



MOBISTYLE

**MOBISTYLE**

**M**OTivating end-users **B**ehavioral change by combined **I**CT based modular **I**nformation on energy use, indoor environment, health and **l**ife**S**TYLE

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## Definitions\*

### *Results*

**Any tangible or intangible output of the action**, such as data, knowledge and information whatever their form or nature, whether or not they can be protected.

### *Communication*

**Promoting the action and its results**, by providing targeted information to a multitude audience (including the media and the public / society) in a strategic and effective manner.

### *Dissemination*

The **public disclosure of the results** by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium.

### *Exploitation*

The **utilisation of results** – up to four years after the research action:

- in further research activities other than those covered by the action concerned, or
- in developing, creating and marketing a product or process, or
- in creating and providing a service, or in standardisation activities.

### *Key Exploitable Results*

Project and its research work done or to be done in the future is broken down into key exploitable results (KER). These are results, which have commercial and/or societal significance. The selected results are characterised from a viewpoint which is exploitation only. This is the market / customer demand or societal needs / user point of view. For each of them risks connected to exploitation are mapped and prioritized.

Different types of exploitable results:

- knowledge;
- methods;
- agreements;
- networks;
- technologies.

\* <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/glossary>



## Executive summary

This document is the deliverable *D5.4 Business Plan for the MOBISTYLE Platform* (resulted from task T5.4) of project H2020-EE07 research project, [MOBISTYLE](#). Full information on this project, including the contents of this deliverable, will be made available online at <https://www.MOBISTYLE-project.eu/en/MOBISTYLE/dissemination/public-deliverables> upon approval from the European Commission.

The main goal within European research projects is to make sure the research results are being “used”, or in other words they are brought to the market and in the best case scenario they will generate economic benefits, lead to innovation and welfare. In this context, defining Business Models is a crucial task, as they can be used as source of inspiration to design exploitation models and to benchmark with competitors.

To this aim, this document presents the exploitation journey of the MOBISTYLE consortium partners and the preparatory work done for defining feasible Business Models for the envisioned results. Various exploitation exercises were run throughout the duration of the project, all under the guidance of the META Group /Support Services for Exploitation of Research Results (SSERR), which is an on-demand exploitation service offered by the European Commission to all completed and ongoing research projects in the field of energy funded under H2020 Societal Challenge "Secure, clean and efficient energy".

These exercises consisted of an *Exploitation Strategy Seminar* (ESS) provided in October 2018, an *Exploitation Pitching Event* organized during Sustainable Places Conference in the summer of 2019 and a *Business Plan Development* (BPD) seminar organized during the MOBISTYLE 7<sup>th</sup> consortium meeting in October 2019.

This deliverable precedes deliverable *D5.5 “MOBISTYLE Exploitation Plan and strategy”* due at month 42 (March 2020) which will elaborately describe the exploitation strategy and the concrete actions of the consortium partners on how to use the results for the exploitation. It will present the first business models discussed with the integrated parties represented in the MOBISTYLE Consumer Advisory Board (MCAB), consisting of demonstration case holders, commercial companies endorsing the project from the conception phase.

In this respect, the objectives served by this deliverable are to present:

- First exploitation ideas on the identified Key Exploitable Results (i.e end-user solutions); draft ideas on exploitation models consisting of estimates and assessments of the commercial value of the solutions;
- Overview of the (exploitation) journey – end-user solutions potential integrated with the MOBISTYLE Open Users Platform;
- Exploitation exercises guided by the META Group – SSERR representatives under the European Commission on helping the MOBISTYLE defined research results reach the market.

This report will not describe the implementation process nor the final business models for the integrated MOBISTYLE solution.



## Introduction

Energy consumption in buildings has significantly increased in the last half century across the globe mainly due to economic developments and growing living standards [1]. This raises concern about the energy consumption in buildings, which are a substantial energy user worldwide. Buildings themselves account for around 40% of total energy use which makes the building sector the greatest energy consumer around the world [2].

The design of energy efficient buildings and improvements in the energy performance of existing buildings are becoming of vital importance. Buildings are becoming more air-tight and with more advanced building service systems [3]. In this context, there has been a widespread of building automation systems, however, there is a lack of solutions that would inevitably motivate the building users to start behaving in an energy efficient way.

Experience shows that promoting the building's energy efficiency as such is not an attractive driving factor for changing everyday habits and lifestyle of the building users. Combining information on energy use with other relevant information such as the indoor environmental quality, personal health and eventually combined with other attractive life style information can be used to catch the interest of consumers and even more importantly change their behavior and maintain their new habits and interest in the long term.

Within MOBISTYLE, the overall aim is to raise consumer awareness and motivate behavioral change by providing attractive personalized combined knowledge services on energy use, indoor environment, health and lifestyle, through ICT-based solutions. Providing more understandable information on energy, health and lifestyle will motivate end-users to change their behavior towards optimized energy use and give confidence in choosing the right thing. It will offer consumers more and lasting incentives than only information on energy use.

To this end, MOBISTYLE comes with an innovative integrated approach allowing an accurate and precise collection of data from the end-users which results in a better understanding of their needs with respect to comfort and health, or asset management activities.

In this framework, it is envisioned that the MOBISTYLE Platform will embed a range of technical components (e.g. ICT products) that will deliver business opportunities and bring added value to the current market. However, offering ICT products through web-portals is not something unique; nevertheless the MOBISTYLE Platform is unique in various ways:

- It focuses on the implementation of emerging, innovative ICT solutions that support the building managers as well as creative work of the architects;
- The underlying software infrastructure of the platform is based on open source BIM/IFC/CMO applications developed in EU research projects ensuring a smooth transition with accepted and developing standards;
- The envisioned future exploitation vision will generate high economic benefits for all involved parties and the architecture and construction industry as a whole.



With this in mind, this document summarises the business discussion(s) on the defined MOBISTYLE Key Exploitable Results that support the sustainability and large-scale uptake of the ICT tools and the identified modular services beyond the project lifetime.

The first discussions on preliminary business strategies and impact vision of the exploitation partners, their role in the implementation and exploitation of their defined products after the completion of the project shaped the MOBISTYLE exploitation journey and support the final Business Plans.

*Chapter 1 – Journey from Exploitation Strategy Seminar to Business Plan Development*, focuses on the three main exploitation exercises the consortium has been done since 2018, from the ESS, as the first step in brainstorming and identifying the key exploitable results and on how to address the risks and obstacles associated with exploitation, to the BPD service in 2019, meant to assist project partners in better approaching this crucial step towards the commercialisation of the products or services.

*Chapter 2 – Business Plan Development* describes in more details the defined five Key Exploitable Results forthcoming out of previous exploitation workshops.

*Chapter 3 – Follow-up recommendations* stresses out the fact that this work has not yet been finalised and in order to reach the market some next steps and improvements are needed with respect to each developed exploitation strategy.

For an elaborated view of the exploitations discussions and exercises under the guidance of the exploitation expert, Alessia Melasecche Germini, please refer to *Annex 1 – Exploitation Strategy Seminar – Final Report* and *Annex 2 – Business Plan Development Final Report*.



## 1. Journey from ESS to BPD

Appropriate exploitation leads to innovation (in different markets and societal contexts), new businesses and jobs, increased knowledge, and welfare.

In this context, exploitation has become a crucial element in H2020 projects and is nowadays, a mandatory activity and reporting item. In order to maximise the added value and impact of research projects, the EC Directorate-General for Research and Innovation offers on-demand services to interested projects – through the **Support Services for Exploitation of Research Results (SSERR)** Framework Contract. To this aim, exploitation contributes to the overall objectives of the investors in the European Union.

The business and exploitation models are a key output of MOBISTYLE to continue the activities after the project duration. In order to ensure the continuation of MOBISTYLE after the project duration and to maximize the impact, an open on-line accessible MOBISTYLE Open Users Platform will be created, supported by a business plan for the further exploitation.

This platform will have the following functionalities:

- Share and store all relevant methodologies, tools and online services;
- Creation of a database on monitoring data, as a basis for the information services.

Data bases on energy use and occupant patterns can also be used as input for energy calculations as well as for preparatory work for further standardization. The MOBISTYLE Open Users Platform will be compatible for the integration with other services that use the same data storage and exchange principles (telecom routers).

### *Exploitation versus Business Model*

An exploitation/business model describes the rationale of how an organization creates, delivers, and captures value, in an economic, social and cultural way. It is however important to understand the difference between a *Business Plan* and an *Exploitation Model*:

1. A business plan describes what the organisation does. This written document states an organisation's **operational and financial goals** for the future and **how it proposes to meet them**;
2. An exploitation/business model describes **how and where an organisation chooses to operate**. The model defined is then detailed in a business plan.

In this framework, within MOBISTYLE exploitation journey (i.e. business/exploitation modelling) the partners in charge have been trained to define the 'hypothesis' of their business vision, to test it in action and revise it accordingly at the time suited best.

Due to the dynamic character of an Exploitation model rather than static, it is highly recommended to review and revise this model periodically in order to suit to the needs and demands.



### 1.1. Report on results ESS Workshop

The first Exploitation Strategy Seminar (ESS) took place during the 5<sup>th</sup> General Assembly Meeting in Turin (IT) on October 18<sup>th</sup>, 2018 and it was coordinated and moderated by META Group representative, Alessia Melasecche Germini. The discussion addressed in big lines the identified MOBISTYLE Key Exploitable Results.

The ESS is a key service for the partners of an Energy research project to give sharper consideration to the potential of project results and their exploitation routes. It aims to provide the most appropriate environment to facilitate in an open discussion:

- 1) the identification/grouping of key exploitable results and the definition of the related exploitation strategy,
- 2) the road-mapping of follow-up actions
- 3) the identification and mapping of risks related to the exploitation
- 4) the development of a draft plan for the exploitation and dissemination of research results and
- 5) linkages with relevant stakeholders.

#### *Agenda of October the 18<sup>th</sup>, 2018 (Torino, Italy):*

The ESS agenda and the overall set up have been agreed in advance by the SSERR Expert and the project Coordinator (HIA) and the work done preliminary to the meeting has been consistent with the agreed approach.

The set up agenda was as follows:

#### **14:30 – 15:30, Ice breaking & Topic Introduction**

Welcome, introducing participants presenting the ESS agenda. Introducing the main elements connected to exploitation and value creation.

#### **15:30 – 16:45, Achieving Project Goals Part I**

MOBISTYLE Open Users Platform, clarifying partners' exploitation interests

16:45 – 17:00, Coffee break

#### **17:00 – 18:00, Achieving Project Goals Part II**

Drafting the Exploitation Roadmap, Actions to be implemented

#### **18:00 – 18:30, Wrap-up**

Collecting ESS feedback forms, wrapping up & Closing Remarks





### List of participants

	Company	Name
1	Huygen Installatie Adviseurs	Peter Op 't Veld
2	Huygen Installatie Adviseurs	Simona d'Oca
3	Huygen Installatie Adviseurs	Ana Tisov
4	DEMO Consultants	André van Delft
5	Maastricht University	Wouter van Marken Lichtenbelt
6	Institute for Innovation and Development of UL	Slavko Dolinšek
7	Institute for Innovation and Development of UL	Jure Vetršek
8	Aalborg University	Per Heiselberg
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26	META Group – SSERR Team	Maddalena Lukasik
27	META Group – SSERR Team	Alessia Melasecche Germini

The core Key Exploitable Result is the **MOBISTYLE Platform**. In this respect, the main goal of the ESS was to have a guided discussion among project partners to clarify willingness and exploitation intentions and define potential exploitation routes.

It became clear to the consortium that any further add on/plug in services/apps that was at the time under analysis and development would be then linked to the MOBISTYLE Open Users Platform that will constitute the main basis for all the exploitation activities envisaged within the project. At the same time, the focus laid on key results that can generate impacts, rather than generic Deliverables.

At the beginning of the meeting the difference has been explained between Exploitation (utilization of results) and Dissemination (disclosure of results). The Key Exploitable Result (KER) Characterization and the issues connected with the KERs, helped the Consortium have a clear understanding of what needs to be achieved by the end of the project.

In anticipation of the ESS workshop in Turin, all partners within the consortium filled in preparatory forms, all embedded in the Final Exploitation Strategy Seminar Report (see Annex 1).



- **Characterisation table** is a tool that summarises the main features of a KER and provides first level information on the selected exploitation route. The table contains information on:
  - **The novel solution:** Description of the Result, Innovativeness introduced compared to already existing Products/Services, Unique Selling Point (competitive advantages);
  - **Market:** Product/Service Market Size, Market Trends/Public Acceptance, Product/Service Positioning; Competitors/Incumbents, Prospects/Customers;
  - **External factors:** Legal or normative or ethical requirements (need for authorisations, compliance to standards, norms, etc.);
  - **Go to market aspects:** Cost of Implementation (before Exploitation), Time to market, Estimated Product/Service Price, Adequateness of Consortium Staff, External Experts/Partners to be involved;
  - **IPR Status:** Background (type and partner owner), Foreground (type and partner owner);
  - **Exploitation Strategy:** Exploitation Forms (direct industrial use, patenting, technology transfer, license agreement, publications, standards, etc.), which partner contributes to what (main contributions in terms of know-how, patents, etc.) Partner/s' expectations, Sources of financing foreseen after the end of the project (venture capital, loans, other grants, etc.).
  
- **Priority Map and Risk Matrix:** The Priority Map provides a snapshot of the most common risks faced by the project, previously identified through the Risk Matrix assessment tool (Risk Matrix). The Risk Matrix aims at identifying the level of the different risks factors in accordance to the level of importance of the risk related to the final achievement of each Key Exploitable Result and the probability for such a risk to happen. The Risk Matrix analyses the following six different categories of risks:
  - **Partnership Risks:** internal risk factors related to the composition of the partnership or specific behaviours of the partners, conflict of interests, etc.
  - **Technological Risks:** external factors related to the feasibility of the technology, its level of development, presence of other emerging technologies, etc.
  - **Market Risks:** external risk factors related to fulfilment of marked needs, presence of competitors or alternative products, etc.
  - **IPR Risks:** factors related to the presence of similar previous patents, the possibility to protect the developed technology/product, patent counterfeit, etc.
  - **Environmental risk factors:** are external factors related to the presence or changing in legislations, standards, etc. Special attention will be given to regulatory environment and standardisation issues.
  - **Financial risk factors:** factors related to the availability of funds for bringing research stage to prototyping industrialisation/commercialisation.

*For an individual description of the key exploitable results see Annex 1 and 2.*

The important follow-up action was defined as developing a structured Exploitation Roadmap. Moreover, a Plan for Exploitation and Dissemination of Results needed to be considered as well:



- What kind of problem MOBISTYLE will solve and why this solution will be better than existing ones;
- What new knowledge (i.e. Key Exploitable Results) the project will generate;
- Who will use/buy these results;
- How the results will be delivered to users/customers;
- What resources (human, financial, etc.) have to be secured to deliver the novel solution to the users/customers;

During the ESS, the discussion stressed on what kind of value should be created for the different players on the market: manufacturers of white/fast moving goods (e.g. WHIRLPOOL), energy providers (e.g. TAURON), manufacturers etc. While the main focus was on how to use (aggregated) data and to sell it as there is high value in such KPIs.

The open Platform's functionalities should be seen as part of *Task 5.3 Open Users Platform*: to allow others to add the products and make use of other products that are shared on platform. It has been explained and then agreed that open access does not mean it is free (i.e. open APIs).

Another option that has been considered is that an independent party takes data from all manufacturers, analyzes it and sells the modular information to someone else, thus everyone getting a share.

WHIRLPOOL (IT) partner presented its vision for the value of the open platform where it is allowed to other companies to build the business case together, correlate with data of other companies, having benchmarking and allowing market positioning. WHIRLPOOL explained that data in silos are useless, while combining information allows discovering new patterns in data. Consumers providing data are useful for manufacturers, hence they need to see the profit of selling aggregated data to other.

It was unanimously agreed that the MOBISTYLE X factor lies within giving the added value to the **data**: information in modular way combining interdisciplinary approach within data mining. The main aim is not only aggregated data however this data already has a clear value. The Consortium provides pre-processed/refined data, giving information by looking into correlation between data, KPIs. If the Consortium can correlate data to other energy and IEQ features, the value increases due to the environmental and lifestyle relevance.

The SSERR Expert pinpointed that the consortium needs to notify the people from whom they're gathering the data (demo cases), what will happen even if using the aggregated data; if renting/selling the platform to an external partner or using for MOBISTYLE partners. It is explained by Aalborg University (DK) partner that data collection will stop when the project stops (seen only as part of the research project). Nevertheless, Aalborg University Partner explains that in the Danish case, they would like to buy the service (if successful) after the project duration (scaling up). If MOBISTYLE is ready with deployment 600-700 €/per month (sensors + service), then they have the interest to scale up to 700 apartments.

Nevertheless, it was suggested that the Consortium should first discuss internally who has the interest in running the MOBISTYLE Open Platform and decide whether partners want and can keep



the platform inside the consortium, whether it is better to go on as a separate entity (or start-up incubator) or they profile and market the platform as a selling product.

DEMO Consultants (NL) partner expressed a general interest in running the platform and making a business out of it after the expiration of the granting period. In the meantime, several crucial elements should be assessed, before confirming this willingness and DEMO partner is going to be the leading one in coordinating the project efforts in that direction.

At this moment in time it was recommended to run a market analysis during the AHA Symposium MOBISTYLE Breakout session on 8 November 2018 with MCAB members (commercial companies) considered to be a good opportunity to discuss the interest from different companies (i.e. what do they need/are looking for).

It was stressed that the Consortium can take some specific requirements based on the interest/feedback from different companies (after introducing them first to the MOBISTYLE platform objectives), as this can help define the minimum requirements the platform should have (scout to the market). Once more developed, the MCAB network can be used for dissemination of the business case to the stakeholders that would/could potentially take over the platform.

After the ESS seminar, it is clearly seen that the Consortium needs to start making internal and external agreements and should look for different exploitation's paths and think out of the box.

The SSERR Expert has recommended to fill in and elaborate the conceptual note forms shared by her together with the final version of the ESS report, that would help partners define draft exploitation concepts per partner: who, why, what, when etc. The Consortium partners could use this guidance tools when thinking at each organization's exploitation vision.

*See the elaborated recommendations table within the ESS report on Annex 1.*

### **Exploitation Concept Statement**

Writing an Exploitation Concept Statement is the following step towards the preparation of developing an exploitation model as recommended by the SSERR Expert, Alessia Melasecche Germini during the first ESS Workshop in Turn, in October 2018.

This task would allow the partners to clearly understand and elaborate on what they specifically want to pursue and achieve with respect to their organisation's exploitation strategy.

The exploitation concept should be no longer than two pages and should be tested for feasibility prior to the preparation of the exploitation plan.

As informed by the Expert, it is common for the initial concept statement to change during the life of the project with the feasibility testing and the writing of any Exploitation Plan.

In short, the exercise consisted of:

- Step 1: Identifying the key components of the exploitation concept (for each exploitable result);
- Step 2: Writing the exploitation concept statement;



- Step 3: The main aim of a well-defined exploitation concept is whether someone else can understand it well enough to relate it back precisely, thus, getting feedback on the written Exploitation Concept Statement was crucial in order to and revise the statement to clarify any misinterpretations of the exploitation concept.

In this framework, the key components to be identified in order to develop the Exploitation Model are related to:

1. **WHAT** does the product or service do? (Features);
2. **HOW** is it different from other products or services? (Uniqueness);
3. **WHO** will buy it? (Potential customers);
4. **WHY** will they buy it? (Benefits):
  - a. Price?
  - b. Convenience?
  - c. Better than what's currently available?
  - d. Pleasurable experience?
  - e. Uses new technology?
5. **WHERE** will it be sold?(i.e. Geographic location of business and customers);
6. **WHEN** will it be ready to be sold? Concept, start-up, initial operations phase;
7. **HOW** will it be promoted and sold? (Sales channels).

As result, the elaborated ideas and revisions of the business concept statement have supported the follow-up discussions and brainstorming on the exploitations workshops of the MOBISTYLE products and services. Moreover, the exercise would create awareness on the high impact exploitation that research results may have.

## 1.2. Report on Pitching event

After the experience of the ESS workshop in 2018 that shaped the first steps of a structured path towards exploitation, the follow-up exploitation event would stress and elaborate on what needs to be achieved by the end of the project. Moreover, it would bring a clear and actionable exploitation plan agreed among partners.

On June, 7<sup>th</sup>, 2019, the **Pitch event** on the MOBISTYLE Platform was organized within the Sustainable Places Conference in Cagliari (Italy), during the "[How to achieve a behavioural change for energy saving through innovative IT solutions](#)" session. Sustainable Places is an event that prides itself on being the most important European platform for the dissemination of research, the conduct of workshops, EU project clustering and networking between stakeholders of all types.

MOBISTYLE together with other three international sister projects, all co-funded by the European Commission: [BENEFFICE](#), [enCOMPASS](#) and [UtilitEE](#) have presented their new proposed solutions on innovative user-friendly digital tools, applications and services making use of energy end-user generated information, with the purpose to significantly enhance energy efficiency by behavioural change of end-users. Each presenter got five minutes to present his/her new energy solution and another 5/10 minutes for Q&A.

Session moderator: Dr Alessia Melasecche Germini, META Group/EC



Target audience: Building managers, building owners, residents, housing associations, visitors, public actors, etc.

### **MOBISTYLE Pitch event**

To answer different stakeholders' needs, MOBISTYLE develops different ICT solutions for the identified stakeholder groups [4]. This creates a first challenge for MOBISTYLE in terms of exploitation. The main solution to be exploited as the MOBISTYLE platform is made of five different IT tools:

- a customizable dashboard for non-residential buildings users (customers as hotels and university offices);
- a gamified mobile app for residential users (to be sold by utilities or by social housing organizations to householders);
- a dashboard to visualize dynamics conditions indoor for offices;
- a data visualization tool for experts' calculations and analysis;
- an Open Users Platform able to give MOBISTYLE aggregated data to 3rd party developers.

The pitch was structured in a story telling way, addressing the MOBISTYLE customer via his/her user journey. The aim was to show the potential customer which would be for him/her the added value of using the MOBISTYLE solutions.

The MOBISTYLE Platform is able to collect data coming from different sources (energy consumption smart meters, Indoor Environmental Quality (IEQ) sensor and health wearables) in a single environment and to transform these data into quick, up to date and easy to be understood information, everything in one application. Data are also correlated with tips and tricks on how to raise personal indoor comfort and save on energy bills by improving the energy usage.

Two segments of customers have been identified: a) Customers interested in engaging more with their client, for example housing associations, real estate owners, tertiary companies, service and energy providers, and b) Customers interested in data such as 3rd parties developers, data providers, manufactures, service and energy providers. The features provided by the MOBISTYLE Platform are currently (in June 2019) at prototype level and are being tested in several study cases in Europe (Italy, Slovenia, Netherlands, Denmark and Poland). The team is composed by software developers to support the client on technical level in collecting, analysing and disclosing the information further; anthropologists specialized on user behaviour; energy and data experts.

After the pitch, valuable feedbacks were received that would be used to improve the initially developed exploitation strategy to answer better the real market needs. Firstly, the possibility to combine different kind of data types is recognized as of high value, empowering the platform and the single tools. Secondly, the possibility to Open the Data to externals in an aggregated and anonymised way, is recognized as high potential. To achieve these two added values, MOBISTYLE needs to achieve the following:

- 1) Access to a significant amount of buildings (and users) data;
- 2) Aggregation methodology allowing joint assessment of the different types of data to provide Innovative Key Performance Indicators (KPIs) giving insights in energy, IEQ and personal health.



Having five completely different demonstration cases could help understanding the best differentiating approach to exploitation. To this aim, the five demonstration cases will be involved further in the exploitation process, analyzing one by one the dimensions of the target market, and the interest raised by the entire MOBISTYLE platform and the single tools.

An elaborated review of this event can be read in the [Proceedings](#) of the conference on this session.

### 1.3. Report on results of BPD workshop

To move forward and improve the successful outcomes (so far) of MOBISTYLE, META Group was again appointed by the European Commission to help the consortium partners in developing the business strategy/plan for their exploitable results and to design a road map of the steps needed.

In October 2019, as follow up on the previously addressed ESS and the Pitching event, the *Business Plan Development* (BPD) seminar took place in joint organisation with the 7<sup>th</sup> MOBISTYLE consortium meeting in Krakow, Poland.

This service aims to deliver a snapshot of the main fields from the competition and the business model envisaged to the early adopters and market approach. Additionally, it provides an exploitation roadmap and budget estimation for the first months after the project's end.

#### *Structure BPD service provided to MOBISTYLE*

- 1) Analysis of the state of the art (deliverables dealing with exploitation);
- 2) Animation of a workshop with partners to finalise lean canvases and roadmaps;
- 3) Support in fine tuning available information and provision of final comments, after the workshops;
- 4) Elaboration of a factsheet on the project's solutions/results (on a template form provided by the EC).

#### *Agenda BPD workshop from 10<sup>th</sup> of October 2019 (Krakow, Poland)*

##### **8:30 – 9:00, Ice breaking**

Pre-meeting with the Coordinator, Welcome, Presenting the day

##### **9:00 – 10:30, Towards an effective Exploitation Strategy: in Theory**

Extensive presentation on business modelling, business planning and introducing the Lean Canvas. Q&A session.

##### **10:30 – 10:45, Coffee break**

##### **10:45 – 13:00, Towards an effective Exploitation Strategy: in Practice**

Working in groups on the KERs Lean Canvasses (5 KERs)

##### **13:00 – 14:00, Lunch**

##### **14:00 – 15:00, How to pitch: The art of raising interest**

Presentation on how to develop a 3/5 minute's pitch. Hints for the content that it should include, with instructions on presentation styles, body language and PowerPoint guidelines, moving from Research Project to a business proposition. From theory to Practice.

##### **15:00 – 16:00, Implementing the exploitation strategy**

Presentation on Characterisation of KERs and on Roadmap to Exploitation.

##### **16:00 – 16:15, Any other issue exploitation-related?**



**16:15 – 16:30, Wrapping up**

Wrapping up &amp; Closing Remarks. Collecting workshop feedback forms

*List of participants*

	Partner	Short Name	Name and Last Name
1	Huygen Installatie Adviseurs	HIA	Peter Op't Veld
	Huygen Installatie Adviseurs	HIA	Ana Tisov
2	DEMO Consultants BV	DMO	Rosamaria Olivadese
	DEMO ConsultantsBV	DMO	André van Delft
4	Institute for Innovation and Development of UL	IRI-UL	Jure Vetršek
5	Aalborg Universitet	AAU	Per Heiselberg
	Aalborg Universitet	AAU	Sandijs Vasilevskis
6	Politecnico di Torino	POLITO	Cristina Becchio
	Politecnico di Torino	POLITO	Giulia Vergerio
7	Holonix Srl	HOLX	Eva Coscia
8	Highskillz Ltd	HS	Joao Costa
	HighskillzLtd	HS	Maria Margoudi
9	TAURON Polska Energia SA	TAU	Andrzej Sapalski
	TAURON Polska Energia SA	TAU	Krystian Wojtasik
	TAURON Polska Energia SA	TAU	Magdalena Dembińska
	TAURON Polska Energia SA	TAU	Michał Oleś
NA	META Group	META	Alessia Melasecche Germini – SSERR Expert

During the workshop the discussion allowed to focus on reviewing the **five lean canvasses**, the (KER) **characterisation tables** and the **exploitation roadmaps** and a pitch session was organised.

Throughout the whole session, partners were guided by the expert in clearing which relationships there were behind each of the 5 KERs to be exploited in terms of contribution and willingness to exploit by the leading and contributing partners. It was agreed to set dedicated bilateral/multilateral agreements (e.g. Memorandum of Understanding, letter of intent or similar).

The BPD workshop was held in plenary (except for the revision and fine-tuning of the lean canvasses) with all the partners attending, actively contributing, according to their role. Anonymous feedback forms were gathered from participants at the end of the workshop.

In the final report (see Annex 2), the Lean Canvas of at the 4<sup>th</sup> iteration for the 5 KERs identified are being introduced and the roadmaps to exploitation per each KER, as the level of development and assessment vary among the different KERs:

1. KER1 – MOBISTYLE Open Users Platform
2. KER2 – MOBISTYLE Game and Missions
3. KER3 – MOBISTYLE Expert Tool
4. KER4 – MOBISTYLE Dashboard
5. KER5 – MOBISTYLE Office App





All discussed KERs were further revised after the workshop and sent back to the expert in between the 22<sup>nd</sup> of November and the 2<sup>nd</sup> of December 2019.

The following remarks were stressed by the expert respectively:

1. *“Between the time of the ESS (2018) and the BPD (2019), partners within the consortium managed to clarify and validate that the best way to exploit the “MOBISTYLE Platform” (KER 1 at the ESS), is to market it no longer as one single tool (as this is too complex to implement), but as a combination of ICT tools plus integrated services (5 separate modules, KER1 to KER 5 as defined at the BPD) which could be used/adopted by Customers separately or together. Therefore, 5 KERs and 5 business models were discussed and agreed at the BPD. Being this a recent achievement, KERs have very different readiness levels and exploitation connected actions are influenced by this”.*
2. “At the BPD workshop partners clearly identified which partner would like to claim what. Dedicated exploitation agreements (e.g. memorandum of understanding) need to be put in place, considering each involved partners’ willingness to exploit and contribution in the development/achievement of the result to be exploited. This brings to the following agreements to be signed, for:
  - KER1 – MOBISTYLE Open Users Platform, between Holonix SRL and Inovacijsko-razvojni institut Univerze v Ljubljani
  - KER2 – MOBISTYLE Game and Missions, between Highskillz Limited and Aalborg Universitet
  - KER3 – MOBISTYLE Expert Tool by DEMO Consultants BV
  - KER4 – MOBISTYLE Dashboard, between Holonix SRL and Politecnico di Torino
  - KER5 – MOBISTYLE Office App, between Huygen Installatie Adviseurs and Universiteit Maastricht

During the workshop a detailed presentation on **Lean Canvas** and a brief introduction on **How to Pitch** was given by the expert. In addition, other topics were addressed as well, such as Commercialisation Routes for R&D projects, Components of business models, Achieving project goals and Customer validation.



## 2. Business Plan Development (KERs)

The Business Model is the plan for the successful operation of any “business”, identifying: the intended “customer” base, products/services, sources of revenue and details of financing. It describes the way in which “value” can be extracted from an exploitable R&D result.

The Business Plan Development service extends the support in helping R&D projects to develop a business plan, from the very drafting phase, when the exploitation model needs to be identified, up to including options for financing needs and/or coaching on how to successfully present the exploitation concept before a targeted audience.

### *Lean Canvas methodology*

For preparing the Exploitation Plan of a R&D result it is useful to use the **Lean Canvas**. The Lean Canvas is an adaptation of Business Model Canvas by Alexander Osterwalder which Ash Maurya created in the Lean Startup spirit (Fast, Concise and Effective startup). Lean focuses on problems, solutions, key metrics and competitive advantages. Among all the different type of canvas, the lean business model canvas, by Ash Maurya, is found to be the most suited for R&D projects, thus is also the one chosen for MOBISTYLE.

It is a powerful tool to be used by the partners to further develop the characterization of their KERs, prepare the materials to be discussed at consortium meetings and draft the exploitation/business plan for a KER.

The lean canvas helps to fine-tune and develop the exploitation strategy for a KER having in mind four questions:

- 1) Who is “my customer”?
- 2) What is “her/his” problem?
- 3) How does “She/he” solve the problem now?
- 4) Is our solution more efficient than the current one?

In this respect, as result of the BPD services in October 2019 together with the service report, MOBISTYLE project partners have received:

- Finalised Lean Canvas for the KERs;
- Ready-to-use content for pitching to potential investors and/or business partners & simulated;
- A set of recommendations on steps to be performed after the end of the EC support.

Below the description of each MOBISTYLE KER following the structure of the BPD service. The text highlighted in red represents the recommended elaboration provided by the exploitation expert based on the drafted Lean Canvas information provided by each respective partner.



## 2.1 MOBISTYLE Open Users Platform (i.e. Open Data, T5.3)

### Characterization MOBISTYLE Open Data - KER description

<b>Problem</b>	<p>Groups of stakeholders (as data providers, appliances manufacturers, building managers, etc) are interested in having aggregated information about the energy consumption, IEQ and wellbeing of buildings. Some of them are also interested in knowing the behaviour of people living buildings, when connected to the consumption and IEQ. But:</p> <ul style="list-style-type: none"> <li>• A lot of data is potentially available, yet not fully accessible nor correlated/combined. The customer has a gap in knowledge about the behaviour of the end user in terms of interaction with other devices. Fragmented information (only from one device at a time) does not allow to fully profiling user behaviour.</li> <li>• Information coming from building systems is not understandable due to different formats, languages, and standards.</li> <li>• Moreover, data about energy / Indoor Environmental Quality (IEQ) / health are usually not interconnected.</li> <li>• The scale and fragmentation of the building supply industry makes very difficult the creation and an actual mapping of an ecosystem.</li> </ul> <p><i>Which is the dimension of the problem? How “big” is the problem for your Customers? Big enough that they would invest in solving it? Please add some quantitative dimensions.</i></p>
<b>Description</b>	<p>The MOBISTYLE Open Users Platform (MOUP) collects data from different buildings, which have been connected to the Platform as interested in using the MOBISTYLE tools.</p> <p>The MOUP provides:</p> <ol style="list-style-type: none"> <li><b>1. ICT tools:</b> <ol style="list-style-type: none"> <li>1.1. Modular solutions for collecting, standardizing and disclosing data to registered parties (customers and end users).</li> <li>1.2. Customized data analysis both at individual product/account and at aggregated level.</li> <li>1.3. Creation of a data lake about energy and comfort to be used for future use.</li> </ol> </li> <li><b>2. Services (knowledge related):</b> <ol style="list-style-type: none"> <li>2.1. Trainings of customers and end users to improve energy behaviour.</li> <li>2.2. Base for awareness / engagement campaigns strategies with end users.</li> <li>2.3. Data analytics knowledge based on energy and comfort data.</li> </ol> </li> </ol>
<b>Alternative solution</b>	<p>Each service, energy, device provider uses <b>its own applications</b> and collects data related to their own products (not interconnected with other products which usually are used by end users, therefore only partial information gathered). On top, there is no correlation with other kind of data.</p> <p><i>Please list at least 3 products/applications that are currently in use (the most diffused ones). Please highlight Strengths and Weaknesses of each of them.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>The MOBISTYLE Open Users Platform acts as a one-stop-shop where all data (energy and Indoor Environmental Quality) are available and interpreted in one unique comprehensive tool.</p> <p>The MOBISTYLE Open Users Platform offers an ecosystem where suppliers can improve their businesses by correlating their products data. A platform that heals the fragmentation of data, connects it in one data lake and allows new information extraction by advanced data analytics.</p> <p>User-centric based services and tools to guide people to a behavioural change related to energy consumption, comfort and health. Direct engagement of customers’ end users providing specific data about their habits, behaviours and responses for motivation signals concerning life</p>



	<p>change, indoor environment and energy consumption.</p> <p><i>Please add concrete facts and data to give a better idea of the magnitude of the value that your solution is offering compared to what already in place.</i></p>
"Market" – Target market	<ul style="list-style-type: none"> <li>• Customers interested in aggregated data (MOUP) Examples: 3rd parties' developers, data providers, service providers, energy providers, manufacturers.</li> </ul> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description of the presented segments. Each one of those has different drivers-to-adopt/buy and needs to be addressed in a specific way.</i></p>
"Market" - Competitors	<p>On the market a lot of Platform and Data Management Systems are already available. However, there is none that provides both tools and services, able to combine and disclose energy, comfort, and health information.</p> <p><i>Who is commercialising/proposing the most-used platforms and data management systems currently available? Please present weaknesses comparing to your solution, it is useful in order to stress your uniqueness.</i></p>
"Market" Size	<p>Market size depends on the sectors that will be approached. If we simply consider ICT companies that could have ICT developers interested in creating APPs using MOBISTYLE data, we have to consider 732,000 companies around EU. <a href="https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106589/jrc106589(1).pdf">https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106589/jrc106589(1).pdf</a>.</p>
"Market" Trends	<p>In the context of sustainability, smart buildings, energy savings, the commercial solutions related to sensing systems, smart systems, and their user interfaces are <b>increasing consistently</b>.</p> <p><i>Once better investigated, please provide quantitative data as well.</i></p>
Settings - Impact	<p><b>Economic impact:</b> the MOBISTYLE Open Users Platform is one single space where both services and tools are provided, data are collected. This reduces service and maintenance costs and helps our customers to retain customers offering fully customised services.</p> <p><b>Environmental impact:</b> the MOBISTYLE Open Users Platform goes in the direction of supporting the development of smart buildings (energy savings and less polluting).</p>
Settings - legal	<p>GDPR compliance.</p> <p><i>Any other technical requirement to be compliant with?</i></p>
Go to Market – Use model	<p>Each module of the MOBISTYLE Open Users Platform (ICT tool and connected knowledge services) will be commercialized through licenses and sales transactions.</p> <p><i>In the case of licensing, please consider that are several different types of licensing agreements that could be used.</i></p>
Go to Market – IPR (Background )	<p>The MOBISTYLE Open Users Platform is developed by:</p> <ul style="list-style-type: none"> <li>- DMO (Databases and aggregation service),</li> <li>- HLX (3<sup>rd</sup> party dashboard and catalogue)</li> <li>- POLITO (KPIs for aggregated data),</li> <li>- IRI-UL (awareness and engagement campaigns).</li> </ul> <p>Background is owned by each one listed in the Consortium Agreement.</p>
Go to Market – IPR (Foreground )	<p>The MOBISTYLE Open Users Platform will be commercialized (through licensing and direct sales) by the abovementioned partners.</p>



<b>Go to Market – Early adopters</b>	Some demonstration cases are already in place and are interested to be early adopters around in Europe for the TOOL. The MOUP will not be sold at the moment, until enough data will be available.
<b>Go to Market – Pricing</b>	The MOUP with Open Data will not be sold at the beginning as the amount of available data is too restricted. <i>Knowing what competitors are doing in this direction could help in defining your price strategy.</i>
<b>Go to Market – Time to market</b>	The entire solution will be ready for the market at TRL 9 within 2 years. It is currently at TRL 7. The MOUP is at lower TRL and it will increase according to the available data within 2 years. The MOUP will be available and published by the end of the project, it will be free for interested developers during the incoming 2 years, and reasoning on potential sales will be done during the next two years according to the real sales of the MOBISTYLE Tools. Real sales depend on other MOBISTYLE partners. <i>Consider that this is going to deeply influence the quantification of costs to be incurred for the still needed 2 years.</i>
<b>The Team</b>	The team within MOBISTYLE Consortium is skilled to further develop, provide consultancies and implement the MOBISTYLE Open Users Platform. Holonix team is ready to support external developer, especially when B2B solutions have to be put in place.
<b>The Team – External providers</b>	Cooperation with technicians from the client or other company providers is necessary to support the installation of the smart sensors and systems and for the connection within the different systems.

### Exploitation Roadmap – MOBISTYLE Open Data

Exploitation roadmap	
<b>Actions Description</b>	To progress from TRL 7, the MOBISTYLE Open Users Platform needs to be populated with more data in order to make the data aggregation and correlation interesting. Actions will aim at using the MOBISTYLE Open Users Platform in other projects to achieve this goal. In parallel, interesting and innovative KPIs correlated to energy, comfort, and health, will be further investigated. After 1 year after the project ends the MOBISTYLE Open Users Platform will be further developed in at least 2 other research projects.
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• DMO, HLX, HIA, HSZ for the TOOLS implementation and sales;</li> <li>• POLITO for KPIs.</li> <li>• IRI-UL for support, consultancy and engagement</li> </ul>
<b>Actions Monitoring</b>	Every six months from the end of the project on, during two years, the MOUP will be analysed in order to understand if it is growing enough to be sold.
<b>Impact in 3-year time</b>	The MOUP will open the information to many companies. This will allow companies to create new business models, and to improve their own. Additionally, ICT developers will be enabled to create new solutions
<b>Financial Costs</b>	After 2 year: €4.000 /year. After 3 years: <i>to be further discussed</i> . Costs include the ICT infrastructure, personnel costs, helpdesk, overhead. ICT infrastructure: MOUP is working on an Open tool, which is free of charge until the number of accesses is reduced. This is the expected case for year 1 and 2. For year 3 it has to be discussed. ICT Personnel and helpdesk, for Holonix, can be the same working actively on the Dashboard Tool. It will be just a support for externals and it can be evaluated in half day per week of effort, 2 days per month. It is about 4.000 euro / year.



	Overhead for year 1 and 2 can be considered as null.
<b>Financials - Revenues</b>	After 1 year and after 2 years: none expected. It will be up for free.
	After 3 years: to be deeply discussed, analysing sales of MOBISTYLE TOOLS every 6 months from the project ends. It will be further discussed after year 1 and a half.
<b>Financials - Other sources</b>	Own budget.
<b>Financials Timeline for funding</b>	To be discussed after 1 year and half.



*Lean Canvas – MOBISTYLE Open Data (as part of the MOBISTYLE Open Users Platform)*

<p><b>Problem</b> 1) Large (BIG) data about energy consumption/Indoor Environmental Quality/health in Europe are not available.</p> <p>Data about energy consumption/ Indoor Environmental Quality /health are usually not interconnected. It is hard to understand correlation on large scale, until data are missing.</p> <p>Behaviours in Europe about energy/ Indoor Environmental Quality /heath, according to different building types/location/dimension/etc., are not collected together so not available.</p> <p><b>Alternative solutions? Some solutions are able to collect data, but not to correlate data coming from different sources and of different types. For example, solutions as the TAU smart meters can collect huge amount of data about a district, but those data will be correlated only to the energy consumption and only to that district; MOBISTYLE is able to.</b></p>	<p><b>Solutions 4)</b> <b>Top 3 features</b> <a href="#">API</a> to access Open MOBISTYLE anonymised data.</p> <p>Suggestions on useful aggregation of data.</p> <p>Eventually: report on data --&gt; to be defined.</p>	<p><b>Unique Value proposition 3)</b> Anonym aggregation, segmentation and analysis of big data coming from energy consumption/Indoor Environmental Quality /health data monitoring at MOBISTYLE customers.</p>	<p><b>Unfair Advantage 7)</b> Solving the problem, giving access to the data, can be an answer here? Availability of Open data?</p>	<p><b>Customer segment 2)</b> Facility providers, to know habits and segmentation of needs</p> <p>Social housing managers</p> <p>Large organizations owning lot of buildings (municipalities, big European companies managing many buildings or facilities, etc)</p>
	<p><b>Key Metrics 6)</b> Quantity of available data.</p> <p>Number of proposed aggregations of data.</p> <p>Number of third parties that uses the <a href="#">API</a>.</p> <p>Number of paying users in future.</p>	<p>Access to Open Data allows third party developers to collect aggregated available information and to have specific analytics on them.</p> <p><u>NOTE: OPEN DATA solution is strictly connected to the entire MOBISTYLE solution.</u></p>	<p><b>Channels 5)</b> Cooperate with policy makers.</p> <p>Publish about Open data availability on internet.</p> <p>Participate to <a href="#">IOT</a> communities.</p> <p>Participate to Projects and Open Calls.</p>	<p>Appliances producers, to know segmented habits.</p> <p><b>Who are the early adopters?</b> To be discussed with MOBISTYLE facility providers, appliances producers, buildings managers.</p> <p>Early adopters will be interested in Open aggregated data only when the amount of data will be relevant, having a huge quantity of data in the databases usefully segmented.</p>
<p><b>Cost structure (when solution is ready for the market)</b> 8) Type of costs: hosting infrastructure, helpdesk &amp; chatbox personnel, costs to engage customers and partners, commercial campaigns</p> <p>Estimation of costs still to be defined even according to the MOBISTYLE entire solution.</p> <p>For year 1 and 2 the costs will be reduced to EUR 4.000/year.</p>	<p><b>Revenue Streams (after 6 months and 3 years)</b> 9) 6 months: free trial. No revenues. Revenues should come from MOBISTYLE customers connected. 3 years: basic information for free, pre-aggregated, pre-analysed information to be paid. Some groups of information to be sold can be identified, others can be customized. To be set according to the existing customers really involved.</p>			

## 2.2 MOBISTYLE Game App and Indoor Environmental Quality Missions (HighSkillz Ltd., IT)

### Characterisation MOBISTYLE Game App – KER description

<b>Problem</b>	<p>Companies and organizations managing, owning or supervising large sets of residential homes <b>struggle to incentivise residents to adopt healthier and more energy efficient habits</b>. Many times, sensor deployment initiatives don't make the most of the newly available data.</p> <p><i>How "big" is the problem for your Customers? Would they invest further in solving it?</i></p>
<b>Description</b>	<p>MOBISTYLE Game App is a mobile App providing users with relevant and timely information and recommendations based on their specific home and conditions, and recommendations for improvements (services).</p>
<b>Alternative solution</b>	<p>Current alternatives are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns.</li> </ul> <p><i>Why are the listed solutions "worse" than yours in the Customer perception? Why Customer should move from what currently available and adopt the solution you are proposing? Please explain weaknesses and strengths.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>Integrated application + services that can be provide organizations starting in this field with a faster time to market than if starting from scratch. It is a white label: it can be fully customized to the organization branding.</p> <p><i>This seems to be not so strong point, please rephrase why are you better (considering the Customer perspective) than what currently available and point this out clearly. Why Customers should buy/adopt your solution?</i></p>
<b>"Market" – Target market</b>	<p><u>Target market:</u></p> <ul style="list-style-type: none"> <li>• home energy data management.</li> </ul> <p><u>Customer Segments:</u></p> <ul style="list-style-type: none"> <li>• Companies and organizations managing, owning or supervising large sets of residential homes;</li> <li>• National and Municipal Utility companies.</li> </ul> <p>All of the above must own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</p> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description.</i></p>
<b>"Market" - Competitors</b>	<p><u>Competitors:</u></p> <ul style="list-style-type: none"> <li>• Companies and organizations offering residential energy management systems;</li> <li>• "traditional" gamification-based offerings (even when being less focused, they are perceived as being "similar").</li> </ul> <p><i>Please present the weaknesses comparing to your offering, it is useful in order to stress your uniqueness.</i></p>
<b>"Market" - Size</b>	<p>Current market for residential sensorized applications is quite large and forecasts are for</p>



	<p>explosive growth in the following years, which indicates market size should not be an issue.</p> <p><i>What is the market size for your solution?</i> <i>What is the percentage of that market you will be targeting?</i></p>
<b>"Market" - Trends</b>	<ul style="list-style-type: none"> <li>• Gamification;</li> <li>• <a href="#">IoT</a>;</li> <li>• Sensorization;</li> <li>• Behavioural Change;</li> <li>• Energy efficiency;</li> <li>• Sustainability;</li> <li>• Energy Saving.</li> </ul> <p><i>Are those positively growing trends? Please give a qualitative and quantitative description.</i></p>
<b>Settings - Impact</b>	<p>More in general, there is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours.</p> <p>Economic impact: for larger organizations (mainly public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p> <p>Environmental impact can be very significant, as savings over longer periods and over large number of locations will add up.</p>
<b>Settings - Legal</b>	<p><i>What are the legal requirements?</i> <i>What are the normative requirements?</i> <i>What are the ethical requirements?</i></p>
<b>Go to Market – Use model</b>	<p>Sales and/or licensing: it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.</p> <p><i>Please consider adding more details about the two options (sales vs licensing), this would help in better understanding under which conditions one option is preferable to the other and in which cases.</i></p>
<b>Go to Market – IPR (Background)</b>	<p>According to the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>Considering what currently available has already been made public in the project deliverables, we only see a commercial value in the IP of the heat/water reports and, possibly, on the complex (nightly) missions, both of which are shared IP among HighSkillz and Aalborg University, a memorandum of understanding will be discussed and signed.</p>
<b>Go to Market – Early adopters</b>	<p>Early adopters will be identified and reached as follows:</p> <ul style="list-style-type: none"> <li>• Project partners in the residential markets (Tauron, Himmerland) could be engaged in a 3- to 6- month experimental period, possibly in continuation of the project's activities.</li> <li>• MOBISTYLE <a href="#">CAB</a> and dissemination channels.</li> <li>• Exploitation services support.</li> <li>• Dissemination opportunities at the EU level, following up the policy-level interest identified so far.</li> <li>• Search CORDIS for partners in this area.</li> <li>• Partnership with major cloud providers that offer their own <a href="#">IoT</a> and DigitalTwin platforms, by offering direct integrations with them.</li> </ul>



	<ul style="list-style-type: none"> <li>• Grouping of <a href="#">IoT</a> provider companies.</li> <li>• Create "crafted content" in specialty publications and organizations, on the approach and results.</li> </ul>
<b>Go to Market - Pricing</b>	<p>In terms of per-home pricing it has been indicated that between 1€-10€ per home per month might be sustainable. However, this would depend on volume and on the level of automation of the on boarding, maintenance processes and IT systems, as well as the number of value-added features enabled for the customer.</p> <p>Setup costs for each new organization could be introduced.</p>
<b>Go to Market - Time to market</b>	<p>6 months from time investment is assured.</p> <p><i>Is this planned to happen within the project's life or later? Please clarify.</i></p>
<b>The Team</b>	<p>At this moment we don't have the financial or staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation of 2 previous H2020 <a href="#">RIA</a> projects (via 2 spinoffs) in unrelated areas.</p> <p>For this reason, our preferred exploitation path would be the one in licensing/sale.</p>
<b>The Team – External providers</b>	<p>We have made some contacts with external partners in this area who might be interested in collaborating in the development of a market-ready solution, if investment / funding is available.</p>

### Exploitation Roadmap – MOBISTYLE Game App

Exploitation roadmap	
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>• Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>• Assess with early adopters what would be their ideal integration scenarios.</li> <li>• Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google <a href="#">IoT</a> solutions.</li> <li>• Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>• Implement an initial proof of concept solution that can be used to support an initial batch of 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• HighSkillz - solution definition, with implementation being carried out either by internal or nearshored team.</li> <li>• Specialist organization - sales channel, relationship building.</li> <li>• Domain expert partner - identification of knowledge that can be converted into gamification mechanisms.</li> <li>• For the sale/licensing path, the question is not applicable.</li> </ul>
<b>Actions Monitoring</b>	<ul style="list-style-type: none"> <li>• Interested organization identified, with concrete use case and financial proposal</li> <li>• Funding for productization assured</li> <li>• Productized version launched</li> <li>• First client deployed</li> </ul>
<b>Impact in 3-year time</b>	<p><i>Describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i></p>



<b>Financials Costs</b>	For the non-sale scenario: <ul style="list-style-type: none"> <li>• Productization and setup costs                         <ul style="list-style-type: none"> <li>○ landing pages and marketing (8k€);</li> <li>○ sales and business development (36k€);</li> <li>○ legal (10k€);</li> <li>○ Integration architecture (35k€);</li> <li>○ Backend (25k€);</li> <li>○ Mission Engine (75k€);</li> <li>○ Customer Org Portal (45k€)</li> <li>○ Project management (10k€);</li> </ul> </li> <li>• infrastructure costs (5k/mth -20k€/mth) depending on volume of customers and homes</li> <li>• ongoing operations, support, IT (10k€/month).</li> <li>• 5k€-10k€ direct costs per game and related servers' customization, including setting up of data ingress and egress;</li> <li>• 15k-50k per custom mobile application developer for each customer</li> </ul>
<b>Financials Revenues</b>	At orgs with 1000 homes, 3€/home/month, 36k€/year. With 5 orgs of this topology, break-even is less than 1 year.  For the initial early adopters, the minimum requirements are an Integration Architecture that enables low-latency data ingress. Mobile app development would have variable costs depending on features and complexity
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters, even if at a reduced cost (to ensure some commitment);</li> <li>• Direct contribution of initial pilots;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>
<b>Financials – Timeline for funding</b>	Initial funds (or agreement with pilot organizations) would need to be available 2 to 3 month before the end of the project.

### Characterisation MOBISTYLE Energy and Indoor Environmental Quality Missions

<b>Problem</b>	How to put in use existing sensor-based "data" to incentivise residents to adopt healthier and more energy efficient habits, in a way that maintains sustained engagement.  <i>How relevant is this problem for your Costumers?</i>
<b>Description</b>	Engine/pipeline to promote end-user's behaviour change on energy efficiency and health using sensor-based immediate-feedback gamification mechanics.  <i>Is this a software type of solution?</i>
<b>Alternative solution</b>	Current alternatives are based on: <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns.</li> </ul>



	<p><i>Why are the listed solutions “worse” than yours? Why Customer should move from what currently available and adopt the solution you are proposing? Please explain weaknesses and strengths.</i></p>
<p><b>Unique Selling Point USP - Unique Value Proposition UVP</b></p>	<p>Gamification of energy and health-based activities based on sensors installed in the home, common to all users. Goes beyond traditional threshold or averaging of data by considering time and location when analysing sequences of events, to generate the gamification elements. Has the ability to provide near-instant feedback on actions, increasing the opportunity for lasting engagement. Missions, actions, recommendations, points, and badges are easy to understand, provides actionable and relevant actions and recommendations for end-users. Simple to integrate with existing <a href="#">IoT</a> and sensor-based platforms. Can be extended with custom-purpose scientific-driven mechanics and reports.</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> <li>• Behavioural change approach to home energy management with the use of gamification is bound to produce longer-lasting engagement;</li> <li>• More relevant and targeted recommendations and metrics are more likely to be accepted by the users;</li> <li>• Ability to correlated time-events over time into higher-level events, which can be used in existing and/or shared channels (apps, dashboards, websites, ...);</li> <li>• offer differentiated proposal to users to help them save money.</li> </ul>
<p><b>"Market" – Target market</b></p>	<p><u>Target market:</u></p> <ul style="list-style-type: none"> <li>• home energy data management.</li> </ul> <p><u>Customer Segments:</u></p> <ul style="list-style-type: none"> <li>• Organizations with established IT teams or IT service providers, which own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</li> <li>• National and Municipal Utility companies.</li> <li>• <b>Providers of sensors for homes, which want to provide added value on top of the sensor data (gamification, guidance on behaviour change):</b> ex: <a href="https://www.ista.com">https://www.ista.com</a></li> </ul> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description.</i></p>
<p><b>"Market" - Competitors</b></p>	<p><u>Competitors:</u></p> <ul style="list-style-type: none"> <li>• custom made solutions;</li> <li>• existing threshold-based solutions with existing market presence.</li> </ul> <p><i>You must present the weaknesses comparing to you of the competitors, it is useful in order to stress your uniqueness.</i></p>
<p><b>"Market" - Size</b></p>	<p>Current market for residential sensorized applications is quite large and forecasts are for</p>



	<p>explosive growth in the following years, which indicates market size should not be an issue.</p> <p><i>What is the market size for your solution?</i>  <i>What is the percentage of that market you will be targeting?</i></p>
<b>"Market" - Trends</b>	<ul style="list-style-type: none"> <li>• Gamification;</li> <li>• <a href="#">IoT</a>;</li> <li>• Sensorization;</li> <li>• Behavioural Change;</li> <li>• Energy efficiency;</li> <li>• Sustainability;</li> <li>• Energy Saving.</li> </ul> <p><i>Are those positively growing? Please give a qualitative and quantitative description.</i></p>
<b>Settings - Impact</b>	<p>More in general, there is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours.</p> <p>Economic impact: for larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p> <p>Environmental impact can be very significant, as savings over longer periods and over large number of locations will add up.</p>
<b>Settings - Legal</b>	<p><i>What are the legal requirements?</i>  <i>What are the normative requirements?</i>  <i>What are the ethical requirements?</i></p>
<b>Go to Market – Use model</b>	<ul style="list-style-type: none"> <li>• Identify the target type of companies, managing or having access to large numbers of homes with sensorized environments.</li> <li>• Discuss target behaviours and mapping to available data and implemented techniques.</li> <li>• Support initial "onboarding" through SaaS solution where users can define the integration mechanisms (mapping of properties from their data to the [Energy+<a href="#">IEQ</a>Missions] requirements, permissions, capacity planning).</li> <li>• Create mission packs for specific organization and data availability scenarios.</li> <li>• For companies not having a mobile app, offer customization and support services to provide a branded version of the app, and offer 2<sup>nd</sup> line operational support services.</li> </ul> <p>Either sell or license the technology to:</p> <ul style="list-style-type: none"> <li>• tech provider company with offer in <a href="#">IoT</a> but still lacking gamification capabilities;</li> <li>• large organization (as per Target Market) with own IT capabilities, but lacking gamification capabilities.</li> </ul>
<b>Go to Market – IPR (Background)</b>	<p>According to the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>Considering what currently available has already been made public in the project deliverables, we only see a commercial value in the IP of the heat/water reports and, possibly, on the complex (nightly) missions, both of which are shared IP among HighSkillz and Aalborg University, a memorandum of understanding will be discussed and signed.</p>
<b>Go to Market – Early adopters</b>	<p>Early adopters will be identified and reached in the following way:</p> <ul style="list-style-type: none"> <li>• Project partners in the residential markets (Tauron, Himmerland) could be engaged in a 3- to 6- month experimental period, possibly in continuation of the project's</li> </ul>



	<p>activities.</p> <ul style="list-style-type: none"> <li>• MOBISTYLE <a href="#">CAB</a> and dissemination channels.</li> <li>• Exploitation services support.</li> <li>• Dissemination opportunities at the EU level, following up the policy-level interest identified so far.</li> <li>• Search CORDIS for partners in this area.</li> <li>• Partnership with major cloud providers that offer their own <a href="#">IoT</a> and DigitalTwin platforms, by offering direct integrations with them.</li> <li>• Grouping of <a href="#">IoT</a> provider companies.</li> <li>• Create "crafted content" in specialty publications and organizations, on the approach and results.</li> </ul>
<b>Go to Market - Pricing</b>	<p>In terms of per-home pricing and it indicated that between 1€-10€ per home per month might be sustainable. But this would depend on volume and on the level of automation of the onboarding, the maintenance processes and IT systems, as well as the amount of value-added features enabled for the customer.</p> <p>Also, there might be setup cost for each new organization.</p> <p>For the sales/licensing path, it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.</p>
<b>Go to Market – Time to market</b>	<p>6 months from time investment is assured.</p> <p><i>Is this planned to happen within the project's life or later? Please clarify.</i></p>
<b>The Team</b>	<p>At this moment we don't have the financial or staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation of 2 previous H2020 <a href="#">RIA</a> projects (via 2 spinoffs) in unrelated areas.</p> <p>For this reason, our preferred exploitation path would be the one in licensing/sale.</p>
<b>The Team – External providers</b>	<p>We have made some contacts with external partners in this area who might be interested in collaborating in the development of a market-ready solution, if investment / funding is available.</p>

### Exploitation Roadmap - MOBISTYLE Energy and Indoor Environmental Quality Missions

Exploitation roadmap	
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>• Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>• Assess with early adopters what would be their ideal integration scenarios.</li> <li>• Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google <a href="#">IoT</a> solutions.</li> <li>• Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>• Implement an initial POC solution that can be used to support an initial batch of 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• HighSkillz - solution definition, with implementation being carried out either by internal or nearshored team.</li> <li>• Specialist organization - sales channel, relationship building.</li> <li>• Domain expert partner - identification of knowledge that can be converted into</li> </ul>



	<p>gamification mechanisms.</p> <ul style="list-style-type: none"> <li>• For the sale/licensing path, the question is not applicable.</li> </ul>
<b>Actions Monitoring</b>	<ul style="list-style-type: none"> <li>• Interested organization identified, with concrete use case and financial proposal</li> <li>• Funding for productization assured</li> <li>• Productized version launched First client deployed</li> </ul>
<b>Impact in 3-year time</b>	<p><i>Describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i></p>
<b>Financials Costs</b>	<p>For the non-sale scenario:</p> <ul style="list-style-type: none"> <li>• Productization and setup costs <ul style="list-style-type: none"> <li>○ landing pages and marketing (8k€);</li> <li>○ sales and business development (36k€);</li> <li>○ legal (10k€);</li> <li>○ Integration architecture (35k€);</li> <li>○ Backend (25k€);</li> <li>○ Mission Engine (75k€);</li> <li>○ Customer Org Portal (45k€)</li> <li>○ Project management (10k€);</li> </ul> </li> <li>• infrastructure costs (5k/mth -20k€/mth) depending on volume of customers and homes</li> <li>• on-going operations, support, IT (10k€/month).</li> <li>• 5k€-10k€ direct costs per game and related servers' customization, including setting up of data ingress and egress;</li> </ul> <p><i>When the listed costs need to be covered? It would be an initial investment or costs are spread over a longer period of time?</i></p>
<b>Financials Revenues</b>	<p>At orgs with 1000 homes, 2€/home/month, 24k€/year. With 8 orgs of this topology, breakeven is less than 1 year.</p> <p>For the initial early adopters, the minimum requirements are an Integration Architecture that enables low-latency data ingress.</p>
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters, even if at a reduced cost (to ensure some commitment);</li> <li>• Direct contribution of initial pilots;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>
<b>Financials – Timeline for funding</b>	<p>Initial funds (or agreement with pilot organizations) would need to be available 2 to 3 month before the end of the project.</p>



*Lean Canvas MOBISTYLE Game App*

<p><b>Problem 1)</b> Companies and organizations managing, owning or supervising large sets of residential homes struggle to incentivise residents to adopt healthier and more energy efficient habits. Many times, sensor deployment initiatives don't make the most of the newly available data.</p>	<p><b>Solution 4)</b> Mobile app providing users with relevant and timely information and recommendations based on their specific home and conditions, and recommendations for improvements (services).</p>	<p><b>Unique Value proposition 3)</b> Gamification of energy and health-based activities based on sensors installed in the home, common to all users;</p> <p>Easy to understand, actionable and relevant recommendations for end-users;</p> <p>Existing application code ready to be customized to the organization branding.</p>	<p><b>Unfair Advantage 7)</b> The approach to identify the behaviours from real-world data and detect actions from the end-users is non-trivial to implement at a scale.</p> <p>Acquisition costs require onboarding organizations, integrating with their particular flavour of data sources, adaptation of the behaviours and recommendations, and providing the data to power their own applications.</p>	<p><b>Customer segment 2)</b></p> <ul style="list-style-type: none"> <li>• Companies and organizations managing, owning or supervising large sets of residential homes;</li> <li>• National and Municipal Utility companies;</li> </ul> <p>All of the above must own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</p>
<p><b>Current alternatives</b> are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns</li> </ul>	<p><b>Key Metrics 6)</b> Changes in behaviour and/or consumption profiles.</p> <p>Number of organizations adopting the game.</p>		<p><b>Channels 5)</b> Home and business real estate associations; Environmental and energy efficiency associations; Direct contacts with National and Municipal Utility companies.</p>	<p><b>Early Adopters</b> People involved with the project already through the project partners in the residential cases (Tauron, Himmerland). Companies being contacted via the <a href="#">CAB</a>.</p>



<p><b>Cost structure 8)</b>          Conversion from <a href="#">MVP</a> to commercial product;          On boarding costs for new companies (adaptors for new / additional data sources, data adaptation), programming and deployment of new behaviours, hosting/processing/storage, helpdesk costs for the customer organizations, monitoring/operation/support costs;          Adaptors to provide data to existing mobile apps of the customer organizations;          * 10k per game and related servers' customization</p>	<p><b>Revenue Streams 9)</b>          In terms of per-home pricing and it indicated that between 1€-10€ per home per month might be sustainable. But this would depend on volume and on the level of automation of the on boarding, maintenance processes and IT systems, as well as the number of value-added features enabled for the customer;          Also, there might be setup cost for each new organization.          For the sales/licensing path, it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.</p>
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*Lean Canvas MOBISTYLE Energy and Indoor Environmental Quality Missions*

<p><b>Problem 1)</b>          How to use existing sensor-based "data" to incentivise residents to adopt healthier and more energy efficient habits, in a way that maintains sustained engagement</p>	<p><b>Solutions 4)</b>          Software solution: engine/pipeline to promote end-user behaviour change on energy efficiency and health using sensor-based immediate-feedback gamification mechanics</p>	<p><b>Unique Value proposition 3)</b>          Gamification of energy and health-based activities based on sensors installed in the home, common to all users.          Goes beyond traditional threshold or averaging of data by taking into account time and location when</p>	<p><b>Unfair Advantage 7)</b></p>	<p><b>Customer segment 2)</b></p> <ul style="list-style-type: none"> <li>• Organizations with established IT teams or IT service providers, which own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more</li> </ul>
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D5.4: Business Plan Development

<p><b>Current alternatives</b> are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> </ul> <p>awareness campaigns</p>	<p><b>Key Metrics 6)</b></p>	<p>analyzing sequences of events, to generate the gamification elements; Has the ability to provide near-instant feedback on actions, increasing the opportunity for lasting engagement; Missions, actions, recommendations, points, and badges are easy to understand, provides actionable and relevant actions and recommendations for end-users. Simple to integrate with existing <a href="#">IoT</a> and sensor-based platforms; Can be extended with custom-purpose scientific-driven mechanics and reports.</p>	<p><b>Channels 5)</b> Home and business real estate associations; Environmental and energy efficiency associations; Direct contacts with National and Municipal Utility companies</p>	<p>energy efficient habits.</p> <ul style="list-style-type: none"> <li>• National and Municipal Utility companies.</li> <li>• Providers of sensors for homes, which want to provide added value on top of the sensor data (gamification, guidance on behaviour change): ex: <a href="https://www.ista.com">https://www.ista.com</a></li> </ul> <p><b>Early Adopters</b> People involved with the project already through the project partners in the residential cases (Tauron, Himmerland). Companies being contacted via the <a href="#">CAB</a></p>
<p><b>Cost structure 8)</b></p> <ul style="list-style-type: none"> <li>• landing pages and marketing (8k€);</li> <li>• sales and business development (36k€);</li> <li>• legal (10k€);</li> <li>• Integration architecture (25k€);</li> <li>• Backend (25k€);</li> <li>• Mission Engine (75k€);</li> <li>• project management (10k€);</li> <li>• on-going operations, support, IT (10k€)</li> </ul>		<p><b>Revenue Streams 9)</b> At orgs with 1000 homes, 2€/home/month, 24k€/year With 8 orgs of this typology, <b>break-even is less than 1 year</b></p>		



### 2.3 MOBISTYLE Expert tool (DEMO Consultants, NL)

Within the MOBISTYLE project, the Expert Tool allows the visualization and management of a big amount of data available in the different demonstration cases. The experts are able to filter the information they need, to calculate pre-defined KPIs, but also to set up their own KPIs. The Expert Tool has been designed in such a way that it fixes only some boundary conditions. It allows the user to filter information, make simple calculations, and export the data in the most suitable way.

The Expert Tool is built upon the existing RE Suite software package developed and commercialized by the consortium partner DEMO Consultants. In general terms the Expert Tool will be an additional module to the RE Suite package for real estate asset management.

With the Expert Tool, you can:

- 1) Manage data. The expert has access to the data for visualization, filtering and validation purposes.
- 2) Calculate KPI's. The expert is able to visualize and download KPIs on energy, comfort and health.
- 3) Support the needs of third parties tools. The expert is able to export the data in the most suitable format. This functionality guarantees the interoperability between the Expert Tool and the other software programs used by the expert for evaluation and analysis purposes.

#### Characterisation Expert Tool – KER description

<p><b>Problem</b></p>	<p>Due to low cost sensor techniques the amount of data collected from various physical quantities is expanding rapidly. In the construction sector, building managers and owners deal with a lot of different data and information – such as sensors data, smart meter data, energy bills, <a href="#">BIM</a> models, condition assessment, etc. – coming from different sources and available in different formats.</p> <p>Nevertheless, in some situations this data is easily accessible, available or readable; whereas in other situations the required data can be difficult to extract and difficult to interpret in a homogeneous and clear way.</p> <p><i>Which is the dimension of the problem for the Customer you would like to address?</i></p>
<p><b>Description</b></p>	<p>The Expert Tool is a software tool for energy and <a href="#">IEQ</a> monitoring in asset management. The tool is based on the Real Estate (RE) Suite software solutions, including the relevant software applications and modules, developed by DEMO Consultants.</p> <p>RE Suite supports among other topics an objective and measurable condition assessment methodology for existing buildings and building components for multi annual maintenance plans and asset management.</p> <p>The Expert Tool is an additional application added to the RE Suite software package. The Expert Tool is a visualization and data management tool that provides access to sensors and metadata for check, filtering, and validation.</p> <p>It enables the calculation and visualization of KPIs and will support data needs of third-party tools satisfying interoperability requirements.</p> <p>The Expert Tool is designed in such a way that it fixes only some boundary conditions, giving the freedom to the user to filter information, make simple calculations, and export the data in the most suitable way.</p>

<p><b>Alternative solution</b></p>	<p>There are different software and tools for building asset management, for example SCADA systems and Building Management System. However, there are none or very few that can organize and disclose heterogeneous information in a systematic way.</p> <p><i>Please list the ones which “can organize and disclose heterogeneous information in a systematic way”, please present their strengths and weaknesses.</i></p>
<p><b>Unique Selling Point USP - Unique Value Proposition UVP</b></p>	<p>The Expert Tool is part of an already existing software package, the RE Suite, which enables the collection, structuring, organization, analysis and disclosure of heterogeneous information in a systematic way for real estate asset management. The Expert Tool is composed not only by the user interface but also the database for data collection. This means that the whole infrastructure is already developed and available to collect data from different sources and store it in a usable and harmonized way.</p> <p><i>Is there any possibility to measure and quantify the added value for the customers? Fact and data would help in better presenting the UVP.</i></p>
<p><b>"Market" – Target market</b></p>	<p>Real estate owners and managers. Early adopter will be on DEMO's current main business client: housing associations in the Netherlands. In later stage and further development of the tool, the second targeted group will be hospitals.</p>
<p><b>"Market" - Competitors</b></p>	<p>On the market Building Management Systems are available. These are usually quite complex and expensive to be used. Moreover, it is not always easy to export data from these systems (such as the SCADA system). On the other hand, they manage the whole data collection for the building, showing data and KPIs on dashboard. Compared with these tools, the ExpertTool has the added value that can be used as interface for more simple data collection services such as SQL and SFTP database. Moreover, it offers full compatibility with other tools and can easily export raw/combined data. <a href="#">BMS</a> systems only allow data collection for mechanical, <a href="#">HVAC</a>, and electrical systems. The Expert Tool works as interface; hence all type of systems and sensors can be connected to it.</p> <p><i>It's nice to have a direct comparison with competing solutions, this should be reported in the Alternative solutions box and should be used to better define the UVP.</i></p>
<p><b>"Market" Size</b></p>	<p>Market focus is in the Netherlands where there are 7.8 million houses (in 2018). In the Netherlands there are 389 housing associations (early adopters of the solution) which own almost 3 million homes, representing 38,5% of the total number of homes in the Netherlands.</p>
<p><b>"Market" Trends</b></p>	<p>In the context of sustainability, smart buildings, energy savings, the commercial solutions related to sensing systems, smart systems, and their user interfaces are increasing consistently.</p> <p><i>Any number to be presented?</i></p>



<b>Settings - Impact</b>	<p><b>Economic Impact:</b> the Expert Tool allows a lean management of all the complex smart systems in a real estate object and support the definition of smart multi annual maintenance plans and management strategies.</p> <p><b>Public acceptance:</b> the user is interested in a user friendly, simple, and combined solution.</p> <p><b>Environmental impact:</b> the expert tool goes in the direction of the supporting the development of smart buildings and helps to decrease energy consumption.</p>
<b>Settings - Legal</b>	<p>GDPR compliance.</p> <p><i>What are the legal requirements?</i></p> <p><i>What are the normative requirements?</i></p>
<b>Go to Market – Use model</b>	<p>The Expert Tool will be sold for use through a periodic user license (SaaS model). Moreover, the Expert Tool will support consultants within the company (DEMO) who will provide an additional service in consultancy activities.</p>
<b>Go to Market – IPR (Background)</b>	<p>The Expert Tool is developed by DEMO Consultants only.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>The Expert Tool will be commercialized by DEMO Consultants only.</p>
<b>Go to Market – Early adopters</b>	<p>Early adopters (housing associations in the Netherlands) will be approached by participating to national targeted commercial events.</p> <p>Moreover, DEMO Consultants organise periodically dissemination events where current and potential clients are invited to discuss important topics and challenges in the field and to test also DEMO solutions.</p> <p>DEMO Consultants usually invites clients to participate in research activities to further develop their tools and test them on site.</p>
<b>Go to Market - Pricing</b>	<p>The license of the Expert Tool will be sold for € 100,00 / month + € 5,00 for each apartment connected / month.</p> <p>Fee depends also on the number of apartments and sensors that will have to be connected to the expert tool for each apartment and from the number of apartments.</p>
<b>Go to Market – Time to Market</b>	<p>The solution will be ready for the market at TRL 9 within 2 years.</p> <p>It is currently at TRL 7.</p>
<b>The Team</b>	<p>The team within DEMO Consultants (André van Delft- CEO and data management expert, Peter Allemekinders - Senior software developer, Maurijn Neumann - software developer, Sander van Gennip- software developer, Oana Schippers - Trifan – (knowledge transition and communications) is skilled to consult and further develop and implement the expert tool to the users.</p>
<b>The Team – External providers</b>	<p>Cooperation with technicians from the client or other company providers is necessary to support the installation of the smart sensors and systems and for the connection within these systems and the expert tool.</p>



*Exploitation Roadmap – MOBISTYLE Expert Tool*

Exploitation roadmap	
<b>Actions Description</b>	<p>Actions 3-6 months after the project ends consist of finalizing the Expert tool with a smarter and more user-friendly interface following the feedback from the validation.</p> <p>The Expert tool will be further tested in other research projects where additional functionalities will be implemented.</p>
<b>Actions - Roles</b>	The only partner involved is DEMO Consultants.
<b>Actions Monitoring</b>	After 1 year after the project ends the expert tool will be further developed in at least 2 other research projects: <a href="#">BIM</a> Speed, SAFEWAY wherein DEMO Consultants is partner.
<b>Impact in 3-year time</b>	The further development of the expert tool will allow hiring at least 1 junior software developer and 1 consultant.
<b>Financial Costs</b>	Type of costs: hosting infrastructure, helpdesk, personnel to guarantee connection between the RE Suite and the building sensors, costs to engage customer (e.g. DEMO studio workshops; participation at fairs, etc.), commercial (online) campaigns.
<b>Financials - Revenues</b>	<p>After 1 year: 1 client with 100 apartments = 100€/month (software license) + 5,00€/month (connecting apartments to database and expert tool) &gt;&gt; 7200 €/year.</p> <p><b>basic assumptions* euro's /month:</b>  price license expert tool/organisation € 100,00  price license expert tool/apartment € 5,00  cost for hosting, helpdesk etc./organisation</p> <p><b>euro's/year</b>  entry level € 5.000,00  additional/apartment € 20,00</p>
	After 3 years: 1 client with 200 apartments and 1 client with 1500 apartments = 69.600€/year.
<b>Financials - Other sources</b>	Own budget, other research projects budget, pilots.
<b>Financials – Timeline for funding</b>	<p>First financing is needed right after the end of the project, to finalize the development of the tool up to TRL 9.</p> <p>Then after 3 years to push for market uptake.</p>



*Lean Canvas – MOBISTYLE Expert Tool*

<p><b>Problem 1)</b> Building manager deals with a lot of different kind of building information (sensors data, bills, condition assessment, energy consumption, <a href="#">BIM</a>, etc).</p> <p>Sensors data have different format and structure. Providers have their own apps to access data. It is too heterogeneous if we consider the use of different sensors' brand on site.</p> <p>Building data and information are very heterogeneous and complex.</p>	<p><b>Solutions 4)</b> <b>Top 3 features</b></p> <p>Software tool for energy and <a href="#">IEQ</a> monitoring in asset management.</p> <p>Access to data and visualization on graphs and dashboard (Both raw data and KPI).</p> <p>Filtering of information that wants to be visualized.</p> <p>Export functionality in csv and json.</p>	<p><b>Unique Value proposition 3)</b> Collect and disclose in a harmonious way information (data) and enable easy interpretation of this information in forms of KPIs for further management and analysis purposes (as a service).</p> <p><u><i>A market analysis on competitors is not yet done though.</i></u></p>	<p><b>Unfair Advantage 7)</b> Expert Tool as part of a complete software package (already commercialised) for real estate asset management.</p>	<p><b>Customer segment 2)</b> The organizations using the expert tool are expected to be mainly, housing associations of which there are about 350 in the Netherlands. Together they own and manage a housing stock of about 2,5 mln. households. Next to housing associations, ESCO's and private investors, like pension funds corporations, also own and manage large amounts of houses in NL. Also, for these kinds of associations the expert tool will be interesting.</p> <p>In short:</p> <ul style="list-style-type: none"> <li>- Real estate companies;</li> <li>- Real estate management companies;</li> <li>- Real estate owners;</li> <li>- Real estate developers;</li> <li>- Utility providers (such as consortium partner TAURON, interested in these data for customer segmentation and understanding, and targeted marketing);</li> <li>- Service companies (expanding portfolio of product and services).</li> </ul>
<p><b>Existing alternative:</b> Building Management Systems to access data. In residential cases, several single tools are available but not interconnected solutions available</p>	<p><b>Key Metrics 6)</b> Number of licenses sold, in extension to existing customers</p> <p>Period of paid use</p>		<p><b>Channels 5)</b></p> <p>Approach existing clients providing this additional service</p> <p>Specific fairs (e.g. <a href="#">CorporatiePlein</a> – Dutch housing corporation endorsed event ) and journals (e.g. <a href="#">Vastgoed Journal</a> – Dutch Real Estate dedicated journal)</p> <p>Umbrella organization for housing association (but mainly for raising awareness)</p>	<p><b>Who are the early adopters?</b> Firstly, the existing customers of DEMO:</p> <ul style="list-style-type: none"> <li>- Municipalities of: Krimpenerwaard, Almere;</li> <li>- Housing associations: STEK, TBV Wonen, SCW Tiel, Delta Wonen, Lefier;</li> <li>- Hospitals: Rijnstate Hospital in Arhem;</li> </ul> <p>Secondly real estate owners and developers with whom joint initiatives have taken place:</p> <ul style="list-style-type: none"> <li>- Housing associations in the Netherlands (e.g. <a href="#">Stek Wonen</a>; <a href="#">Woonstad Rotterdam</a>,</li> </ul>

			DEMO Studio (periodic company initiative to network, investigate customer needs, promote)  Online communications on social media and website.	<a href="#">Vestia</a> , etc.) - Hospitals (e.g. Erasmus MC in Rotterdam, NL, Reinier de Graaf in Delft, NL); - RE Developers: <a href="#">Camelot Europe</a> (Netherlands)
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**Cost structure (when solution is ready for the market) 8)**

Type of costs: hosting infrastructure, helpdesk, personnel to guarantee connection between the RE Suite and the building sensors, costs to engage customer (e.g. DEMO studio workshops; participation at fairs, etc.), commercial (online) campaigns.

basic assumptions*	euro's /month
price license expert tool/organisation	€ 100,00
price license expert tool/apartment	€ 5,00
euro's/year	
cost for hosting, helpdesk etc./organisation	
entry level	€ 5.000,00
additional/apartment	€ 20,00

\* not included costs for sensors and placing of sensors

**Revenue Streams (after 6 months and 3 years) 9)**

The license of the Expert Tool will be sold for € 100,00 / month + € 5,00 for each apartment connected / month. Fee depends also on the number of apartments and sensors that will have to be connected to the expert tool for each apartment and from the number of apartments.

	year				
	1	2	3	4	5
number of customers organisations	1	2	4	8	12
connected appartm. /org	100	200	400	800	1600
apartments in total	100	400	1600	6400	19200

**Costs**

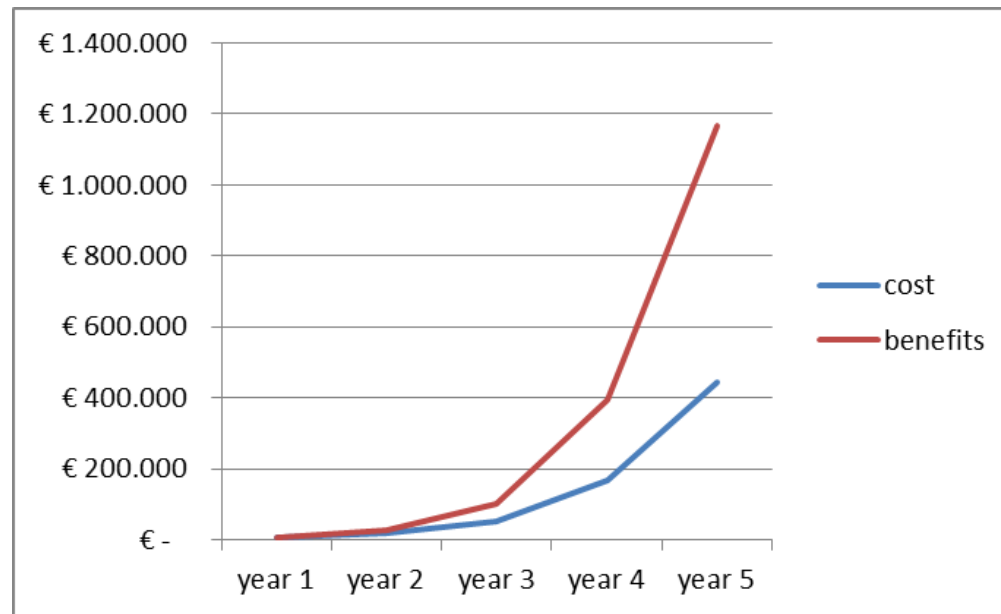
	year 1	year 2	year 3	year 4	year 5
hosting infrastructure	€ 7.000	€ 18.000	€ 52.000	€ 168.000	€ 444.000
helpdesk personnel					

**Revenues**

	year 1	year 2	year 3	year 4	year 5
license expert tool/org	€ 1.200	€ 2.400	€ 4.800	€ 9.600	€ 14.400
license expert tool/app.	€ 6.000	€ 24.000	€ 96.000	€ 384.000	€ 1.152.000
<b>total revenues</b>	<b>€ 7.200</b>	<b>€ 26.400</b>	<b>€ 100.800</b>	<b>€ 393.600</b>	<b>€ 1.166.400</b>
<b>Gross profit margin</b>	<b>€ 200</b>	<b>€ 8.400</b>	<b>€ 48.800</b>	<b>€ 225.600</b>	<b>€ 722.400</b>







**Cost vs. benefits – Y1-Y5**



## 2.4 MOBISTYLE Dashboard (Holonix, IT)

### Characterisation MOBISTYLE Dashboard – KER description

<b>Problem</b>	<p>People living in building generates a lot of different kind of building information but have no access to them in an easy manner, or not available at all.</p> <p><i>Which is the “dimension” of the problem from the Customer perspective?</i></p>
<b>Description</b>	<p>Desktop and mobile tool for personalized energy and <a href="#">IEQ</a> monitoring in buildings, with a suggestions system to guide users.</p>
<b>Alternative solution</b>	<ul style="list-style-type: none"> <li>• Building Management Systems to access data.</li> <li>• Home systems.</li> <li>• Office systems.</li> <li>• But all of them give access to partial data.</li> </ul> <p><i>Please add weaknesses and strengths of the alternative solutions, this will help to compare and to quantify added value of your solution.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>The solution drives users to consciousness creation and behaviour change about home energy consumption and Indoor Environmental quality. Expected results can be summarized in:</p> <ul style="list-style-type: none"> <li>- energy consumption reduction of about 16%;</li> <li>- awareness on energy efficiency and alternatives, increase of about 50%.</li> </ul> <p>MOBISTYLE dashboard statement: Behavioural change approach to home energy management and unique information point.</p>
<b>"Market" – Target market</b>	<p>- <u>What is the target market?</u> Households and buildings manager.</p> <p>- <u>Who are the customer segments?</u> Companies or organizations managing, owning or supervising large sets of homes (including non-residential as hotels and short rent apartments) and day life buildings (as offices, schools, universities).</p> <p>All of the above must own or have access to large numbers of sensors installed.</p> <p>- <u>Who might be the early adopter (those you might address first)?</u> - Known short rent apartment management organization, in Northern Italy. - Hotels connected to the Orologio hotels association (MOBISTYLE pilot), who expressed their interest.</p>
<b>"Market" - Competitors</b>	<p>Competitors: Single solution providers (smart metering, smart appliances, etc.) and building management’s systems providers.</p> <p><i>What are the weaknesses of competitors comparing to you?</i></p>
<b>"Market" Size</b>	<p><u>What is the market size for your solution?</u> Global energy management system market valued at USD 18,269.6 Mn in 2018 and is projected to reach USD 48,901.1 Mn by the end of 2026, exhibiting a CAGR of 13.7% during the forecast period (2019 – 2026). <a href="https://www.fortunebusinessinsights.com/industry-reports/energy-management-system-market-101167">https://www.fortunebusinessinsights.com/industry-reports/energy-management-system-market-101167</a></p> <p><u>What is the percentage of that market you will be targeting?</u> To answer, we should discover how many energy management systems are specific for hotels and short rent apartments, and offices/public buildings. No data found. If you are dealing with training, provide information on the size of potential beneficiaries. If you</p>

	deal with policy recommendations provide an estimation of how many people/SMEs will be affected.
<b>"Market" Trends</b>	Energy Efficiency; Sustainability; <a href="#">IoT</a> ; Behavioural Change. <i>Please give a qualitative and quantitative description.</i>
<b>Settings - Impact</b>	<u>What is the public acceptance?</u> Using mobile is totally accepted. Using an APP to receive information and notifications is generally accepted. <u>What is the social impact?</u> Doing something positive for the planet, is actually a mainstream. Starting from own environment is the starting point for many people. <u>- What is the environmental impact?</u> Reducing everyone' energy consumption at home is one of the main topics of working on improving own's environmental impact. Alone it is not enough, but it is something tangible and with the APP it can be measured and compared to previous behaviour. <u>What is the economic impact?</u> Reducing energy consumption, reduces bills.
<b>Settings - Legal</b>	<u>What are the legal requirements?</u> Only GDPR related. <u>What are the ethical requirements?</u> Sharing information is part of the actual sharing economy, being more and more accepted. Anyway, if the solution is used not sharing any sort of information with externals, improving own' footprint on the environment is generally considered as positive or, at worst, not of interest.
<b>Go to Market – Use model</b>	<b>Sell</b> the solution to organizations that wants to improve their customers/users experience in terms of energy consumption consciousness and that wants to improve the behaviour of people on these topics. This means selling to sensorized companies, as the core business of Holonix does not include the sensorization of buildings. A partnership could be considered. Partnership with DEMO is under discussion.  <i>Please explain what the next steps are to take, the action points, milestones regarding the commercialisation.</i>
<b>Go to Market – IPR</b>	As stated in the Consortium Agreement.
<b>Go to Market – IPR</b>	As stated in the Consortium Agreement.
<b>Go to Market – Early adopters</b>	Starting from MOBISTYLE partners, who declared to be interested in the solution and proposed the solution to their associations and municipalities.  <i>What about outside of the consortium?</i>
<b>Go to Market - Pricing</b>	After 6 months, still early adopters.  <i>What is the estimation of price/unit and number of units sold to reach the breakeven point?</i>
<b>Go to Market – Time to markets</b>	1 year for additional developments (User interface to be improved), partnerships definition and commercial contacts.  <i>Please consider that estimated time to market influence the plan needed to timely assure proper resources for the additional development.</i>
<b>The Team</b>	IT, ICT, project management, business developments, administration are skills existing in Holonix. The exploitation will be made as a new business unit in Holonix, not as a new company.



<b>The Team – External providers</b>	The expertise of MOBISTYLE experts about energy consumption and indoor environmental quality is something relevant that cannot be a Holonix skill, and there will be the need of a partnership with universities, or other form of cooperation.
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*Exploitation Roadmap – MOBISTYLE Dashboard*

Exploitation roadmap	
<b>Actions Description</b>	<p>3 months: second version implementation of the front end, considering usability improved + experts’ partnership + website and marketing material ready + sales contacts to early adopters + internal staff preparation.</p> <p>6 months: full dashboard developments with database in HOLX premises structured.</p> <p>More than 6: early adopter deployment</p>
<b>Actions - Roles</b>	<p>Roles of partners involved only HOLONIX.</p> <p>MOBISTYLE partners will be called as first choice for partnerships: DEMO for the databases and data gathering from sensors, POLITO for energy management, IRI-UL for change behaviour.</p> <p>Then external contacts will be approached.</p>
<b>Actions Monitoring</b>	<p>3 months: second version implementation of the front end, considering usability improved + experts’ partnership + website and marketing material ready + sales contacts to early adopters + internal staff preparation.</p> <p>6 months: full dashboard developments with database in HOLX premises structured.</p> <p>More than 6: early adopter deployment.</p>
<b>Impact in 3-year time</b>	<p><i>Please describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i></p>
<b>Financial Costs</b>	<p>Type of costs:            hosting infrastructure: 1.000 euro every 100 users connected.</p> <p>Helpdesk: 1-person month every 50 customers (around 30.000 euro of company cost per year).</p> <p>Personnel to guarantee connection with the building sensors: 1-person month every 100 buildings (around 30.000 euro of company cost per year).</p> <p>Personnel for customizations and initial deployment: 1 person (around 30.000 euro of company cost per year).</p> <p>Costs to engage customer and dedicated commercial campaign: sales budget 15.000 euro. Personnel included in Holonix costs.</p> <p><u>After 3 years:</u>            700 users connected: 7.000 euro hosting            1 person in helpdesk: 30.000 personnel            3 developers: 90.000            Dedicated commercial campaign: 15.000            Total per year: 142.000 euro</p> <p>Considering indirect costs (25% of business unit costs: 35500 euro), year 3 will begin with earnings increasing Holonix business.</p>



<b>Financials - Revenues</b>	<p><u>After 6 months, still early adopters:</u></p> <ul style="list-style-type: none"> <li>- Short rent apartment organization, pilot in 5 apartments connected: 80euro per apartment per month -&gt; 400 euro per month</li> <li>- 3 hotels of the association, pilot in 4 rooms per hotel (total 12 rooms): 50 euro per room per month -&gt; 600 euro per month</li> </ul> <p><u>After 3 years, real common customers:</u></p> <ul style="list-style-type: none"> <li>- Short rent apartments, at least 400 apartments connected for a average price of 40 euro per apartment per month: 1.600 euro per month</li> <li>- Sort rent apartment – entering customization fee for 150 new apartments, at 400 euro: 60000 per year.</li> <li>- 10 Hotels with an average of 10 rooms connected, at average price of 30 euro per room per month -&gt; 3.000 euro per month</li> <li>- Hotels – entering customization fee, for 5 new hotels per year, at 2000 euro: 10.000 per year.</li> <li>- Offices of 7 medium companies, connecting about 10 rooms each, at a company price of 150 euro per month -&gt; 1.050 euro per month</li> <li>- Offices – entering customization fee, for 50 new offices, at 400 euro: 20.000 per year.</li> <li>- Public organization (university / municipality), connecting 3 buildings with 30 main rooms each, at a building price of 300 euro -&gt; 900 euro per month</li> <li>- Public – entering customization fee, for 1 new building per year, at EUR 5.000,00</li> </ul> <p>Monthly income expected: EUR 6.550/month (EUR 87.600,00/year).                  Customization fee: 60.000 + 10.000 + 20.000+ 7.000 = EUR 95.000,00                  Total income expected per year: EUR 182.600,00</p>
<b>Financials - Other sources</b>	Partners own budget. This will be supported by participation to other projects proposals in similar domains, in industry 4.0 domain (which is Holonix core business and supports the data gathering and sensorization aspects), in Fast Track-to-Innovation, and in local and regional vouchers.
<b>Financials – Timeline for funding</b>	If early adopters start using the solution within 6 months, or January 2021, then funds are needed to grow up the solution. Otherwise, on the end of 6 months funds will be needed to look for other early adopters and improve sales activities.



*Lean Canvas – MOBISTYLE Dashboard*

<p><b>Problem 1)</b>                  People living in building generates a lot of different kind of building information but have no access to them in an easy manner, or not available at all. I.e. in houses: energy consumption data are available only reading directly the meter, which is usually not in the apartment, or in the consumption bill; in shared buildings as offices and universities: energy consumption data are not available to occupants.  <a href="#">IEQ</a> is even less monitored in buildings. Even if energy and <a href="#">IEQ</a> (Indoor Environmental Quality) information can be accessed in an easy manner, people usually don't know how to change behaviour in order to improve performances.</p> <p><b>Existing alternative:</b>                  Building Management Systems to access data. Home systems. Office systems. But all of them gives access to partial data.</p>	<p><b>Solutions 4)</b>  <b>Top 3 features</b>                  Access to easy-to-understand single data and visualization of graphs.</p> <p>Personalized dashboards for user. Monitoring can be punctual, or trends related. It has to be easy-to-understood at a first glance.                  Users can be owners, managers, occupants. Each of them can have access to different rooms and to different data through highly personalized dashboards.                  Users receive suggestions about how it can be possible to improve performances, reducing energy consumption and improving <a href="#">IEQ</a>.</p>	<p><b>Unique Value proposition 3)</b>                  Desktop and mobile tool for personalized energy and <a href="#">IEQ</a> monitoring in buildings, with a suggestions system to guide users. Expected results in:                  - energy consumption reduction of about 16%                  - awareness on energy efficiency and alternatives, increase of about 50%</p>	<p><b>Unfair Advantage 7)</b>                  Dashboard as part of MOBISTYLE solution, with partnership with experts.</p> <p><a href="#">IOT</a> deep experience and knowledge in HOLONIX.</p> <p>HOLONIX organization to be used (administrative, HR, strategy, commercial, marketing, etc) not needing a dedicated company, but only a business unit.</p>	<p><b>Customer segment 2)</b>                  Starting from:                  Hotels in Italy                  Public organizations in Slovenia                  Short rent apartment in Italy</p> <p>Many potential others, i.e.:                  Housing associations                  Real estate agencies                  Municipalities                  Contractors                  Hospitals                  Elderly people rest houses                  Offices</p> <p><b>Early adopters</b> can be:                  - Known short rent apartment management organization, in Northern Italy                  - Hotels connected to the Orologio hotels association (MOBISTYLE pilot), who expressed their interest</p>
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	<p><b>Key Metrics 6)</b>          Period of paid use: at least 3 years of licensing per license</p> <p>Number of apartment/buildings connected: at least 30 new per year</p> <p>Number of active users: at least 1 per room connected per period.</p>		<p><b>Channels 5)</b>          For early adopters: direct contacts.</p> <p>For other potential customers:          HOLONIX Sales force          Fairs and events of the specific sector</p>	
<p><b>Cost structure (when solution is ready for the market) 8)</b> Considering only HOLONIX Business Unit costs</p> <p>Type of costs:</p> <ul style="list-style-type: none"> <li>- Hosting infrastructure: 1.000 euro every 100 users connected.</li> <li>- Helpdesk: 1-person month every 50 customers (around 30.000 euro of company cost per year).</li> <li>- Personnel to guarantee connection with the building sensors: 1-person month every 100 buildings (around 30.000 euro of company cost per year).</li> <li>- Personnel for customizations and initial deployment: 1 person (around 30.000 euro of company cost per year).</li> <li>- Costs to engage customer and dedicated commercial campaign: sales budget 15.000 euro. Personnel included in Holonix costs.</li> </ul> <p>After 3 year:</p> <ul style="list-style-type: none"> <li>- 700 users connected: 7.000 euro hosting</li> <li>- 1 person in helpdesk: 30.000 personnel</li> <li>- 3 developers: 90.000</li> <li>- Dedicated commercial campaign: 15.000</li> </ul> <p>Total per year: 142.000 euro</p>		<p><b>Revenue Streams (after 6 months and 3 years) 9)</b></p> <p>After 6 months, still early adopters:</p> <ul style="list-style-type: none"> <li>- Short rent apartment organization, pilot in 5 apartments connected: 80euro per apartment per month -&gt; 400 euro per month</li> <li>- 3 hotels of the association, pilot in 4 rooms per hotel (total 12 rooms): 50 euro per room per month -&gt; 600 euro per month</li> </ul> <p>After 3 years, real common customers:</p> <ul style="list-style-type: none"> <li>- Short rent apartments, at least 400 apartments connected for a average price of 40 euro per apartment per month: 1.600 euro per month</li> <li>- Sort rent apartment – entering customization fee for 150 new apartments, at 400 euro: 60000 per year.</li> <li>- 10 Hotels with an average of 10 rooms connected, at average price of 30 euro per room per month -&gt; 3.000 euro per month</li> <li>- Hotels – entering customization fee, for 5 new hotels per year, at 2000 euro: 10.000 per year.</li> <li>- Offices of 7 medium companies, connecting about 10 rooms each, at a company price of 150 euro per month -&gt; 1.050 euro per month</li> <li>- Offices – entering customization fee, for 50 new offices, at 400 euro: 20.000 per year.</li> <li>- Public organization (university / municipality), connecting 3 buildings with 30 main rooms each, at a building price of 300 euro -&gt; 900 euro per month</li> </ul>		



## D5.4: Business Plan Development

Considering indirect costs (25% of business unit costs: 35500 euro), year 3 will begin with earnings increasing Holonix business.

- Public – entering customization fee, for 1 new building per year, at 5.000 euro.

Monthly income expected: EUR 6.550 / month. Which means EUR 87.600 /year.

Customization fee:  $60.000 + 10.000 + 20.000 + 7.000 = \text{EUR } 95.000$ .

Total income expected per year: EUR 182.600





## 2.5 MOBISTYLE Office App (Huygen, NL)

The MOBISTYLE Office application has been developed in relation to the Dutch demonstration case. This application aims to improve the user's awareness. With its tips and information provision it improves the energy efficiency and productivity in the offices.

The application introduces users to the dynamic indoor conditions in an understandable way. It makes the invisible interactions between the building and occupants visible to them, the building users. The application educates people about the benefits of the dynamic conditions: improved personal health, the building's energy efficiency and improved indoor quality. The testings in the Huygen office are ongoing but the building occupants experience so far is promising.

### Characterisation MOBISTYLE Office App – KER description

<b>Problem</b>	<p>Occupants of office buildings are often complaining about the indoor environment. Nevertheless, the building management is hardly able to solve these problems in a limited time and energy efficient way, this is most often done by changing setting in the BMS manually.</p> <p>So, a question to be tackled is how to use existing sensor-based "data" to adopt dynamic conditions that make building occupants more productive and energy efficient (proactive on a long term).</p> <p><i>How "big" is the problem? Which is the importance for the Customers? How this is impacting in quantitative terms on their activity/business?</i></p>
<b>Description</b>	<p>MOBISTYLE feedback provision via the Office app was introduced to first evaluate their acceptance and find the best profiles for the given group and through the feedback loop, increase the acceptance with the dynamic office conditions indoors by educating building occupants. In that respect, two main features of Office App are:</p> <ul style="list-style-type: none"> <li>- Mobile app collecting feedback from occupants to quantify their satisfaction and evaluate their perception with the dynamic conditions.</li> <li>- And providing personalized tips, information and suggestions to building occupants (e.g. staff, employees) on dynamic profiles of temperature and its effects.</li> </ul>
<b>Alternative solution</b>	<p>Building managers are responsible for the quality of the indoor climate in office buildings. As soon as someone's starts complaining, others will follow. Even if the discomfort comes from other circumstances than only the indoor climate (e.g. poor relationship with a colleague). In practice building managers keep distance from the building occupants because they are aware, they cannot satisfy all people at the same time. Occupants know their complains will not be properly addressed and turned into actions and occupants therefore do not behave pro-actively. So, we see that buildings complaints of the occupants are passively and inefficiently gathered and managed by building managers.</p> <p>Reactive approach: in case of complaints the <a href="#">HVAC</a>-settings are adjusted in answer to these complaints whilst neglecting other aspects like energy costs, maintenance costs etc.</p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>UVP:</p> <ul style="list-style-type: none"> <li>• Increase the real estate value in terms of the level of the rent and future proof perspective;</li> <li>• Reduce primary energy use of buildings or climatization;</li> <li>• energy costs;</li> </ul>

	<ul style="list-style-type: none"> <li>• Reduce maintenance cost;</li> <li>• opening to new cost reduction possibilities e.g. offering flexibility on the electricity grid or application of Demand Response Control Strategies.</li> </ul>
<b>"Market" – Target market</b>	<ul style="list-style-type: none"> <li>• Owners of real estate e.g. real estate renters;</li> <li>• Owners of real estate for their own use e.g. hospitals, campuses (Brightlands), banks;</li> <li>• Real estate from educational institutions e.g. Tilburg University.</li> </ul>
<b>"Market" - Competitors</b>	<p>In office buildings the feedback about the indoor climate will be given to the building manager. Either oral or in an email or written note to the building manager. So if needed, the building managers can have direct contact with their occupants but this is not a practice normally.</p> <p>The MOBISTYLE office app can be used in several ways:</p> <ul style="list-style-type: none"> <li>- As a tool able to collect opinions and feedbacks from occupants (users in the loop data) for building managers for easy contact with occupants, where the app also gives the first feedback to occupants.</li> <li>- As a tool for an independent party in case a building manager got stuck in a discussion or got in conflict with occupants about the indoor climate.</li> <li>- The MOBISTYLE-office app can collect data anonymously, what makes the work of the building manager easier by having less conflict about emotional response.</li> </ul> <p><i>How do you plan to defeat competition?</i></p>
<b>"Market" - Size</b>	<p>All office spaces, about 2.000.000 m2 net floor area in Netherlands. Market share of 10-15%, increasing to 30% over 5-8 years. Mainly real estate owners, about 200 companies.</p>
<b>"Market" - Trends</b>	<p>Healthy buildings e.g. declared by the BREEAM and WELL certificates. Health in general (food, sports/fitness, stress, sustainability) is the trending topic. There is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours. For larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p>
<b>Settings (public acceptance)</b>	<p>There is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours. For larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p>
<b>Settings (legal environment)</b>	<p>There are legal requirements for the upper and lower boundary of the range of indoor temperature, relative humidity and CO2-concentration. In general people will complain before these boundaries are reached. If boundaries are exceeded then the building manager is forced to take measures.</p>
<b>Go to Market – Use model</b>	<p>Either sell or license the technology to:</p> <ul style="list-style-type: none"> <li>• tech provider company with offer in <a href="#">IoT</a> but still lacking gamification capabilities;</li> <li>• large organization (as per Target Market) with own IT capabilities, but lacking gamification capabilities.</li> </ul>
<b>Go to Market – IPR (Background)</b>	<p>As stated in the Consortium Agreement.</p>



<b>Go to Market – IPR (Foreground)</b>	Huygen will exploit: MOBISTYLE Office App; MOBISTYLE mission& recommendations definitions.  Subset of the MOBISTYLE Office App; MOBISTYLE mission definitions (basic); MOBISTYLE mission definitions (nightly + reports).
<b>Go to Market – Early adopters</b>	Existing loyal clients of Huygen.
<b>Go to Market - Pricing</b>	Concerning pricing it could be expressed in euro per m2 net floor area. E.g. 1 euro/m2/year. A certain size of clients is necessary to cover fixed costs as development and customer care.
<b>Go to Market - Time to market</b>	1 year from the end of MOBISTYLE project  <i>Please remember that you will need to plan resources needed and how and when to cover connected costs for the period above mentioned.</i>
<b>The Team</b>	At this moment we don't have the ICT-staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation DataBuilt, internal data analysis development of Huygen. For this reason, our preferred exploitation path will be combined with other ICT-data applications.
<b>The Team – External providers</b>	ICT-developers, Huygen consultants in building services, installers.

### Exploitation Roadmap – MOBISTYLE Office App

Exploitation roadmap	
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>• Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>• Assess with early adopters what would be their ideal integration scenarios.</li> <li>• Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google IoT solutions.</li> <li>• Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>• Implement an initial POC solution that can be used to support an initial 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• Huygen - solution definition, with implementation being carried out either by internal or nearshored team;</li> <li>• Huygen consultants - sales channel, relationship building;</li> <li>• Domain expert partner - identification of knowledge that can be converted into ICT mechanisms e.g. chat bot.</li> </ul>



<b>Actions Monitoring</b>	<p>Subscription:</p> <ul style="list-style-type: none"> <li>• Number of buildings using MOBISTYLE-app</li> <li>• Number of occupants using MOBISTYLE-app</li> <li>• Number of building types</li> <li>• Number of m2 provided with MOBISTYLE -app</li> </ul> <p><i>Which is the timeframe per each monitoring parameter?</i></p>																																																												
<b>Impact in 3-year time</b>	<table border="1"> <thead> <tr> <th>Year</th> <th>m2 Gross floor area</th> <th>no of buildings</th> <th>no of displays</th> <th>no of sensor</th> <th>Labour</th> <th>Promotion</th> <th>Total cost</th> <th>Revenu</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>10.000</td> <td>2</td> <td>20</td> <td>100</td> <td>€ 35.000</td> <td>€ 15.000</td> <td>€ 59.500</td> <td>€ 30.000</td> <td>0,5 fte</td> </tr> <tr> <td>2</td> <td>20.000</td> <td>4</td> <td>40</td> <td>200</td> <td>€ 35.000</td> <td>€ 5.000</td> <td>€ 69.000</td> <td>€ 50.000</td> <td>0,5 fte</td> </tr> <tr> <td>3</td> <td>50.000</td> <td>10</td> <td>100</td> <td>500</td> <td>€ 70.000</td> <td>€ 5.000</td> <td>€ 164.000</td> <td>€ 130.000</td> <td>1 fte</td> </tr> <tr> <td>4</td> <td>100.000</td> <td>20</td> <td>200</td> <td>1000</td> <td>€ 70.000</td> <td>€ 5.000</td> <td>€ 224.000</td> <td>€ 250.000</td> <td>1 fte</td> </tr> </tbody> </table>	Year	m2 Gross floor area	no of buildings	no of displays	no of sensor	Labour	Promotion	Total cost	Revenu		1	10.000	2	20	100	€ 35.000	€ 15.000	€ 59.500	€ 30.000	0,5 fte	2	20.000	4	40	200	€ 35.000	€ 5.000	€ 69.000	€ 50.000	0,5 fte	3	50.000	10	100	500	€ 70.000	€ 5.000	€ 164.000	€ 130.000	1 fte	4	100.000	20	200	1000	€ 70.000	€ 5.000	€ 224.000	€ 250.000	1 fte										
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<b>Financials Costs</b>	<p>Hosting <a href="#">ICT</a>-infrastructure: € 4.000 per 100 displays + sensors including coupling with <a href="#">BMS</a>-system</p> <p>Helpdesk/consultancy: not clear yet. € 80 per manhour</p> <p>Hardware for displays and sensors: € 500 display and € 200 <a href="#">IEQ</a>-sensor</p> <p>Sales, pilots and promotion: pilot € 20.000 and sales budget € 15.000 in the first year and € 5.000 per year on.</p>																																																												
<b>Financials Revenues</b>	<p>Fee about € 2 per m2 gross floor area.</p> <p>In the first year two building total 5.000 m2 = € 10.000.</p> <p>Upscaling in 3 years to 50.000 m2; Revenue is € 100.000 per year.</p>																																																												
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters</li> <li>• Direct contribution of initial pilots;</li> <li>• Connect with health insurance companies supporting lifestyle health programmes, and willingness to contribute financially;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>																																																												
<b>Financials – Timeline for funding</b>	<p>Initial funds need to be available at the end of the project to support the market introduction and support the further development and hosting of the app.</p> <p>Year 1: € 100k Year 2: € 75k Year 3: € 25k</p>																																																												



## Lean Canvas MOBISTYLE Office App

<p><b>Problem 1)</b> Occupants of office buildings are often complaining about the indoor environment. Nevertheless, the building management is hardly able to solve these problems in a time and energy efficient way, often by changing setting in the <a href="#">BMS</a> manually.</p> <p>2) Buildings are not matching the quality performance or desired performance by its actual use or purpose. This problem has different time scales:</p> <ul style="list-style-type: none"> <li>- Historic data for long term asset evaluation</li> <li>- Data on mid-term to evaluate maintenance works</li> <li>- Data in short term for operations and indoor environment optimization</li> </ul> <p>3) Building managers have no insight in the status of maintenance. They cannot check the quality of the work of the servicing companies.</p> <p><b>Alternative:</b> Building managers asking occupants periodically about their comfort and well-being (personal or by questionnaire) Weakness: Time consuming for building managers, not all occupants may be asked the exact same questions</p>	<p><b>Solution4)</b></p> <p>Technical solution:</p> <p>Collecting online feedback by an app from occupants to quantify their satisfaction and evaluate their perception with the dynamic indoor conditions.</p> <p>Providing personalized tips, information and suggestions to building occupants (e.g. staff, employees) on dynamic profiles of temperature and its effects to improve the awareness on behaviour and health and the energy performance (education) of the building.</p> <p>Data collection and storage: A database to be combined with <a href="#">BMS</a>, <a href="#">IEQ</a> sensors (and possibility to add wearables) and collect feedback from users. Plug&amp;Play wireless sensors in addition to <a href="#">BMS</a>-sensors by LoRa-network.</p>	<p><b>Unique Value proposition 3)</b> Service to:</p> <ul style="list-style-type: none"> <li>- Increase the real estate value in terms of the level of the rent (10-20%) and future proof perspective;</li> <li>- Reduce energy costs (&lt; 10%);</li> <li>- Reduce maintenance cost (&lt; 5%);</li> <li>- Opening to new cost reduction possibilities e.g. offering flexibility on the electricity grid or application of Demand Response Control Strategies (lowering energy costs about 10%)</li> </ul> <p>Based on the collecting building and user data and advanced analytics creating insights on how dynamic conditions indoors influence building and occupant's productivity and health.</p>	<p><b>Unfair Advantage 7)</b> Huygen knows how to apply healthy indoor climate settings from proven tangible scientific and practical results on establishing healthy and productive indoor <a href="#">IEQ</a> by research project TKI-DYNKA-project and partners MU (MOBISTYLE partner) and Technical University Eindhoven.</p> <p>MOBISTYLE Dashboard constructed on fundamental anthropological aspects with trusted partner &amp; expert IRI-UL.</p> <p>Own data warehouse DataBuilt ready for data collection and visualisation from the MOBISTYLE app and other scattered data sources. Data is then prepared for data analysis.</p>	<p><b>Customer segment 2)</b> In the Netherlands, clients of Huygen:</p> <ul style="list-style-type: none"> <li>- Owners of real estate e.g. real estate renters</li> <li>- Owners of real estate for their own use e.g. hospitals, campuses (Brightlands), banks</li> <li>- Real estate from educational institutions e.g. Tilburg University</li> </ul> <p><b>Early adopters:</b></p> <ul style="list-style-type: none"> <li>- Brightlands Campus real estate director (private)</li> <li>- Hospitals: general manager of Roermond and Maastricht;</li> <li>- Merin real estate owner of the office buildings.</li> </ul>
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<p>Time step between filling out questionnaire and getting results to share among occupants.</p> <p>Data is collected at all, or data is scattered in different non-operable data environments. <a href="#">API</a>'s is not available.</p>	<p><b>Key Metrics 6)</b>          Number of clients paying for a subscription: 20 in 4 y          Number of buildings using MOBISTYLE-app: 20 in 4 y          Number of occupants using MOBISTYLE-app 200 in 4 y          Number of building types: office buildings          Number of m2 provided with MOBISTYLE-app 200.000 m2 in 4y</p>		<p><b>Channels 5)</b></p> <ul style="list-style-type: none"> <li>- Huygen management;</li> <li>- Social media e.g. Instagram;</li> <li>- Involve influencers;</li> <li>- Developing pilots at launching customers to demonstrate as evidence about the impact to people form real estate owners.;</li> <li>- Promotion at real estate events e.g. Provada;</li> <li>- Facility management branches.</li> </ul>	
<p><b>Cost structure (when solution is ready for the market)</b> 8)</p> <p>Hosting <a href="#">ICT</a>-infrastructure: € 4.000 per 100 displays + sensors including coupling with <a href="#">BMS</a>-system</p> <p>Helpdesk/consultancy: not clear yet. € 80 per manhour</p> <p>Hardware for displays and sensors: € 500 display and € 200 <a href="#">IEQ</a>-sensor</p> <p>Sales, pilots and promotion: € 15.000 in the first year and € 5.000 per year on.</p> <p>Upscaling in 4 years to 100.000 m2; Costs are € 224.000 per year. Break even at about 3,5 years.</p>	<p><b>Revenue Streams (after 6 months and 3 years)</b> 9)</p> <p>Initial fee per building: € 5000          Fee about € 2 per m2 gross floor area.          In the first year two building total 5.000 m2 = € 10.000.</p> <p>Upscaling in 4 years to 100.000 m2; Revenue is € 250.000 per year.</p> <p>Break even at about 3,5 years.</p>			



### 3. Recommendations by the exploitation expert

Considering the fruitful discussions during, both the ESS and the BPD seminars and to ensure the successful (practical) implementation of all the proposed exercises within the exploitation framework, the SSERR /Meta Group expert has given some conclusive remarks to provide MOBISTYLE projects partners with final recommendations on how to improve the exploitation scheme and exploit the results to key actors (such as investors and business partners). In particular, on how to ensure the successful exploitation of the MOBISTYLE project Key Exploitable Result: the MOBISTYLE Open Users Platform (which connects five different ICT tools).

#### **Key exploitable Results:**

In terms of exploitation, MOBISTYLE has faced a quite a challenge from the beginning of the project, as several ICT solutions are being developed. As a follow-up on of the ESS discussion (October 2018), the Consortium decided to split the “MOBISTYLE Platform” (KER 1 at the ESS) in a combination of ICT tools plus integrated services (five separate modules, from KER1 to KER 5 as defined at the BPD, in October 2019) which could be put in use by partners individually, or jointly and adopted by targeted Customers separately or together.

*Marketing the separate modules could speed market uptake and would help managing the process at partner level.*

#### **Lean Canvas, Characterisation of KERs and Roadmap --> Go to Market**

In the light of the defined five KERs after the ESS, and the follow-up exploitation service, the BPD, it is *crucial to develop a detailed cost and revenues breakdown in order to understand which business scenario could be more profitable and what could be the main differences (also in terms of efforts) to eventually prioritise.*

At the same time, when talking about next steps to be taken, the main point to be raised is about the sustainability of the proposed actions. The following matters need to be clearly defined:

- staff needed;
- budget foreseen/available resources;
- milestones to be achieved.

#### **Unique Value Proposition**

In order to ensure the message you want to transfer is strong and clear it is important to clearly state the advantages of the proposed solutions by referring to already existing solutions available on the market, but avoiding too many technical details. At the same time, partners should directly address the *Customers' needs* and how they think they will *solve the Customers' problems*.

In this respect, important steps that will ensure a more elaborated strategy and clear exploitation overview are: *customer validation of the UVP, Analyse the margins over the costs and investigate the possibility to structure pricing in a different way or to use different technologies revising the portfolio of the services;* and *Streamlining the communication channels and planning the first marketing activities.*

#### **Partnerships and organisational structures for exploitation**

After clearly identifying which partners from the consortium will be claiming an exploitation result, *dedicated exploitation agreements (e.g. memorandum of understanding) need to be put in place,*

*considering each involved partners' willingness to exploit and contribution in the development and achievement of the result to be exploited.* Therefore, specific partnership formats and partner organisations should now be considered and put together in line with the next steps towards exploitation.

After the BPD workshop in October 2019, the following agreements were defined which will need to be signed:

- KER1 – MOBISTYLE Open Users Platform, between Holonix SRL and Inovacijsko-razvojni institut Univerze v Ljubljani
- KER2 – MOBISTYLE Game and Missions, between HighSkillz Limited and Aalborg Universitet
- KER3 – MOBISTYLE Expert Tool, by DEMO Consultants BV
- KER4 – MOBISTYLE Dashboard, between Holonix SRL and Politecnico di Torino
- KER5 – MOBISTYLE Office App, between Huygen Installatie Adviseurs

#### ***Pitching: content and presentation skills***

As there is no (successful) exploitation without the communication and visibility aspects around it, and at the same time, to make sure you will have the necessary additional resources for financing the next steps developments, partners will need to work on improving the pitching of their results, which is crucial if one wants to grab the attention of possible investors and have them call back with a business proposition.

*To this aim, partners in MOBISTYLE should not only work on the content part (which needs to be compelling, well-conceived, and very well-rehearsed for the limited time of max.4 min.), they need to improve their presentation style, skills and be aware of their body language.*

*Various pitching guidelines have been provided by the expert; for more information see Annex 2: BPD final report.*

#### ***Follow-up funding opportunities***

Next to possible investors, partners should actively search and monitor the funding opportunities across the globe, but in particular at European level in order to find the best fit for the research solution. In Annex 2, there is an extensive list of available funding schemes aiming at a more sustainable future which fit the MOBISTYLE objectives.





## Conclusions

Different Horizon 2020 funding schemes support research and development activities resulting in new knowledge, new products and services, and also in non-technological and social innovation. It is, therefore, essential that the public investment in these activities is converted into socio-economic benefits for the society. This idea is reflected in the Horizon 2020 Rules for Participation with a clear accent to the partners' obligations to exploit and disseminate the outcomes of the funded activities.

However, as research projects mature, one of the challenges that many of them face is related to the commercialization of the end-product. In order to maximize the value added and impact of research projects, the EC Directorate-General for Research and Innovation offers on-demand exploitation services to interested projects with support from the SSERR service managed and delivered by [META Group](#).

Non technological bottlenecks (knowledge of the market, financial issues, regulatory environment, etc.) prevent a research result from making it to the end users; therefore, the SSERR provides support to bridge the gap between research results and the market by:

- raising awareness of exploitation possibilities;
- providing an opportunity to clarify issues, propose solutions and actions, and anticipate possible conflicts for a successful exploitation of research results;
- helping set roadmaps for the long-term sustainability of project results;
- creating value out of novel knowledge (creating revenues, improving skill set of an organization, setting a standard, improving applications for next grant).

In this context, this report has aimed to offer an inventory of all the exploitations sessions and preparatory processes MOBISTYLE has engaged into throughout the whole duration of the project, zooming in on the project-specific (exploitation) outcomes and rolled out the next steps towards a final Business Plan, considering real activities where partners commit themselves to implement the solutions, identified resources and first operative steps.

In the light of the European Green Deal, the entry into force of the Paris Agreement as of January 1<sup>st</sup> 2020, and the revised Energy Performance of Buildings Directive (EPBD) we are confident that MOBISTYLE will steer significantly towards behavioral change for energy saving: the first step towards a clean energy transition.



## References

[1] J.C. Lam, K. K.W. Wan, D. Liu, C.L. Tsang. Multiple regression models for energy use in air-conditioned office buildings in different climates. *Energy Conversion and Management* 51 (2010) 2692–2697.

[2] D. Clements-Croome. *Creating the Productive Workplace*, E&FN Spon, Taylor & Francis Group, London/New York, 2nd edition, 2006.

[3] L. Jagemar and D. Olsson. *The EPBD and Continuous Commissioning*. CIT Energy Management AB. Göteborg, October 2007.

Launonen, H., Tisov A., Melasecche Germini A., Olivadese R., Koroleva K., Lukasik M., Malamou A., Arabsolgar D., Zacharis E., Garbi A. (2019) Exploitation of the European Research Projects Aiming to Achieve a Behavior Change for Energy Saving Through Innovative IT Solutions. *Sustainable Places Proceedings 2019*, 20(1), 13; <https://doi.org/10.3390/proceedings2019020013>

[4] Tisov, A.; Podjed, D.; D’Oca, S.; Vetršek, J.; Willems, E.; Veld, P.O. (2017) People-Centred Approach for ICT Tools Supporting Energy Efficient and Healthy Behaviour in Buildings. *Sustainable Places Proceedings 2017*, 1(7), 675, <https://doi.org/10.3390/proceedings1070675>

## ANNEX 1- ESS Final Report

## ANNEX 2- BPD Final Report



*Exploitation Strategy Seminar Report  
For*

«MOBISTYLE»

MOTivating end-users Behavioral change by combined ICT  
based tools and modular Information services on energy  
use, indoor environment, health and lifestyle



PROJECT NUMBER  
723032

18<sup>th</sup> October 2018

TURIN

Provided by:  
ALESSIA MELASECCHÉ GERMINI

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## 1 Introducing the ESS

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### 1.1 The ESS

The Exploitation Strategy Seminar (ESS) is a key service for the partners of an Energy research project to give sharper consideration to the potential of project results and their exploitation routes. It aims to provide the most appropriate environment to facilitate in an open discussion:

- 1) the identification/grouping of key exploitable results and the definition of the related exploitation strategy,
- 2) the road-mapping of follow-up actions
- 3) The identification and mapping of risks related to the exploitation
- 4) The development of a draft plan for the exploitation and dissemination of research results and
- 5) linkages with relevant stakeholders.

### 1.2 Agenda of the day

#### **October the 18<sup>th</sup> Torino, Italy:**

14:30 – 15:30, Ice breaking & Topic Introduction

Welcome, introducing participants presenting the ESS agenda. Introducing the main elements connected to exploitation and value creation.

15:30 – 16:45, Achieving Project Goals Part I

MOBISTYLE Open Users Platform, clarifying partners' exploitation interests

16:45 – 17:00, Coffee break

17:00 – 18:00, Achieving Project Goals Part II

Drafting the Exploitation Roadmap, Actions to be implemented

18:00 – 18:30, Wrap-up

Collecting ESS feedback forms, wrapping up & Closing Remarks.

### 1.3 List of Participants and their role in the project

	<b>Company</b>	<b>Name</b>
1	Huygen Installatie Adviseurs	Peter Op 't Veld
2	Huygen Installatie Adviseurs	Simona d'Oca
3	Huygen Installatie Adviseurs	Ana Tisov
4	DEMO Consultants	Andre van Delft
5	Maastricht University	Wouter van Marken Lichtenbelt
6	Institute for Innovation and Development of UL	Slavko Dolinšek
7	Institute for Innovation and Development of UL	Jure Vetršek
8	Aalborg University	Per Heiselberg
9	Aalborg University	Sandijs Vasilevskis
10	Politecnico Torino	Verena M. Barthelmes
11	Politecnico Torino	Cristina Becchio
12	Politecnico Torino	Giulia Vergerio
13	Politecnico Torino	Sara Viazzo
14	Politecnico Torino	Stefano Paolo Corgnati
15	Politecnico Torino	Andrei Vladimir Litiu
16	Holonix	Aleksandra Sojic
17	Holonix	Manuel Larsen
18	Holonix	Eva Coscia
19	Highskillz	Joao Costa
20	Highskillz	Maria Margoudi
21	TAURON Polska Energia	Paweł Marciniak
22	TAURON Polska Energia	Joanna Herczakowska
23	TAURON Polska Energia	Kinga Warchoł
24	TAURON Polska Energia	Miłosz Gruszczyński
25	Whirlpool	Marco Signa
26	META Group – SSERR Team	Maddalena Lukasik
27	META Group – SSERR Team	Alessia Melasecche Germini

## 1.4 Project Main Data

TITLE	MOTivating end-users Behavioral change by combined ICT based tools and modular Information services on energy use, indoor environment, health and lifestyle
ACRONYM	MOBISTYLE
CONTRACT NUMBER	723032
BUDGET	EUR 1 999 905
COORDINATOR	Huygen Installatie Adviseurs
STARTING DATE	2016-10-01
DURATION	42 months

## 1.5 Project Abstract

The aim of MOBISTYLE is to provide attractive tailor-made combined knowledge services on energy use, indoor environment, health and lifestyle, by ICT-based solutions. This awareness will support and motivate end-users to well informed pro-active behaviour towards energy use, energy efficiency and health.

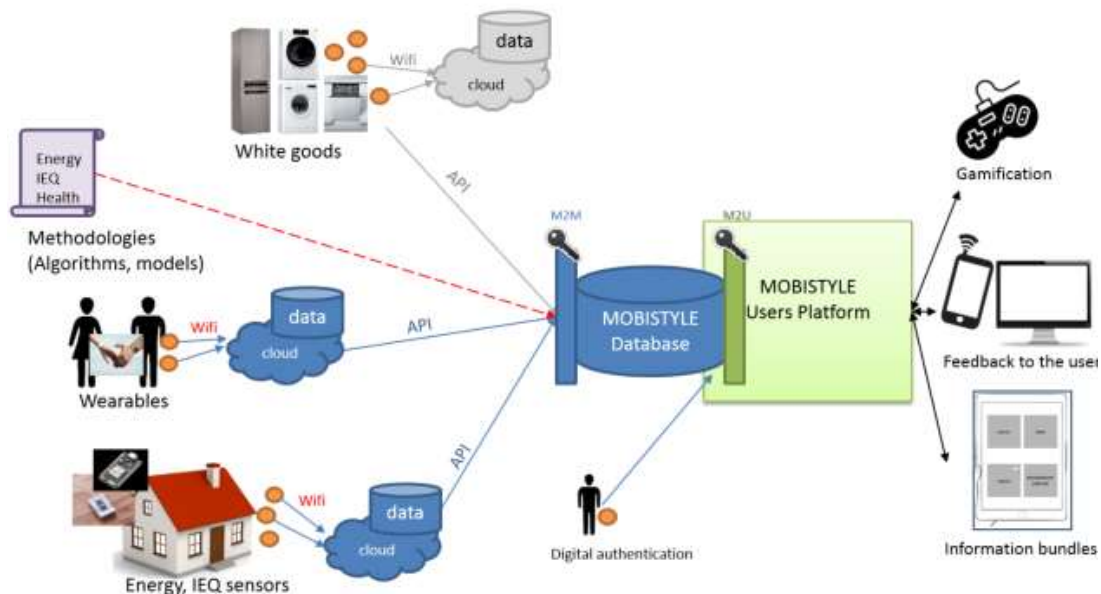
The objectives are:

1. To make energy use and energy efficiency understandable and easy to handle in an attractive way by unlocking and translating large data sets using data science from energy monitoring for consumers.
2. To provide understandable information to consumers on health and life style in relation to energy use by combining energy monitoring with monitoring indoor environmental and behaviour parameters.
3. To motivate behavioural change of consumers/energy end-users by combined modular information on energy use, health and lifestyle: To transform this information into knowledge for raising awareness on energy use and behaviour, thus motivating and supporting to come to a behavioural consciousness and change of lifestyle concerning energy and health.
4. To foster new business models and applications.
5. To deploy and validate the developed solutions and services in different building types and user types, demonstrating a significant reduction of final energy use, prompted by these solutions.

The MOBISTYLE perform several demonstration projects in which relevant information about building performance (e.g. energy, indoor environment quality, health) is collected via sensors and meters and then presented to the users (dashboard, game, expert tool) according to a developed methodology (incorporates behaviour nudging aspects) for assessing what has the deepest impact on their behaviour.

Usefulness and value of the developed MOBISTYLE approach and tailor-made services will be validated for the five demonstration cases in real life operating conditions, in five different geo-clusters:

- Social housing apartments at Kildnenparken, Aalborg, Denmark
- University of Ljubljana, buildings of four faculties, Ljubljana, Slovenia
- Apartments of the Hotel Residence L’Orologio, Turin, Italy
- Office environment, Kerkade, The Netherlands
- Residential housing as part of Smart City Wroclaw, Poland





## 2 Definitions and methodology

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### 2.1 Definitions

Project and its research work done or to be done in the future is broken down into key exploitable results. These are results, which have commercial and/or societal significance. The selected results are characterised from a viewpoint which is exploitation only. This is the market / customer demand or societal needs / user point of view. For each of them risks connected to exploitation are mapped and prioritised.

**Results:** Any tangible or intangible output of the action, such as data, knowledge and information whatever their form or nature, whether or not they can be protected.

**Communication:** Promoting the action and its results, by providing targeted information to a multitude audience (including the media and the public / society) in a strategic and effective manner.

**Dissemination:** The public disclosure of the results by any appropriate means (other than resulting from protecting or exploiting the results), including by scientific publications in any medium.

**Exploitation:** The utilisation of results – up to four years after the action:

- in further research activities other than those covered by the action concerned, or
- in developing, creating and marketing a product or process, or
- in creating and providing a service, or in standardisation activities.

### 2.2 Characterisation Table

The Characterisation table is a tool that summarises the main features of a KER and provides a first level information on the selected exploitation route.

It does not focus on the scientific dimension of the KER but offers a snapshot of the most important elements to be considered when dealing with the use of a result, following a demand driven approach. During the ESS the Characterisation table is discussed with the project partners in an interactive manner and further finalised.

In the table each element is described in a simple way highlighting the most important features that distinguish the result from current solutions. The table contains information on:

- **The novel solution:** Description of the Result, Innovativeness introduced compared to already existing Products/Services, Unique Selling Point (competitive advantages);
- **Market:** Product/Service Market Size, Market Trends/Public Acceptance, Product/Service Positioning; Competitors/Incumbents, Prospects/Customers;
- **External factors:** Legal or normative or ethical requirements (need for authorisations, compliance to standards, norms, etc.);
- **Go to market aspects:** Cost of Implementation (before Exploitation), Time to market, Estimated Product/Service Price, Adequateness of Consortium Staff, External Experts/Partners to be involved;
- **IPR Status:** Background (type and partner owner), Foreground (type and partner owner);
- **Exploitation Strategy:** Exploitation Forms (direct industrial use, patenting, technology transfer, license agreement, publications, standards, etc.), Which partner contributes to what (main contributions in terms of know-how, patents, etc.) Partner/s' expectations, Sources of financing foreseen after the end of the project (venture capital, loans, other grants, etc.).

### 2.3 The Priority Map and Risk Matrix

The Priority Map provides a snapshot of the most common risks faced by the project, previously identified through the Risk Matrix assessment tool (Risk Matrix). The Risk Matrix aims at identifying the level of the different risks factors in accordance to the level of importance of the risk related to the final achievement

of each Key Exploitable Result and the probability for such a risk to happen. The Risk Matrix analyses the following six different categories of risks:

- **Partnership Risks:** internal risk factors related to the composition of the partnership or specific behaviours of the partners, conflict of interests, etc.
- **Technological Risks:** external factors related to the feasibility of the technology, its level of development, presence of other emerging technologies, etc.
- **Market Risks:** external risk factors related to fulfilment of marked needs, presence of competitors or alternative products, etc.
- **IPR Risks:** factors related to the presence of similar previous patents, the possibility to protect the developed technology/product, patent counterfeit, etc.
- **Environmental risk factors:** are external factors related to the presence or changing in legislations, standards, etc.. Special attention will be given to regulatory environment and standardisation issues.
- **Financial risk factors:** factors related to the availability of funds for bringing research stage to prototyping industrialisation/commercialisation.

The severity grade is scored for each risk (1 = low; 10 = high). The grade shows the importance of the risk with respect to successful exploitation.

For example:

- a previous patent, on the same technology, is a severe risk (10 points) if our exploitation route is fully relying on patenting;
- the sudden change of market conditions can be a severe risk if we want to introduce a product into the market.

After scoring the severity grade, the second step is to evaluate the probability for the risk to happen (1 = low; 10 = high).

In the examples:

- in the case of the patent, if we realize (after a quick search) that there is a patent preventing us to patent as well, then the probability of happening is 100% and the related mark is 10;
- in the case of market change: the apples market will not change so dramatically in the next future (grade 1) while apps market is changing every day (grade 10)

The product of the severity and the probability grade will give the risk grade of the concerned risk factor (value on the x axis).

Once the risk grade is estimated the next step is to identify a remedy and assign to it the probability of success (this will be the value for the y axis).

The combination of risk grade and probability of success of the intervention is represented in the map

- A high-risk grade and a low probability of success of the intervention, identifies a situation where we may consider to discuss stopping the project (Warning). Examples:
  - There is a patent interfering with the one we would like to file. As a remedy there is the plan to ask the owner for an agreement but, it is evident, chances of succeeding are very low. The selected exploitation path is blocked and there is not any possibility to go on;
  - The market is changing regulations and the product is not compliant anymore. As a remedy there is the re-design of the product but with very low probability of having something that will match the customers' needs. This may lead to the decision to stop the project.
- A high-risk grade with a high probability of success for the remedy action defines a situation where there is the need of an immediate action to ensure exploitation (action). Examples:
  - There is a previous patent interfering with the one we are about to file in. An agreement with the previous patent is feasible. In this case, the exploitation of that technology, if the agreement is reached, it is still possible, but action should be taken as soon as possible;

- The market is changing regulations and the product is not respecting the new one. The re-design of some components will fulfil both compliance to new regulations and customers' needs. Partnership should re-think our project as soon as possible.
  
- A low risk grade coupled with a high probability of success of the planned remedy defines a situation where it would be preferable to keep an eye on what is happening (Control) to be ready to act. Example:
  - Regulations in the market have not changed since the last 20 years and our product is valid only with such regulations. As a remedy we should re-design some components to continue to be on the market. We have to monitor the situation (regulatory framework) and in case it will change, we have to immediately re-design our product.
  
- A low risk grade and a low probability of success for the remedy, it is a situation does not call for immediate action (no action). Examples:
  - Regulations in the market have not changed since the last 20 years and our product is valid only with such regulations. We could think to re-design our product but there are low possibilities to get good results. Under these conditions it is better not consider any intervention;

Regulations in the market have not changed since the last 30 years and our product is fully compliant. There is no need at the current stage to modify our product nor to be worried about any change in regulations.

### 3 Key Exploitable Results

#### 3.1 Exploitable result No 1

##### 3.1.1 Characterization of the result

MOBISTYLE Open Users Platform	Provide below a short description
Description of the Result	The Open Users Platform is the core around which is built all MOBISTYLE approach. An open architecture for developer engagements and for further deployment of the developed tools (game -HS, dashboard (HOLX), modular information services (intergating MOBISTYLE anthropological multidisciplinary holistic approach and involvement of various scientific expertise in the area of energy (AAU, HIA, POLITO), IEQ (AAU, POLITO, HIA) and personal health (MU) research), data storage and management (DMO), compatible for integration with existing modular services based on the same data storage and exchange principles (e.g. telecom-routers, smart meter platforms etc.).
Problems you are addressing and how your customers solve them so far	There are numerous data and energy end-user generated information available, captured from in-home equipment and sensors (like smart meters and heat metering tools, smart plugs, smart appliances and energy-aware products, intelligent controls and building automation). However, this data is often not available or understandable for energy end-users, especially residents. At the same time, there are already many products commercially available that can be used for cost-effective monitoring with various level of feedback to consumers. The challenge however is how to utilize all the possible benefits, how to avoid too much cognitive load and how to make sure (or increase the probability) that end-users are actually using ICT based tools and solutions. Energy or environment as such are not attractive driving factors for changing user behaviour.
Unique Selling Point (competitive advantages, Innovativeness introduced compared to already existing Products/Services)	There are numerous data and energy end-user generated information available, captured from in-home equipment and sensors (like smart meters and heat metering tools, smart plugs, smart appliances and energy-aware products, intelligent controls and building automation). However, this data is often not understandable to users. This is where the MOBISTYLE comes in (unique point): <ul style="list-style-type: none"> <li>• Combining data coming from different sources and translating this data into useful and understandable for different building occupants (no one size fits all). Based on real anthropological methodological approaches.</li> <li>• Introducing occupants multiple (co-related) benefits when behaving energy efficient (energy-IEQ-health). Knowing that information on energy, environment preservation is not attractive (sexy) to users – there are multiple energy feedback programs on the market that are not attractive for users (they don't understand what means kWh). Yet, combining information on energy use and behaviour with other relevant information such as the actual indoor environmental quality, personal health (and the relation with energy and behaviour patterns), eventually combined with other attractive life style information can be used to catch the interest of consumers and even more important maintain their new habits and interest on the long term.</li> <li>• There are many state of the art sensing devices that can be used for cost-effective monitoring with various level of feedback to consumers. The challenge however is how to utilize all the data and make use of it - provide knowledge and insights to occupants in the buildings. The idea is not to develop new technology but to offer new services (this is what the current market is missing). We already have technological saturation. This leads to the innovation embedded in the MOBISTYLE approach.</li> </ul>
Target market and customer segments - Early adopters	ESCOs, Housing companies, energy suppliers, industries on building construction, building services, policy makers
Product/Service Market Size and trends	To be further investigated.
Competitors	To be still analysed.
Public Acceptance/social impact	Positive
Legal or normative or ethical requirements (need for authorisations, compliance to standards, norms, etc.)	To be discussed

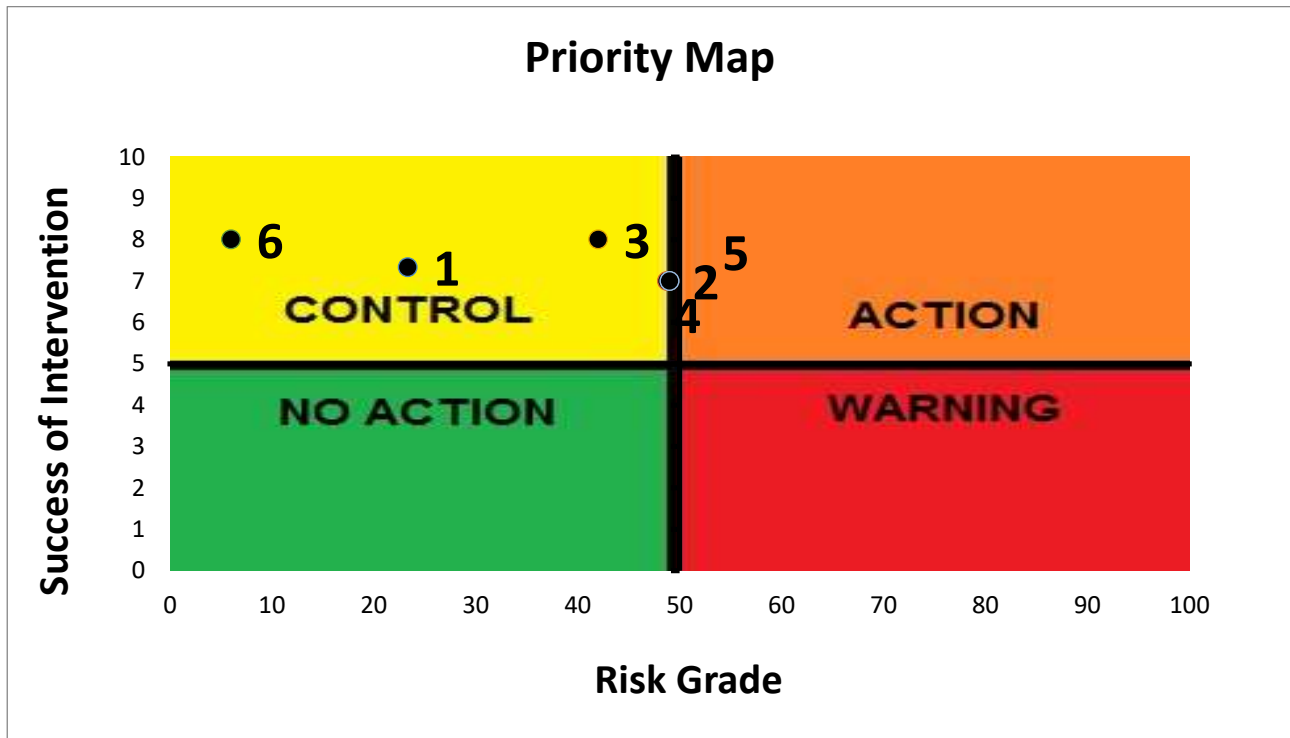
Adequateness of Consortium Staff	Yes
External Experts/Partners to be involved	To be further investigated.
Status of IPR: Background (type and partner owner)	Still to be analysed
Status of IPR: Foreground (type and partner owner)	The Consortium Agreement tackles the topic
How the KER will be put in use (new policy, new standard, new product/service, direct industrial use, patenting, technology transfer, license agreement, publications, standards, etc.)	Can be seen different use cases: <ul style="list-style-type: none"> <li>• For educational purposes – universities,</li> <li>• Service for clients of housing corporations and ESCO's – offering the holistic commercially integrated solution (technical system + long-term behaviour change service)</li> <li>• Third party developers to offer their end-user solutions (such as dashboard, game)</li> </ul>
Eventual Product/Service Price	Too early to say
Time to market	Still to be quantified
Which partner contributes to what (main contributions in terms of know how, patents, etc.)	Please have a look to the Contribution/Benefit Matrix
Partner/s involved expectations	Please refer to the minutes of the meeting
Estimated cost to bring the KER to market (after project ends)	Still to be quantified
Sources of financing foreseen after the end of the project (partners' own budget, other project grants, national/regional incentives, risk capital, loans, etc.)	Please refer to the minutes of the meeting

## 3.2 Priority map of Exploitable result

### Risk matrix

	<b>Key Exploitable Results</b>	<b>Degree of importance of the risk related to the final achievement of this Key Exploitable Result. Please rate from 1 to 10 (1 low- 10 high)</b>	<b>Probability of risk happening Please rate from 1 to 10 (1 low - 10 high)</b>	<b>Risk Grade</b>	<b>Scope and type of potential intervention</b>	<b>Feasibility/Success of Intervention Please rate from 1 to 10 (1 low- 10 high)</b>	<b>Priority Level</b>
1	<b>Partnership Risk Factors</b>	<b>4,7</b>	<b>5,0</b>	<b>23</b>		<b>7</b>	<b>171</b>
	Disagreement on ownership rules	8	7		Legal mediation of downership disputes and patent review	8	
	Industrialization at risk: a partner declares bankruptcy.	3	4		Initiate consortium meeting to explain usage issues and redefine roadmap of exploitation	7	
	Industrialization at risk: a partner declares bankruptcy.	3	4		Maintain communication with exiting expert and organise hand-over and training	7	
2	<b>Technological Risk Factors</b>	<b>8</b>	<b>7</b>	<b>49</b>		<b>7</b>	<b>341</b>
	better technology emerges	8	7		Re-evaluation of technology and further optimisation to match/outperform new benchmark	7	
	limited market (flow limitations)	7	6		Redesign of valve configuration to enhance range of device	7	
3	<b>Market Risk Factors</b>	<b>7</b>	<b>6</b>	<b>42</b>		<b>8</b>	<b>336</b>
	Exploitation disagreement	7	6		Discuss exploitation proposals and ensure that exploitation is beneficial and in the interest of marketing the technology	8	
	difficulty in market penetration/customer reception and acceptance of technology	7	6		Additional market studies, customer surveys and assessment of product shortfalls	8	
4	<b>IPR/legal Risk Factors</b>	<b>7</b>	<b>7</b>	<b>49</b>		<b>7</b>	<b>343</b>
	competitors replicate technology	7	7		Stricter control in in patent usage and aggressive pursuit of legal action	7	
5	<b>Financial/management Risk Factors</b>	<b>7</b>	<b>7</b>	<b>49</b>		<b>7</b>	<b>343</b>
	weak exploitation of the material	7	7		Revision of exploitation plan and market research and relaunch of product	7	
6	<b>Environmental/regulatory Risk Factors</b>	<b>6</b>	<b>1</b>	<b>6</b>		<b>8</b>	<b>48</b>
	not in compliance with regulations	6	1		Assessment of legal/regulatory requirements and alteration of product to comply	8	

**Priority map result for Exploitable result**



Priority Map for the project

All exploitable risks will be collected into a single matrix in order to provide an overview of project Priority Map. The Priority Map’s strength lies in its capacity to summarize in a picture the main exploitation related activities risks connected to the project and give an overall idea of the balance between opportunities and risks related to the project, thus helping the projects to make an evaluation of the state of the art and intervention needs for efficient exploitation.

Project Map

Highlighted risks are all in the Control area (no Risks under Action or Warning)

Major Risks	Scope and type of potential intervention	Lead Partner
Technological Risk Factors	Re-evaluation of technology and further optimization to match/out-perform new benchmark	<u>Coordinator</u>
IPR/Legal Risk Factors	Stricter control in in patent usage and aggressive pursuit of legal action	<u>Coordinator</u>
Financial/management Risk Factors	Revision of exploitation plan and market research and relaunch of product	<u>Coordinator</u>
Market Risk Factors	Discuss exploitation proposals and ensure that exploitation is beneficial and in the interest of marketing the technology; Additional market studies, customer surveys and assessment of product shortfalls	<u>Coordinator</u>

## 4 Partner's contribution

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The table below provides, at a glance, the contribution provided by each partner. It helps to identify where an agreement among the partners is needed and or elements that still need to be discussed among partners and agreed during next Consortium meetings.

Partner that contributes
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Partner names as numbered in the DoW	MOBISTYLE Open Users Platform	MOBISTYLE Game	MOBISTYLE Dashboard	MOBISTYLE anthropological approach	MOBISTYLE modular provision of information (energy – IEQ – health)	MOBISTYLE acquisition system (database)	MOBISTYLE Expert Tool	Game Behaviours (or game nudges/behaviour)
HIA	x							
DEMO	x		x			o	o	
MU	x				x			
IRI UL	x		x	o	x	x		
AAU	x				x	x		x
POLITO	x		x		o	x		x
HOLONIX	o		o					
HS		o						x
TAURON	x					x		x
WHR	x					x		

**Instructions:** Put cross to the box of the partners with which you cooperate on this specific Key Exploitable result

o is main responsible KER partners

## 5 Exploitation strategy seminar - 18th October, Turin, Italy

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ESS agenda and the overall set up have been agreed in advance by the SSERR Expert and the project Coordinator and the work done preliminary to the meeting has been consistent with the agreed approach. The core Key Exploitable Result is the MOBISTYLE Open Users Platform, the main goal of the ESS was to have a guided discussion among project partners to clarify willingness and exploitation intentions and define potential exploitation routes.

It is clear to the partnership that any further add on/plug in services/apps that is currently under analysis and development will be then linked to the MOBISTYLE Open Users Platform that will constitute the main basis for all the exploitation activities currently envisaged within the project.

Project partners should not focus on generic Deliverables, but on key results that can generate impacts. At the beginning of the meeting it has been explained the difference between Exploitation (utilization of results) and Dissemination (disclosure of results).

The Key Exploitable Result (KER) Characterization and the issues connected with the KERs, will help the Consortium to have a clear understanding of what needs to be achieved by the end of the project.

Next action to follow is coming to a structured Exploitation Roadmap.

A Plan for Exploitation and Dissemination of Results will be needed as well:

- What kind of problem MOBISTYLE will solve and why this solution will be better than existing ones
- What new knowledge (Key Exploitable Results - KERs) the project will generate
- Who will use/buy these results
- How the results will be delivered to users/customers
- What resources (human, financial, etc.) have to be secured to deliver the novel solution to the users/customers

A draft PEDR is provided by the SSERR Expert for the use of the partnership.

At the ESS, there was an active discussion on what kind of value should be created for the different players on the market: manufacturers of white/fast moving goods (e.g. WHR), energy providers (e.g. TAU), manufacturers etc. The discussion was focused on how to use (aggregated) data and to sell it as there is great value in such KPIs.

The open Platform's functionalities should be part of T5.3: to allow others to add the products make use of other products that are shared on platform. It has been explained and then agreed that open access does not mean it is free (open APIs).

Another option that has been considered is that an independent party takes data from all manufacturers, analyzes it & sell the modular information to someone else and each gets a share.

WHR partner presented his vision for the value of the open platform where is allowed to other companies to build the business case together, correlate with data of other companies, having benchmark, allowing market positioning. He explained that data in silos are useless, where combining information allows discovering new patterns in data. Consumers providing data are useful for manufacturers, hence they need to see the profit of selling aggregated data to other.

It is agreed that MOBISTYLE X factor lies within giving the added value to the data: information in modular way combining interdisciplinary approach within data mining. Giving only aggregated data is not the aim though it already has a clear value. The Consortium provides pre-processed/refined data, giving

information by looking into correlation between data, KPIs. If Consortium can correlate data to other energy, IEQ, value is higher because it has more relevance to the environment, lifestyle.

The SSERR Expert pinpoints that the Consortium needs to tell the people from whom are gathering the data (demo cases) what will happen even if using the aggregated data – in any case; if renting/selling the platform to an external partner or using for MOBISTYLE partners. It is explained by Aalborg University Partner that data collection will stop when the project stops (as part of the research). Nevertheless, Aalborg University Partner explains that in Danish case, they would like to buy the service (if successful) after the project duration (scaling up). If MOBISTYLE is ready with deployment 600-700 €/per month (sensors + service), then they have interest to scale up to 700 apartments.

Nevertheless, first the Consortium should discuss who has interest in running the MOBISTYLE Open Users Platform and decide whether they want to keep the platform inside the consortium, whether to go on as a separate entity (or start-up incubator) or they profile and market the platform as a selling product.

DEMO partner expressed a general interest in running the platform and making a business out of it after the expiration of the granting period. In the meantime, several crucial elements should be assessed, before confirming this willingness and DEMO partner is going to be the leading one in coordinating the project efforts in that direction.

At this step a market analysis should be done where the AHA Symposium MOBISTYLE Breakout session (on 8 Nov) with MCAB members (commercial companies) seems a good opportunity to discuss the interest from different companies (what do they need/are looking for).

The Consortium is still with work in progress, they can take some specific requirements based on the interest/feedback from different companies (after introducing them first MOBISTYLE platform objectives). This can help to define minimum requirement the platform should have (scout to the market). Once more developed, the MCAB network can be used for dissemination of the business case to the stakeholders that would/could potentially take over the platform.

After the seminar, it is clearly seen that the Consortium needs to start making some agreements (internally as externally). They should look for different exploitation's paths, also partners who might go with certain product on their own way.

SSERR Expert will send the with the final report also how to elaborate a conceptual note which partners can use to define draft exploitation concept per partner: who, why, what, when etc. The Consortium could use this guidance when thinking each organization's exploitation vision.

## 6 Recommendations

Considering the fruitful discussion during the seminar, the following are the main issues and final recommendations towards ensuring a successful exploitation of the MOBISTYLE project Key Exploitable Result: the MOBISTYLE Open Source Platform.

Issues	Recommendations
<b>Characterisation and market potential assessment</b>	<p>Even though it is difficult to expect the researchers/technical people themselves to undertake the various assessments and steps necessary towards exploitation, without significant assistance from the side of those researchers/technical people, no exploitation can be effectively pursued. Then, it is clear that additional competent resources will need to be involved and/or engaged for furthering and undertaking such assessments in detail.</p> <p>However, without a clear initial idea about the market need and potential demand, hence a clear case for exploitation potential, such additional resources and focus will be difficult to be obtained.</p>
<b>IP ownership and collaboration for exploitation</b>	<p>It is clear that some partners have brought contributions to and have an interest in the specific add-ons/plugin to the Platform (individually or together with other partners from the MOBISTYLE Consortium) and not in the Platform itself.</p> <p>The issue of joint co-ownership is tackled in the Consortium Agreement but needs to be further discussed and if updates/amendments are needed this should be then reflected in an updated Consortium Agreement.</p>
<b>IP protection and management</b>	<p>It needs to be assured that a collective strategy on IPR is set in motion.</p> <p>IP management should be considered both from the perspective of avoiding infringement of IP rights and ensuring a most appropriate path for the protection and exploitation of project's IP.</p> <p>According to the type of KER, the protection of IP embedded in it could be undertaken through application and/or registration for specific IPR (e.g. patent, copyright, design) or otherwise by ensuring its confidentiality (e.g. industrial secret know-how).</p> <p>The EU's IPR HelpDesk Guidance on software IPR management should be also considered in detail.</p> <p>Please start referring to: <a href="https://www.iprhelpdesk.eu/Fact-Sheet-IPR-Management-in-Software-Development">https://www.iprhelpdesk.eu/Fact-Sheet-IPR-Management-in-Software-Development</a>.</p>
<b>Risk management</b>	<p>Risks monitoring is essential to identify them on time and take actions in order to reduce them. The identified risks should be taken into account by the partners and appropriate strategies should be developed to minimize any impact on eventual exploitation of the results.</p> <p>It is also important to keep in mind that a risk assessment should be a regular and ongoing exercise towards and along the implementation of an exploitation strategy. Therefore, further detailed and regularly updated risks assessment and prioritisation exercises should be undertaken for each of the KERs.</p>
<b>Internal buying-in and support</b>	<p>At this stage, it is important to clearly identify the decision-makers and other departments within the project organisations to be involved in or responsible to take over the further development of the exploitation strategy. Also, to establish a clear</p>

	<p>process to get them on board for ensuring that formal decisions on the choice and/or prioritisation of the various exploitation options are taken and that then adequate operational implementation teams are deployed.</p>
<b>PEDR, Plan on the Use and Dissemination of Foreground</b>	<p>With the use/exploitation and dissemination of the project results being one of the key objectives of the EU funding programmes for RDI, you will need to provide a Plan on the Use and Dissemination of Foreground as part of the project final report. However, preparing such a plan is not just an obligation but a key tool in ensuring an effective and efficient translation of research results “from the lab” on the market and in the society.</p> <p>To this end, partners should keep developing and updating, as appropriate, the characterisation of the KERs. This is a good way to better and further focus partner objectives, but also a very useful approach to the monitoring of the progress of the project.</p> <p>Template for preparing an Exploitation Concept Statement and a PEDR are included herewith.</p>
<b>Exploitation routes / forms</b>	<p>It is recommended that additional review, consideration and outlining of the various exploitation routes, including of the specific IP commercialisation agreement type and parties to be involved in each, is undertaken.</p> <p>In this sense, the project partners may refer to the guidance being made available by the EU’s IPR Help Desk on general exploitation and commercialisation aspects at <a href="https://www.iprhelpdesk.eu/sites/default/files/documents/EU_IPR_Guide_Commercialisation.pdf">https://www.iprhelpdesk.eu/sites/default/files/documents/EU_IPR_Guide_Commercialisation.pdf</a> , and via Fact Sheets on the commercialisation of IP through <a href="https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Licence-Agreements.pdf">https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Licence-Agreements.pdf</a> <a href="https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Joint-Ventures.pdf">https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Joint-Ventures.pdf</a> ; and Spin-offs <a href="https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Spin-offs.pdf">https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/Fact-Sheet-Commercialising-IP-Spin-offs.pdf</a> .</p> <p>Moreover, please have a look to the following Sections of this report:</p> <ul style="list-style-type: none"> <li>• 7.4 Follow-up funding opportunities,</li> <li>• 10. Commercialisation options and other examples of Business Contracts and annexed slides on Business Models.</li> </ul>
<b>Further SSERR service</b>	<p>It would be important to finalise the fruitful work started with the ESS in the next Consortium meeting (to be held in Aalborg April/May 2019) and continue working guided by a SSERR Expert in the meantime. Please consider requesting a BPD service to <a href="mailto:RTD-ENERGY-SSERR@ec.europa.eu">RTD-ENERGY-SSERR@ec.europa.eu</a>. For more info, please have a look at <a href="http://sserr.meta-group.com/SitePages/default.aspx">http://sserr.meta-group.com/SitePages/default.aspx</a></p>

## 7 Related information

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### 7.1 Related Links

Key Words: « energy efficiency in open user platform »

- **Interreg Europe “The De-risking Energy Efficiency Platform (DEEP)”**  
Internet Link: <https://www.interregeurope.eu/policylearning/news/1152/the-de-risking-energy-efficiency-platform-deep/>
- **ENGIE: “Digital control of energy efficiency”**  
Internet Link: <https://www.engie.com/en/innovation-energy-transition/digital-control-energy-efficiency/>
- **ENGERATI: “Digital Platforms Fueling the Next Generation of Innovation in Customer Engagement”**  
Internet Link: <https://www.engerati.com/article/digital-platforms-fueling-next-generation-innovation-customer-engagement>
- **EUROCITIES: “SMARTSPACES - Saving Energy in Europe's Public Buildings Using ICT”**  
Internet Link: <http://www.eurocities.eu/eurocities/projects/SMARTSPACES-Saving-Energy-in-Europe-s-Public-Buildings-Using-ICT&tpl=home>
- **IEEE Xplore: “YouPower: An open source platform for community-oriented smart grid user engagement”**  
Internet Link: <https://ieeexplore.ieee.org/document/8000058/>
- **SMART SOCIETY SERVICE: “Open Smart Grid Platform”**  
Internet Link: <https://smartsocietyservices.com/osgp/>
- **PYLON: “Pylon Network installs the first “Metron” energy meters at users of the GoiEner energy cooperative and begins to test its blockchain platform in a real environment.”**  
Internet Link: <https://pylon-network.org/pylon-network-installs-first-metron-energy-meters-users-goienener-energy-cooperative-begins-test-blockchain-platform-real-environment.html>

### 7.2 Related projects

- **GOAL “Games Of Active Life”**  
**Objective:**  
GOAL provides a platform that fosters an ecosystem of games and applications that helps people stay motivated to lead socially engaged, physically and cognitively active lifestyles.  
The GOAL platform provides a set of services to integrated games and health apps:  
First, the platform supports a complete virtual reward system.  
Second, the platform provides generic, adaptive personalized goal-setting that apps and games can leverage to automatically provide the most relevant challenge to their users.  
Third, an integrated motivational agent helps users achieving their health-, or in-game goals.

Last, the platform includes a social marketplace that fosters social interactions among the GOAL community.

The GOAL platform has the potential to open up a new market in which health behaviour change components can be fully integrated in real, fun and engaging games. Game developers can focus on developing emerging experiences, while behaviour change experts provide the benefits in the GOAL platform.

Internet link: [https://cordis.europa.eu/project/rcn/206170\\_en.html](https://cordis.europa.eu/project/rcn/206170_en.html)

- **BENEFICE “Energy Behaviour Change driven by plug-and-play-and-forget ICT and Business Models focusing on complementary currency for Energy Efficiency for the Wider Population”**

**Objective:**

BENEFICE’s strategic objective is to reduce wasted energy by incentivising various consumer types in the wide energy consumer market. BENEFICE ecosystem leverages novel IoT enabled, low-cost, “plug-and-play-and-forget” devices, energy disaggregation and an innovative empowerment and rewards approach based on an alternative monetary currency so as to change consumers’ energy consumption behaviour. The “plug-and-play-and-forget” devices will accurately capture energy use patterns at the level of each electrical appliance and at the level of each individual user. BENEFICE will design personalized, real-time motivational paths to deliver sustained reductions in energy consumption. Customers will be incentivized to follow these paths voluntarily, through the application of novel business models that provide monetary rewards in return for progress along each personalized pathway and help build an online community of like-minded actors. These business models will be based on an innovative digital CO2 currency - CO2 Credits are awarded to actors for proven, sustained reduction in fossil fuel use. These business models will leverage partnerships with established businesses -third party market catalysts- that recognize the potential offered by CO2 Credits both to promote reduced consumption of fossil fuels and to extend their market share by offering a new service to their clients with clear social added value.

Internet link: [https://cordis.europa.eu/project/rcn/211926\\_en.html](https://cordis.europa.eu/project/rcn/211926_en.html)

- **ChArGED “CleAnweb Gamified Energy Disaggregation”**

**Objective:**

ChArGED proposes a framework that aims to facilitate achieving greater energy efficiency and reductions of wasted energy in public buildings. The framework leverages IoT enabled, low-cost devices to improve energy disaggregation mechanisms that provide energy use and (consequently) wastages at the device, area and end user level. These wastages will be targeted by a gamified application that feeds personalized real-time recommendations to each individual end user.

Users will become more educated on energy efficiency actions and their impacts which has an impact beyond the actual public building. Efficient energy use will render its consumption predictable and this will be exploited by the ChArGED gamified application to optimize use of the micro-generated energy. Users will be motivated to reduce energy consumption when power comes from the grid. Predictable energy consumption will also support more informed decisions of micro-generation sources to match the use patterns.

Internet link: [https://cordis.europa.eu/project/rcn/200157\\_en.html](https://cordis.europa.eu/project/rcn/200157_en.html)

### 7.3 Related patents

- **ICT test control system**

**Abstract:**

The invention discloses an ICT test control system comprises an ICT test server module, client test system modules, a serial number scanning and reading module and a database module.

The ICT test server module and the client test system modules are in data connection through the Ethernet, each client test system module comprises a test program downloading tool module, the ICT test server module contains multiple test programs for different products, the database module contains positional information of multiple different test fixtures, and each test program downloading tool module is in data connection with the serial number scanning and reading module and automatically searches the positional information of the corresponding test fixtures from the database module according to read information.

- Application n.: CN20171705255 20170817
- Publication No.: CN107329873 (A)
- Applicant: FLEXTRONICS ELECTRONIC TECH SUZHOU CO LTD
- Inventors: ZHANG JIAN

▪ **Open platform access method and open platform access system**

**Abstract:**

The invention provides an open platform access method and an open platform access system. The open platform access method comprises steps of receiving a port calling request on a target open platform from a third-party application; according to the port calling request, searching a preset forward-direction analysis formula; converting the port calling request into format data with a preset data format of the target open platform via the preset forward-direction analysis formula; and sending the format data with the preset data format and the port calling request to the target open platform. According to the invention, there is no need to carry out port butt-joint development on each to-be-logged open platform, and all open platforms can be butt-jointed only with once development on an agent platform; and the agent platform only carries out conversion of port calling data rather than sends the data, so all data are received and sent via third-party applications, thereby preventing the agent platform from tampering and stealing user data, and ensuring safety and reliability of the data.

- Application n.: CN201511028486 20151231
- Publication No.: CN105635151 (A);
- Applicant: ZTE ICT TECHNOLOGIES CO LTD
- Inventors: YANG ZHIPENG

▪ **ICT Method For Providing Marketing Service Using ICT**

**Abstract:**

The present invention provides a method for providing a marketing service using ICT, comprising: a step of collecting and classifying at least one open application program interface (API) from at least one open API providing server into a database; a step of receiving sales item data and seller information from a seller terminal; a step of extracting at least one open API corresponding to the sales item data and the seller information and inserting the sales item data and the seller information to the open API to generate a seller marketing platform of the seller terminal; a step of linking the generated seller marketing platform with an SNS page provided by at least one SNS server; a step of providing a payment API for the SNS page or seller marketing platform when a purchase event of the user terminal occurs via the linked SNS page or seller marketing platform; and a step of performing a delivery process by using the information of the user terminal if a payment event of the user terminal is approved via the payment API.

- Application n.: KR20150065122 20150511
- Publication No.: KR20160132520 (A);
- Applicant: KIM JUNG IM
- Inventors: KIM JUNG IM



## 7.4 Follow-up funding opportunities

### 7.4.1 European Investment Project Portal (EIPP)

The European Investment Project Portal is the speed-dating, online, central platform for EU projects and investors worldwide. It is hosted by the European Commission and is part of the Investment Plan for Europe, aiming to mobilise investment, promote economic growth and create more jobs across the EU. For more information check here: <https://ec.europa.eu/eipp/desktop/en/index.html>

### 7.4.2 The SME Instrument

The SME-Inst funds and advises high-potential SMEs to develop ground-breaking innovative ideas for products, services or processes that are ready to face global market competition. It is divided in 3 Phases.

Phase I grants a lump sum of 50.000€ for the implementation of a feasibility study. Action should last approx 6 months

Phase II funds projects from 0,5 to 2,5 million euros for innovations that are currently in TRL6 or above. Duration of the project should be from 12 to 24 months.

Phase III doesn't provide funding, but facilitates coaching and business acceleration services through Enterprise Europe Network (EEN). EEN is the world's largest support network for SMEs with 3,000 experts across 600-member organisations in more than 60 countries. It provides international business expertise with local knowledge and advisory services via scale-up advisors. For more information check here:

<https://ec.europa.eu/easme/en/sme-instrument>



### 7.4.3 Fast Track to Innovation

The Fast Track to Innovation (FTI) pilot provides funding for bottom-up proposals for close-to-market innovation activities in any area of technology or application. This thematic openness – combined with the possibility for all kinds of innovation actors to work together and deliver innovation onto the market and/or into society – should nurture trans-disciplinary and cross-sectoral cooperation. The aim is to:

- reduce time from idea to market,
- stimulate the participation of first-time applicants to EU research and innovation funding, and increase private sector investment in research and innovation.

For more information check here: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/fast-track-innovation-pilot>

### 7.4.4 INTERREG EUROPE

Interreg Europe can help in the following ways:

- **Financial support** – funding is available for interregional cooperation projects, which have the potential to lead to longer term collaborations and partnerships
- **Expand your network** – meet new like-minded partners, stakeholders, and business colleagues across Europe.

The DG also gives the opportunity to organizations to get some grants through calls for proposals. These are invitations for suppliers to submit a proposal on a specific commodity or

service. A grant or a subvention is a direct financial contribution from the European Commission to support a specific action or project of a non-commercial nature, to cover eligible costs directly incurred by the beneficiaries. For more information check here: <http://www.interregeurope.eu/>

#### 7.4.5 The Small business portal

The Small business portal offers a wide section dedicated to information on possible EU funding opportunities for SMEs: [http://ec.europa.eu/small-business/finance/index\\_en.htm](http://ec.europa.eu/small-business/finance/index_en.htm)

Furthermore, to know if a programme is relevant to your particular case, we strongly suggest that you contact your local Enterprise Europe Network partner, who can give you one-to-one advice and support in applying for EU funding.

Contact details of the Enterprise Europe Network members: <http://een.ec.europa.eu/about/branches/>

#### 7.4.6 COSME

Europe's programme for small and medium-sized enterprises

The programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) is improving access to finance for SMEs through two financial instruments that have been available since August 2014. For more information check here: <http://ec.europa.eu/growth/smes/cosme/>



##### ➤ The Loan Guarantee Facility (LGF)

Part of the COSME budget will fund **guarantees** and **counter-guarantees** for financial intermediaries (e.g. guarantee organisations, banks, leasing companies) to help them provide more loan and lease finance to SMEs. This facility will also include the securitization of SME debt-finance portfolios.

##### ➤ The Equity Facility for Growth (EFG)

Part of the COSME budget will be dedicated to investments in risk-capital funds that provide venture capital and mezzanine finance to expansion and growth-stage SMEs, in particular those operating across borders.

Fund managers working on a commercial basis will ensure that investments are focused on SMEs with the greatest growth potential. For more information check here: [http://ec.europa.eu/growth/access-to-finance/cosme-financial-instruments\\_en](http://ec.europa.eu/growth/access-to-finance/cosme-financial-instruments_en)

#### 7.4.7 EUREKA and Eurostars funding

Eurostars supports the development of rapidly marketable innovative products, processes and services that help improve the daily lives of people around the world. Eurostars has been developed to meet the specific needs of SMEs.

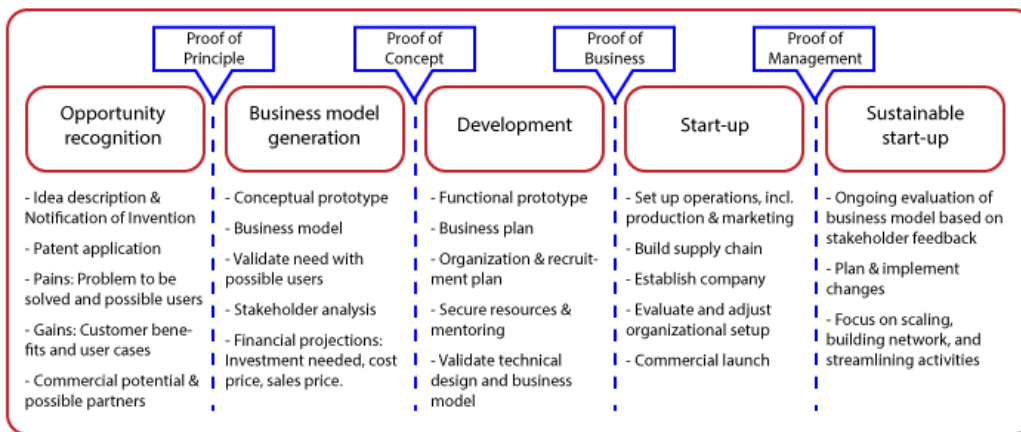
Eurostars applies a decentralized funding procedure; participants do not receive funding directly from the EUREKA Secretariat or the EU. All funding to participants in approved projects is managed by their respective funding body and according to their national funding

rules and procedures. These rules and procedures are dependent on the member countries involved in the project. Project partners are strongly advised to contact your National Project Coordinators (NPCs) and browse other Eurostars in each country.

### 7.4.8 Proof of Concept (PoC)

Eligible for those who have received an ERC grant. This has proved essential in developing ideas to a stage which ensures commercial interest. Proof of concept funding is offered if innovations (i) have a realistic prospect of attracting a commercial partner within 12 months of the commitment of funds; (ii) would, if successful, result in products appearing on the market within 18 months, (iii) have a realistic prospect of generating sales that result in products with annual invoiced sales in excess of ten times the original proof of concept funding and (iv) have the potential to make a return to the fund on the basis of an average royalty of 2.5% on the resulting invoiced sales.

#### Proof of Concept principle<sup>1</sup>



### 7.4.9 European Fund for Strategic Investments (EFSI)

EFSI is an initiative launched jointly by the EIB Group – the European Investment Bank and European Investment Fund – and the European Commission to help overcome the current investment gap in the EU. EFSI is one of the three pillars of the Investment Plan for Europe that aims to revive investment in strategic projects around the continent to ensure that money reaches the real economy. For more information check here: <http://www.eib.org/efsi/what-is-efsi/index.htm>

### 7.4.10 Contracts and grants - access to business opportunities

Several different contracts and grants are regularly made available for companies or organisations who want to work with Directorate General (DG) for Internal Market, Industry, Entrepreneurship, and SMEs or apply for funding.

In the framework of public procurement contracts, DG Internal Market, Industry, Entrepreneurship, and SMEs regularly organizes calls for tenders. Calls for tenders are special

<sup>1</sup> <https://erc.europa.eu/funding-and-grants/funding-schemes/proof-concept>

procedures to generate competing offers from different businesses looking to obtain works, supply, or service contracts.

Those tenders/calls also give an insight in competitors' activities as well as ideas for partnerships and stakeholders. Furthermore, there are possibilities for winning contracts.

#### 7.4.11 Tenders Electronic Daily

TED provides free access to business opportunities from the European Union, the European Economic Area and beyond.

Every day, from Tuesday to Saturday, a further 2,000 public procurement notices are published on TED. You can browse, search and sort procurement notices by country, region, business sector and more. Information about every procurement document is published in the 24 official EU languages. All notices from the EU's institutions are published in full in these languages. For more information check here: <http://ted.europa.eu/TED/search/search.do>

#### 7.4.12 Access to finance in Europe

University technology transfer offices (UTTOs) often perform the function of transferring technology and commercialising innovations emerging from the University sector to the market place.

For more information check here: [http://europa.eu/youreurope/business/funding-grants/access-to-finance/index\\_en.htm](http://europa.eu/youreurope/business/funding-grants/access-to-finance/index_en.htm)

This site can help to apply for loans and venture capital supported by the European Union. Click on your country to locate banks or venture capital funds that provide finance supported by the EU.

#### 7.4.13 Innovaccess - Intellectual Property Portal

Innovaccess aims to enhance Intellectual Property (IP) support services to Small and Medium-sized Enterprises (SMEs) to turn their Intellectual capital into commercial values and competitiveness.

The portal helps to protect IP rights and to understand IP security rules. For more information check here: <http://www.innovaccess.eu/>

## 8 Exploitation Plan Structure

The ESS is just one of the first step of a structured path towards exploitation. Working with KERs calls for understanding what needs to be achieved at the end of a project to have a clear and actionable exploitation plan ready and agreed among partners.

In the following pages we illustrate a set of tables, complementing the ones used during the ESS that we suggest are used to facilitate discussion and planning towards exploitation. They are part of the Business Plan Development (BPD) provided by SSERR<sup>2</sup>. Using these tables will help project partners in better prepare and structuring the PUDR by focusing on relevant information and planning actions, to be made even before the end of the project, to ensure resources and sustainability for using results.

KER's Exploitation Form				
(how the KER will be further exploited – Select only an option)				
Selected route		Implementing actor	Yes	No
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner	x	
		A group of partners	x	
	Contract research (new contracts signed by the research group with external clients)	A partner		
		A group of partners		
	A new research project (application to public funded research programmes)	A partner	x	
		A group of partners		
	Implementation of a new university - course (Note that a training course is a service)	A partner	x	
		A group of partners		
		A new partnership		
	<b>INDIRECT USE</b>	Assignment of the IPR	A partner	
A group of partners			x?	
Licensing of the IPR		A partner		
		A group of partners	x?	
Development of a new legislation/standard		A partner		
		A group of partners		
Spin- off		A partner	x?	
		A group of partners	x?	
		By assignment		
		By licensing		
<b>INDIRECT USE</b>	Other (please describe)			

<sup>2</sup> A service aiming to deliver a snapshot of the main fields from the competition and the business model envisaged to the early adopters and market approach. Additionally, it provides an exploitation roadmap and a budget estimation for the first months after the project's end. It can be requested by eligible projects, even if they already got an ESS.

## 9 Annex 1 The lean canvas

### 9.1 How to approach the business model

The Business Model is the plan for the successful operation of any “business”, identifying, the intended “customer” base, products/services, sources of revenue and details of financing. It describes the way in which “value” can be extracted from an exploitable R&D result.

When working on the “business” model it is important to focus on the following elements:

<p><b>Your ultimate goal</b></p> <ul style="list-style-type: none"> <li>• Why am I doing this thing?</li> <li>• Which are my goals? (Best and worst scenario)</li> <li>• Am I really better?</li> </ul>	
<p><b>Global market</b></p> <ul style="list-style-type: none"> <li>• Competitors</li> <li>• Incumbents</li> <li>• Investors (geography matters)</li> <li>• Level of investment</li> </ul>	<p><b>Local market</b></p> <ul style="list-style-type: none"> <li>• Competitors</li> <li>• Incumbents</li> <li>• Investors</li> <li>• Peculiarities</li> </ul>
<p><b>6-12-18 months plan</b></p> <ul style="list-style-type: none"> <li>• KPI</li> <li>• Product roadmap</li> <li>• Cashflow</li> <li>• Valuation target</li> <li>• Next step</li> </ul>	

#### Every customer has a problem, every problem has a solution

When working on the business model, it is crucial to start from the problem not from the solution. New initiatives, including spin-off, fail because their offer (a product, a service, a licence) is not designed for the customers. Every customer has a problem; every problem has a solution. Vice versa, not every solution has a problem, not every problem has a customer. Brainstorm and identify the problem (forget the solution) focus on the problem, identify a common definition.

#### Early Adopters

To develop the exploitation model, it is important to look at early adopters and how to go from early adopters to “early majority”. Innovators are the ones that “use” the “alfa” version (2,5%, often the industrial partner in an R&D project); early adapters are the customers ready to “use” the “beta” version (13,5%). Next step is to reach the “early majority” (34%). New initiatives fail before reaching out the early majority and this is connected with the capability to reach early adopters.

Identify the “customers”, who will pay, focus on the riskier ones and describe them in the most specific way. Why that customer has that problem is the way to select the assumptions (how they deal with the problem, what are they looking for). Focus on the most important one, the one that, if not validated, will make everything fall down.

#### UVP

The Unique Value Proposition, or Unique Selling Proposition (USP), is a clear statement describing the benefits of the novel offer, how you solve your customer's needs and what distinguishes you from the competition. It is clearly related to the customers’ needs and how their problems are solved so far.

In defining the UVP you do not want a “point of parity”, when your features are similar of the ones of the competitors”. What counts are the points of difference, what you do, that the others do not and that matters to the customers. You do not want to be better than your competitors, you want to be

better for your customers. Do not imitate/mirror competitors. Keep in mind customers, not competitors.

## 9.2 How to approach the “Lean Canvas”

For preparing the Exploitation Plan (your business plan) of a R&D result it is useful to use the Lean Canvas. The Lean Canvas is an adaptation of Business Model Canvas by Alexander Osterwalder which Ash Maurya<sup>3</sup> created in the Lean Startup spirit (Fast, Concise and Effective startup). Lean focuses on problems, solutions, key metrics and competitive advantages.

The canvas is a good tool to focus on the exploitation model and start collecting information for the exploitation plan. Among the different type of canvas, the lean business model canvas, by Ash Maurya, is the most suited for R&D projects. It is a powerful tool to be used by the partners to further develop the characterization of their KERs, prepare the materials to be discussed at consortium meetings and draft the exploitation/business plan for a KER.

The lean canvas helps to fine-tune and develop the exploitation strategy for a KER having in mind four questions:

- 1) Who is “my customer”?
- 2) What is “her/his” problem?
- 3) How does “She/he” solve the problem now?
- 4) Is our solution more efficient than the current one?

## 9.3 How to fill out a LEAN CANVAS for a KER

*General aspects to consider.* The end goal of the lean canvas is that an unknowing third-party will be able to review it from start to end and, and through this revision, understand what your KER is about. They will understand the problem in focus, the customer groups that you target, the solution you provide, how it differentiates from competitors, how you intend to create value, etc.

Due to this, it is very important to avoid the use of highly technical language, abbreviations etc. They can result in third-parties not understanding the nature of your KER.

Below a description of the main steps to draft the canvas.

- 1) **PROBLEM** - find 3 main problems you are addressing.

Explain: **What** is the problem and **why** is it a problem.

Additionally, attempt to add numbers or quantifiable measures that will clearly highlight the scale of the problem.

Describe EXISTING ALTERNATIVES - Find out how they are solving the problem now (today’s alternatives)

- 2) **CUSTOMER SEGMENT** - identify who has the problem, define target customers (do not confuse with users).

Be clear on explaining the geographic location of your customers, the industry in which they are operating in, as well as connecting them to the problem in question.

EARLY ADOPTERS - find a small niche that is having the biggest problem, the ones that suffer the most (early adopters).

These will be the first customers of your solution; Be sure to find as much information about these as possible. Explain the geographic location, connect them to the problem, explain exactly why these will be the first adopters, clarify your current connection to them etc.

- 3) **UNIQUE VALUE PROPOSITION**

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<sup>3</sup> For more information about this canvas, please refer to the blogpost explaining Lean Canvas and the ideas behind it on his website: <http://www.ashmaurya.com/2012/02/why-lean-canvas/>

Define your UVP based on the today's alternative, what makes your product/service more efficient for your customers, a single and compelling sentence that makes everybody understand why you are far better (your features need to be compelling to the customers' needs, otherwise are irrelevant to clients).

Insure that you clearly define how you differentiate from alternative solutions, and why the customer will come to you; Explain the **uniqueness** of your solution.

Provide facts and data, explaining the performance of your product compared to alternative solutions (efficiency increase of 20%, decreased energy consumption of 10%, 30% less development costs etc.).

4) **SOLUTION** – outline the main features of your solution.

When your features are similar of the ones of the competitors, this is an equality. What matters are the points of difference! What you do, that the others do not do and is what matters to the clients.

Be sure to explain the format of your solution (is it a machine, an equipment, a software, a service, a process, etc.), what it does, and how it does it.

5) **CHANNELS** – How will you reach your customers?

Be sure to investigate whether the chosen channels are suitable for your choice of customers and consider whether they will be enough to establish the needed reputation on the market.

6) **UNFAIR ADVANTAGE** – what is it that gives you an advantage in front of the competition? Something that can't be easily copied or bought.

This could be IPR, being first movers on new technology that takes years to develop etc. Be sure to explain, *why* the listed points provide you with an advantage. It can be difficult for third-parties to understand, if they do not have a wide array of knowledge regarding your industry.

7) **REVENUE STREAMS**

Which will be the main revenue streams when the solution is ready for the market. Explain how each of them will generate revenue and how much you expect to generate from each stream.

Estimate revenues for seed stage after 6 months and after 3 years. Quantify amounts and prices by detailing, for example, the expected amount of services provided and paid, amount of licenses sold at which prices etc.

8) **KEY METRICS** – key activities you will measure to track the success (e.g. units sold, users registered, retaining users, paying customers, number of complaints ...)

9) **COST STRUCTURE** – which will be the main costs when the solution is ready for the market (e.g. customer acquisition costs, distribution costs, hosting, people etc).

As with revenues, estimate the total costs issued after 6 months and 3 years along with the estimated cost of each "cost-entity". This will connect your revenues to your costs.

After you finish the exercise, test your hypothesis "out the lab", with at least 2 to 3 real potential customers:

- Are the problems you assume really the ones? Is your solution solving their problem?
- Are the features your solution is offering the ones the market needs and looks for?
- Are the explanations provided in the canvas sufficient to provide the customer with an understanding of your project?

Write down the feedbacks and update, revise, iterate the CANVAS accordingly.



**Lean Canvas by Ash Maurya**

<p>Problem 1) Top 3 problems</p> <p>His main problem Which job has to accomplish</p> <p>What and why?</p> <p>4) Existing alternatives to address the same problems</p>	<p>Solutions 6) Top 3 features Based on the VP (why it is better than others) Use MVP to test assumptions</p> <p>Remember: the first sentence should clarify what it does, how it does it.</p>	<p>Unique Value proposition 5) Why you are different and worth buying (How you help customer doing his job, accomplish his mission Improve his position .... better than others. Provide</p> <p>Explain how you differentiate from alternative solutions and thus the uniqueness of your solution. Provide numbers to the performance of your solutions (see earlier explanation).</p>	<p>Unfair Advantage 7) Can be easily copied or brought? What are the customer retaining costs? Acquisition costs Switching costs</p> <p>See earlier explanation for clarification. ....</p>	<p>Customer segment 2) Who is he</p> <p>Distinguish between users and customers (customers buy, users “use”) Split in vertical segments Pick the strongest customer segment</p> <p>Remember geographic location, Industry and connection to problem.</p> <p>3) Early adopters</p> <p>Remember geographic location, Industry and connection to problem. + why are they early adopters? What is your relation to these etc.</p>
<p>Cost structure 11) Prototyping HR costs, Eng. costs, MFG costs, marketing costs etc. Estimate costs for each “cost-entity” Estimate costs after seed stage 6 months and 3 years.</p>		<p>Revenue Streams 10) The different revenue streams How each stream generates revenue Estimation of how much each stream will generate Estimation of revenue at seed stage 6 months and 3 years.</p>		

## 10 Commercialisation options and other examples of Business Contracts

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### 10.1 Licensing

Exclusive:

Only the licensee is able to use the licensed IP or technology (the licensor cannot use or license it);

Sole:

The licensor agrees not to grant any additional licenses but retains the right to make use of the licensed IP.

Non-Exclusive License:

The licensee and the licensor can both use the licensed intellectual property or technology. The licensor is also allowed to negotiate further non-exclusive licenses with other companies.

### 10.2 Franchising

While on the one hand, franchising helps franchisors to expand their business with the need for less investment, on the other hand it enables franchisees to enter into a market more easily since the business is based on an established brand and/or on a proven business model. Franchising means less risk and low costs for both parties with higher chances of surviving within the first years of business.

In Europe, the regulation of franchising is not harmonised. Also, in most EU Member States there are no independent codes establishing all the rules for this particular partnership. However, this sector has the particularity of being self-regulated in the EU through the European Code of Ethics for Franchising establishing a set of guidelines and principles for both franchisors and franchisees. Therefore, it is important for potential franchisors and franchisees to get to know the requirements that they must meet under their national law and become familiar with the European Code of Ethics for Franchising.

Due diligence: potential franchisees should carry out a due diligence to detect potential risks, which may arise during the franchise. Such an audit may include verification of the related IP, financial and business information about the franchisor, sufficiency of the goods/services, training and assistance to be provided by the franchisor, etc.

### 10.3 Joint ventures (JVs)

JVs are business alliances of two or more independent organisations (venturers) to undertake a specific project or achieve a certain goal by sharing risks. IP has an important role in the creation of such collaborations, since venturers bring their own intellectual assets for the success of a JV and they should agree on their initial contributions, responsibilities and obligations within the alliance as set out in JV agreements.

#### Advantages

- Gives opportunity to exploit and share IP assets with reduced financial investment.
- Allows companies to access new markets by sharing risks.
- Creates possibilities to leverage existing technologies and patents developed by each venturer.
- Provides companies with the chances to develop new IP with less investment.
- Allows utilisation of unused IP assets.

#### Disadvantages

- There may be an imbalance in expertise, intellectual assets and investment brought into the JV by the venturers.
- Coping with different management cultures in IP management may be difficult.

#### Key terms in the JV agreements: Background, foreground and access rights

In JVs, the venturers bring into the project their previously owned IP assets - which are known as background - and they should decide on the access rights to their background for other venturers. Furthermore, the project implementation will also generate IP, which is referred to as IP foreground or results. The ownership of foreground/results and determination of access rights should be clarified before entering into a JV partnership together with compensation of IP registration and/or maintenance costs.

### 10.4 Spin-off (newco)

Spin-off (or newco) is a separate legal entity created by a parent organisation (PO) to bring its IP assets into the market. It is generally an efficient solution for the parent organisations, who may not be fully capable of commercialisation of their own IP assets, such as for universities and research institutions. Spin-offs are seen as an important means of technology transfer since they are acting as an intermediary between the research environment and industries while putting research results into the commercial market with a marketable product. Moreover, through spin-offs, research organisations can focus on their main task of “research” instead of “marketing”, which is the main task of commercial companies (spin-off).

A spin-off company can be formed by a person external to the PO for the exploitation of the IP asset created by the parent organisation. In this type of spin-off, as the new company is owned by an external professional, the IP assets to be exploited by the new company (spin-off) are generally transferred by licensing, to allow the PO to keep control over them. The external professionals can also be venture capitalists, who foresee a market potential in commercialisation of IP.

#### Conducting due-diligence

A due diligence study allows the investors to ascertain the ownership of the IP to be transferred and any obligations affecting the transfer.

### 10.5 Material Transfer Agreements (MTAs)

MTAs are used when exchanging tangible materials between parties to secure the IP rights of the material provider against possible disclosure by the recipient party. The material exchanged can take many forms, such as product samples, prototypes, software, chemical compounds or biological materials etc. Generally, such a transfer occurs during:

- feasibility studies to check whether the material is compatible with the recipient facilities,
- research activities on the material in R&D partnerships,
- provision of samples or prototypes to future clients for trials, etc.

## 11 Annex 2 Miscellaneous

---

### 11.1 How to approach Customers

Solving Problems = Building Client Base

Every customer has a problem,

every problem has a solution

Not every solution has a problem

Not every problem has a customer

#### 1. ASSUMPTION

Define one or more assumptions for your customer/problem hypothesis that must hold true

Remember: assumptions are what supports the belief that your customer has that problem

The riskiest is the one that is core to the viability of the problem. If it is not true, your customer/problem hypothesis is invalidated

Be sure your riskiest assumption can be proven wrong: avoid using subjective words!

#### 2. TESTING

Define the customer/problem hypothesis to test for the first experiment and the riskiest assumption

Define the success criterion, e.g. 70% or "7 out of 10"

- validation = persevere
- invalidation = pivot

If you pivoted, you can change the problem or the customer or both

You may come back with many different learnings on many different aspects of your idea.

Focus only on the KEY INSIGHTS that helps you to design your next experiment

#### 3. PROBLEM

Brainstorm and identify the problem(s)

Define a common definition of the problem(s)

Write the problem(s) down

#### 4. CUSTOMER

Identify one or more customers. If you refer to a multi-player market, start from the most challenging one: which customer segment is less likely to have a problem it wants solved?

Write them down, being as more specific as possible

## APPROACHING CUSTOMERS

### The Experiment Techniques

#### The Problem Interview

The **main goal** is  
**to learn about our customers' environment and the problem you want to solve.**  
*It is not to test your solution, your product idea or your value proposition.*  
Customers **shouldn't have any idea about the solution you have in mind.**

Thus, **they can talk with you without being influenced by your idea and their answers will be much more valuable.**

You shouldn't even mention your solution when you start the conversation to introduce yourself or schedule the meeting.

#### To Learn vs to Convince

Ask a set of **"demographic questions"** (at the end of the interview),  
by focusing on those variables that will **be useful for re-segmenting.**

E.g.: age, job, where he/she is living, etc.

Ask at the very end:

**"Could you suggest 3 other people I should contact next for an interview?"**

This will help you to find names and surnames of people to be contacted next

**With a problem interview, you have not to convince.** You must learn as much as possible about your customers and their problem.

**For example:** only 20% of the interviews confirm the problem, but, if we've taken into account only women who live in a particular area, the percentage has raised up to 85%. This data might indicate a possible pattern we can explore. So, next round of interviews is around women who live there in order to validate this first sign.

Through it, you must reply the following questions:

- *Is the problem real?*
- *Is it important?*
- *Is it recurring?*
- *Does it affect a large number of people?*
- *How is your customer solving it?*
- *What alternatives are available?*
- *What problems do these alternatives have?*
- *What is the ideal solution for your customer?*

## APPROACHING CUSTOMERS

### The Experiment Techniques

#### Interview

1. DO NOT TELL, LISTEN
2. Neutral and pleasant place
3. 30 minutes
4. Ask the same questions every time
5. Write everything down
6. Minimum 6 interviews per hypothesis

An **interview** is a [conversation](#) where [questions](#) are asked and answers are given. It refers to a one-on-one conversation.

#### Interview

Never talk about the solution!

Never ask about what they would do or buy, how much they would spend

Ask about the **behavior they had in the past**

#### Interview Structure

- *Have you ever had this problem?* (If they answer “No”, end the interview and count it as invalidated)
- *Tell me about the last time you had this problem/how have you solved this problem in the past?* (You will find your competitors!)
- *Have you been satisfied by the solution you found?* ONLY IF they did not find a solution you can ask how they would solve the problem

## 11.2 Exploitation Concept Statement

### **Outcome**

A clear, brief concept statement for each exploitable result.

### **Overview**

Writing an exploitation concept statement is a critical task, whether starting a company to pursue the new opportunity or seeking to continue with research activities. You should be able to clearly and briefly describe the nature of the exploitation action in a short document of one to two pages. **This exploitation concept is then tested for feasibility prior to the preparation of the exploitation plan.** It is common for the initial concept statement to change during the life of the project with the feasibility testing and the writing of any Exploitation Plan.

### **Instructions**

First complete the Draft Exploitation Concept Form according to steps 1 and 2 (below). Then, refine your statement based on feedback you receive (step 3).

#### **Step 1: Identify the key components of your exploitation concept.**

For each exploitable result complete the Draft Exploitation Concept Form on page 2 of this document.

1. In Column A, make quick notes or list general points to answer each question and identify the key components of your exploitation concept.
2. In Column B, expand your notes or lists into complete sentences. These sentences will be combined to form the final business concept statement.

#### **Step 2: Write the exploitation concept statement.**

Complete the Exploitation Concept Statement on page 3 of this document.

1. Copy the sentences from Column B of the worksheet.
2. Paste them into the concept statement. Together, they should form a clear, succinct concept statement.
3. Add any words or phrases necessary to make the “copy and paste” version read clearly and smoothly.
4. Limit the statement to 150 words or fewer.

#### **Step 3: Get feedback about your Exploitation Concept Statement.**

The acid test of a well-defined exploitation concept is whether someone else can understand it well enough to relate it back precisely.

1. Give your concept statement to two people you trust.
2. Ask them to read it and relate back to you the concept as they understand it.
3. Based on their feedback, revise your statement to clarify your exploitation concept.

**Draft Exploitation Concept Form**

<b>Column A</b> <b>Answer the following questions about your product or service</b>	<b>Column B</b> <b>Expand your Column A answers into complete sentences</b>
<b>WHAT</b> does the product or service do? (Features)	
<b>HOW</b> is it different from other products or services? (Uniqueness)	
<b>WHO</b> will buy it? (Potential customers)	
<b>WHY</b> will they buy it? (Benefits) <ul style="list-style-type: none"> <li>• Price?</li> <li>• Convenience?</li> <li>• Better than what's currently available?</li> <li>• Pleasurable experience?</li> <li>• Uses new technology?</li> <li>• .....</li> </ul>	
<b>WHERE</b> will it be sold? <ul style="list-style-type: none"> <li>• Geographic location of business and customers</li> </ul>	
<b>WHEN</b> will it be ready to be sold? <ul style="list-style-type: none"> <li>• Concept, start-up, initial operations phase</li> </ul>	
<b>HOW</b> will it be promoted and sold? (Sales channels)	

**Exploitation Concept Statement (not more than 150 words)**



## **Business Plan Development Service**

for

### **“MOBISTYLE”**

MOTivating end-users Behavioral change by combined ICT based tools and modular Information services on energy use, indoor environment, health and lifeSTYLE



DATE

10-10-2019

PLACE

Krakow, Poland

Provided by:

**ALESSIA MELASECCHÉ GERMINI**

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## 1. Abbreviations

This is a list of the acronyms used by MOBISTYLE which are recurring in the Final Report and not directly explained:

- API** Application Programming Interfaces
- BIM** Building Information Model
- BMS** Building Management System
- CAB** Consumers Advisory Board
- HVAC** Heating, Ventilation and Air Conditioning
- ICT** Information and Communication Technology
- IEQ** Indoor Environmental Quality
- IoT** Internet of Things
- MOUP** Mobistyle Open Users Platform
- MVP Minimum** Viable Product
- R&D** Research and Development
- RIA** Research and Innovation Actions

## 2. Introducing the BPD service

### 2.1. The BPD

Appropriate exploitation leads to innovation (in different markets and societal contexts), new businesses and jobs, increased knowledge, and welfare. Exploitation thus contributes to the overall objectives of the investors European Union.

Exploitation has become a crucial element in H2020 projects and is a mandatory activity and reporting item. In order to maximise the value added and impact of research projects, the Directorate-General for Research and Innovation offers on-demand services to interested projects – through the SSERR Framework Contract.

To move forward and improve the outcomes of MOBISTYLE, META Group was appointed by the European Commission to help the partners in developing the business strategy/plan for their exploitable results and to design a road map in a seminar in Krakow, Poland.

## 2.2. Project main data

<b>Title</b>	Motivating end-users Behavioural change by combined ICT based tools and modular information services on energy use, indoor environment, health and lifestyle
<b>Acronym</b>	MOBISTYLE
<b>Contract N°</b>	723032
<b>Coordinator</b>	Huygen Installatie Adviseurs
<b>Budget</b>	€ 1 999 748,26
<b>Starting Date</b>	01-10-2016
<b>Duration</b>	42 months

## 2.3. Project description

The overall aim of MOBISTYLE is to motivate behavioural change by raising consumer awareness and by providing attractive personalized combined pro-active knowledge services on energy use, indoor environment, health and lifestyle, by ICT-based solutions. Measurable benefits raise behavioural change by the awareness of feedback loops. This awareness will support and motivate end-users to well informed proactive behaviour towards energy use and health, thus empowering consumers and providing confidence of making the right choices. The combination of awareness on energy, health and lifestyle will offer consumers more and lasting incentives than only information on energy use.

MOBISTYLE has the following specific measurable qualitative objectives:

1. To present understandable information and indicators, related to energy use and energy efficiency, in an easy to handle and attractive way for consumers.
2. To provide understandable personalized information for consumers by combining energy monitoring with monitoring of indoor environmental quality, behaviour parameters and daily habits.
3. To motivate a prolonged change of consumers' habits and daily practices on energy use by combined modular personalized information on individual energy use, health and lifestyle.
4. To foster new business models and applications for future developer engagements.
5. To demonstrate a sustainable behavioural change towards significant reduction of energy use in different real environments by deploying and validating the developed solutions and services.

## 2.4. Participants in the Workshop

Partner	Organisation	Short Name	Name and Last Name
1	Huygen Installatie Adviseurs	HIA	Peter Op't Veld
	Huygen Installatie Adviseurs	HIA	Ana Tisov
2	DEMO Consultants BV	DMO	Rosamaria Olivadese
	DEMO ConsultantsBV	DMO	Andre van Delft



4	Institute for Innovation and Development of UL	IRI-UL	Jure Vetršek
5	Aalborg Universitet	AAU	Per Heiselberg
	Aalborg Universitet	AAU	Sandijs Vasilevskis
6	Politecnico di Torino	POLITO	Cristina Becchio
	Politecnico di Torino	POLITO	Giulia Vergerio
7	Holonix Srl	HOLX	Eva Coscia
8	Highskillz Ltd	HS	Joao Costa
	HighskillzLtd	HS	Maria Margoudi
9	TAURON Polska Energia SA	TAU	Andrzej Sapalski
	TAURON Polska Energia SA	TAU	Krystian Wojtasik
	TAURON Polska Energia SA	TAU	Magdalena Dembińska
	TAURON Polska Energia SA	TAU	Michał Oleś
NA	META Group	META	Alessia Melasecche Germini – SSERR Expert

Partner UNIVERSITEIT MAASTRICHT and WHIRLPOOL were not present at the Seminar.

## 2.5. Executive Summary of the service

This report summarises the process followed and the main outcomes of the Business Plan Development (BPD) service for the MOBISTYLE project, held in Krakow – Poland on the 10<sup>th</sup> of October 2019.

It introduces the service and the main elements of it, the agenda of the day and the participants. It then introduces the Lean Canvas at the 4<sup>th</sup> iteration for the 5 KERs identified (KER1 – MOBISTYLE Open Users Platform, KER2 – MOBISTYLE Game and Missions, KER3 – MOBISTYLE Expert Tool, KER4 – MOBISTYLE Dashboard, KER5 – MOBISTYLE Office App) and the roadmaps to exploitation per each KER (level of development and assessment vary among the different KERs).

The expert was appointed on the 11<sup>th</sup> of June 2019 and the project was contacted by the expert on the same day via email.

On the 10<sup>th</sup> of July 2019 a conference call with the Coordinator and DEMO (partner) was organised to discuss expectations, get an update on the state of the art and start preparatory activities. Project representatives informed the expert that the possibility of having an extension of the duration of the project until 30 June 2020 was informally agreed with the PO and the external reviewers during the review meeting held in July. The amendment is in the evaluation process by EC. During the call it was agreed to have one full day BPD workshop, on the 10<sup>th</sup> of October 2019. On the same day the expert sent out via email to the project coordinator: main elements to be addressed during the service delivery coming from the email officially received by the SSERR PO, the template of the fact sheet for clear innovations and the characterisation table for the BPD (including the roadmap), guidelines.

On the 18<sup>th</sup> of September a second conference call with the Coordinator and DEMO (partner) was organised to support the partnership in the preparation of the workshop and finetuning the agenda; a dedicated session to have partners pitching their results was introduced. Lean canvasses, characterisation tables and exploitation roadmaps were received on the 3<sup>rd</sup> of October. A Preliminary report was sent out on the following day with the expert strongly suggesting sharing the document with all the partners before the BPD workshop to have at the BPD a common starting point.

The BPD was then attended by representatives of all the partners. In place, the agenda was a bit reshaped. The agenda presented in this report is the one actually run.

During the workshop the discussion allowed to focus on reviewing the 5 lean canvasses, the characterisation tables and the exploitation roadmaps and a pitch session was organised. Finally, partners were guided by the expert in clearing which relationships there were behind each of the 5 KERs to be exploited in terms of contribution and willingness to exploit by the leading and contributing partners. It was agreed to set dedicated bilateral/multilateral agreements (e.g. Memorandum of Understanding, letter of intent or similar).

All the workshop was held in plenary (except for the revision and finetuning of the lean canvasses) with all the partners attending, actively contributing, according to their role. Anonymous feedbacks forms were gathered from participants at the end of the BPD.

On the same day of the workshop the expert sent in .pdf format to the Project Coordinator all the materials used, and slides presented, namely “Achieving project goals”, “Business modelling and business planning – The Lean Canvas”, “Commercialisation Routes for R&D projects”, “Components of business models”, “Customer validation”, “How to pitch”.

All discussed KERs were further revised after the workshop and sent back to the expert in between the 22<sup>nd</sup> of November and the 2<sup>nd</sup> of December. Then further feedbacks have been requested to the project and gathered on the 21<sup>st</sup> of January.

From the expert perspective, some important remarks:

1. Between the time of the ESS and the BPD, partners managed to clarify and validate that the best way to exploit the “MOBISTYLE Platform” (KER 1 at the ESS), is to market it not anymore as a one single tool (very complex), but as a combination of ICT tools plus integrated services (5 separate modules, from KER1 to KER 5 at the BPD) which could be used/adopted by Customers separately or together. Therefore, 5 KERs and 5 business models were discussed and agreed at the BPD. Being this a recent achievement, KERs have very different readiness levels and exploitation connected actions are influenced by this.
2. At the BPD workshop partners clearly identified which partner would like to claim what. Dedicated exploitation agreements (e.g. memorandum of understanding) need to be put in place, considering each involved partners’ willingness to exploit and contribution in the development/achievement of the result to be exploited. This brings to the following agreements to be signed, for:

KER1 – MOBISTYLE Open Users Platform, between Holonix SRL and Inovacijsko-razvojni institut Univerze v Ljubljani  
KER2 – MOBISTYLE Game and Missions, between HighSkillz Limited and Aalborg Universitet  
KER4 – MOBISTYLE Dashboard, between Holonix SRL and Politecnico di Torino

While the following KERs will be exploited directly by the partners listed below:

KER3 – MOBISTYLE Expert Tool, by DEMO Consultants BV  
KER5 – MOBISTYLE Office App, by Huygen Installatie Adviseurs



### 3. Review and fine tuning of the Exploitation plans

The BPD service provided to MOBISTYLE was structured as follows:

- 1) Analysis of the state of the art (deliverables dealing with exploitation)
- 2) Animation of a workshop with partners to finalise (canvas, roadmap)
- 3) Support in fine tuning available information and provision of final comments, after the workshops
- 4) Elaboration of a factsheet on the project’s solutions/results (on a template form provided by the EC)

#### 3.1. Analysis of the state of the art

The following documents were analysed to start the iterations with MOBISTYLE’s Coordinator, Exploitation Manager and partners:

- Consortium Agreement
- Periodic Technical Report Part B
- Monitoring - Project Quality Assurance and control of feedback loops D 1.5
- Operational MOBISTYLE Open Users Platform D 5.3

The following elements were highlighted:

<b>Characterisation Description</b>	5 Key Exploitable Results were identified, and for all of them has been developed a Lean Canvas Model and Characterisation. Was agreed to split the MOBISTYLE Platform (KER 1 at the ESS) in a combination of ICT tools plus integrated services (5 separate modules, from KER1 to KER 5 at the BPD) which could be used by Customers separately or together.
<b>Target groups</b>	Partners have an idea of a target audience and individual plans and has been discussed also a collaborative approach of partners.
<b>Planning</b>	The Road Map has been discussed, and the value propositions were identified, but the project needs to follow up.

#### Workshop with partners to finalise the Lean Canvas and the Road Maps for exploitation

A workshop was held in Krakow, Poland. During the workshop a detailed presentation on Lean Canvas and a brief introduction on How to Pitch was given by the expert. The expert covered other topics as well, such as Commercialisation Routes for R&D projects, Components of business models, Achieving project goals and Customer validation.

## 3.2. Agenda

### **8:30 – 9:00, Ice breaking**

Pre-meeting with the Coordinator, Welcome, Presenting the day

### **9:00 – 10:30, Towards an effective Exploitation Strategy: in Theory**

Extensive presentation on business modelling, business planning and introducing the Lean Canvas.  
Q&A session.

### **10:30 – 10:45, Coffee break**

### **10:45 – 13:00, Towards an effective Exploitation Strategy: in Practice**

Working in groups on the KERs Lean Canvasses (5 KERs)

### **13:00 – 14:00, Lunch**

### **14:00 – 15:00, How to pitch: The art of raising interest**

Presentation on how to develop a 3/5 minute's pitch. Hints for the content that it should include, with instructions on presentation styles, body language and PowerPoint guidelines, moving from Research Project to a business proposition. From theory to Practice.

### **15:00 – 16:00, Implementing the exploitation strategy**

Presentation on Characterisation of KERs and on Roadmap to Exploitation.

### **16:00 – 16:15, Any other issue exploitation-related?**

### **16:15 – 16:30, Wrapping up**

Wrapping up & Closing Remarks. Collecting workshop feedback forms

### 3.3. Post workshop support

#### **Support in fine tuning available information and provision of final comments, after the workshops**

All the exploitation plans finalised during the workshop were collected by the expert for a further round of comments. In total n.5 canvases were sent back to the Project Coordinator and the partners with feedbacks. Even though elements were clearer and better defined, some elements still need further consideration in the next weeks or as actions envisaged in each roadmap:

- Identification of early adopters
- Identification of solutions currently available;
- Identification of the Unique Value Proposition (UVP);
- Definition of the revenue generation process (on how value is going to be generated) for the organisation exploiting the KER;
- Description of the process to involve decision makers and other departments within the organisation responsible to take over on the roadmaps;
- Milestones and KPIs (Key Performance Indicators) to be defined and agreed.

## 4. The Lean Canvas methodology

### 4.1. How to approach the business model

The Business Model is the plan for the successful operation of any “business”, identifying, the intended “customer” base, products/services, sources of revenue and details of financing. It describes the way in which “value” can be extracted from an exploitable R&D result.

When working on the “business” model it is important to focus on the following elements:

<p><b>Your ultimate goal</b></p> <ul style="list-style-type: none"> <li>• Why am I doing this thing?</li> <li>• Which are my goals? (Best and worst scenario)</li> <li>• Am I really better?</li> </ul>	
<p><b>Global market</b></p> <ul style="list-style-type: none"> <li>• Competitors</li> <li>• Incumbents</li> <li>• Investors (geography matters)</li> <li>• Level of investment</li> </ul>	<p><b>Local market</b></p> <ul style="list-style-type: none"> <li>• Competitors</li> <li>• Incumbents</li> <li>• Investors</li> <li>• Peculiarities</li> </ul>
<p><b>6-12-18 months plan</b></p> <ul style="list-style-type: none"> <li>• KPI</li> <li>• Product roadmap</li> <li>• Cashflow</li> <li>• Valuation target</li> <li>• Next step</li> </ul>	

### Every customer has a problem, every problem has a solution

When working on the business model, it is crucial to start from the problem not from the solution. New initiatives, including spin-off, fail because their offer (a product, a service, a license) is not designed for the customers. Every customer has a problem; every problem has a solution. Vice versa, not every solution has a problem, not every problem has a customer. Brainstorm and identify the problem (forget the solution) focus on the problem, identify a common definition.

### Early Adopters

To develop the exploitation model, it is important to look at early adopters and how to go from early adopters to “early majority”. Innovators are the ones that “use” the “alfa” version (2,5%, often the industrial partner in an R&D project); early adapters are the customers ready to “use” the “beta” version (13,5%). Next step is to reach the “early majority” (34%). New initiatives fail before reaching out the early majority and this is connected with the capability to reach early adopters.

Identify the “customers”, who will pay, focus on the riskier ones and describe them in the most specific way. Why that customer has that problem is the way to select the assumptions (how they deal with the problem, what are they looking for). Focus on the most important one, the one that, if not validated, will make everything fall down.

## UVP

The Unique Value Proposition, or Unique Selling Proposition (USP), is a clear statement describing the benefits of the novel offer, how you solve your customer's needs and what distinguishes you from the competition. It is clearly related to the customers’ needs and how their problems are solved so far.

In defining the UVP you do not want a “point of parity”, when your features are similar of the ones of the competitors”. What counts are the points of difference, what you do, that the others do not and that matters to the customers. You do not want to be better than your competitors, you want to be better for your customers. Do not imitate/mirror competitors. Keep in mind customers, not competitors.

## 4.2.How to approach the Lean Canvas

For preparing the Exploitation Plan (your business plan) of a R&D result it is useful to use the Lean Canvas. The Lean Canvas is an adaptation of Business Model Canvas by Alexander Osterwalder which Ash Maurya<sup>1</sup> created in the Lean Startup spirit (Fast, Concise and Effective startup). Lean focuses on problems, solutions, key metrics and competitive advantages.

The canvas is a good tool to focus on the exploitation model and start collecting information for the exploitation plan. Among the different type of canvas, the lean business model canvas, by Ash Maurya, is the most suited for R&D projects. It is a powerful tool to be used by the partners to further develop the characterization of their KERs, prepare the materials to be discussed at consortium meetings and draft the exploitation/business plan for a KER.

The lean canvas helps to fine-tune and develop the exploitation strategy for a KER having in mind four questions:

- 1) Who is “my customer”?
- 2) What is “her/his” problem?
- 3) How does “She/he” solve the problem now?
- 4) Is our solution more efficient than the current one?

---

<sup>1</sup> For more information about this canvas, please refer to the blogpost explaining Lean Canvas and the ideas behind it on his website: <http://www.ashmaurya.com/2012/02/why-lean-canvas/>

### 4.3. How to fill out a Lean Canvas for a KER

*General aspects to consider.* The end goal of the lean canvas is that an unknowing third-party will be able to review it from start to end and, and through this revision, understand what your KER is about. They will understand the problem in focus, the customer groups that you target, the solution you provide, how it differentiates from competitors, how you intend to create value, etc.

Due to this, it is very important to avoid the use of highly technical language, abbreviations etc. They can result in third parties not understanding the nature of your KER.

Below a description of the main steps to draft the canvas.

- 1) **CUSTOMER SEGMENT** - identify who has the problem, define target customers (do not confuse with users).

Be clear on explaining the geographic location of your customers, the industry in which they are operating in, as well as connecting them to the problem in question.

- 2) **EARLY ADOPTERS** - find a small niche that is having the biggest problem, the ones that suffer the most (early adopters).

These will be the first customers of your solution; Be sure to find as much information about these as possible. Explain the geographic location, connect them to the problem, explain exactly why these will be the first adopters, clarify your current connection to them etc.

- 3) **PROBLEM** - find 3 main problems you are addressing.

Explain: **What** is the problem and **why** is it a problem.

Additionally, attempt to add numbers or quantifiable measures that will clearly highlight the scale of the problem.

Describe EXISTING ALTERNATIVES - Find out how they are solving the problem now (today's alternatives)

- 4) **UNIQUE VALUE PROPOSITION**

Define your UVP based on the today's alternative, what makes your product/service more efficient for your customers, a single and compelling sentence that makes everybody understand why you are far better (your features need to be compelling to the customers' needs, otherwise are irrelevant to clients).

Insure that you clearly define how you differentiate from alternative solutions, and why the customer will come to you; Explain the **uniqueness** of your solution.

Provide facts and data, explaining the performance of your product compared to alternative solutions (efficiency increase of 20%, decreased energy consumption of 10%, 30% less development costs etc.).

- 5) **SOLUTION** – outline the main features of your solution.

When your features are similar of the ones of the competitors, this is an equality. What matters are the points of difference! What you do, that the others do not do and is what matters to the clients.

Be sure to explain the format of your solution (is it a machine, an equipment, a software, a service, a process, etc.), what it does, and how it does it

- 6) **UNFAIR ADVANTAGE** – what is it that gives you an advantage in front of the competition? Something that can't be easily copied or bought.

This could be IPR, being first movers on new technology that takes years to develop etc. Be sure to explain, *why* the listed points provide you with an advantage. It can be difficult for third-parties to understand, if they do not have a wide array of knowledge regarding your industry.

- 7) **CHANNELS** – How will you reach your customers?

Be sure to investigate whether the chosen channels are suitable for your choice of customers and consider whether they will be enough to establish the needed reputation on the market.

- 8) **REVENUE STREAMS**

Which will be the main revenue streams when the solution is ready for the market. Explain how each of them will generate revenue and how much you expect to generate from each stream.

Estimate revenues for seed stage after 6 months and after 3 years. Quantify amounts and prices by detailing, for example, the expected amount of services provided and paid, number of licenses sold at which prices etc.

- 9) **KEY METRICS** – key activities you will measure to track the success (e.g. units sold, users registered, retaining users, paying customers, number of complaints ...)

- 10) **COST STRUCTURE** – which will be the main costs when the solution is ready for the market (e.g. customer acquisition costs, distribution costs, hosting, people etc).

As with revenues, estimate the total costs issued after 6 months and 3 years along with the estimated cost of each "cost-entity". This will connect your revenues to your costs.

After you finish the exercise, test your hypothesis "out the lab", with at least 2 to 3 real potential customers:

- Are the problems you assume really the ones? Is your solution solving their problem?
- Are the features your solution is offering the ones the market needs and looks for?
- Are the explanations provided in the canvas sufficient to provide the customer with an understanding of your project?

Write down the feedbacks and update, revise, iterate the CANVAS accordingly.



**Lean Canvas by Ash Maurya**

<p><b>Problem 1)</b> Top 3 problems</p> <p>His main problem Which job has to accomplish</p> <p>What and why?</p> <p><b>4)</b> <b>Existing alternatives to address the same problems</b></p>	<p><b>Solutions 6)</b> Top 3 features Based on the VP (why it is better than others) Use MVP to test assumptions</p> <p>Remember: the first sentence should clarify what it does, how it does it.</p> <hr/> <p><b>Key Metrics 9)</b> Key aspects/activities you need to measure for a feedback</p>	<p><b>Unique Value proposition 5)</b> Why you are different and worth buying (How you help customer doing his job, accomplish his mission Improve his position .... better than others. Provide</p> <p>Explain how you differentiate from alternative solutions and thus the uniqueness of your solution. Provide numbers to the performance of your solutions (see earlier explanation).</p>	<p><b>Unfair Advantage 7)</b> Can be easily copied or brought? What is the customer retaining costs? Acquisition costs Switching costs</p> <p>See earlier explanation for clarification. ....</p> <hr/> <p><b>Channels 8)</b> How you contact your customers/early adopters, How you deliver value How you promote value</p>	<p><b>Customer segment 2)</b> Who is he</p> <p>Distinguish between users and customers (customers buy, users “use”) Split in vertical segments Pick the strongest customer segment</p> <p>Remember geographic location, Industry and connection to problem.</p> <p><b>3)</b> <b>Early adopters</b></p> <p>Remember geographic location, Industry and connection to problem. + why are they early adopters? What is your relation to these etc.</p>
<p><b>Cost structure 11)</b> Prototyping HR costs, Eng. costs, MFG costs, marketing costs etc. Estimate costs for each “cost-entity” Estimate costs after seed stage 6 months and 3 years.</p>		<p><b>Revenue Streams 10)</b> The different revenue streams How each stream generates revenue Estimation of how much each stream will generate Estimation of revenue at seed stage 6 months and 3 years.</p>		



## 5. Exploitation Plan Structure

### 5.1.KER No.1 – MOBISTYLE Open Users Platform (KER leading partner: Holonix Srl)

<p><b>Problem</b></p>	<p>Groups of stakeholders (as data providers, appliances manufacturers, building managers, etc) are interested in having aggregated information about the energy consumption, Indoor Environmental Quality (IEQ) and wellbeing of buildings. Some of them are also interested in knowing the behaviour of people living buildings, when connected to the consumption and IEQ. But:</p> <ul style="list-style-type: none"> <li>• A lot of data is potentially available, yet not fully accessible nor correlated/combined. The customer has a gap in knowledge about the behaviour of the end user in terms of interaction with other devices. Fragmented information (only from one device at a time) does not allow to fully profiling user behaviour.</li> <li>• Information coming from building systems is not understandable due to different formats, languages, and standards.</li> <li>• Moreover, data about energy / Indoor Environmental Quality (IEQ) / health are usually not interconnected.</li> <li>• The scale and fragmentation of the building supply industry makes very difficult the creation and an actual mapping of an ecosystem.</li> </ul> <p><i>Which is the dimension of the problem? How “big” is the problem for your Customers? Big enough that they would invest in solving it? Please add some quantitative dimensions.</i></p>
<p><b>Description</b></p>	<p>The MOBISTYLE Open Users Platform (MOUP) collects data from different buildings, which have been connected to the Platform as interested in using the MOBISTYLE tools.</p> <p>The MOUP provides:</p> <ol style="list-style-type: none"> <li><b>1. ICT tools:</b> <ol style="list-style-type: none"> <li>1.1. Modular solutions for collecting, standardizing and disclosing data to registered parties (customers and end users).</li> <li>1.2. Customized data analysis both at individual product/account and at aggregated level.</li> <li>1.3. Creation of a data lake about energy and comfort to be used for future use.</li> </ol> </li> <li><b>2. Services (knowledge related):</b> <ol style="list-style-type: none"> <li>2.1. Trainings of customers and end users to improve energy behaviour.</li> <li>2.2. Base for awareness / engagement campaigns strategies with end users.</li> <li>2.3. Data analytics knowledge based on energy and comfort data.</li> </ol> </li> </ol>
<p><b>Alternative solution</b></p>	<p>Each service, energy, device provider uses <b>its own applications</b> and collects data related to their own products (not interconnected with other products which usually are used by end users, therefore only partial information gathered). On top, there is no correlation with other kind of data.</p> <p><i>Please list at least 3 products/applications that are currently in use (the most diffused ones). Please highlight Strengths and Weaknesses of each of them</i></p>
<p><b>Unique Selling Point USP - Unique Value Proposition UVP</b></p>	<p>The MOBISTYLE Open Users Platform acts as a one-stop-shop where all data (energy and Indoor Environmental Quality) are available and interpreted in one unique comprehensive tool.</p> <p>The MOBISTYLE Open Users Platform offers an ecosystem where suppliers can improve their businesses by correlating their products data. A platform that heals the fragmentation of data, connects it in one data lake and allows new information extraction by advanced data analytics.</p> <p>User-centric based services and tools to guide people to a behavioural change related to energy</p>

	<p>consumption, comfort and health. Direct engagement of customers' end users providing specific data about their habits, behaviours and responses for motivation signals concerning life change, indoor environment and energy consumption.</p> <p><i>Please add concrete facts and data to give a better idea of the magnitude of the value that your solution is offering compared to what already in place.</i></p>
"Market" – Target market	<p>Customers interested in aggregated data (MOUP) Examples: 3rd parties' developers, data providers, service providers, energy providers, manufacturers.</p> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description of the presented segments. Each one of those has different drivers-to-adopt/buy and needs to be addressed in a specific way.</i></p>
"Market" - Competitors	<p>On the market a lot of Platform and Data Management Systems are already available. However, there is none that provides both tools and services, able to combine and disclose energy, comfort, and health information.</p> <p><i>Who is commercialising/proposing the most-used platforms and data management systems currently available? Please present weaknesses comparing to your solution, it is useful in order to stress your uniqueness.</i></p>
"Market" Size	<p>Market size depends on the sectors that will be approached. If we simply consider ICT companies that could have ICT developers interested in creating APPs using Mobistyle data, we have to consider 732,000 companies around EU (<a href="https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106589/jrc106589(1).pdf">https://publications.jrc.ec.europa.eu/repository/bitstream/JRC106589/jrc106589(1).pdf</a>).</p> <p><i>What is the market size for your solution? This is connected with the "dimension" of the problem you highlighted. What is the percentage of that market you will be targeting?</i></p>
"Market" Trends	<p>In the context of sustainability, smart buildings, energy savings, the commercial solutions related to sensing systems, smart systems, and their user interfaces are <b>increasing consistently</b>.</p> <p><i>Once better investigated, please provide quantitative data as well.</i></p>
Settings - Impact	<p><b>Economic impact:</b> the Mobistyle Open Users Platform is one single space where both services and tools are provided, data are collected. This reduces service and maintenance costs and helps our customers to retain customers offering fully customised services.</p> <p><b>Environmental impact:</b> the Mobistyle Open Users Platform goes in the direction of supporting the development of smart buildings (energy savings and less polluting).</p>
Settings - legal	<p>GDPR compliance.</p> <p><i>Any other technical requirement to be compliant with?</i></p>
Go to Market – Use model	<p>Each module of the Mobistyle Open Users Platform (ICT tool and connected knowledge services) will be commercialized through licenses and sales transactions.</p> <p><i>In the case of licensing, please consider that are several different types of licensing agreements that could be used.</i></p>
Go to Market – IPR (Background)	<p>The Mobistyle Open Users Platform is developed by:</p> <ul style="list-style-type: none"> <li>- DMO (Databases and aggregation service),</li> <li>- HLX (3<sup>rd</sup> party dashboard and catalogue)</li> <li>- POLITO (KPIs for aggregated data),</li> </ul>



	<p>- IRI-UL (awareness and engagement campaigns). Background is owned by each one listed in the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	The Mobistyle Open Users Platform will be commercialized (through licensing and direct sales) by the abovementioned partners.
<b>Go to Market – Early adopters</b>	<p>Some demonstration cases are already in place and are interested to be early adopters around in Europe for the TOOL. The MOUP will not be sold at the moment, until enough data will be available.</p> <p><i>How are you going to follow up?</i></p>
<b>Go to Market – Pricing</b>	<p>The MOUP with Open Data will not be sold at the beginning as the amount of available data is too restricted.</p> <p><i>Knowing what competitors are doing in this direction could help in defining your price strategy.</i></p>
<b>Go to Market – Time to market</b>	<p>The entire solution will be ready for the market at TRL 9 within 2 years. It is currently at TRL 7. The MOUP is at lower TRL and it will increase according to the available data within 2 years. The MOUP will be available and published by the end of the project, it will be free for interested developers during the incoming 2 years, and reasoning on potential sales will be done during the next two years according to the real sales of the Mobistyle TOOLS. Real sales depend on other MOBISTYLE partners.</p> <p><i>Please consider that this is going to deeply influence the quantification of costs to be incurred for the still needed 2 years.</i></p>
<b>The Team</b>	The team within MOBISTYLE Consortium is skilled to further develop, provide consultancies and implement the Mobistyle Open Users Platform. Holonix team is ready to support external developer, especially when B2B solutions have to be put in place.
<b>The Team – External providers</b>	Cooperation with technicians from the client or other company providers is necessary to support the installation of the smart sensors and systems and for the connection within the different systems.

Exploitation roadmap	
<b>Actions Description</b>	<p>To progress from TRL 7, the Mobistyle Open Users Platform needs to be populated with more data in order to make the data aggregation and correlation interesting.</p> <p>Actions will aim at using the Mobistyle Open Users Platform in other projects to achieve this goal.</p> <p>In parallel, interesting and innovative KPIs correlated to energy, comfort, and health, will be further investigated.</p> <p>After 1 year after the project ends the Mobistyle Open Users Platform will be further developed in at least 2 other research projects.</p> <p><i>Please add time slots per each action considering that in the previous table in the Time to Market box you wrote that you will need 2 years of further development before reaching TRL 9.</i></p>
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• DMO, HLX, HIA, HSZ for the TOOLS implementation and sales;</li> <li>• POLITO for KPIs.</li> <li>• IRI-UL for support, consultancy and engagement</li> </ul>
<b>Actions Monitoring</b>	Every six months from the end of the project on, for two years, the MOUP will

	be analysed in order to understand if it is growing enough to be sold.
<b>Impact in 3-year time</b>	The MOUP will open the information to many companies. This will allow companies to create new business models, and to improve their owns. Additionally, ICT developers will be enabled to create new solutions.
<b>Financial Costs</b>	<p>After 2 year: €4.000 per Year. After 3 years: € to be discussed</p> <p>Costs include the ICT infrastructure, personnel costs, helpdesk, overhead.</p> <p>ICT infrastructure: MOUP is working on an Open tool, which is free of charge until the number of accesses is reduced. This is the expected case for year 1 and 2. For year 3 it has to be discussed.</p> <p>ICT Personnel and helpdesk, for Holonix, can be the same working actively on the Dashboard Tool. It will be just a support for externals, and it can be evaluated in half day per week of effort, 2 days per month. It is about 4.000 euro / year.</p> <p>Overhead for year 1 and 2 can be considered as null.</p>
<b>Financials - Revenues</b>	<p>After 1 year and after 2 years: none expected. It will be up for free.</p> <p><i>Please describe, how you will you cover the costs needed to provide it to early adopters, customers and beneficiaries.</i></p> <p><i>Projected revenues and eventual profits over the next 1-3 years?</i></p>
	<p>After 3 years: to be deeply discussed, analysing sales of MOBISTYLE TOOLS every 6 months from the project ends. It will be further discussed after year 1 and a half.</p> <p><i>Please describe, how you will you cover the costs needed to provide it to early adopters, customers and beneficiaries.</i></p> <p><i>Projected revenues and eventual profits over the next 1-3 years?</i></p>
<b>Financials - Other sources</b>	Own budget.
<b>Financials Timeline for funding</b>	To be discussed after 1 year and half.

<b>KER's Exploitation Form (several partners involved)</b>				
(how the KER will be further exploited)				
<b>Selected route</b>		<b>Implementing actor</b>	<b>Yes</b>	<b>No</b>
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner		
		A group of partners	X	
	Contract research (new contracts signed by the research group with external clients)	A partner		
		A group of partners	X	
	A new research project (application to public funded research programmes)	A partner		
		A group of partners	X	
	Implementation of a new university - course (Note that a training course is a service)	A partner		
		A group of partners	X	
		A new partnership		
	<b>INDIRECT USE</b>	Transfer of ownership (IPR)	A partner	X
A group of partners				
Licensing IPR		A partner		
		A group of partners	X	
Development of a new legislation/standard		A partner	X	
		A group of partners		
Spin- off		A partner		
		A group of partners	X	
		By assignment		
		By licensing		
<b>INDIRECT USE</b>	Other (please describe)			

### 5.1.1. Lean Canvas: focusing on the "MOBISTYLE Open Data" as part of the Mobistyle Open Users Platform

<p><b>Problem</b> 1) Large (BIG) data about energy consumption/Indoor Environmental Quality/health in Europe are not available.</p> <p>Data about energy consumption/ Indoor Environmental Quality /health are usually not interconnected. It is hard to understand correlation on large scale, until data are missing.</p> <p>Behaviours in Europe about energy/ Indoor Environmental Quality /heath, according to different building types/location/dimension/etc, are not collected together so not available.</p> <p><b>Alternative solutions</b> Some solutions are able to collect data, but not to correlate data coming from different sources and of different types. For example, solutions as the TAU smart meters can collect huge amount of data about a district, but those data will be correlated only to the energy consumption and only to that</p>	<p><b>Solutions</b> 4) <b>Top 3 features</b> <a href="#">API</a> to access Open MOBISTYLE anonymized data.</p> <p>Suggestions on useful aggregation of data.</p> <p>Eventually: report on data. to be defined.</p> <hr/> <p><b>Key Metrics</b> 6) Quantity of available data.</p> <p>Number of proposed aggregations of data.</p> <p>Number of third parties that uses the <a href="#">API</a>.</p> <p>Number of paying users in future.</p>	<p><b>Unique Value proposition</b> 3) Anonym aggregation, segmentation and analysis of big data coming from energy consumption/Indoor Environmental Quality /health data monitoring at MOBISTYLE customers.</p> <p>Access to Open Data allows third party developers to collect aggregated available information and to have specific analytics on them.</p> <p><u>NOTE: OPEN DATA solution is strictly connected to the entire MOBISTYLE solution.</u></p>	<p><b>Unfair Advantage</b> 7) Solving the problem, giving access to the data, can be an answer here? Availability of Open data?</p> <hr/> <p><b>Channels</b> 5) Cooperate with policy makers.</p> <p>Publish about Open data availability on internet.</p> <p>Participate to <a href="#">IOT</a> communities.</p> <p>Participate to Projects and Open Calls.</p>	<p><b>Customer segment</b> 2) Facility providers, to know habits and segmentation of needs</p> <p>Social housing managers</p> <p>Large organizations owning lot of buildings (municipalities, big European companies managing many buildings or facilities, etc)</p> <p>Appliances producers, to know segmented habits.</p> <p><b>Early Adopters</b> To be discussed with MOBISTYLE facility providers, appliances producers, buildings managers. Anyway: early adopters will be interested in Open aggregated data only when the amount of data will be relevant, having a huge quantity of data in the databases usefully segmented.</p>
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district.				
<p><b>Cost structure (when solution is ready for the market)</b> 8) Type of costs: hosting infrastructure, helpdesk &amp; chatbox personnel, costs to engage customers and partners, commercial campaigns</p> <p>Estimation of costs still to be defined even according to the MOBISTYLE entire solution.</p> <p>For year 1 and 2 the costs will be very reduced to 4.000 euro per year.</p>			<p><b>Revenue Streams (after 6 months and 3 years)</b> 9) 6 months: free trial. No revenues. Revenues should come from MOBISTYLE customers connected.</p> <p>3 years: basic information for free, pre-aggregated, pre-analysed information to be paid. Some groups of information to be sold can be identified, others can be customized. To be set according to the existing customers really involved.</p>	



### **1) PROBLEM**

*Make sure that the problems listed are directly related and connected to your customers and early adopters. Are all the listed Customers facing exactly the same type of problems? Any way to better explain the magnitude of the listed problems?*

### **ALTERNATIVE SOLUTIONS**

*Ok*

### **2) CUSTOMER SEGMENT**

*Target customers are pointed out. It will be important to further identify them: where they are geographically located, how relevant are they for you? Is there any way to prioritise?*

### **EARLY ADOPTERS**

*Some Early Adopters are pointed out, but please better describe the geographic location, connect them to the problem, explain exactly why these will be the first adopters, clarify your current connection to them, etc.*

### **3) UNIQUE VALUE PROPOSITION**

*Ensure that you clearly define how you differentiate from alternative solutions, and why the customer will come to you. Facts and data need to be there.*

### **4) SOLUTION**

*Please check that the outlined the main features of your solution are the ones which matters for your target customers and solve the problems they are facing.*

### **5) CHANNELS**

*Crucial to reach out early adopters and customers. It is not clear why "cooperate with policy makers" could be considered a way to reach your customers/early adopters. Please rephrase or better explain.*

### **6) KEY METRICS**

*Need to quantify them and add a timing for monitoring e.g. Number of paying users (subscriptions)/time.*

### **7) UNFAIR ADVANTAGE**

*What is your advantage that your competitor has not and how it won't be easy to copy/reverse engineer your solution?*

### **8) COST STRUCTURE**

*Estimate the total costs issued after 6 months and 3 years along with the estimated cost of each "cost entity".*

### **9) REVENUE STREAMS**

*Quantify amounts and prices by detailing, estimate revenues for seed stage after 6 months and after 3 years. If you do not plan to have revenues, please explain how you are going to cover connected costs.*



## 5.2.KER No. 2 – MOBISTYLE Game App and Indoor Environmental Quality Missions (KER leading partner: HighSkillz Ltd)

### 5.2.1. Characterisation MOBISTYLE Game App

<b>Problem</b>	<p>Companies and organizations managing, owning or supervising large sets of residential homes <b>struggle to incentivise residents to adopt healthier and more energy efficient habits</b>. Many times, sensor deployment initiatives don't make the most of the newly available data.</p> <p><i>How "big" is the problem for your Customers? Would they invest further in solving it?</i></p>
<b>Description</b>	<p>Mobistyle Game App is a mobile App providing users with relevant and timely information and recommendations based on their specific home and conditions, and recommendations for improvements (services).</p>
<b>Alternative solution</b>	<p>Current alternatives are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns.</li> </ul> <p><i>Why are the listed solutions "worse" than yours in the Customer perception? Why Customer should move from what currently available and adopt the solution you are proposing? Please explain weaknesses and strengths.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>Integrated application + services that can be provide organizations starting in this field with a faster time to market than if starting from scratch. It is a white label: it can be fully customized to the organization branding.</p> <p><i>This seems to be not so strong point, please rephrase why are you better (considering the Customer perspective) than what currently available and point this out clearly. Why Customers should buy/adopt your solution?</i></p>
<b>"Market" – Target market</b>	<p><u>Target market:</u></p> <ul style="list-style-type: none"> <li>• home energy data management.</li> </ul> <p><u>Customer Segments:</u></p> <ul style="list-style-type: none"> <li>• Companies and organizations managing, owning or supervising large sets of residential homes;</li> <li>• National and Municipal Utility companies.</li> </ul> <p>All of the above must own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</p> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description.</i></p>
<b>"Market" - Competitors</b>	<p><u>Competitors:</u></p> <ul style="list-style-type: none"> <li>• Companies and organizations offering residential energy management systems;</li> <li>• "traditional" gamification-based offerings (even when being less focused, they are</li> </ul>

	<p>perceived as being "similar").</p> <p><i>Please present the weaknesses comparing to your offering, it is useful in order to stress your uniqueness.</i></p>
<b>"Market" - Size</b>	<p>Current market for residential sensorized applications is quite large and forecasts are for explosive growth in the following years, which indicates market size should not be an issue.</p> <p><i>What is the market size for your solution? What is the percentage of that market you will be targeting?</i></p>
<b>"Market" - Trends</b>	<ul style="list-style-type: none"> <li>• Gamification;</li> <li>• <a href="#">IoT</a>;</li> <li>• Sensorization;</li> <li>• Behavioural Change;</li> <li>• Energy efficiency;</li> <li>• Sustainability;</li> <li>• Energy Saving.</li> </ul> <p><i>Are those positively growing trends? Please give a qualitative and quantitative description.</i></p>
<b>Settings - Impact</b>	<p>More in general, there is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours.</p> <p>Economic impact: for larger organizations (mainly public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p> <p>Environmental impact can be very significant, as savings over longer periods and over large number of locations will add up.</p>
<b>Settings - Legal</b>	<p><i>What are the legal requirements? What are the normative requirements? What are the ethical requirements?</i></p>
<b>Go to Market – Use model</b>	<p>Sales and/or licensing: it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.</p> <p><i>Please consider adding more details about the two options (sales vs licensing), this would help in better understanding under which conditions one option is preferable to the other and in which cases.</i></p>
<b>Go to Market – IPR (Background)</b>	<p>According to the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>Considering what currently available has already been made public in the project deliverables, we only see a commercial value in the IP of the heat/water reports and, possibly, on the complex (nightly) missions, both of which are shared IP among HighSkillz and Aalborg University, a memorandum of understanding will be discussed and signed.</p>
<b>Go to Market – Early adopters</b>	<p>Early adopters will be identified and reached as follows:</p> <ul style="list-style-type: none"> <li>• Project partners in the residential markets (Tauron, Himmerland) could be engaged in a 3- to 6- month experimental period, possibly in continuation of the project's activities.</li> <li>• MobiStyle <a href="#">CAB</a> and dissemination channels.</li> <li>• Exploitation services support.</li> </ul>



	<ul style="list-style-type: none"> <li>• Dissemination opportunities at the EU level, following up the policy-level interest identified so far.</li> <li>• Search CORDIS for partners in this area.</li> <li>• Partnership with major cloud providers that offer their own <a href="#">IoT</a> and DigitalTwin platforms, by offering direct integrations with them.</li> <li>• Grouping of <a href="#">IoT</a> provider companies.</li> <li>• Create "crafted content" in specialty publications and organizations, on the approach and results.</li> </ul>
<b>Go to Market - Pricing</b>	In terms of per-home pricing and it indicated that between 1€-10€ per home per month might be sustainable. But this would depend on volume and on the level of automation of the onboarding, the and maintenance processes and IT systems, as well as the number of value-added features enabled for the customer. Setup costs for each new organization could be introduced.
<b>Go to Market - Time to market</b>	6 months from time investment is assured. <i>Is this planned to happen within the project's life or later? Please clarify.</i>
<b>The Team</b>	At this moment we don't have the financial or staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation of 2 previous H2020 <a href="#">RIA</a> projects (via 2 spinoffs) in unrelated areas. For this reason, our preferred exploitation path would be the one in licensing/sale.
<b>The Team – External providers</b>	We have made some contacts with external partners in this area who might be interested in collaborating in the development of a market-ready solution, if investment / funding is available.

Exploitation roadmap	
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>• Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>• Assess with early adopters what would be their ideal integration scenarios.</li> <li>• Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google <a href="#">IoT</a> solutions.</li> <li>• Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>• Implement an initial proof of concept solution that can be used to support an initial batch of 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• HighSkillz - solution definition, with implementation being carried out either by internal or nearshored team.</li> <li>• Specialist organization - sales channel, relationship building.</li> <li>• Domain expert partner - identification of knowledge that can be converted into gamification mechanisms.</li> <li>• For the sale/licensing path, the question is not applicable.</li> </ul>
<b>Actions Monitoring</b>	<ul style="list-style-type: none"> <li>• Interested organization identified, with concrete use case and financial proposal</li> <li>• Funding for productization assured</li> </ul>

	<ul style="list-style-type: none"> <li>• Productized version launched</li> <li>• First client deployed</li> </ul>
<b>Impact in 3-year time</b>	<i>Describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i>
<b>Financials - Costs</b>	<p>For the non-sale scenario:</p> <ul style="list-style-type: none"> <li>• Productization and setup costs <ul style="list-style-type: none"> <li>○ landing pages and marketing (8k€);</li> <li>○ sales and business development (36k€);</li> <li>○ legal (10k€);</li> <li>○ Integration architecture (35k€);</li> <li>○ Backend (25k€);</li> <li>○ Mission Engine (75k€);</li> <li>○ Customer Org Portal (45k€)</li> <li>○ Project management (10k€);</li> </ul> </li> <li>• infrastructure costs (5k/mth -20k€/mth) depending on volume of customers and homes</li> <li>• ongoing operations, support, IT (10k€/month).</li> <li>• 5k€-10k€ direct costs per game and related servers' customization, including setting up of data ingress and egress;</li> <li>• 15k-50k per custom mobile application developer for each customer</li> </ul>
<b>Financials - Revenues</b>	<p>At orgs with 1000 homes, 3€/home/month, 36k€/year. With 5 orgs of this topology, breakeven is less than 1 year.</p> <p>For the initial early adopters, the minimum requirements are an Integration Architecture that enables low-latency data ingress. Mobile app development would have variable costs depending on features and complexity</p>
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters, even if at a reduced cost (to ensure some commitment);</li> <li>• Direct contribution of initial pilots;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>
<b>Financials – Timeline for funding</b>	Initial funds (or agreement with pilot organizations) would need to be available 2 to 3 month before the end of the project.

### 5.2.2. Characterisation MOBISTYLE Energy and Indoor Environmental Quality Missions

<b>Problem</b>	<p><b>How to put in use existing sensor-based "data"</b> to incentivise residents to adopt healthier and more energy efficient habits, in a way that maintains sustained engagement.</p> <p><i>How relevant is this problem for your Costumers?</i></p>
<b>Description</b>	<p>Engine/pipeline to promote end-user's behaviour change on energy efficiency and health using sensor-based immediate-feedback gamification mechanics.</p> <p><i>Is this a software type of solution?</i></p>

<p><b>Alternative solution</b></p>	<p>Current alternatives are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns.</li> </ul> <p><i>Why are the listed solutions “worse” than yours? Why Customer should move from what currently available and adopt the solution you are proposing? Please explain weaknesses and strengths.</i></p>
<p><b>Unique Selling Point USP - Unique Value Proposition UVP</b></p>	<p>Gamification of energy and health-based activities based on sensors installed in the home, common to all users. Goes beyond traditional threshold or averaging of data by considering time and location when analysing sequences of events, to generate the gamification elements. Has the ability to provide near-instant feedback on actions, increasing the opportunity for lasting engagement. Missions, actions, recommendations, points, and badges are easy to understand, provides actionable and relevant actions and recommendations for end-users. Simple to integrate with existing <a href="#">IoT</a> and sensor-based platforms. Can be extended with custom-purpose scientific-driven mechanics and reports.</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> <li>• Behavioural change approach to home energy management with the use of gamification is bound to produce longer-lasting engagement;</li> <li>• More relevant and targeted recommendations and metrics are more likely to be accepted by the users;</li> <li>• Ability to correlated time-events over time into higher-level events, which can be used in existing and/or shared channels (apps, dashboards, websites, ...);</li> <li>• offer differentiated proposal to users to help them save money.</li> </ul>
<p><b>"Market" – Target market</b></p>	<p><u>Target market:</u></p> <ul style="list-style-type: none"> <li>• home energy data management.</li> </ul> <p><u>Customer Segments:</u></p> <ul style="list-style-type: none"> <li>• Organizations with established IT teams or IT service providers, which own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</li> <li>• National and Municipal Utility companies.</li> <li>• <b>Providers of sensors for homes, which want to provide added value on top of the sensor data (gamification, guidance on behaviour change):</b> ex: <a href="https://www.ista.com">https://www.ista.com</a></li> </ul> <p><i>Please remember that geography matters, and once better investigated there is the need to have a qualitative and quantitative description.</i></p>
<p><b>"Market" - Competitors</b></p>	<p><u>Competitors:</u></p> <ul style="list-style-type: none"> <li>• custom made solutions;</li> </ul>

	<ul style="list-style-type: none"> <li>existing threshold-based solutions with existing market presence.</li> </ul> <p><i>You must present the weaknesses comparing to you of the competitors, it is useful in order to stress your uniqueness.</i></p>
<b>"Market" - Size</b>	<p>Current market for residential sensorized applications is quite large and forecasts are for explosive growth in the following years, which indicates market size should not be an issue.</p> <p><i>What is the percentage of that market you will be targeting?</i></p>
<b>"Market" - Trends</b>	<ul style="list-style-type: none"> <li>Gamification;</li> <li><a href="#">IoT</a>;</li> <li>Sensorization;</li> <li>Behavioural Change;</li> <li>Energy efficiency;</li> <li>Sustainability;</li> <li>Energy Saving.</li> </ul> <p><i>Are those positively growing? Please give a qualitative and quantitative description.</i></p>
<b>Settings - Impact</b>	<p>More in general, there is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours.</p> <p>Economic impact: for larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p> <p>Environmental impact can be very significant, as savings over longer periods and over large number of locations will add up.</p>
<b>Settings - Legal</b>	<p><i>What are the legal requirements?</i></p> <p><i>What are the normative requirements?</i></p> <p><i>What are the ethical requirements?</i></p>
<b>Go to Market – Use model</b>	<ul style="list-style-type: none"> <li>Identify the target type of companies, managing or having access to large numbers of homes with sensorized environments.</li> <li>Discuss target behaviours and mapping to available data and implemented techniques.</li> <li>Support initial "onboarding" through SaaS solution where users can define the integration mechanisms (mapping of properties from their data to the [Energy+<a href="#">IEQ</a>Missions] requirements, permissions, capacity planning).</li> <li>Create mission packs for specific organization and data availability scenarios.</li> <li>For companies not having a mobile app, offer customization and support services to provide a branded version of the app, and offer 2<sup>nd</sup> line operational support services.</li> </ul> <p>Either sell or license the technology to:</p> <ul style="list-style-type: none"> <li>tech provider company with offer in <a href="#">IoT</a> but still lacking gamification capabilities;</li> <li>large organization (as per Target Market) with own IT capabilities, but lacking gamification capabilities.</li> </ul>
<b>Go to Market – IPR (Background)</b>	<p>According to the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>Considering what currently available has already been made public in the project deliverables, we only see a commercial value in the IP of the heat/water reports and, possibly, on the complex (nightly) missions, both of which are shared IP among HighSkillz and Aalborg University, a memorandum of understanding will be discussed and signed.</p>

<b>Go to Market – Early adopters</b>	<p>Early adopters will be identified and reached in the following way:</p> <ul style="list-style-type: none"> <li>• Project partners in the residential markets (Tauron, Himmerland) could be engaged in a 3- to 6- month experimental period, possibly in continuation of the project's activities.</li> <li>• MobiStyle <a href="#">CAB</a> and dissemination channels.</li> <li>• Exploitation services support.</li> <li>• Dissemination opportunities at the EU level, following up the policy-level interest identified so far.</li> <li>• Search CORDIS for partners in this area.</li> <li>• Partnership with major cloud providers that offer their own <a href="#">IoT</a> and DigitalTwin platforms, by offering direct integrations with them.</li> <li>• Grouping of <a href="#">IoT</a> provider companies.</li> <li>• Create "crafted content" in specialty publications and organizations, on the approach and results.</li> </ul>
<b>Go to Market - Pricing</b>	<p>In terms of per-home pricing and it indicated that between 1€-10€ per home per month might be sustainable. But this would depend on volume and on the level of automation of the onboarding, the and maintenance processes and IT systems, as well as the number of value-added features enabled for the customer.</p> <p>Also, there might be setup cost for each new organization.</p> <p>For the sales/licensing path, it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.</p>
<b>Go to Market – Time to market</b>	<p>6 months from time investment is assured.</p> <p><i>Is this planned to happen within the project's life or later? Please clarify.</i></p>
<b>The Team</b>	<p>At this moment we don't have the financial or staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation of 2 previous H2020 <a href="#">RIA</a> projects (via 2 spinoffs) in unrelated areas.</p> <p>For this reason, our preferred exploitation path would be the one in licensing/sale.</p>
<b>The Team – External providers</b>	<p>We have made some contacts with external partners in this area who might be interested in collaborating in the development of a market-ready solution, if investment / funding is available.</p>

Exploitation roadmap	
<b>Actions</b>	<ul style="list-style-type: none"> <li>• Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>• Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>• Assess with early adopters what would be their ideal integration scenarios.</li> <li>• Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google <a href="#">IoT</a> solutions.</li> <li>• Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>• Implement an initial POC solution that can be used to support an initial batch of 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>

<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>• HighSkillz - solution definition, with implementation being carried out either by internal or nearshored team.</li> <li>• Specialist organization - sales channel, relationship building.</li> <li>• Domain expert partner - identification of knowledge that can be converted into gamification mechanisms.</li> <li>• For the sale/licensing path, the question is not applicable.</li> </ul>
<b>Actions Monitoring</b>	<ul style="list-style-type: none"> <li>• Interested organization identified, with concrete use case and financial proposal</li> <li>• Funding for productization assured</li> <li>• Productized version launched First client deployed</li> </ul>
<b>Impact in 3-year time</b>	<i>Describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i>
<b>Financials Costs</b>	<p>For the non-sale scenario:</p> <ul style="list-style-type: none"> <li>• Productization and setup costs <ul style="list-style-type: none"> <li>○ landing pages and marketing (8k€);</li> <li>○ sales and business development (36k€);</li> <li>○ legal (10k€);</li> <li>○ Integration architecture (35k€);</li> <li>○ Backend (25k€);</li> <li>○ Mission Engine (75k€);</li> <li>○ Customer Org Portal (45k€)</li> <li>○ Project management (10k€);</li> </ul> </li> <li>• infrastructure costs (5k/mth -20k€/mth) depending on volume of customers and homes</li> <li>• ongoing operations, support, IT (10k€/month).</li> <li>• 5k€-10k€ direct costs per game and related servers' customization, including setting up of data ingress and egress;</li> </ul> <p><i>When the listed costs need to be covered? It would be an initial investment or costs are spread over a longer period of time?</i></p>
<b>Financials Revenues</b>	<p>At orgs with 1000 homes, 2€/home/month, 24k€/year. With 8 orgs of this topology, breakeven is less than 1 year.</p> <p>For the initial early adopters, the minimum requirements are an Integration Architecture that enables low-latency data ingress.</p>
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters, even if at a reduced cost (to ensure some commitment);</li> <li>• Direct contribution of initial pilots;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>
<b>Financials – Timeline for funding</b>	Initial funds (or agreement with pilot organizations) would need to be available 2 to 3 month before the end of the project.

<b>KER's Exploitation Form</b>
(how the KER will be further exploited – <b>Select only an option</b> )
<b>Only one option is possible</b>



Selected route		Implementing actor	Yes	No
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner	X	
		A group of partners	X	
	Contract research (new contracts signed by the research group with external clients)	A partner		X
		A group of partners		X
	A new research project (application to public funded research programmes)	A partner		X
		A group of partners		X
	Implementation of a new university - course (Note that a training course is a service)	A partner		X
		A group of partners		X
		A new partnership		X
	<b>INDIRECT USE</b>	Transfer of ownership (IPR)	A partner	X
A group of partners			X	
Licensing IPR		A partner	X	
		A group of partners	X	
Development of a new legislation/standard		A partner		X
		A group of partners		X
Spin- off		A partner		X
		A group of partners		X
		By assignment		X
		By licensing		X
Other (please describe)				

### 5.2.3. Lean Canvas MOBISTYLE Game App

<p><b>Problem</b> 1) Companies and organizations managing, owning or supervising large sets of residential homes struggle to incentivise residents to adopt healthier and more energy efficient habits. Many times, sensor deployment initiatives don't make the most of the newly available data.</p> <p><b>Current alternatives</b> are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> <li>• awareness campaigns</li> </ul>	<p><b>Solution</b> 4) Mobile app providing users with relevant and timely information and recommendations based on their specific home and conditions, and recommendations for improvements (services).</p>	<p><b>Unique Value proposition</b> 3) Gamification of energy and health-based activities based on sensors installed in the home, common to all users;</p> <p>Easy to understand, actionable and relevant recommendations for end-users;</p> <p>Existing application code ready to be customized to the organization branding.</p>	<p><b>Unfair Advantage</b> 7) The approach to identify the behaviours from real-world data and detect actions from the end-users is non-trivial to implement at a scale.</p> <p>Acquisition costs require onboarding organizations, integrating with their particular flavour of data sources, adaptation of the behaviours and recommendations, and providing the data to power their own applications.</p>	<p><b>Customer segment</b> 2)  <ul style="list-style-type: none"> <li>• Companies and organizations managing, owning or supervising large sets of residential homes;</li> <li>• National and Municipal Utility companies;</li> </ul>           All of the above must own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</p>
	<p><b>Key Metrics</b> 6) Changes in behaviour and/or consumption profiles.</p> <p>Number of organizations adopting the game.</p>		<p><b>Channels</b> 5) Home and business real estate associations; Environmental and energy efficiency associations; Direct contacts with National and Municipal Utility companies.</p>	<p><b>Early Adopters</b> People involved with the project already through the project partners in the residential cases (Tauron, Himmerland). Companies being contacted via the <a href="#">CAB</a>.</p>

**Cost structure**

8)

Conversion from [MVP](#) to commercial product;  
Onboarding costs for new companies (adaptors for new / additional data sources, data adaptation), programming and deployment of new behaviours, hosting/processing/storage, helpdesk costs for the customer organizations, monitoring/operation/support costs;  
Adaptors to provide data to existing mobile apps of the customer organizations;  
\* 10k per game and related servers' customization

**Revenue Streams**

9)

In terms of per-home pricing and it indicated that between 1€-10€ per home per month might be sustainable. But this would depend on volume and on the level of automation of the onboarding, maintenance processes and IT systems, as well as the number of value-added features enabled for the customer;  
Also, there might be setup cost for each new organization.  
For the sales/licensing path, it would depend on when in time the transfer would occur, as it is expectable that over time more features are added.

1) **PROBLEM**

*How “big” is the problem in the Customer perspective?*

**CURRENT ALTERNATIVES**

*Please compare with your solution.*

2) **CUSTOMER SEGMENT**

*Customer segments identified, but please consider that the 2 of them differ very much the one to the other and that Companies and organizations managing, owning or supervising large sets of residential homes need to be approached in a different way from National and Municipal Utility companies and have different drivers.*

**EARLY ADOPTERS**

*For the ones outside the current consortium, please explain the geographic location, connect them to the problem, explain exactly why these will be the first adopters.*

3) **UNIQUE VALUE PROPOSITION**

*Ok. You need to provide, as much as possible, facts and data, explaining the performance of your product compared to alternative solutions. With the proposed UVP are you really helping your customers to have the right perception of the value you will bring them and that you are worth buying? Are you different from competing solutions?*

4) **SOLUTION**

*Fair enough. When clarified you can add more details on the Service part.*

5) **CHANNELS**

*Fair enough.*

6) **KEY METRICS**

*KPIs have a specific role and are a measure of your performance against key objectives. Need to quantify them and to add the time slot in which you will check them. E.g. Number of organizations adopting the game/yearly.*

7) **UNFAIR ADVANTAGE**

*Ok, but what is it that gives you an advantage in front of the competition? Why what you wrote is an advantage which prevents your solution to be easily copied?*

8) **COST STRUCTURE**

*Please estimate the total costs issued after 6 months and 3 years along with the estimated cost of each “cost entity”. This will connect to distribution channels and assumptions made in the revenues section.*

9) **REVENUE STREAMS**

*Please try to quantify amounts and prices by detailing, estimate revenues for seed stage after 6 months and after 3 years. At one point you should break even.*

### 5.2.4. Lean Canvas MOBISTYLE Energy and Indoor Environmental Quality Missions

<p><b>Problem</b> 1) How to use existing sensor-based "data" to incentivise residents to adopt healthier and more energy efficient habits, in a way that maintains sustained engagement</p> <p><b>Current alternatives</b> are based on:</p> <ul style="list-style-type: none"> <li>• financial incentives (lower bills);</li> <li>• data-display (dashboards/reports);</li> <li>• threshold-based alerts and notifications;</li> <li>• self-reporting gamification;</li> <li>• whole-home energy/water consumption gamification;</li> </ul> <p>awareness campaigns</p>	<p><b>Solutions</b> 4) Software solution: engine/pipeline to promote end-user behaviour change on energy efficiency and health using sensor-based immediate-feedback gamification mechanics</p> <hr/> <p><b>Key Metrics</b> 6) ?</p>	<p><b>Unique Value proposition</b> 3) Gamification of energy and health-based activities based on sensors installed in the home, common to all users. Goes beyond traditional threshold or averaging of data by taking into account time and location when analyzing sequences of events, to generate the gamification elements; Has the ability to provide near-instant feedback on actions, increasing the opportunity for lasting engagement; Missions, actions, recommendations, points, and badges are easy to understand, provides actionable and relevant actions and recommendations for end-users. Simple to integrate with existing <a href="#">IoT</a> and sensor-based platforms; Can be extended with custom-purpose scientific-driven mechanics and reports.</p>	<p><b>Unfair Advantage</b> 7) ?</p> <hr/> <p><b>Channels</b> 5) Home and business real estate associations; Environmental and energy efficiency associations; Direct contacts with National and Municipal Utility companies</p>	<p><b>Customer segment</b> 2)  <ul style="list-style-type: none"> <li>• Organizations with established IT teams or IT service providers, which own or have access to large numbers of sensors installed in the residential homes and must have the need to incentivise residents to adopt healthier and more energy efficient habits.</li> <li>• National and Municipal Utility companies.</li> <li>• Providers of sensors for homes, which want to provide added value on top of the sensor data (gamification, guidance on behaviour change): ex: <a href="https://www.ista.com">https://www.ista.com</a></li> </ul> <p><b>Early Adopters</b> People involved with the project already through the project partners in the residential cases (Tauron, Himmerland). Companies being contacted via the <a href="#">CAB</a></p> </p>
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<p><b>Cost structure</b></p> <p>8)</p> <ul style="list-style-type: none"><li>• landing pages and marketing (8k€);</li><li>• sales and business development (36k€);</li><li>• legal (10k€);</li><li>• Integration architecture (25k€);</li><li>• Backend (25k€);</li><li>• Mission Engine (75€k);</li><li>• project management (10k€);</li><li>• ongoing operations, support, IT (10k€)</li></ul>	<p><b>Revenue Streams</b></p> <p>9)</p> <p>At orgs with 1000 homes, 2€/home/month, 24k€/year With 8 orgs of this typology, <b>break-even is less than 1 year</b></p>
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**1) PROBLEM**

*How “big” is the problem in the Customer perspective?*

**CURRENT ALTERNATIVES**

*Please compare with your solution.*

**2) CUSTOMER SEGMENT**

*Customer segments identified, but please consider that the 2 of them differ very much the one to the other and that Companies and organizations managing, owning or supervising large sets of residential homes need to be approached in a different way from National and Municipal Utility companies and have different drivers.*

**EARLY ADOPTERS**

*For the ones outside the current consortium, please explain the geographic location, connect them to the problem, explain exactly why these will be the first adopters.*

**3) UNIQUE VALUE PROPOSITION**

*Ok. You need to provide, as much as possible, facts and data, explaining the performance of your product compared to alternative solutions. With the proposed UVP are you really helping your customers to have the right perception of the value you will bring them and that you are worth buying? Are you different from competitors? Be more focused in your statements.*

**4) SOLUTION**

*Fair enough, I’m not sure about the innovativeness of the proposed solution. When your features are similar of the ones of the competitors, this is an equality. What matters are the points of difference! What you do, that the others do not do and is what matters to the clients. Try to be more specific.*

**5) CHANNELS**

*Fair enough.*

**6) KEY METRICS**

*Please add the key activities you will measure to track the success (e.g. units sold, users registered, retaining users, paying customers, number of complaints) and the related time slot for achievement.*

**7) UNFAIR ADVANTAGE**

*Is there anything that could give you a long-term type of advantage in front of the competition?*

**8) COST STRUCTURE**

*Fair enough.*

**9) REVENUE STREAMS**

*Concise but clear.*



### 5.3.KER No. 3- MOBISTYLE Expert Tool (KER leading partner: DEMO CONSULTANTS BV)

<b>Problem</b>	<p>Due to low cost sensor techniques the amount of data collected from various physical quantities is expanding rapidly. In the construction sector, building managers and owners deal with a lot of different data and information – such as sensors data, smart meter data, energy bills, <a href="#">BIM</a> models, condition assessment, etc. – coming from different sources and available in different formats.</p> <p>Nevertheless, in some situations this data is easily accessible, available or readable; whereas in other situations the required data can be difficult to extract and difficult to interpret in a homogeneous and clear way.</p> <p><i>Which is the dimension of the problem for the Customer you would like to address?</i></p>
<b>Description</b>	<p>The Expert Tool is a software tool for energy and <a href="#">IEQ</a> monitoring in asset management. The tool is based on the Real Estate (RE) Suite software solutions, including the relevant software applications and modules, developed by DEMO Consultants.</p> <p>RE Suite supports among other topics an objective and measurable condition assessment methodology for existing buildings and building components for multi annual maintenance plans and asset management.</p> <p>The Expert Tool is an additional application added to the RE Suite software package. The Expert Tool is a visualization and data management tool that provides access to sensors and metadata for check, filtering, and validation.</p> <p>It enables the calculation and visualization of KPIs and will support data needs of third-party tools satisfying interoperability requirements.</p> <p>The Expert Tool is designed in such a way that it fixes only some boundary conditions, giving the freedom to the user to filter information, make simple calculations, and export the data in the most suitable way.</p>
<b>Alternative solution</b>	<p>There are different software and tools for building asset management, for example SCADA systems and Building Management System.</p> <p>However, there are none or very few that can organize and disclose heterogeneous information in a systematic way.</p> <p><i>Please list the ones which “can organize and disclose heterogeneous information in a systematic way”, please present their strengths and weaknesses.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>The Expert Tool is part of an already existing software package, the RE Suite, which enables the collection, structuring, organization, analysis and disclosure of heterogeneous information in a systematic way for real estate asset management. The Expert Tool is composed not only by the user interface but also the database for data collection. This means that the whole infrastructure is already developed and available to collect data from different sources and store it in a usable and harmonized way.</p> <p><i>Is there any possibility to measure and quantify the added value for the customers? Fact and data would help in better presenting the UVP.</i></p>

<b>"Market" – Target market</b>	Real estate owners and managers. Early adopter will be on DEMO's current main business client: housing associations in the Netherlands. In later stage and further development of the tool, the second targeted group will be hospitals.
<b>"Market" - Competitors</b>	On the market Building Management Systems are available. These are usually quite complex and expensive to be used. Moreover, it is not always easy to export data from these systems (such as the SCADA system). On the other hand, they manage the whole data collection for the building, showing data and KPIs on dashboard. Compared with these tools, the ExpertTool has the added value that can be used as interface for more simple data collection services such as SQL and SFTP database. Moreover, it offers full compatibility with other tools and can easily export raw/combined data. <a href="#">BMS</a> systems only allow data collection for mechanical, <a href="#">HVAC</a> , and electrical systems. The Expert Tool works as interface; hence all type of systems and sensors can be connected to it.  <i>It's nice to have a direct comparison with competing solutions, this should be reported in the Alternative solutions box and should be used to better define the UVP.</i>
<b>"Market" Size</b>	Market focus is in the Netherlands where there are 7.8 million houses (in 2018). In the Netherlands there are 389 housing associations (early adopters of the solution) which own almost 3 million homes, representing 38,5% of the total number of homes in the Netherlands.
<b>"Market" Trends</b>	In the context of sustainability, smart buildings, energy savings, the commercial solutions related to sensing systems, smart systems, and their user interfaces are increasing consistently.  <i>Any number to be presented?</i>
<b>Settings - Impact</b>	<b>Economic Impact:</b> the Expert Tool allows a lean management of all the complex smart systems in a real estate object and support the definition of smart multi annual maintenance plans and management strategies. <b>Public acceptance:</b> the user is interested in a user friendly, simple, and combined solution. <b>Environmental impact:</b> the expert tool goes in the direction of the supporting the development of smart buildings and helps to decrease energy consumption.
<b>Settings - Legal</b>	GDPR compliance.
<b>Go to Market – Use model</b>	The Expert Tool will be sold for use through a periodic user license (SaaS model). Moreover, the Expert Tool will support consultants within the company (DEMO) who will provide an additional service in consultancy activities.
<b>Go to Market – IPR (Background)</b>	The Expert Tool is developed by DEMO Consultants only.
<b>Go to Market – IPR (Foreground)</b>	The Expert Tool will be commercialized by DEMO Consultants only.

<b>Go to Market – Early adopters</b>	Early adopters (housing associations in the Netherlands) will be approached by participating to national targeted commercial events. Moreover, DEMO Consultants organise periodically dissemination events where current and potential clients are invited to discuss important topics and challenges in the field and to test also DEMO solutions. DEMO Consultants usually invites clients to participate in research activities to further develop their tools and test them on site.
<b>Go to Market - Pricing</b>	The license of the Expert Tool will be sold for € 100,00 / month + € 5,00 for each apartment connected / month. Fee depends also on the number of apartments and sensors that will have to be connected to the expert tool for each apartment and from the number of apartments.
<b>Go to Market – Time to Market</b>	The solution will be ready for the market at TRL 9 within 2 years. It is currently at TRL 7.
<b>The Team</b>	The team within DEMO Consultants (André van Delft- CEO and data management expert, Peter Allemekinders - Senior software developer, Maurijn Neumann - software developer, Sander van Gennip- software developer, Oana Schippers - knowledge transition and communications) is skilled to consult and further develop and implement the expert tool to the users.
<b>The Team – External providers</b>	Cooperation with technicians from the client or other company providers is necessary to support the installation of the smart sensors and systems and for the connection within these systems and the expert tool.

<b>Exploitation roadmap</b>	
<b>Actions Description</b>	Actions 3-6 months after the project ends consist of finalizing the Expert tool with a smarter and more user-friendly interface following the feedback from the validation. The Expert tool will be further tested in other research projects where additional functionalities will be implemented.
<b>Actions - Roles</b>	The only partner involved is DEMO Consultants
<b>Actions Monitoring</b>	After 1 year after the project ends the expert tool will be further developed in at least 2 other research projects: <a href="#">BIM Speed</a> , <a href="#">SAFEWAY</a> wherein DEMO Consultants is partner.
<b>Impact in 3-year time</b>	The further development of the expert tool will allow to hire at least 1 junior software developer and 1 consultant.

<b>Financial Costs</b>	Type of costs: hosting infrastructure, helpdesk, personnel to guarantee connection between the RE Suite and the building sensors, costs to engage customer (e.g. DEMO studio workshops; participation at fairs, etc.), commercial (online) campaigns.
<b>Financials - Revenues</b>	After 1 year: 1 client with 100 apartments = 100€/month (software license) + 5,00€/month (connecting apartments to database and expert tool) >> 7200 €/year.  <b>basic assumptions* euro's /month:</b> price license expert tool/organisation € 100,00 price license expert tool/apartment € 5,00 cost for hosting, helpdesk etc./organisation  <b>euro's/year</b> entry level € 5.000,00 additional/apartment € 20,00
	After 3 years: 1 client with 200 apartments and 1 client with 1500 apartments = 69.600€/year.
<b>Financials - Other sources</b>	Own budget, other research projects budget, pilots.
<b>Financials – Timeline for funding</b>	First financing is needed right after the end of the project, to finalize the development of the tool up to TRL 9. Then after 3 years to push for market uptake.

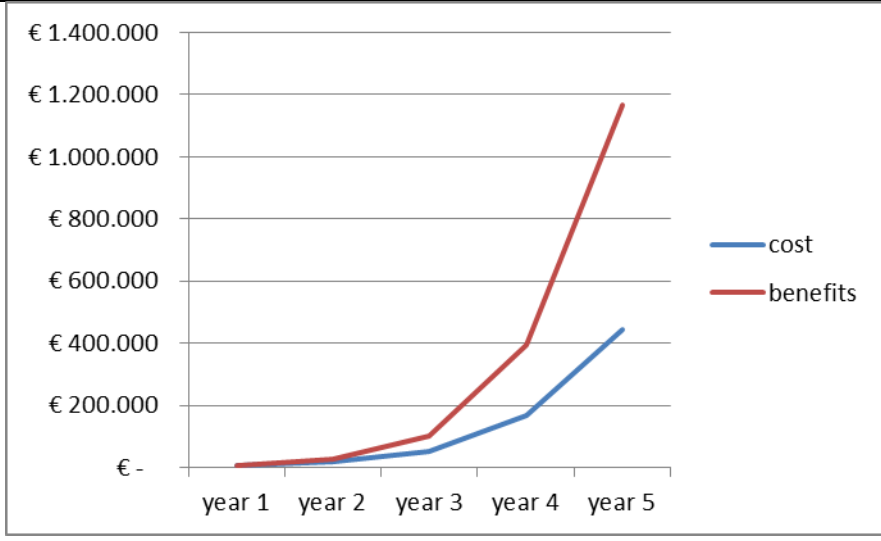
KER's Exploitation Form				
(how the KER will be further exploited)				
Selected route		Implementing actor	Yes	No
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner	X	
		A group of partners		X
	Contract research (new contracts signed by the research group with external clients)	A partner	X	
		A group of partners		X
	A new research project (application to public funded research programmes)	A partner	X	
		A group of partners		X

		A partner		X
	Implementation of a new university - course (Note that a training course is a service)	A group of partners		X
		A new partnership		X
<b>INDIRECT USE</b>	Transfer of ownership (IPR)	A partner		X
		A group of partners		X
	Licensing IPR	A partner		X
		A group of partners		X
	Development of a new legislation/standard	A partner		X
		A group of partners		X
	Spin- off	A partner		X
		A group of partners		X
		By assignment		X
		By licensing		X
	Other (please describe)			

### 5.3.1. Lean Canvas – MOBISTYLE Expert Tool

<p><b>Problem</b> 1) Building manager deals with a lot of different kind of building information (sensors data, bills, condition assessment, energy consumption, <a href="#">BIM</a>, etc).</p> <p>Sensors data have different format and structure. Providers have their own apps to access data. It is too heterogeneous if we consider the use of different sensors' brand on site.</p> <p>Building data and information are very heterogeneous and complex.</p>	<p><b>Solutions</b> 4) <b>Top 3 features</b></p> <p>Software tool for energy and <a href="#">IEQ</a> monitoring in asset management.</p> <p>Access to data and visualization on graphs and dashboard (Both raw data and KPI).</p> <p>Filtering of information that wants to be visualized.</p> <p>Export functionality in csv and json.</p>	<p><b>Unique Value proposition</b> 3) Collect and disclose in a harmonious way information (data) and enable easy interpretation of this information in forms of KPIs for further management and analysis purposes (as a service).</p> <p><i><u>A market analysis on competitors is not yet done though.</u></i></p>	<p><b>Unfair Advantage</b> 7) Expert Tool as part of a complete software package (already commercialised) for real estate asset management.</p>	<p><b>Customer segment</b> 2) The organizations using the expert tool are expected to be mainly, housing associations of which there are about 350 in the Netherlands. Together they own and manage a housing stock of about 2,5 mln. households. Next to housing associations, ESCO's and private investors, like pension funds corporations, also own and manage large amounts of houses in NL. Also, for these kinds of associations the expert tool will be interesting.</p> <p>In short:</p> <ul style="list-style-type: none"> <li>- Real estate companies;</li> <li>- Real estate management companies;</li> <li>- Real estate owners;</li> <li>- Real estate developers;</li> <li>- Utility providers (such as consortium partner TAURON, interested in these data for customer segmentation and understanding, and targeted marketing);</li> <li>- Service companies (expanding portfolio of product and services).</li> </ul>
<p><b>Existing alternative:</b> Building Management Systems to access data. In residential cases, several single tools are available but not interconnected solutions available</p>	<p><b>Key Metrics</b> 6) Number of licenses sold, in extension to existing customers</p> <p>Period of paid use</p>		<p><b>Channels</b> 5) Approach existing clients providing this additional service</p> <p>Specific fairs (e.g. <a href="#">CorporatiePlein</a> – Dutch housing corporation endorsed event ) and journals (e.g. <a href="#">Vastgoed Journal</a> – Dutch Real Estate dedicated journal)</p> <p>Umbrella organization for housing association (but mainly for raising awareness)</p> <p>DEMO Studio (periodic company)</p>	<p><b>Who are the early adopters?</b> Firstly, the existing customers of DEMO:</p> <ul style="list-style-type: none"> <li>- Municipalities of: Krimpenerwaard, Almere;</li> <li>- Housing associations: STEK, TBV Wonen, SCW Tiel, Delta Wonen, Lefier;</li> <li>- Hospitals: Rijnstate Hospital in Arhem;</li> </ul> <p>Secondly real estate owners and developers with whom joint initiatives have taken place:</p> <ul style="list-style-type: none"> <li>- Housing associations in the Netherlands (e.g. <a href="#">Stek Wonen</a>; <a href="#">Woonstad Rotterdam</a>, <a href="#">Vestia</a>, etc.)</li> <li>- Hospitals (e.g. Erasmus MC in Rotterdam, NL, Reinier de Graaf in Delft, NL);</li> <li>- RE Developers: <a href="#">Camelot Europe</a> (Netherlands)</li> </ul>

			initiative to network, investigate customer needs, promote)  Online communications on social media and website																																																																																											
<p><b>Cost structure (when solution is ready for the market)</b> 8) Type of costs: hosting infrastructure, helpdesk, personnel to guarantee connection between the RE Suite and the building sensors, costs to engage customer (e.g. DEMO studio workshops; participation at fairs, etc.), commercial (online) campaigns.</p> <table border="1"> <thead> <tr> <th>basic assumptions*</th> <th>euro's /month</th> </tr> </thead> <tbody> <tr> <td>price license expert tool/organisation</td> <td>€ 100,00</td> </tr> <tr> <td>price license expert tool/apartment</td> <td>€ 5,00</td> </tr> <tr> <td>cost for hosting, helpdesk etc./organisation</td> <td><b>euro's/year</b></td> </tr> <tr> <td>entry level</td> <td>€ 5.000,00</td> </tr> <tr> <td>additional/apartment</td> <td>€ 20,00</td> </tr> </tbody> </table> <p>* not included costs for sensors and placing of sensors</p>			basic assumptions*	euro's /month	price license expert tool/organisation	€ 100,00	price license expert tool/apartment	€ 5,00	cost for hosting, helpdesk etc./organisation	<b>euro's/year</b>	entry level	€ 5.000,00	additional/apartment	€ 20,00	<p><b>Revenue Streams (after 6 months and 3 years)</b> 9) The license of the Expert Tool will be sold for € 100,00 / month + € 5,00 for each apartment connected / month. Fee depends also on the number of apartments and sensors that will have to be connected to the expert tool for each apartment and from the number of apartments.</p> <table border="1"> <thead> <tr> <th></th> <th colspan="5">year</th> </tr> <tr> <th></th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> </tr> </thead> <tbody> <tr> <td>number of customers organisations</td> <td>1</td> <td>2</td> <td>4</td> <td>8</td> <td>12</td> </tr> <tr> <td>connected appartm. /org</td> <td>100</td> <td>200</td> <td>400</td> <td>800</td> <td>1600</td> </tr> <tr> <td>apartments in total</td> <td>100</td> <td>400</td> <td>1600</td> <td>6400</td> <td>19200</td> </tr> </tbody> </table> <p><b>Costs</b></p> <table border="1"> <thead> <tr> <th></th> <th>year 1</th> <th>year 2</th> <th>year 3</th> <th>year 4</th> <th>year 5</th> </tr> </thead> <tbody> <tr> <td>hosting infrastructure</td> <td>€ 7.000</td> <td>€ 18.000</td> <td><b>€ 52.000</b></td> <td>€ 168.000</td> <td><b>€ 444.000</b></td> </tr> <tr> <td>helpdesk personnel</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p><b>Revenues</b></p> <table border="1"> <thead> <tr> <th></th> <th>year 1</th> <th>year 2</th> <th>year 3</th> <th>year 4</th> <th>year 5</th> </tr> </thead> <tbody> <tr> <td>license expert tool/org</td> <td>€ 1.200</td> <td>€ 2.400</td> <td>€ 4.800</td> <td>€ 9.600</td> <td>€ 14.400</td> </tr> <tr> <td>license expert tool/app.</td> <td>€ 6.000</td> <td>€ 24.000</td> <td>€ 96.000</td> <td>€ 384.000</td> <td>€1.152.000</td> </tr> <tr> <td>total revenues</td> <td>€ 7.200</td> <td>€ 26.400</td> <td><b>€100.800</b></td> <td>€393.600</td> <td><b>€1.166.400</b></td> </tr> <tr> <td><b>Gross profit margin</b></td> <td><b>€ 200</b></td> <td><b>€ 8.400</b></td> <td><b>€ 48.800</b></td> <td><b>€ 225.600</b></td> <td><b>€ 722.400</b></td> </tr> </tbody> </table>			year						1	2	3	4	5	number of customers organisations	1	2	4	8	12	connected appartm. /org	100	200	400	800	1600	apartments in total	100	400	1600	6400	19200		year 1	year 2	year 3	year 4	year 5	hosting infrastructure	€ 7.000	€ 18.000	<b>€ 52.000</b>	€ 168.000	<b>€ 444.000</b>	helpdesk personnel							year 1	year 2	year 3	year 4	year 5	license expert tool/org	€ 1.200	€ 2.400	€ 4.800	€ 9.600	€ 14.400	license expert tool/app.	€ 6.000	€ 24.000	€ 96.000	€ 384.000	€1.152.000	total revenues	€ 7.200	€ 26.400	<b>€100.800</b>	€393.600	<b>€1.166.400</b>	<b>Gross profit margin</b>	<b>€ 200</b>	<b>€ 8.400</b>	<b>€ 48.800</b>	<b>€ 225.600</b>	<b>€ 722.400</b>
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**Cost vs. benefits – Y1-Y5**



**1) PROBLEM**

*Fair enough.*

**EXISTING ALTERNATIVES**

*Fair enough. Any name/brand which is more known/adopted than others? And then which are their weaknesses and strengths?*

**2) CUSTOMER SEGMENT**

*Fair enough.*

**EARLY ADOPTERS**

*Fair enough.*

**3) UNIQUE VALUE PROPOSITION**

*You need to provide, as much as possible, facts and data, explaining the performance of your product compared to alternative solutions (efficiency increase of 20%, decreased energy consumption of 10%, 30% less development costs etc.). You presented as existing alternative "Building Management Systems" why someone should substitute current available solutions with the solution you will be proposing? Why you are worth buying instead of what already in place?*

**4) SOLUTION**

*Fair enough.*

**5) CHANNELS**

*Fair enough.*

**6) KEY METRICS**

*KPIs have a specific role and are a measure of your performance against key objectives. Need to quantify them and to add the time slot in which you will check them. E.g. Number of licenses sold/yearly.*

**7) UNFAIR ADVANTAGE**

*Fair enough.*

**8) COST STRUCTURE**

*It seems that you listed costs you are going to incur but then the table presents Costs for your customers to adopt the Expert Tool. Please clarify. Costs' quantification seems to be presented in the Revenue Streams box to present how and when profits will be made (ok).*

**9) REVENUE STREAMS**

*Fair enough.*

## 5.4.KER No. 4 – MOBISTYLE Dashboard (KER leading partner: Holonix Srl)

<b>Problem</b>	<p>People living in building generates a lot of different kind of building information but have no access to them in an easy manner, or not available at all.</p> <p><i>Which is the “dimension” of the problem from the Customer perspective?</i></p>
<b>Description</b>	<p>Desktop and mobile tool for personalized energy and <a href="#">IEQ</a> monitoring in buildings, with a suggestions system to guide users.</p>
<b>Alternative solution</b>	<ul style="list-style-type: none"> <li>• Building Management Systems to access data.</li> <li>• Home systems.</li> <li>• Office systems.</li> <li>• But all of them gives access to partial data.</li> </ul> <p><i>Please add weaknesses and strengths of the alternative solutions, this will help to compare and to quantify added value of your solution.</i></p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>The solution drives users to consciousness creation and behaviour change about home energy consumption and Indoor Environmental quality. Expected results can be summarized in:</p> <ul style="list-style-type: none"> <li>- energy consumption reduction of about 16%;</li> <li>- awareness on energy efficiency and alternatives, increase of about 50%.</li> </ul> <p>Mobistyle dashboard statement: Behavioural change approach to home energy management and unique information point.</p>
<b>"Market" – Target market</b>	<ul style="list-style-type: none"> <li>- <u>What is the target market?</u> Households and buildings manager.</li> <li>- <u>Who are the customer segments?</u> Companies or organizations managing, owning or supervising large sets of homes (including non-residential as hotels and short rent apartments) and day life buildings (as offices, schools, universities). All of the above must own or have access to large numbers of sensors installed.</li> <li>- <u>Who might be the early adopter (those you might address first)?</u> - Known short rent apartment management organization, in Northern Italy. - Hotels connected to the Orologio hotels association (Mobistyle pilot), who expressed their interest.</li> </ul>
<b>"Market" - Competitors</b>	<p>Competitors: Single solution providers (smart metering, smart appliances, ...) and building managements systems providers.</p> <p><i>What are the weaknesses of competitors comparing to you?</i></p>
<b>"Market" Size</b>	<p><u>What is the market size for your solution?</u> Global energy management system market valued at USD 18,269.6 Mn in 2018 and is projected to reach USD 48,901.1 Mn by the end of 2026, exhibiting a CAGR of 13.7% during the forecast period (2019 – 2026). <a href="https://www.fortunebusinessinsights.com/industry-reports/energy-management-system-market-101167">https://www.fortunebusinessinsights.com/industry-reports/energy-management-system-market-101167</a></p>

	<p><u>What is the percentage of that market you will be targeting?</u> To answer, we should discover how many energy management systems are specific for hotels and short rent apartments, and offices/public buildings. No data found.</p> <p>If you are dealing with training, provide information on the size of potential beneficiaries. If you deal with policy recommendations provide an estimation of how many people/SMEs will be affected.</p>
<b>"Market" Trends</b>	<p>Energy Efficiency; Sustainability; <a href="#">IoT</a>; Behavioural Change.</p> <p><i>Please give a qualitative and quantitative description.</i></p>
<b>Settings - Impact</b>	<p><u>What is the public acceptance?</u> Using mobile is totally accepted. Using an APP to receive information and notifications is generally accepted.</p> <p><u>What is the social impact?</u> Doing something positive for the planet, is actually a mainstream. Starting from own environment is the starting point for many people.</p> <p>- <u>What is the environmental impact?</u> Reducing everyone' energy consumption at home is one of the main topics of working on improving own's environmental impact. Alone it is not enough, but it is something tangible and with the APP it can be measured and compared to previous behaviour.</p> <p><u>What is the economic impact?</u> Reducing energy consumption, reduces bills.</p>
<b>Settings - Legal</b>	<p><u>What are the legal requirements?</u> Only GDPR related.</p> <p><u>What are the ethical requirements?</u> Sharing information is part of the actual sharing economy, being more and more accepted. Anyway, if the solution is used not sharing any sort of information with externals, improving own' footprint on the environment is generally considered as positive or, at worst, not of interest.</p>
<b>Go to Market – Use model</b>	<p><b>Sell</b> the solution to organizations that wants to improve their customers/users experience in terms of energy consumption consciousness and that wants to improve the behaviour of people on these topics. This means selling to sensorized companies, as the core business of Holonix does not include the sensorization of buildings. A partnership could be considered. Partnership with DEMO is under discussion.</p> <p><i>Please explain what the next steps are to take, the action points, milestones regarding the commercialisation.</i></p>
<b>Go to Market – IPR</b>	As stated in the Consortium Agreement.
<b>Go to Market – IPR</b>	As stated in the Consortium Agreement.
<b>Go to Market – Early adopters</b>	<p>Starting from Mobistyle partners, who declared to be interested in the solution and proposed the solution to their associations and municipalities.</p> <p><i>What about outside of the consortium?</i></p>
<b>Go to Market - Pricing</b>	<p>After 6 months, still early adopters.</p> <p><i>What is the estimation of price/unit and number of units sold to reach the breakeven point?</i></p>

<b>Go to Market – Time to markets</b>	1 year for additional developments (User interface to be improved), partnerships definition and commercial contacts.  <i>Please consider that estimated time to market influence the plan needed to timely assure proper resources for the additional development.</i>
<b>The Team</b>	IT, ICT, project management, business developments, administration are skills existing in Holonix. The exploitation will be made as a new business unit in Holonix, not as a new company.
<b>The Team – External providers</b>	The expertise of Mobistyle experts about energy consumption and indoor environmental quality is something relevant that cannot be a Holonix skill, and there will be the need of a partnership with universities, or other form of cooperation.

<b>Exploitation roadmap</b>	
<b>Actions Description</b>	3 months: second version implementation of the front end, considering usability improved + experts' partnership + website and marketing material ready + sales contacts to early adopters + internal staff preparation. 6 months: full dashboard developments with database in HOLX premises structured. More than 6: early adopter deployment
<b>Actions - Roles</b>	Roles of partners involved only HOLONIX. MOBISTYLE partners will be called as first choice for partnerships: DEMO for the databases and data gathering from sensors, POLITO for energy management, IRI-UL for change behaviour. Then external contacts will be approached.
<b>Actions Monitoring</b>	3 months: second version implementation of the front end, considering usability improved + experts' partnership + website and marketing material ready + sales contacts to early adopters + internal staff preparation. 6 months: full dashboard developments with database in HOLX premises structured. More than 6: early adopter deployment.
<b>Impact in 3-year time</b>	<i>Please describe impact in terms of growth/benefits for the society (jobs created, investments mobilized, turnover generated).</i>

<p><b>Financial Costs</b></p>	<p>Type of costs: hosting infrastructure: 1.000 euro every 100 users connected.</p> <p>Helpdesk: 1-person month every 50 customers (around 30.000 euro of company cost per year).</p> <p>Personnel to guarantee connection with the building sensors: 1-person month every 100 buildings (around 30.000 euro of company cost per year).</p> <p>Personnel for customizations and initial deployment: 1 person (around 30.000 euro of company cost per year).</p> <p>Costs to engage customer and dedicated commercial campaign: sales budget 15.000 euro. Personnel included in Holonix costs.</p> <p><u>After 3 year:</u> 700 users connected : 7.000 euro hosting 1 person in helpdesk: 30.000 personnel 3 developers: 90.000 Dedicated commercial campaign: 15.000 Total per year: 142.000 euro</p> <p>Considering indirect costs (25% of business unit costs: 35500 euro), year 3 will begin with earnings increasing Holonix business.</p>
<p><b>Financials - Revenues</b></p>	<p><u>After 6 months, still early adopters:</u> - Short rent apartment organization, pilot in 5 apartments connected: 80euro per apartment per month -&gt; 400 euro per month - 3 hotels of the association, pilot in 4 rooms per hotel (total 12 rooms): 50 euro per room per month -&gt; 600 euro per month</p> <p><u>After 3 years, real common customers:</u> - Short rent apartments, at least 400 apartments connected for a average price of 40 euro per apartment per month: 1.600 euro per month - Sort rent apartment – entering customization fee for 150 new apartments, at 400 euro: 60000 per year. - 10 Hotels with an average of 10 rooms connected, at average price of 30 euro per room per month -&gt; 3.000 euro per month - Hotels – entering customization fee, for 5 new hotels per year, at 2000 euro: 10.000 per year. - Offices of 7 medium companies, connecting about 10 rooms each, at a company price of 150 euro per month -&gt; 1.050 euro per month - Offices – entering customization fee, for 50 new offices, at 400 euro: 20.000 per year. - Public organization (university / municipality), connecting 3 buildings with 30 main rooms each, at a building price of 300 euro -&gt; 900 euro per month - Public – entering customization fee, for 1 new building per year, at 5.000 euro.</p> <p>Monthly income expected: 6.550 per month. Which means 87.600 euro per year. Customization fee: 60.000 + 10.000+ 20.000+ 7.000 = 95.000. Total income expected per year: 182.600 euro</p>

<b>Financials - Other sources</b>	Partners own budget. This will be supported by participation to other projects proposals in similar domains, in industry 4.0 domain (which is Holonix core business and supports the data gathering and sensorization aspects), in Fast Track-to-Innovation, and in local and regional vouchers.
<b>Financials – Timeline for funding</b>	If early adopters start using the solution within 6 months, or January 2021, then funds are needed to grow up the solution. Otherwise, on the end of 6 months funds will be needed to look for other early adopters and improve sales activities.

<b>KER's Exploitation Form</b>				
(how the KER will be further exploited – Select only an option)				
<b>Selected route</b>		<b>Implementing actor</b>	<b>Yes</b>	<b>No</b>
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner		
		A group of partners	x	
	Contract research (new contracts signed by the research group with external clients)	A partner		
		A group of partners		
	A new research project (application to public funded research programmes)	A partner		
		A group of partners		
	Implementation of a new university - course (Note that a training course is a service)	A partner		
		A group of partners		
		A new partnership		
	<b>INDIRECT USE</b>	Transfer of ownership (IPR)	A partner	
A group of partners				
Licensing IPR		A partner		
		A group of partners		
Development of a new legislation/standard		A partner		
		A group of partners		
Spin- off		A partner		
		A group of partners		
		By assignment		
By licensing				
Other (please describe)				

### 5.4.1. Lean Canvas MOBISTYLE Dashboard

Problem	Solutions	Unique Value proposition	Unfair Advantage	Customer segment
<p>1) People living in building generates a lot of different kind of building information but have no access to them in an easy manner, or not available at all. I.e. in houses: energy consumption data are available only reading directly the meter, which is usually not in the apartment, or in the consumption bill; in shared buildings as offices and universities: energy consumption data are not available to occupants. <a href="#">IEQ</a> is even less monitored in buildings. Even if energy and <a href="#">IEQ</a> (Indoor Environmental Quality) information can be accessed in an easy manner, people usually</p>	<p>4) <b>Top 3 features</b> Access to easy-to-understand single data and visualization of graphs.  Personalized dashboards for user. Monitoring can be punctual, or trends related. It has to be easy-to-understood at a first glance. Users can be owners, managers, occupants. Each of them can have access to different rooms and to different data through highly personalized dashboards. Users receive suggestions about how it can be possible to improve performances, reducing energy consumption and improving <a href="#">IEQ</a>.</p>	<p>3) Desktop and mobile tool for personalized energy and <a href="#">IEQ</a> monitoring in buildings, with a suggestions system to guide users. Expected results in: - energy consumption reduction of about 16% - awareness on energy efficiency and alternatives, increase of about 50%</p>	<p>7) Dashboard as part of MOBISTYLE solution, with partnership with experts.  <a href="#">IOT</a> deep experience and knowledge in HOLONIX.  HOLONIX organization to be used (administrative, HR, strategy, commercial, marketing, etc) not needing a dedicated company, but only a business unit.</p>	<p>2) Starting from: Hotels in Italy Public organizations in Slovenia Short rent apartment in Italy  Many potential others, i.e.: Housing associations Real estate agencies Municipalities Contractors Hospitals Elderly people rest houses Offices  <b>Early adopters</b> can be: - Known short rent apartment management organization, in Northern Italy - Hotels connected to the Orologio hotels association (Mobistyle pilot), who expressed</p>

<p>doesn't know how to change behaviour in order to improve performances.</p> <p><b>Existing alternative:</b> Building Management Systems to access data. Home systems. Office systems. But all of them gives access to partial data.</p>	<p><b>Key Metrics</b></p> <p>6) Period of paid use: at least 3 years of licensing per license</p> <p>Number of apartment/buildings connected: at least 30 new per year</p> <p>Number of active users: at least 1 per room connected per period.</p>		<p><b>Channels</b></p> <p>5) For early adopters: direct contacts.</p> <p>For other potential customers: HOLONIX Sales force Fairs and events of the specific sector</p>	<p>their interest</p>
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<p><b>Cost structure (when solution is ready for the market)</b> 8) Considering only HOLONIX Business Unit costs Type of costs: hosting infrastructure: 1.000 euro every 100 users connected.</p> <p>Helpdesk: 1-person month every 50 customers (around 30.000 euro of company cost per year).</p> <p>personnel to guarantee connection with the building sensors: 1-person month every 100 buildings (around 30.000 euro of company cost per year).</p> <p>Personnel for customizations and initial deployment: 1 person (around 30.000 euro of company cost per year).</p> <p>costs to engage customer and dedicated commercial campaign: sales budget 15.000 euro. Personnel included in Holonix costs.</p> <p>After 3 year: 700 users connected: 7.000 euro hosting 1 person in helpdesk: 30.000 personnel 3 developers: 90.000 Dedicated commercial campaign: 15.000 Total per year: 142.000 euro</p> <p>Considering indirect costs (25% of business unit costs: 35500 euro), year 3 will begin with earnings increasing Holonix business.</p>	<p><b>Revenue Streams (after 6 months and 3 years)</b> 9)</p> <p>After 6 months, still early adopters:</p> <ul style="list-style-type: none"> <li>- Short rent apartment organization, pilot in 5 apartments connected: 80euro per apartment per month -&gt; 400 euro per month</li> <li>- 3 hotels of the association, pilot in 4 rooms per hotel (total 12 rooms): 50 euro per room per month -&gt; 600 euro per month</li> </ul> <p>After 3 years, real common customers:</p> <ul style="list-style-type: none"> <li>- Short rent apartments, at least 400 apartments connected for a average price of 40 euro per apartment per month: 1.600 euro per month</li> <li>- Sort rent apartment – entering customization fee for 150 new apartments, at 400 euro: 60000 per year.</li> <li>- 10 Hotels with an average of 10 rooms connected, at average price of 30 euro per room per month -&gt; 3.000 euro per month</li> <li>- Hotels – entering customization fee, for 5 new hotels per year, at 2000 euro: 10.000 per year.</li> <li>- Offices of 7 medium companies, connecting about 10 rooms each, at a company price of 150 euro per month -&gt; 1.050 euro per month</li> <li>- Offices – entering customization fee, for 50 new offices, at 400 euro: 20.000 per year.</li> <li>- Public organization (university / municipality), connecting 3 buildings with 30 main rooms each, at a building price of 300 euro -&gt; 900 euro per month</li> <li>- Public – entering customization fee, for 1 new building per year, at 5.000 euro.</li> </ul> <p>Monthly income expected: 6.550 per month. Which means 87.600 euro per year. Customization fee: 60.000 + 10.000+ 20.000+ 7.000 = 95.000. Total income expected per year: 182.600 euro</p>
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**1) PROBLEM**

*Fair enough, but please connect problems directly with listed Customers.*

**CURRENT ALTERNATIVES**

*Fair enough. Which the weaknesses of each of the listed solutions?*

**2) CUSTOMER SEGMENT**

*Fine that you have prioritized.*

**EARLY ADOPTERS**

*Fair enough*

**3) UNIQUE VALUE PROPOSITION**

*Please avoid acronyms! Please take advantage from what written in the Solution box there is more added value offered to customers that could be presented.*

**4) SOLUTION**

*A lot of elements presented in Solution should be addressed as well in UVP.*

**5) CHANNELS**

*Fair enough.*

**6) KEY METRICS**

*Fair enough*

**7) UNFAIR ADVANTAGE**

*Not very strong, but ok.*

**8) COST STRUCTURE**

*When will you be reaching the break-even?*

**9) REVENUE STREAMS**

*Fair enough.*

## 5.5.KER No. 5 – MOBISTYLE Office App (KER leading partner: Huygen)

<b>Problem</b>	<p>Occupants of office buildings are often complaining about the indoor environment. Nevertheless, the building management is hardly able to solve these problems in a limited time and energy efficient way, this is most often done by changing setting in the BMS manually. So, a question to be tackled is how to use existing sensor-based "data" to adopt dynamic conditions that make building occupants more productive and energy efficient (proactive on a long term).</p> <p><i>How "big" is the problem? Which is the importance for the Customers? How this is impacting in quantitative terms on their activity/business?</i></p>
<b>Description</b>	<p>MOBISTYLE feedback provision via the Office app was introduced to first evaluate their acceptance and find the best profiles for the given group and through the feedback loop, increase the acceptance with the dynamic office conditions indoors by educating building occupants. In that respect, two main features of Office App are:</p> <ul style="list-style-type: none"> <li>- Mobile app collecting feedback from occupants to quantify their satisfaction and evaluate their perception with the dynamic conditions.</li> <li>- And providing personalized tips, information and suggestions to building occupants (e.g. staff, employees) on dynamic profiles of temperature and its effects.</li> </ul>
<b>Alternative solution</b>	<p>Building managers are responsible for the quality of the indoor climate in office buildings. As soon as someone's starts complaining, others will follow. Even if the discomfort comes from other circumstances than only the indoor climate (e.g. poor relationship with a colleague). In practice building managers keep distance from the building occupants because they are aware, they cannot satisfy all people at the same time. Occupants know that their complains will not be properly addressed and turned into actions and occupants therefore do not behave proactively. So, we see that buildings complaints of the occupants are passively and inefficiently gathered and managed by building managers.</p> <p>Reactive approach: in case of complaints the <u>HVAC</u>-settings are adjusted in answer to these complaints whilst neglecting other aspects like energy costs, maintenance costs etc.</p>
<b>Unique Selling Point USP - Unique Value Proposition UVP</b>	<p>UVP:</p> <ul style="list-style-type: none"> <li>• Increase the real estate value in terms of the level of the rent and future proof perspective;</li> <li>• Reduce primary energy use of buildings or climatization;</li> <li>• energy costs;</li> <li>• Reduce maintenance cost;</li> <li>• opening to new cost reduction possibilities e.g. offering flexibility on the electricity grid or application of Demand Response Control Strategies.</li> </ul>
<b>"Market" – Target market</b>	<ul style="list-style-type: none"> <li>• Owners of real estate e.g. real estate renters;</li> <li>• Owners of real estate for their own use e.g. hospitals, campuses (Brightlands), banks;</li> <li>• Real estate from educational institutions e.g. Tilburg University.</li> </ul>
<b>"Market" - Competitors</b>	<p>In office buildings the feedback about the indoor climate will be given to the building manager. Either oral or in an email or written note to the building manager. So if needed, the building managers can have direct contact with their occupants but this is not a practice normally.</p> <p>The Mobistyle office app can be used in several ways:</p> <ul style="list-style-type: none"> <li>- As a tool able to collect opinions and feedbacks from occupants (users in the loop)</li> </ul>

	<p>data) for building managers for easy contact with occupants, where the app also gives the first feedback to occupants.</p> <ul style="list-style-type: none"> <li>- As a tool for an independent party in case a building manager got stuck in a discussion or got in conflict with occupants about the indoor climate.</li> <li>- The Mobistyle-office app can collect data anonymously, what makes the work of the building manager easier by having less conflict about emotional response.</li> </ul> <p><i>How do you plan to defeat competition?</i></p>
<b>"Market" - Size</b>	<p>All office spaces, about 2.000.000 m2 net floor area in Netherlands. Market share of 10-15%, increasing to 30% over 5-8 years. Mainly real estate owners, about 200 companies.</p>
<b>"Market" - Trends</b>	<p>Healthy buildings e.g. declared by the BREEAM and WELL certificates. Health in general (food, sports/fitness, stress, sustainability) is the trending topic. There is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours. For larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p>
<b>Settings (public acceptance)</b>	<p>There is an increasing concern on how people can be led into adapting healthier and more energy efficient behaviours. For larger organizations (probably public ones) the energy savings can free up economic resources and CO2 emissions credits. The solutions can contribute to operationalization of organization or public policies.</p>
<b>Settings (legal environment)</b>	<p>There are legal requirements for the upper and lower boundary of the range of indoor temperature, relative humidity and CO2-concentration. In general people will complain before these boundaries are reached. If boundaries are exceeded then the building manager is forced to take measures.</p>
<b>Go to Market – Use model</b>	<p>Either sell or license the technology to:</p> <ul style="list-style-type: none"> <li>• tech provider company with offer in <a href="#">IoT</a> but still lacking gamification capabilities;</li> <li>• large organization (as per Target Market) with own IT capabilities, but lacking gamification capabilities.</li> </ul>
<b>Go to Market – IPR (Background)</b>	<p>As stated in the Consortium Agreement.</p>
<b>Go to Market – IPR (Foreground)</b>	<p>Huygen will exploit: Mobistyle Office App; Mobistyle mission &amp; recommendations definitions.</p> <p>Subset of the MobiStyle Office App; Mobistyle mission definitions (basic); Mobistyle mission definitions (nightly + reports).</p>
<b>Go to Market – Early adopters</b>	<p>Existing loyal clients of Huygen.</p>
<b>Go to Market - Pricing</b>	<p>Concerning pricing it could be expressed in euro per m2 net floor area. E.g. 1 euro/m2/year. A certain size of clients is necessary to cover fixed costs as development and customer care.</p>

<b>Go to Market - Time to market</b>	1 year from the end of Mobistyle project  <i>Please remember that you will need to plan resources needed and how and when to cover connected costs for the period above mentioned.</i>
<b>The Team</b>	At this moment we don't have the ICT-staffing capability to take this solution to the market, as we are currently actively engaged in the exploitation DataBUILT, internal data analysis development of Huygen. For this reason, our preferred exploitation path will be combined with other ICT-data applications.
<b>The Team – External providers</b>	ICT-developers, Huygen consultants in building services, installers.

Exploitation roadmap										
<b>Actions</b>	<ul style="list-style-type: none"> <li>Select partners with presence in the target vertical markets, and define a revenue/profit sharing agreement, both for the initial sales and for ongoing exploitation, on country/region and/or vertical area.</li> <li>Create landing page that can be used in assessing organization interest and be used in advertising.</li> <li>Assess with early adopters what would be their ideal integration scenarios.</li> <li>Design a technical design for migrating the existing platform from standalone into a cloud-native solution, integrated with Azure, AWS and Google IoT solutions.</li> <li>Design an integration engine to allow processing of diverse data sources to be efficiently processed.</li> <li>Implement an initial POC solution that can be used to support an initial 10 organizations (even w/o all the identified extensibility mechanisms).</li> </ul>									
<b>Actions - Roles</b>	<ul style="list-style-type: none"> <li>Huygen - solution definition, with implementation being carried out either by internal or nearshored team;</li> <li>Huygen consultants - sales channel, relationship building;</li> <li>Domain expert partner - identification of knowledge that can be converted into ICT mechanisms e.g. chat bot.</li> </ul>									
<b>Actions Monitoring</b>	subscription Number of buildings using MOBISTYLE-app Number of occupants using MOBISTYLE-app Number of building types Number of m2 provided with MOBISTYLE -app  <i>Which is the timeframe per each monitoring parameter?</i>									
<b>Impact in 3-year time</b>	<b>Year</b>	<b>m2 Gross floor area</b>	<b>no of buildings</b>	<b>no of displays</b>	<b>no of sensor</b>	<b>Labour</b>	<b>Promotion</b>	<b>Total cost</b>	<b>Revenu</b>	
	1	10.000	2	20	100	€ 35.000	€ 15.000	€ 59.500	€ 30.000	0,5 fte
	2	20.000	4	40	200	€ 35.000	€ 5.000	€ 69.000	€ 50.000	0,5 fte
	3	50.000	10	100	500	€ 70.000	€ 5.000	€ 164.000	€ 130.000	1 fte
	4	100.000	20	200	1000	€ 70.000	€ 5.000	€ 224.000	€ 250.000	1 fte
<b>Financials Costs</b>	Hosting <a href="#">ICT</a> -infrastructure: € 4.000 per 100 displays + sensors including coupling with <a href="#">BMS</a> -system									

	<p>Helpdesk/consultancy: not clear yet. € 80 per manhour</p> <p>Hardware for displays and sensors: € 500 display and € 200 <a href="#">IEQ</a>-sensor</p> <p>Sales, pilots and promotion: pilot € 20.000 and sales budget € 15.000 in the first year and € 5.000 per year on.</p>
<b>Financials Revenues</b>	<p>Fee about € 2 per m2 gross floor area. In the first year two building total 5.000 m2 = € 10.000.</p> <p>Upscaling in 3 years to 50.000 m2; Revenue is € 100.000 per year.</p>
<b>Financials - Other sources</b>	<ul style="list-style-type: none"> <li>• Direct contributions of early adopters</li> <li>• Direct contribution of initial pilots;</li> <li>• Connect with health insurance companies supporting lifestyle health programmes, and willingness to contribute financially;</li> <li>• External private investors / VCs;</li> <li>• National / EU incentives to reduce investment funds.</li> </ul>
<b>Financials – Timeline for funding</b>	<p>Initial funds need to be available at the end of the project to support the market introduction and support the further development and hosting of the app.</p> <p>Year 1: € 100k Year 2: € 75k Year 3: € 25k</p>

<b>KER's Exploitation Form</b>				
how the KER will be further exploited				
<b>Selected route</b>		<b>Implementing actor</b>	<b>Yes</b>	<b>No</b>
<b>DIRECT USE</b>	Commercialisation: deployment of a novel product/service (offered to the target markets)	One partner	x	
		A group of partners	x	
	Contract research (new contracts signed by the research group with external clients)	A partner		
		A group of partners		
	A new research project (application to public funded research programmes)	A partner		
		A group of partners		
	Implementation of a new university - course (Note that a training course is a service)	A partner		
		A group of partners		

		A new partnership		
<b>INDIRECT USE</b>	Transfer of ownership (IPR)	A partner	x	
		A group of partners	x	
	Licensing IPR	A partner		
		A group of partners		
	Development of a new legislation/standard	A partner	x	
		A group of partners	x	
	Spin- off	A partner		
		A group of partners		
		By assignment		
		By licensing		
	Other (please describe)			

### 5.5.1. Lean Canvas MOBISTYLE Office App

<p><b>Problem</b></p> <p>1) Occupants of office buildings are often complaining about the indoor environment. Nevertheless, the building management is hardly able to solve these problems in a time and energy efficient way, often by changing setting in the <a href="#">BMS</a> manually.</p> <p>2) Buildings are not matching the quality performance or desired performance by its actual use or purpose. This problem has different time scales:</p> <ul style="list-style-type: none"> <li>- Historic data for long term asset evaluation</li> <li>- Data on mid-term to evaluate maintenance works</li> <li>- Data in short term for operations and indoor environment optimization</li> </ul> <p>3) Building managers have no insight in the status of maintenance. They cannot check the quality of the work of the servicing companies.</p>	<p><b>Solutions</b></p> <p>4)</p> <p>Technical solution:</p> <p>Collecting online feedback by an app from occupants to quantify their satisfaction and evaluate their perception with the dynamic indoor conditions.</p> <p>Providing personalized tips, information and suggestions to building occupants (e.g. staff, employees) on dynamic profiles of temperature and its effects to improve the awareness on behaviour and health and the energy performance (education) of the building.</p> <p>Data collection and storage: A database to be combined with <a href="#">BMS</a>, <a href="#">IEQ</a> sensors (and possibility to add wearables) and collect feedback from users. Plug&amp;Play wireless sensors in addition to <a href="#">BMS</a>-sensors by LoRa-network.</p>	<p><b>Unique Value proposition</b></p> <p>3)</p> <p>Service to:</p> <ul style="list-style-type: none"> <li>- Increase the real estate value in terms of the level of the rent (10-20%) and future proof perspective;</li> <li>- Reduce energy costs (&lt; 10%);</li> <li>- Reduce maintenance cost (&lt; 5%);</li> <li>- Opening to new cost reduction possibilities e.g. offering flexibility on the electricity grid or application of Demand Response Control Strategies. (lowering energy costs about 10%) Based on the collecting building and user data and advanced analytics creating insights on how dynamic conditions indoors influence building and occupant's productivity and health.</li> </ul>	<p><b>Unfair Advantage</b></p> <p>7)</p> <p>Huygen knows how to apply healthy indoor climate settings from proven tangible scientific and practical results on establishing healthy and productive indoor <a href="#">IEQ</a> by research project TKI-DYNKA-project and partners MU (MOBISTYLE partner) and Technical University Eindhoven.</p> <p>MOBISTYLE Dashboard constructed on fundamental anthropological aspects with trusted partner &amp; expert IRI-UL.</p> <p>Own data warehouse DataBuilt ready for data collection and visualisation from the MOBISTYLE app and other scattered data sources. Data is then prepared for data analysis.</p>	<p><b>Customer segment</b></p> <p>2)</p> <p>In the Netherlands, clients of Huygen:</p> <ul style="list-style-type: none"> <li>- Owners of real estate e.g. real estate renters</li> <li>- Owners of real estate for their own use e.g. hospitals, campuses (Brightlands), banks</li> <li>- Real estate from educational institutions e.g. Tilburg University</li> </ul> <p><b>Early adopters:</b></p> <ul style="list-style-type: none"> <li>- Brightlands Campus real estate director (private)</li> <li>- Hospitals: general manager of Roermond and Maastricht;</li> <li>- Merin real estate owner of the office buildings.</li> </ul>
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<p><b>Alternative:</b> Building managers asking occupants periodically about their comfort and well-being (personal or by questionnaire) Weakness: Time consuming for building managers, not all occupants may be asked the exact same questions Time step between filling out questionnaire and getting results to share among occupants.</p> <p>Data is collected at all, or data is scattered in different non-operable data environments. <a href="#">API</a>'s is not available.</p>	<p><b>Key Metrics</b> 6) Number of clients paying for a subscription: 20 in 4 y Number of buildings using MOBISTYLE-app: 20 in 4 y Number of occupants using MOBISTYLE-app 200 in 4 y Number of building types: office buildings Number of m2 provided with MOBISTYLE-app 200.000 m2 in 4 y</p>		<p><b>Channels</b> 5) - Huygen management; - Social media e.g. Instagram; - Involve influencers; - Developing pilots at launching customers to demonstrate as evidence about the impact to people form real estate owners.; - Promotion at real estate events e.g. Provada; - Facility management branches.</p>	
<p><b>Cost structure (when solution is ready for the market)</b> 8) Hosting <a href="#">ICT</a>-infrastructure: € 4.000 per 100 displays + sensors including coupling with <a href="#">BMS</a>-system  Helpdesk/consultancy: not clear yet. € 80 per manhour  Hardware for displays and sensors: € 500 display and € 200 <a href="#">IEQ</a>-sensor  Sales, pilots and promotion: € 15.000 in the first year and € 5.000 per year on.  Upscaling in 4 years to 100.000 m2; Costs are € 224.000 per year. Break even at about 3,5 years.</p>		<p><b>Revenue Streams (after 6 months and 3 years)</b> 9) Initial fee per building: € 5000 Fee about € 2 per m2 gross floor area. In the first year two building total 5.000 m2 = € 10.000.  Upscaling in 4 years to 100.000 m2; Revenue is € 250.000 per year.  Break even at about 3,5 years.</p>		

**1) PROBLEM**  
*Fair enough*

**CURRENT ALTERNATIVES**  
*Fair enough*

**2) CUSTOMER**  
*Fair enough.*

**EARLY ADOPTERS**  
*Fair enough.*

**3) UVP**  
*Fair enough*

**4) SOLUTION**  
*There is still a mix in between solution and UVP.*

**5) CHANNELS**  
*Fair enough.*

**6) KEY METRICS**  
*Fair enough.*

**7) UNFAIR ADVANTAGE**  
*Fair enough.*

**8) COSTS STRUCTURE**  
*Fair enough.*

**9) REVENUE STREAMS**  
*Fair enough.*

## 6. Recommendations by the expert

Issues	Recommendations
<b>Key Exploitable Results</b>	<p>Considering that the MOBISTYLE Description of Action does not include an Exploitation Work package, and that, at proposal level, just few and spread actions were foreseen in this direction, the effort and commitment put in following the expert's suggestions and comments, and the improvements made by the partners in the year which passed between the ESS and the BPD service delivery, are definitely relevant.</p> <p>As a follow on of the ESS discussion, the Consortium decided to split the "MOBISTYLE Platform" (KER 1 at the ESS) in a combination of ICT tools plus integrated services (5 separate modules, from KER1 to KER 5 at the BPD) which could be put in use but partners individually or jointly and adopted by targeted Customers separately or together. Marketing the separate modules could speed market uptake and would help to manage the process at partner level.</p>
<b>Lean Canvas, Characterisation of KERs and Roadmap</b>	<p>Five KERs were discussed at the BPD workshop and during the service delivery time period 4 iterations were made per each identified result.</p> <p>Methodologies and tools (Characterisation tables in the extended versions, Roadmap to exploitation and Lean canvas) introduced and exercised at the BPD integrated with additional information shared and discussed afterwards and comments which have been provided in red and italic in sections 5.1, 5.2, 5.3, 5.4, 5.5 and will be considered and included in the <u>Deliverable 5.4 – Report Business Plan Development, to be released at end of January 2020 (a draft version of it has been sent to the expert on the 8<sup>th</sup> of January 2020).</u></p>
<b>Go to Market</b>	<p>Has highlighted in some of the KERs characterisation table, it is crucial to develop a detailed cost and revenues breakdown, in order to understand which business scenario could be more profitable and what could be the main differences (also in terms of efforts) to eventually prioritise.</p> <p>When it comes to plan the next steps, the main point to be raised is about the sustainability of the proposed actions. Staff needed, as well as budget foreseen, and milestones to achieve have to be always clearly indicated. This part is the one with more open issues still open.</p>
<b>UVP</b>	<p>It is important to clearly state as well from a quantitative point of view the advantages of the proposed solutions (with a clear reference to already existing solutions available on the market but addressing directly Customers' needs/solving Customers' problems) and to avoid too many technical details, in order the craft strong message easy to get also for commercials.</p>
<b>Validation of</b>	<p>Customer validation phase is still very important to finalise the development of</p>

<p><b>Assumptions</b></p>	<p>some of the KERs. Essentially, partners may need to:</p> <ul style="list-style-type: none"> <li>▪ Validate the Unique Value Proposition;</li> <li>▪ Analyse the margins over the costs and to investigate the possibility to structure pricing in a different way or to use different technologies revising the portfolio of the services;</li> <li>▪ Streamline communication channels and better plan first marketing activities.</li> </ul>
<p><b>Partnerships and organisational structures for exploitation</b></p>	<p>At the BPD workshop partners clearly identified which partner would like to claim what. Dedicated exploitation agreements (e.g. memorandum of understanding) need to be put in place, considering each involved partners' willingness to exploit and contribution in the development/achievement of the result to be exploited. Specific partnership formats and partner organisations should be now considered and put together in line with the next steps towards exploitation. This brings to the following agreements to be signed, for:</p> <p>KER1 – MOBISTYLE Open Users Platform, between Holonix SRL and Inovacijsko-razvojni institut Univerze v Ljubljani</p> <p>KER2 – MOBISTYLE Game and Missions, between HighSkillz Limited and Aalborg Universitet</p> <p>KER4 – MOBISTYLE Dashboard, between Holonix SRL and Politecnico di Torino</p> <p>While the following KERs will be exploited directly by:</p> <p>KER3 – MOBISTYLE Expert Tool, by DEMO Consultants BV</p> <p>KER5 – MOBISTYLE Office App, by Huygen Installatie Adviseurs</p>

## 7. Annex 1 - Pitching research results

There is always a time when there is the need to present, in a short time the results of our research activities to secure resources for next steps, including additional sources of finance.

A pitch is the distillation of the most important points in your exploitation and/or business plan; not lasting any more than few, or the length of an elevator ride, it should be compelling, well-conceived, and very well-rehearsed. The section below provides some hints for preparing an elevator pitch. Such hints are also useful in finalising the executive summary of your business plan.

This section will provide you with guidelines on how to develop a 3-4minute's pitch. It will offer you hints for the content that you should include in your pitch, with instructions on presentation styles, body language and PowerPoint guidelines, and it will guide you through the art of keeping it simple and moving from Research Project to a business proposition. Lastly it will provide you with proposed guidelines for the "Pitch Creation Process" along with a template that assists the pitch development.

### Content of the pitch

This section will provide a snapshot on recommended aspects to include in a 3-4-minute pitch. If you touch upon all of these areas in the pitch, you will have caught the most important parts. The pitch setup is based on the LEAN CANVAS (see **Error! Reference source not found.**), so if you have not already gotten acquainted with this, do tell, and you will be provided with instructions and a template.

*With a short pitch; time goes fast, and the attention of the audience needs to be focused on you and your most important statements. A few simple slides with clear messages are preferable. Pitching is all about capturing the attention of the audience! Keywords to keep in mind are: "Relatable," "Sharp" and "Attention-grabbing".*

### Recommended aspects:

#### 1) An attention Grabbing first line

As explained, pitching is about grabbing the attention of the audience and thus the first line is crucial to your pitch. It needs to be exciting, funny, dead-serious, confusing or whatever you think benefits your pitch the most. The important thing is that all eyes are on you after the line has been stated. Most often you can connect it to the next part of the pitch, so wait with developing your attention-grabbing line until you have finished the remaining parts.

#### 2) Problem, Customer and Alternative Solutions

The first thing you do when pitching is to present the problem and the customer (often the earliest adopter) who experiences this problem. This will allow you to quickly explain to the audience, why there is a need for your solution and who your customers are. Include the current alternative solutions and why they are inadequate, so that you build up tension for the presentation of your solution. Use this as an opportunity to introduce competitors.

Consider the invention of the phone. The first part of a pitch for the phone could be as follows:

*“This is Bill. Bill is one of the millions of people, who has left home and travelled to another country. Unfortunately, Bill is missing both his parents and his friends and he wants to get in touch with them. Currently, the only thing that Bill can do is to use Mors-Code or travel great distances by train. These alternatives are however either impersonal or costs a lot of money and time. Bill is sad, because he feels stuck.”*

Blue: Customer

Green: Problem

Red: Alternative Solutions and their inadequateness

As you can see, in a matter of 15-20 seconds, you will have set the stage for your solution. You have presented the customer, the problem, the alternative solutions and shown why they are inadequate.

### 3) Solution & Features + Unique Value Proposition

Now that you have set the stage and the entire audience are waiting to hear, exactly how you are going to solve your customers’ problems, it is time to present the solution.

Firstly, you present the solution and its features and afterwards you proceed to present, why the solution is unique compared to current solutions. Do not make it too long. Provide a clear and precise message presenting your solution and the value proposition following it.

Consider the phone example again. This part of the “Phone Pitch” could be:

*“To solve Bill’s problems, we have created “The Telephone”. The telephone is a new intervention that enables the sound of voices to be transferred over great distances in a matter of milliseconds, enabling two persons to have a live conversation, even though they are separated by thousands of miles. I will not go so much into technical details, but basically, each participant is provided with a telephone into which they speak and the sound will then be transferred directly. Compared to alternative solutions this enables a far more personal interaction between the users to a fraction of the cost; and simultaneously Bill and others like him, avoid travelling great distances.”*

Blue: Solution

Green: Features

Red: Unique Value Proposition

You can also choose to turn it around, and state the unique value proposition before the solution and its features. This is more up to you. E.g. The “Phone Pitcher” could have started the last part with: *“We have created something that enables Bill to get in touch with his friends and family in a far more personal way to a fraction of the price. And simultaneously, he avoids travelling great distances. I present to you, “The Telephone.” (...)”* - Turning it this way, builds momentum – But in general, it is up to you, to pick the order that you prefer.

By doing this, you will now have presented the most important parts of your pitch in about a minute (depending on your ability to sharply present your product and customers).



**4) State-of-art of solution + Team**

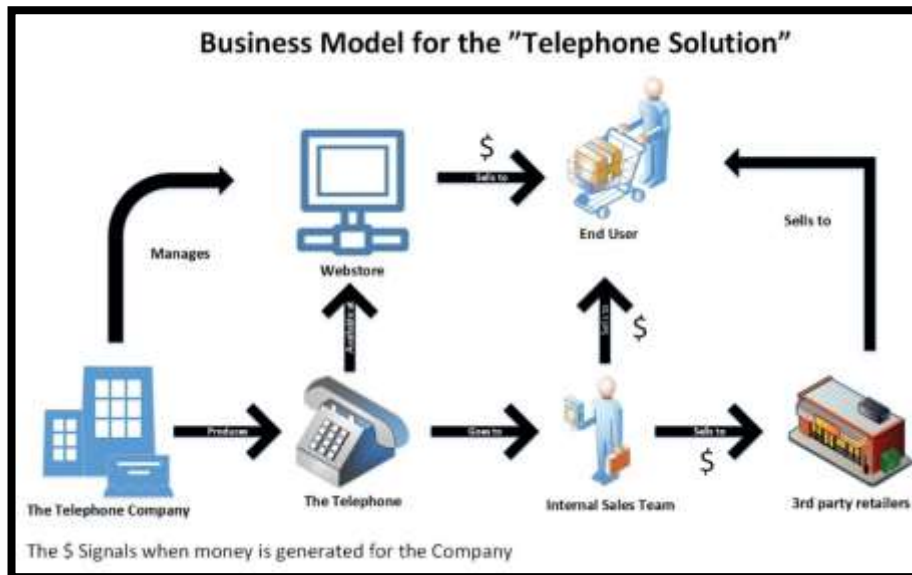
Now that you have presented the audience with the problem, the customers and the solution; it is time to explain how far you are in the development process of the solution and to convince them, that *you and your partners* are the *right team* to bring the product to market. You do this by explaining the current state-of-art of the solution (How far you have gotten in development or commercialization of the product), and the professional competencies and experience of your team.

The team explanation is *very* important. You need to show who you are, which competencies you have and especially, how you complement each other in day to day operating activities. Your solution may be state of the art, but if people are not convinced that you are the *right* people to bring it to the market, it will not matter.

**5) Business Model/Revenue Streams & estimated revenue generated**

Now that you have presented the state-of-art and convinced the audience of the strength of your team; the next thing the audience wants to hear about is, how you intend to earn money on your solution: The Business Model. Here you need to explain, how you intend sell your product, being it by direct sales, by licenses, by lending out your IPR etc. This is a *very* important part of your pitch and it is important that you practice how to deliver this in a direct and precise way. If you are looking for investments, they will want to know, how you intend to double their money.

In order to strengthen your pitch, a good way could be to make a simple graphic illustration of your Business model. E.g. as shown below:



With this simple graphic illustration, you will be able to show your various revenue streams in a simple way (you are probably able to make a nicer illustration than this one. Let us be honest, it looks like something that was made on the windows 98 OS).

**6) Financial plan**

When you have explained the business model it is time to convince the audience that your idea is supported by a solid financial plan. The financial plan of the business proposition is the connection between costs and revenues. Of course, at this time it can be difficult to make precise assessments of costs and revenues, but the ability to make estimations shows that you are not completely disconnected from your targeted market. Thus develop estimations about the amount of money you expect to generate after 12, 24 and 32 months and connect these to the costs that you expect to have in the same periods. This will provide experts with an idea about when you expect to have a profit, how much capital you will need to launch your business proposition and the financial expertise of the team.

In general, by showing costs, you show that you have a profound understand of the backend of your business, and with revenues the frontend.

Tables and comparisons between revenues and costs are more than welcome in your slide deck.

## **7) Call to action**

For you as a pitcher, this is *the most important* part of your pitch! In the four other sections you have provided what was expected. You have provided a wide array of information about your project that benefitted *the audience*. Now it is time *you* will benefit from the pitch. In this last part of the pitch, you need to ask yourselves: “What do I want to achieve by conducting this pitch?” – Are you searching for funding, partners, feedback on a specific area or different? Include this.

If you “Call for funding” explain what you need funding for and how much you need (to develop a prototype, to create distribution channels, etc....).

If you “Call for partners” explain why you need the given partner and what you intend for her to do.

If you “Call for specific feedback” explain the area of interest and why you need feedback on it.

## **8) Ending**

If you can, go out with a “bang” or a “joke” or something “smooth” (this all depends on your style of pitching). But in general try to include an ending to your pitch. This will convince the audience that you are well rehearsed and that you have planned your pitch from beginning to end. Many pitches end with: “*And eeh.. That’s it.*” This does not seem very professional.

With these guidelines in mind, you should be able to make a pitch that at least has the expected content. The content is however just one part of a pitch. The next pages will provide you with information on presentation styles, body language, PowerPoint guidelines and the art of keeping it simple.



## 7.1. Presentation style and body language

Unfortunately, (or fortunately for the audience), there are much more to a pitch than simple content. If it was only about content, it would not be that difficult. However, pitching is about grabbing the attention of the audience and make them want to hear more. Especially, since you have limited time to present. There is no way that you are going to be able to provide all the detailed information about your solution and your team, that you have in 3-4 minutes; the objective for you is to convince the audience, which could potentially be investors or business partners, that they should set aside hours to hear the details of your solution. But how do we grab the attention of the audience, if not through the content? Simply: *Presentation style* and *body language*.

**Presentation style:** Grabbing the attention of your audience is closely connected to your presentation style. Consider your type. Are you energetic, funny, cozy, professional to the bone or something different? Not all styles suit every person, and you should find the style that suits your best.

You do not need to pretend to be something that you are not. If you are not funny, then do not try to be. But then investigate what you are. Most often, you will be pitching at sessions with various other pitching just as you do. You need to have something that separates you from the rest or at least makes you memorable.

**Body Language:** Another thing to consider is your body language. Some people use their arms wildly, some keep them close to the body, some walk around the stage and some stand still. This is all up to you. However, what is important is that you understand that the more you rehearse and practice your pitch, the higher the chances are that your nervousness will disappear and thus your body language will be natural to you as a person.

And as well, there are some distinct pointers that you should keep in mind when pitching. The winning features of a pitcher are as follows:

- Having a vibrant and balanced voice – Ensure that your pitch is not too long, so that you can keep your voice balanced.
- Clear vigorous articulation – Speak clearly and loud (also if you are wearing a mic).
- Body preparedness – With your body, you will be able to show, that you are ready and excited for what you are doing. The audience is looking for passion. Give it to them.
- Eye contact – Look you audience in the eyes. Show them, that you stand by your solution, your pitch and yourself. By doing this you will show confidence and the audience will both want, and somehow feel forced, to pay extra attention.

And remember. The best thing that you can do in regards to presentation style and body language is to practice, practice, practice and practice. And then listen to the feedback from the audience.

By practicing you will most often experience that as you become more secure on the pitch, your body language will become more and more relaxed, and that you, without knowing it, will start to develop you own presentation style.

And by listening to the feedback from your audience you will be able to streamline your key message and become more and more effective in telling what you *need* to tell and not what you like to say!

## 7.2.Slides Guidelines

When creating a slide deck, remember, that its only function is to attract the attention of the audience. Therefore, you need a good text-to-image ratio.

A general point is to attempt to balance the two. **No one wants to see a PowerPoint completely filled with text.** The audience are there to listen to you, not to read text on at slideshow. If so, you could just have sent them the slideshow in a mail and everybody could have stayed home. **The audience come to listen to you.** However, having some key bullet points, summarizing the most important aspects of the presentation are good to have in text. Moreover, the slides are supposed to integrate and complement the information you deliver with your voice. When talking about markets, there can be a slide showing more detailed data that you do not need to tell but that the audience will still get. This will allow the audience to quickly obtain an understanding of what you are saying and where you are going with your project.

Slides are for the audience to understand and get interested, not for you to remember the pitch.

Slides with good, illustrative pictures, combined with key bullet points are preferred.

## 7.3.The art of keeping it simple

Perhaps *the most important thing* of pitching: Keeping it simple. Sounds easy right? Actually, this is what appears to be the single most difficult thing for “pitchers” to do, especially pitchers with a *technical* background and a technical product; and it makes good sense.

Consider a software engineer who has developed a very technical software with the ability to connect two even more technical software languages to be used within an even more technical process in a technical industry. For the engineer, the genius of the solution probably lies in all the technical specifications and developments that he/she has spent hours and hours on developing. These are what he/she wants to present. Unfortunately, most investors do not have a background as software engineers; and even if, it would probably still be extremely difficult for them to understand the details of the development that has taken years to develop in a matter of minutes.

Thus: If you have a technical solution, find a way to present it in simple and understandable way, so that even a 10-year old boy would be able to understand. Yes, this is hard to do, because you might feel that all the great parts of your solution will be left out. But remember; the pitch is about grabbing the attention of your audience. If they do not understand half of the things, that you are saying, the attention will be lost.

And if you have a prototype, a Minimum Viable Product ([MVP](#)), show it to the audience, they will get your message right the way, better than 1000 words.

*Kill your darlings, keep it simple, molto importante!*

## 7.4.Moving from Research to market

The last, but not the least aspect to be emphasized is that if you are currently visualizing your project as a “Research Project”, this needs to change! When you pitch, you need to move from a Research Project to a solution (product, process, service, etc.) to be purchased by “customers”. Thus remove project jargons (partners, deliverables, etc.) and acronyms (WPs, H2020) from your pitch and present your main result (Key Exploitable Result) as the “product” connected to a business opportunity. If

you have not currently assessed how you will transform your “research project” into a business opportunity or into a company; now is the time to do so.

Do you intend to form a company managed by specific colleagues of the research project? Do you intend to license the IPR out to other companies, are you willing to close contract research agreements or what is your plan? This is very important to highlight, since investors need to be convinced that the endgame of the project is a business opportunity with a solid potential.

Thus, when you present the team, you should avoid presenting the current setup of the Research Project (partnership); illustrate how key people will contribute to the achievement of your business goals (or how they will develop into a company).

## 7.5.Outro

You should now be able to start preparing a well-structured and simple pitch that grabs the attention of the audience and leaves them wanting more, presenting what you plan to say in the 3/4-minutes provided. On the next pages you will be provided with guidelines on handling the “Pitch Development Process” along with a pitch template to fill out.

However, do remember, that these are just guidelines. If you have another great idea for how to structure your pitch, you are more than welcome to take advantage of this creative freedom.

## 7.6.Guidelines for the Pitch Development Process

Now that you have received the needed information to understand what a pitch should include, how it can be structured and how important body language, slide deck and simplicity are, it is time to develop the pitch. Starting from nothing and simply writing a pitch can be difficult. Therefore, you are here provided with guidelines to do it. The guidelines are divided into tasks that you can follow. In the end, you should be standing with a well sounding pitch.

### Task 1: Identify your audience

Even though you have a basic pitch, that you use every time you pitch, it is most common, that the pitch varies from event to event. This is due to the fact, that when audiences change, so should the pitch. You need to determine, prior to developing the pitch, who your audience is, what you intend to get out from them, and what they desire to hear.

If you pitch for potential customers, they will be interested in understanding the benefits that they can receive from your solution, and you will be interested in understanding what their needs are and how they perceive your solution (Relevant for the “Call to action”).

If you pitch for investors, they will be interested in understanding, how you intend to transform their money into even more money and how good you are in driving the process; you will be interested in understanding how they can assist you in your business development and especially how they will “screen” you and what kind of money that they may bring to the table (Relevant for the “Call to action”).

It could also be, that you are pitching for potential business partners, employees etc.

It is very important that you identify who your audience is, and keep this in mind throughout the development of your pitch. The pitch structure that has been provided in the previous pages is a basic pitch structure, that can aim at all the audiences (investors, customers, potential partners and

so on). Its final “shape” will depend on the importance each section may have over the others, on the amount of time you spend on each subject (for customers it would make sense to spend more time on solution and UVP, and for investors it would make more sense to focus on Business model and finances).

### **Task 2: Complete the Pitch Template worksheet**

The next thing to do is to complete the [Pitch Template Worksheet](#) (see 7.7). This template provides you with basic headlines matching the aforementioned pitch structure and simply asks you to fill in the needed information. Once you have finished the template you will more or less have a first iteration of your pitch that you can work on from.

### **Task 3: Combine your answers and write your pitch**

Now that you have completed the Pitch Template Worksheet, you simply copy&paste your answers to the [First Pitch Iteration](#) (see **Error! Reference source not found.**). With your answers copied in, you more or less have a first draft of your pitch and you just need to connect the answers, making smooth transitions from topic to topic. Afterwards of course, you need to revise the pitch and develop a slide deck to support it.

### **Task 4: Find an audience and present**

Now that you have a pitch, the next thing to do is to present it. Find an audience; this could be anybody ranging from your mom to your boss, and practice both content, body language and presentation style. Try to time yourself to see, how much time you are using and try to adapt your presentation to the 4-minute mark.

### **Task 5: Listen to the feedback of your audience**

The audience are your best source of feedback and you should always listen to them. They can give you pointers on how to improve your pitch and likewise prepare you for the questions that you might be getting after the actual pitch. Almost any feedback is relevant, so listen and learn.

### **Task 6: Review your pitch**

Based on the experience and feedback that you receive from presenting your pitch, go back to your pitch and review it. Make changes, improvements and work your way towards the optimal version of *your* pitch.

### **Task 7: Redo task 4-7**

Remember, the thing that benefits your pitch the most is practice. So simply keep doing this until you have an optimal pitch, which you master to perfection.

## **7.7. Pitch Template worksheet**

In this appendix you will be assisted in writing the basic parts of your pitch. What you need to do is simply to follow the instructions presented throughout and include your text where the “InsertTextHere” is presented. The headlines follow the structure of presented in the “Content of the Pitch” section and it is therefore recommended to follow those guidelines as you start writing.

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### **An attention grabbing first line**

Write your first, attention grabbing line. It needs to be exciting and leave your audiences wanting to hear more!

InsertTextHere

### **Customer, Problem and Alternative Solutions**

Precisely present the problem, your customers (the problem owners) and the alternative solutions that are currently available. Remember Bill, the guy needing a telephone to call his mother.

InsertTextHere

### **Solution & Features + Unique Value Proposition**

Present your marvelous solution that is going to solve the problem of your customer. Briefly present the various feature of the solution (not too technical! – Keep it simple!), and describe why you are better than your competitors/alternative solutions.

InsertTextHere

### **State of the art of solution + Team**

Present how far you have come with the development of your solution and the team behind it. Remember to explain your individual competencies and how you complement each other as a team.

InsertTextHere

### **Business Model/Revenue Streams**

Describe your business model (how you intend to earn money) and your various revenue streams. Remember, a graphic illustration can be very good to accompany your explanation.

InsertTextHere

### **Financial plan**

Present your financial estimations both related to revenues and costs. How much revenue do you expect to generate after 12, 24 and 36 months? And what about costs? Will your business proposition require a large initial investment or are there almost no costs connected? Remember, tables and comparisons between revenues and costs are more than welcome in your slide deck.

InsertTextHere

### **Call to action**

What do you need to gain from the pitch and the audience? An investment, a partner, a customer review? Present it here. Remember, the pitch is most of all for you; take advantage of the opportunity!

InsertTextHere

## Ending

Go out with a “boom”!

InsertTextHere

## 7.8. First Pitch Iteration

Now that you have completed the Pitch Template Worksheet, simply copy & paste your answers in the template below and start developing the transitions from topic to topic. You will now have developed the first pitch for your solution.

### **An attention grabbing first line**

InsertTextHere

### **Customer, Problem and Alternative Solutions**

InsertTextHere

### **Solution & Features + Unique Value Proposition**

InsertTextHere

### **State of the art of solution + Team**

InsertTextHere

### **Business Model/Revenue Streams**

InsertTextHere

### **Financial plan**

InsertTextHere

### **Call to action**

InsertTextHere

### **Ending**

InsertTextHere

## 8. Annex 2 - Related information

### 8.1. Follow-up funding opportunities

#### 8.1.1 European Investment Project Portal (EIPP)

The European Investment Project Portal is the speed-dating, online, central platform for EU projects and investors worldwide. It is hosted by the European Commission and is part of the Investment Plan for Europe, aiming to mobilize investment, promote economic growth and create more jobs across the EU. For more information check here:

<https://ec.europa.eu/eipp/desktop/en/index.html>

#### 8.1.2 The SME Instrument

The SME-Inst funds and advises high-potential SMEs to develop ground-breaking innovative ideas for products, services or processes that are ready to face global market competition. It is divided in 3 Phases.

Phase I grants a lump sum of 50.000€ for the implementation of a feasibility study. Action should last approximately 6 months

Phase II funds projects from 0,5 to 2,5 million euros for innovations that are currently in TRL6 or above. Duration of the project should be from 12 to 24 months.

Phase III doesn't provide funding but facilitates coaching and business acceleration services through Enterprise Europe Network (EEN). EEN is the world's largest support network for SMEs with 3,000 experts across 600-member organisations in more than 60 countries. It provides international business expertise with local knowledge and advisory services via scale-up advisors. For more information check here:

<https://ec.europa.eu/easme/en/sme-instrument>

#### 8.1.3 Fast Track to Innovation

The Fast Track to Innovation (FTI) pilot provides funding for bottom-up proposals for close-to-market innovation activities in any area of technology or application. This thematic openness – combined with the possibility for all kinds of innovation actors to work together and deliver innovation onto the market and/or into society – should nurture trans-disciplinary and cross-sectoral cooperation. The aim is to:

- reduce time from idea to market,
- stimulate the participation of first-time applicants to EU research and innovation funding, and
- increase private sector investment in research and innovation.

For more information check here:

<https://ec.europa.eu/programmes/horizon2020/en/h2020-section/fast-track-innovation-pilot>

#### 8.1.4 INTERREG EUROPE



Interreg Europe can help in the following ways:

- **Financial support** – funding is available for interregional cooperation projects, which have the potential to lead to longer term collaborations and partnerships
- **Expand your network** – meet new like-minded partners, stakeholders, and business colleagues across Europe.



The DG also gives the opportunity to organisations to get some grants through calls for proposals. These are invitations for suppliers to submit a proposal on a specific commodity or service. A grant or a subvention is a direct financial contribution from the European Commission to support a specific action or project of a non-commercial nature, to cover eligible costs directly incurred by the beneficiaries. For more information check here: <http://www.interregeurope.eu/>

#### 8.1.5 The Small business portal

The Small business portal offers a wide section dedicated to information on possible EU funding opportunities for SMEs: [http://ec.europa.eu/small-business/finance/index\\_en.htm](http://ec.europa.eu/small-business/finance/index_en.htm)

Furthermore, to know if a programme is relevant to your particular case, we strongly suggest that you contact your local Enterprise Europe Network partner, who can give you one-to-one advice and support in applying for EU funding. Contact details of the Enterprise Europe Network members: <http://een.ec.europa.eu/about/branches/>

#### 8.1.6 COSME

Europe's programme for small and medium-sized enterprises

The programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME) is improving access to finance for SMEs through two financial instruments that have been available since August 2014. For more information check here: <http://ec.europa.eu/growth/smes/cosme/>

##### ➤ **The Loan Guarantee Facility (LGF)**

Part of the COSME budget will fund **guarantees** and **counter-guarantees** for financial intermediaries (e.g. guarantee organisations, banks, leasing companies) to help them provide more loan and lease finance to SMEs. This facility will also include the securitization of SME debt-finance portfolios.

##### ➤ **The Equity Facility for Growth (EFG)**

Part of the COSME budget will be dedicated to investments in risk-capital funds that provide venture capital and mezzanine finance to expansion and growth-stage SMEs, in particular those operating across borders.

Fund managers working on a commercial basis will ensure that investments are focused on SMEs with the greatest growth potential. For more information check here: [http://ec.europa.eu/growth/access-to-finance/cosme-financial-instruments\\_en](http://ec.europa.eu/growth/access-to-finance/cosme-financial-instruments_en)

### 8.1.7 EUREKA and Eurostars funding

Eurostars supports the development of rapidly marketable innovative products, processes and services that help improve the daily lives of people around the world. Eurostars has been developed to meet the specific needs of SMEs.

Eurostars applies a decentralized funding procedure; participants do not receive funding directly from the EUREKA Secretariat or the EU. All funding to participants in approved projects is managed by their respective funding body and according to their national funding rules and procedures. These rules and procedures are dependent on the member countries involved in the project. Project partners are strongly advised to contact your National Project Coordinators (NPCs) and browse other Eurostars in each country.



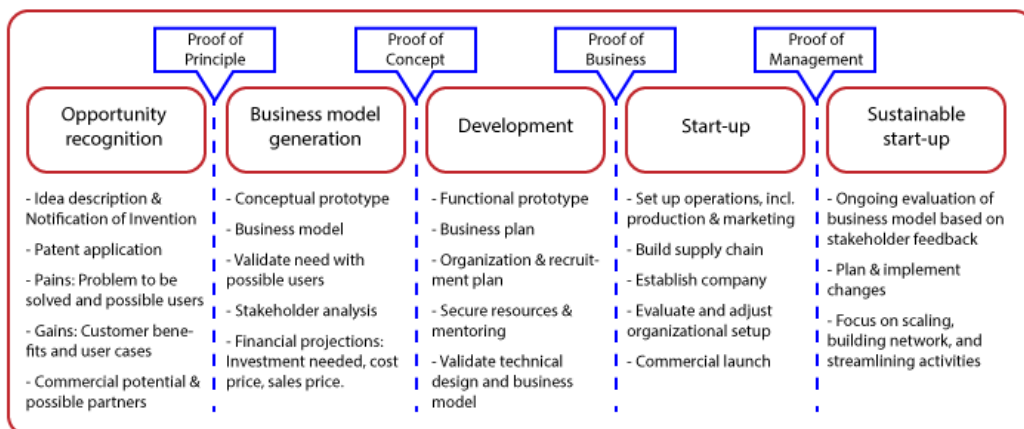
### 8.1.8 Proof of Concept (PoC)

Eligible for those who have received an ERC grant. This has proved essential in developing ideas to a stage which ensures commercial interest. Proof of concept funding is offered if innovations (i) have a realistic prospect of attracting a commercial partner within 12 months of the commitment of funds; (ii) would, if successful, result in products appearing on the market within 18 months, (iii) have a realistic prospect of generating sales that result in products with annual invoiced sales in excess of ten times the original proof of concept funding and (iv) have the potential to make a return to the fund on the basis of an average royalty of 2.5% on the resulting invoiced sales.

#### Proof of Concept principle<sup>2</sup>

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<sup>2</sup> <https://erc.europa.eu/funding-and-grants/funding-schemes/proof-concept>



### 8.1.1 European Fund for Strategic Investments (EFSI)

*EFSI is an initiative launched jointly by the EIB Group – the European Investment Bank and European Investment Fund – and the European Commission to help overcome the current investment gap in the EU. EFSI is one of the three pillars of the Investment Plan for Europe that aims to revive investment in strategic projects around the continent to ensure that money reaches the real economy. For more information check here: <http://www.eib.org/efsi/what-is-efsi/index.htm>*

### 8.1.2 Contracts and grants - access to business opportunities

Several different contracts and grants are regularly made available for companies or organisations who want to work with Directorate General (DG) for Internal Market, Industry, Entrepreneurship, and SMEs or apply for funding.

In the framework of public procurement contracts, DG Internal Market, Industry, Entrepreneurship, and SMEs regularly organizes calls for tenders. Calls for tenders are special procedures to generate competing offers from different businesses looking to obtain works, supply, or service contracts.

Those tenders/calls also give an insight in competitors' activities as well as ideas for partnerships and stakeholders. Furthermore, there are possibilities for winning contracts.

### 8.1.3 Tenders Electronic Daily

TED provides free access to business opportunities from the European Union, the European Economic Area and beyond.

Every day, from Tuesday to Saturday, a further 2,000 public procurement notices are published on TED.

You can browse, search and sort procurement notices by country, region, business sector and more.

Information about every procurement document is published in the 24 official EU languages. All notices from the EU's institutions are published in full in these languages. For more information check here: <http://ted.europa.eu/TED/search/search.do>

#### 8.1.4 Access to finance in Europe

University technology transfer offices (UTTOs) often perform the function of transferring technology and commercialising innovations emerging from the University sector to the market place.

For more information check here: [http://europa.eu/youreurope/business/funding-grants/access-to-finance/index\\_en.htm](http://europa.eu/youreurope/business/funding-grants/access-to-finance/index_en.htm)

This site can help to apply for loans and venture capital supported by the European Union  
Click on your country to locate banks or venture capital funds that provide finance supported by the EU.

#### 8.1.5 Innovaccess - Intellectual Property Portal

Innovaccess aims to enhance Intellectual Property (IP) support services to Small and Medium-sized Enterprises (SMEs) to turn their Intellectual capital into commercial values and competitiveness.

The portal helps to protect IP rights and to understand IP security rules. For more information check here: <http://www.innovaccess.eu/>