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Report on unique selling points for FLEXMETER Solution

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Authors	Carmen Oana, Simona Bica, Lavinia Dinca – SIVECO Lorenzo Bottaccioli – POLITO Federico Boni Castagnetti, Enrico Pochettino - IREN
Reviewer(s)	Ana-Maria Dumitrescu - UPB
Approver(s)	Andrea Acquaviva
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Abbreviations

EU – European Union

SM – Smart Meters

USP – Unique Selling Proposition / Unique Selling Points

PEST - Political, Economic, Social, Technological

AMI - Advanced Metering Infrastructure

ANRE – Romanian Energy Regulatory Authority

GUI – Graphical User Interface

UI – User Interface

UX – User Experience

CBA - Cost Benefit Analysis

B2C – Business to Customer

B2B2C – Business to Business to Customer

B2B – Business to Business

Contents

1. SCOPE

The major purpose of this document is to provide the results of analyzing the competitive advantages and benefits of the Flexmeter solution, as preliminary basis of the Go-to market strategy. A detailed analysis has been achieved in order to provide valuable information for the Consortium.

The methodologies and techniques applied are presented in the following sections. The deliverable aims to define the Unique Selling Points / Propositions (USP) for the Flexmeter solution, based on the results obtained within the previous research, presented in the deliverables *D5.1 – Report on business models for smart meters and retail market* and *D5.2 – Report on energy aggregator impact and business model*.

The scopes connected with the purpose of the current deliverable are presented below:

Purpose	**1. Market analysis (based on the results published in D5.1)**	**2. Define initial marketing strategy**	**3. Define preliminary exploitation strategy**
Defining the USP (Unique Selling Points / Propositions) of the Flexmeter solution / product	a. Stakeholders b. Market segments	a. SWOT analysis b. Competitive advantages of Flexmeter c. Positioning (based on USPs)	a. Roadmap - Preliminary Go-to market strategy (based on the positioning findings) b. Input for a preliminary Business Plan

Table 1 Scopes and purpose of deliverable

We mention this report presents a common approach regarding the business approach for Flexmeter, comprising the common Value Propositions of the solution. The appropriate business strategy will be refined, and the appropriate ways of exploiting the results of the project individually by each partner of the Consortium will be presented in the next deliverable *D7.4 - Exploitation and Dissemination Plan*.

2. METHODOLOGICAL APPROACH

2.1 METHODOLOGY FOR MARKET ANALYSIS

A market study for a product or business represents one of the most important and useful tools for strategic business planning. It is an analysis which provides a reliable model with strengths, weaknesses, opportunities and threats to create the basis for a marketing strategy.

The strategic market analysis currently presumes the following:

- Identification and evaluation of data relevant to strategy definition
- Definition of the external and internal environment to be analyzed
- Specification of analytical methods which can be used within the research.

The analytical methods commonly used for the market analysis include:

- SWOT analysis
- PEST (or the extended PESTLE - Political, Economic, Social, Technological, Legal, Environmental) macro-environment Analysis. PEST analysis represents a scan of the external macro-environment where an organization exists, giving an overview of the various macro-environmental factors that the organization has to take into consideration for designing its marketing strategy.
- Porter for Competitiveness Analysis. Porter's five forces analysis (Industry rivalry, Bargaining power of suppliers, Threat of substitutes, Bargaining power of buyers, Threat of new entrants) represents a framework that aims to explore the level of competition within an industry and the business strategy development.

2.2 INFORMATION SEARCHING STRATEGY

The research included original articles, review articles, studies, websites, published standards, guidelines and best practices, white papers related to the reference domain (Smart Grids, Smart Metering in electricity / public utilities) and the particular topics of the project.

Several topics were addressed in this stage of the project:

- Website screening of the EU Official Journals websites, EU roadmaps in energy websites, Smart Grid and smart metering solutions and projects websites, websites of significant organizations/institutions related to the reference domain
- Professional publications specific for the reference domain, tackling the particular aspects of Flexmeter project of the last 5 years
- References of the retrieved publications.

The survey was mainly performed using search engines such as Google, addressing appropriate keywords / combination of keywords, such as:

- Smart metering solutions / projects
- Smart Grid
- Smartening the electricity grid
- IoT platforms
- Aggregators in the electricity / energy field
- Energy vectors
- IT solutions based on flexible architectures in electricity / public utilities
- Innovation in electricity
- Innovative architectural design of Smart Grid platforms / solutions
- Smart algorithms for smart metering solutions
- Simulators for smart metering solutions
- Competitive advantages of Smart Grid solutions.

This task addressed the specific aspects and findings of smart metering innovative and flexible solutions and their management. The selected material focused on:

- Articles, reports, papers, studies
- Guidelines, standards, best practices, projects or success stories about implemented solutions
- Case examples
- Scientific views and opinions.

2.3 STAKEHOLDERS

The actors belonging to different key business sectors (energy, public utilities, environment, networks and associations, etc.) are considered like potential stakeholders, as follows:

- Public Utility companies
- Consumers/Prosumers
- Energy services companies / providers (Electricity suppliers)
- Aggregators
- IT companies
- Environmental agencies / institutions
- Real estate agents / operators
- Networks / Associations
- Government.

The stakeholders' survey was very important because of their role in defining the market segments and market needs, and determining our business development strategy.

3. SWOT ANALYSIS

SWOT analysis represents the acronym for Strengths, Weaknesses, Opportunities and Threats, and it is a structured planning method that evaluates these four significant elements of a project or business. It involves specifying the objective of the business or project and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.

This analytical method was chosen to refine the market analysis achieved in the previous research stage corresponding to deliverable D5.1.

This section of the deliverable aims to analyze the following aspects of the Flexmeter product:

- **Strengths**
  - *Helps consumers to have a better control over their energy consumption* – the system shows how much the energy has been consumed since the last invoice. The consumption information is presented both in RON and kWh.
  - *Helps consumers to make informed decisions* – the system shows the consumption in real time, allowing identification of heavy consumers. The user can turn on and off different consumers and identify in real time appliances with heavy consumption.
  - *Helps consumers to pay regularly for their actual consumption* – consumers know for sure that they pay for what they consume.
  - *Helps consumers to track and manage their energy consumption* – a consumer can estimate with a high degree of accuracy what the amount of their next bill will be. Moreover, due to historic records, the consumer can estimate the value of a bill in advance and can plan he's cash flow in advance. This feature is very useful for winter months when the consumption can be higher, thus the customer can be prepared for this.
  - *Provides a higher privacy and data security for consumers* – contrary to popular believe security is enhanced because the human operators are eliminated, so data privacy is ensured. The meter data is sent automatically for billing.
  - *Ensures protection of vulnerable consumers* – the supplier can monitor energy consumption needs for consumers and can offer special social tariffs for special categories of people: elderly, people with disabilities etc.
  - *Helps for a better forecast of energy consumption and energy losses* – suppliers can estimate the overall consumption necessity and make adequate plans for peak seasons, like the consumption increase in summer due to air conditioner use.

- **Weaknesses**

- *Can not provide automatic warning by email when the consumption is over a set limit or the consumption spike* - The end user can't set alarms for certain events like: a consumption limit or spike and be notified by email when those limits are reached.
- *Can not provide automatic identification of individual heavy consumers* - The end user can see the consumption in real time, but it can't identify how much each appliance is consuming. The end user has to physical turn off appliances to identify a heavy consumer.

- **Opportunities**
  - *Targeted products and services for customers* – The end user can benefit from targeted services and products from the supplier. The supplier can identify certain trends and act accordingly, for example: a consumer with a vacation house can receive a special offer with lower prices during the weekend, or the consumer can receive special prices during off peak hours, where he can use heavy consumers, thus paying a lot less.
  - *A smart meter is the foundation of upcoming technology developments* – all new trends from photo voltaic (PV) systems that transform the consumer into prosumer, energy storage and management, Internet of Things thus installing automated devices to the grid which can be controlled through the internet, to vehicle to grid (electric cars) are dependent on smart meters.
  - *Smart meters easily integrate renewable sources* – renewable sources can be easily integrated into the grid. Smart meters can monitor both consumption and production of energy, making the shift to a prosumer very easily.
  - *Network tariffs will reflect the investment in digitalization* – A decrease of tariffs is the direct result of automatic reading, because no additional employees are needed to manually read the meters. This fact won't translate into fewer jobs for people, because these jobs can be shifted as follows: midterm these employees can assist in smart meter installation, configuration and long term in smart meter replacement with newer models.
  - *Faster outage detection and reduced failure times* – smart meter is in constant communication with the operator and possible failures can be either foreseen or when they happen, the failures are reported in real time. There will be no need for the people to call the provider and report and issue.
- **Threats**
  - *Cyber hacking* – This is the biggest threat smart meters face. The US grid was penetrated by hackers through hacking of smart meters. The security of the smart meters is dependent on: technologies used and users' password. Regarding technologies used the EU has set up regulation on smart meter security, which is respected by approved EU smart meters providers. The weakest link remains the users' password, which can be mitigated with two factor authentication. The main concern in cyber hacking are cut-off and intentional fires. A hacker might cut-off the consumer from the grid, this issue

can be mitigated by installing meters with no cut-off capability, not accessible by software. Our software solves this issue because it doesn't allow the user to cut-off the energy supply. There were some fears of the possibility of causing intentional fires by an intruder, who might affect certain appliances. This scenario was never proven and an intruder can't use our application to control appliances.

4. UNIQUE SELLING POINTS FOR FLEXMETER SOLUTION

This section is dedicated to define the preliminary aspects of our business strategy which addresses the potential targeted markets and customers for the scalable and marketable product Flexmeter.

The proposed business strategy is based on the following categories of results:

(i) the results issued from the market analysis accomplished in the previous deliverable D5.1 and from the SWOT analysis,
(ii) the results (competitive advantages and particularities) issued from the functional benchmark analysis, as presented in the chapter above, and
(iii) the conclusions resulted from the assessment of the commercial contacts and demonstrations' feed-back (customers-centered benefits and demands).

Three prospects regarding the competitive and innovative features of the Flexmeter marketable solution / product were analyzed, namely:

- *Functional and operational perspective* (addressing the scalability, flexibility, modularity and accessibility).
- *Compliance with the regulatory framework of the reference domain (Smart Grids, Smart Metering in electricity / public utilities)*
- *Financial perspective* (addressing the most convenient formulas of selling off the product and services, following the appropriate business models).

Flexmeter is an Integrated Applications Suite (IAS), based on an open technological platform, complying with the principles of the distributed "pluggable", scalable and modular architecture.
Flexmeter is a solution specific developed for the consumers / prosumers of the energy field, including interesting features for the Public utility companies and Aggregators' staff.
From the financial perspective, the price of the Flexmeter platform is more convenient like other costs for similar proprietary solutions. For instance, an appropriate formula might be comprising installation in cloud infrastructure with a paid access like monthly subscription or licensing per customer (Public Utility company, DSO, electricity services supplier/provider, …) per year.

The analysis of Flexmeter as marketable solution / product is based on USP (Unique Selling Proposition or Unique Selling Point) marketing approach, addressing the competitive advantages of Flexmeter against similar Smart Metering solutions / platforms existing on the market.

Using this approach, the solution positioning has arisen from the functional benchmarking analysis presented in the previous chapter.

The Unique Selling Points of the Flexmeter solution are the commercial competitive advantages which attract the potential beneficiaries/consumers.

As resulted from the functional benchmarking analysis, the distinctive features of Flexmeter, considered as competitive advantages (USPs), are the following:

- The solution is focused on the customers' demands and benefits (customer-oriented solution) for the electricity/utilities domain
- Flexmeter is a consumer/prosumer profile driven solution
- The solution implements smart mobile applications with respect to the specificity of the Smart Metering solutions, easy to configure and personalize for different demands of the utilities providers, at a convenient price
- Flexemeter is focused on the consumption efficiency and optimization, based on the smart algorithms implementation
- Flexmeter is a modular, scalable and flexible solution, developed on smart mobile devices with embedded specific software
- Flexmeter is compatible with the domain' regulation framework, fulfilling the specific requirements, needs, practices, principles and latest regulations
- The solution meets the usability requirements and principles and encloses the end-user experience in designing the adaptive GUI (Graphical User Interface) (based on UI – User Interface and UX – User Experience approaches)
- The solution implements innovative technologies and scalable architectural solution, based on micro-services developed in cloud, allowing starting small and growing the system as desired, by implementing new components like: simulators, reporting and statistics, alarms, etc.
- The solution requires an open architecture, capable to integrate both realistic dates and data provided by simulation programs/applications.
- The solution implements various business models, compliant with the particularities of the targeted market.

5. SOLUTION POSITIONING

As already presented in other deliverables and detailed in the business plan (D5.1), Flexmeter developed various services intended for different actors of the Energy Market.

Such a portfolio will represent a plus in the future market positioning of the Company (following the same assumptions of D5.1), whose Competitors will be both small firms or large tech/software Companies.

Compared to the formers, Flexmeter Company will have, in most cases, a more diversified portfolio addressing different clients, that is securing more profits. The possibility to address multi-utilities or large holding companies active in different businesses (and commodities) with a common framework of frontend and backend solutions for different services will also represent a plus and grant savings for clients and the Company itself.

Compared to the latters, Flexmeter Company will have a more agile approach to the business, granting Clients the adaptations/personalization needed in such a heterogeneous client base.

The major competitive advantages of the solution issue from the following components: *innovative technology and architectural design, functional, operational and financial*.

Flexmeter is a customer-centered solution, focused on the needs and demands of the final users (end-users). Following this approach, the positioning of Flexmeter on the market is seen from the *consumer / end-user point of view*.

The competitive advantages and benefits of the Flexmeter platform were analyzed by distinguishing three major categories of customers:

- Public Utility companies and Aggregators' staff (final users)
- Consumers / Prosumers
- Energy services companies / providers (Electricity suppliers) staff (final users).

Within the solution positioning, based on the distinctive features of Flexmeter, the Value Propositions of the Flexmeter solution / product were defined. The proposed list of the Value Propositions (VP), based on USP and compliant with the VPC model[1], is presented in Chapter 7.

As mentioned in the previous chapter, the analysis of Flexmeter as marketable solution / product was based on USP marketing method, techniques, principles and benefits.

[1] Alexander Ostervalder, http://alexosterwalder.com/; Strategyzer, The Value Proposition Canvas, https://strategyzer.com/canvas/value-proposition-canvas

The following aspects were tackled for the preliminary business strategy:

a) Solution positioning

The solution positioning (unique / competitive advantages) on the market is based on the Unique Selling Propositions / Points (USPs) defined in the previous chapter.

b) The *relevant features* of the Flexmeter solution are the following:

- Smartening the measuring and monitoring of the energy (water, heating, gas) consumption
- Optimizing the consumption
- Alerts / Notifications
- Messaging
- Assistance
- Automated tracking of multi-parameters.

c) How we attract the potential beneficiaries/consumers?

We will attract the potential beneficiaries/consumers by presenting to them the competitive advantages and benefits (USPs) of the Flexmeter solution.

d) How we highlight the solution advantages?

The solution's advantages and benefits resulted from the three prospects described in the previous chapter.

e) Finding a USP motto for our product like: "More transparency, less money".

Based on the findings of the solution positioning, we'll present in the next chapter our preliminary marketing strategy.

The knowhow of the business (together with the knowledge of a very complex and changing regulation framework as the Energy Market one is) brought by the industrial partners and the scientific and academic knowledge brought by the academic partners will represent a unique advantage compared to all Competitors, no matter of the dimensions.

6. MARKETING STRATEGY. ROADMAP

This section is dedicated to define the common business strategy of the Consortium for the scalable and marketable solution Flexmeter, including the list of Value Propositions and other elements (Roadmap, business approach, …) concerning the Go-to market / preliminary exploitation strategy.

As presented in the previous chapter, the distinctive features and benefits of the Flexmeter solution were reviewed by distinguishing three major categories of customers:

- Public Utility companies and Aggregators' staff (final users)
- Consumers / Prosumers
- Energy services companies / providers (Electricity suppliers) staff (final users).

6.1 VALUE PROPOSITIONS OF FLEXMETER

Based on the distinctive features of Flexmeter, the Value Propositions of the Flexmeter solution / product were defined as follows.

Product

- Customer-oriented solution (centered on the customers' demands and benefits)
- Consumer/prosumer profile driven solution
- Intelligent measuring, modeling and monitoring (smart algorithms and customized modules)
- Focused on the consumption efficiency and optimization
- Ensures automated tracking of multiple parameters (multi-parameters), alerts and notifications
- Modular and scalable, developed on smart mobile devices with embedded specific software
- Easy to configure and personalize for different demands of the utilities providers, at a convenient price
- Messaging and assistance
- Requires an open architecture, capable to integrate both realistic dates and data provided by simulation programs/applications
- Implements innovative technologies and scalable architectural solution, based on micro-services developed in cloud, allowing develop/integrate new components like: simulators, reporting and statistics, alarms, etc.
- Capability to validate different business models, compliant with the particularities of the targeted market
- Flexible and replicable
- Adaptive user interfaces (easy to configure based on the user profile).

Gain creator

- Compliance with the domain' regulation framework, fulfilling the specific requirements, needs, practices, principles and latest regulations
- Costs reduction, energy savings
- Consumers can make informed decisions
- Consumers can track and manage their consumption (ease of planning and estimation)
- Empowers the staff of the Public Utility companies, energy services providers, DSO, Aggregators
- Empower the consumer
- Accessible from computers, tablets and smartphones
- Meets the usability requirements and principles and encloses the end-user experience in designing the adaptive GUI (Graphical User Interface) (based on UI – User Interface and UX – User Experience approaches)
- Ensures a better forecast of energy consumption and energy losses
- Ensures faster outage detection and reduced failure times (for the companies)
- Process transparency, clarity of roles and responsibilities.

Pain relievers

- Consumers have better control over their energy (water, heating, gas) consumption
- Consumers are more confident regarding their actual consumption
- Consumer feels more secure concerning their privacy (higher privacy, data confidentiality and security for consumers)
- Provides protection of the vulnerable categories of consumers
- Ensures a better forecast of energy consumption and energy losses (for the companies)
- On demand support
- Interfaces user-friendly and user profile centred.

6.2 BUSINESS APPROACH

The business plan described in D.5.1 is based on Flexmeter as platform (technological approach) and product.

Below we present a the Flexmeter Business approach that has been used within the project to ensure a smooth commercialization.

Flexmeter Business Approach	
Why does the Company exist?	To develop an innovative and flexible Smart Metering solution and services for multiple energy vectors.
Who do we need to be to do that?	A diverse and passionate team with various expertise, culture and background willing to create a valuable customer-centered Smart Metering solution.
Big Goal	To provide a commercial ICT Smart Metering platform, based on a flexible, multi-utility and multi-service metering architecture. Furthermore, to provide innovative services for both residential users and distribution system operators in a fast moving European Energy Market.
What are we building to accomplish this? **How will we build this project?**	- A suite of applications for web and mobile devices, developed in cloud - Automated tracking of multiple parameters - Intelligent measuring / modeling / monitoring (smart algorithms and customized modules) - Alerts / Notifications - Accessible from computers, tablets and smartphones - In-app support - Compliance with the domain' regulation framework, fulfilling the specific requirements, needs, practices and principles.
What is the work to be done in the coming months? **Key activities**	- Launching the first Flexmeter prototype - Validating the proposed business models / approaches - Evaluate the possibility to create economic values from the services portfolio - Continuous Research and development
Measurable outcomes	- Business sustainability - Number of client willing to subscribe - Evaluation of client satisfaction - Suite of services ready to be used - Commercialization strategy established - Number of professional associations / organizations / other stakeholders recommending Flexmeter.

6.3 PRELIMINARY EXPLOITATION STRATEGY. BUSINESS APPROACH

Preliminary exploitation strategy. Business approach

The proposed list of Flexmeter' Value Propositions represents the base of the exploitation strategy, given that it is used to understand the customer's needs, and the benefits offered by the solution.

A relevant role in defining the Value Propositions was represented by the feedback provided by the staff of both end-users involved in the project – E.ON SVERIGE AB (E.ON Sweden) and IREN ENERGIA SPA Italy.

This section covers relevant aspects of the marketing strategy based on the results of benchmarking analysis , the Value Propositions of the Flexmeter solution and the results obtained within the previous analysis, presented in the deliverables *D5.1 – Report on business models for smart meters and retail market* and *D5.2 – Report on energy aggregator impact and business model*.

Various business prospects were analyzed and finally the appropriate business models were proposed, as follows:

a) B2B2C model: Developing an e-Commerce platform/portal (dedicated platform) for the electricity suppliers/providers (or for the Public Utility companies) through the consumers would access the functionalities/applications of Flexmeter, valorizing this way the capabilities of the Flexmeter IAS (Integrated Applications Suite). The Consortium can promote the services offered by Flexmeter to the supplier which will include them in their portfolio.

b) B2B model: The Consortium could promote Flexmeter to any company/organization (DSO, Public Utility companies, Aggregator, other stakeholder) which is interested in developing / implementing / valorizing / replicating the entire suite of applications or its particular modules.

c) B2C model: The Consortium could build a partnership (strategic partnership) with a Telco company (e.g. Telekom, Orange, Vodafone, …) to address/promote Flexmeter to as many consumers as possible, which are interested streamlining their energy (water, heating, gas) consumption.

Dissemination approach

The dissemination strategy covers the dissemination objectives and the activities aimed to be performed during the project in order to accomplish the proposed outcomes but also the identification of the major stakeholders in the reference domain (Smart Grids, Smart Metering in electricity / public utilities).

The overall objective of the Flexmeter Consortium was to find the most suitable stakeholders/end-users in order to inform them about the results of the Consortium's' research and innovation.

The members of the Flexmeter Consortium started from the premises if they better understand the stakeholders' interests and needs, then, the dissemination process will be very effective.

The dissemination strategy of Flexmeter comprises the following approaches:

- Internal dissemination
- External dissemination.

Internal dissemination was achieved by:

- Email
- Biweekly / monthly teleconferences
- Internet storage platform
- Project website used for internal but also external dissemination
- Face to face meetings and events.

External dissemination was achieved by:

- Elaboration and maintenance of the project's website
- Elaboration of materials that can be uploaded on the website of every partner's organization (e.g. SIVECO website, IREN website, …)
- Elaboration of materials that can be uploaded on the websites of organizations, other than the partners' ones, with the scope of increasing the visibility of the project results for the professionals acting in the field
- Press releases and articles
- Preparation of other materials that could be disseminated through social media channels (Facebook, Twitter, LinkedIn)
- Participating at different scientific conferences/ congresses and forums all over Europe.

The refined business strategy and more details concerning our exploitation plan are presented in the next deliverable *D7.4 - Exploitation and Dissemination Plan*.

7. CONCLUSIONS

This report explores the significant aspects concerning the marketing analytical methods which provide a good assessment for the market launch and commercial exploitation of the project's results.

The proposed analytical methods (SWOT analysis, benchmarking analysis, customer-centered benefits, solution/product positioning based on USPs) explore the market from a functional, operational and segmentation point of view. Furthermore, the report presents market information and data providing interesting references for further research and business opportunities to be addressed for this project in the future.

Considering the findings of our market analysis, we are now aware of the exploitation opportunities we can benefit from and threats we must care about from the economic, technological and socio-cultural perspectives. Moreover, we are aware about our strengths that could help us compete with our competitors and weaknesses we should get over. Through the competitive advantages research it has arisen that our core competences are essentially the technology and the innovation.

Finally, we have concluded the deliverable with a business roadmap for exploiting the project's results that would be completed in the future, based on the commercial strategy approved by the Consortium.