

# The Core Interaction of Platforms: How Startups Connect Users and Producers

Heidi M. E. Korhonen, Kaisa Still, Marko Seppänen,  
Miika Kumpulainen, Arho Suominen, and Katri Valkokari

*“ Our management team strongly believes that the key opportunity of our business does not only come from just the increase in terms of number of users but also how we continue to enhance the value of our platform for our users. ”*

Victor Koo

Founder and CEO of the Youku online video platform

The platform economy is disrupting innovation while presenting both opportunities and challenges for startups. Platforms support value creation between multiple participant groups, and this operationalization of an ecosystem's value co-creation represents the “core interaction” of a platform. This article focuses on that core interaction and studies how startups connect producers and users in value-creating core interaction through digital platforms. The study is based on an analysis of 29 cases of platform startups interviewed at a leading European startup event. The studied startups were envisioning even millions of users and hundreds or thousands of producers co-creating value on their platforms. In such platform businesses, our results highlight the importance of attracting a large user pool, providing novel services to those users, offering a new market for producers, supporting the core interaction in various ways, and utilizing elements of the platform canvas – an adaptation of the business model canvas, which we have accommodated for platform-based business models – to accomplish these goals.

## Introduction

In the age of non-linear innovation and digital technologies, innovation can be better nurtured within a special, innovation-conducive environment, which may be seen as an ecosystem meant for co-creation of value through collaboration (Smorodinskaya et al., 2017). Additionally, today's global business setting requires actors to be involved in value co-creation that is beneficial to all participants (Ramaswamy & Ozcan, 2014). Multi-sided platforms are seen as business models that enable external producers and users to create value together by interacting with each other (Choudary, 2015), hence operationalizing some of the co-creation of an ecosystem.

Platforms oftentimes disrupt companies' existing capabilities, networks, and business models, paving the way for new entrants capable of leveraging new capabilities.

In addition, established companies manage innovation by building innovation externally, buying it, or partnering with resources outside of the company (Blank, 2014). Accordingly, information technology (IT) startups are aware of possibilities for multi-sided marketplaces and resulting platform-based business models. However, startups have limited resources and network position, meaning they have little or limited connections to existing ecosystems (Valkokari et al., 2017).

In this article, we concentrate on producers and users and the value-creating interaction between them because creating and capturing value is the “core interaction” of platforms (Parker et al., 2016). We explore the core interaction in the context of growth-seeking startups and their platform solutions. We view startups as organizations formed to search for repeatable and scalable business models (Blank, 2013).

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In our research, we are interested in the ways startups are connecting producers and users in value-creating interaction through digital platforms, but also in their ability to capture value from this core interaction of the platform. Hence, our research question is: How do platform startups connect producers and users through value-creating core interactions?

We approach this research question by first looking at the existing theoretical literature on digital two-sided platform businesses. We further illustrate a platform business with a canvas to clarify some of the main concepts of our empirical research. We then describe our method for studying 29 cases of platform startups that we interviewed at a leading European startup event. Thereafter, we present our findings, including a general presentation of our case startups and their financial performance, an analysis of the number of users and producers connected, the value created for them, and a deeper analysis of the core interaction, the participants, and the support for core interaction. Finally, we discuss our results, identify the managerial implications, and take a look at opportunities for future research.

### Background

#### *Platforms beyond matchmaking*

The purpose of a platform is to facilitate the exchange of products, which can be goods, services, or even social currency (Choudary, 2015). In management research, the fastest-growing stream related to platforms is the market intermediary stream, in which a “platform” represents a link or a facilitator between two or more markets or groups of producers and users (Thomas et al., 2014).

Simply put, platforms have been described as digital matchmakers that connect a variety of users and producers, making it easy for them to get together and do business. It is essential but challenging for platforms to simultaneously attract users and producers (Parker et al., 2016), as both participants are needed in order for value to be created (Evans & Schmalensee, 2016). However, true platform innovators do more than use data-driven algorithms to drive better buyer–seller matches: they also empower participants to create value with each other, which leads to multi-sided surplus and more value (Van Alstyne & Schrage, 2016), hence network effects play a key role.

#### *Focus on interaction*

Platforms give companies new opportunities by changing the nature of their interactions with each other

and by circumventing traditional business rules (Vazquez Sampere, 2016). In the digital platform ecosystem, technology mediates connections between actors – such as people, organizations, and resources – making it easy and efficient for participants to connect and exchange value (Evans & Schmalensee, 2016).

To make this core interaction inevitable, the platform must attract users (often with a heterogeneous value proposition), create infrastructure, and set the interaction governance principles. Hence, with an elaborate governance system of laws, enforcement, and penalties (Evans & Schmalensee, 2016), the platform can facilitate value co-creation and match the most compatible users with each other.

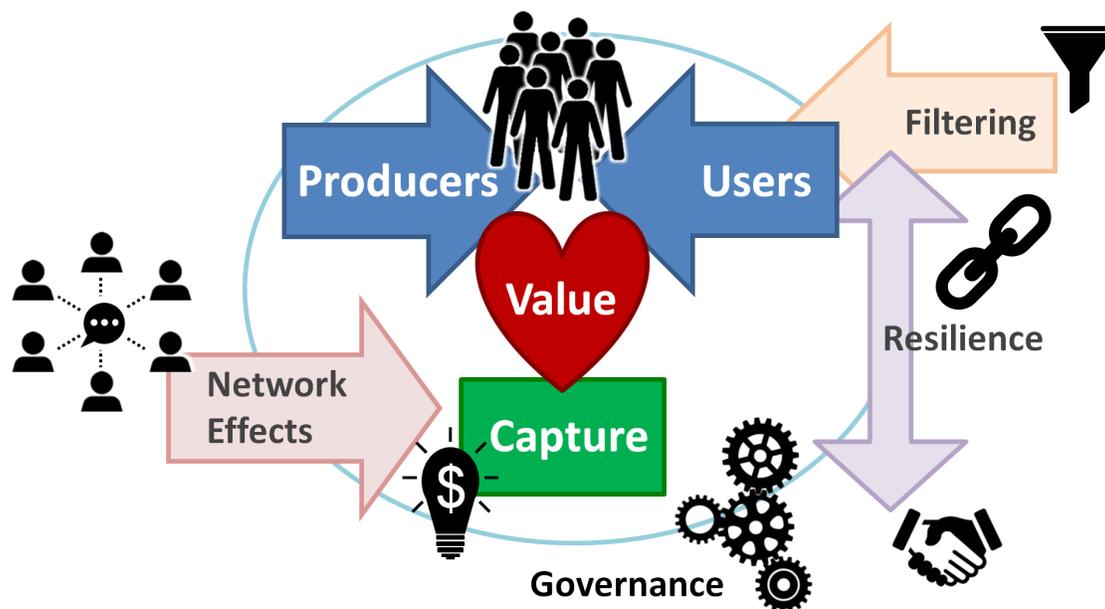
Instead of single or one-time interactions (though valuable ones), the key to platform success is explained with sustainable and repeatable interactions (Choudary, 2015) that breed ecosystem growth or emergence. Such opportunities for digital platforms often emerge when the market has friction that hinders the different user groups from doing business with each other (Evans & Schmalensee, 2016). Removal of such friction allows for more interaction – and therefore digital platforms often challenge the existing business ecosystems with disruptive business models. Increasing the number of platform participants and the level of their interaction further increases the value of participation. Once a critical mass of participants is reached, the phenomenon becomes self-reinforcing. Such network effects are the source of competitive advantage, which can lead to market dominance (Parker et al., 2016) and platform ecosystem sustainability.

In other words, when platform ecosystem members seek sustainable growth, it is not enough for them to simply invest in greater capacity and greater efficiency: platforms should strategically invest in the capabilities, competence, and creativity of users (Van Alstyne & Schrage, 2016). Such empowerment attracts customers, and empowered customers strengthen the platform. Also, studies suggest that the biggest profits are gained when platforms are opened to third parties – their technologies, products, and services. These complementary offerings increase customer value (Ailisto et al., 2016).

*Exploring the core interaction with the platform canvas*  
The platform canvas (Sorri et al., 2016) operates with eight key elements describing critical characteristics of platform business: users, producers, value, value capture, network effects, resilience, governance, and filtering (Figure 1). The platform canvas helps to guide the

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**Figure 1.** The platform canvas emphasizes the central role of core interaction towards value capturing and monetization

platform ecosystem participants – platform owners, complementors, infrastructure, and service providers – through key elements, ensuring reviews of all critical perspectives.

The platform canvas presents, in a visual way, the most important activity of the platform: *the core interaction* (Choudary, 2015; Parker et al., 2016). For the purposes of this study, we focus on four core elements. These include participants, both *users* and *producers* (Evans & Schmalensee, 2016), who are depicted in the canvas with blue arrows. The value created for them (Van Alstyne & Schrage, 2016) is explored with *value proposition*, depicted in the canvas with a red heart. The *value capture* needed toward creating a sustainable business, and attractive motivation for all participants, is depicted in the platform canvas with a green box.

### Method

Our study is based on a qualitative case study research strategy (Yin, 2003) supported by quantitative data on the financial performance of the case startups. To investigate the phenomenon of platform innovations and the core interaction within them, we collected data in November and December, 2016, at the leading technology startup event in the European Union, SLUSH (slush.org), held in Helsinki, Finland. According to the organizer's press material, there were 2,336 startups, 1,146 investors, and 17,500 attendees in this event.

We pre-selected some of the case companies based on keywords they provided to the event organizers, selecting only those companies that used keywords such as “platform” or “marketplace”. We then approached and interviewed representatives of those pre-selected companies that had booths at the two-day event. We added further case companies opportunistically by visiting booths and examining the companies' marketing materials; this approach enabled us to identify additional interviewees of companies that self-identified as representing platform companies. The most typical roles of the interviewees included Founder, Co-Founder, CEO, and other C-level executives. Other interviewee roles were related to business development, marketing, sales, public relations, finance, product management, community management, and web development.

In total, 55 short (10–20 minute) interviews were conducted among those companies that were available for interview. After the event, we gathered secondary information about these companies from their websites and Facebook pages as well as other openly available information on the companies and their offerings on the Internet. From the sample, we removed duplicates, companies that we later decided were not platform companies based on additional information, as well as companies that had been established for more than four years (i.e., they were no longer startups). Our final sample contained 29 cases of platform startups for further analysis.

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Our interview guide was based on the platform canvas. Hence, it included questions about platform participation, business models, and support needed for success. However, only the results of the first part of the survey, which explored the core interaction, are considered in the current article. Survey results related to the business model innovation of the startups were previously reported by Still and colleagues (2017).

The interview guide questions addressed in this study relate to the number of platform participants on the *user* and *producer* side, and what kind of *value* is offered for them by the core interaction within the platform.

The choices for the value offered for the users were:

- 1 = Service entities
- 2 = Better, faster services
- 3 = New services
- 4 = Tailored solutions
- 5 = Opportunities for sharing of profits or new earnings

The choices for the value offered for the producers were:

- 1 = New business through coupling of services
- 2 = New markets/new customers
- 3 = New tools for customer interfaces
- 4 = Novel usages of data for business

The respondents could choose more than one of the choices. As to the number of participants on the platform, the respondents were asked if there were ones, tens, hundreds, thousands, or millions of users and producers on the platform.

In addition to the qualitative data gathered through interviews, quantitative financial information for the companies was collected from the Orbis database ([tinyurl.com/yaho3dyb](http://tinyurl.com/yaho3dyb)), one of the world's largest databases for company information. Of the 29 interviewed companies included in the analysis, 21 could be identified from the Orbis corporate database: 16 of them had profit/loss data and 18 of them had turnover data. The first part of this study is based on the interview questions and Orbis data.

As a second part of this study, the core interaction was studied in greater depth based on qualitative information about the companies and their offerings that was

freely available online. We first looked at the startups' own websites and Facebook pages. Thereafter, we searched for the companies on Google, and given that these startups are still in their infancy, the amount of information found through search was quite manageable. In our Google searches, we typically arrived at websites connecting together startups and investors, such as CrunchBase or AngelList. However, the information freely available on these sites is typically very limited and does not give a full picture of the platforms. Many of the startups had LinkedIn pages, YouTube videos, or they were presented on the websites of startup communities, and this information was often very helpful for the analysis.

The startups were typically described in different ways in the various contexts. Therefore, our interpretation of their platforms is not based on any single source but represents an integrated view of the different sources and our interviews. Based on our interpretations, we wrote a condensed description of the platform for each startup. We further focused on who are the different groups participating on the platforms (i.e., users and producers) and what kind of support the platform company offers for their core interaction, trying to find different types of support. We then looked at the groups participating on the platforms, whether there was one group of users and one group of producers on the platform (representing a two-sided market) or whether there were multiple groups of participants on the platform (representing a multi-sided market).

### Findings

The 29 cases of startups developing digital platforms and our analysis of the platform participants and support for their interaction are presented in Table 1. This analysis is based on the data openly available on the Internet. The company-specific interview data is not presented here for reasons of confidentiality, but it is described at an aggregate level in the next subsection.

The startups were mostly Finnish, which reflects the origins of the majority of companies at the SLUSH event, which was held in Helsinki. However, there were also startups from countries near the event site (e.g., Sweden, Estonia), a bit further away (e.g., France, Hungary, Italy, Turkey), and even further away (e.g., Singapore, South Korea). The platform ideas varied extensively: from health, pet, and travel-related to open innovation, travel network optimization, and cryptocurrency exchanges. Hence, it can be seen that, in addition

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**Table 1.** An overview of the 29 platform startup cases in this study

#	Year Founded	Country	Platform Idea of Core Interaction	Participants Involved in Core Interaction	Support for Core Interaction
1	2014	Finland	People getting to know new people	People	Bring together matching parties and aid their communication
2	n.a.	n.a.	Weather community interaction	Wind sports enthusiasts and weather forecast provider	Bring together matching parties and aid their communication
3	2015	Finland	Service experience personalization	Service providers and their customers	Analysis of customers and aid communication between participants
4	2015	Finland	Combining vacancy rental services	Rental hosts and providers of vacancy rental services	Easier-to-use interface
5	2015	Italy	Sports equipment rental	Equipment owners and users	Marketplace
6	2012	Singapore	Location-based customer intelligence and marketing	Brand owners and their customers	Analysis of customers and aid communication between participants
7	2016	Finland	Gamification	Companies and their customers	Bring participants together and aid their communication
8	n.a.	Finland	Finding clothes manufacturers	Brand owners and manufacturers	Easier-to-use interface
9	2013	Finland	Chat	Companies and their customers	Aid communication between participants
10	2015	France	Market for data	Data providers and buyers	Marketplace
11	2016	Finland	Sharing of health data	Patients and health service providers	Analysis of customers and aid communication between participants
12	2016	Estonia	Health services market	Health service providers and their customers	Marketplace
13	2013	Finland	Near-location messages	Those sending and receiving messages	Bring matching parties together and aid their communication
14	2016	Finland	Pet caring	Pet owners and care takers	Marketplace
15	2014	Finland	Market for local shopping	Nearby stores and consumers	Marketplace
16	2015	Finland	Open innovation	Companies and developers	Bring participants together and aid their communication

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**Table 1 (continued).** An overview of the 29 platform startup cases in this study

#	Year Founded	Country	Platform Idea of Core Interaction	Participants Involved in Core Interaction	Support for Core Interaction
17	2014	Finland	Real-time data-based micro-services	People and machines trading data; developers	Marketplace
18	2015	Finland	Business applications	Users and cloud services providers for enterprise resource planning (ERP)	Easier-to-use interface
19	n.a.	Hungary	Community of shoe enthusiasts	Shoe wearers and key industry players	Analysis of customers, bring matching parties together, and aid their communication
20	2016	Finland	Travel optimization	Travel providers, their customers, and airlines	Optimization
21	2014	France	Travel network optimization	Different kinds of travel and transport operators	Optimization
22	2014	Sweden	Different payment methods	E-tailers, their customers, and payment companies	Easier-to-use interface
23	2016	Finland	Design clothes market	Designers, brand owners, and consumers	Marketplace
24	2012	Finland	Cryptocurrency transactions	Users of cryptocurrencies in different roles	Easier-to-use interface
25	2014	Singapore	Gaming	Players, game developers, and licensing partners	Bring matching parties together and marketplace
26	n.a.	Turkey	Travel experiences	Experience seekers, providers, and experts	Marketplace
27	2014	Finland	Positioning for location-aware apps	App developers, end users, and different location-technologies providers	Easier-to-use interface
28	2015	South Korea	App development	Beginner app developers, services providers, and operating system providers	Easier-to-use interface
29	2016	Finland	Media	Digital publishers, readers, and media providers	Analysis of customers and aid communication between participants

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to consumer markets, the startups were also aiming for business-to-business (B2B) markets. All of the companies had been established within the past three years (2014–2016), except for four companies for which we could not determine a date of establishment. We assume that these four startups are so new that they had not been formally established as companies at the time of data collection.

Most of the studied startups had turnover and, from this point of view, they were making money with their platform businesses. The median turnover was €100,000 ( $s=90$ ,  $N=18$ ). The largest turnover was more than €300,000. One of the companies had zero turnover; others, for which turnover was known, had a positive turnover. In particular, turnover below €50,000 and turnover between €100,000 and €150,000 were common in our case startups.

Still, the majority of the case startups were making losses, three of the companies had profits below €10,000, and one was making €42,000 profit. The profit and loss (P/L) values before taxes had a median value of -€143,000 ( $s=179$ ,  $N=16$ ). Four of the 16 companies that had data on profit and loss had a positive P/L value, whereas others had a negative value. This shows that the companies selected for the analysis are in a development stage where significant development costs and low revenues reduce the P/L value. On the asset side, the companies' total assets median value was €157,000 ( $s=249$ ,  $N=16$ ) and shareholder funds €52,000 ( $s=104$ ,  $N=16$ ).

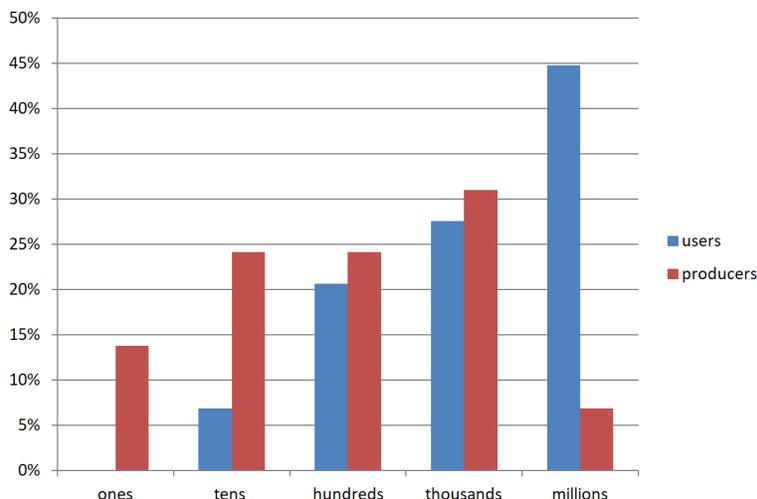
### Value creation through connecting users and producers

The first part of the study based on the interview data

explores the numbers of users and producers on the platform and what kind of value is created for each of these participant groups as the platform connects them. The analysis of the 29 interviews shows that the startups were comfortable with analyzing the platform as a marketplace. Using the sliding scales of the survey (Ones-Tens-Hundreds-Thousands-Millions), most of the companies were able to estimate the number of participants on both sides. However, some discussed the current levels of participation, whereas some discussed the future expected levels of participation.

Among the 29 startup cases, the most common answer for the number of users was millions, which was stated by 45% of the respondents. The second most common answer was thousands (28%), which some elaborated as “hundreds of thousands”. Still, two startups (7%) stated tens of users, which they explained reflects their B2B market.

The startups seemed to have fewer producers in their platforms than users. Only two of the startups reported having more producers than users on the platform. These were both B2B platforms that connected a larger pool of business services providers with a smaller pool of user companies. Further, only two (7%) of the 29 case startups mentioned millions of producers, whereas more than half of the start-ups mentioned either hundreds (24%) or thousands (31%). The platforms with millions of producers also had millions of users. Many (24%) of the startups mentioned only tens of producers and four of the startups (14%) counted the number of producers on their platforms as “ones”. Figure 2 shows a comparison of how the 29 startups viewed the number of users and producers on their platforms.



**Figure 2.** Number of users and producers on the case company platforms ( $N=29$ )

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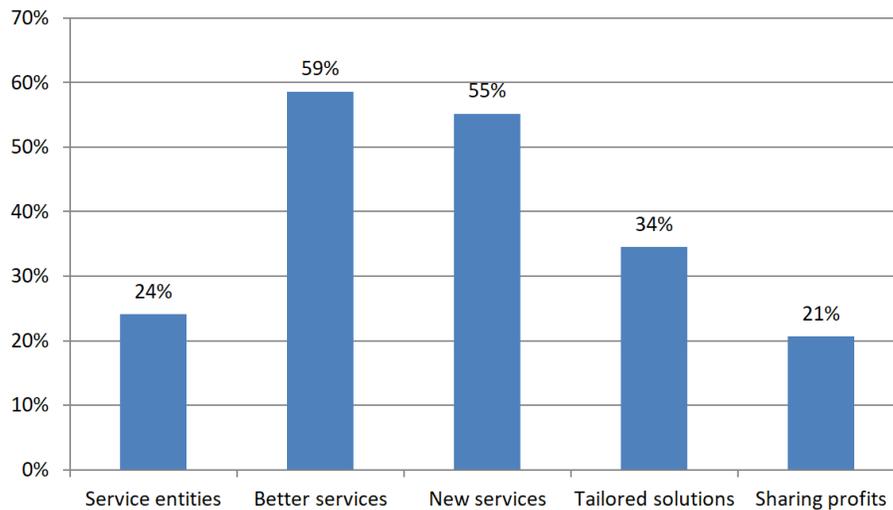
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For the types of value offered to the users, most of the respondents saw that it is a combination of multiple choices. The majority of the respondents chose more than one option. Thirteen of them (45%) emphasized the importance of one, 11 (38%) chose two options, two (7%) chose three options, another two (7%) four options, and one respondent even chose all five options.

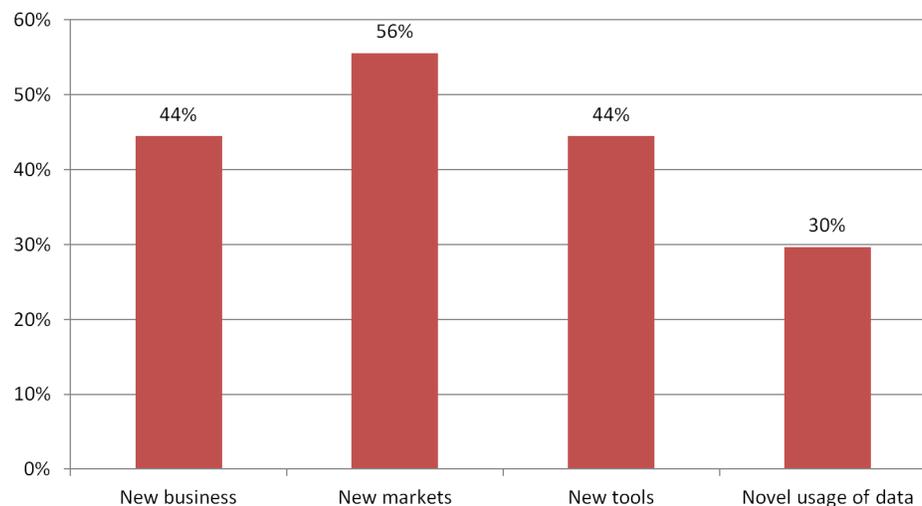
The most often-mentioned value choices were better, faster services (59%) and new services (55%). Tailored solutions were chosen by 34%, service entities by 24%, and opportunities for sharing of profits or new earnings by 21% of the respondents. The distribution of the respondents' choices is shown in Figure 3.

When addressing the types of value offered to the producers, two startups did not mark anything. The majority, 14 out of 27 responses (52%), chose only one option. Two values were chosen by nine respondents (33%), while one chose three options, and three (11%) chose all four options given to them.

The most common producer value was new markets / new customers (56%), followed by new business through coupling of services (44%) and new tools (44%). Novel usage of data for business was chosen by 28% of the respondents. The distribution of these choices is shown in Figure 4.



**Figure 3.** Distribution of the respondents' choices for the types of value offered to users (N=29)



**Figure 4.** Distribution of the respondents' choices for the types of value offered to producers (N=27)

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### *The core interaction and how platforms support it*

The second part of the study goes beyond the number of users and producers connected and the value created when connecting them. We studied each case in greater depth based on the data found online. The main results of the case-by-case analysis were presented earlier (Table 1).

Our in-depth examination of each platform and the participants involved revealed the actual core interaction – how the parties co-create value on the platform. When looking at the parties involved, our first notion was that in roughly one-third of the platforms (9 of the 29 studied platform startups: cases #20–#29), there are clearly more than two groups of participants involved in the core interaction in addition to the platform startup. There may be more than one user group or more than one producer group participating in the platform. In roughly two-thirds of the cases, there is a clearer two-sided market with one user group and one producer group. However, it is difficult to define an exact number for the user and producer groups on a platform because these roles may be blurred and because the level of activity required from a participating group varies. The blurring of roles is especially emphasized in cases with millions of people interacting with each other in both the user and producer roles.

Some examples, such as machines trading data (case #17), also made us ponder whether robots, machines, or artificial intelligence in some situations should be counted as participants in the core interaction. Machines do not experience value in the same way as people, and usually there should be some sort of owner or user of the machine that can be considered as the actual party involved in the value co-creation.

After studying the participants involved and how they co-create value on the platform, it was possible to take the next step: to study how the platform supports this core interaction. The platforms typically seem to combine different logics for support. All the platforms provide the basic function of connecting the parties for the core interaction. They may connect parties that have not been connected before or they may somehow improve existing connections. Most of them provide something more than just a marketplace. They bring together the right kind of users and producers that match together, and they aid the information exchange and communication between the groups. They often analyze one group on behalf of the other: customer intelligence (analysis of users) seems to be particularly popular, but they also analyze the services of producers

and help users find the right services or even optimize their usage. Also, in many cases, the services of producers were technical and difficult to use (especially when there was a need to combine together many different services from various technology providers), and the platform supported the core interaction by providing an easier and unified interface for these services.

### Discussion and Conclusion

This study sheds light on the expectations startups have in relation to their platform-based business models and their abilities to both support the core interaction and capture value from it. The most apparent outcome of our study is that many startups do think of themselves as connecting producers and users. Platform thinking and looking at platforms as marketplaces has proliferated in the startup scene. Startups are experimenting with platform businesses, but the general level of articulating these business models is not yet very high. This result may also be affected by the issue that startups may not wish to fully reveal their business plans.

The previous literature highlights the core-interaction between the users and producers (Choudary, 2015; Evans & Schmalensee, 2016; Sorri et al., 2016). It is important to look at the scale of connecting users and producers given that, in a platform business, it is essential to reach a critical mass, and the value, or win-win, needs to be understood. This exploration was conducted based on the visualization of the core interaction using the platform canvas, which then guided the interviews of 29 startups.

“Millions” was the most common number of users, and those startups that only had a small number of users on their platforms were B2B companies. For the types of value offered to users, better services and new services were the two most common answers. For the types of value offered to producers, the differences between the answers were less pronounced but new markets was the most common answer. Making loss is typical for companies in their infancy, and based on our data, it seems that platform startups are no different on this aspect.

When looking at the core interaction in more depth, it became clear that most platforms not only bring the different users and producers to the marketplace but also support their core interaction in various ways. The value and strength of the platform and the ability of the platform company itself to capture value often seems to stem from the way the platform supports the different

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parties in their respective value creation and capture. It has been suggested that the perspective on innovation should be widened from value created for customers to value that is co-created, and that this approach will first be adopted by the companies in the forefront of development and in industries facing rapid technological change (Korhonen, 2014). Our study suggests that such thinking has already been adopted by many technology startups.

However, many startups have business ideas that seem to be based on their self-identified customer needs and their efforts in providing technical solutions to them rather than empowering users and producers to identify the needs themselves and create new solutions. Although we did not have financial data on all the case startups and the majority of them were making losses (as young companies usually do), the fact that most of the cases did have turnover signals – in line with previous studies (Ailisto et al., 2016) – that profits can be gained when platforms are opened to complementing producers in order to offer users value through novel services. Such development by complementing parties creates scale and momentum for the offering (Korhonen & Kaarela, 2015).

### Managerial implications

Acknowledging that established companies are also part of the platform economy, we see that startups can provide good, clear, and novel examples of platform core interaction as they work towards finding a sustainable business model within their respective platform. Also, startups are not bound by current business models of the ecosystem and, as such, can provide valuable and useful insights into novel digital platforms.

We started our research by focusing on four key elements of core interaction: users, producers, value creation, and value capture. Through our research, we learned that the issue of platform participants may be more complex than just one group of users and one group of producers. Further, we learned that platform support for the core interaction is an essential element that glues together the users, the producers, the value creation, and the value capture. The platform, with all of its participants, needs to concentrate on supporting the interaction, both toward value co-creation as well as toward value capturing. Therefore, based on the study, as a managerial implication, we propose four key questions about the core interaction that managers need to consider:

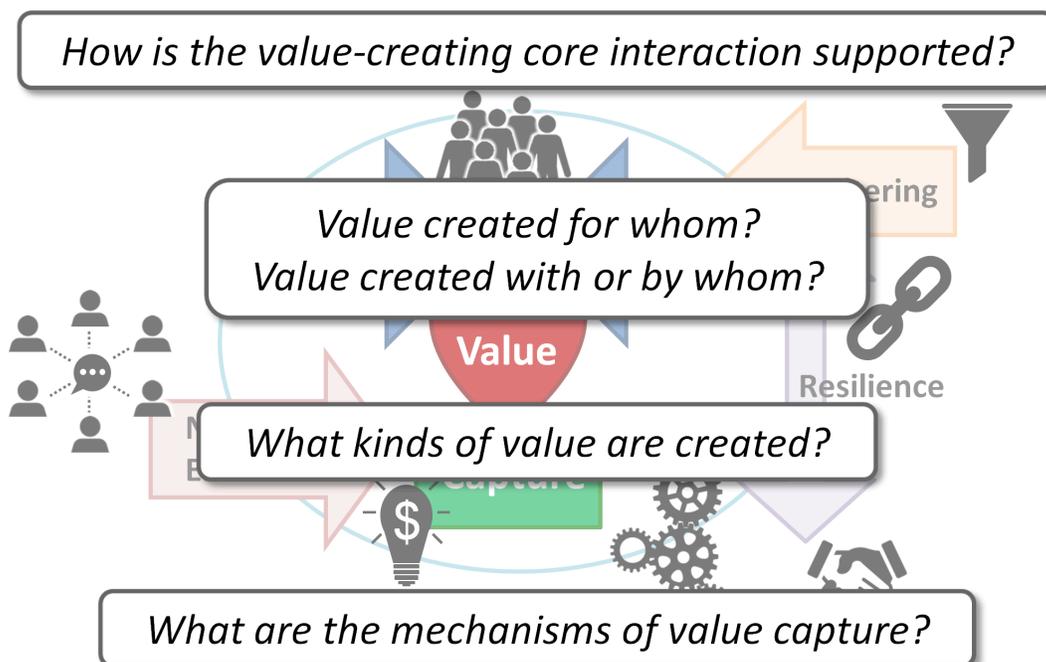


Figure 5. Four key elements of core interaction for managers to consider

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1. Who are the platform participants for whom, with whom, or by whom value is created?
2. What kinds of value are created?
3. What are the mechanisms of value capture for the different parties?
4. Finally, as an overarching element, how is this core interaction supported in the platform?

We see that addressing the issues underlying these four questions can be conducted using the other elements of the platform canvas. Figure 5 reflects the key questions of core interaction overlaid on the platform canvas.

Our study confirmed the importance of ecosystem thinking in a platform-based business (Parker et al., 2016), meaning the focus should be on understanding multi-sided ecosystem value co-creation instead of focusing solely on user value (Korhonen, 2016, 2014). Platform-creating startups should have several partners with complementing offerings as producers in order to increase customer value and solve the chicken-and-egg problem related to their network position. On the other hand, changing customer behaviour towards novel services may raise new possibilities as the well-known disruptive business models of Airbnb and Uber show.

### Limitations

Startups are clearly developing platform business, but the language and understanding of this type of business are still developing. In the absence of prior longitudinal experience of the platform, respondents' answers were based on impressions and assumptions of their future business models and the impact of network effects. Although assistance was provided at the time of answering the interview questions, in several cases the respondents seemed to lump together the two participant groups – users and producers – with each other. The blurring of the concepts of users and producers may be related to platforms having more than two participating groups and to all the groups being simultan-

ously creators and receivers of value. Still, the short, structured interviews enabled us to discuss the terms and key concepts with interviewees, which would not be possible within a traditional survey. The information on the platforms gathered through Google searches was particularly limited because there typically is not that much information available on startups relative to established companies. The analyses of the platform idea, the participating groups, as well as the support provided for the core interaction are to a large extent based on our interpretation of this limited information and not on clear statements of the startups themselves. On the other hand, the information available on startups often is focused on expressing the basic business idea of the startup.

As in any empirical research, the results of the present study cannot be interpreted without taking into account its limitations. Future research directions could include, for example, revenue and incentive models of platform-based business models or further analysis of the different logics of supporting the core interaction. We also need to better understand how existing ecosystems might adopt new platform-based business models faster, with one possibility being to more actively facilitate collaboration between startups and established companies.

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## The Core Interaction of Platforms: How Startups Connect Users and Producers

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