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Short Description:
<p>This deliverable summarises the results from Task 3.4 Service Pricing. The plan4business project aims to provide a series of services as a basis for business opportunities for data providers and the plan4business platform custodians. The service pricing strategy serves as an input for the business plan. It includes an overview of pricing strategies and information policies, competitor analysis, costs for the platform and a draft service pricing for the plan4business services.</p>
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1 Introduction

1.1 About the Project

The Plan4business project is developing a service platform for aggregation, processing and analyses of urban and regional planning data in Europe. Harmonised data will be integrated into seamless, homogenous, constantly growing and updated trans-border dataset. The platform will enable spatial analyses across European datasets.

1.2 The Aim of the Report

The Plan4business platform offers services for searching, downloading, processing and analysing spatial planning data. The aim of the report is to analyse existing pricing policies and models for spatial data in Europe and to design the Plan4business pricing strategy for the services offered by the platform.

The analysis and the designed pricing strategy will serve as a part of the business model and as a starting point for launching the Plan4business platform and offering the services to customers.

1.3 Structure of the Document

The document is structured in 8 chapters. The content of the chapters is as follows:

Chapter 1 (Introduction) includes brief information about the plan4business project, the aim of the report and the structure of the document.

Chapter 2 (Terminology) contains definition of several terms that are essential for further understanding of the content of this document.

Chapter 3 (Pricing Strategies) presents selected strategies for service pricing.

Chapter 4 (Methodology) includes the methodology for the plan4business service pricing.

Chapter 5 (Information Policies) describes major policies relevant to the pricing of geographical information.

Chapter 6 (Competitor Analysis and Value for Customers) includes an analysis of competitors and the evaluation of the value of competitive products.

Chapter 7 (Costs for the Plan4business Services) outlines the costs for the platform.

Chapter 8 (Plan4business Service Pricing) presents options for pricing and the start-up plan4business prices and serves as a concluding chapter of this deliverable.

2 Terminology

marketing – “The activities of a company associated with buying and selling a product or service. It includes advertising, selling and delivering products to people. People who work in marketing departments of companies try to get the attention of target audiences by using slogans, packaging design, celebrity endorsements and general media exposure. The four 'Ps' of marketing are product, place, price and promotion.” (Investopedia 2013)

Open Data – “A piece of data or content is open if anyone is free to use, reuse, and redistribute it — subject only, at most, to the requirement to attribute and/or share-alike.” (Open Knowledge Foundation 2013)

plan4business apps – a set of apps including Thematic Map Viewer, Location Evaluator, Harmonise, Brownfields, Open Land Use Map, Tender Search and other apps created by the plan4business consortium.

plan4business services – services offered by the plan4business platform including the *plan4business apps* and *plan4business tools*.

plan4business tools – plan4business metadata catalogue, features for data visualisation, analysis, transformation and download.

plan4business user groups:

- **Plan4business end customer** – customers who need access to planning data and analyses.
- **Plan4business platform operators** – the ones who are running the Plan4business platform (currently the Plan4business consortium).
- **Plan4business data contributors** – those companies or individuals that have data and who can possibly share them, either for free or for a fee / cost.

Note: Data contributors can be at the same time end customers and vice versa.

re-use - “the use by persons or legal entities of documents held by public sector bodies, for commercial or non-commercial purposes other than the initial purpose within the public task for which the documents were produced. Exchange of documents between public sector bodies purely in pursuit of their public tasks does not constitute re-use” (Article 2.4 of the PSI Directive)

3 Pricing Strategies

3.1 Optimal Price for Services

Managing the price of the plan4business services is one of the challenging aspects of the project. Making wrong decisions can have a lasting effect on the business activities of the platform.

In general, the optimal price for services is the result of negotiation between buyers (the plan4business end customers) and service providers (the plan4business platform operators). In the case of the plan4business project, another group is involved in the negotiation. The group includes the plan4business data contributors that feed the platform with data.

In order to set an optimal price for services, the following aspects should be taken into account (Wasseman 2009):

- *Perceived value to the customer* – it is important to measure and estimate the value of the offered services from the customer's point of view. This is a challenging task that becomes more of an art than a science.
- *Competitor pricing* – prices for similar services offered by competitors should be analysed.
- *Cost-plus pricing* – this standard method of pricing seeks to first determine the cost of creation and provision of a service, and then add an additional amount to represent the desired profit.

Analysing data on costs, customers and the competition and integrating that into prices lead to long-term profitability (Nagle & Hogan 2005). A basic schema is depicted in Figure 1.

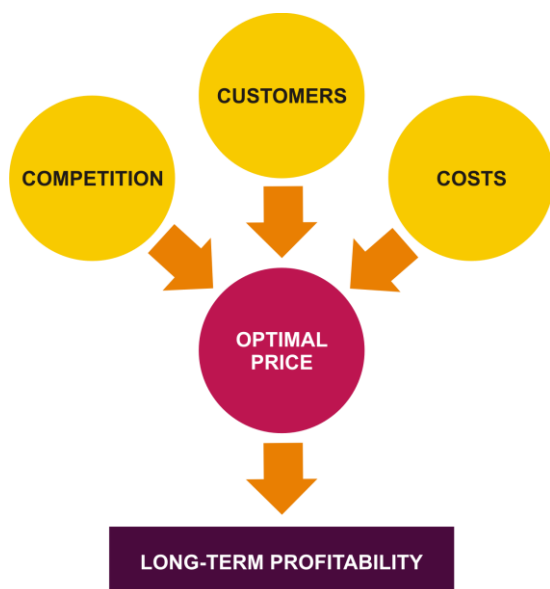


Figure 1 - Optimal price and its main aspects

3.2 Strategic Pricing Pyramid

Setting the optimal price for services cannot be based on a math formula or simulated by special algorithms or applications. In order to set an optimal price, a set of other actions should be performed.

Strategic pricing is a method that is focused on the value of a product or a service for the customer rather than the price. “A comprehensive pricing strategy is comprised of multiple layers creating a foundation for price setting that minimizes erosion and maximizes profits over time. These layers combine to form what we call the strategic pricing pyramid” (Figure 2). (Nagle & Hogan 2005)

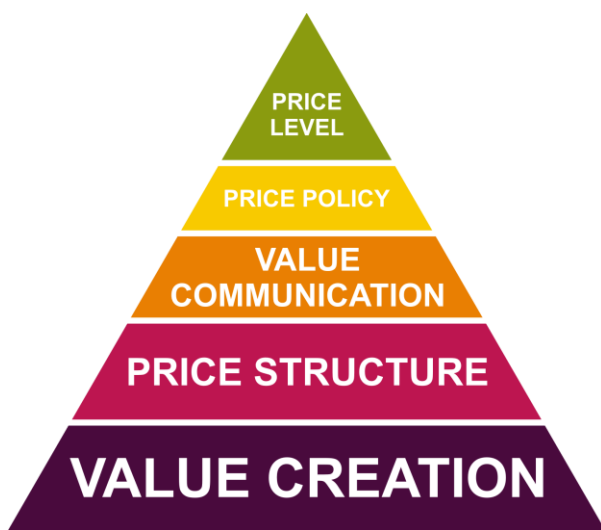


Figure 2 - Strategic pricing pyramid (adapted from Nagle & Hogan 2005)

Value creation

“Estimating the value created by a product requires intimate knowledge of the customer’s needs. This deep understanding of needs can then be used to translate a product’s features into customer benefits which are then translated into a value estimate.” (Nagle & Hogan 2005) Since the value of the product (services offered by the plan4business platform) varies depending on the customer, price segmentation is an option for satisfying the customer needs and to increase the seller’s revenue. Different customer segment gets different price for a service.

Price structure

Knowing the value of a service for each customer segment, a price structure can be created. Most common technique to create a price structure is by price metrics. Price metrics are simply the unit by which price is applied to the service. For example, a “delivery time” metrics forces customers that value quick delivery to pay for it.

Price and value communication

“The next step in pricing strategy requires communicating your prices based on the value created for different customers. Poor communication of value results in higher price sensitivity and more intense price negotiations. Customers might not understand the value of your product because they may be unaware of new features, lack knowledge about how use them, or not understand how a particular feature might satisfy

an unmet need. It is the marketer's responsibility to address these issues through effective price and value communications.” (Nagle & Hogan 2005)

Pricing Policy

There are many pricing policies. The simplest way to set price is through uniform pricing. Uniform pricing is a pricing policy where a seller charges the same price for every unit of the product. Uniform pricing is the least profitable way to set a price.

Price level

The top of the pyramid is the actual setting of the price for a service.

3.3 The Art of Pricing

Mohammed (2005) in his book *he Art of Pricing* presents the following method for setting prices (Figure 5):

- *Step 1: Price & Availability Of Substitutes*
Are there any substitutes for your product?
If so, how are they priced?
- *Step 2: Characteristics Relative to Competitors*
What features do you offer that your competitors do not, and vice versa?
Do your customers value these features enough to pay extra for them?
Do customers value other characteristics, such as brand, established service levels, reputation, locality etc.?
- *Step 3: Income*
Can your customers afford your prices?
Are they less able to afford your prices than they once were?
Are there times of the year they can afford it, and other times where their purchasing power is constrained?
- *Step 4. Price/Strength Of Demand For Related Products*
What are the associated overheads of owning your product? For example, if you sold cars, there are other costs involved that make up the total cost of ownership, including running costs, insurance and maintenance.
- *Step 5 - Market Environment*
Has your product suddenly become high profile?
Has demand increased/decreased considerably in a short period of time?

This type of approach takes into account a number of variables when setting price, namely affordability, value, market conditions, and competition.

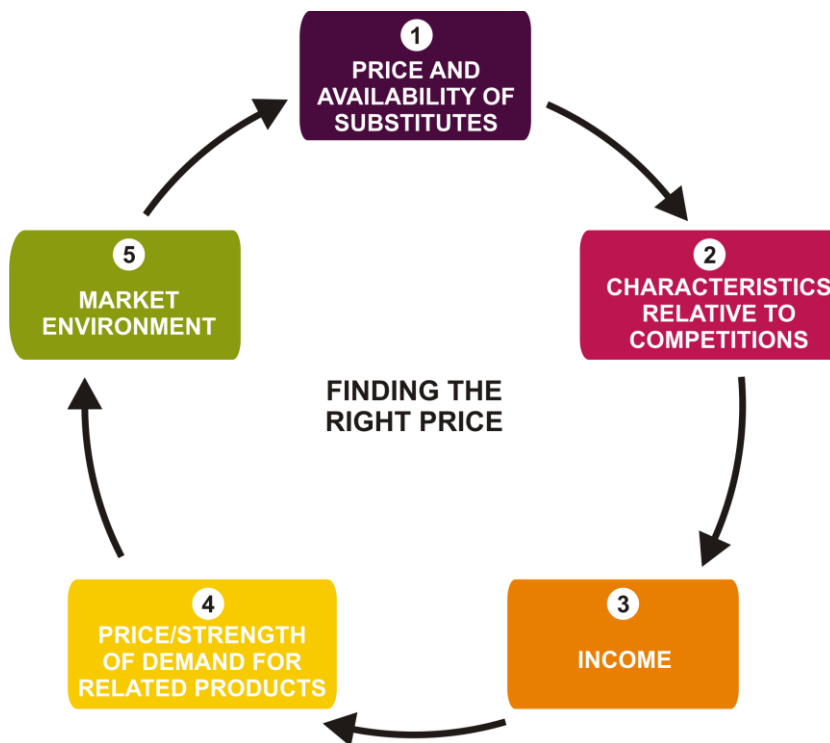


Figure 3 - Finding the right price (Mohammed 2005)

3.4 Freemium

“Freemium is a pricing strategy by which a proprietary product or service (typically a digital offering such as software, media, games or web services) is provided free of charge, but money (premium) is charged for advanced features, functionality, or virtual goods. The word “freemium” is a portmanteau neologism combining the two aspects of the business model: “free” and “premium”.” (Wikipedia 2013)

It is a model when core services are given away for free and premium ones are sold. Four basic models can be considered (Froberg 2013):

- *Free 1* - one product is free when the customer pays for another. An example of this model is a premium analysis and a free download of the result.
- *Free 2* - free services are supported by ads.
- *Free 3* – a lot of free services are complemented by premium services which cover the costs for the free ones.
- *Free 4* - is where a person gives a piece of work as a gift. An example of this is the work done on Wikipedia or OpenStreetMap.

These models are depicted in Figure 4.

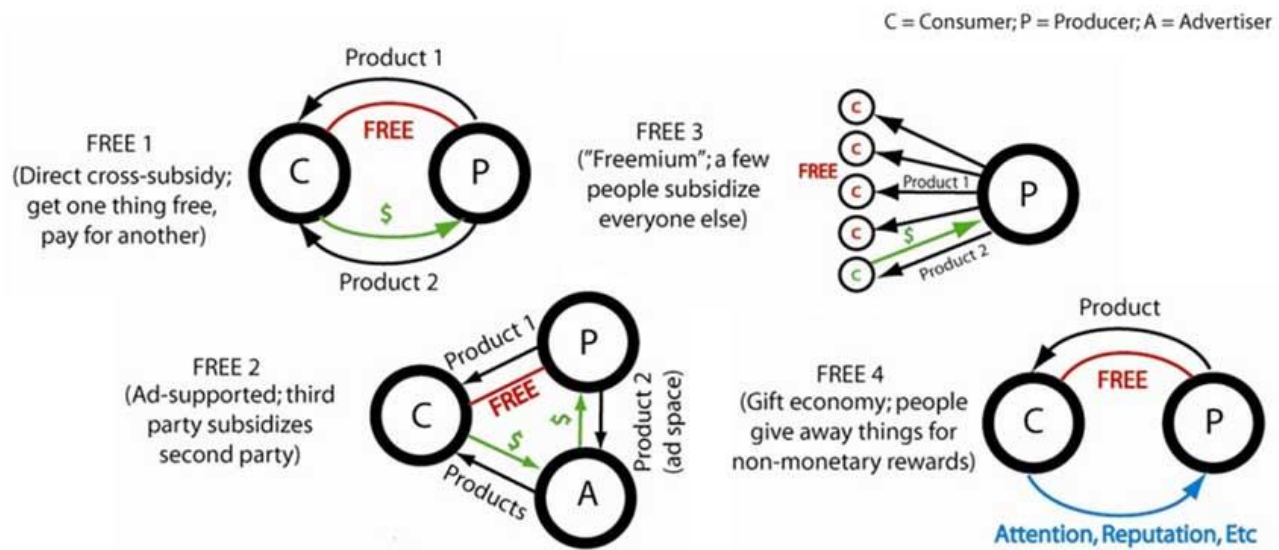


Figure 4 - Four basic freemium models (Froberg 2013)

The Freemium model is used by many service providers such as Skype, Dropbox, LinkedIn, Evernote, Survey Monkey and many others.

4 Methodology

4.1 Stages

With regarding to the service pricing, we distinguish three stages of the business activities related to the plan4business operations (Figure 5):

1. **PROJECT STAGE** – The plan4business project duration is two years. Within this period the consortium has to collect user requirements, design the plan4business platform, implement and test the components of the platform, go public with end-user applications and start a new business.
2. **TRANSITION STAGE** – This stage includes a transition to advanced capabilities of the plan4business services offering higher value to the customers and making the platform cost recovery and profit making. All the partners have committed to contribute to the platform development, upgrade and marketing as an in-kind contribution within this transition stage. For example, HSRS committed to provide free maintenance and upgrade of the platform for next three years.
3. **FULL BUSINESS STAGE** – The platform will be cost recovery and profit making.

These stages are used throughout the document.

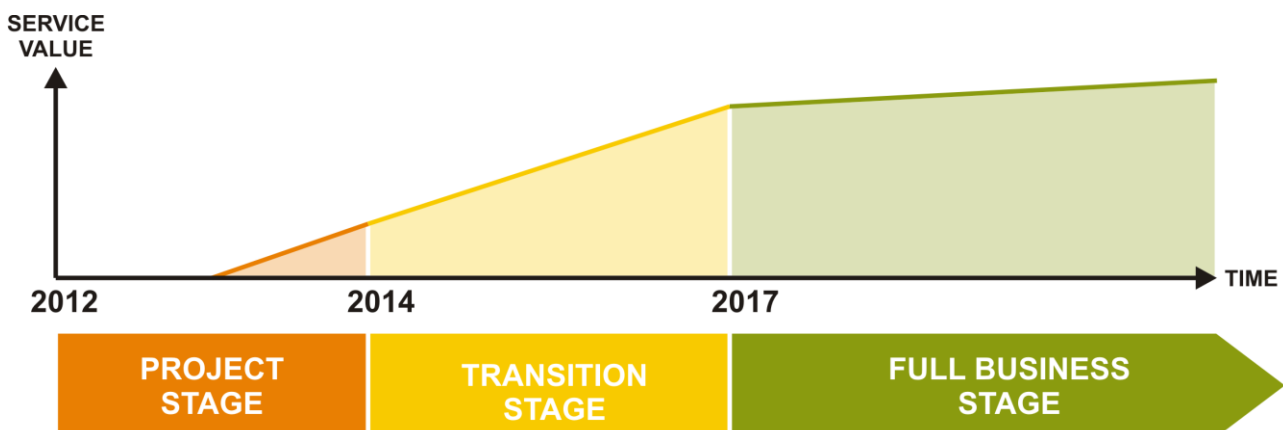


Figure 5 - Main stages for the business development

4.2 Strategy

If we compare different pricing strategies (see the previous chapter), all of them have the following building blocks in common:

- **VALUE FOR CUSTOMERS** – Due to the fact that plan4business is publishing its services in stages, adding more and more functions, the value for customers is difficult to measure and analyse. The input was therefore combined with the analysis of competitors based on an estimation of the value of competitive solutions and also on feedback from our stakeholders during the plan4business workshops organised by ISOCARP and UWB. The value for customers on a general level is also included in D3.3 Customer Cost/Benefit Analysis.

- **COMPETITION** – An analysis of competitors with regard to the service pricing and the service value for customers is included in Chapter 6.
- **COSTS** – The costs for the plan4business platform were elaborated in D3.3 Customer Cost/Benefit Analysis. Chapter 7 includes an updated cost table.

Next to these building blocks, the plan4business strategy for pricing includes an overview of information policies relevant to pricing, especially in the geographic information and open data domains. The following chapter introduces the main information policies relevant to plan4business.

5 Information Policies

5.1 Public Sector Information

5.1.1 Overview

Section 5.1 and Section 5.2 are based on the information published by the LAPSI 2.0 Network¹ under the Creative Commons Attribution 3.0 (Unported) License². LAPSI 2.0 is a Thematic Network funded by the European Commission under the Competitiveness and Innovation Framework Programme 2007-2013. LAPSI 2.0's objective is to identify the remaining legal barriers and obstacles to access and re-use of public sector information (PSI) on the European content market, and to propose measures and tools to stimulate the progress of the European market towards open data.

Public Sector Information (PSI) can be defined as the wide range of information that public sector bodies collect, produce, reproduce and disseminate in many areas of activity while accomplishing their institutional tasks. PSI may include (among others) social, economic, geographical, cadastral, weather, tourist, and business information. PSI acquires a specific legal meaning within the European Union, since it has been provided with a minimum set of rules contained in the Directive 2003/98/EC of 17 November 2003 on the re-use of public sector information (hereinafter referred to as the PSI Directive³).

Additionally, the Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE Directive⁴) provides specific rules for spatial and geographical information. The INSPIRE Directive is meant to be applied along with the PSI Directive, the objectives of which are complementary to those of the INSPIRE Directive. More on the INSPIRE Directive can be found in Section 5.4.

The ongoing technological progress we are experiencing and benefiting from in the modern digital age has drastically modified the procedures and broadened the opportunities for any citizen to reach and access information.

In such a context, making information generated and collected by public sector entities available and re-usable is important for many reasons:

- because it provides citizens with a reliable knowledge regarding Government and public sector bodies activities. It also enables them to confront directly with public sector bodies activities and therefore participate actively to the public choices.
- because it represents the initial material for public or private undertakings to come up with new added-value services and supply them to citizens.

¹ <http://www.lapsi-project.eu/>

² <http://creativecommons.org/licenses/by/3.0/>

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0098:EN:HTML>

⁴ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:108:0001:01:EN:HTML>

Moreover, it is one of the pivotal tasks to fulfil the aim of the Digital Agenda for Europe to "deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast internet and interoperable applications."

5.1.2 Revision of the PSI Directive

The PSI Directive was recently (June 2013) revised and resulted in amending the PSI Directive from 2003. The revised PSI Directive:

- introduces a genuine right to reuse by making reusable all content that can be accessed under national access to documents laws;
- **lowers the upper ceiling for charges on reuse applicable in standard cases to marginal costs**, i.e. the costs incurred by the individual request for reuse (reproduction, provision and dissemination costs); exceptions are allowed in a limited set of cases;
- expands the scope of application of the Directive to certain cultural institutions such as libraries (with the exception of university libraries), museums and archives, but making them subject to a number of different rules that reflect that set of rules of the 2003 Directive, namely:
 - There is no genuine right to reuse; only such documents the reuse of which has previously been allowed are reusable;
 - Cultural institutions can charge re-users based on the principle of full costs recovery, including a reasonable return on investment;
 - Cultural institutions may engage in the award of exclusive exploitation rights if necessary to ensure digitisation projects,
- reinforces the obligation to be transparent on conditions and on charges applied to reuse;
- invites Member State to make more documents available in machine-readable and open formats.

The new PSI Directive in its recital 36 suggests that the Commission adopts guidelines in three areas:

1. Licensing conditions
2. Charging
3. Datasets to be made available for re-use as a priority

On 30th August 2013, the Commission launched a **public consultation** on recommended standard licensing, datasets and charging for the re-use of public sector information. All interested parties were invited to share their views via an online survey.

The next step in the consultation process was a **public hearing** on 25th November 2013 in Luxembourg. The purpose of the public hearing was to provide a forum for a direct exchange of opinions by as many stakeholders as possible, including national authorities, public sector content holders, commercial and non-commercial re-users and other parties. Karel Charvát (HSRS) represented the plan4business consortium at this meeting and contributed to the discussions regarding licencing.

The estimated adoption of the guidelines is in mid-2014.

5.2 Open Data

5.2.1 Open Data by Open Knowledge Foundation

Open Data, as defined by the Open Knowledge Foundation (2013), is “data that can be freely used, reused and redistributed by anyone - subject only, at most, to the requirement to attribute and share alike.”

The full definition includes the following rules:

- *Access* - The work (item or piece of knowledge which is being transferred) shall be available as a whole and at no more than a reasonable reproduction cost, preferably downloading via the Internet without charge. The work must also be available in a convenient and modifiable form.
- *Redistribution* - The license shall not restrict any party from selling or giving away the work either on its own or as part of a package made from works from many different sources. The license shall not require a royalty or other fee for such sale or distribution.
- *Reuse* - The license must allow for modifications and derivative works and must allow them to be distributed under the terms of the original work.
- *Absence of Technological Restriction* - The work must be provided in such a form that there are no technological obstacles to the performance of the above activities. This can be achieved by the provision of the work in an open data format, i.e. one whose specification is publicly and freely available and which places no restrictions monetary or otherwise upon its use.
- *Attribution* - The license may require as a condition for redistribution and re-use the attribution of the contributors and creators to the work. If this condition is imposed it must not be onerous. For example if attribution is required a list of those requiring attribution should accompany the work.
- *Integrity* - The license may require as a condition for the work being distributed in modified form that the resulting work carry a different name or version number from the original work.
- *No Discrimination Against Persons or Groups* - The license must not discriminate against any person or group of persons.
- *No Discrimination Against Fields of Endeavour* - The license must not restrict anyone from making use of the work in a specific field of endeavour. For example, it may not restrict the work from being used in a business, or from being used for genetic research.
- *Distribution of License* - The rights attached to the work must apply to all to whom it is redistributed without the need for execution of an additional license by those parties.
- *License Must Not Be Specific to a Package* - The rights attached to the work must not depend on the work being part of a particular package. If the work is extracted from that package and used or distributed within the terms of the work's license, all parties to whom the work is redistributed should have the same rights as those that are granted in conjunction with the original package.
- *License Must Not Restrict the Distribution of Other Works* - The license must not place restrictions on other works that are distributed along with the licensed work. For example, the license must not insist that all other works distributed on the same medium are open.

5.2.2 EU Open Data Strategy

Open data in the terminology of the European Union refers to the idea that certain data should be freely available for use and re-use. The Commission's work in the area of open data is focussing on generating value through re-use of a specific type of data – public sector information, sometimes also referred to as government data. That is all the information that public bodies produce, collect or pay for. Examples are: geographical information, statistics, weather data, data from publicly funded research projects, and digitised books from libraries. (European Commission 2013)

The key measures of the Open data strategy of the European Commission include:

- revision of the legislative documents;
- European open data portals and platforms;
- open data for science;
- support of research and innovation.

The actions taken by the Commission towards open data include the revision of the PSI Directive (Section 5.1) and creation of the European Union Open Data Portal which can be accessed at <http://open-data.europa.eu>. The European Union Open Data Portal is the single point of access to a growing range of data from the institutions and other bodies of the European Union (EU). Data are free for you to use and reuse for commercial or non-commercial purposes.

5.3 PSI versus Open Data

While the terms PSI and Open Data are often used interchangeably, a strict definition of PSI according to the PSI Directive rules would reveal certain discrepancies among the two.

Moreover, one should keep in mind that both the PSI directive and the so-called Open Data Movement provide a core of rules and principles that may be practically implemented in a slightly different way within different countries and different existing legal frameworks.

That being said, confronting the PSI Directive provisions and the widely acknowledged Open Data features would lead to comments presented in Table 1.

Table 1 - PSI versus Open Data

Issue	PSI	Open Data
Content and access restrictions	PSI refers to "documents" ⁵ held by public sector bodies". While the PSI Directive encourages public sector bodies to make available for re-use any of their documents, it also set some access and re-use restrictions to such documents: firstly, the Directive doesn't contain an obligation to allow re-use, thus leaving each EU State or public sector body to decide whether a document should be re-usable or not; secondly, the Directive doesn't change the national rules for access to documents, so that each EU State could maintain its own access restrictions (usually due to privacy or national security concerns). In addition to that, the PSI Directive currently doesn't apply to documents held by public service broadcasters, educational and research establishments, and cultural establishments.	Open Data refer to "data" as a potentially much broader term which may involve any kind of work, knowledge, data (both public data and private funded data) or information with no given source limitations. Access restrictions are conceived mainly for data affecting privacy, confidentiality or public security.
Charging	PSI can be made available charging a price for re-use. The PSI Directive sets the charging upper limit at the recovery of total costs of collecting, producing, reproducing and disseminating documents together with a reasonable return on investment, though leaving the right to ask for lower charges or no charges at all. In addition to that, the Directive encourages to make documents available at charges that do not exceed the marginal costs for reproducing and disseminating the documents.	Open Data are traditionally meant to be available at no more than a reasonable reproduction cost. Yet, the on-line availability without charge is the first choice option.
Ownership and licensing	PSI itself does not affect the existence or ownership of intellectual property rights of public sector bodies: while public sector bodies might be encouraged by the Directive to exercise their copyright in a way that facilitates re-use, the default rule adopted by the Directive seems to be the traditional all rights reserved Copyright rule. Therefore, should a public sector body have any intellectual property right on its information, it's up to the public sector body itself to decide how broadly its information has to be licensed.	Open Data experts specifically require data to adopt an Open License (e.g. Creative Commons, Open Government License) in order to be disseminated in a truly open fashion; thus aspiring to a some rights reserved Copyright rule.

5.4 INSPIRE Directive

The INSPIRE Directive is an initiative supporting the re-use of public sector information, in particular access and re-use of spatial environmental information and harmonisation of key datasets.

The success of INSPIRE is based on principles that are crucial for achieving the sustainability of the infrastructure. The INSPIRE principles include:

- Data should be collected once and maintained at the level where this can be done most effectively;
- It should be possible to combine seamlessly spatial data from different sources and share them between many users and applications;
- Spatial data should be collected at one level of government and shared between all levels;

⁵ "any content whatever its medium (written on paper or stored in electronic form or as a sound, visual or audiovisual recording); (b) any part of such content" (article 2.3 of the PSI Directive)

- **Spatial data needed for good governance should be available on conditions that are not restricting their extensive use;**
- It should be easy to discover which spatial data are available, to evaluate their fitness for purpose and to know which conditions apply for their use. (INSPIRE Website 2012)

5.5 Basic Policies for Data Pricing

European Territorial Management Information Infrastructure (2001) distinguishes four basic policies for data pricing:

- *FREE* - data are made available to users free of charge. This may include costs associated with data replication, but none of the costs for collection and maintenance of the data are passed to the user. This policy for data sharing is becoming popular due to many studies showing the benefits of providing data for free. For example, the Research Institute of Finnish Economy published a study "Does Marginal Cost Pricing of Public Sector Information Spur Firm Growth?" authored by Koski (2011). The study shows that "in countries where pricing was based on marginal cost or no cost at all, the growth of SMEs was 15% faster than in countries where charges were higher". (Ratia 2012).
- *PARTIAL COST RECOVERY* - users are charged a price that partially contributes to recovering the costs associated with data collection and data maintenance. This is the model that is pursued by most national mapping and cadastral organisations.
- *COST RECOVERY* - users are charged a price that represents the cost associated with the collection and maintenance of the data. The intention is that those who make use of the data are those who pay for its provision.
- *PROFIT MAKING* - the users are charged a price in order to maximise the profit of the data owner. Two price setting models exist:
 - *Based on production costs* - this mechanism is typically used when there is a monopoly on the supply of data and is used for defining a "fair" price for the data.
 - *Market price* - this is the price that is charged in the market - assuming appropriate levels of competition. There are various models that can be used to define the price, but it comes down to how much users are willing to pay for data.

6 Competitor Analysis and Value for Customers

Based on the list of identified competitors in D3.3 Cost Benefit Analysis, an analysis focused mainly on product or service pricing and the value for customers in comparison with the plan4business services was performed.

The analysis revealed that there are many software developers in the field of spatial data analysis and visualisation. However, the number of competitors that have similar scope as plan4business is rather low.

There are plenty of software vendors who offer services such as data harmonisation and data analysis. But in general, the territorial coverage and the main scope of their services are rather different. As an example the ESRI Business and Location Analysts can be mentioned. ESRI recently launched a project that has very close relation to what plan4business does. The ESRI Urban Observatory is based on data of big world cities provided on a voluntary basis. The Urban Observatory provides a visual comparison of these cities in an attractive manner. However, this initiative is currently focused on global scale including only big cities. Plan4business scope is mainly on local and regional level.

Next to big software vendors, there are data distributors. These play the role of a one stop shop. As an example, Nordeca or Norsk eiendomsinformasjon from Norway can be mentioned.

There are several companies with similar scope as plan4business such as FIND and Landmark which provide data, analyses, reports, apps and other services based on these data on the territory of the UK. The same applies for the Ordnance Survey, the British national mapping agency, which is focused on reference data for thematic applications in Great Britain. On the global level, DataMarket provides services for data aggregation, sharing and analysis. This solution is focused on non-spatial data.

Another potential competitor is Google providing its Google Maps, Google Earth and Google API. These are delivered as free services as well as pro versions with more advanced features. There are certain limitations on how the Google data can be used. The access to the data and their reuse is rather limited, especially when the user wants to download them or perform user defined analyses. Also, the data themes are limited and do not include land cover and land use data.

ESPON, the European Spatial Planning Observation Network, could be considered more as a partner and data provider rather than a competitor. ESPON provides access to a set of maps available as raster images and data through its ESPON Database. However, the data available for public is limited and the use is restricted to non-commercial purposes.

One of the most relevant competitors could be AND. AND provides location based services using the Open Street Map and also an advanced and free user customised API for data visualisation embedded into the customers' websites. However, prices for their services are not available.

7 Costs for the Plan4business Services

The costs and benefits analysis was performed in Task 3.3 Customer Cost/Benefit Analysis and is documented in the D3.3 deliverable. In D3.3, the costs for running the plan4business platform were identified, such as costs for gathering and update of data, system maintenance, promotion and marketing, and further elaborated. For more details, please refer to D3.3 Customer Cost/Benefit Analysis, Chapter 4.

The costs incurred within the first year of the plan4business project are 1,139,691 EUR. It is expected that by the end of year 2, the consortium will spend 2,540,956 EUR, which means 1,401,265 EUR for the second year.

Table 2 is an updated table from D3.3 showing the costs for running the business. The update concerns mainly reducing the timespan taking into account only next 3 years instead of 12 years and an update of the figures (costs) that should be decreasing in time because of process automation (in case of data harmonization and update), increasing number of staff for development, data management and marketing and declining computational costs. Average yearly wage used to calculate the personal costs is 66,000 EUR.

Table 2 - Costs for the plan4business platform

Cost Item	Year 3	Year 4	Year 5
Server / Domain Extended Service	EUR 12,000	EUR 10,000	EUR 9,000
Data Management	EUR 132,000	EUR 118,800	EUR 105,600
Number of staff: 2	100%	90%	80%
Data Harmonisation	EUR 132,000	EUR 92,400	EUR 79,200
Number of staff: 2	100%	70%	60%
Service/Software Development	EUR 132,000	EUR 132,000	EUR 132,000
Number of staff: 2	100%	100%	100%
Management			
10% of personal costs	EUR 39,600	EUR 34,320	EUR 31,680
Overheads			
20% of personal costs	EUR 79,200	EUR 68,640	EUR 63,360
Data Licensing (per year)	EUR 10,000	EUR 10,000	EUR 10,000
Marketing	EUR 33,000	EUR 33,000	EUR 33,000
Number of staff: 1	50%	50%	50%
EUR 1,139,691	EUR 569,800	EUR 499,160	EUR 463,840
YEAR 1	YEAR 3	YEAR 4	YEAR 5
PROJECT STAGE	TRANSITION STAGE		

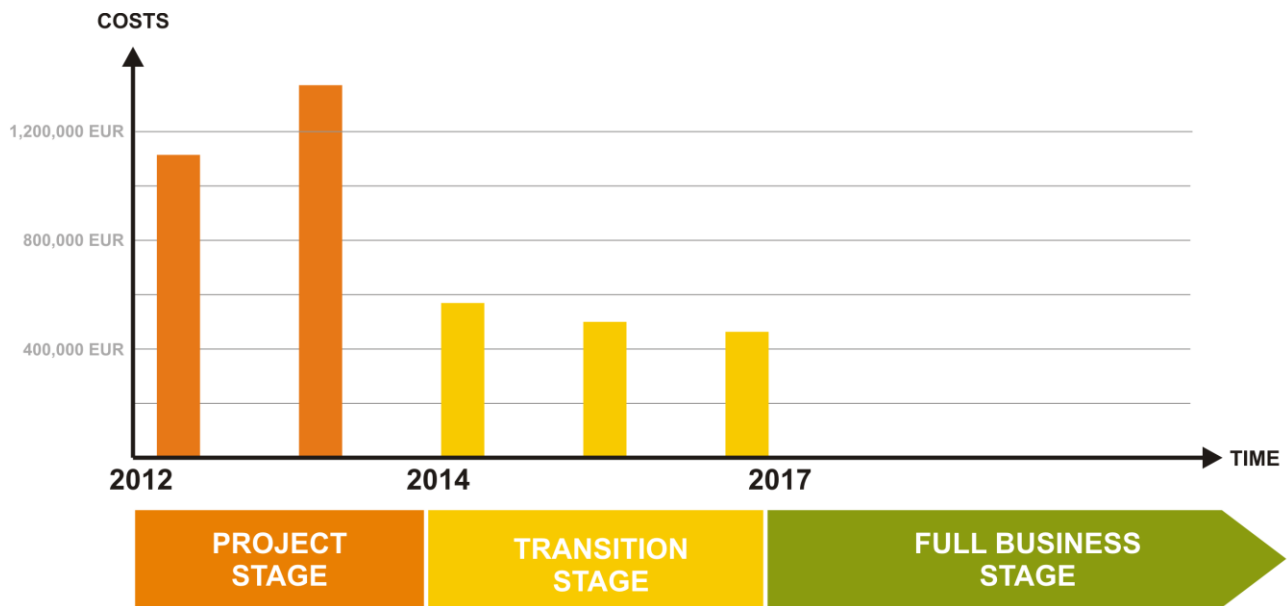


Figure 6 – Costs for the plan4business platform in a chart

8 Plan4business Service Pricing

8.1 Different Views on Pricing

This chapter introduces the plan4business pricing strategy and elaborates several possibilities for service pricing. In Section 4.1, the three stages of the plan4business activities were outlined. These include the Project Stage (2012-2014), the Transition Stage (2014-2017) and the Full Business Stage (2017 onwards).

On the one side, the Project Stage involves high costs for the initial development of the service platform including user requirements collection and system design and testing. It is expected, based on the cost analysis performed in Task 3.3 and the refined costs for running the platform in Table 2 that these costs will be significantly smaller in upcoming years and will be decreasing in time.

On the other side, little or no income is foreseen in the Project Stage due to the fact that the plan4business services are being tested without any charges applied. The cost benefit analysis documented in D3.3 Customer Cost/Benefit Analysis estimates the incomes of the platform in the future. These estimates together with the costs for the Plan4business services (Chapter 7) are displayed in the form of a chart in Figure 7.

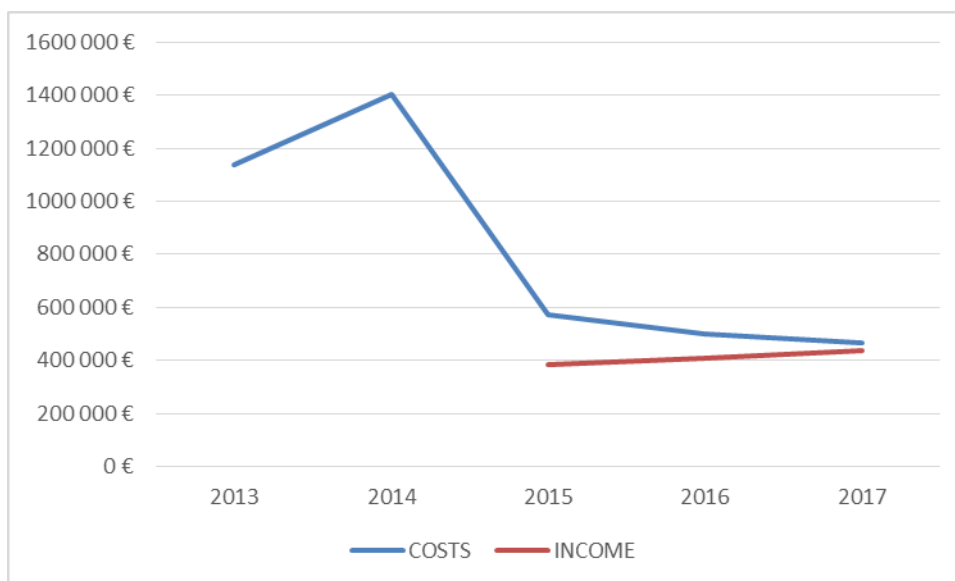


Figure 7 Costs and income estimates (based on D3.3 Customer Cost/Benefit Analysis)

The incomes should be increasing and the plan4business team foresees that by 2017 the costs will equal the incomes (break-even point) and the platform will be cost recovery and profit making (see Section 5.5 for details on cost recovery and profit making terms). The plan4business platform will enter into the Full Business Stage.

A schematic depiction of the trends of reducing costs and increasing incomes is shown in Figure 8. Please note that this is only an assumption and the schema is not based on real figures.

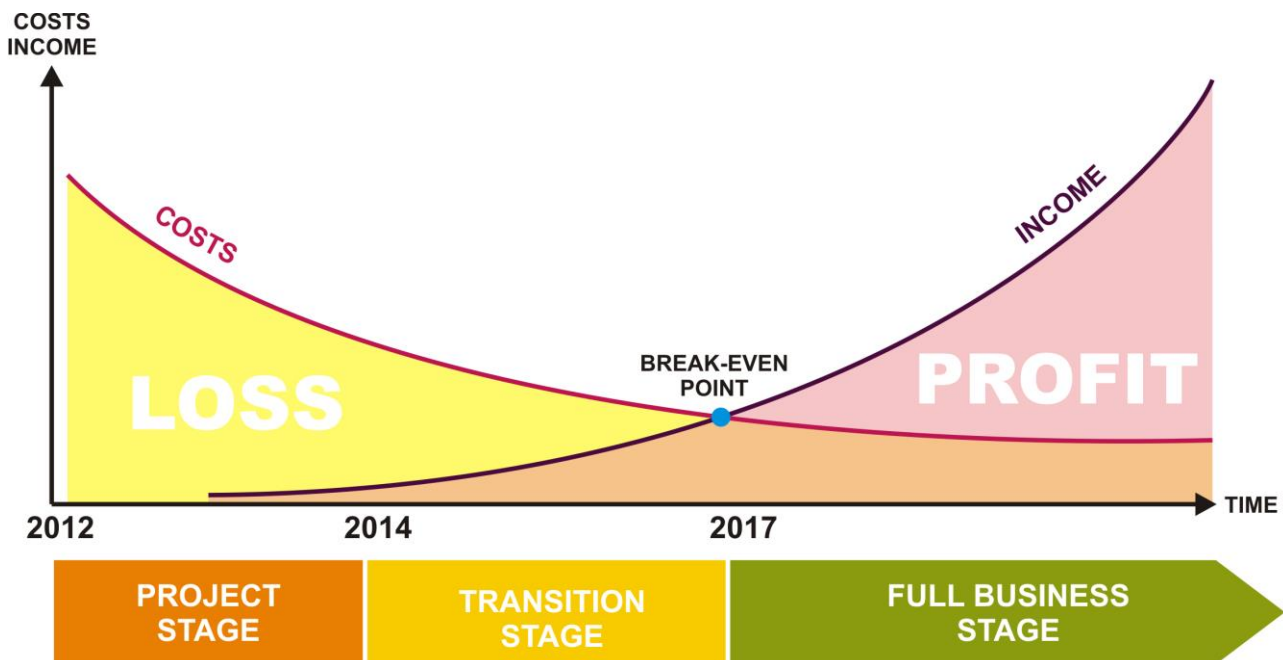


Figure 8 – Trends in costs and incomes

The most likely pricing strategy to be applied for plan4business is the Freemium model introduced in Section 3.4.

We can look at the pricing from different perspectives. From the **project stages point of view**, the following pricing can be distinguished:

- *Project Stage* - all the plan4business apps are given for free, feedback from partners is collected and used for refinement of the apps. This is part of the testing – partly verification and mainly validation of the services.
- *Transition Stage* – most of the apps will be available for free and accompanied by ads. Some of the plan4business tools which are targeted at experts and professionals will be charged and the pricing will follow one of the models introduced further in this chapter.
- *Full Business Stage* – this stage will follow the same pricing model as envisaged for the transition stage. The platform will be enriched by data, new apps and tools and an appropriate pricing will be applied. Also the current services will be enriched and therefore the pricing might change. For example, the Location Evaluator will be available for free in the Transition Stage. It is envisaged that this app will become commercial in the Full Business Stage.

From the **business model point of view**, there will be two main platforms with the following pricing models:

- *Open Data Platform (ODP)* – a data hub containing open data, management and harmonising tools (HALE, Layment, MICKA – for more details on these tools please refer to D4.1.2 Operational System V2), open applications (Open Land Use Map, Thematic Map Viewer). All these services will be available for free with no restrictions. Any party can access the data pool and make commercial or non-commercial apps based on these data. The use of the data must be in line with data licences.

The non-profit ODP will have the following sources of financing in order to keep it sustainable:

- In-kind contributions - sponsorships of companies contributing to the system maintenance, server infrastructure, update and upgrade.
- Future project contributions – there is a number of future projects (e.g. SmartOpenData, SDI4Apps, OpenTransportNet, FOODIE) for which the portal can serve for their purposes. The projects would not only use the data but they would also feed the platform with new other data. These projects could contribute to the system maintenance, server (cloud) infrastructure and new tools development.
- Advertisement - the hub will offer adverts (at the early stage, ads can be provided by third parties, later on they can be managed by the Commercial Platform partners). Note: Some data cannot be accompanied by ads, this need to be taken into account.
- Public funding from the side of organisations who don't want to build their own infrastructure or who would like to support the Open Data Platform.
- Other contributions.
- *Commercial Platform (CP)* – a data hub containing restricted data and commercial apps and tools. These tools and apps will be charged. The CP will be managed by HSRS. HSRS will sign bilateral agreements with the plan4business partners (for example with Fraunhofer about the harmonisation services). The restricted data hub includes all data that cannot be included in the ODP. The CP will be used for commercial applications and in line with data licences. Restricted data will be either not available for download or there will be a possibility to download the data only for a certain group under given conditions and in line with data licences. Generally, all data in the CP are available for all the project partners. Certain restrictions (different access rights) might be put in place. At the beginning, data collection should be secured mainly by the project partners as an in-kind contribution. Later on, when successful, profits from the commercial apps attached to the CP can be shared with those that are collecting data. Data collection can be performed by third parties too, but an agreement between HSRS and the third party must be made. Data collection will focus on free data. Purchase of data will be done only in the case when the return of investment is secured.

Third parties will be able to access the CP and use its services. While the plan4business partners will have access to the CP based on the costs for data collection and maintenance (recovery costs), costs for third parties will be profit making (recovery costs + profit). An agreement must be made between HSRS and the third party.

The incomes will be composed of:

- Advertisement with the focus on concrete user groups (e.g. real estate businesses). Advertising is described in Section 8.3.
- Data hosting for public and private bodies who don't want to make data freely available, but they need to publish their data.
- Profits from the commercial apps.
- Payments from the project partners for the infrastructure utilisation - will include only maintenance costs (non-profit costs).
- Payments from third parties accessing the CP or offering the commercial apps in other counties and regions.

Figure 9 shows these two platforms, associated apps and tools and the potential users. More details on the ODP and CP will be published in D2.4.2 Business Model final version in month 21.

Note: The licencing remains a big issue for further development of the platform. Based on the information included in Chapter 5 and latest discussions on the revision and guidelines of the PSI Directive, a standardised set of licences is foreseen as a solution for combining data from various sources with different licences. This is crucial for the end users of the ODP. Currently, in many cases, combining data from different sources is permitted but the conditions given by their licences and to the need to preserve them make the combination impossible, especially in the case of commercial use, making derived sets and further data distribution.

It is important to note that pricing will be matter of continuous changes and updates based on the market, potential competitors that may arise and actual costs associated with running the platform. The prices indicated are the first estimates and will serve as a basis for the business planning.

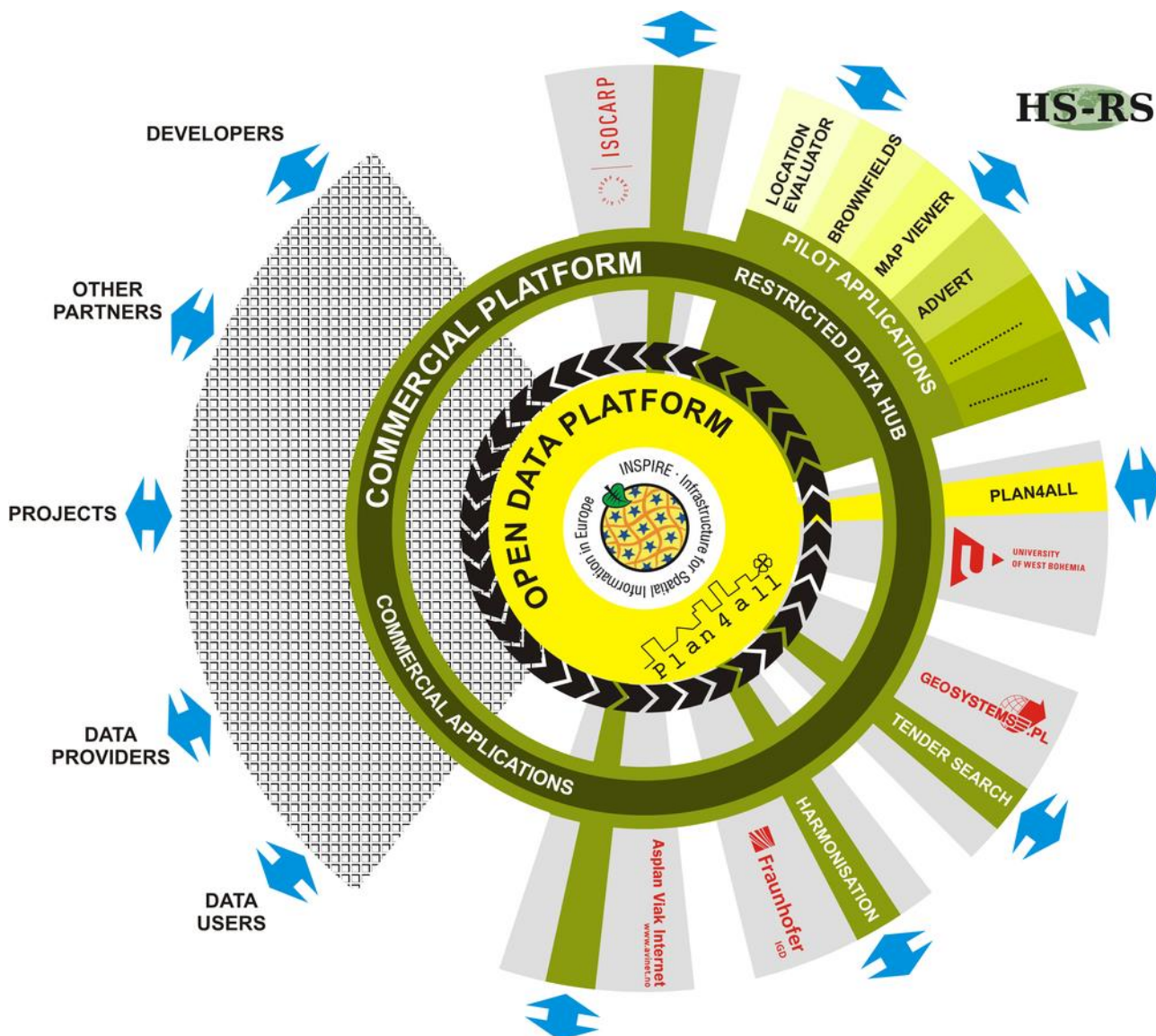


Figure 9 – Open Data and Commercial Platforms and associated tools, apps and users.

We can look on the prices also from the **country point of view**. Each country has its specifics in terms of cultural, economic, environmental and societal aspects. Also, the availability and prices of certain data differ. This will lead to different pricing models for some countries. Then we can distinguish two main models:

- *Pan-European* - The services which have a pan-European character will be available for the same pricing scheme.
- *Country based* – Each country might have different pricing scheme.

The plan4business service pricing can get to a very complex pricing scheme. The next sections present the service pricing that can be applied in Central Europe where Transition Stage should take place. In the later stage, prices should be elaborated based on the country where the Plan4business services will expand..

8.2 Pricing Options

There are many ways how to attract customers and convince them to buy services or products from you rather than from your competitor. One of them is to have clear pricing options that fit customers' purposes and expectations. In this section, several options for service and data pricing strategies relevant to the plan4business platform are listed and briefly described. Some of them were already introduced in D2.3 Approach for Data and Services Management. The list is based on the analysis of competitors in the field of spatial data (Chapter 6).

- *Periodic access* – a customer can access the platform and its services for a certain period (e.g. monthly or annual fee).
- *Pay per use* (Keyword: Software as a service) – example can be a payment for a report generated using the Location Evaluator.
- *Pay per data volume* (per MB, GB, TB, PB, EB) – a customer pays the price according to the measurable amount of the data transferred.
- *Reseller* – the platform will be a distributor of data coming from other providers. Several options for pricing can be applied, such as price per dataset or per feature.
- *Customised based on individual contracts* - Another option is also to price services on an ad-hoc basis depending on the extent of the service, customer preferences and use of the result and other conditions. This model is appropriate for example for data harmonisation tasks.

These price models can be further graded by:

- *Geographical area* – a customer can access data by a predefined map sheets (a fixed price for a map sheet) or by a user-defined area (price is set per e.g. km²).
- *Level of detail* – different levels of detail can be differently priced. For example European and national levels can be offered for free and regional and local level can be charged.
- *Type of data delivery* – the data or a service result (e.g. a map or a report) can be delivered to users in different ways such as for viewing (e.g. a web service WMS, WMTS, WFS), for printing or for downloading (in various formats).

8.3 Advertisement

A common option, which is a part of the Freemium pricing model, is using adverts next to services, which are given for free. The purpose of the services is to attract as many users as possible. The site accompanied by adverts can generate a profit. As an indication, 97% of Google's profit is from advertising (WordStream Inc. 2011).

An easy option how to incorporate adverts into the plan4business platform is to use services of third parties. An example can be Google AdSense. This service providers do all the communication and work related with ads management. As the final user of this service, the plan4business platform would only embed a code on its websites.



1. You make your ad spaces available

You make your website ad spaces available by pasting ad code on your site, and choose where you want the ads to appear.



2. The highest paying ads appear on your site

Advertisers bid to show in your ad spaces in a real-time auction. The highest paying ad will show on your site.



3. You get paid

We handle the process of billing all advertisers and networks for the ads on your site, to make sure you receive your payments.

Figure 10 – Google AdSense example of ad service provider

The other option is to manage the ads directly with their advertisers. This option might be on the one side more expensive in terms of costs generated. On the other side, it can be an easy solution for a certain period as some of the ad service providers require certain conditions so this service can be used, such as number of hits or specific website content.

The Plan4business consortium implemented a pilot demonstration of advertisements within one of the Plan4business apps – the Location Evaluator. Based on the agreement between HSRS and Vasmajetek (Czech real estate company), ads of the Vasmajetek database records are included as a part of the Location Evaluator report for buildings in the Czech Republic (Figure 11). There is a location-based algorithm that selects appropriate records for advertisement based on their location in relation to the selected building in the Location Evaluator.

Located in
City name: Pardubice
City id (CZSO): 555134
Land id: 2430782606

Infrastructure
Sewer system: Not known
Water instalation: Not known
Heating: Not known
Elevator: Not known


Points of interest (Aerial distance)

The nearest points of interest of various types	
Object type	Distance (km)
bus_stop	0.06
restaurant	0.18
post_office	0.21
hospital	0.26
library	0.43
shop	0.62
motorway_junction	7.01

Basic properties
Construction type: Not known
Built-up area: Not known
Floor area: Not known
Walled up space: Not known m
Number of floors: Not known
Number of apartments: Not known


Usage
Used as: Not known

Completion
Date of completion: 2011-06-03 00:00:00.0



Flood risk
Located in zone of largest flood: No
Located in zone of 100-year flood: No
Located in zone of 20-year flood: No
Located in zone of 5-year flood: No

Linked data and reports
[Report for city: Pardubice](#)



Majetek v okolí k prodeji
[Skladová hala v obci Přelouč okres Pardubice](#)
[Dražba RD, Přelouč, okr. Pardubice / rodinný dům](#)
[2/14 rodinného domu s příslušenstvím a zahradou v Řečanech nad Labem / rodinný dům](#)








Figure 11 A building report accompanied by ads from Vasmajetek.

This service is currently running in a testing mode. The pricing for such kind of service has been designed and discussed between HSRS and Vasmajetek. A reasonable pricing option for both parties (service provider and customer) is based on the total number of views. The agreed price range in this case would be between 0.05 and 0.20 EUR per view. But depending on the type of advertisement (dimensions, place on the website), the prices can significantly vary and will depend on a case-by-case agreement with customers.

8.4 Embed-Map

This service should follow the freemium business model:

- Embedding map for free – for commercial and non-commercial activities;
- As a paid service for customised commercial activities.

The commercial activities include for example embedding a thematic map including a spatial plan of a municipality into websites of real estate agencies. Figure 12 show a typical example of locating properties in real estate catalogues.

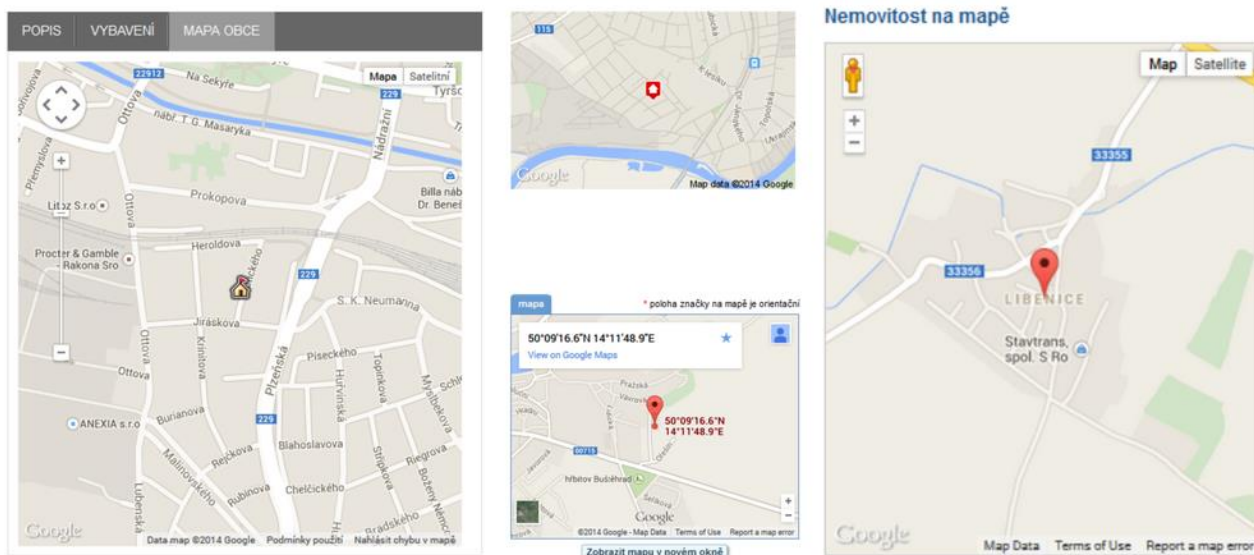


Figure 12 Google map as a location visualisation for real estate agencies

An alternative which is now being discussed with Vasmajetek in the Czech Republic would be embedding a Plan4business thematic map displaying the land use and other data layers to give customers a detailed information on the property and its surrounding (Figure 13).

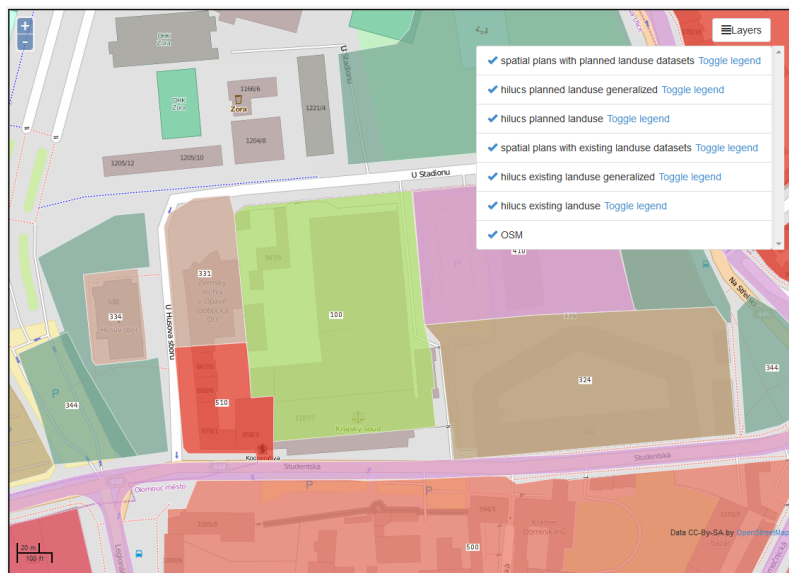


Figure 13 Embedded map that can accompany advertised properties on real estate agency website

Pricing of such service will be divided into more groups:

- Pricing for open data:
 - Free services for users will be covered by basic API, with basic functionality including zooming, information access, and switching layers.
 - Paid module with extended API will allow a set of programming functions, supporting better integration with other applications, like querying, statistical analysis, etc. It will also include support for developers and guarantee 365/7/24 functionality. Price will depend on the amount of accesses per month. There will be three levels of pricing - basic, advanced and diamond.
 - On demand paid embedded maps - will include full service for customers, including preparation of maps according to user needs, and their integration with user web pages. The price will be defined individually. It has to guarantee better services and lower prices than using own GI web server.
- Pricing for commercial data – it will depend on the rules of the original data provider. We expect three type of services
 - Basic with simple API - will be similar like free services for open data, but there will be paid licence for commercial data.
 - Extended with advanced API, similar as for open data.
 - On demand - similar as for open data.

8.5 Integrator and Services based on Restricted Data

8.5.1 Data Harmonisation as a Service

During the project phase data has been acquired from data providers in European countries. The acquisition process was tenacious and the subsequent harmonisation process needed different amount of effort depending on the acquired data quality.

Data harmonisation steps were included in the project's work packages and thus, were performed from a scientific point of view to build best practice methods for data harmonisation. Offering the service of data harmonisation to the data providing authorities was intended to fill the data storage pool with high quality data. The data providing authorities on the other hand received the transformed data sets, which were INSPIRE conform in a manner as the plan4business intermediate data model represents a subset of the INSPIRE Data Specification on Land Use. The schema mapping instructions were stored in a HALE project file and are thus reusable to future transformation of the same kind of data on the one hand. On the other hand the HALE mapping project can be seen as an exemplary starting point for a solution to map the remaining elements of the authority's data set to INSPIRE.

Based on the above described mapping process, a range of products and services have been identified which will be commercially exploited and will generate revenue stream:

- The created HALE mapping project, which allows the client for transforming updated data sets independently.
- The transformed data sets, which are modelled in a subset of the INSPIRE land use model.

- The transformed data sets in addition to a transformation contract to harmonise updated of the data sets in the future.
- The infrastructure to harmonise the current and updated data sets, namely access to the Plan Integrator and access to HALE mapping project based transformation functionality.

The pricing on creating the HALE mapping project is to be determined in accordance to the source data's quality. Depending on the listed factors a mapping process needs about two to ten working days.

- Language: The dataset attributes and categorical values (e.g. land use category) will be provided in English. The mapping process should consider that the data must be translated and transferred into a mapping table that is to be validated by the data provider.
- Data cleanliness: The geometries and attributes will be provided in a clean manner, such that no polygons are overlapping or are broken. Broken geometries are to be validated manually. Overlapping features will be solved in cooperation with the data provider.
- Uniform geo-features: Data providers tend to model small areas as points, which is because of a better processing performance. However, mapping these point or line features into polygons requires a high effort and lengthens the mapping process.
- Data pre-harmonisation: The mapping process maps data from one schema to another. When the source data has more than one schema, additional mapping projects have to be created.
- Land use category mapping: The core action in harmonising the data to the plan4business intermediate model is the mapping of the land use categories. An available mapping table containing one to one relationships from source to HILUCS land use values e reduces the mapping effort enormously. In case that land use category mapping is not available, it has to be validated in several steps in cooperation with the data provider.
- Completeness of the source data files: When the required data is not available in the source data geo-files but in additional documents, such as pdf-files describing the data. This information has to be extracted during the mapping process and added to the mapping project manually.

8.5.2 Pricing Model and Business Cases

The Open Data Platform will be non-profit. However, advertisements will be used as an appropriated revenue stream in order to ensure sustainable development of the platform.

Part of the platform will be commercially exploited. The pricing strategy needs to be considered according to the specific of the following identified business cases, based on the data harmonisation services defined in Section 8.5.1.

Business Case A: Download by direct users

Product(s): plan4business applications can be offered for download; customers shall be convinced in the additional benefits of the information that is not available in the open platform.

Client Type: Direct Users

Revenue Stream: A download fee can be charged to direct users, under the following conditions:

- A critical mass of data should be available,

- A critical mass of users should be secured,
- Not within the first year of operating the Mobile Apps.

The download fee could range between 0.99 € and 2,99 € per download.

Timeframe: It is assumed that:

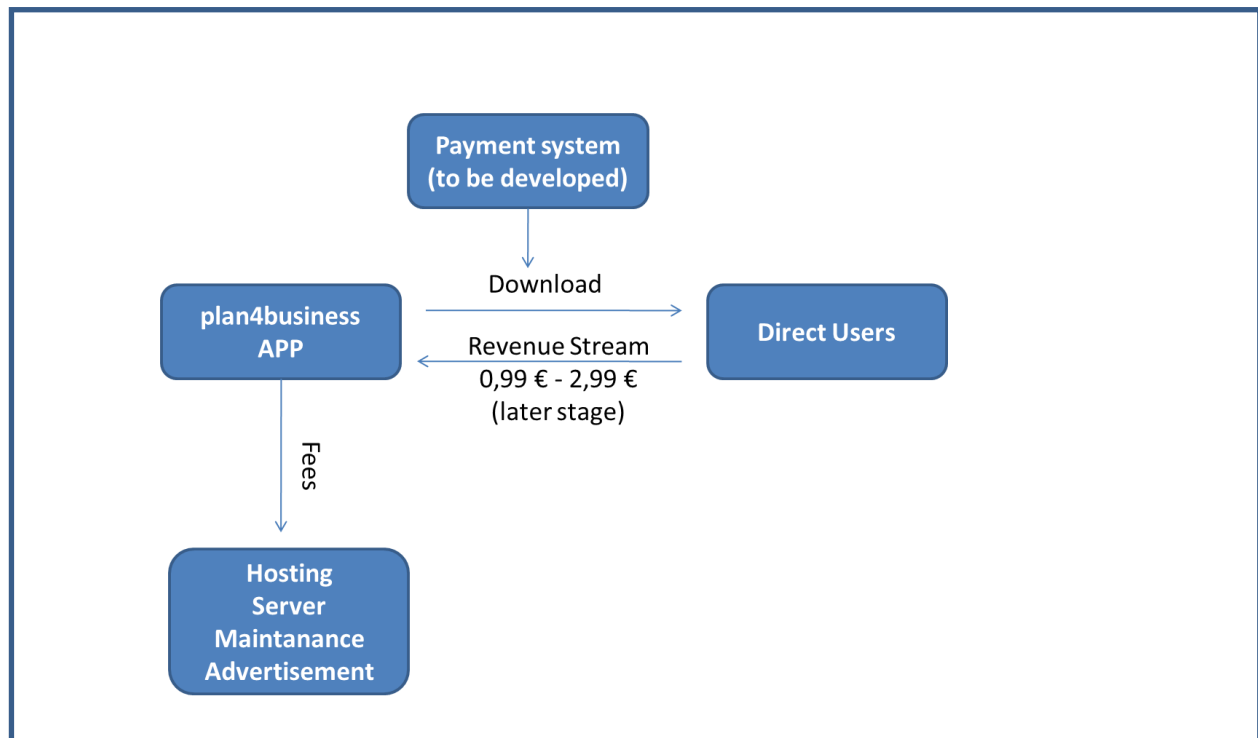
- They should not pay a download fee at least within the first year to promote and stimulate market entry,
- They are not willing to pay a download fee as long as the critical mass of information available within the App is not achieved, and
- There will be a big number of downloads at the beginning with a decreasing number of downloads over time.

Resources needed:

- Payment system as additional functionality
- Labour effort for maintenance and hosting tasks
- Cost for server provision

Acquisition Strategy: A marketing and distribution strategy has to be defined.

Illustration of the model:



Business Case B: Indirect Users will be requested to add in valuable data

Product(s): The content of plan4business platform can be enriched by stakeholders (data contributors), adding different kind of data and expanding the database. Data contributors can be at the same time end customers and vice versa.

Client Type: Indirect Users

Revenue Stream: for free; alternatively: a monthly, quarterly biannual or annual fee could be charged.

However: there will be various experts in the market, who would be motivated to provide data free of charge (private persons, interest groups etc.). These are:

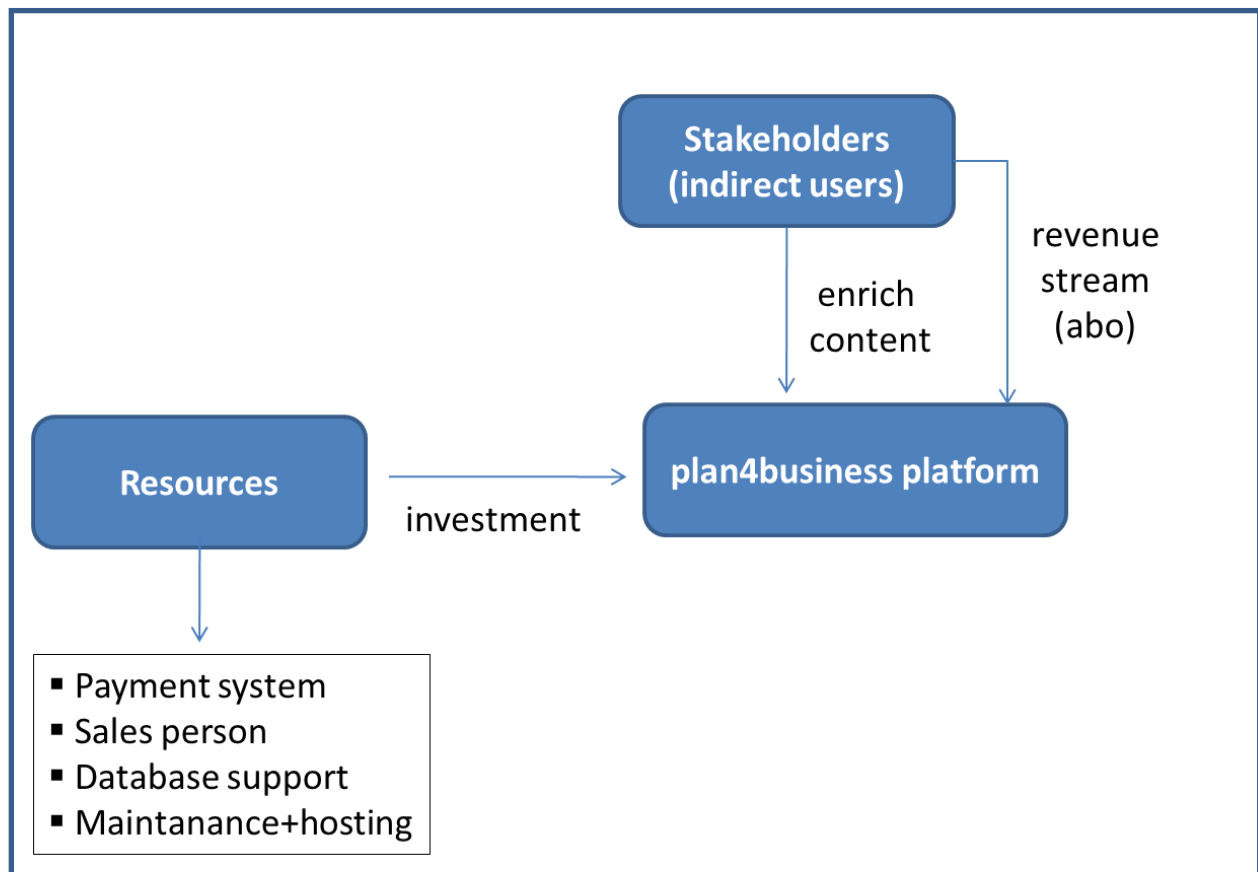
- Municipalities,
- NGOs,
- Umbrella organisations such as EuroGeographics or Eurogi.

A fee can be subsidized by a so called „data maintenance fee“, paid by governmental agencies or NGOs. This fee will also compensate use of a robust server that will be available 24 hours.

Resources needed:

- Payment system
- Labour effort for a sales person
- Labour effort to add data
- Labour effort for maintenance and hosting tasks
- Costs for server provision

Acquisition Strategy: A marketing and distribution strategy has to be defined. A sales person has to contact the relevant stakeholders personally.

Illustration of the model:

Business Case C: Future Users in other regions

Product(s): The content of the platform can be enriched by transferring the applications to other regions adding new data and new languages or by licensing the applications to a third party acquiring customers and further upgrading the database.

Client Type: Future Users in other regions

Revenue Stream: Customers should pay a license fee, for which they would receive services like training (how to use the back-end system), maintenance and data hosting. The license fee should also include a return-on-investment component for the pre-development efforts. A license fee can be paid on a monthly, quarterly biannual or annual basis or it can be structured as a success fee in an agreed percentage of the related customer's income.

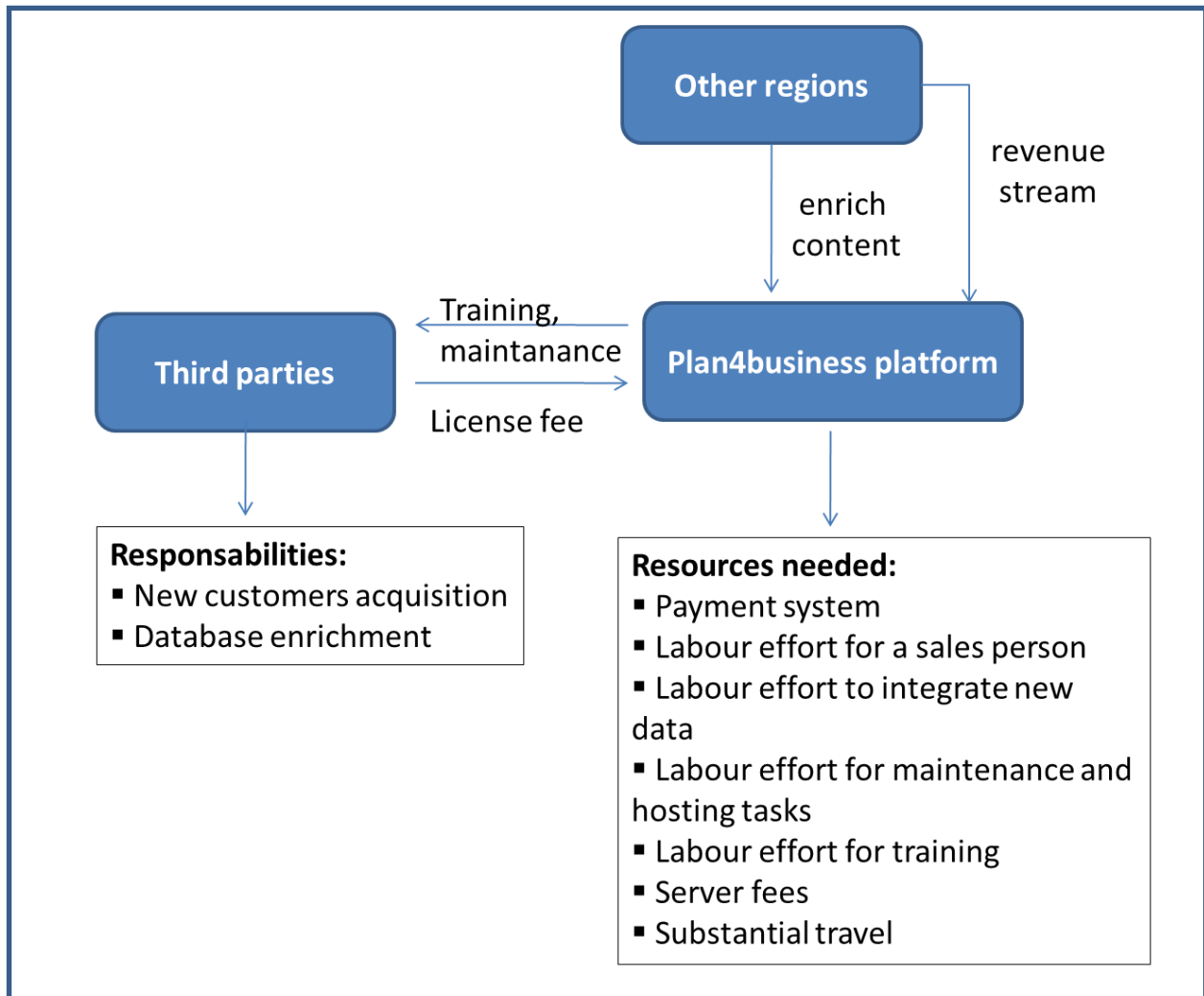
Resources Needed:

- Payment system
- Labour effort for a sales person
- Labour effort to enrich the database
- Labour effort for maintenance and hosting tasks
- Labour effort for training
- Costs for server provision
- Substantial travel may be necessary to meet with potential customers and business partners on international level.

Acquisition Strategy: A marketing and distribution strategy has to be defined. A sales person has to contact the relevant stakeholders personally. Alternatively, publicly funded projects can be acquired to cover the total effort and costs for this kind of dissemination activities. Funding sources for grant acquisition could be national Operational Programs, Cross-Border Collaboration Programs or other adequate schemes from national governments or European Commission. Support received from the local governments and the European Commission will create credibility and reliability, while at the same time it will guarantee the sustainability and expansion potential of the platform.

The pricing strategy for consulting services, dissemination activities and licensing shall be based upon common factors such as the current rate for a person of this level of expertise, the hours of consulting effort demanded and other related direct costs e.g. travel and accommodation. In any case, pricing factors for required resources and related costs have to be taken into account to guarantee sustainable operations.

Illustration of the model:



Business Case D: Users in unrelated thematic areas

Product(s): „Unrelated“ users could acquire (=transfer) the platform to promote other sectors, different from the geographical information management.

Client Type: „Unrelated“ users

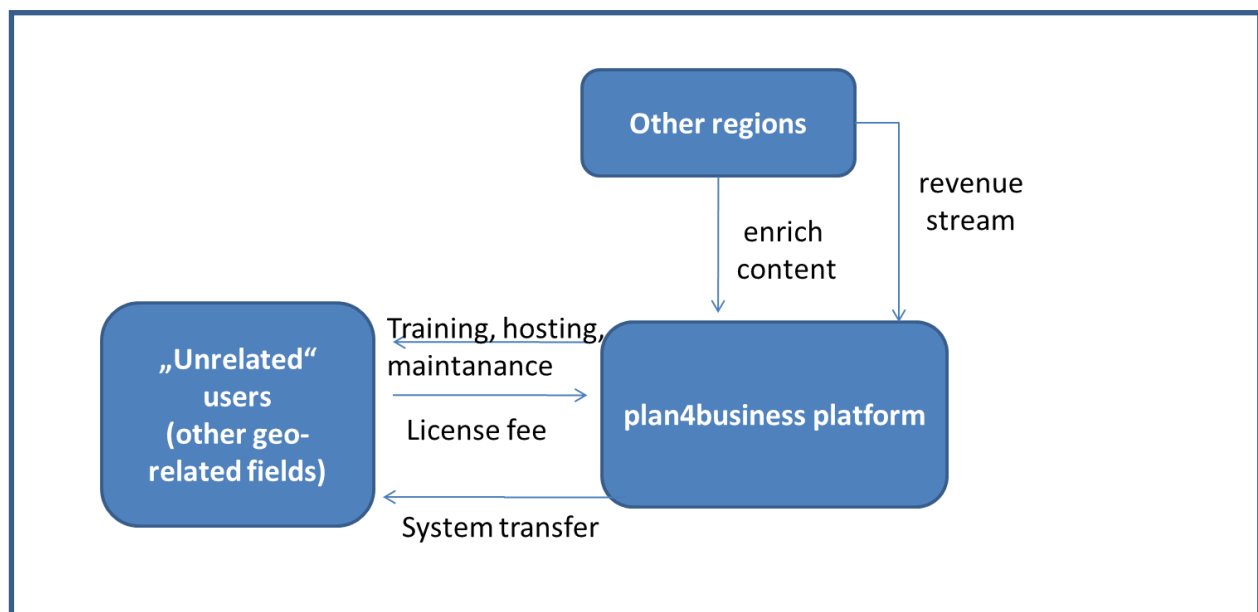
Revenue Stream: Customers should pay a license fee, for which they would receive services like training (how to use the back-end system), maintenance and data hosting. The license fee should also include a return-on-investment component for the pre-development efforts. A license fee can be paid on a monthly, quarterly biannual or annual basis or it can be structured as a success fee in an agreed percentage of the related customer's income.

Resources needed:

- Payment system
- Labour effort to gain information about the other thematic area
- Labour effort for marketing and first installation
- Labour effort maintenance and hosting tasks
- Labour effort for training
- Costs for server provision
- Substantial travel may be necessary to meet with potential customers and business partners on international level.


Acquisition Strategy: A general acquisition and marketing strategy has to be defined. Relevant stakeholders of other thematic / geo-related areas (e.g. cultural heritage related) have to be contacted individually.

Illustration of the model:



8.6 Tenders Searcher Pricing

For the Tenders Searcher, a 30 days trial period is offered for those who would like to try and test the service (Figure 14). The pricing for this service will be set in later stage based on the feedback from testers and the first customers using the trial version.





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  English

Search tenders

Voivodship/Powiat/Municipality:

- Any -

Property usage:

- Any -

Min. asking price in PLN

Max. asking price in PLN

Max. asking price in PLN

Max. usable area (sqm)

Min. ground area (sqm)

Max. ground area (sqm)

Apply

Cart contents

Qty	Products	Price
2 x	30 days trial period	0.00 PLN

Subtotal: 0.00 PLN

Customer information

Enter a valid email address for this order or [click here](#) to login with an existing account and return to checkout.

E-mail address *

New account details

Please type login details. This account will be later used for logging in. If nothing is typed account will be created automatically.

Username

Password

Confirm password

Passwords must match to proceed.

Delivery information

Enter your delivery address and information here.

Company name

VAT ID

* Name

* Surname

Figure 14 Tenders Searcher 30 day trial subscription

9 Conclusions

Recent developments in the Plan4business project created an environment for various kinds of business models and exploitation plans. These are included in the deliverable D1.5.2 Dissemination and Exploitation Plan. There are six main activities foreseen:

- AVINET utilises the plan4business data and services into their product Adaptive;
- GEOSYSTEMS operates the Tenders Searcher and provide customised services based on the Plan4business data;
- HSRS will take over the Plan4business portal and its tools and services to exploit it commercially;
- Fraunhofer IGD has set-up a spin-off company for customised data harmonisation services;
- UWB setting-up the Plan4all Association that is non-profit, but its data should be exploited by other partners' commercial activities;
- ISOCARP will include the plan4business data and services into the portfolio of its Research Institute as well as the services availability to the members.

The aim of this report was to elaborate different pricing options for the Plan4business services. These were limited to those offered by HSRS, GEOSYSTEMS and Fraunhofer IGD as they are directly exploiting the developed solutions.

One of the building blocks for setting a price is usually the competition and the market share. The performed competitor analyses (Chapter 6) revealed that there are very few or no competitors that have the same scope and similar business strategy as Plan4business.

The second building block is costs for operating the Plan4business platform and the services (Chapter 7). These costs were analysed in the deliverable D3.3 Customer Cost/Benefit Analysis and updated in this report. Based on these costs together with the foreseen incomes, the break-even point was estimated for 2017, at the end of the Transition Stage (Section 8.1).

Since the initial costs for the platform development and operation are rather high (due to developments and data aggregation), the service pricing is not basing on these. For each service pricing options were suggested (Chapter 8).

The main stream of revenue for the Commercial Platform (HSRS) is foreseen through advertisement. The Plan4business apps including the Location Evaluator and the Thematic Map Viewer will be offered for free but accompanied by advertisements (Section 8.3).

The other service that has a potential for commercial exploitation is the Embed-Map service (HSRS). This service will follow the Premium business model and will be available for free and as a customised service as a paid service (Section 8.4).

HSRS and Fraunhofer IGD foresee a stream of income from services which will be based mainly on restricted data. This will include the download of mobile apps (Business case A in Section 8.5.2). Fraunhofer IGD will take care of filling up the database with restricted data that can be then used for these services. A help from data providers is expected as described in the business case B in Section 8.5.2. Expansion of the Plan4business services to other countries and other thematic domains is also foreseen (business cases C and D in Section 8.5.2.)

References

- Anon, 2013. Freemium. *Wikipedia, the free encyclopedia*. Available at: <http://en.wikipedia.org/w/index.php?title=Freemium&oldid=584376460> [Accessed December 4, 2013].
- Investopedia, 2013. Marketing Definition. *Investopedia*. Available at: <http://www.investopedia.com/terms/m/marketing.asp> [Accessed December 6, 2013].
- European Commission, 2013. Open Data. Available at: <https://ec.europa.eu/digital-agenda/node/70> [Accessed October 30, 2013].
- European Parliament, 2003. Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32003L0098:EN:HTML>.
- European Territorial Management Information Infrastructure, 2001. ETeMII White Paper: Chapter on Reference Data. Available at: <http://www.ec-gis.org/etemii/reports/chapter1.pdf> [Accessed March 30, 2012].
- Froberg, P., 2013. Freemium.org. *Freemium.org*. Available at: <http://www.freemium.org>.
- INSPIRE, 2012. INSPIRE. Available at: <http://inspire.ec.europa.eu/>.
- Koski, H., 2011. Does Marginal Cost Pricing of Public Sector Information Spur Firm Growth?
- LAPSI 2.0 Network, 2013. LAPSI 2.0. Available at: <http://www.lapsi-project.eu/> [Accessed October 31, 2013].
- Mohammed, R., 2005. *The Art of Pricing: How to Find the Hidden Profits to Grow Your Business*, Crown Publishing Group.
- Nagle, T. & Hogan, J., 2005. What is strategic pricing? *SPG Insight*.
- Open Knowledge Foundation, 2013. Open Definition. Available at: <http://opendefinition.org/>.
- Ratia, J., 2012. SDI Interviews Jarmo Ratia of National Land Survey of Finland on Open Data. Available at: <http://www.sdimag.com/20120302584/SDI-Interviews-Jarmo-Ratia-of-National-Land-Survey-of-Finland-on-Open-Data.html> [Accessed May 31, 2012].
- Wasseman, E., 2009. How to Price Business Services. *Inc.com*. Available at: <http://www.inc.com/guides/price-your-services.html> [Accessed February 1, 2013].
- WordStream Inc., 2011. How Does Google Make Its Money: The 20 Most Expensive Keywords in Google AdWords. Available at: <http://www.wordstream.com/articles/most-expensive-keywords> [Accessed December 6, 2013].