Deliverable D500.5.2

Market Analysis and Business Models Matching Updated Version

WP 500

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The FIspace Project

The FIspace Project

Leveraging on outcomes of two complementary Phase 1 use case projects (FInest & SmartAgri-Food), the aim of FIspace is to develop a novel services platform that implements fundamental changes in how collaborative business networks will work in the future. FIspace will develop a multi-domain Business Collaboration Space (short: FIspace) that employs FI technologies for enabling seamless collaboration in open, cross-organizational business networks, establish eight working Experimentation Sites in Europe where Pilot Applications are tested in Early Trials for Agri-Food, Transport & Logistics and prepare for industrial uptake by engaging with players & associations from relevant industry sectors and the IT industry.

Project Summary

As a use case project in Phase 2 of the FI PPP, FIspace aims at developing and validating novel Future-Internet-enabled solutions to address the pressing challenges arising in collaborative business networks, focusing on use cases from the Agri-Food, Transport and Logistics industries. FIspace will focus on exploiting, incorporating and validating the Generic Enablers provided by the FI PPP Core Platform with the aim of realising an extensible collaboration service for business networks together with a set of innovative test applications that allow for radical improvements in how networked businesses can work in the future. These solutions will be demonstrated and tested through early trials at experimentation sites across Europe. The project results will be open to the FI PPP program and the general public, and the pro-active engagement of larger user communities and external solution providers will foster innovation and industrial uptake planned for Phase 3 of the FI PPP.

Project Consortium

- DLO; Netherlands
- ATB Bremen; Germany
- IBM; Israel
- KocSistem; Turkey
- Aston University; United Kingdom
- ENoLL; Belgium
- KTBL; Germany
- NKUA; Greece
- Wageningen University; Netherlands
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- North Sea Container Line; Norway
- LimeTri; Netherlands
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- Arcelik; Turkey
- EuroPoolSystem; Germany
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Dissemination Level

PU	Public	
PP	Restricted to other programme participants (including the Commission Services)	x
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Change History

Version	Notes	Date
001	Creation of the document	01.05.2013
002	First draft of final document structure plus content	01.07.2013
003	Final draft version	29.07.2014
004	Review by iMinds	06.08.2014
005	Review by Kuehne + Nagel	08.08.2014
006	Final document	13.08.2014

Abbreviations

AG	Advisory Group		ICT	Information and Communication Technology
App	Software Application		i.e.	id est = that is to say
AWS	Amazon Web Services		IP	Intellectual Property
CAP	Common Agriculture Policy		IPR	Intellectual Property Rights
B2B	Business to business		KPI	Key Performance Indicator
CRM	Customer Relationship Manager		M	Month
D	Deliverable		PAO	Proposal for Automatic Order (Shop Orders Manager)
DoW	Description of Work		PoC	Power of Customers
EAGF	European Agricultural Guarantee Fund		POS	Point Of Sale
EAFRD	European Agricultural Fund for Rural Development		PoS	Power of Suppliers
EBM	Exploitation and Business Models		RTD	Research and Technological Development
EC	European Commission		R&F	Replenishment & forecasting
EDI	Electronic Data Interchange		SAP	Stock Manager
EEIG	European Economic Interest Grouping		SE	Specific Enabler
e.g.	Exempli gratia = for example		SME	Small and Medium Sized Enterprise
ERP	Enterprise Resource Planning		ST	Sub-Task
EU	European Union		T	Task
FIA	Future Internet Assembly		TS	Term Sheet
FI PPP	Future Internet Public Private Partnership		UAA	Utilized Agricultural Area
FP7	Framework Programme 7		WG	Working Group
GA	Grant Agreement		WP	Work Package
GE	Generic Enabler			

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1 Introduction

1.1 This Document

This document is addresses the Exploitation and IPR task for the FIspace Project. It is a result of task 550 in Work package 500 and describes the potential market for FIspace.

1.2 Objective

This document aims to describe the current market situation for collaborative business-to-business services and the potential ways of exploit the FIspace platform, not only where the platform will fit within the market, but how do we, the consortium members, will manage FIspace from a more legal perspective and linked with this, how do we want to achieve FIspace sustainability. . As it is a living document, these are the main sections and time frames for each:

1. Identify market needs - M6: Already delivered and approved: Mainly focus on the market itself.

2. Matching with the expected results - M16: This is where we are now: This deliverable has added content, specially based on previous EC recommendations, regarding B2B market analysis and project sustainability.

3. Individual Exploitation plans - M18: This deliverable will be only integrated in the Overall Exploitation plan, so at this stage, M18, it will be deliver as a single isolated document with all individual exploitation plans and ways to spread the FIspace word.

4. Overall exploitation plan - M24: Update and conclusions from all the previous work.

1.3 Main Audience

This deliverable will be relevant for the FIspace consortium as well as exploitation leaders from the other FI PPP Phase II projects and eventually also por phase III developpers.

2   FIspace Story → What do we want to sell?[1]

FIspace: Business-to-Business Collaboration Platform

Paperwork is still an essential part of traditional business life. Business cards have to be exchanged, contracts written, delivery notes signed, and invoices sent. Small and Medium Enterprises (SMEs) have a particularly difficult time competing against large companies who have the financial and technical resources to invest in paperless solutions such as Customer Relationship Management and Enterprise Resource Planning systems. Because of their lack of resources, SMEs still exchange a considerable amount of data on paper, between themselves and in interaction with large companies and government agencies.

Small and medium organizations are ill equipped to handle the wealth of data that could be accessed from modern sensor based systems. Production monitoring and business process systems, for example, produce rich data about operations that could be put to use by these organizations to improve their competitive positions. Unfortunately, lacking appropriate resources to purchase and operate such systems, these companies are unable to leverage these data to their advantage and thus they, and their supply chain partners, fail to obtain the benefits that such rich information could bring to them.

What is missing to prepare businesses, both small and large alike, for the future is a mechanism that allows them to derive more value from the data that is accessible through their internal operations, or external to them (e.g., open data), while keeping complete control over their own data. With an easy to use platform organizations can interact and communicate with each other. Both SMEs and large organizations can link to collaborate on an equal footing to execute intercompany activities. FIspace is the platform that allows such business collaborations.

FIspace leverages Future Internet technology to establish a business ecosystem of companies, as well as service providers and app developers. These players are able to connect more easily with each other in the online world. They conduct business and enrich their business activities through the use of targeted value-added services embedded in apps.
FIspace is *the* collaborative business platform.

2.1   The concept of FIspace

FIspace can best be imagined as a business-to-business (B2B) software platform. It combines collaboration features of social networks, like LinkedIn, with app integration capabilities that surpass those of currently popular app stores, like those for smart phones and tablets. The collaboration service of FIspace connects companies (and professional users). For companies, registration is an easy and secure process. Following the registration, businesses can contact each other to negotiate collaborations, detail a contract, exchange data, manage intercompany business processes, or deliver and use value-added services.

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[1] Obtained from: "draft leaflet The FIspace Story_Revision0.9" and updated according to D500.7.2

Sharing such data is as easy as uploading a photo on to Facebook, but here the analogy with the social media in private life ends. Actually, and in contrast to B2C social network users, companies require more control of their data. They want to ensure that only those individuals or organizations that they have authorized have access and use of these data. Because companies should be able to maintain control of their data, FIspace does not store the data exchanged between companies. It only stores the links between companies and the rules that have been specified to share their data.

Another difference between companies and consumers is that companies need much higher standards of security for their data management. The Future Internet technology on which FIspace is built makes this possible, e.g. by encryption or selective access rights.

> There is no way a farmer could handle all his different software without getting mad. – Kverneland Group

Once data is available it becomes attractive to employ it in business processes using applications. For this reason, FIspace incorporates an app store where app developers can market and sell their software. The development of apps can, for example, be triggered by a company that has a particular need for some operational service or the other way around, an app developer may see an opportunity in a domain to deliver value added services and deliver the app that would provide such services. Apps could help interpret data streams (e.g. a domain specific advisory app or a track and trace app). Other apps would be useful in finding business partners or detailing a data exchange. In addition, app developers can be contacted through FIspace to request the development of new apps or to add functionality to their existing apps.

Agile formation of business networks: *finding & binding before facilitating data exchange*

Companies can access FIspace via an app on their mobile device (e.g., phone or tablet) or on FIspace's web page via their browser. In addition, companies may integrate FIspace into existing software that is used in an industry.

Creating a simple business profile opens the door for companies to search for, and find each other – as individuals do on Facebook or LinkedIn. FIspace is, therefore, especially of interest to business communities that are dynamic and made up of many small players; creative industries, self-employed individuals, city food webs or regional construction industries, to name just a few. Since the platform aims at reaching a large number of businesses, FIspace will also provide ways for the platform users to sort out their contacts, e.g. by allowing users to rate another partners' reliability or performance (e.g. in the form of reviews, 'likes' or stars).

Industries with stable relations (e.g., farmers and their cooperatives, government agencies, or logistics service providers) can use FIspace to enlarge their business networks and more transparently manage their inter-organizational process execution activities. They can also easily integrate novel apps into their production and distribution processes, thus providing innovative services to their customers.

2.2   Seamless collaboration and data exchange

Firms connected in FIspace can grant each other access to approved parts of their datasets. This makes it possible for the two firms' applications to start using each other's data and checking in real time whether new data are available. Apps from the FIspace app store can be used by these firms to enhance their collaborations and hence the value of the data streams moving between the organizations.

FIspace can coordinate the movement of all types of data. These data coordination activities can include administrative data such as contracts, delivery notes, invoices, laboratory reports, etc. FIspace is

especially built to support access to operational data such as measured or sensor data generated through automation or manual input.

FIspace does not store the data that firms provide to each other. Each company maintains control of who can access their data and can specify conditions of use using FIspace data security and management services.

2.3   Deployment of Apps and Services

FIspace provides an app store from which firms can buy apps to work with the (combined) data flows of their business partners (see box for an example). In addition to the data of the business partners, some apps may allow to use 'open data' from public and private services.

Some of the apps that can be found in FIspace reduce transaction costs between business partners. FIspace enables its users to detail their business relationships, for example through contracts with service level agreements. Other examples of apps are apps that run auctions, or that help firms conclude a contract under a particular legal system.

> An example is an app for a farmer that combines:
>
> - digital camera data on his potato crop from his spraying machine
>
> - data from a soil laboratory on the water evaporation characteristics of his soil
>
> - a crop growing model
>
> - weather forecasts with open data from the meteorology office
>
> => to generate advices on risk management.

2.4   Benefits for app providers

FIspace is an attractive platform for app developers. Developers can write apps for – and in collaboration with – specific companies. That means that apps can be tailor-made to solve an organization's particular problems. Alternatively, developers can release apps and services to be provided in the app store to the general population of FIspace users and that address general issues that might arise in a B2B collaboration.

The platform sets out to build a community (ecosystem) on an international scale. FIspace ecosystem makes it much easier for smaller ICT companies, specialised in a certain industry, to scale up to provide services to a broader, international market. This is an attractive outcome for FIspace community members as some markets are too small to attract investors and innovators.

The platform's approach to managing data flows also assists ICT companies as they do not need to worry about data flow management for their apps. FIspace services reduce the development costs of a successful app and allow app developers to focus on creating innovative functionality unencumbered by overhead worries.

From a technical perspective, FIspace provides app developers with easy-to-use guides and templates; a software development toolkit and a testing and certification service for apps. FIspace also supports peer learning between app developers where they can connect to, and learn from, each other.

2.5   Benefits for governments

In some respects governments resemble large businesses: they exchange a considerable amount of data with commercial organizations, particularly in industries such as logistics and agriculture. This means that governments can also benefit from using FIspace for exchanging data with businesses. In this respect Business-to-government (B2G) collaboration is similar to B2B collaboration.

Governments have also another role: governing the economy at large. In this role governments should realise that FIspace creates and strengthens markets for IT platforms, for apps and even for data. It lowers transaction costs in doing business, especially for SMEs. FIspace brings innovation (and economic growth) as it will help to realise economies in supply chains, and help ICT companies and service providers to compete on an international scale, instead of only in their national or local markets. With better data exchange it also contributes to public issues in areas such as food safety, sustainability, etc.

2.6   How will FIspace be introduced to the market?

At the moment FIspace is being developed through European research and development funds within the FI-PPP programme by a large international consortium.

FIspace can benefit any industry in which B2B collaboration occurs. FIspace is currently being tested in the logistics, agriculture and food industries through eight test trials (see box).

2.7   The future of FIspace

The story of FIspace is the story of its users. Platform development is currently driven by the FIspace consortium. Such development builds on the requirements and demands of the business partners who are participating in the project's trials.

FIspace is open for commercialization strategies once the development phase terminates. It is currently anticipated that interested companies will build on this initial release to commercialize the platform. This means that it is possible to have several FIspace versions (or 'platforms'), just as there are several internet browsers (like Chrome, Safari, Internet Explorer etc.) or mail applications. A platform like FIspace has potential in many areas and many configurations.

The partners currently conducting the FIspace trials indicate that the services of FIspace have a clear value for businesses. The value that these trials demonstrate is the basis for a revenue stream that can underpin any investment needed to bring FIspace from its initial release in April 2015 to one or several commercial software platforms by a technology provider.

> Crop Protection Information Sharing
>
> Greenhouse Management & Control
>
> Fish Distribution and (Re-) Planning
>
> Fresh Fruit and Vegetables Quality Assurance
>
> Flowers and Plants Supply Chain Monitoring
>
> Meat Information Provenance
>
> Import and Export of Consumer Goods
>
> Tailored Information for Consumers

The FIspace development project offers potential investors the open specifications of the FIspace platform as well as open source implementations of most of the FIspace platform building blocks. The FIspace specifications come with a platform prototype implementation that has been tested in eight business trials. Interested firms and app developers in the eight trials wish to expand the trials

and they will likely be joined by a number of projects in the third phase of the FI-PPP. These planned activities will result in an ecosystem of app developers and a repository of a significant number of value adding apps in the app store of FIspace.

3   Business Model Matching

3.1   Business Canvas

The business model is a relatively new concept that is primarily associated with the 'Internet era'. The context in which the term business model is often used is 'how the web changes traditional business models' (Chesbrough and Rosenbloom, 2002). Until the start of the 21st century a minimal amount of research was done to investigate the concept. Eventually the rise of e-commerce boosted the attention it was given in the academic world. Chesbrough and Rosenbloom (2002) were some of the first scholars who proposed what elements belong in a business model which led to a refinement of the definition of the concept. The definition is given in terms of functions of the business model:

- Articulate the value proposition;
- Identify a market segment;
- Define the structure of the value chain within the firm required to create and distribute the offering, and determine the complementary assets needed to support the firm's position in this chain;
- Describe the position of the firm within the value network linking suppliers and customers, including identification of potential complementors and competitors;
- Formulate the competitive strategy by which the innovating firm will gain and hold advantage over rivals; and
- Estimate the cost structure and profit potential of producing the offering, given the value proposition and value chain structure chosen.

3.2   Matching

The market analysis, in task T550, and business modelling, in task T520, are two facets in the development of the FIspace platform that, when aligned, can have a major impact on its success. Matching the two tasks basically means the synchronization between (1) evaluating market gaps and demand for a new technological solution (the FIspace platform) on the one hand and (2) the design of an architecture for how different actors in a value network can, based on that solution, create and capture value from filling the market gap.

The market analysis in FIspace draws on market needs identified in the FI-PPP Phase I projects SAF (SmartAgriFood) and FInest. These projects, anchored in the agriculture food production and logistics and transportation domains, naturally interact. Common for both domains is that establishment and execution of business collaboration processes could be substantially

improved by the use of the Future Internet. While the market analysis task of FIspace will further elaborate this, the business development task needs to match the outcome of this analysis with key technical design choices taken in the project.

In linking a technological solution with a market the Task 520 of the project aims to design a business model not only for one firm but for networks of actors. While, until recently, it was common to use the term business modelling to define processes within single businesses [1], this view is too limited when considering the evolvement of networks and collaborations between businesses and industries. A main driver of a broader view is the development of new ICT (Information and Communication Technology), a field in which the FIspace platform is situated. Consequently, business modelling demands a shift in focus from "the single firm to networks of firms, and from simple concepts of interaction or revenue models to extensive concepts". [1] In other words, requirements of a network based business model need to reflect collective innovation processes and assess the relationships between the stakeholders involved.

When analysing the FIspace platform T520 therefore considers a broader set of parameters defined to be able to depict characteristics of network settings. These parameters can refer to the business architecture and technical architecture, both dealing with control, as well as the financial architecture and the service architecture, both dealing with value[2]. These parameters explain (i) the way in which the value network is constructed and how roles and actors are distributed in the value network, (ii) how technical elements play a role in the value creation process, (iii) the financial model and how revenue streams run between the actors and the existence of revenue sharing deals, and (iv) the perceived value that the platform offers. While these parameters delineate a static configuration of the business model, market developments and changes will naturally require reconfiguration, constant realignment and iterative adjustments. T520 aims to take some steps in making such alignment by testing the overall FIspace business model in a selected number of trials.

The task of business modelling is thus not a one-off undertaking, but an iterative process strongly dependent and driven by management decisions and repetitive revisions of whether the current settings meet the given demands. In the current stage of the project, an initial concept of a business model (or several possible business models) will be developed in Task T520 based on experiences from parent projects, desk research and interviews with key project participants. However, this process does not promise a finished or complete model as it will be continually revised throughout the development of the project as information on external markets and internal developments is incorporated. These dynamics will, together with input from the project's trials, feed into the model and revisions and fine-tuning of the model will occur.

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[2] P. Ballon, llon, n, n for Con for Cohain Monitoringguration of control and value,n info, vol. 9, no. 5, pp. 6p. 6 6弗7.

3.3   **B2B Business Process**

Recommendation #1.12 of the first review meeting stated: "[w]ith respect to the future exploitation it is recommended to look more thoroughly into comparable B2B models, rather than concentrating solely on the established AppStore B2C models." In order to address this, a business process life cycle has been developed explain what a potential use case of the platform could be like.

Figure 1 below identifies two main participants: *farmer Franz* and the *Advisory Group (AG).* In addition, there's the business architect, who in this case is the *lawyer*, and the *notary* that will store the contract.

First – Franz has the need of advice for sensorized farms. In future scenarios, the possibilities of finding business partners through the FIspace platform will be shown. For this first B2B case description, it is supposed that Franz and the Advisory Group know each other already.

Second – Franz and AG talk to the lawyer in order to create a contract for that specific business opportunity. The lawyer will be the business architect in this case, the one with full information about the details of the business.

Third – There are two simultaneous processes: one technical (the deployment and publication of the contract) and one operational (the handover of the contract from the lawyer to the notary, the storage in the notary's database and the publication of the contract by the notary.

Fourth – All participants are registered in the platform and the links between them are recognized. The instance of the contract is created.

Fifth – The contract instance is finished and the business/contract itself starts. Franz and the AG start the interchange of messages.

Sixth – At some point either the contract will finish by mutual agreement or either one of the participants terminates the contract for a given reason.

The business flow for the interaction is given in *Figure 2*.
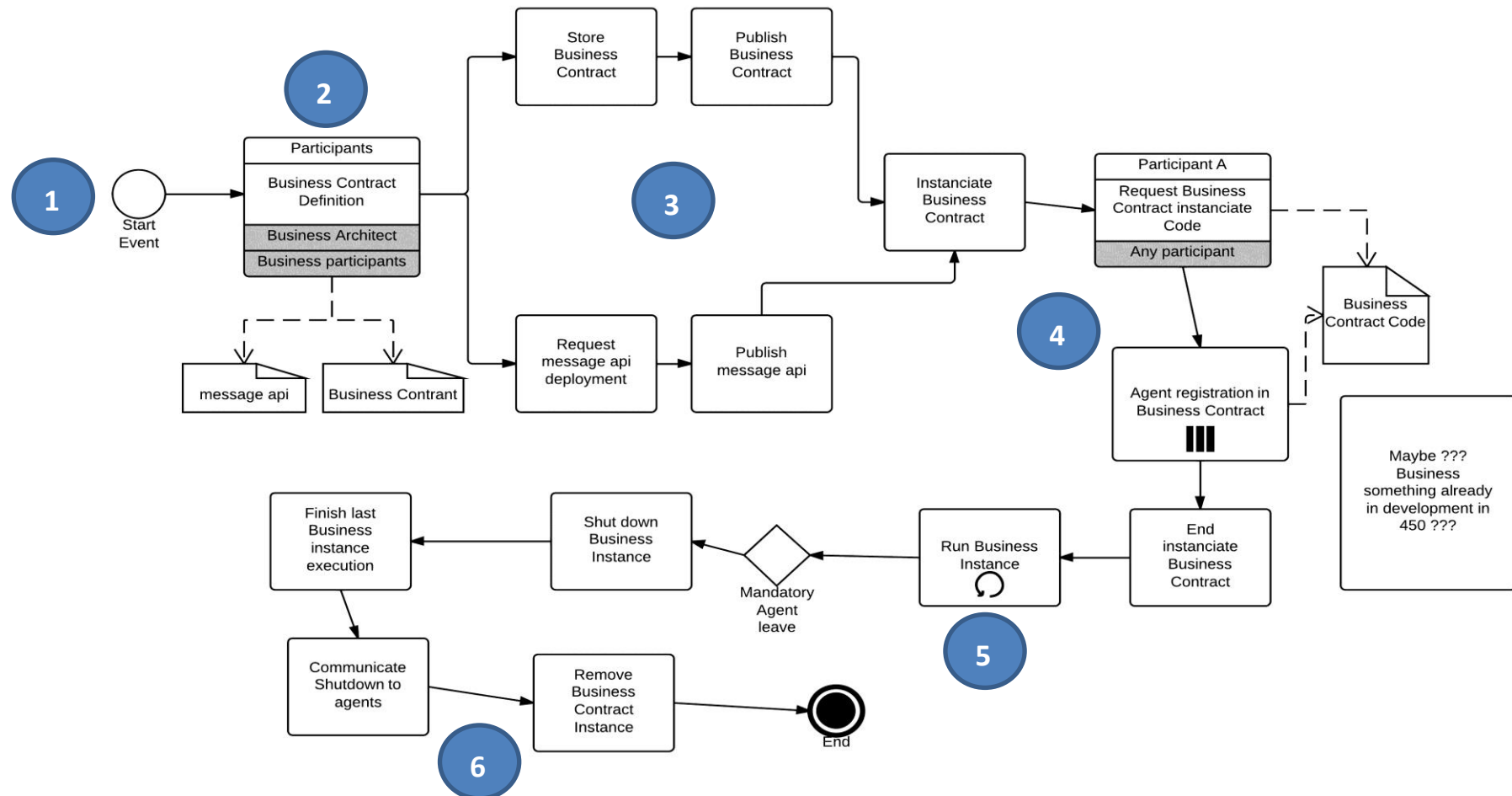
Figure 1: Business Process Life Cycle
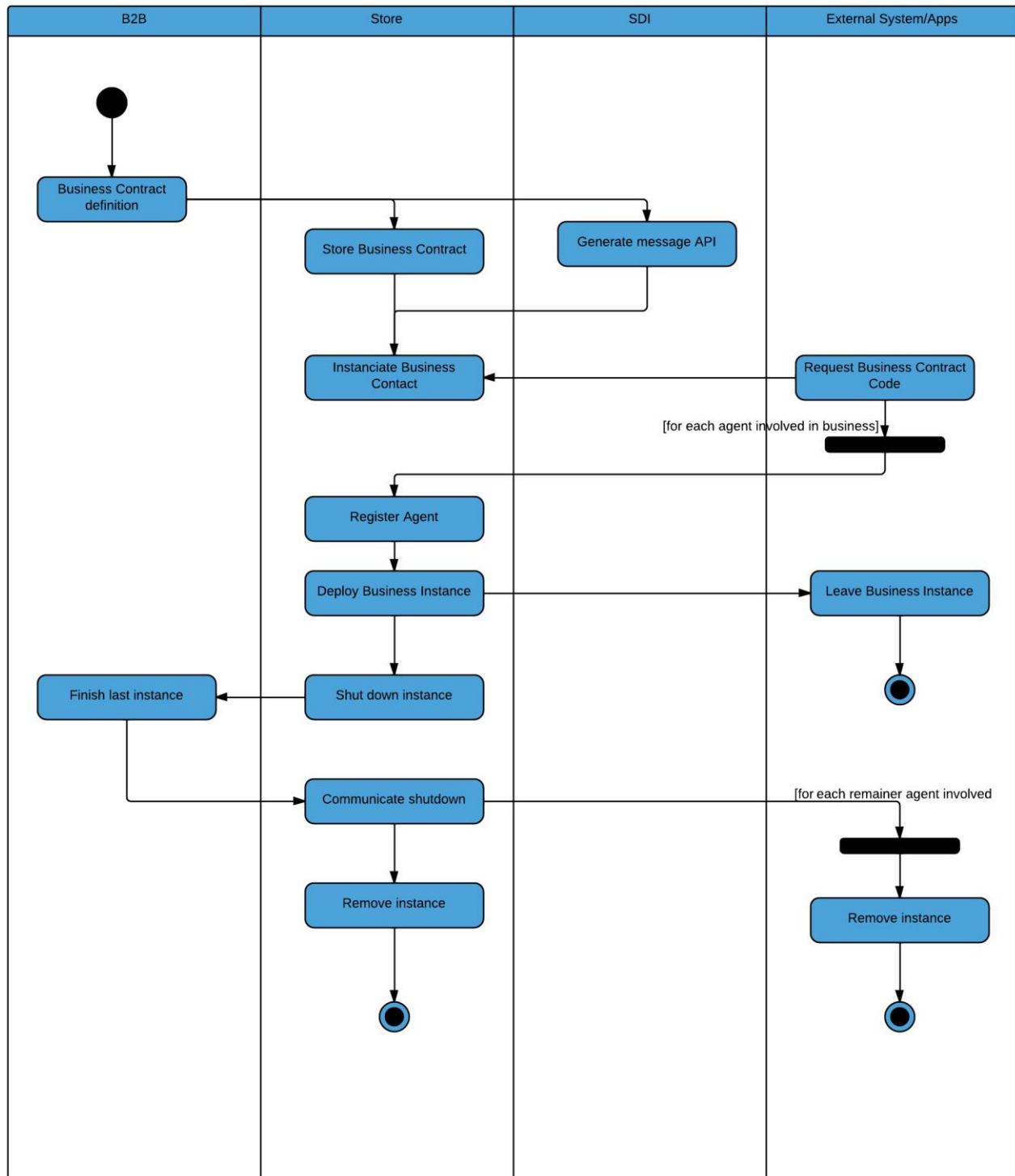
Figure 2: Business Flow

4   Market Analysis

4.1   Product description

In the particular case of the FIspace project it is difficult to identify only one product to potentially sell. As we have described before in point 3, we have 8 trials in which we are going to be able to identify several potential services, apps and cross domain services and apps that may form the basis of saleable services. We can directly identify certain domain and cross domain apps as potential "products" that could be sold, but the FIspace service is not an application. The FIspace collaboration service extends the concept of B2B collaboration and incorporates the platform itself where business seek partners, develop relationships, and manage inter-business collaboration activities and apps that provide granular functionalities that can be incorporated in the execution activities to enhance the value of these activities.

The FIspace platform concept was initially conceived in the FI PPP Phase 1 project FInest. The concept developed in that project has been extended in Phase 2, in conjunction with work done in the Phase 1 SmartAgriFoods project, to include:

- Provisioning of the FIspace service will follow the Software-as-a-Service delivery model, which means that FIspace services can be accessed anywhere at any time via any device; **cloud.**
- The FIspace service is an **open service** that can be extended and customized for specific stakeholder demands by integrating domain apps (similar to the iPhone and Android business models).
- A domain app store facilities the marketing of targeted applications that take advantage of the collaboration and mash up services of the FIspace and its underlying FI-WARE generic enablers. **Marketplace.**
- A collaboration manager for business-to-business networks that supports the planning and execution of business operations from a global perspective with message-based coordination among the involved business partners;
- Integrated techniques for **monitoring and tracking** on the basis of data integration from the Internet of Things, including sensor systems and smart item technologies accessible via FI-WARE generic enablers;
- Information integration from **legacy and third party systems** enabled through a service-based integration layer that is enabled and supported by FI-WARE generic enablers.
- Role-based views for the individual participants in the business networks along with integrated **security and privacy management** for fine-grained access control to confidential information;
- **B2B: FIspace at the intermediate of multiple two-sided markets**

4.1.1 Cloud

There are several signs of the increased adoption of cloud technologies in industry, especially in the logistics field:

- Following a recent announcement by ERP Consultancy firm Panorama, we find that the cloud ERP market has grown between 6% to 16% over the last two years.[3]

- Analysts report that cloud based adoption increased 40% this year.

- On a global scale, the worldwide public cloud services market—where services are provided "as a service" via the web with users having little or no control over the technology infrastructure—is on track to grow by 19.6 percent in 2012 to $109 billion, up from $91.4 billion in 2011, according to recent Gartner research.[4]

Cloud computing offers your business many benefits. It allows you to set up what is essentially a virtual office to give you the flexibility of connecting to your business anywhere, any time. With the growing number of web-enabled devices used in today's business environment (e.g. smartphones, tablets), access to your data is even easier. There are many benefits to moving your business to the cloud:

Reduced IT costs

Moving to cloud computing may reduce the cost of managing and maintaining IT systems. Rather than purchasing expensive systems and equipment for business, reduce costs by using the resources of cloud computing service provider. Then be able to reduce operating costs because:

- The cost of system upgrades, new hardware and software may be included in the contract
- No longer need to pay wages for expert staff
- Energy consumption costs may be reduced
- There are fewer time delays,

Scalability

Business can scale up or scale down of operation and storage needs quickly to suit to situation, allowing flexibility as it needs change. Rather than purchasing and installing expensive upgrades, cloud computer service provider can handle these. Using the cloud frees up time so business can get on with running own activities.

Business continuity

Protecting data and systems is an important part of business continuity planning. Whether an experience a natural disaster, power failure or other crisis, having business data

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[3] Logistics Business IT (Magazine). July 2013.

[4] http://www.supplychain247.com/article/analysts_report_that_cloud_based_adoption_increased_40_percent_this_year/cloud

stored in the cloud ensures it is backed up and protected in a secure and safe location. Being able to access data again quickly allows   conduct business as usual, minimizing any downtime and loss of productivity.

Collaboration efficiency

Collaboration in a cloud environment gives to business the ability to communicate and share more easily outside of the traditional methods. If clients are working on a project across different locations, enterprises could use cloud computing to give employees, contractors and third parties access to the same files. They could also choose a cloud computing model that makes it easy for you to share the records with their advisers (e.g. a quick and secure way to share accounting records with an accountant or financial adviser).

Flexibility of work practices

Cloud computing allows employees to be more flexible in their work practices. For example, the ability to access data from home, on holiday, or via the commute to and from work (providing to have an internet connection). If needs access to data while from off-site, can connect to virtual office, quickly and easily.

Access to automatic updates

Access to automatic updates for IT requirements may be included in the service fee. Depending on cloud computing service provider, systems will regularly be updated with the latest technology. This could include up-to-date versions of software, as well as upgrades to servers and computer processing power.

All above advantages and benefits are the perfect fit for FIspace project goals; leverage the business to Transport & Logistics and Smart-Agrifood, while synchronize business processes to build on-line cooperation between partners and stack holders as well as to all related industries.

4.1.2 Open Service

Henry Chesbrough, a business professor at UC Berkeley, spearheads the Open Services Innovation[5] movement through the Centre for Open Innovation. Open Services provide an integrated approach and framework that explains much of what is happening today in the software and services market. Chesbrough clearly demonstrates through real-world case studies that services are not just something that is done after selling a product anymore. Services are transforming industries by redefining the competitive playing field in historically product-driven markets.

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[5] Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era Hardcover
by Henry Chesbrough, published by Jossey-Bass, January 18, 2011.

Services based business activities are increasingly influencing the world economy. In fact, much of the economic activity in the top 40 economies in the world is based on services, not products and technology; Moreover, many leading companies are finding that their business is shifting towards services as well. While we usually discuss services in the context of end – users, the principles apply to the business to business world as well.

In the current market situation enterprises find it harder and harder to stay competitive while doing their R&D in complete isolation (the traditional approach). The cost of innovations often exceeds the capacity of a single enterprise to deliver. We therefore find more often that companies are forced out of the old "prisoner's dilemma" and collaborate on major initiatives. This fact was recognized even earlier by small businesses. The advent of open innovation processes and open services has allowed small businesses to compete by benefiting from the results that are created through collaboration.

An important reason for the emergence of open services is a desire to escape the commodity trap; a situation where working on making products faster, cheaper, higher quality, etc. no longer brings much, if any, profit. Various market forces make it harder and harder to sustain differentiation in a product business. Among these are: the rise of the emerging economies, the spread of TQM and Six Sigma, the globalization of manufacturing and R&D. The escape route out of the commodity trap is services, and openness is a very effective way to attain competitive advantage.

The advent of the cloud, together with the emergence of open services, is now making it attractive for use even by companies that traditionally were happy with a commodity business (e.g., companies selling raw materials like metals or petroleum). The adoption of open services by other businesses that are finding their margins shrinking, despite their continued investments in R&D and innovation, is self-evident.

6 Stages:

- 6. Platform business model
- 5. Integrated business model
- 4. Externally aware business model
- 3. Segmented business model
- 2. Differentiated business model
- 1. Undifferentiated business model

open

closed
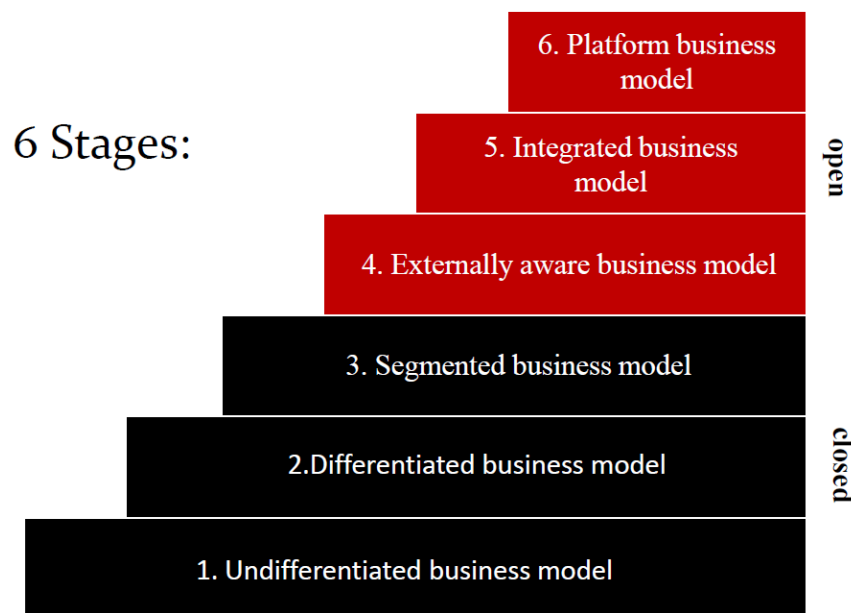
Figure 3 Business model maturity stages according to Henry Chesbrough[6]

It is important to note the role of the prosumer[7] in such an ecosystem. In the past, businesses conducted market research before embarking on a new product or service. The prosumer sat on the side while this market research was conducted. In open services the prosumer is intimately involved in the process. We thus see the MVP (Minimal Viable Product) philosophy in product production and the interaction with the prosumer during service development.

Traditionally, the customer sits at the very end of the value chain. Thus in Michael Porter's famous value chain[8], the competitive advantage arises from products of higher quality, lower cost, or unique differentiation. In the services value chain, the prosumer engages with multiple parts of the value chain throughout the process, not just at the end of the chain. Because services are fundamentally intangible, it is tricky to specify services in advance. Often we cannot tell what we need until we experience it. This requires very simple creation of new services (minimal cost to realization). We invite the prosumer to be part of a creation process, precisely to unlock that tacit knowledge of what the prosumer really wants. The prosumer usually has a hard time to articulate what he wants and therefore her involvement in the process of the service creation is mandatory. An open service platform should make it very easy to launch a new service and get prosumer feedback while solidifying the service.

For a platform that supports open services to succeed, we need a new business model that supports a model with very low initial cost, perhaps lower gross margins, but greater ongoing revenues. This business model will involve tracking metrics like consumer acquisition cost, consumer retention rates, and lifetime value of a consumer. A key element in this model is the support of consumers using their social network know how. Another concept that this business

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[6] Henry Chesbrough, Open Service Innovation, 2010
[7] Prosumer is both a customer of some services and a producer of other services. Part of the B2B chain.
[8] Michael Porter, Competitive Advantage, 1985

FIspace
Business Collaboration

model should support is the API economy. Namely the consumption of services by other services through the use of APIs and the generation of services through the activation of APIs.

Consider for example the open services of the Amazon Webstore. Amazon allows third party merchants to use its tools and create Amazon web pages to sell their merchandise. Fulfilment of the purchased product is provided by the third party while billing and collection are done by Amazon. It gives the customer a uniform shopping experience; including all the ranking, statistics reviews and social touches. Amazon does a quality check and scrutinizes the quality of third party merchants that want to use their platform and provides the regular Amazon user experience. In return it gets a share of the profit without having to invest in the merchandise. This makes Amazon an attractive destination for shopping and provides Amazon with the economy of scope.

The FIspace platform has a design that is based on Open Services (see Figure 1). It actually represents a stage 6 in the business model maturity. In the past there where some attempts to produce similar platforms, however all these attempts where proprietary and mainly advocating a particular supplier. In that sense FIspace is fulfilling two main ambitions. The first is the democratization of this space and the second is opening this space to new innovations ("Open Innovations").

4.1.2.1   FIspace as a Democratization Engine

If we take, for example, the use case of a Farmer that requires a service. Today a small farmer cannot afford the type of services that will make him competitive with the big farm companies that develop and build custom IT to automate their work. He has the choice of selling out to one of the big farm companies or resorting to grow very specialized crops with a hope that the big farm industries will not find the niche lucrative. With FIspace this small Farmer will have access to the same level of services as the big company without having to build a custom infrastructure for it. Moreover, on the FIspace open services platform he will have the choice of engaging with any supplier or service provider that he likes without locking himself in to a specific provider. This will allow the small farmers in Europe to get the best services without having to make major investments. This will allow them to be competitive. An added benefit to the Farmer (or generally a small business) is the social network of similar users with related experiences.

4.1.2.2   FIspace as an Innovation Engine

FIspace is designed to provide a foundation for the development of new services. Through it's open services architecture it should facilitate the creation of new services. Some of these services will only use the FIspace base services in their construction while the others will be composite services that will build on, and consume, other services to produce new innovation. One key requirement for facilitating this is the ability of the platform to provide services that allow the consumption of particular APIs in other service and at the same time will self-

expose external APis that can be used by new services. This together with the diverse community of consumers will make FIspace an innovation engine.

4.1.3 Marketplace

The FIspace platform collaboration service is based on the concept of a cloud based service in which business partners can find collaboration partners that, working in the collaborative structure of the FIspace service, manage and execute collaborative (inter-organizational) business activities in a cost effective and efficient manner. To enable such a vision requires that activities between business partners be tracked and managed through platform services. However, as no designer of a platform like FIspace cannot possibly imagine all of the business-to-business processes that potential FIspace users will require, the FIspace needs to provide a means for third parties to develop granular services that can be incorporated in any collaboration activity carried out through the platform. These services are incorporated in what the FIspace project calls apps and they are hosted in a marketplace called the FIspace App Store.

The FIspace App Store operates like the more familiar consumer app stores used for mobile telephone apps (Apple's App Store, Google's Play app store, Microsoft's Marketplace, etc.). Developers wishing to publish an app to the App Store must utilize a FIspace App Development SDK to construct their app. The app is tested by the FIspace collaboration service for conformance to API, security, monetization, usability and platform criteria to ensure that it will function properly if employed in a FIspace B2B collaboration. If the app is certified by the FIspace for use, it is then uploaded into the FIspace App Store where it can be downloaded by FIspace business partners to operate in one of their collaboration activities.

App developers receive compensation for the use of their apps by selecting an allowed payment model from the FIspace SDK. Common payment models that are envisioned include, transaction based models, volume based models, value based models, time based models, etc. The FIspace platform identifies the type of monetization model the app instantiates and keeps track of the relevant variables so that the app user is properly invoiced for the use of the app and the app developer is properly paid.

The FIspace collaboration service advances the concept of app usage beyond that found in consumer focused apps in that apps developed for use in the FIspace collaboration service can be "mashed up." This means that apps must adhere to strict API standards and message protocols. These standards allow apps to invoke the services of other apps and use the results of the app invocation to create value that is greater than the simple sum of individual app services. This mash up capability of the FIspace service enables business to manage complex execution activities at substantially less cost than they would incur by using custom developed applications and complex integration services required for the execution of these same services without the intermediation of the FIspace platform.

It should be noted that, like Apple, Google and Microsoft, the FIspace collaboration platform "owner" will be compensated for the use of apps by obtaining a percentage of the revenue generated by the app. Whether this figure will be the 30% of revenue that is currently the standard model for consumer apps or something else remains to be determined.

4.1.4 Collaboration Objects

One of the main aims of the FIspace platforms is to create, manage, execute, and monitor collaborative processes between stakeholders. The Business Collaboration Objects are key conceptual entities that are central to guiding the above-mentioned operations. The business processes between different stakeholders are, thus, orchestrated by Collaboration Objects (aka business entities, artifacts, or dynamic artifacts). In order to structure as well as manage business operations, specific technologies including Business Process Management, workflows and case management are needed.

Within FIspace, such Business Collaboration Object or Entities are managed using the *Business Entities with Lifecycle* approach. Such an approach includes both an *information model* that captures all the business-relevant data about entities of that type, as well as a *lifecycle* model, which specifies the possible ways an entity can progress through the business by responding to events, invoking services etc[9].

Initially, specific test cases will be executed within FIspace. Eight different trials from various domains (logistics, agriculture etc.) will carry out business processes, all of which will take advantage of the Business Entity with Lifecycle approach, in order to facilitate the management of their collaboration objects. The framework which will be used to support this approach is the Guard – Stage – Milestone (GSM) modeling. A GSM model mainly focuses on the design of the business operation models. A GSM models uses the notion of stage, which is based on a) milestones, which refer to business objectives - conditions possibly accompanied by a triggering event), b) the stage body, which contains activities or even sub-stages in order to accomplish a milestone, and c) guards, conditions which enable the entry into a stage.

Below an example of such a GSM model is presented. The particular GSM model describes the collaboration object (business entity) "*Advice*", in the context of the *Advice Request* scenario of the Greenhouse Management & Control trial. In the particular scenario, the conditions (based on sensor values) of the Greenhouse are constantly monitored, and an Expert (Advisory System) sends Advice to the user of the Advice app (farmer) to take particular actions based on these conditions. Whenever there is a sensor value threshold violation (based on predefined rules, e.g. temperature high when above 35 degrees), the Expert System is notified and generates an advice, which is being sent back to the Greenhouse:

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[9] *Introducing the Guard-Stage-Milestone Approach for Specifying Business Entity Lifecycles – Hull, Damaggio, Fournier et. al.*
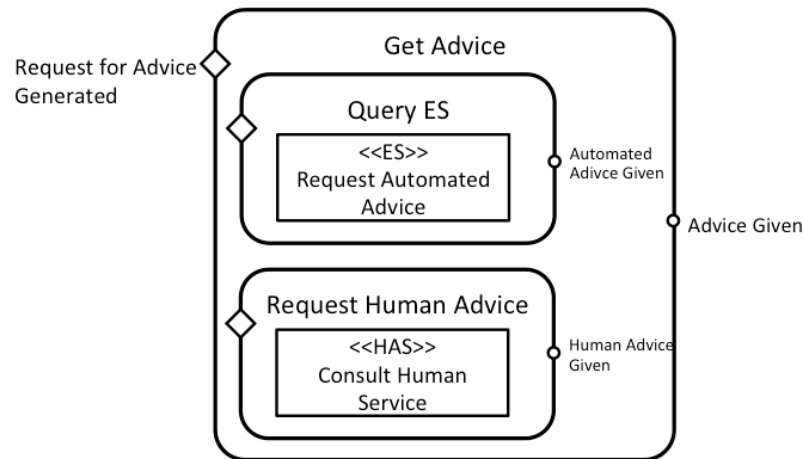
Figure 4: GSM model for the Advice business entity

Two components will support the collaboration objects inside the FIspace platform. The Business Collaboration Module (BCM) and the Event Processing Module (EPM). The BCM component is responsible for orchestrating the different processes from different stakeholders and assuring the correct sequence of task execution. The BCM is based on the entity-centric approach. The Event Processing Module (EPM) component monitors events and detects situations of interest, i.e. situations that require appropriate reactions. The events' producer can be the actual execution of the collaboration activity, i.e. the Business Collaboration Module.

4.1.5 Integration with legacy systems

In this part, we are going to use a trial as a clear example of what me mean to say when we talk about legacy systems. We are going to use the PlusFresc organization's current software systems:

The aim of the TIC trial is to test and present how we can use all the potential of Future Internet and the FIspace platform to improve food awareness among consumers. For this experimentation, we will focus on developing a trial system that will help consumers to be more aware of the food they buy in the supermarket and that they eat.

Plusfresc is a food retail organization and, as a final agent of the supply chain, has a direct contact with the final consumer. Therefore, as a retail store and distribution platform Plusfresc is a platform where test applications can be implemented together with a direct analysis of the results and its impacts on customers. In this sense, and in order to test TIC Apps, it will be necessary to link with Plusfresc legacy systems to provide the necessary information and capabilities for the planned collaborative services.

CURRENT SOFTWARE SYSTEMS AT PLUSFRESC ORGANIZATION

Plusfresc has developed legacy systems to manage all the operations between suppliers and customers. Plusfresc software systems at corporate office and points of sale are the following:

- The main software is the **ERP** (Enterprise Resource Planning) system: Microsoft Dynamics (former Axampta) with MS-SQLdata base. This management tool includes several modules: accountability, sales, articles, warehouse management, etc..

  Some applications are integrated with the ERP system:
    o **R&F, replenishment & forecasting:** SAP module to manage provisioning stock at warehouse and from providers (real time and forecasting). It is integrated in Microsoft Dynamics (ERP) at PlusFresc.. A Voice control system to prepare orders for shops is integrated in it.
    o **EDI:** Electronic data exchange between PlusFresc and suppliers. It's a communication channel. Basically used for e-invoices and e-orders, mainly with EUROMADI. It does not provide delivery notes. With EDI, a centralized payment to the suppliers can be done through EUROMADI. Orders to suppliers can be done by EDI, but also by e-mail or fax.
    o **PAO, proposal for automatic order (Shop orders manager):** Own created software to manage demands from shops to central warehouse). It controls shop stock and replacements.

- Own created software for **shop management** (installed in a local PC at **shop-backoffice**)- > Responsible for prices and changes, articles references, price labels, scales... It is connected to Microsoft Dynamics to get the information and transfers it to **Point of Sale Computer (POS)**. The shop management software is being replaced by an intranet tool to communicate directly ERP and POS. It is based in MS-SQL server and asp.net.

- **Intranet:** Among other functions, is responsible of the **shop stock information.**

- The own created **software for POS** creates sales tickets (including individual discount promotion voucher). It includes the costumer data base.

- **CRM, Customers Relationship Manager.** Own created software. It is placed in central servers and includes data such as: costumers contact data, individual vouchers, products bought by each consumer.

  All own created software runs on the Linux OS

Software	Relation with TIC pilot
ERP	Product attributes Supplier

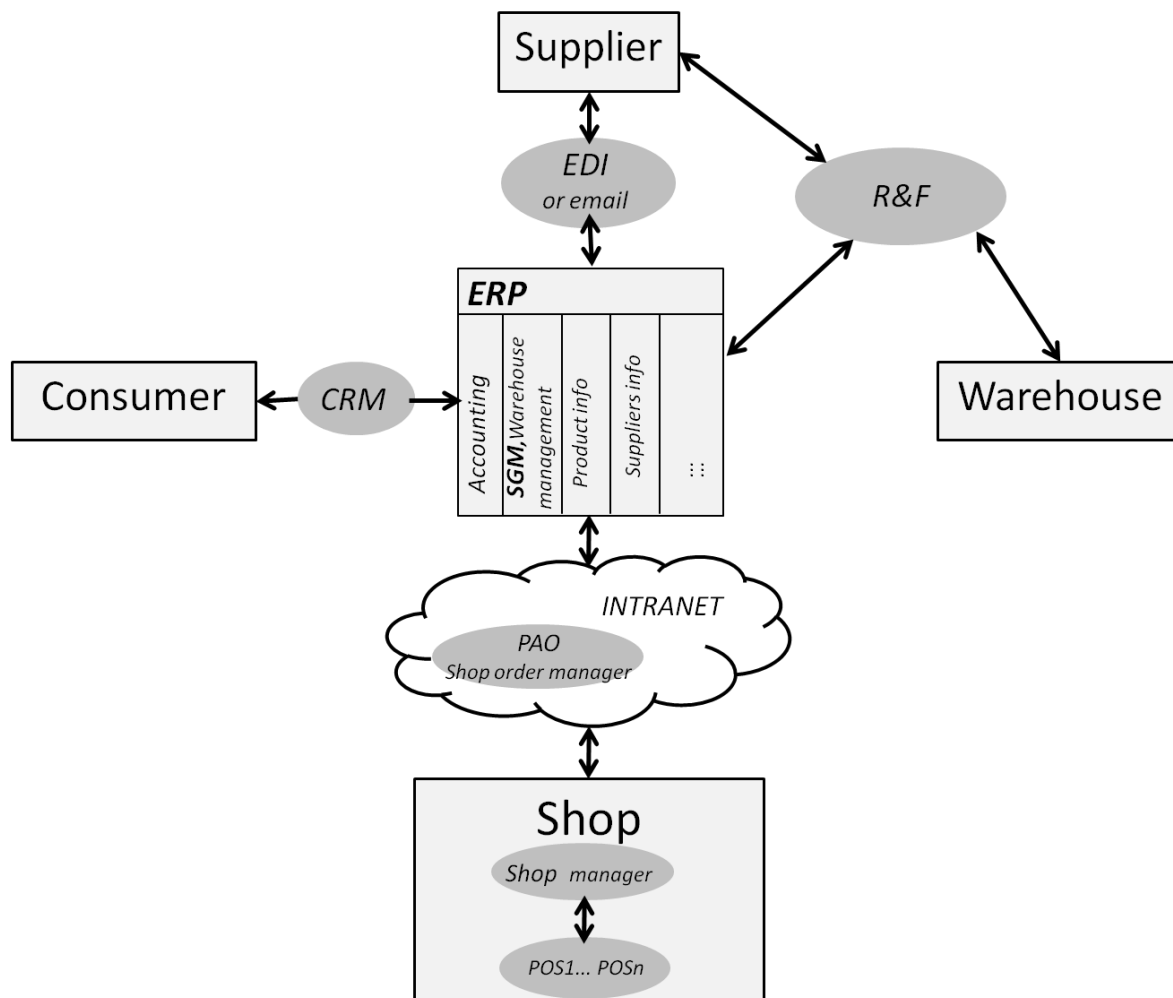| | Internal codification |
	Stock management
Point of Sales software	Ticket information
Fidelity card management tool	Costumers data
Intranet	Shop stock information
	PCA

Figure 5: Legacy Systems

FIspace facilitates exchange of information and communication across organizations to conduct business.

The development of applications for the TIC trial covers different scenarios in the shopping experience of consumers at the supermarket:

- **PRODUCT INFO App and FOOD TRAFFIC LIGHT App;**

  - Product tailored info/knowledge gathering: is initiated by a customer who wishes to obtain information related to a product tailored to his/her personal preferences stored in the user profile (allergies, favourite food, etc.).

  - Customers complaints and feedback

- **SHOPPING LIST & RECIPE App:**

  - Shopping list & recipes management: customers want to manage their shopping list and receive product recommendations according to recipes.

- **AUGEMENTED REALITY and PUSH INFO App:**

  - Augmented reality & push information: Information of products is displayed with augmented reality technologies by using capabilities of customer's mobile phones.

- **ALERT NOTIFICATION provided by FIspace:**

  - Alerts: The TIC trial supports food alert notification to users who bought certain products and can deliver notification globally, individually or to groups.

For the shopping experience using FIspace, customers will have to log into the FIspace platform, access the store and download the apps they want to use. These apps will provide information to consumers that have been provided by all the agents in the food supply chain, such as farmers, producers, suppliers, transport and logistics companies, etc.

As an example, all these functionalities of FIspace and Apps are represented in Figure 6, and have been connected to software relationships of PlusFresc legacy systems. This is a preliminary situation that will be updated in the course of TIC trial according to software developments.
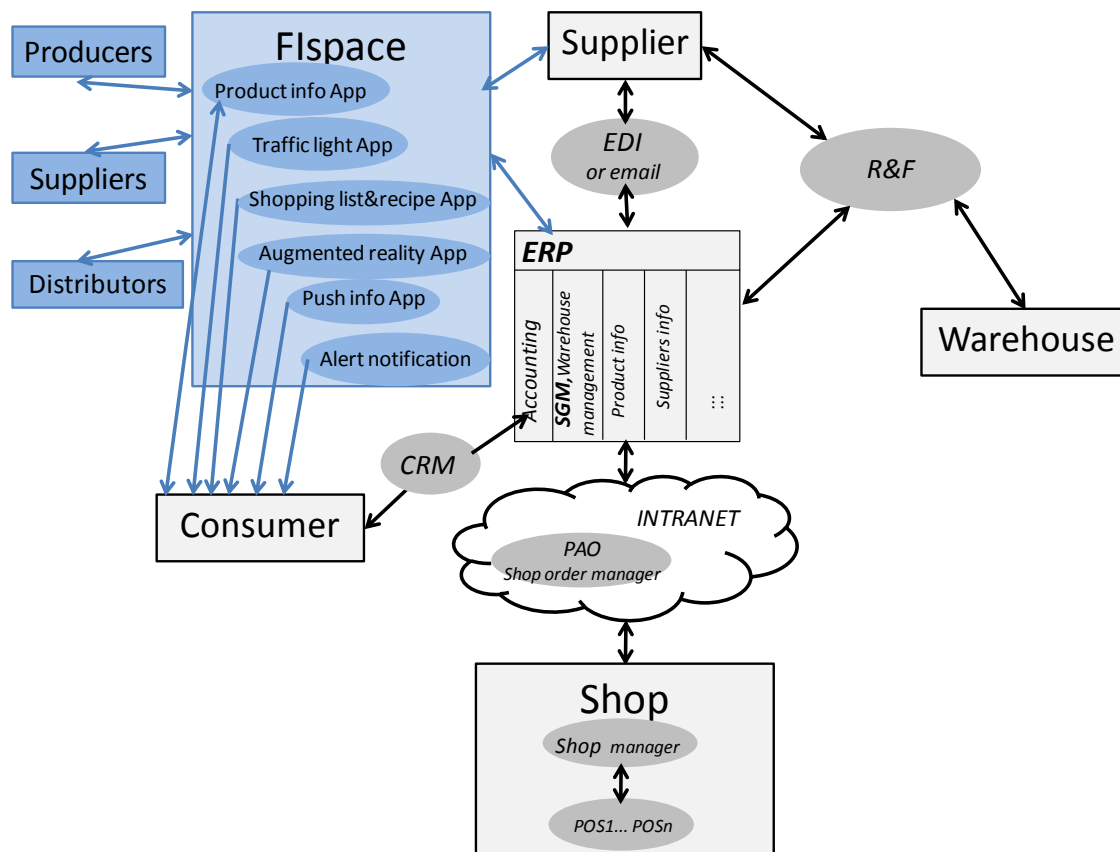
Figure 6: Legacy Systems. FIspace included

4.1.6 B2B[10]: FIspace at the intermediate of multiple two-sided markets

While there are many actors put in the spotlight in different circumstances and scenarios, in its core functionality, the FIspace addresses issues and challenges that enable business collaboration between industry partners (enhanced) by the provision of apps. The platform is thus in the position of an intermediate on multiple two-sided markets11: The first two-sided market contains the app developers vs. business users. The second contains the business users as buyers and sellers. This is the case since functionalities such as searching for other a business contacting should be able to be done on the platform itself.

However, the platform's own functionalities might be limited and enhance by the provision of apps. These apps that are developed and hosted on the platform, might equally mediate business users on two sides of a market (with possible expansion to even more sides, such as advertisers). To illustrate this, a stylised representation using the example of shippers and LSPs is given inFigure 7. The markets are represented by the yellow half circles, each connecting two parties.

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[10] Input from T520. More specifically from D5.2.1

[11] Since our perspective here is different from the previous section, we disregard the business process engineer. It fulfills a supporting role for the business user.
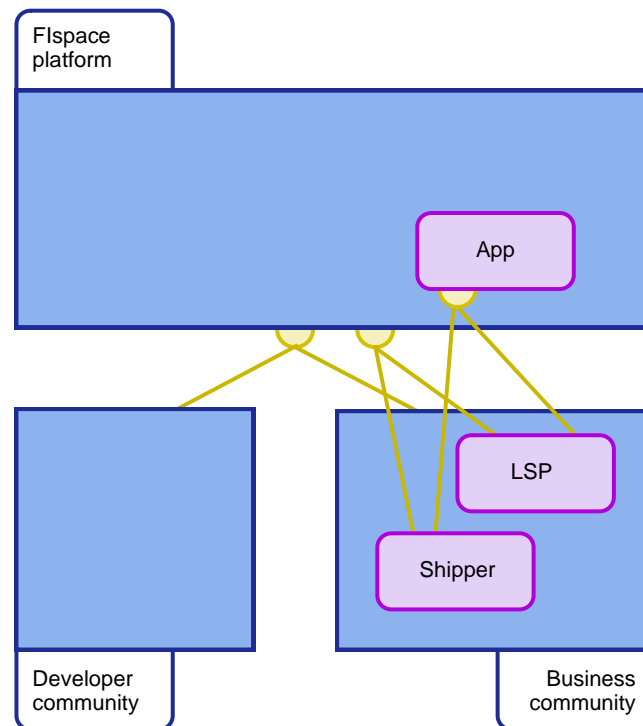
Figure 7 Stylised representation of the multiple two-sided markets in FIspace

As mentioned earlier, the weight of one side of the market can also define the attractiveness for the other side of the market (inter-group network effects). An innovation that is well adopted and has gained numerous adherents represents an asset for the platform with a certain control over this market side. Characteristics of this effect of two-sided markets can for example be translated for FIspace as following: the more LSPs are on the platform, the more options for the food producer and the more value to join.

FIspace will be positioned as a platform intermediating (or supporting apps to intermediate) multiple two-sided markets. These are business users as buyers and sellers. For the current project, these business users are situated in the transport, logistics and agri-food sector. The market is characterised by (mainly inter-group) network externalities where the rate of adoption of the platform on one side of the market defines the attractiveness for the other side to join.

4.1.6.1   The FIspace platform positioned vis-à-vis other platforms

In this section, a benchmark will be made of current B2B (Business-to-Business) and B2C (Business-to-Consumer) platforms. This benchmark of B2B platforms serves a twofold purpose. Firstly, it shows what the current competition in the market looks like, and how FIspace can position itself. Secondly, for as much as possible, it tries to highlight the strategic choices made by the platforms so that they can be evaluation in the strategic design of the FIspace platform. The B2C platforms complement the analysis by revealing their strategies of how to include and approach app developers.

4.1.6.2   B2B benchmark

Based on project documentation and a desk research, a list has been compiled of six platforms to be considered: Salesforce AppExchange, Fraunhofer Logistics Mall, Descartes, SAP

store, Ariba, GT Nexus and Alibaba. Since most of these platforms are commercial business, not all information on them is publicly available, but for as much as possible a comparison has been made on the following five points of attention:

1. *The (business) focus of the platform*, e.g. the industries that are being targeted.
2. *The requirements of the platform*, i.e. what kinds of hardware and software does one need to use the platform and its application?
3. *App developer strategy*, i.e. who develops the applications for the platform, and in cause of external developers, how does the platform attract and give incentives to these developers?
4. *App user strategy*, i.e. how does that platform attract business users?
5. *Revenue model,* i.e. how does the platform generate revenues? E.g. by business user payments, or by commissions on app purchases.

In the next section and overview of the benchmark platforms with a short description for each of them will be provided. In section 4.1.6.4, an analysis of these platforms will be provided, based on the five attention points above.

4.1.6.3   B2B platform benchmark selection

The **Salesforce AppExchange**[12] is a platform for apps that run as plug-ins in the customer relationship management (CRM) software by the American stock-traded company Salesforce.com, Inc. The AppExchange was launched in 2005 as a marketplace for web applications that work together with the Salesforce software. The apps do not contain the core functionalities that are being developed by Salesforce themselves, but rather should be seen as additional cloud computing functionalities. As per September 2013, the platform contains over 1,900 apps.

The **Fraunhofer Logistics Mall**[13] that is being developed by the German applied-research organization Fraunhofer is arguably the platform in this list that most resembles the business idea of FIspace. In the mall, third parties can offer logistic services and software to the target audience, in particular SMEs who cannot afford an extensive ICT support department. All of this is based on cloud computing, on an infrastructure offered by Logata GmbH, whereas companies can also run their own cloud for internal services. The Logistics Mall is not active yet, but it is planned to launch in 2014.

The **Canadian company Descartes**[14] also offers solutions in the field of logistics. To be precise, it lists six groups of solutions: Logistics technology platform, Routing, mobile & telematics, Transportation management, Customs & regulatory compliance, Global logistics network services, and Broker & forwarder enterprise systems. For it's solutions it makes use of long-term partners. It's corporate fact sheet[15] lists over 10,000 customers in more than 60 countries.

The **SAP store**[16] is a platform that offers solutions that run within the SAP ERP system. The solutions range from e.g. CRM and planning to cloud services. They can be being offered by

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[12] Salesforce.com, inc., "AppExchange - Home." [Online]. Available: https://appexchange.salesforce.com/. [Accessed: 09-Mar-2013].

[13] Fraunhofer Innovationscluster Cloud Computing für die Logistik, "Logistics Mall: Wilkommen." [Online]. Available: www.logistics-mall.com. [Accessed: 04-Sep-2013].

[14] Descartes, "Welcome to Descartes." [Online]. Available: https://www.descartes.com/. [Accessed: 04-Sep-2013].

[15] The Descartes Systems Group, Inc., "Corporate Fact Sheet." Jul-2013.

[16] SAP AG, "Welcome | SAP Store." [Online]. Available: https://store.sap.com. [Accessed: 04-Sep-2013].

third parties, so called 'Solution Providers'. However, when checked in September 2013, it's most popular solutions were all developed by SAP itself: 'SAP CRM Sales', SAP Travel Receipt Capture' and 'SAP BusinessObjects Mobile'. From the 24 'popular' solutions featured on the store's site, only two are not provided by SAP: 'Inventory Management' by Larsen & Toubro Infotech and 'Skill Scanner' by EPI-USE America, each having a few hundred downloads. Per solution, the platform indicates which mobile platforms (iOS, Android, Blackberry, Windows) it runs on.

Ariba[17] is an American company, founded in 1996, which has been acquired by SAP in 2012. Its main focus is on procurement and trade, it calls itself "the world's largest trading partner community"[18], and as such is a bit more limited than some of the other platforms. It acts both as a trading community as well as a provider of ICT solutions to facilitate trade between its participants.

GT Nexus[19] is a private company, founded in the United States in 1998, which provides cloud-based business network for global trade and supply chain services. Early 2013, it announced a merger with logistic software provider TradeCard, though it remains unclear what will be the exact consequences of this merger. It claims to be the "largest global trading and commerce network."[20] Most of its solutions currently deal with supply chain management, from inventory and procurement to transportation and payment. It claims to be the only platform to capture both financial and physical supply chain processes. It platform connects large clients from different fields, including major banks and logistic service providers.[21]

The Alibaba Group is a Chinese private company that operates a number of services to facilitate global electronic trade. The centre of it all is their e-commerce platform for SMEs[22], which has been around since 1999. Since it started, it has branched out in different markets using sub-websites, e.g. Taobao Marketplace (launched in 2003) to serve the Chinese C2C market, Alipay (2004) as an online payment platform, Alibaba Cloud Computing (2009) offering a cloud computing and data management platform, and AliExpress (launched in 2010) for international B2C sales.[23]

4.1.6.4   B2B platform benchmark analysis

The analysed platforms display a number similarities as well as differences. First of all, this is another illustration of the on-going 'platformisation' trend in ICT. In our limited set of examples, we have both a provider of a CRM system that sees itself as a platform and offers ERP as an integrated solution, as well as the opposite: a provider of an ERP system that offers CRM in its platform.

[17] Ariba, Inc., "Home - Ariba, an SAP Company." [Online]. Available: http://www.ariba.com. [Accessed: 04-Sep-2013].

[18] Ariba, Inc., "Supplier Network – Find Suppliers, Find Leads on the Ariba Network - Ariba, an SAP Company." [Online]. Available: http://www.ariba.com/community/the-ariba-network. [Accessed: 04-Sep-2013].

[19] GT Nexus, Inc., "GT Nexus is a Cloud Based Global Supply Chain Management Platform." [Online]. Available: http://www.gtnexus.com/. [Accessed: 04-Sep-2013].

[20] GT Nexus, Inc., "Large and Active Community - GT Nexus." [Online]. Available: http://www.gtnexus.com/why/supply-chain-community/. [Accessed: 04-Sep-2013].

[21] GT Nexus, Inc., "GT Nexus Vision & Company's Vision For Supply Chain Management Growth." [Online]. Available: http://www.gtnexus.com/about/vision-and-mission/. [Accessed: 04-Sep-2013].

[22] Alibaba Group, "Manufacturers, Suppliers, Exporters & Importers from the world's largest online B2B marketplace-Alibaba.com." [Online]. Available: http://www.alibaba.com/. [Accessed: 04-Sep-2013].

[23] Alibaba Group, "Alibaba Group — Company overview." [Online]. Available: http://news.alibaba.com/specials/aboutalibaba/aligroup/index.html. [Accessed: 04-Sep-2013].

A first difference is in the (business) focus of the different platforms. There is a group of platforms that focuses on trade and community, while another group provide logistic solutions. The Salesforce and SAP platforms form a third group, being built around their own popular software packages. Where a FIspace could distinguish itself in this aspect is by offering an integrated solution that spans many areas of business.

Most of the platforms offer cloud services and provide web-based interfaces, not imposing many requirements on the software and hardware. The SAP Store is a clear differentiator here, offering applications for several mobile platforms. It is unclear whether the other platforms offer their services in the form of applications that can be run locally on a variety of devices, the BYOD approach. The FIspace platform will aim for a cloud-based solution as well, and will combine this with both apps that run in the cloud as well as locally installable applications. Offering solutions to a variety of mobile platforms can be both an opportunity (an expanded market) as well as a challenge (motivating developers to also offer solutions for less popular platforms).

Not all platforms have publicly available information on the development process of the apps and solutions. For some platforms it is clear that external developers can provide their services via the platform, like FIspace envisions as well. Descartes seems to have a selective procedure here, aiming for long-term relationships with partners that they trust to bring value to their customers. Others seem to have a more open approach, although this does not guarantee third-party input. The SAP Store is open to third-party developers, but the majority of the popular apps are the ones that are being offered by SAP themselves. This strategy of encouraging the use of the platform by offering your own services in addition to the third-party ones can backfire as well, since the in-house services might take a majority of the market, not leaving much room for the much wanted external developers. The Salesforce AppExchange on the contrary seems to be populated by many third-party services.

Less is known about the efforts to attract business users to the market. Some of the platforms appear very closed for visitors who have not signed up for the service, while others, most notably Salesforce AppExchange, SAP Store and AliBaba are very open, allowing unregistered visitors to inspect the offerings. However, statistics are difficult to gather. Only the AppExchange provides some statistics, like the amount of installs and pie chart of the amount of apps per category.

In terms of revenue models, it is difficult to make hard statements. One can assume that for the platforms that offer their already popular software packages, like Salesforce and SAP, the platform will create additional value to the software, this creating a form of cross-subsidisation: they might accept a financial loss in the platform field when this gets compensated by more revenues in software licenses. SAP might also get additional revenues for their own developed solutions on the platform. It is to be expected that other platforms aim for membership fees or consultancy fees. AliBaba has a premium membership system, offering verified memberships as well as gold memberships.

4.1.6.5   Implications for the FIspace platform

It is difficult to derive general recommendations based on the above analysis, since it is unknown how successful the different platforms are, both in terms of usage as in revenues for the platform provider. For the open platforms, impressions can be given. For instance, the Salesforce platform looks more active than the SAP Store. However, these are impressions, rather than quantified conclusions.

Some lessons can be learned though. Firstly, none of the platforms in the benchmark offer a holistic view like FIspace does. They all focus on a part of B2B collaboration, be it customer relations, enterprise resource planning, logistics, or trading and the supply chain. In that sense, there might be a market opportunity for FIspace, providing the only solution implementing a rich set of collaboration tools from producer to end-consumer.

Secondly, many platforms seem to offer web-based and cloud-based solutions. FIspace cannot diversify itself on this, but it does indicate that this is a sensible choice in the current state of business ICT.

In terms of developer strategy, FIspace clearly follows an open approach aimed at third-party app development. In that sense, it stays clear from several of the other platforms. One lesson from the SAP Store should be that creating a first set of apps might be a strategy to initially fill the marketplace, but it needs to leave room for the external developers and not discourage them.

In terms of user strategy, an open approach, including easy website access to information about the services provided, might encourage more business to become FIspace users, although in a B2B context the power of large suppliers and clients should not be underestimated. But since FIspace explicitly targets SMEs, an open approach is recommendable. One factor to immediately get a significant user base is to couple the platform to existing software packages that already have their users. This seems to have been the approach for both Salesforce and SAP. For FIspace however, there is no software package by one of the partners that immediately makes for a logical bundling. The project might look for an organisation fitting this profile to become a platform provider, anticipating the situation for the platform after FI-PPP has ended.

In terms of revenue model for the platform, it seems that cross-subsidisation is popular, but for this the platform needs to be bundled, cf. the previous paragraph. A premium membership model can also be considered. Unfortunately, for most of the platforms, the revenue model is unclear. For instance, it is not known whether developers and users pay fees.

4.1.7 Conclusions of market analysis

As seen, FIspace is fundamentally a technical platform that provides opportunities for entrepreneurs, business organizations and potentially governments to communicate more effectively. While various services exist that propose part of the functionalities proposed by FIspace, the USP (unique selling proposition) of FIspace is that it is neutral and allows for the development and publication of Apps that are open source. The neutrality element is valuable to business because the communication platform has no interest in the actual data being exchanged and therefore can be trusted to be a commercially safe intermediary. This allows business to have confidence that new commercial initiatives based on electronic communication are within its own control and cannot be disrupted or intercepted by their competitors. By coupling the neutrality with the ability to develop and publish applications that can be created by a large pool of developers, then business can cost effectively look for new ways to connect and make business with its new and current clients

FIspace is therefore an enabler of these transactions. It is not a solution in its own right as it requires other actors to take advantage of the service it offers: large adoption is a crucial matter. Therefore the benefits that FIspace offers have to be made clear in an easy to understand way to potential users (i.e. business organization as well as app developers). Although many businesses see the need to utilize technology to create, expand or merely survive in their

markets, many organizations are put off by the perceived complexity of working with such solutions. Therefore the proper marketing of the platform is crucial in delivering the message of the benefits and the ease of use for potential users.

The marketing message and how this will be communicated will be expanded upon by later updates of this deliverable. It is obvious however that by utilizing basic marketing analysis of the product lifecycle that there will be a small group of 'innovators' and 'early adopters' who need to be targeted. These two groups need to be identified and meaningful messages tailored to their individual needs. If these messages are successful then the 'early majority' grouping will follow. At this point we will have a community of users who will then expand naturally the use of the platform towards the point of critical mass. Once critical mass has been achieved the platform will become self-sustaining.

Market analysis has shown that the FIspace product has a level of uniqueness against other cloud competitors because it is not proprietary, it is ambivalent about the type or nature of the customer or the transaction and it has no 'lock in' characteristics. Therefore there is no direct competition currently to FIspace in the neutral communication service market. This is how FIspace should position itself as against its competitors moving forward.

All of these issues will be expanded upon and a more sustainable marketing strategy will be created prior to m24.

The marketing strategy identifies that FIspace has the following constituent elements;
1. Product positioning – As a neutral and non proprietary platform.
2. Customers – organizations that require the use of neutral platform to conduct business.
3. Industry definition – The neutral communication services market
4. Target market – Innovator and early adopter organizations for technology platforms
5. Competitors – no direct competitors in this market but considerable number in related areas such as the B2C space and C2C.

4.2   Market evolution

The ICT industry has become more and more competitive. Hardware gets cheaper and infrastructure does as well. What has been increasing in cost has been the software due to the increasing complexity of the problems being addressed, the intellectual property embedded in the software and the value that software delivers to the business. In the graphic below we show some support to this theory.
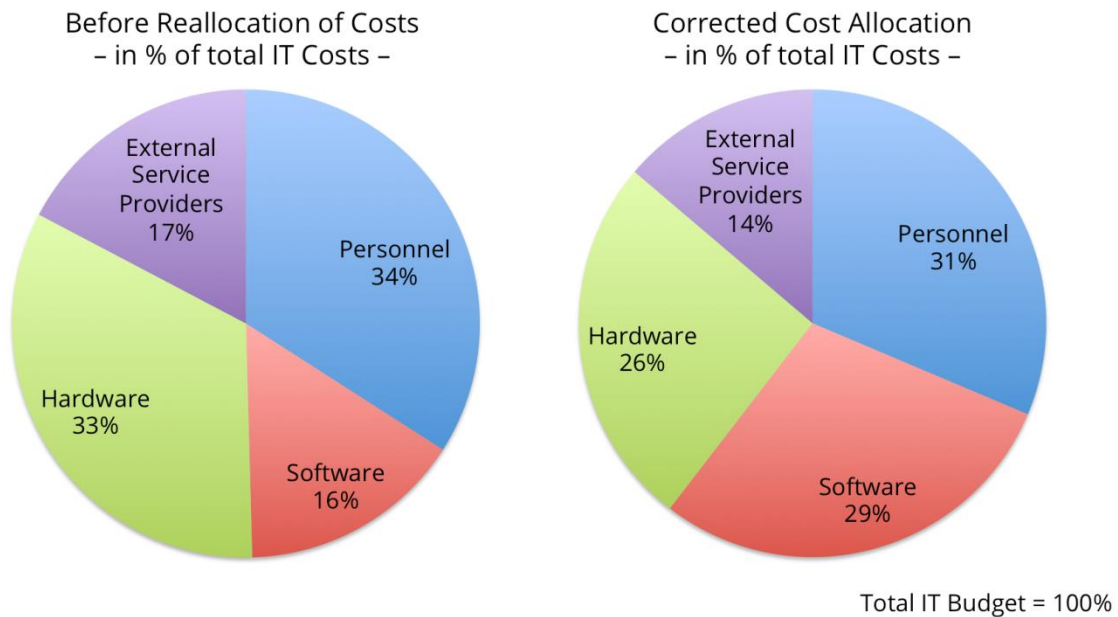
Before Reallocation of Costs
– in % of total IT Costs –

Corrected Cost Allocation
– in % of total IT Costs –

External Service Providers 17%

Personnel 34%

Hardware 33%

Software 16%

External Service Providers 14%

Personnel 31%

Hardware 26%

Software 29%

Total IT Budget = 100%

Figure 8: IT Cost Breakdown And Hidden Software Asset Costs (by OMTCO)

As we see, researchers from McKinsey and the Sand-Hill Group estimate as well that, all-in-all, 30% of the average IT budget is consumed by software assets, putting this cost category in the top league of IT costs.

In fact, to enhance the importance of ICT, we should take into account that the total money spent on IT worldwide has been most recently estimated (beginning 2013) as US $3.5 trillion, and is currently growing at 5% p.a. – doubling every 15 years. IT costs, as a percentage of corporate revenue, have grown 50% since 2002, putting a strain on IT budgets. Today, when looking at a company's IT budget, 75% are recurrent costs, used to "keep the lights on" in the IT department, and 25% are cost of new initiatives for technology development.[24]

In addition to the considerations above about the current volume of software asset costs, even more important is their growth – their absolute growth (in EUR) and relative growth (relative to growth of other costs in the IT budget). Software asset costs are growing, endogenously and exogenously:

- Endogenous growth – Recent technology shifts and IT cost reduction initiatives, e.g. server virtualization, remote desktops and cloud computing, have delivered flexibility and security in operations and a cost advantage on the hardware/infrastructure side – but have generated increased software demand, and thus supplementary costs, on the software asset side.

- Exogenous growth – Software vendors have transformed the process of discovering in-compliance into a business model. The technology shift to virtualized/cloud environments has provided the right platform. Nowadays, most vendors have increased the complexity licensing requirements, taking into account more attributes for more licensing metrics. They have accelerated the pace of change and created more pitfalls, thus in-

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[24] http://omtco.eu/references/sam/it-costs-the-costs-growth-and-financial-risk-of-software-assets/

creasing the level of software licensing expertise required in order to remain compliant. For the purpose of forecasting and budgeting, the specificities of each organization's infrastructure should be considered. However, should your software cost trend analysis not yet be available, we suggest that you cast a first draft version relating to your own business case with the following hypothesis: We forecast an average of 9% year-to-year growth of software asset costs for the period 2013-2016 (estimated from our market experience):

- Endogenous growth – 4% per year (2% inflation + 2% demand increase)

• Exogenous growth – 5% per year, strongly depending however on your product portfolio and compliance profile (see more detailed explanations in the next chapter[25] – contact OMTCO for a customized calculation).

This 9% growth takes into account endogenous and exogenous growth, and is to be accounted for in planned budgets and budget overrun.

Reinforcing this theory we have found in an OECD report that software revenue has grown a bit more than 300% from 2000 to 2011, the biggest grown in comparison with the rest of the industry, even Telecommunications keep the global lead in revenue with $USD 1.617.381[26].

But where do we use all that money spent in IT? Here we have an illustrating graphic about how much some countries in Europe spend in IT:
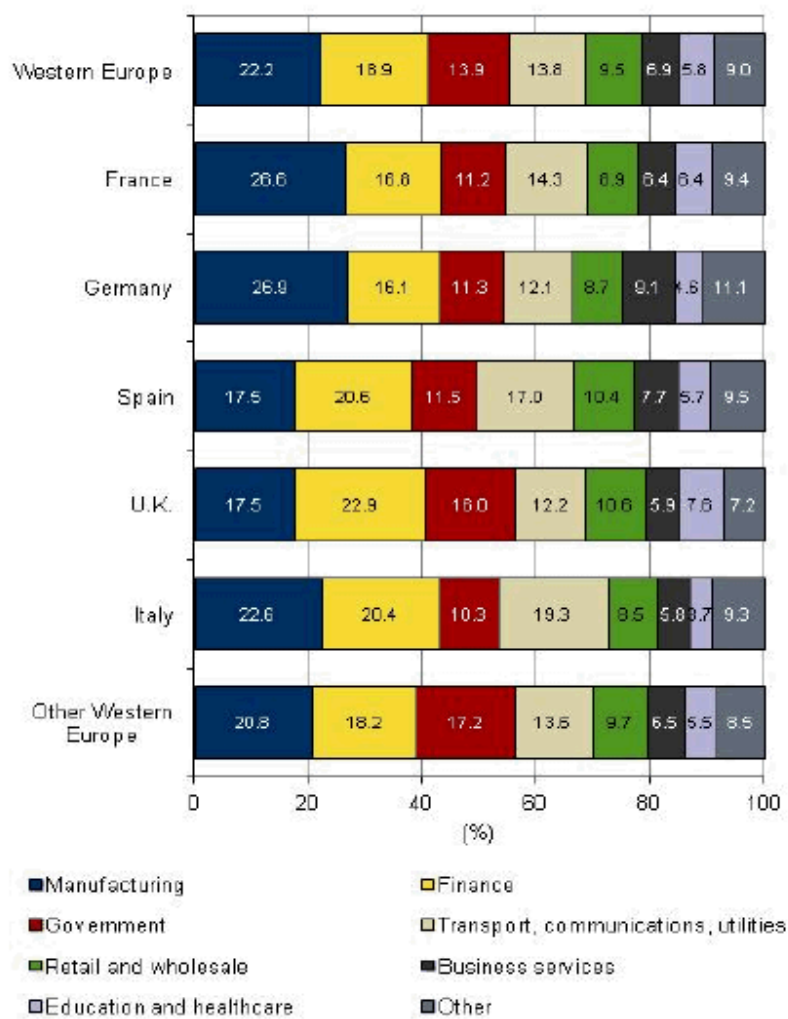
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[25] http://omtco.eu/wp-content/uploads/OMTCO-IT-Costs-The-Costs-Growth-And-Financial-Risk-Of-Software-Assets.pdf
[26] OECD Internet Economy Outlook 2012 (electronic version available here: http://www.oecd-ilibrary.org/science-and-technology/oecd-internet-economy-outlook-2012_9789264086463-en)

Western Europe IT Spending Breakdown by Vertical Market, 2011

Figure 9: Western Europe. ICT spend in vertical markets.

As we can see, about a 20% average of the total money spend in IT goes from manufacturing, about 10% for retail and wholesale, if we add the percentage of transport included in the grey color, we obtained about 35% of total IT spending in topics related with what we are doing in FIspace.

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[27] Western European Vertical Markets IT Spending 2012 – 2016 Forecast (Author: Nina Bonagura from IDC). September 2012.

4.3   The 5 Porter Forces Analysis

4.3.1 Overview

Porter forces are a well-known market analysis base on the idea that each market is represented in 5 key forces that determine the competitive intensity and the market attractiveness. We have chosen this analysis because of their easy understanding when you see the graphic we have below:
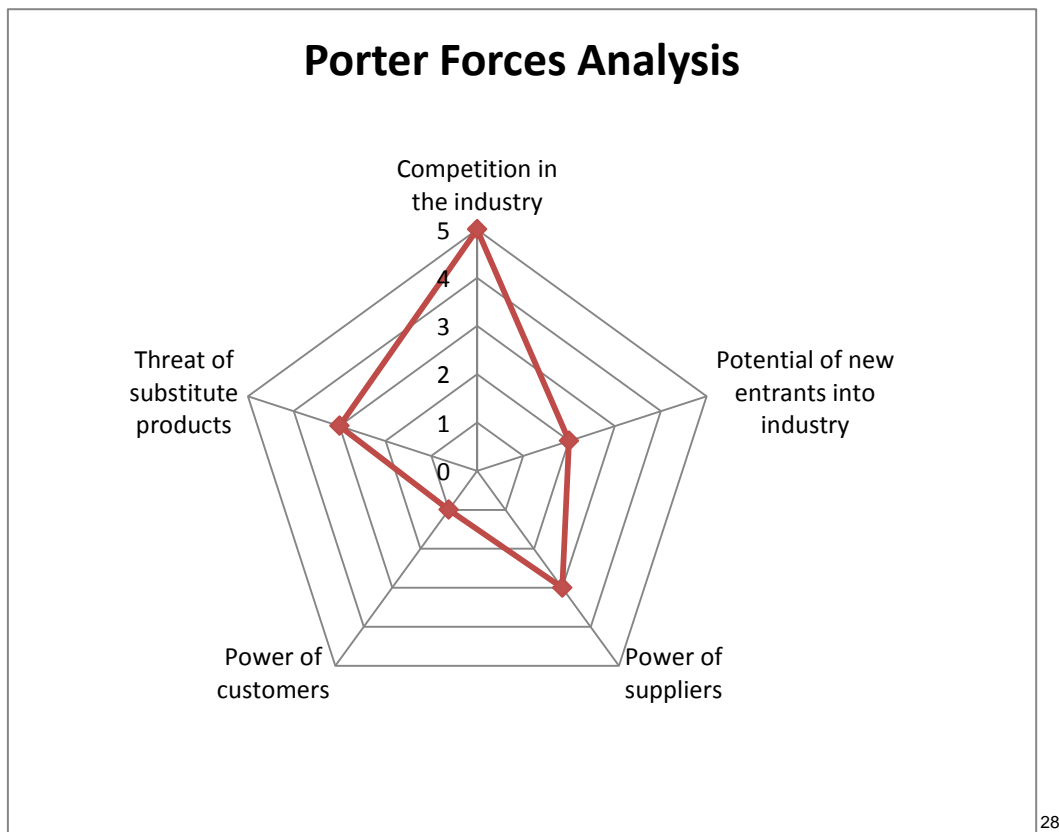
Figure 10: 5 Porter Forces Analysis.

As we can see, our major difficulty to get into the market would be the already existing competition in it. Even though our product is not finalized yet we can compare it with Google Play, AppStore or Amazon Web Services, as we are going to detail in the first point, and we will realize that **competition in the market** is already intense. Nevertheless there are some "easy" points of possible entrance, so we see the **power of customers** reduce to almost the minimum, how come? At some point if you are an industrial company that looks for a specific application only located in our platform is going to be difficult to "bargain down" because the demand for that is going to be big and the impact of one single company isolated will not affect the prices of the product, but, there is always a but, we have a re-

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[28] Own elaboration

al **threat of substitute products**, meaning that if we are able to find several applications or several services in different platforms, which is highly possible, we, as platform owners, are going to have a problem when we try to foster our customers loyalty or to establish ourselves as the first platform chosen for all apps or services search. Just in case, we find a quite low **potential of new entrants into industry** due to the high barriers of knowledge and investment that a company or group of companies are going to have if they want to develop a platform as FIspace or any platform similar. To finalize this overview, we consider the **power of suppliers** as quite high 3 over 5, understanding "power" as the capacity of suppliers of keeping the services and servers alive and what will cost the replacement. If we picture the idea of one single supplier providing the cloud service for the whole platform and that supplier decides to turn off their servers (if this was legally possible), the rest of services and applications will really suffer so the negotiation power is high, but limited to the legal terms and conditions.

4.3.2 Competition inside the industry

As we have shown previously, competition in the industry is 5 of 5. FIspace is going to be a collaborative and integration service, we have mention that earlier but here, when we talk about competition in the industry we have to identify market niches. For that, we are going to create a 4 areas approach:

First Area: FIspace as a place to compose services and use services and infrastructures to create new services and applications. From this perspective, we can take a look at the Amazon Web Services (AWS)[29].

AWS is a collection of remote computing services (also called web services) that together make up a cloud computing platform, offered over the Internet by Amazon.com. The most central and well-known of these services are Amazon EC2 and Amazon S3. The service is advertised as providing a large computing capacity (potentially many servers) much faster and cheaper than building a physical server farm.[30] They are totally focused on Compute & Networking, Storage, Database, Application Services and Deployment Management[31].

The AWS Marketplace is an online store that provides an easy way for sellers to market and sell their software to developers and IT Professionals. AWS Marketplace users can find, compare, and immediately start using the software they need to build their products and run their businesses[32].

We find a clear and simple competition here, not just regarding FIspace but also FIware and other FI-PPP projects. If we compare, GEs are the services that AWS are also providing, to say it in a simple way, and Amazon has already a network of influence well extended. Just in

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[29] http://aws.amazon.com/
[30] http://aws.amazon.com/what-is-cloud-computing/ 07/17/2013
[31] http://www.youtube.com/watch?v=jOhbTAU4OPI#at=50
[32] https://aws.amazon.com/marketplace/help/200899830

case, we rely on our trials to add that spark that could make the difference. If FIspace, as it is in other FI PPP projects, we work together between technicians and operational people, there, we should find the added value.

Second Area: FIspace platform as repository of applications.

Right now, the biggest application repositories in the world are the App Store[33], the Google Play[34] and a bit far away the Windows store and Windows Phone Store[35], the BlackBerry World[36] and the Ovi store[37], developed by Nokia and one of the main marketplaces develop within Europe.

- The Apple App Store is a digital application distribution platform for iOS developed and maintained by Apple Inc. The service allows users to browse and download applications that were developed with Apple's iOS SDK. The apps can be downloaded directly to an iOS device, or onto a personal computer via iTunes[38]. It has around 800.000 apps available[39].

- The Google Play is a digital application distribution platform for Android and an online electronics and digital media store developed and maintained by Google. The service allows users to browse and download music, magazines, books, movies, television programs, and applications published through Google. Users can also purchase Chromebooks, Google Nexus–branded mobile devices, other Google-branded hardware, and accessories through Google Play[40]. It has more than 700.000 apps[41].

- The BlackBerryWorld is an application distribution service and application by BlackBerry, formerly Research In Motion Limited, for a majority of BlackBerry devices. The service provides BlackBerry users with an environment to browse, download, and update third-party applications[42]. It has about 250.000 apps available[43].

- The Windows Store is a digital distribution platform in Microsoft's Windows 8 and Windows RT operating systems. The platform can be used to provide listings for desktop applications certified to run on Windows 8, but are also the primary distribution platform for a new type of app called "Windows Store apps"[44]. Windows Store has 111.056 apps available[45]

- The OVI Store is a platform where customers can download mobile games, applications, videos, images, and ringing tones to their Nokia devices. Some of the items are free of charge; others can be purchased using credit card or through operator billing in selected operators[46]. It has 120.000 to be used by 150.000.000 of registered users[47].

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[33] http://store.apple.com/us
[34] https://play.google.com/store
[35] http://www.windowsstore.com/
[36] http://appworld.blackberry.com/webstore
[37] http://store.ovi.com/
[38] https://en.wikipedia.org/wiki/App_Store_(iOS)
[39] http://www.apple.com/pr/library/2013/01/07App-Store-Tops-40-Billion-Downloads-with-Almost-Half-in-2012.html 01/07/2013
[40] http://en.wikipedia.org/wiki/Google_Play
[41] https://play.google.com/intl/ALL_es/about/apps/index.html 08/05/2013
[42] http://en.wikipedia.org/wiki/BlackBerry_World
[43] http://www.pocketberry.com/2013/05/14/blackberry-is-jammin-hope-you-like-jammin-to/ 05/14/2013
[44] http://arstechnica.com/information-technology/2011/12/win-8-app-store-revealed-more-money-for-devs-beta-in-late-february/
[45] http://www.metrostorescanner.com/ 08/05/2013
[46] https://en.wikipedia.org/wiki/Ovi_(Nokia)#Ovi_Store
[47] http://developer.nokia.com/Distribute/Statistics.xhtml

Google surpassed the 50.000.000 download apps in July 2013, while the App store did it in May same year[48]. And they keep growing[49]

This is telling us that if what FIspace is going to create is a repository of applications, we should create a huge competitive advance somehow somewhere; otherwise, the vast experience of our competitors and the amount of people already reached is going to create an infrastructural impossibility to solve, at least in the first five years.

Third Area: FIspace as a B2B platform[50]:

Previously detailed. See section 4.1.6.3

Fourth Area: FIspace as a competitor with other FI-PPP initiatives.

Are FITMAN, FI-CONTENT 2, FINESCE and FISTAR competing against FIspace? At a quick look, it seems not, not at all, because of the different domains of each, but if we look carefully at the different technologies and basic functionalities of those other platforms, we could find competition. Just it in case, this is a question to discuss in the EBM WG.

4.3.3 Potential of new entrants into industry

As we mention previously, potential entrants into this particular industry are very low, we could even say it is about 1-1.5, instead of 2, the mark depends on the take into account of other FI initiatives or not. This project has cost 20.006.437, 00€ and there are 29 partners involved, certainly it is not an easy thing to do, even at a global level. If we dig a little more we will realize that there are pure technical companies, pure operational companies, universities and one European lab. So it is not even a matter of numbers, budget and companies involved but a matter of who and what. Certainly we identify highly initial cost barriers and a very strong barrier of knowledge that really difficult the entrance of any other possible potential competitor. This kind of analysis could be beneficial for the companies involved and pernicious for the market users, the final consumers, but as we seen, there is a really high level of competition in the market so, suddenly, we find a well-balanced market with high competition despite of their initial huge barriers of entrance

4.3.4 Power of suppliers

PoS is relatively high, 3/5. We consider a possible risk of oligopoly, at least in theory, due to the limited number of providers. This means, suppliers could easily fix prices according to competency and this could impact negatively the consumers and the market health. Nevertheless, competency in this market is so strong and there are so "insurmountable" barriers be-

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tween some of the suppliers. Just in case, we think is logical to give a 3 out of 5 due to the limited number of suppliers and the huge need and demand of users.

We have also to take into account the different action areas of FIspace but we consider the situation is similar in all: FIspace as a B2B platform, FIspace platform as repository of applications, FIspace as a place to compose services and use services and infrastructures to create new services and applications and FIspace as a competitor with other FI-PPP initiatives.

4.3.5 Power of customers

We consider a 1/5 score due to a very low capacity of customers to influence providers capacity to change prices or services. We consider customers as the end-users. Of course, this mark will vary a little bit depending on the different customers we find in the different areas we have mention above, meaning, customers will have more importance in the service composition area than in the marketplace area or the B2B platforms. In the marketplace there is a huge number of consumers then, their capacities of negotiation are limited while in the services composition we could have one small consumer that needs a lot of services so he can try to push somehow the prices. Nevertheless, their power is limited, but this should not be a problem for the market health because of their high competition.

4.3.6 Threat of substitute products

Our score here is 3 out of 5 but we have some doubts about it. If we think in FIspace as a services composition site: On one hand it is true that when we think about a platform composed for different partners, providing different services, is very risky to keep the platform alive because all possible changes of commercial strategy or mistrust between partners in a commercial and real territory. On the other hand, this "atomization" is the one that also helps the providers to find new companies and new ways of substitute the services provided.

If we think of FIspace as a marketplace, there are limited ways of having substitute products, but as we said previously, there is a really high competition that could keep the market in good shape for all end-users and for the companies involved as well.

In any case, we would be enclosed by the IPRs or terms & conditions previously established.

When we analyse FIspace as a B2B platform, there is a significant amount of competitors, so there is a threat of substitute products. It will be crucial for FIspace to establish itself well based on the advantages it has over the other platforms.

We do not count FIware as a substitute product, since it does not provide an integrated platform for the agricultural and logistic industry, like FIspace does.

5   Project Sustainability

5.1   Overall Roadmap[51]

Figure 11 presents a high-level overview of the roadmap for FIspace sustainability and support for Phase 3.

The primary focus of the whole plan is on the commercial exploitation of the FIspace platform as a service. This will also be the best basis for long-term sustainability beyond the duration of the FI-PPP programme and therefore the results of Phase 3 projects. For that purpose we have engaged the companies that are planning to be involved in this commercial exploitation and will setup the FIspace Foundation as a key accelerator creating greater confidence by industry in the long term evolution and sustainability of the FIspace platform. The Foundation will be a not-for-profit organisation which will support and provide the required stability in the FIspace platform to encourage broad commercial exploitation as planned by FIspace partner companies and third parties.
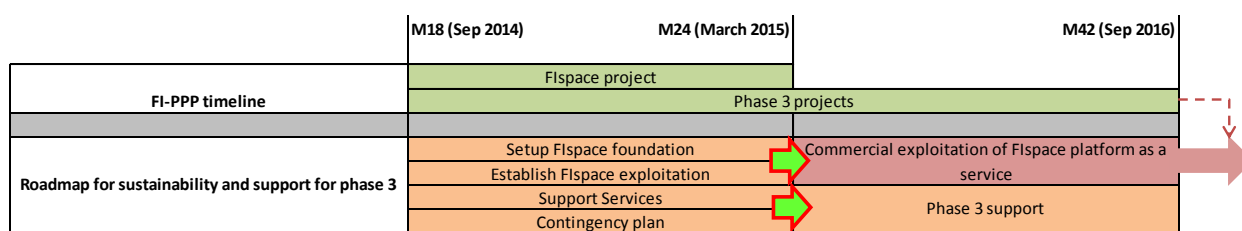
Figure 11:   High level view of the roadmap for FIspace sustainability and support for Phase 3 of the FI-PPP

The FIspace support plan – as already specified by the FIspace project – outlines the support for Phase 3 projects. The support plan is equally valid for other developers that will use the FIspace results in the commercial exploitation phase, regardless of whether they are direct involved in the FI-PPP programme. This sustainability will be regulated by the Exploitation Agreement.

Thus, the planned FIspace Foundation along with the availability of the FIspace platform as a service made available by FIspace partner companies will be the organizational embedding for the support of Phase 3 developers and others. In the event of unexpected delays in establishing the Foundation and exploitation startup are not realized in time (i.e. by the end of M24), a contingency plan is also in place to guarantee that Phase 3 projects are supported.

The next section provides a high-level description of the steps that will be taken to realize this plan. The following chapters provide the detailed descriptions of each step.

5.2   Description of the steps to be taken and timeline

The FIspace Phase 3 support roadmap includes the following steps:

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[51] Information also included in "FIspace sustainability and support to Phase 3 - v006" file, less updated.

1. **Setup FIspace Foundation**

   1.1. <u>Definition of FIspace platform</u> – a clear description of the FIspace platform and all of the components where the evolution will be managed by the Foundation as open source[52].

   1.2. <u>Decide on the governance model</u> – make a decision on which governance model will underpin the Foundation operations and participation by future FIspace partners and third parties.

   1.3. <u>Identify prospective members</u> who want to be part of the Foundation.

   1.4. <u>Formation of the Foundation</u> – formal establishment of the Foundation legal entity deciding on country of domiciliation, preparation of statutes, legal registrations, etc.

   1.5. <u>Publication of FIspace technologies</u> – the programming interfaces, development guidelines and open source technologies needed for App development will be key outputs of the Foundation.

2. **Establish FIspace exploitation**

   2.1. <u>Finalise the business models</u> for each of the prospective companies.

   2.2. <u>Liaise between companies and FIspace Foundation</u> – a clear description of what exactly the services that the companies will offer to App developers and end users based on the open source codes and standards that are managed by the FIspace Foundation.

   2.3. <u>Exploitation Agreement (EA)</u> between FIspace partners guaranteeing the use and support of the FIspace results primarily for Phase 3 developers. It will be detailed below in section 5.5.2.

   2.4. <u>Start-up FIspace exploitation</u> – companies start to use FIspace for commercial exploitation.

3. **Support services**

   3.1. <u>Support & Training program</u> – a whole set of activities (e.g. webinars, bootcamps, etc.) to train potential developers that are intending to use the FIspace platform.

   3.2. <u>Documentation</u> – provide educational material (mostly wiki's) for self-support of developers that are intending to use the FIspace platform.

   3.3. <u>FIspace platform hosting and experimentation environment</u> – provision of a FIspace platform instance to be used for educational, experimental and development purposes especially for Phase 3 developers.

4. **Contingency plan (only if formation of the FIspace Foundation and commercial exploitation is unexpectedly delayed)**

   4.1. <u>Letter of Intent</u> that guarantees access to and support of the various components that make up the FIspace platform and Apps that are already developed during the project. A draft of this letter can be found in Annex 1 and the list of components in Annex 2.

   4.2. <u>Extension of the Consortium Agreement</u> that guarantees a continuation of the current project organization for access and support of the FIspace platform during Phase 3.

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[52] Some FIspace components are FI-Ware GE's whose evolution may be managed by third party providers.

Figure 12 provides the timeline of these steps and milestones that have to be reached. The general project meeting at October, 1st and 2nd 2014 will review progress in each of these areas and determine whether further contingency plans are needed.

	13	14	15	16	17	18	19	20	21	22	23	24
	April	May	June	July	August	September	October	November	December	January	February	March
Setup FIspace Foundation												
Definition of the FIspace platform												
Decide on governance model							in GM4					
Identify prospective members							in GM4					
Formation of the Foundation						draft statutes		final statutes		notary		
Publication of FIspace technologies												
Establish FIspace exploitation												
Finalise Business Models												
Liaise between Foundation and companies												
Exploitation Agreement					term sheet		draft EA		final EA			
Start-up FIspace exploitation												
Support Services												
Training program												
welcome package + webinar												
monthly webinar												
train the trainers												
Documentation												
Hosting and Experimentation Environment												
Contingencyplan												
Letter of Intent					signed							
Extension of the Consortium Agreement							draft CA-ext					signed
Meetings												
FIspace General Meeting 4 (GM4)							1-2 Oct					

Figure 12: Timeline of activities of the FIspace

FIspace
Business Collaboration

As we have shown, sustainability is definitely one of the main challenges in WP500 and at a project level. Before arriving at the selected plan, several options were explored and finally declined: a platform run by a single company, a spin-off and an EEIG. These are described in the subsections 5.2.1 to 5.2.3. In 5.2.4, the selected option, the FIspace Foundation, will be elaborated upon.

5.2.1 One single company takes over.

This could have also two different options:

a) A company from inside the consortium decides to take the lead and make FIspace a commercial product. That company should, somehow compensate the rest of the consortium. This could be a potential option yet, even with the foundation, but according to the future exploitation plan, some BOC (Business Opportunities Committee) will be identified and then exploited, so there is no need of any company to 'take over' the whole platform.

b) An outside company buys FIspace or some modules from FIspace and creates an own platform. That option could be valid as well for a venture capitalist. Financial compensation in this case would be an issue. This option will be still viable even after the execution of the sustainability plan as take-overs, friendly or hostile, can happen. FIspace is quite protected from this due to the fact that Foundation will regulate the standards of utilization, which is going to limit the possibilities for a private company, and the potential buyers should also compensate the people involved in the EA.

5.2.2 A spin-off

This new company would be made by some companies involved in FIspace: This option is viable if we think that one or two trial have a particular high success, so the members or the people involved in those trials want to keep developing things on their own.

5.2.3 Build an EEIG[53]

An EEIG (European Economic Interest Grouping) must be formed in accordance with the rules described below:

The purpose of the grouping is to facilitate or develop the economic activities of its members by a pooling of resources, activities or skills. This will produce better results than the members acting alone. It is not intended that the grouping should make profits for itself. If it does make any profits, they will be apportioned among the members and taxed accordingly. Its activities must be related to the economic activities of its members, but cannot replace them. An EEIG cannot employ more than 500 persons.

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[53] Summaries of EU legislation: http://europa.eu/legislation_summaries/internal_market/businesses/company_law/l26015_en.htm

An EEIG can be formed by companies, firms and other legal entities governed by public or private law which have been formed in accordance with the law of a Member State and which have their registered office in the European Union (EU). It can also be formed by individuals carrying on an industrial, commercial, craft or agricultural activity or providing professional or other services in the EU.

An EEIG must have at least two members from different Member States.

The contract for the formation of an EEIG must include its name, its official address and objects, the name, registration number and place of registration, if any, of each member of the grouping and the duration of the grouping, except where this is indefinite. The contract must be filed at the registry designated by each Member State. Registration in this manner confers full legal capacity on the EEIG throughout the EU.

When a grouping is formed or dissolved, a notice must be published in the Official Journal of the EU (C and S series).

A grouping's official address must be within the EU. It may be transferred from one Member State to another subject to certain conditions.

Each member of an EEIG has one vote, although the contract for its formation may give certain members more than one vote provided that no one member holds a majority of the votes. The Regulation lists those decisions for which unanimity is required.

The EEIG must have at least two organs: the members acting collectively and the manager or managers. The managers represent and bind the EEIG in its dealings with third parties even where their acts do not fall within the objects of the grouping.

An EEIG may not invite investment by the public.

An EEIG does not necessarily have to be formed with capital. Members are free to use alternative means of financing.

The profits of an EEIG will be deemed to be the profits of its members and will be apportioned either according to the relevant clause in the contract or, failing such a clause, in equal shares. The profits or losses of an EEIG will be taxable only in the hands of its members. As a counterweight to the contractual freedom which is at the basis of the EEIG and the fact that members are not required to provide a minimum amount of capital, <u>each member of the EEIG has unlimited joint and several liability for its debts.</u>

Background

This Regulation meets the need for the harmonious development of economic activity throughout the EU and the establishment of a common market offering conditions analogous to those of a national market. To achieve this, and alleviate the legal, fiscal and psychological difficulties encountered by natural persons, companies, firms and other bodies in cooperating

across borders, the EU decided to create a suitable legal instrument at Community level in the form of a European Economic Interest Grouping.

Finally, we have decided that the EEIG due to the fact that "each member of the EEIG has unlimited joint and several liability for its debts" is not desired and does not fit with the legal requirements we are looking for in a legal common figure.

5.2.4 FIspace foundation

A foundation is a non-profit organization mainly devoted to a common goal, above all partner's needs. Foundation means something different depending on the country. The FIspace project consists of partners from different countries with different rules, but according to a global definition, a foundation is:

"[…] a non-governmental entity that is established as a non-profit corporation or a charitable trust, with a principal purpose of making grants to unrelated organizations, institutions, or individuals for scientific, educational, cultural, religious, or other charitable purposes. This broad definition encompasses two foundation types: private foundations and grantmaking public charities.

A private foundation derives its money from a family, an individual, or a corporation. An example of a private foundation is the Ford Foundation.

In contrast, a grantmaking public charity (sometimes referred to as a "public foundation") derives its support from diverse sources, which may include foundations, individuals, and government agencies. An example of a grantmaking public charity is the Ms. Foundation for Women. Most community foundations are also grantmaking public charities.

Please be aware that "foundation" is not a legal term [in the US]." [54]

The selection of a 'mother country' should not be a problem, but we will create the FIspace Foundation so all the knowledge remains within consortium members. This option could add a clause saying that if any of the individual members wants to leave the foundation, then they will have to hand over all the source code needed for the rest of the partners to maintain the platform and applications alive. Because of legal and administrative considerations, we have decided within the consortium that The Netherlands is going to be the most convenient place to set up the FIspace foundation. It is not much costly and it allows to any foreign member to join or be part of the steering board.

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[54] Grant Space. Knowledge base: http://www.grantspace.org/Tools/Knowledge-Base/Funding-Resources/Foundations/what-is-a-foundation

5.2.5 Setup of the FIspace Foundation[55]

This section describes the steps that will be taken to establish the FIspace Foundation. Section 5.2.5.1 describes the planned approach for the governance model for the Foundation and how this will be further established. Section 5.3 describes how the prospective members will be identified from the current FIspace consortium and from organisations outside of the consortium. Section 5.4 describes the formal process of establishing the Foundation after which the FIspace technologies can be published officially (Section5.5).

5.2.5.1   Decision on the governance model

The FIspace consortium has decided in its General Meeting in March 2014 in Haifa to move to commercial exploitation as soon as possible, that is after the FI-PPP Phase 2 and the termination of the FIspace project. As presented in the last review meeting, the FIspace consortium was elaborating the basic alternatives for a sustainable exploitation after the project end. The main options were identified, a timeline with related action items was elaborated and the road for decision making was agreed between the different project partners.
Moreover, as expressed during the review meeting, several end-user partners such as Kuehne & Nagel, Kverneland and NCL have a clear understanding of their expectations towards commercial exploitation of the FIspace platform. For example, these organisations would not like to be locked-in or exploited by a monopoly situation of where one commercial company controls all the IPR. Therefore, to summarise these key expectations, FIspace end-user companies have detailed a list of "10 commandments" (Figure 13). These can also be considered as key success factors for FIspace exploitation from an end-user point of view.

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[55] Information also included in "FIspace sustainability and support to Phase 3 - v006" file, less updated

1. The platform must be forever neutral (it cannot ever be dominated by any single organisation)

2. Structured and standardised (business makers cannot fully exploit the platform if it is not consistent globally)

3. Must be transparent, trustworthy and secure (no compromise on how the platform operates for the end users)

4. Freedom to create new ecosystems (no restrictions on the business opportunities that can be created from the platform as long as rules are followed)

5. Must be available to all (no exceptions allowed apart from legal obligations. It must be available inside and outside EU)

6. Development patterns must not create restrictions for future exploitation

7. Dispute resolution process (there must be a means by which disputes are resolved)

8. Platform needs to continually grow and evolve (this creates the sustainability)

9. The technical service provision must be affordable and robust (high costs for technical services will negate the benefits to many SME's. This will only happen if there is competition in all development and technical aspects)

Figure 13:   "Ten Commandments" for the governance of FIspace in the eyes of some of the FIspace user-companies

After the review meeting, several discussions within the current FIspace consortium took place and the most desired direction is to move all the IPR in a not-for-profit Foundation that makes the FIspace know-how (code, standards) available as open source. The FIspace Foundation encourages the use of the know-how in open source projects and allows companies to use the open source standards and codes in commercial products. This solution is inspired by the WWW Consortium (W3C) that secures interoperability on the world wide web with commercial browsers like Chrome and Internet Explorer as well as open source ones. Linux and companies like Red Hat are another examples of successes in establishing de facto standards based on open source. This governance model is graphically presented in Figure 14.
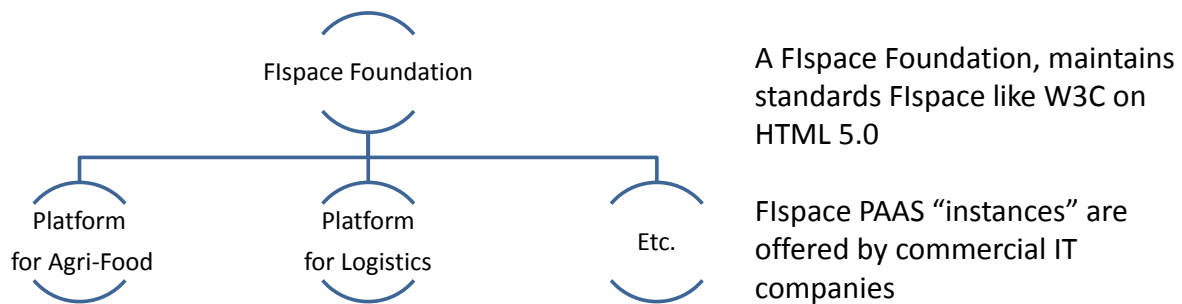
Figure 14:   Possible governance structure of FIspace in the commercial stage.

The FIspace Foundation will take over all the FIspace know-how (code, standards) and make it available as open source on its website. The FIspace Foundation will encourage the use of the know-how in open source projects and allows companies to use the open source stand-ards and codes in commercial products and services. The next sections in this chapter provide more details on establishing the FIspace Foundation.

Several current FIspace partners have already indicated they plan to create a FIspace in-stance for commercial exploitation in one or more domains. For the short term this is the most likely scenario but for the longer term, the consortium wants to encourage other companies to offer their own FIspace platform and to ensure instances are interoperable. This is model is also attractive for encouraging external funding through e.g. venture capitalists, as we mention in 5.2.1.

Given the comments in the review meeting, taking also into account the developments in the FI-PPP in general and recent discussions on the FI-WARE Foundation, the FIspace consor-tium has decided to establish a formal open governance model for the FIspace project. In the coming months this scenario will be elaborated in detail and a final approval will be officially given at the next General Meeting of the FIspace consortium (01.-02. Oct. 2014).

5.3   Identify prospective members

All current FIspace consortium members will be invited to participate in forming of the FIspace Foundation. The FIspace Foundation will safeguard the openness of the FIspace plat-form, and its independence from any single entity or company and other requirements for al-lowing successful exploitation of FIspace platform implementations. At least one or more part-ners in all three key areas will be involved in the formation process of the Foundation in order to have all aspects represented in its statutes. These three areas are: Software development, End users (companies planning to use FIspace to implement their business processes) and Re-search entities.

The basic ground rules on which the Foundation operates and within which boundaries, will be finalised within a certain time frame. They will cover the framework for the Foundation statutes which can be used to form the actual legal entity. Some presently well-functioning foundations (like Apache or Cloud Foundry) will be used as examples or reference. The project

consortium also includes two foundation style organisations that can provide first-hand experience in the formation process.

In case of any problems during the formation process, an external facilitator can/will be utilised to achieve the required consensus amongst founding members of the Foundation.

In the coming months we will further explore who should be the board members and along with the draft statutes (see next Section) decide on this during the next General Meeting (01.-02. Oct. 2014).

5.4   Formation of the Foundation

The FIspace Foundation will:

- Hold the IPR for the open source core of the platform as well as for the open specifications

- Promote FIspace as a de facto open collaboration platform standard

- Be financially supported by partner contributions, which will cover at least the minimal operational costs. Any additional budget can be spend on promotion.

- Have a request-for-change (RFC) procedure as well as procedures for new members, governance etc.

Details of the statutes will be finalised during the Foundation creation process.

From an administrative standpoint, creating a Foundation is considered rather easy, especially in The Netherlands as mentioned before. The overall process was already analysed for one example, based on the procedures that need to take place under the Dutch law. For being able to create a foundation, draft statutes have to be elaborated, based on examples and discussed with a notary to ensure the required applicable wording, and then the foundation is created. Additionally, the Foundation has to be registered at the Chamber of Commerce and a bank account can be opened. Costs are, at least in the Netherlands, very reasonable (start-up costs for the notary and yearly operational costs of less than 1000 euro), this can be paid from the FIspace budget while the project is operating. Under Dutch law board members can be foreigners, although it is attractive to have at least one Dutch member on the board.

In the coming months, up to the General Meeting (01.-02. Oct. 2014), the following topics will be specified in detail:

- The formal objectives and goals of the FIspace Foundation and the any IPR topics that must be addressed to ensure the Foundation's ability to publish the FIspace open source technologies and specifications
- Precise financial fees for organisations participating in the formation and operation of the Foundation based on tiered or other structure that recognises that

the Foundation should be inclusive to both small and large companies as well as academic organisations

- Governance of the Foundation including formal bodies such as the governing board, chairman, dissemination committee and others, including desired profiles for board members
- In addition to this, the first group of board members will seek approval of their employer to take up such an activity as an addition to their normal labour contract.

Once the final agreement is reached at the next General Meeting of the consortium, the FIspace Foundation can be created by November and a formal foundation established by a notary in January 2015.

5.5   Publication of FIspace technologies

After formal establishment of the FIspace Foundation, the FIspace open source technologies will be officially published at the website. These concern the programming interfaces, development guidelines and open source technologies needed for App development within the FIspace platform.

In practice this will mainly be a formal continuation of the documentation that is already provided and updated in the current plan.

5.5.1 Exploitation Agreement & Term Sheet

An exploitation agreement (EA) is a formal document where each entity describes all details of a potential commercial opportunity that may arise after or during the project life cycle. It is a quite complex document. We are mainly focus on this kind of approach:

Section 1. Definitions

Article 1.1. FIspace project

Article 1.2. Contract Definitions

Article 1.3. Additional Definitions

Article 1.4. Further understandings

      I.   General Roles

Section 2. Purpose and Duration

Article 2.1. Purpose

Article 2.2. Duration

Section 3. Exploitation Committees

Article 3.1. Exploitation Coordination Committee

Article 8.9. Counterparts

Section 9. Signatures

Annex I Table of Foreground

As we consider this EA document quite difficult to elaborate, we will first create a Term Sheet document, a bit more informal and more accurate to specific goals. This TS document is the previous file where all information of potential interest from partners will be collected, is a live document and still as draft version, but mainly: these 6 pages are an estimation of what is going to be:

TERM SHEET

EXPLOITATION AGREEMENT

FISPACE PROJECT

Topic	Agreement
Parties	(1) ATOS SPAIN SOCIEDAD ANONIMA (ATOS) (6) IBM ISRAEL - SCIENCE AND TECHNOLOGY LTD (IBM) (7) KOCSISTEM BILGI VE ILETISIM HIZMETLERI A.S. (KOÇ) (27) LIMETRI VB (Lime Tri) ¿Any other?
FIspace Platform	FIspace is a Future-Internet-based extensible SaaS-platform that will enable the seamless, efficient, and effective business collaboration across organizational boundaries and facilitates the establishment of ecosystems with business benefits for both stakeholders from industrial sectors as well as the ICT industry. Extensibility of the FIspace platform is achieved by addition of functionality through Apps, configuration of the platform for dedicated industry users through collaborative workflows.
Purpose	On this basis, the purpose of the Exploitation Agreement is to establish: • The standards of the technical support to be provided by the Parties to the Phase 3 partners of the FIspace Platform. • The terms, under which the Parties will exploit the

FIspace
Business Collaboration

	business opportunities which may derive from the FIspace Platform, once the EU financed project will be finalised.
Product(s)	Means the results of the FIspace Platform and anything tangible or intangible produced entirely or partially from such results including or not associated Parties's background, as well as any service which derives therefrom, and which can be marketable for a business opportunity.
Duration	• 24 months from the date on which the Grant Agreement is terminated; • Automatic renewal for one year periods; • In case of termination, the Exploitation Agreement will be maintained until finalisation of all business opportunities carried out by one or more of its parties.
Exploitation Coordination Committee (ECC)	Supervising committee of the exploitation
Composition	Each Party shall have one representative Chairman shall be Atos Spain SA
Meeting	At least once a year (to be convened by the chairman with 15 days prior notice and agenda) At any other time necessary (to be convened by any Party with 15 days prior notice and agenda)
Quorum and majority	Quorum: [2/3] of the Parties present or represented (or all Parties when unanimous decisions are to be taken) Majority: [2/3] of the votes (each Party shall have one vote) *Possibility for certain decision to be taken unanimously – Possibility to prohibit Defaulting Parties to vote*
Veto rights	For each Party in case its legitimate commercial interests would be harmed, or its rights and liabilities under the Exploitation Agreement would be impacted. The Party using its veto right shall undertake to pro-actively find an arrangement in order to mitigate the consequence of the veto for all the other Parties.
Competences	It will be in charge of (list to be further detailed in the final agreement): • the definition of the strategy for the exploitation of the Product(s) and foster business relationships and alliances

	with third parties; • the adaptation of the terms of the Exploitation Agreement to the necessities of the exploitation; • establish Business Opportunities Committee(s); • the follow-up of the issues regarding the Parties (participation, determination of defaulting parties;
Business Opportunity Committee(s) (BOC)	Committee to be established for each new business identified further to the ECC's decision, with the Parties which have agreed to collaborate in the specific business opportunity.
Composition	The Parties (at least 2) which have agreed to collaborate in an identified business opportunity.
Negotiation	A negotiation period will be necessary to determine: • the business plan related to the marketing of a Product; • the roles and responsibilities of each Party in the implementation of the business opportunity; • the final income sharing, to be calculated on the basis of the principles defined in the Exploitation Agreement; • the specific governance structure (meetings…) for supervising the implementation of the business opportunity;
Competences	• This committee will be responsible for the determination of all the actual commercial activities carried out by two or more Parties and follow-up the implementation of such activities. • The follow-up of the issues related to the technical support to be provided by the Parties to the Phase 3 partners of the FIspace Platform;
Specific obligations of the Parties	Each Party obligates itself vis-à-vis each and every other Party to use reasonable endeavours to perform and fulfil, promptly, actively and on time, all of its obligations under the Exploitation Agreement. Each Party undertakes to refer to the ECC any business opportunity which would require the involvement of more than one Party, for the commercialisation of Products in order to take into consideration the establishment of a BOC for this business opportunity. Each Party hereby undertakes to use reasonable endeavours to supply promptly to the ECC all such information or documents as the ECC may need to carry out its responsibilities. Each Party shall ensure the accuracy of any information or materials it supplies for the purpose of commercial activities and

	promptly to correct any error therein of which it is notified. The recipient Party shall be entirely responsible for the use that such information and materials are given. In addition, any Party hereby agrees to make available any of its assets (including, but not limited to, any right it may have on Background or the results) which is needed for use for the purpose of carrying out a business opportunity with other Parties. The Parties undertake to respect and implement any standard of use of the FIspace Platform, in particular in the marketing of the Products, which standards shall be established and updated by the .
Specific rights of the Parties	Each Party is entitled to explore new Business Opportunities and request the creation of a BOC, provided the requirements for the establishment thereof are met. Each Party, which is legally entitled to do so can perform the role of distributor and the BOC should establish a reasonable economic compensation to compensate the sales efforts. Each Party has the right to carry out all the Business Opportunities in any part of the world, but in any event within, if any, the geographical scope agreed by the corresponding BOC. Each Party can delegate or sub-contract to other persons the performance of its obligations under the Exploitation Agreement.
Standards for support to Phase 3 Partners	Until September 2016, each Party agree to provide to the Level 3 partners of the FIspace Platform, on a good faith effort basis, the following services: • [*kind of services to be listed*] • [*kind of services to be listed*] • [*kind of services to be listed*] With the following quality standards: • [*indicate quality standards*] • [*indicate quality standards*] • [*indicate quality standards*] • [*indicate quality standards*] Provided that for each partner such support shall be limited to: • [*indicate limitation for each partner or all partners*] • [*indicate limitation for each partner or all partners*] • [*indicate limitation for each partner or all partners*]

	• [*indicate limitation for each partner or all partners*]
Income distribution	
Guidelines for the BOC regarding income sharing	Each BOC is entitled to define its own income distribution scheme, which should recognise for each participating Party:
	(i) sales efforts, and therefore the related commission for such investments;
	(ii) the value of the IPRs made available by a participating Party for the concerned business opportunity;
	⬛ In order to calculate the value of the IPRs, the BOC can analyse the effort and cost reports of the EU project to determine the investment required for each IPR.
	(iii) the costs / investments dedicated by one Party for:
	a. the evolution of any IPR; and
	b. any additional knowledge needed for the BOC;
	The value of evolved IPRs and of the additional knowledge needed for the BOC should be discussed and agreed at BOC level.
	(iv) deployment and/or operation cost.
	It is specified that the values assigned to these items with respect to one Party in one BOC, shall also, unless otherwise agreed by the participating Parties, be applicable for any further BOC for which such Party participates
General rules	(i) a percentage of [ten percent (10%)] of the total contractual value of the business opportunity will be paid to the Party(ies) who has(ve) generated the business opportunity (the Origination Commission). The Origination Commission could be split in the case that the Party originating the business opportunity is not able to close the negotiation and contract with a customer, in such case the distribution of the Origination Commission will be:
	a. [fifty percent (50%)] of the Origination Commission will be assigned to the Party(ies) that generated the business opportunity; and
	b. [fifty percent (50%)] of the Origination Commission will be assigned to the Party(ies) that closed the sale with a customer(s) in the context of the business opportunity.
	(ii) The remaining income generated by the same business opportunity will be distributed among the Parties that actually participate in the business opportunity, this distribution will be negotiated for each business opportunity at

	the BOC.
	If, during the exploitation period of a specific business opportunity, there is a change in the operation or exploitation which causes a participating Party to receive a level of income which is no longer in line with the income taken into account in the decision of the BOC, all participating Parties shall agree in good faith any modification or adaptation necessary to allow the concerned Party to continue participating in the business opportunity on the same basis as originally contemplated in the initial BOC decision, except as otherwise agreed as between the concerned Parties.
Liabilities	
Limitations as between the parties	Each Party shall indemnify each of the other Parties in respect of the acts or omissions of itself, its employees, agents and sub-contractors, provided always that no Party shall be responsible to any other Participant for punitive damages, indirect or consequential loss or similar damage such as, but not limited to, loss of profit, loss of revenue or loss of contracts. A Party's aggregate liability for direct damages towards the other Parties collectively shall be limited to once the Party's share in the incomes generated under the Exploitation Agreement and actually perceived by that Party during the year preceding the date on which the damage occurs. The exclusions and limitations of liability shall not apply in the case of damage caused by a wilful act and/or gross negligence.
Towards third parties	Each Party shall be solely liable for any loss, damage or injury to third parties resulting from the performance by it of its obligations in the Exploitation Agreement. In case of subcontracting, the concerned Party shall remain primarily responsible for the compliance with such obligations vis-à-vis the other Parties.
Force Majeure	No breach in case of breach by one Party caused by Force Majeure.
Termination	• Possibility for a party to leave with a notice sent 30 days prior to the initial termination date or the end of each renewal period; • Possibility for the ECC to terminate the participation of a Party which is qualified as a Defaulting Party, and provided that the latter would not have cured its default within 30 days from the date of the notice sent by the chairman.

Assignment	No assignment or amendment of the Exploitation Contract without the prior agreement of all Parties (except for those amendments listed in the list of competences of the ECC).
Applicable law/settlement of disputes	Laws of Belgium Jurisdictions of Brussels further to a mediation process having failed (rules of Mediation (formerly BBMC) with a minimum of three meetings and a delay of at least 60 days).

6   Contingency plan

The FIspace consortium has established a contingency plan to address potential delays in formation of the FIspace Foundation or in partner companies making available a commercial deployment of the FIspace platform for use by Phase 3 projects. The support of Phase 3 projects is assured until M24 (March 2015), due to the current development team being in place and providing the Platform Hosting and Experimentation Environment along with required support and maintenance. To avoid a situation that the FIspace platform is not active after M24 a contingency plan has been developed as described in this Chapter. The contingency plan focus on an incremental process of extended engagement of the current FIspace partners. Section 6.1 describes how a Letter of Intent is formulated and signed by all partners that are currently involved in development of FIspace components.

In the contingency scenario the IPR will not be transferred to the Foundation, and instead an extension of the current Consortium Agreement will be prepared to continue the current FIspace organization and create framework in which IPR issues are clearly addressed (Section 6.2) that enable a prolongation of the availability of the FIspace platform and support services for Phase 3 projects using the same structure and facilities as provided during the operation of the project.

Partners currently providing the FIspace platform technologies and infrastructure would continue to do so for an incremental period of time allowing for completion of the formation of the Foundation and/or any finalising of the Exploitation Agreement between commercial partners to transition availability of the FIspace platform for Phase 3 projects to a commercial and sustainable basis.

6.1   Letter of Intent

As a first contingency step of extended engagement, a Letter of Intent will be signed by all partners that are currently involved in developing components for the FIspace platform, as well as Apps that are developed within the current project. A draft letter is attached in **Annex 1**. This will guarantee that all FIspace components will be accessible and supported for Phase 3 projects.

The draft letter was first discussed and modified by several of the main development partners and finally agreed in principle by e-mail confirmation by all other partners that are concerned (see Annex 2). This preliminary process provides assurance that in the event the contingency plan is needed formal signing on the Letter of Intent by all concerned partners can be quickly executed.

6.2   Extension of the Consortium Agreement

On top of the FIspace Grant Agreement that represents a contractual agreement between the FIspace beneficiaries and the European Commission, the FIspace partners have signed a Consortium Agreement to

- Specify or supplement, as between themselves, the provisions of the Grant Agreement;
- Lay down general rules related to the management of the Project and their agreements with respect to certain matters including (but not limited to) access rights and liability; and
- Provide for the special requirements of the Future Internet PPP.

The Consortium Agreement generally remains in full force and effect until the complete discharge of all obligations undertaken by the FIspace beneficiaries.

As explained in previous chapters, as soon as the FIspace foundation is established, the related contractual terms will also come into force and smoothly substitute the previous contractual agreements. However, this handover from the FIspace project to the follow-up organisation might require a certain period of time, before all parties will be able to sign the final contractual agreements. Nevertheless, during this transition period, the exploiting FIspace partners are already planning to start with the project follow-up and the related activities for exploitation as well as support Phase 3 projects at the same time.

Therefore, even if such a longer than expected transition period should occur, the related parties are committed to further collaborate and carefully coordinate the required activities in support of Phase 3 projects. From a practical and pragmatic point of view, the related parties will maintain their communication channels and openly collaborate for the sake of a successful exploitation of the FIspace project results. However, to carefully manage responsibilities and mitigate risks, certain contractual agreements would be required (e.g. with respect to foreground, liability, contact points after GA termination). Therefore, to reduce efforts and not to reinvent the wheel with respect to such a contractual agreement, in such a contingency case, the FIspace consortium would extend the duration of the existing FIspace consortium agreement.

Details concerning the contingent extension of the consortium agreement will be presented and agreed at the next General Meeting (01.-02. Oct. 2014). After possible adaption, the formal collection of signatures can commence and will be finished by March 2015 (end of original project).

7 Conclusions

Final conclusions would be written in M24. Just in case, this document update has been mainly focused on the sustainability and describing what are we want to achieve with the Foundation and with the Exploitation Agreement and the Term Sheet. We have also included the B2B market analysis according to the last review recommendations.

As general conclusion for the sustainability we, as a consortium, think that FIspace will be a specific reality at some point in time. That is why we want to make sure we have all legal infrastructure covered. Key point is clearly the TS, if we arrive to get a general agreement on what are main responsibilities on platform maintenance and how to manage business opportunities, it will really ease the hard work to be done in exploitation agreement elaboration.

On the other hand, with the Foundation, we will ensure FIspace life beyond commercial purposes and public funding. FIspace foundation will protect the knowledge and will stablish potential standards of use as well as playing an important role regarding dissemination and spreading the word of the platform itself, the use cases achieved and the apps working.

We still have pending issues like the marketing plan or the new Porter Forces analysis that are going to be included in next document version at the end of the project. We also want to achieve a global comprehension of the FIspace "environment" including not only the platform, but the potential commercial use of the trials; this is already being done side by side in close cooperation with T520, so the global FIspace business is seamless and efficient.

Annex 1 Draft Letter of Intent

From The FIspace consortium

To the responsible partners in WP200 & WP400

Ref: Intention to support FIspace from April 2015 – September 2016. Letter of intent

Dear Sir / Madam

The purpose of this letter is to declare our intent in the event that the FI Space Sustainability plan is not in operation by at the 1st April 2015.

We agree to provide, on a good faith effort basis, level 3 support[56] of the software developed by [partner's name] and integrated into the FIspace platform. This support will be during [partner's name] regular working hours and from 1st April 2015 to 30th September 2016.

An exploitation agreement will be signed before 1st April 2015 between the partners of the FIspace platform in order to establish the specific conditions of such support.

Yours faithfully

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[56] See http://en.wikipedia.org/wiki/Technical_support for a definition of this level.

Annex 2 FIspace Components

FIspace platform components	Contact for support
Core components	
End-User Core Front-End	ATOS
System & Data Integration	ATOS
FIspace Store	IBM
B2B Collaboration core	IBM
Operating Environment	IBM
Security, Privacy and Trust	KOC
Supporting components	
Software Development Kit	ATOS
Cloud hosting	KOC
Experimentation Environment	IBM
Apps	
Initial Apps	
Product Information App - PInf App	ATB
Product Info App TIC- PITIC	ATOS
Logistics Planning Service App - LPA	KOC
Business SLA Management App - BizSLAM App	UDE
Crop Protection Information Sharing	
Combine weather data	BO-MO
Phytophthora Advice	DLO
Farm Management	Limetri
Task Control	Kverneland
Bad weather alert	CIT-DEV
Scheduling	DLO
Measure weather & soil variables	DLO
Greenhouse Management & Control	
Greenhouse Monitoring & Advice	NKUA
Greenhouse Crop Monitoring	Mobics

Greenhouse Crop Analyser	Mobics
Complaint Management	NKUA
Product Recall	NKUA
Fish Distribution and (Re-Planning)	
CargoSwApp	SDZ
Fresh Fruit & Vegetables	
RISKMAN	Snoopmedia
BOXMAN	Fraunhofer
Flowers & Plants Supply Chain Monitoring	
Logistic tracking & tracing	M&A
Conditions monitoring	M&A
Expert quality assessment	DLO
Product quality alert	M&A
Product quality prediction	DLO
BOTAPP	QRAY
Meat Information Provenance	
QERA - Query EPICS Repositories App	EECC
DERA - Discover EPIS Repositories App	EECC
ATIA - Aggregating Traceability Information App	EECC
Import & Export of Consumer Goods	
Transport Demand App	FINCONS
Shipment Status App	FINCONS
Manual Event & Deviation Reporting App	FINCONS
Tailored Information for Consumers	
TaPIA - Tailored Product Info App	ATOS
Traffic Light App	UPM
Augmented Reality App	CBT
Shopping List App	CBT
Push Information App	CBT