



OPENDEI



REPORT OF BUSINESS MODEL CO.DESIGN WORKSHOP

28 July 2022



Atos

EHTEL



FIWARE

INTERNATIONAL DATA
SPACES ASSOCIATION

iovalia
ASSOCIATION



TECNOALMENTI



CONTENTS

List of Figures	3
1 INTRODUCTION	4
2 Value Design and magic triangle methodology.....	5
2.1 Value design tool.....	5
2.2 The Magic Triangle	5
3 Summary and findings of parallel sessions	5
3.1 Energy Parallel session.....	6
3.1.1 Value design.....	6
3.1.2 Business model innovation.....	7
3.1.3 Additional remarks.....	9
4 Manufacturing & Afrifood Parallel session.....	9
4.1 Value design.....	9
4.2 Business model innovation.....	13
4.3 Healthcare parallel session.....	14
4.3.1 Value design.....	15
4.4 Business model innovation.....	16
4.4.1 Additional remarks.....	18
5 Final Remarks and conclusions.....	18



LIST OF FIGURES

Figure 1. The INTERCONNECT business model draft based on the St.Gallen Magic Triangle	9
Figure 2. The KYKLOS 4.0 business model draft based on the St.Gallen Magic Triangle	14
Figure 3. The ADLIFE business model draft based on the St.Gallen Magic Triangle.....	18

1 INTRODUCTION

In the digital economy, digital platforms play an important role. According to the World Economic Forum's Digital Transformation Initiative (DTI), digital platforms could unlock over 8 trillion euros of value for business and wider society over a 10-year period¹ Digital platforms have become one of the principal ways of organizing a wide range of human activities, including economic, social, and political interactions². More specifically, from a business-to-business (B2B) point of view, platforms can be defined as virtual environments facilitating the exchange and connection of data between different organizations through a shared reference architecture and common governance rules³. New platform-enabled business opportunities can be targeted through the creation of virtual buyer-and-seller communities, thus brokering interactions of makers and users with diverse but complementary interests. Platforms offer new ways of maximizing efficiency and improving profitability⁴ and are therefore gaining importance for their economic brokerage and intermediation services – at both the business-to-consumer (B2C) and business-to-business (B2B) levels.

Digital Platforms have a disruptive impact on industry value chains and organisations which are the providers and users of digital platforms. In order to take advantage of the opportunities and control the risks of change, innovative business models are needed to adapt the business and operational processes, redefining the customer journey and value proposition, discovering new channels and stakeholders' engagement models, and creating innovative monetization models. Platforms require aligning incentives of all participants on funding development and operations, prioritizing the development of new services, and pricing of services. The more platforms are built through joint efforts across complex supply chains, the more it is necessary to establish collective decision-making processes and governance structures. However, development of a proper business model to accelerate the commercialization of the digital platform is challenging and not a straightforward journey for many European projects including the large-scale pilots of digital platforms.

Successful business development hinges on many factors and good practices. Many successful developments build on cross-sector learnings and copying proven business models. When new technologies disrupt a sector, this becomes even more challenging. Principles that often are overlooked are the outside-in principle that requires the investigation of the value proposition from a customer (outside) or the fact that successful business modelling, much like technology development, require many iterations, including trial and error to find viable solutions. Complexities also arise due to the interconnected nature of business models in value networks, in particular when this is addressing digital platforms.

This underlines, that an agile approach including testing and iterative evaluation of progress are as important on the commercial side as on the technology side. Neglecting this part of the development process can result in very short-lived digital platforms and solutions, due to nonviable business models.

¹ World Economic Forum Digital Transformation Initiative: Unlocking B2B Platform Value, March 2017

² Gerald C. Kane, Douglas Palmer, Anh Nguyen-Phillips, and David Kiron. "Is Your Business Ready for A Digital Future?" MIT Sloan Management Review (56:4), Summer 2015. - Asadullah, Ahmad; Faik, Isam; and Kankanhalli, Atreyi, "Digital Platforms: A Review and Future Directions" (2018). PACIS 2018 Proceedings. 248.

³ G. Cattaneo, G. Micheletti and L. Veronesi (IDC) 28TH July 2016. "European Data Market SMART 2013/0063. D3.10 Industrial Data Platforms – Key Enablers of Industry Digitization." The document is one of a series of in-depth analysis focusing on the development of the data-driven economy in Europe based on specific case studies by sector and/or by technology. It constitutes the deliverable D3.10 of the study "European Data market", SMART 2-013/0036 entrusted to IDC and Open Evidence by the European Commission, DG Connect, Unit G3 – Data Value Chain.

⁴ Duch-Brown, N. (2017). Platforms to business relations in online platform ecosystems. Brussels: European Commission. doi:JRC109186

OPEN DEI project with collaboration of EU-IoT project organized a co-design workshop on 18 May 2022 that aimed at targeting this topic by carrying out a first exercise of business model co-design with some H2020 projects that address the topic of digital platforms. The co-design exercise took place throughout three parallel sessions that each was focused on a specific domain namely manufacturing and agri-food, healthcare and energy. In the following sections the main methodology for business modelling which is applied during the workshop and the main findings of parallel sessions are summarized.

2 VALUE DESIGN AND MAGIC TRIANGLE METHODOLOGY

The workshop was based on the methodologies and tools offered by EU-IoT as part of the digital business model acceleration packages, continually developed in the project.

2.1 Value design tool

The value design tool is a Co-creation tool designed for outlining a value design on the basis of a specific target group /customer segment. Thus the methodology can be applied as the next step after a customer analysis. Alternatively it can be used as hypothesis testing, by creating multiple boards each with focus on one potential customer segment, to investigate to whom a desirable value can be offered, in relation to the situation of the specific customer segment. Thus, the value design tool represents the outside-in perspective, where the actors designing value for a future business model starts from the market/customer side and moves inwards toward what the actor/project/company can offer the customers.

Details in the specific situation of the customer are of essence, when first formulating the tasks of the customers and the problems and opportunities related to the tasks from the customers perspective. Afterwards the value offering is designed by assessing how the actor/project/company can help the customer eliminate the problems and seize the opportunities, as a solution.

2.2 The Magic Triangle

The St. Gallen Magic Triangle⁵ (<https://businessmodelnavigator.com>) enables a better understanding of the key drivers behind successful business models, and is characterised by its simplicity and ease of use while simultaneously providing a clear picture of the business model architecture.

The Magic Triangle consists of 4 dimensions: Who, What, How and Why. These outline the three sections of the triangle and enable framing a business model for a specific customer (Who) segment including: What value is offered to the customer, How the value proposition is created, Why this is valuable to the company/project through the revenue created. Note that the Why can cover a range of different values desired by the company, depending on the Market and how this specific business model interacts with the other business models owned by the same entity.

3 SUMMARY AND FINDINGS OF PARALLEL SESSIONS

In the following sub-sections, a summary of the main points that were discussed and highlighted during each parallel session in terms of value design for each project and the business model innovation design are presented.

⁵ Oliver Gassmann, Karolin Frankenberger and Michaela Csik. White Paper (updated version 2019). "The St. Gallen Business Model Navigator". Edited by Peter Bruggler

3.1 Energy Parallel session

Participating Projects:

SYNERGY: Providing the foundations for a data market surrounding interoperable energy data.

INTERCONNECT: Data interface between Distribution Systems Operators (DSOs), appliance OEMs and energy consumers (businesses/households)

Participants:

- Ugo Stecchi, ETRA, SYNERGY
- Frank Berkers, TNO, INTERCONNECT
- Virag Szijjarto, TNO, INTERCONNECT

Moderator: Brendan Rowan

3.1.1 Value design

SYNERGY Project

Solution: Multifactor, multilateral data platform for matchmaking data products to customer needs underpinned by smart contracts.

Tasks:

- Enabling the district level of grid maintenance
- Optimization of the grid through data sharing between generators, distributors and consumers for integrating more sources

Problems:

- Data interoperability
- Managing access and security

Eliminates problems

- Provides a common data and information model that translates various other data inputs
- Defines reference data standards
- Rules and supervision enables compliance by default

Opportunities

- Grow data sets for insights

Seizes opportunities

- Creation of sellable data assets

INTERCONNECT Project

Solution: Platform linking appliances to energy distributors. Providing a direct relationship to end-user.

Tasks:

- Providing peak shaving - smoothing out energy consumption demands

- Enabling consumers to reduce energy costs
- Aggregated building system energy management
- Reduce need for extra infrastructure

Problems:

- Interoperability between devices – silos within OEMs ecosystems
- No control on end-user consumption from DSOs
- Lack of micro-visibility on consumption

Eliminates problems

- Data layer between the appliances
- Provides communication between systems
- Provides accurate predictions

Opportunities

- DSO sets the appliances time for operation
- Users can integrate and share self-generated energy
- Use of specific energy sources

Seizes opportunities

- Development of value-add data-based services
- Flexible energy use and federation of data assets

3.1.2 Business model innovation

INTERCONNECT project was selected for the business model design.

WHO/ Customer

Who is your target customer?

- Distribution Systems Operators (DSOs) – **Main customer**
- OEM Device manufacturers
- Consumer – Household
- Consumer – Commercial
- Consumer – Self-generation
- Third party app developer

WHAT/ Value proposition

What does the company offer the customers?

TABLE 1. VALUE PROPOSITION DESIGN OF INTERCONNECT PROJECT

Area	Value	Who
Infrastructure	<ul style="list-style-type: none"> • Increased capacity on grid; lower capital investment required • Reduced cost of operation 	<ul style="list-style-type: none"> • DSOs • DSOs
Ecosystem	<ul style="list-style-type: none"> • Connection of heterogenous groups households to grid flexibility – by grouping appliances across households and providing a direct control loop to the DSOs peak shaving can be achieved. • Broader access to actors – reach to new members of the system • New services and wider range of energy solutions • Compliance with Data Act 	<ul style="list-style-type: none"> • DSOs • DSOs, OEMs

		<ul style="list-style-type: none"> • 3rd Party • OEMs
Onboarding	<ul style="list-style-type: none"> • Faster onboarding of assets and consumers onto system • Better alignment of small-scale energy production to stabilise grid and have consumption matched <i>close to source</i> 	<ul style="list-style-type: none"> • DSOs • DSOs • Consumers
Consumption	<ul style="list-style-type: none"> • Energy usage optimisation • Reduced costs of consumption • Reduced need for fossil fuel generated energy <ul style="list-style-type: none"> ◦ Greening of consumption 	<ul style="list-style-type: none"> • Consumers
Penalties	<ul style="list-style-type: none"> • Improving quality of services – less risk of failure to meet minimum requirements 	<ul style="list-style-type: none"> • DSOs

HOW/ Value chain

How does the organization, together with other partners, create this solution?

Systems

- Management and responsibility: organisation for the operation, tools and standards
 - Can be a single entity or a network but roles will need to be strongly defined with watertight governance
- Strong governance structures which is underpinned by the platform to ensure security of the network, data reliability and resistance to abuse.

People

- Consumer managers – profiles which onboard households/buildings and their appliances onto the system ensuring compliance
- Consumers – requires incentivisation; need to have a clear ROI for their ceding of control of their appliances and data
- Platform governance leaders
- Building operators and facility management should be considered as partners

Knowledge

- Working with OEMs to adapt and adopt standards – cracking open the ecosystems
- Regular review and update of standards related to changes in context and environment
- Development of systems in relationship with regulations at local and national level

Tech

- Secure interfaces
- Smart bidirectional meters and smart home devices
- Interoperability layer and adapters

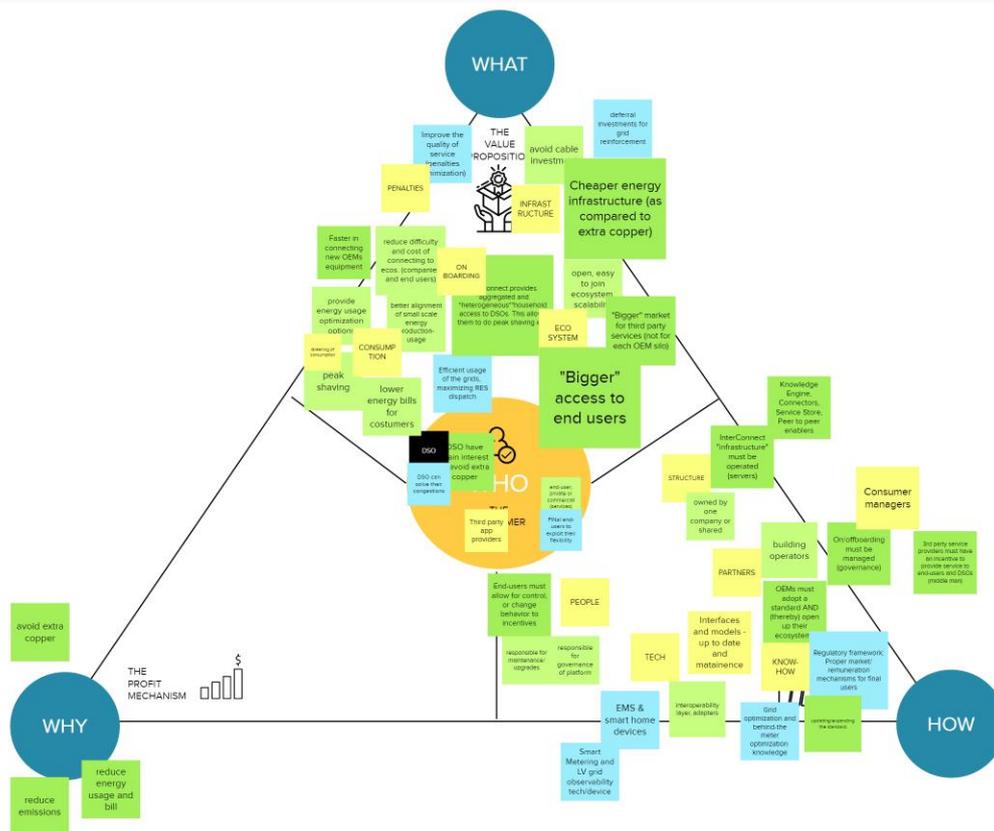


FIGURE 1. THE INTERCONNECT BUSINESS MODEL DRAFT BASED ON THE ST.GALLEN MAGIC TRIANGLE

3.1.3 Additional remarks

- Within the platform set up the challenge is to define who from the consortium will be responsible for operation and exploitation – there is a fundamental need for maintenance and updating of standards and tools.
- Nature of platform model means that the definition of the customer is difficult i.e. who will pay. There are multiple value propositions based on each of the customer profiles and segments.

4 MANUFACTURING & AFRIFOOD PARALLEL SESSION

Participating Projects: Digiprime, Kyklos, EPPF, Qu4lity, SmartAgriHubs

Participants: Usman Wajid, Dena Arabsolgar, Michail Beliatas, Alexandros Sikalidis, Mirko Presser, EFB SA, Giorgio Micheletti, Dieter Meinhard, (Guest)

Moderator: Anita Krogsøe Skou

The Manufacturing session was merged with the Agrofood session, where only one project where able to attend the workshop.

4.1 Value design

A representative from each project presented what the team had prepared in the Value design tool focusing on the tasks of a specific users tasks, problem and the corresponding opportunities based on the [value design tool guide](#).

Each session was follow by a short Q&A by all participants, clarifying the target customer and the value/solution the project was creating for the target customer segment. This lead to the yellow notes on the top of each site of the individual value design boards, summarizing the joint understanding of the aim.

Below each board is illustrated including the yellow notes.

After the presentations, the participants discussed which value design/project to continue with in the next part of the session both EFPF and Kyklos was highlighted as good candidates as they were well formulated in the tool. One of the EFPF representatives informed the group that they where already deep in the BMI process with several tests and so this opportunity was given to Kyklos.

Digiprime Project

Solution: The project provides an IT federated platform where 20 different cross-company and cross-sectoral services will be available. It will be a unique accounts access and they will be released after a full test in pilots and in open calls.

Tasks:

- Customers will have access to many different tools to enable and empower the conversion to the circular economy.
- IT will be allowed the interaction among different companies in different sectors.

Problems:

- Access to many services requires many payments, licences, etc. interoperability never works, finding other organizations to complete the new value chains is complex, etc.

Eliminates problems

- Data layer between the appliances
- providing an IT solution with 17 already working services and already connected and active users.
- Central IT platform. Polymorphic approach.
- Guidelines for external tools connection.
- Standardization protocolos.

Opportunities

- Get in contact with other organizations working in circular economy, having access to many tools and networks

Seizes opportunities

- Having access to a unique IT platform and network

Kyklos 4.0 Project

Solution: KYKLOS 4.0 technology involves a set of intelligent tools for real-time analytics, prediction, and recommendation systems, integrated into the KYKLOS 4.0 platform such as Customized product design, re-design and refurbishment, Real-time monitoring and resource optimization with DSS, and Preventive and reactive maintenance processes.

Tasks:

- Personalized products
- Low cost
- Low environmental footprint products

Problems:

- Digital transformation and interoperability of production systems and lines towards personalized, cost-efficient, and circularity products is challenging

Eliminates problems

- Provides smart design and production optimization solutions
- Incorporates a set of components that support the production, post-production and assembly phases, by modernizing the functionalities of shop floors in the adoption of Circular Manufacturing principles
- Identify processes not performing optimally and recommend further improvement

Opportunities

- The opportunity for customer will be customized, high value-for-money products with low environmental footprint
- The opportunity for companies will be that their digital transition to boost their growth/advancement and recovery

Seizes opportunities

- KYKLOS 4.0 solution promotes low-cost and easy-to-use tools and data platforms, so that companies/SMEs could adopt Circular Economy principles with limited investments from an ICT platform and Data Space point of view
- It enables the continuous monitoring of the Circular Manufacturing implementation in order to early react and improve the Circular Economy related metrics as well as their financial performance

EFPP Project

Solution: EFPP provides a single access to a Smart Manufacturing Portal and Federated Marketplace. They include easy to use technical and process documentation as well as reference cases.

Tasks:

- Customers want to digitalise their manufacturing and collaboration processes.
- Customers want to access heterogeneous systems via unified interfaces.

Problems:

- Heterogeneity of available systems and standards.
- Unified access is restricted by IPR limitations and commercial terms.

Eliminates problems

- Provision of smart design and production optimization solutions
- EFPP Data Spine enables the efficient connectivity and interoperability in terms of processes, protocols and data.
- EFF as a non-profit entity and owner of EFPP components ensures fair play and equal access to the ecosystem.

Seizes opportunities

- EFPF Portal provides single sign-on / single access to the EFPF ecosystem and related offerings.
- EFF provides different membership levels and constantly advance the ecosystem.

QU4LITY Project

Solution: QU4LITY has carried out 14 pilots to demonstrate the potential of AI using the architecture defined demonstrating the possible interoperability. This architecture can be used as a blueprint for companies on similar use cases.

Tasks:

- Manufacturing companies want to implement AI based tools and machines to improve the automation in quality assurance tasks and reach ZDM.

Problems:

- Lack of Interoperability among different systems; this increases notably the investment costs, which are a particular issue for SMEs.

Eliminates problems

- Development of standards and certification that will make it easier to use heterogeneous tools.

Opportunities

- Customers need tools certified according to standards that guarantee interoperability among them and, most important, avoid any vendor lock-in.

Seizes opportunities

- The Digital Factory Alliance (QU4LITY exploitation) platform will enable certification services giving visibility to certified tools for companies, in particular SMEs, since they have limited resources.

SmartAgriHubs

Solution: SmartAgriHubs offers diverse set of funding opportunities, organizes Open Calls, generates catalogue with available knowledge/expertise (Ag Technology Navigator) and provides an innovation Portal for networking and matchmaking.

Tasks:

- DIHs need to initiate, conduct and follow-up Innovation Experiments/Use cases.
- DIHs need access to stakeholder network, knowledge/expertise and finance

Problems:

- Fragmentation of knowledge/expertise
- Access to finance
- Continuous funding
- Minimum viable size

Eliminates problems

- Coherent access to knowledge/expertise
- Enlarges/enables access to finance
- Diversity of funds provides more continuity
- Enlarge the stakeholder network

Opportunities

- Successful innovations: end-users (e.g. farmers) adopt digital solutions, tech providers sell solutions, public bodies reach societal goals, ...
- Expand business

Seizes opportunities

- Run successful Innovation Experiments
- Create more business
- Improve reputation

4.2 Business model innovation

Methodology for the St. Gallen Magic Triangle was shortly recapped, and participants started to work collaboratively to fill out the online tool based on Kyklos's presented Value Design tool.

WHO/ Customer

Who is your target customer?

The target segment for the solution, and point of departure for filling out the Triangle from the perspective of the user: Manufacturing companies.

After a dialog regarding the different services provided by the platform solution other customers groups emerged e.g. consulting firms or integrators. These companies could base their service offer on helping the manufacturing companies leverage the full potential of the services offered on the platform, thus they should also be considered as a target customer. During the discussion leveraging data from the platform also came up, but no specific target customer group related to this value design was identified.

WHAT/ Value proposition

What does the company offer the customers?

In alignment with the multiple customer segment the BM could target, several value propositions were also in play. Here the moderator recemented the participants to continue the work later on, by separating the different value propositions and target customer segments and create a version of the St. Gallen Magic Triangle for each one – thus enabling more detail to the details and value chain of each one and furthermore to enable an overview of synergies between the different Business Models.

The value propositions targeting the Manufactures was on one hand focusing on production capabilities as: "Ability to offer personalized products to customers" and " Technology packages" and another value proposition for this manufacturer customer segment was knowledge "Knowledge of how to change the value chain to circular economy personalized products".

In relation to the consulting firms/integrators the value proposition was designed around market access "Access to new markets through building on the platform services".

HOW/ Value chain

How does the organization, together with other partners, create this solution?

The key element in the value chain of this platform is the partners network that provides the different services. The services are SW based and can be both open source and proprietary. In relation to the 'Knowledge' value proposition recourses as 'trainers' also came up in the dialog. The services would be offered through a marketplace, which also lead to a rich discussion regarding the different profit mechanisms.

WHY/ Revenue model

How does the organization create value in the form of revenue?

The first two profit mechanism for the production platform that was mentioned were a licensing agreement for platform access and as the platform will have several different services relevant to different customers 'Pay per use' for each service. The dialog circled on the services and it was suggested to package the services to match the needs of different target customers segment within the manufacturing industries, thus the revenue model could be build upon a "pay per use for packaged services". Equally, revenue models where discussed in relation to 'training support', 'consulting services' and 'system integration per service'.

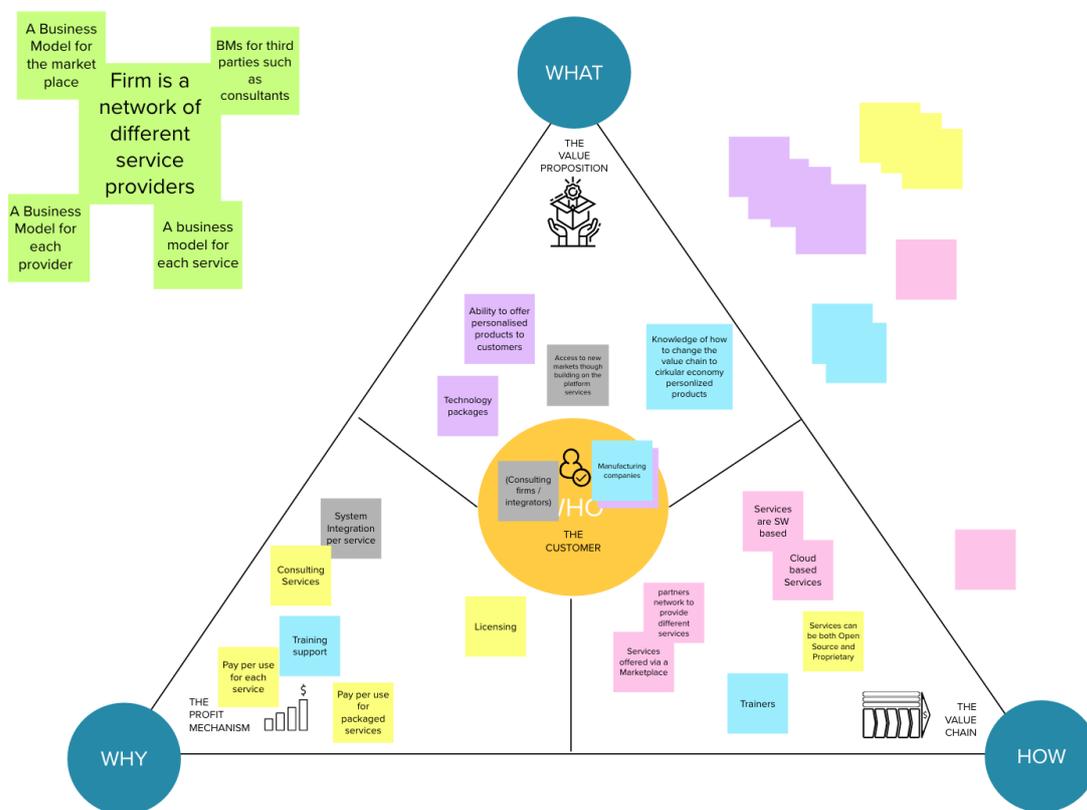


FIGURE 2. THE KYKLOS 4.0 BUSINESS MODEL DRAFT BASED ON THE ST.GALLEN MAGIC TRIANGLE

4.3 Healthcare parallel session

Participating Projects: ADLIFE and PHARAON

Participants:

- ADLIFE: Gokce Banu Laleci Erturkmen, Janika Blömeke, Sophie Wang, Jonah Grütters, Paula Zietzsch, Sara Ceron
- PHARAON: Laura Fiorini
- OPEN DEI: Luc Nicolas

Moderator: Emilie Mathilde Jakobsen

The parallel session was initiated with a round of introductions to moderator, participants and projects. Majority of the participants were present to work on a business model for their specific project, whereas a minority were present first and foremost to learn about BMI methodology.

4.3.1 Value design

ADLIFE

Solution: SmartAgriHubs offers integrated solution to patients with advanced chronic conditions that including: 1) A Personalized Care Plan Management Platform (PCPMP) which guides healthcare professionals to create personalized care plans for and with the patients via clinical decision support (CDS) services 2) A Patient empowerment platform to support care plan implementation, achieve care goals and improve self-management and adherence.

Tasks:

- For healthcare professionals: improve / maintain the health status and quality of life of multimorbid patients by providing high quality health care

Problems:

- It is Challenging to keep an overview of interactions of multiple factors relevant for individual care plans of multimorbid patients because clinical guidelines mostly focus on single diseases and fail to provide evidence on how to manage multiple diseases
- Multimorbid patients have interactions with many different health care professionals (HCP) who are involved in care plan management which usually creates coordination and communication gaps between different caregivers. This hampers efficient care management and may results in medical errors
- Patient health records are often only locally stored at the respective HCP which makes it difficult to have a holistic view of patient's medical condition. In addition, sharing of care plans might take time across different HCPs

Eliminates problems

- Digital tools support and guide care plan management and provide a communication/coordination platform for multidisciplinary care teams that also enables digital communication with the patients. The involved health care staff receives comprehensive information in one place, regardless of hospital, health care centre or municipal health care.
- Up to date care plans allowing all HCP to align treatments, eliminate overlap, unnecessary treatments/hospital visits, potential medicine errors
- Reconciled clinical guidelines are incorporated in the care plan management platform via CDS services which facilitate evidence-based personalised care.

Opportunities

- Having all up-to date health information of a patient in one place that all HCP involved can access (for multimorbid patients especially an overview of medication is important)
- Being able to communicate and coordinate with other HCP, caregivers, and the patient via one tool
- Being digitally supported in creating personalized care plans of multimorbid patients that support patient-centred care
- The gathering and sharing of information should be faster and more efficient to make health care system more productive and to ensure a better quality of life for the elderly

Seizes opportunities

- Incorporated clinical decision support CDS services suggest personalized goal and intervention recommendations to be included in the patient's care plan and are based on their medical summary by automating recommendations from evidence based clinical guidelines.
- Providing a patient-oriented solution (Patient empowerment platform) to empower patients to take control of their care plan, achieve care plan goals and to be actively involved in the care and the implementation of their care plan while improving self-management
- More coordinated and personalised care planning, clinical decision support and more communication between health and care professionals, and patients results in better health outcomes for patients, who will be more motivated to play an active part towards achieving their health goals.

PHARON

Solution: PHARON develops pilots for provision of the monitoring and Socialization care services in Tuscany and Apulia.

Tasks:

- For care providers: Propose personalized Integrated care for frail older adults

Problems:

- Stay in contact with the older adults and keep them involved in the community
- Stimulate frail older adults
- Support the caregivers (informal and informal)

Eliminates problems

- Monitor health status
- consultancy/Educational support
- Cognitive/Physical Stimulation

Opportunities

- Include data presented on dashboard, a videoconference system, monitoring sensors (wearable and environmental) and a telepresence robot

Seizes opportunities

- TUSCANY provides competitive advantage by enriching the current care offer and potential optimization of resources (has to be confirmed by the validation phase) and APULIA provides competitive advantage by adding new service in the portfolio.

4.4 Business model innovation

Methodology for the St. Gallen Magic Triangle was shortly recapped, and participants started to work collaboratively to fill out the online tool based on ADLIFE's presented Value Design tool.

WHO/ Customer

Who is your target customer?

The target segment for the solution, and point of departure for filling out the Triangle from the perspective of the user: healthcare professionals.

However, additional users include the multimorbid patients, Care givers and anyone interested in healthcare data, whereas customers could be Governments, Private hospitals / Care providers and even the private multimorbid patients.

Hence, in the healthcare domain, the WHO is not just a customer, but a set of stakeholders.

WHAT/ Value proposition

What does the company offer the customers?

The unique trait of the value proposition is digital intelligence that enables personalised care. However, additional traits – that are seen as complementary but are in fact indispensable – include the care service co-creation and the interoperability / of the platform.

HOW/ Value chain

How does the organization, together with other partners, create this solution?

The key of the value chain to generate the value proposition is the net of stakeholders and their partners (patients, healthcare providers, -managers, -facilities, -facility IT team/integrators), technical providers/enablers and domain specific regulators, policy makers and insurance providers. Hence, human resources are much more important for platforms' value creation in healthcare than physical resources.

WHY/ Revenue model

How does the organization create value in the form of revenue?

The obvious profit mechanism for a healthcare platform is a licensing agreement for platform access and maintenance. Additional revenue models may include service package selling and healthcare data selling. Key to monetary value generation is identified in enticing the 'big players' of the market (recognised health organisations) to attract critical mass, and to provide financial incentive to users of the platform to ensure fast adoption.

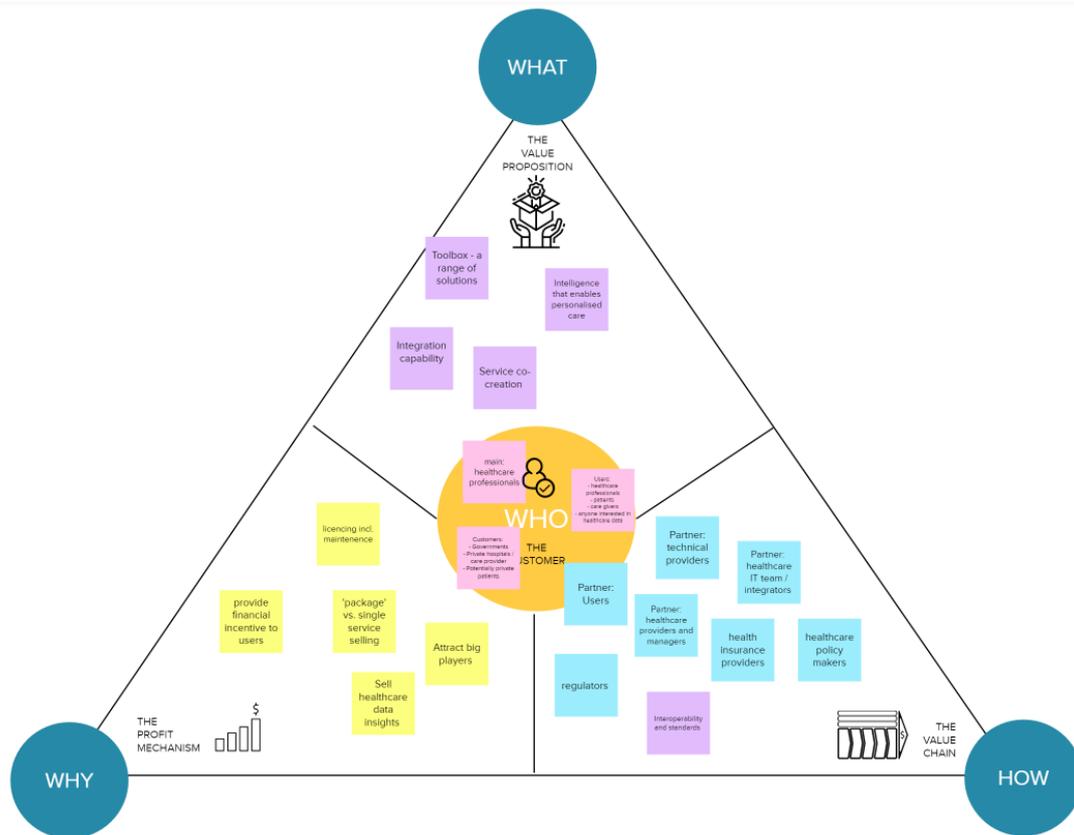


FIGURE 3. THE ADLIFE BUSINESS MODEL DRAFT BASED ON THE ST.GALLEN MAGIC TRIANGLE

4.4.1 Additional remarks

- Several of the dimensions turned out to be interrelated – the WHO and WHY in particular.
- Majority of reflections in each of the dimensions were transferable and/or relatable between the ADLIFE and PHARAON projects – presumably due to their affiliation to the healthcare domain.
- The group could easily have used more time to brainstorm and discuss each of the dimensions.
- Participants came to the conclusion that the outcome of the St. Gallen Magic Triangle can take many forms depending on which of the many stakeholders (WHO's) is used as point of departure – and that each perspective/outcome adds valuable insight to innovate a powerful business model for the platform solution.

5 FINAL REMARKS AND CONCLUSIONS

Developing new business models can be hard in particular when dealing with emerging technologies and digital ecosystems. This is the case of digital platforms as well. Digital platforms have the ability to connect people, organizations and resources with the aim of facilitating the core interactions between businesses and users as well as assuring a greater efficiency for the business management. Taking into account the complicated ecosystem that a digital platform deals with, it is an extremely challenging job to design a proper business model in particular considering that a business model is not only related to the money generation mechanism but also to creation of value and integration of the value chain.

In this regard, the design process of a business model should be an iterative process that takes place in several phases by first generating a very rough idea of the business model elements and then improving it step by step in each iteration.

The findings of this workshop highlights the fact that even though there are some specific elements of business model design for digital platforms in each domain but there are some elements that are common across several domains as well. An important cross-domain element of digital platforms are the wide variety of customers that they have as well as the stakeholders that are involved in generation and delivery of the value proposition. This implies a concise design of the customer segment and specific value proposition for each customer. Accordingly, another important aspect is the design of the value chain structure. Considering that numerous types of stakeholders are involved in a platform economy, a concrete definition of the key partners, their responsibilities, their engagement and finally the governance model is crucial for the success of a platform business model. Moreover, another crucial block of the platform business model is design of the financial structure. For the success of a platform it is critical to define what are the key revenue mechanisms that it applies and what type of monetization mix it will use. Platforms are not just a piece of technology, or a suite of software products, they are business models that creates value by facilitating transactions between buyers and sellers in an ecosystem, with the aim of capturing part of that value. In other words, platforms enable users and organizations to get what they need from each other. In such an ecosystem, it is crucial to define how revenue will be generated considering different possible mechanisms such as subscription model, 2 sided commission fee model, data monetization, Pay per service, Service level agreement, etc.

Each of the above mentioned aspects of a business model, along with all the other elements, should be designed in an iterative manner considering that the business model in a digital ecosystem can evolve gradually and during time.

xxx