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STUDENT REPORT

VCC IN A NETWORK OF ORGANIZATIONS

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ABSTRACT
Although the creation of value has been studied in value co-creation literature for years, there have not been a lot of research in value creation on the network level and the effects of multiple stakeholder in the process of value creation. By developing a prototype based on existing knowledge and theory of value creation on the network level, this paper will examine the current understanding of areas that require more research. Through a focus group and 2 area interview it has been discovered that the size of a case has an impact on the case's ability to support value co-creation on the network level.

INTRODUCTION
There has not been a lot of research into the value co-creation(VCC) network [7], this created the basis for this article. With a wonder about the small amount of research due to whether there is a need to be developed a tool for creating value between stakeholders in a network, or if there has not been made research because it has not been possible to obtain enough cases to perform research on. This article search to examine how value is created between stakeholders with various interests, resources and values in an IT enabled VCC. To do this, I will set up a test system that leads three groups of stakeholders together on an IT platform; the platform will examine challenges associated with developing an IT solution with VCC in a network.

To test this, a platform must be designed that support VVC between stakeholder. The idea behind the platform is to provide customers the ability to search for products they need for their hobby through an internet platform. Customers can search for what they need and get information on which stores in their area have the product and at what prices. Then the customer can order the products for pick up at the store in the style of click and collect, but instead of just being for a particular store, the idea is that the customer can compare their options based on what is available in their area. In this way, small stores can offer the click and collect service as they normally would not and tell customers what products they sell, without being dependent on advertising. This service is not available in Denmark at present on a central platform, it is possible to visit large chain stores websites and look at what that chain store made available for pick up. There is not a tool to compare these offers with offers from other stores digitally as of today. If a customer today want to find an item that is not available on one of the large chain stores website. Then the customer is forced to seek out a store they believe that may have the wanted product or visit an online store. The platform gives customers access to information about products and stores they might not know was in their area. It helps them to create overview of the best options and go on exploring in their area.

Customers are not the only ones who stand to get something out of the platform, as mentioned so do stores who will greatly benefit from the platform. As well as getting the click and collect order from customers, stores will have access to information about customers' storeping habits on the platform. This information can be used to adapt the offer to the individual customer or change the offer all customers get, the platforms owner is the last stakeholder. They make the platform available to other stakeholders. In addition, they can also give stores access to information about customers which stores can use to customize their offerings. This information is sold to stores.

The academic purpose of the platform is to test how VCC can be used to create value for a platform's stakeholders in a network of stakeholders with different interests and needs. In order to test this it is necessary to set up a series of tests, which tests assumptions taken about the platform and its stakeholders needs. These assumptions are made on the basis of theory and the analysis of the platform searches to check, if the existing knowledge surrounding the creation of value, in a network of stakeholders is optimal, or whether there is a need to introduce changes to the theory and understanding of the subject. In this article I will review the considerations that are made every step in the development of the platform and how these considerations have been tested. The results of these tests will affect the platform remains active development and will therefore lead to changes when it finds errors in the understanding of the platforms stakeholders needs. This leads me to the research question for this article; Is it currently possible to develop a VCC platform based on the existing knowledge and theory and if not, in what areas should be introduced changes.

RQ: *How can we utilize VCC framework to design and evaluate an IT platform linking multiple stakeholders in a network?*

RELATED RESEARCH

VCC is defined by Vargo et al. as interaction and integration of resources in and between service systems [12]. These resources can come from a wide range of stakeholders: the customer, the company and others. Stakeholders insert their resources into the process of VCC and help each other create value together, as it was not possible for the simple stakeholders to create without the resources of the other stakeholders. This article examines the use of VCC on the network level.

Mandrella defines VCC on the network level as companies working together to share knowledge, abilities and resources to gain an advantage. This gives new benefits to business units as they can co-create better benefits for their customers. However, there are also potential challenges for these companies as they may have different information systems, strategies and capabilities that need to be interacted before companies can collaborate [7]. This understanding of the relationship between stakeholders on the network level in VCC forms the basis for this articles perception of the problem area.

Grover and Kohli describe 4 layers that companies can use to create value when they are working together on the network level. The assets layer, the complementary capability layer, knowledge sharing layer and governance layer [3].

The assets layer:

Companies share assets to help each other create value for the customer. Amazon.com does this by providing a platform where smaller companies can sell their goods to customers via. Amazon.com [3].

The Complementary capability layer:

Companies create value for themselves and customers by working together as a chain. By sharing knowledge and abilities that, when compounded, makes the companies working together able to deliver value that they could not deliver alone. This can be seen when a car seller sends information about their sales of bills to the front to produce new cars. This way, the customer will find that the popular products are always in stock [3].

Knowledge sharing layer:

Businesses share knowledge between each other to create value. A store's chain can enter into an agreement with a manufacturer to share information about sales and customer behaviour, malpractice and concerns. This information can be used by the manufacturer to develop their next range of products that better suit what customers are looking for. [3].

Governance layer:

Elements that are made to strengthen the creation of value between companies may be contracts that describe business requirements for collaboration to work, but it can also be less informal and still support the framework where value can be created [3]. It is necessary to understand that even though these layers are presently unaffected by each other, it is possible for layers to affect one or more of the other layers [3].

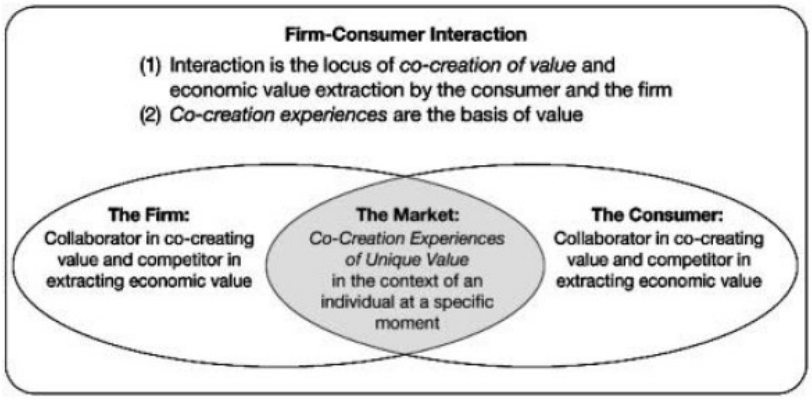
Value co-creation can occur when stakeholders work together on a common goal. It is necessary to conclude compassion for stakeholders to work together on the network level. If stakeholders have different motivational sins to enter into a partnership, problems may arise. [10]. If the stakeholders do not understand how and why value is created between stakeholders, they can't participate in the network [10]. These rules are necessary to keep in mind to get stakeholders with different needs and interests to work together.

Prahalad & Ramaswamy says that customers choose the companies they want to relate to based on their views on how to create value for them [9]. Therefore, the platform must allow the customer access to information that can help them make this choice.

Frow et al. describes 12 forms of value co-creation. There are different ways that the VCC can take place between stakeholders. In this context, I will introduce the platform's use of co-maintenance and co-experience. Stores and platforms will share responsibility for the maintenance of the platform. This part of the collaborative work will allow stores to provide a list of goods and belong to images, descriptions and prices that are up to date while the platform should maintain a customer group for the stores. Stores and the platform will work together to create the experience that takes place, when storeping for hobby goods. The customers no longer need to go in every hobby store to find the wanted products, thus saving time and frustrations [5].

Adeleke & AbdulRahman define service dominant logic, by being a service that first gains value when used by a customer. Business and customer can use their skills, knowledge and experience to add value through use. Therefore, the platform must support the customer's needs, because without a customer, the platform will not have any value for hobby stores [2].

Sarker et al. has identified a number of inhibitors that can prevent or minimize value creation in a collaborative effort of stakeholders. If there is a status difference between stakeholders, it may harm the cooperation, generally policy and power differences between stakeholders could damage the value of VCC [11]. It is therefore important for the platform to avoid, as far as possible, a stakeholder having too much influence.



FRAMEWORK

This article uses the emerging concept of the market by C.K. Prahalad and Venkat Ramaswamy to show how this article entails VCC. In this framework, interaction between stakeholders is what makes value possible and the starting point for value lies in the co-creation experience [9]. After the customer has chosen which company to work together with to create value, the two stakeholders find a way to co-create value that suits them both at the given moment. This thinking fits with the customer that chooses which company they want to create value for them [9].

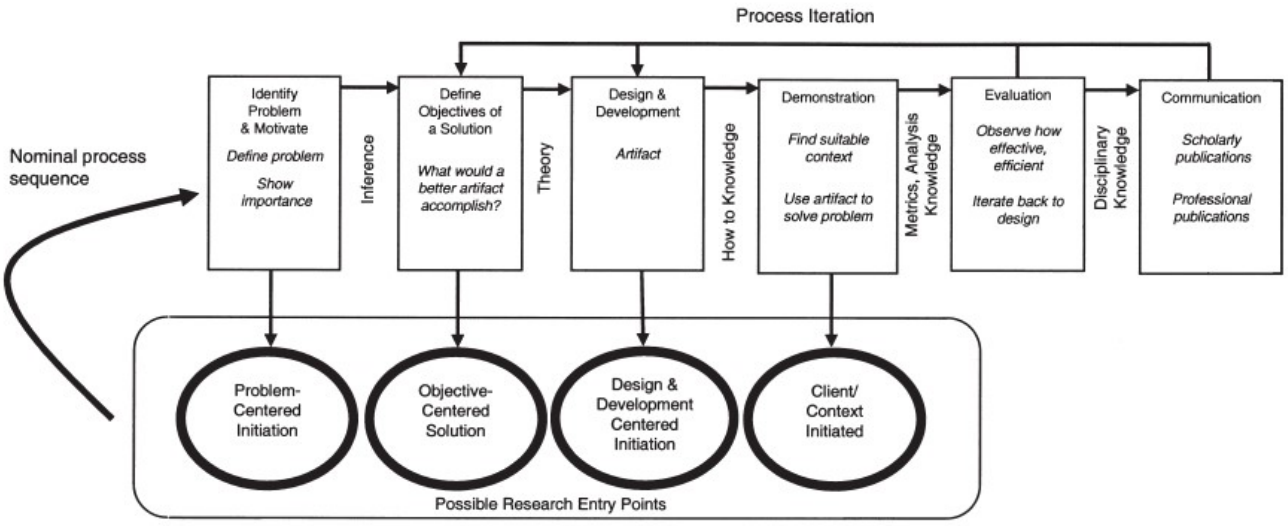
RESEARCH APPROACH

In order to answer the RQ, this article will use design science by creating inventions that tests ideas, practices, products and technical capabilities. Through which analysis, design, implementation, management and use of information system can be as effective as possible and with the best result. [4].

DSRM Process Model

On the next page you will see the DSRM model that will be described and its purpose on the work performed in this article.

Activity 1: Problem identification and motivation. Define the research area and problem, justifying the solution value. The researchers motivation must be clarified for the reader. Activity 2: Define the objectives for a solution. Solution must be defined in a way that is in line with the challenges associated with the case and what is possible. Activity 3: Design and development. Create and develop an artifact that can help assess and test if assumptions were taken correctly. Activity 4: Demonstration. Show the artifact to receive feedback on whether it has solved the issues you hope to resolve. Activity 5: Evaluation. Based on activity 4 evaluate and analyze whether the artifact remedies the problem that is desired to be resolved. Activity 6: Communication. Describe the problem and its importance, its use and importance for researcher. To support research through design, this article will structure design decisions from all iterations following the configuration table by Aaen.



Configuration table

In this project I will work agile, to show changes in relation to the problem area, user needs and opportunities and problems relative to the technology in use [1], The purpose of the configuration tables is to provide a glimpse of projects state at any given time, they should be used to show how problems are perceived and how they are handled. Therefore, the table provides an overview of the main ideas rather than details [1]. The purpose of a configuration table is to give the development team and other stakeholders' insight into the status and plan for the next action. The table is constructed of two header rows and three other rows on separate levels: *Rationale, strategy, and tactics*. The header rows establish views and values for each column: *Paradigm* is for reflection, *Product* is for transaction, *Project* is dedicated to reasoning and *Process* is for appreciation.

Configuration table				
View	**Paradigm**	**Product**	**Project**	**Process**
Value	**Reflection**	**Transaction**	**Reasoning**	**Appreciation**
Rationale: Why?	**Problematic Challenge:** **Problem:**	**Technologies:**	**Vision:** **Warrant:** **Backing:**	**Criteria for Resolution Expectations:** **Findings:**
Strategy: What	**Elements**	**Architecture**	**Qualfication** **Qualifier:** **Rebuttal:**	**Criteria for Architecture** **Expectations:** **Findings:**
Tactics: How?	**Scenarios**	**Features**	**Offers**	**Criteria for offer Expectations:** **Findings:**

In the rationale row we have the reasons for why we do this project; here we find the overall challenge that drives project and the issues that are being handled specifically in the current configuration. This is also where the technology that is needed to solve the problem is found, based on the problem and the technology presents the vision, a solution [1]. The last in rationale is the *rationale review* the aim here is to show how the solution solves the problem; this is formulated during or before development while the results will only be known after analyzing the results from the development.

The strategy row is looking at what needs to be done. The prospect shows elements from the problem domain. The components that is required to achieve prospect is also shown in this row. The main focus on the tactics row is how the problem can be solved under the scenarios described [1].

Data Collection

All data in the following described tests will be in the form of conversations recorded on tape. This will subsequently be transcribed for analysis purposes. The two following sections focus group and interview will explain how data was collected.

Focus group

To examine if the decisions made in the first configuration table fits with the customers' needs, but more importantly

to examine whether the concept in its current form brings a new level of VCC on the network level, a focus group had to be made. To investigate this, the focus group would not have much focus on if they could see themselves using the platform, but instead it would examine whether the idea is understandable and intuitive. The focus group will help to support the idea development between subjects. These ideas will hopefully help improve the platform. Firstly the focus group would start out with an explanation of the process and purpose of the platform, followed by a brief explanation of the concept behind and afterwards the prototype will be showed. Lastly a dialogue between all subjects was about what they had seen and heard.

The interviewed: To create a focus group, for this group I selected people I know personally and that I could imagine using the platform. I chose this because it would make it easier for the group's members to put themselves into a situation, where the platform could be useful for them. Here is the hope that they could give helpful feedback, which people who are not familiar with the problem area could not. At first I contacted 6 people that I thought would be good in the group. It was thought that not everyone could or wished to participate, so I contacted more than I wanted to be involved in the group. In order to allow the conversation to flow between the participants, but not get too be hectic, I chose to keep the group size at 5 people [6].

Group recruiting: Members of the group were composed of people I know personally and they were contacted through a group message on Facebook. This message described the concept and what would happen during the test.

Focus groups location: The focus group took place in my college community center, as we would not be disturbed during the interview and it would have a more official setting than if the interview was held in an apartment of a more public place like a café or pub.

Interview

To examine if the decisions made for the platform fits with the needs of hobby stores, and to understand if a new level of VCC on the network level had been reached, a set of interviews with managers from hobby stores in Aalborg, Denmark were held. The purpose of the interviews is to investigate whether hobby stores get enough value from using the platform and investigate what types of VCC takes place on the platform. The interviews began with an explanation of the principle while showing the prototype. Hereafter the interviews would be semi structured, with some prepared questions, but with the opportunity to explore the possibilities that appeared interesting during the interviews.

Data analysis

The data collected through the focus group and interviews was analyzed by examining which elements of the respondents answers could help answer the RQ. This was to avoid analyzing responses that were in relation to other aspects of either the focus group or one of the interviews, such as usability and non-relational conversation topics for answering the RQ.

DESIGN

This section will describe the design of the platform and how this design changed through the various configurations. In order to demonstrate the design and the changes I will use the configuration table approach. Since this approach supports changes in the design based on new knowledge, the purpose of these configuration tables is to show the knowledge, challenges, ideas, and solutions that is considered at a given moment [1].

THE FIRST CONFIGURATION TABLE

*Challenge for the customers***:** The idea behind the click and collect platform is to give customers the opportunity to order hobby items over the internet from a variety of local stores and then be able to pick up the order in the store. Meaning that customers will have access to an internet portal that lets them search for products from physical

stores in their local area and make it possible to compare prices on item(s) and order item(s) for pick-up.

Challenge for the stores: Give customers access to information about which products they have available at a central location. The platform gives small stores, with little or no opportunity to advertise to customers, the ability to sell to customers that did not know they existed before they found them on the platform.

Challenge for the platform: Convince stores that they need to work together, on a platform that is not directly owned by them and to get customers to use the platform.

Problem for the customers: Customers know what they want to buy, but because hobby stores do not ship advertisements with the mail, it is possible that the customer does not know where to buy what they need.

Problem for the stores: A store may be selling a product or a series of products' that a costumer would buy if they where aware that it was available in their store.

Technologies: It is necessary that the system knows the customers location, so that it can provide information about stores nearby and the stores using the platform must have a list of all their products available.

Vision: Instead of each store has its own click and collect service, customer will here get access to information from all the stores in their area in one convenient place. Stores will get access to information on customers buying habits and what they are looking for, where they are and where they buy their product.

Warrant: Customers get access to the conveniences of the internet, while they support stores located in their local area. Stores get access to information on customers they did not have access to before the platform.

Backing: If customers do not find everything they need for a project, they may be forced to drop it and maybe their hobby, if it happens enough. Therefore to help people enjoy their hobby, this platform will help customers find the goods they need.

Expectations: It is expected that customers want to use a search engine that gathers info from stores in the customers area, to give them the best options and prices at the same time. It is also expected that customer wants to explore the possibilities not only on the platform, but also when they come into the physical store to collect their products. It is expected that it is possible to persuade stores to use such a platform and that stores will see the opportunities in a platform like this and put their information on the platform for the customers, to see and make decisions about where they buy the products.

Finding: The focus group shows that customers likes the platform and could see themselves using it, when they were missing something they were not sure where to buy for one of their hobby projects. There was however worry about all the hobby stores having room for a pickup area in the store. Perhaps it should be possible for stores to use the platform without the click and collect, where customers can only see which items they have in the store.

Elements: It is necessary for stores that want to use the platform, to make a list of goods and quantity of the product available for the platform's database. This list must be exact and always up to date with what is available, not only in the chain but also in the single store so customers can know if the desired product is available in their local store.

Architecture: The database and the system for tracking customer's location are described in technologies, here the need for and the use of packing facilities in stores and email/SMS service will be described. The customer must have a place in the store where they can pick up their ordered product; this place in the store can also serve the purpose as storage of goods ready for pick up. It is necessary that the platform offers a service to inform customers that their goods are available for pick up.

Architecture are the elements that provide the basis for the platform's features.

Qualification: The system makes use of the internet trade convenience, enabling customers to compare prices on goods from physical stores and give the customer an opportunity to explore the store for collection of goods. The system will therefore not have goods shipped to the customers and the hope is that customers still will perceive the system as being convenient.

Criteria for architecture: It is in this state expected that those elements are necessary and sufficient to provide a satisfying product. The focus group was in doubt if hobby stores would have a big enough advantage of using the platform, when it became clear to them that the stores would have to do a lot of extra work to use the platform.

Scenarios: For the platform to function, there are two activities to be undertaken; maintain the database and received orders/ preparing the orders. Scenarios describe what tasks that the platform is expected to handle and in order for it to have the platform features.

Offers: For sale to be possible customers must have access to a precise list of products, with offers the customers are on the lookout for in their neighbourhood.

Tactics review: It is expected that customers wants to make use of the possibility for products to be ready for pick-up in advance, and that they will enjoy comparing prices on goods from local stores. The focus group showed that customers could see themselves using the platform and were willing to pick up the goods themselves on shelves, if the store had no opportunity to put their orders aside. The important thing for them was to find out where the product was possible to buy.

The first configuration table				
View	**Paradigm**	**Product**	**Project**	**Process**
Value	**Reflection**	**Transaction**	**Reasoning**	**Appreciation**
Rationale: Why?	**Problematic** **Challenge:** Make it easy for customers to find and order the items they need for their hobby from local stores. **Problem:** Customers don't have a place to search and/or compare hobby products online. Hobby stores may have products that customers don't know about, but would buy if they knew.	**Technologies:** • Computer/web browser • GPS • Database	**Vision:** Click and collect platform for hobby stores in the customers' area. **Warrant:** Customers can easily find what they need and support their local stores simultaneously. **Backing:** When customers can find what they need, they are more likely to maintain their hobby.	**Criteria for Resolution** **Expectations:** Customers want to use a search engine to find what they are looking for and want to explore. Stores will voluntarily add information to the site. **Findings:** Customers understood the concept and could see themselves using the platform. There was concern about if hobby stores have room to have a place for picking up ordered goods.
Strategy: What	**Elements** • Stores provide list of goods. • Customers use the platform to find products. • The platform holders support communication between stakeholders.	**Architecture** • Database of products • User interface • Packing facilities in stores • Email/SMS service	**Qualification** **Qualifier:** convenient, compare prices and exploring, no shipment **Rebuttal:** still convenient	**Criteria for Architecture** **Expectations:** The components are necessary and sufficient to implement vision. **Findings:** The focus group were not sure if hobby stores would get enough out of being on the platform.
Tactics: How?	**Scenarios** Receive orders Prepare orders Make orders	**Features** • Click and collect • GPS • Mail/SMS service	**Offers** Sales are dependent on accurate database and selection in the customers' area.	**Criteria for offer** **Expectations:** • Customers will take the opportunity to have their product ready for collection • Customers will enjoy a central place to discover where products can be purchased locally. **Findings:** Customers understood the concept and could see themselves using the platform.

VCC IN THE FIRST CONFIGURATION TABLE

This section explains where in the first configuration table VCC takes place. There are three sides in this case, when looking at VCC which is the customer, who is shopping, the stores and there are the owners of the platform. There cannot be VCC unless all parties deliver something, that can be useful to the other parties, and they get something out of the system that one or more of the other parties has created for them.

THE CUSTOMERS VCC

Prior to the work on a VCC platform can begin, it is necessary to know what the customers can get from using the system. If customers do not get a big enough benefit from the platform, there is no reason to develop a platform. Another point to be clarified is where customers deliver resources to the other stakeholders. Customers mainly get value from the platform through value in use, because customers get access to information about products and prices of the products available in stores in their area. Customers deliver resources to the other stakeholders by

being the largest group of users who supply a large amount of information, which neither the stores nor the owner of the platform could not get access to without the platform. Stores can thereby analyze prize influence and which items to advertise to customers based on their purchase and search history.

THE STORES VCC

Companies are the ones who supply most value to the platform, but are also the ones who can get the most out of the platform. Stores will have to provide information on which product they have available, not only for the chain, but what is in the individual stores stock. For this information, they gain access to a large amount of data they did not previously have available. When a store provides information on their stocks to the customer, they get information from the customers in return by purchases and search history on the platform that tells what got a customer to buy a product. This data can be analyzed to adjust what products stores should advertise on to the individual customer. The system helps not only large chain stores, but also small local stores that do not have the same opportunities to advertise to customers. By giving the small stores the opportunity to let customers find them, by searching the product they have in stock; they can get on customers radar without investing in expensive campaigns.

THE PLATFORM VCC

Platform owners will be able to get great value out of the platform itself by selling advertising space to stores. These advertisements may be general or based on analysis of data from the individual customer, this is value in exchange. These advertisements can be anything from ads in different places on the platform; it can also be more discreet where advertising may take the form of products from a store located higher on the list of recommended products. So platform owners gets an economic value out of offering advertising opportunities to stores, while it is here they offer value for stores. For customers the platform owners offer the opportunity to get an overview of which products that is available in their area and allows them to discover local stores.

THE SECOND CONFIGURATION TABLE

This section will present the changes that have been made to the configuration table between the first and second configuration table, it will be presented how the outcome of the first interview influences the design of the third configuration table. The purpose of this configuration was to investigate the stores part of the platform and how the platform was received by stores. Therefore, the second configuration table has more focus on expectations for stores use of the platform than the first configuration table.

The first major change the platform needed was to add items that could demonstrate to stores why they could need the platform, this was done by adding a function to the prototype that showed information about customers on the platform. By showing what customers in the different areas of the city had bought and what they have seen, but not bought. Information about customer age distribution was also shown; this entry can be seen under elements in the second configuration table. At this stage it is expected that stores will be willing to lay the extra work, associated with clarifying orders and keep their catalog of goods updated, to gain access to customer information and become more visible to customers. The result of the first interview proved that there would not be enough value in the possibility of more purchases that a store could get because of the platform. Since the time it will take to clarify the entire click and collect orders, will be too large compared to the advantage the store will get from it.

The result of the first interview (see findings) shows that the platform at its present stage has too many and too big challenges that hinder stores in gaining the benefit of using the platform. In an effort to minimize these challenges, the next configuration table will not allow customers to order through the platform by removing the click and collect function. This is done to minimize the time a store needs to

use on the platform. In the third configuration table, stores will create a catalog that shows everything the store has, taking into account that there may be errors and a product may be out of stock. Here, a store does not have to keep the platform updated with the number of each item they have in stock. Again minimizing the amount of time it takes to keep the platform updated.

The second configuration table

View	**Paradigm**	**Product**	**Project**	**Process**
Value	**Reflection**	**Transaction**	**Reasoning**	**Appreciation**
Rationale: Why?	**Problematic** **Challenge:** Make it easy for customers to find and order the items they need for their hobby from local stores. Give stores access to customer information that can help them improve. **Problem:** Customers don't have a place to search and/or compare hobby products online. Hobby stores may have products that customers don't know about, but would buy if they knew.	**Technologies:** • Computer/ web browser • GPS • Database	**Vision:** A platform that allows customs to find produces, in nearby stores, that they need for their hobby. Where some stores can choose to have click and collect. **Warrant:** Customers can easily find what they need and support their local stores simultaneously. **Backing:** When customers can find what they need, they are more likely to maintain their hobby.	**Criteria for Resolution** **Expectations:** Stores like the idea of give access to information about their goods a central place and will greatly appreciate the new customer information that the platform offers. **Findings:** Hobby stores are not interested in click and collect, but can see the benefits of getting information about customer behaviour.
Strategy: What	**Elements** • Stores provide list of goods. • Customers use the platform to find products. • The platform holders support communication between stakeholders. • Customer behaviour information	**Architecture** • Database of products • User interface • Packing facilities in stores • Email/SMS service	**Qualification** **Qualifier:** convenient, compare prices and exploring, No shipment. **Rebuttal:** still convenient.	**Criteria for Architecture** **Expectations:** Components are necessary and sufficient to implement vision. **Findings:** Click and collect may be sought after by the customers but stores are not interested.
Tactics: How?	**Scenarios** Receive orders Prepare orders Make orders	**Features** • Click and collect • GPS • Mail/SMS service	**Offers** Sales are dependent on accurate database and selection in the customers' area.	**Criteria for offer** **Expectations:** Stores are willing to lay the extra work hours to attract more customers and gain access to new customer information **Findings:** Stores cannot see a big enough value in using the platform to attract new customers due to the big time investment.

The third configuration table				
View	**Paradigm**	**Product**	**Project**	**Process**
Value	**Reflection**	**Transaction**	**Reasoning**	**Appreciation**
Rationale: Why?	**Problematic** **Challenge:** Make it easy for customers to find and order the items they need for their hobby from local stores. **Problem:** Customers don't have a place to search and/or compare hobby products online. Hobby stores may have products that customers don't know about, but would buy if they knew.	**Technologies:** • Computer/ web browser • GPS • Database	**Vision:** A platform that allows customs to find hobby produces based on the needs that they learn about through recipes. **Warrant:** Customers can easily find what they need and support their local stores simultaneously. **Backing:** When customers can find what they need, they are more likely to maintain their hobby.	**Criteria for Resolution** **Expectations:** Customers will want to read recipes on hobby projects and find out where to buy the necessary items Close to them. Stores will publish a catalog of goods to the platform **Findings:** Hobby stores saw their area as being too small to support the platform and suggested grocery stores as a better case.
Strategy: What	**Elements** • Stores provide list of goods. • Customers use the platform to find products. • Customers read recipes • Stores find out trends among customers via. Recipes on the platform • The platform holders support communication between stakeholders.	**Architecture** • Database of products • User interface • Packing facilities in stores	**Qualification** **Qualifier:** Recipe for projects is the same place as info about stores selling the necessary. You must visit the store to purchase the item (s) no shipment. **Rebuttal:** still convenient	**Criteria for Architecture** **Expectations:** Components are necessary and sufficient to implement vision. **Findings:** The elements would have been necessary if the size of the case had been better.
Tactics: How?	**Scenarios** User creates recipe Uses reader recipe User finds a store that sells the necessary for the recipe User visits the store and becomes a customer	**Features** • Link between recipe and search results • GPS • Checklist	**Offers** Sales depend on customer needs and which recipes follow	**Criteria for offer** **Expectations:** • Customers will enjoy a central place to discover new recipes and where products can be purchased locally. **Findings:** The idea of collecting recipes and a comparison of offers is good, it just does not fit well into the Danish hobby market

THE THIRD CONFIGURATION TABLE

There is in the third configuration two differences from the other configuration table; it is not possible to use the platform to order ready for pickup in the store, and the platform allows users to create recipes and link to existing online subscriptions. This was decided on the basis of feedback from the first interview (see findings) that it was expressed that customers often lack a link between ways of proceeding from the internet and their local hobby store.

Stores can use these user-created recipes to get an understanding of what is trending among the customers and customize their selection, prices and decor in the store. In this stage, the platform does not have any kind of purchase or ordering; hereby reducing the time it takes for the store to maintain their part of the platform. The only thing stores will need to do, is create a catalog and update it whenever they find it necessary.

Expectations were that minimizing challenges would make it more appealing for stores to be part of the platform, this did not turn out to be the case (see findings). In the second interview it became clear, that it was not the idea or performance that made the platform not appealing to stores, it was said that the area of the platform was the problem. According to the participant in the second

interview, the area was too small (see findings) and did not have enough customers to support the platform.

FINDINGS

The results from the focus group and the two interviews will be presented, and how the results of the focus group and the first interview have influenced the design for the subsequent interviews. This section will explain the importance of the results from a research perspective.

In general, the focus groups reception of the platform was positive. One of the participants said: “If I need something I do not use often, I go to my local hobby store and if they do not have it, I do not know where I can get it” [focus group]. Here the participant in the focus group said the platform could help. The platforms use of Google Maps information on transport time and distance in car and additional transport, as well as terrain increases and falls for cyclists is a good addition to the platform. As it adds knowledge that can help to make a choice about where you want to buy;”I think it's a good idea with Google” [focus group].

However, there were also concerns from the participants in the focus group on how far it was possible to get all the hobby stores' IT systems to work together, ”The hardest thing is to get your system to work out what they have in each store”[focus group]. The first interview raised concerns about whether it would be possible to get the platform to work with the different IT systems, which each store has as well. “It takes so much interaction with the various stores IT platforms. Because there is, by no means, harmony between the ways they work.” [1. interview].

It was also expressed that the platform might not have enough value for the stores; however it was argued that while stores may be less able to use the platform, the opportunity for more sells will help motivate stores to be part of the platform. ”I think it's more interesting for users than the stores. At least for some stores” [focus group]. Questions were raised about the stock status, if it is inaccurate, problems with unhappy customers can be found, when they think they have ordered a product to find out that it is no longer in stock. ”Also with regard to if stock status is not precise, you also risk placing an order and then the last of that item has just been bought.”[focus group]. In this context it became easy for the customer to order a product with the presented system, but before it can be prepared by a staff member, the last of the given item can be purchased by another customer in the store. There was doubt as to whether the platform contains enough value for the store, “The big question is how many extra customers we are talking about?” [focus group]. On the associations part of the platform, the participant in the first interview told that the setup would make it difficult to find ordered goods. An ordered item in this version of the system had only name, category and price. The participant requested that there should also be an item number associated with each item in a booking so there was a number to be found in the store. In this connection, the participant mentioned that if it requires too much additional work to clarify orders; “it would not matter if the store received 100 extra purchases if they each would require 10 minutes to prepare” [1. interview].

The participant in the first interview was not pleased with the idea, that each store should keep the platform updated with which items they had in stock and in what amount. It would require a lot additional work for each store that would be hard to justify economically. Despite the fact that the version of the platform, as the participant in the second interview was shown, the number of

obstacles for the stores to use of the platform should have been reduced. Unfortunately there were too many challenges for daily operations for a store. According to the participant in the second interview, it will require too much time and energy for each store owner to update the platform with what he had in his store. ”Where the individual merchant does not himself have to update: now I have yeast for 85 cents, he does not want to do that. He does not have time for that. ” [2. interview]. In the version of the platform shown to the participant in the second interview, each store makes a catalog of products for the platform; from here it was up to each store to decide how often they updated their catalog. This solution did not get a good reception:”The catalog is what I publish in the form of our web store, so I'll probably not use this to say it straight” [2. interview].

In the second interview, it became clear that the size of the area had an impact on whether the platform could serve a purpose.” Because a large part of those who are in hobby, dragons lair they close in a few days, so there are not many others left in Aalborg”[2. interview] and “If you stay in war games, board games, crochet, knit. Then the audience is so small” [2. interview]. If there were not enough stores to compare between, why should customers choose to use the platform rather than Google, which stores sells for a given site and then visit them? ”But if I should knit a sweater, what do I do then? Am I going to the app there? No I just go to Google, yarn business, Aalborg. There are 3 stores, it's 100 times easier” [2. interview]. In the second interview, it was argued that even the few hobby stores in town did not have enough in common to make it necessary for customers to have an easy place to compare prices. “Because many times we do not have the same items, so there is no need for price comparison.” [2. interview].

Results from the first interview showed that the platform could deliver value to customers, but that it was unable to deliver enough value to stores, to the extent where they would be interested to participate on the platform. Therefore it was decided to redesign the platform, so stores would find it more appealing to use it. During the first interview, the participant mentioned that it could be of great value for his store if the platform could compile guide designs from the internet with a search engine. When a customer sees a hobby project guide, it typically mentions a series of products and brands that it recommends to use. The customer may be confused over as where to buy these items. So the participant in the interview wants to link these guides with a search engine that showed what was available locally for the customer.” If the customer is watching a video on YouTube, then in the video is mentioned 3 products and how do the customer get them? Then you typically end up with eBay.” [1. interview].

To do that the next version of the platform use created guides, with associated lists of required items, that link to a search result of that product in the customer's area. These reflections may be written by the user or link to extras guides on the internet, such as videos and blog posts. In order to minimize the challenges for stores using the platform, it was decided to remove the option of choosing click and collect and that the platform should only use a catalog of goods that the store offers as well as a price. It is up to every store to assess how often they want to update their catalog, stores would not keep the platform updated with the number of all items in the store.

Regarding the information the platform could give the participants business access to, there was positive feedback. Although it was expressed that information should be national, rather than urban. This may be due to the fact that the participant is

head of a department in a nationwide chain of hobby stores. It was expressed that the platform should include search results, and the store got information about customer behaviour on the platform such as their purchase history and what item they have seen but do not want to buy. Because if a customer buys one miniature paint, but had looked at three, they did not buy two. From the choice of the two other paintings, “Because if you buy one paint at the store but not the others, it's not because you're not interested in paint, it's because you're interested in that one specific paint” [1. interview].

Proposals were made for improvements; a participant mentioned that information about the store was not required to get immediately. So it was suggested that information about the store be stored away so it was easier to get an overview. Regarding the possibility of click and collect, some of the participants mentioned that they saw a challenge in that, not all stores will have room for storing received orders, in particular small stores. From here it was chosen that the next version of the platform, should allow stores to choose whether they want click and collect. One participant suggested that the platform could support user content with the purpose of delivering guides for projects:”Then you should create a maker community with guides. You need a glue gun; here you can find it close to you.” [focus group]. The first interview did not give the desired results. ”Basically, there is no interest in us being on a platform where we are more in competition with others. We will not be interested.” [1. interview]. Participant in the second interview suggested that the platform might work better if it was intended for cooking: by comparing offerings from grocery stores, there will be far more choices for the customer and here for a reason to use the platform as much more information will be gathered at one place. From here he continued to say that the platforms use of recipes, could act as a link between existing recipe pages and apps comparing offerings from grocery stores. “Somehow gain access to recipes and access digital flyers. Then you should make a link between the two.” [2. interview]. By connecting recipes together with information from offers, it removes one step in making the customer go through searching to find the best place to buy the necessary items. This platform also removes frustrations from situations, where the customer reads a recipe and encounters an ingredient they have not bought before. Here the customer is not necessarily looking for the best price, but will use the platform to investigate where the ingredient is sold.

This study shows that the size of the area is of major importance for stakeholders’ interest in participating in VCC on the platform, this is not something that is being discussed in the theory of VCC network level. Further research into VCC on network level should investigate how the size of the case can affect stakeholders' desire to participate in VCC process.

It turned out that the potential challenges, mentioned by Mandrella, regarding business having different information systems, had a bigger significance than was assumed in this article. In order for this case to work, the problem of companies’ different information systems should be solved. Two options were devised here: the first offered the platform as an additional solution for the companies and the other was to systematically replace the information system that the store had in advance. Stores did not seem particularly interested in the two solutions, by getting the platform on the computer system that the store had, it will be a lot of extra work [1. interview] and by changing their system with the platform, the store will lose the

ability to control how goods are displayed to customers [1. interview].

DISCUSSION

The first to be discussed is, whether the size of a case may affect stakeholders' interest to participate in a VCC process. In connection with the second interview, it became clear that the participant was convinced that the size of his subject area in the Danish population was not large enough to explain the development of a platform, which would compare the physical hobby stores selection. The participant mentioned that daily stores might be a better case for the platform, as there are many more stores, these stores often sell the same goods and they are already advertising to customers, so there will not be extra work for them to make information available in the platform. It may also be that the platforms idea is that stores, like stakeholders, follow that the platform can give them an advantage over their competitors. As the participant said in the second interview; there are only three hobby stores in the Aalborg area, it is not something that increases a store's need to be competitive.

When working to get business stakeholders to work together in a VCC context, it must be considered how to motivate companies to participate. In the first interview, the participant said that their business did not want to be on a platform that made them more competitive with the other hobby stores. This may be due to the fact that the store's chain is known for high prices, and he fears that by being on the platform, the price difference will be more apparent to customers. If companies do not follow that they can get a big enough advantage from participating in the VCC process, it's not worth for the extra work to use the platform. Upcoming research can investigate what elements can be added, to motivate companies to participate in this platform. It may be necessary to consider what makes an activity on a platform perceived to give a company an advantage over other companies in the same area, or how not participating in the platform will give their competitors a big advantage.

The next point that should be discussed is whether you should try to get business units to participate in the VCC process, where they will end up in confrontation with each other as part of that process. The question is divided in two; if it prevents the creation of value, where companies can end up opposing each other rather than working together, to create value for the customer. The second is whether companies want to participate in a platform that places them in more direct competition than before. That's the case with hobby stores in the Aalborg area, it is unclear whether it is the case for other types of stores, or in other areas where the circumstances may be in favor of such a platform.

The first assumption regarding the stores IT was that there would be challenges, since hobby stores typically do not have an IT system to keep track of inventory in the store. It was assumed that these IT systems were widespread and it would give great challenges to make them work the same through the platform. It can be discussed that these challenges, make the stores participating in the two interviews, less willing to participate. Partly they could have felt that the platform was a solution to a problem they had solved with their own website, so joining the platform would not be worth it.

In this case the IT part of the platform became one of the obstacles that stores could not see the value in. It may be that companies must take an initiative to enter a network with other business units, because if they are shown a system that allows them to join a network they do not express their interests in joining, they may be hostile against it. With all these challenges that reduce the value for a

business, it is clear that companies do not get big enough value out of the platform. It is possible that another subject area such as grocery stores will have the opportunity for success, for the customers expressed their interests in the platform, maybe it should therefore be adapted to another case.

In compiling this article I have had three data collections, a focus group and two interviews; I have therefore been in contact with 5 customers and 2 store owners. There may be questions about if it is enough to make decisions regarding this case at national level, but since I have been in contact with two of the three stores in the Aalborg area it is difficult to argue for missing data. But if the case had been grocery stores, it may have seemed low only to talk to two stores.

CONCLUSION

In connection with the work on this article, it is not possible to create an IT platform with a starting point in the VCC framework that could bring stores together in a network. This is because there were challenges that were not described in the VCC literature, such as the size of the case that is being worked on, could influence the ability to deliver value to the platforms stakeholders. However, more research will be necessary in order to say something about the extent of influence for success in VVC in a network. The platform could have experienced better reception at companies, if another area had been chosen for the platform, where companies would be more willing to participate in the process; such as grocery stores will be more motivated to participate in order to gain an advantage over their competitors.

This leads to the conclusion that this articles platform area has been much more dependent on the value of the co-creation of the stores and in the future. Other researchers should be aware that yes, the customers part of the platform is important, but if companies are needed for a platform, there should be a lot of focus on the business' side of things. If the companies' resources are necessary to make the platform work, they must be motivated to a far greater extent than on this platform.

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