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Understanding the domain

> A spoon does not know the taste of soup, nor a learned fool the taste of wisdom.
>
> — Welsh Proverb

Introduction

In this chapter, we will introduce a fictitious organization named KP Bank that is looking to modernize its product offerings in the international trade business. In order to establish a business strategy that sets them up for sustained success in the medium to long term, we will employ a series of techniques and practices to help expedite their path from strategy to execution.

At the end of this chapter, you will gain an appreciation of how to employ techniques like the business value canvas and the lean canvas to establish a sound understanding of the business strategy. Furthermore, we will examine how plotting an impact map will allow us to correlate business deliverables to goals. Finally, the Wardley mapping exercise will allow to establish the importance of our business decisions in relation to our competitive landscape.

At the outset, let's gain a high level understanding of KB Bank's business domain before we start diving deeper.

The domain of international trade

In many countries, international trade represents a significant portion of the gross domestic product (GDP) — making an exchange of capital, goods, and services between untrusted parties spread across the globe a necessity. While economic organizations such as the World Trade Organization (WTO) were formed specifically to ease and facilitate this process, differences in factors such as economic policy, trade laws, currency, etc. ensure that carrying out trade

internationally can be a complex process with several entities involved across countries. Letter of Credit exist to simplify this process. Let's take a look at how they work.

International trade at KP Bank

Kosmo Primo (KP) Bank has been in business for the last several years and has been focusing on providing a variety of banking solutions such as retail, corporate, securities and other products. They have been steadily expanding operations to other countries and continents. This has allowed them to expand their international trade business significantly in the last decade or so. While they have been among the leaders in this space, the recent onset of new digital-native competitors has started to eat into their business and impacting their top-line adversely. Customers are complaining that the process is too cumbersome, time-consuming and lately unreliable. In addition, due to a very inefficient, manual process that is currently in place, KP Bank has been finding it very hard to keep a check on costs. Just in the last three years, they have had to increase transaction processing costs by around fifty percent! Not surprisingly, this has coincided with plummeting customer satisfaction — which is evidenced by the fact that the number of customers serviced has remained flat over the intervening time.

The CIO has recognized that there is a need to look at this problem afresh and come up with a strategy that sets KP Bank up for sustained success for the next several years and re-establish them as one of the leaders in the international trade business.

Understanding international trade strategy at KP Bank

To arrive at an optimal solution, it is important to have a strong appreciation of the business goals and their alignment to support the needs of the users of the solution. We introduce a set of tools and techniques we have found to be useful.

> It is pertinent to note that these tools were conceived independently, but when practiced in conjunction with other DDD techniques can accentuate the effectiveness of the overall process and solution. The use of these should be considered to be complementary in your DDD journey.

Let's look at some of the most populars techniques we have employed to quickly gain understanding of the business problem and propose solutions.

Business model canvas

As we have mentioned several times, it is important to make sure that we are solving the right problem before attempting to solving it right. The business model canvas, originally conceived by Swiss consultant Alexander Osterwalder as part of his PhD thesis, is a quick and easy way to establish that we are solving a valuable problem in a single visual that captures nine elements of your business namely:

- *Value propositions*: what do you do?
- *Key activities*: how do you do it?
- *Key resources*: what do you need?

- *Key partners*: who will help you?

- *Cost structure*: what will it cost?

- *Revenue streams*: how much will you make?

- *Customer segments*: who are you creating value for?

- *Customer relationships*: who do you interact with?

- *Channels*: How do you reach your customers?

The business model canvas helps establish a shared understanding of the big picture among a varied set of groups including business stakeholders, domain experts, product owners, architects and developers. We have found it very useful when embarking on both greenfield and brownfield engagements alike. Here is an attempt we made to create the business model canvas for the international trade business at KP Bank:
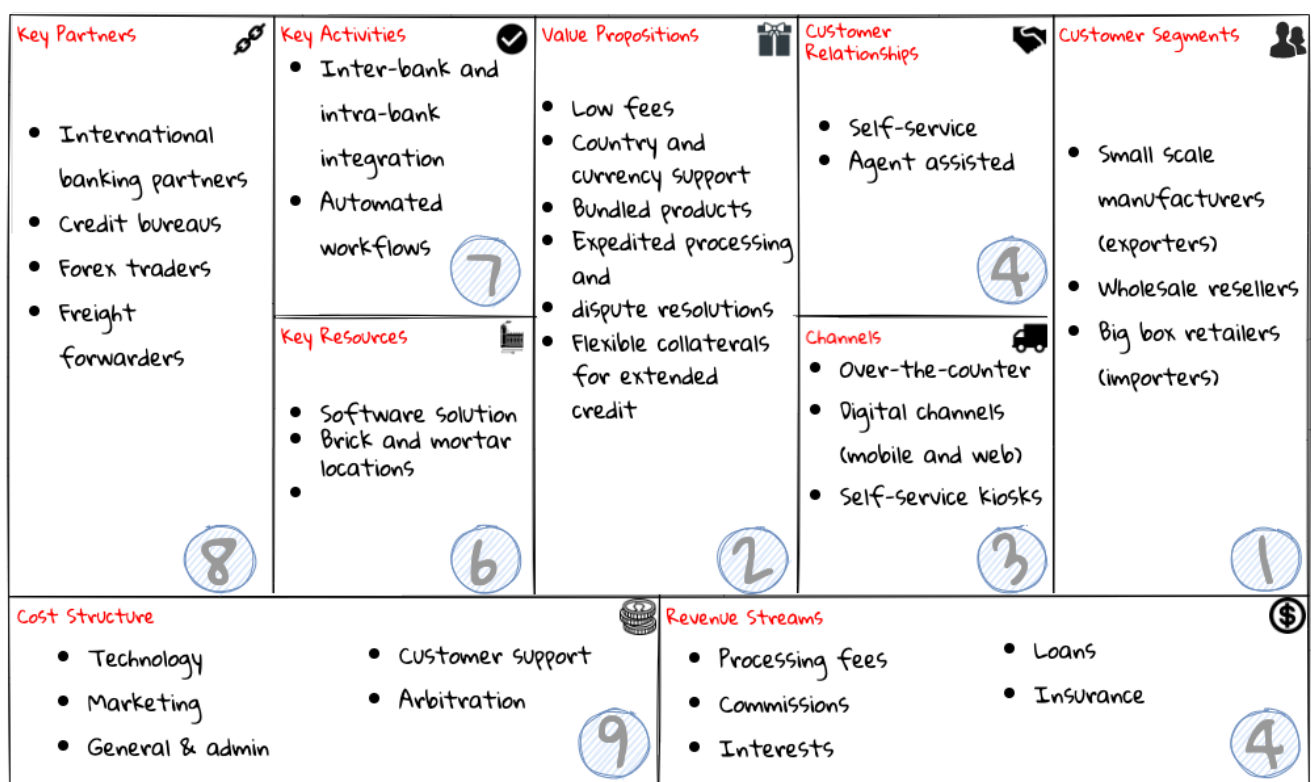

Figure 1. Business model canvas for the international trade business at KP Bank

Using this canvas leads to insights about the customers we intend to serve at the bank, what value propositions are offered through what channels, and how we make money. When developing a business model canvas, it is recommended that we follow the numbered sequence depicted above in order to gain a better understanding of the:

1. Desirability of the business (who our customers are what they want).

2. Feasibility of the business (how we can operationalize and deliver it).

3. Economic viability of the business (how we can identify costs and capture profits).

Creating the business model canvas can prove challenging if you do not have an existing product already — which is usually true in case of startups or existing enterprises expanding into new business areas. In such cases, a variation in the form of the lean canvas is worth exploring.

Lean canvas

A variation of the business model canvas, called the *lean canvas* was conceived by Ash Maurya for lean startups. In contrast to the business model canvas, the main emphasis here is to first and foremost elaborate on the problem that needs to be solved and explore potential solutions. In his own words: "My approach to making the canvas actionable was capturing that which was most uncertain, or more accurately, that which was most risky." This is pertinent for businesses operating under high uncertainty (which is usually true for startups). Similar to DDD, it encourages focusing on the problem as the starting point for building a business.

Structurally, it is similar to the business model canvas, with the following differences:

1. ***Problem*** instead of *Key Partners*: because it is common for businesses to fail due to misunderstanding the problem they are solving. The rationale for replacing the *Key Partners* block is that when you are an unknown entity looking to establish an unproven product, pursuing key partnerships may be too premature.

2. ***Solutions*** instead of *Key Activities*: because it is important to try more than one solution iteratively and respond to feedback. *Key Activities* is removed because they are usually a by-product of the solution.

3. ***Key Metrics*** instead of *Key Resources*: because it is very important to know that we are progressing in the right direction. It is advisable to focus on a small number of **key metrics** to enable pivoting quickly if needed. *Key Resources* is removed because developing new products may not be as resource-intensive in the current climate. Furthermore, they may appear in the *Unfair Advantage* box, which we discuss next.

4. ***Unfair Advantage*** instead of *Customer Relationships*: because it clearly establishes our differentiators that are hard to replicate. This is closely aligned to the idea of the core subdomain we discussed in chapter 1 and gives us a clear picture of what we need to focus our energies on at the outset.

We have shown the result of a lean canvas workshop we ran for KP Bank here:

Figure 2. Lean canvas for the international trade business at KP Bank

The exact sequence in which to fill out the lean canvas may vary. Ash Maurya himself suggests that there may not be a prescriptive run order to do this exercise on his blog[1]. Personally, we like starting from elaborating on the problem before moving on to other aspects of the canvas. Both the business model canvas and the lean canvas provide a high level view into the business model and the high priority problems and the potential solutions. Next, let's look at impact mapping, which is another lightweight planning technique to arrive at an outcome driven plan based on mind maps.

Impact maps

An impact map is a visualisation of scope and underlying assumptions, created collaboratively by senior technical and business people. It is a mind-map grown during a discussion facilitated by considering the following four aspects:

- *Goals*: **Why** are we doing this?

- *Actors*: **Who** are the consumers or users of our product? In other words, who will be impacted by it.

- *Impacts*: **How** can the consumers' change in behavior help achieve our goals? In other words, the impacts that we're trying to create.

- *Deliverables*: **What** we can do, as an organisation or a delivery team, to support the required impacts? In other words, the software features or process changes required to be realized as part of the solution.
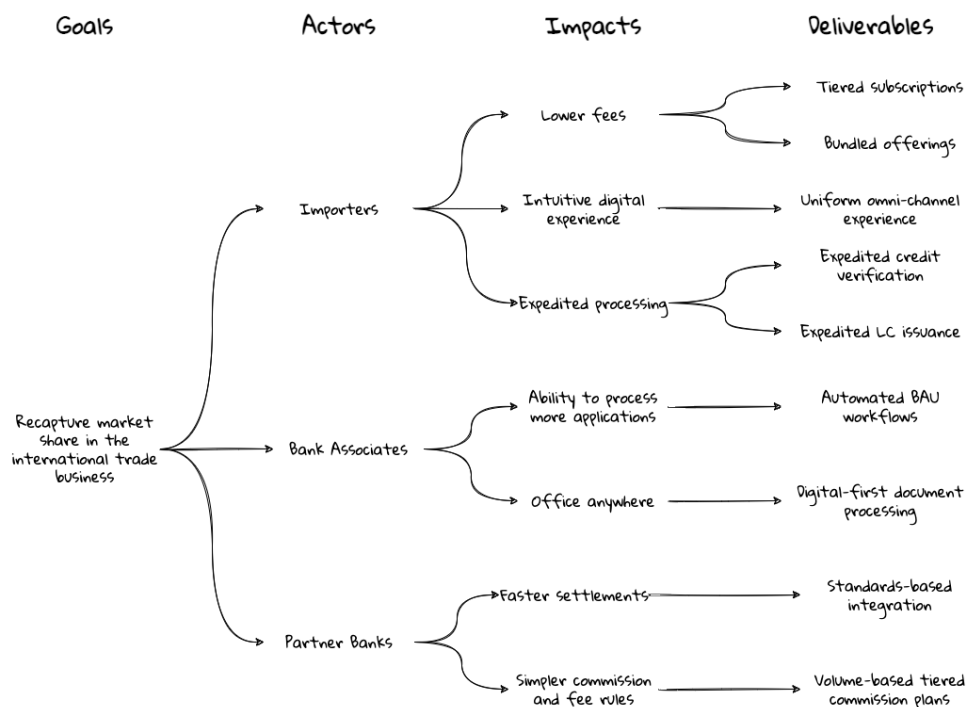
Figure 3. A simple impact map for KP Bank's international trade business

Impact mapping provides an easy to understand visual representation of the relationship between the goals, the users and the impacts to the deliverables. Next, let us examine Wardley maps which enables us to dive deeper, understand our purpose and determine which portions of the business provide the most value.

Wardley maps

The business model canvas and lean canvas can help establish clarity of purpose at a high level. The Wardley map is another tool to help build a business strategy and establish purpose. It provides a sketch of the people that the system is built for, followed by the benefits the system offers them and a chain of needs required to provide those benefits (called the *value chain*). Next the value chain is plotted along an evolution axis which ranges from something that is uncharted and uncertain to something that is highly standardized. When building a Wardley map, it can be done in six steps:

1. **Purpose**: What is your purpose? Why does the organization or project exist?
2. **Scope**: What is (and not) included within the scope of the map.
3. **Users**: Who uses or interacts with the thing you are mapping?
4. **User needs**: What do your users need from the thing you are mapping?
5. **Value chain**: What do we need to be doing to fulfill those needs captured above? These needs are arranged according to their dependencies — resulting in the creation of a value chain that maps user needs to a series of activities in the order of their visibility to the user (going from most visible to the least).
6. **Map**: Finally, plot the map using the evolutionary characteristics to decide where to place each component along the horizontal axis.

We conducted a Wardley mapping exercise at KP Bank for their international trade business as

shown here:

> On this canvas, we have chosen to elaborate the needs of only one class of users (Importers and Exporters) for brevity. In a real-world scenario, we would have to repeat steps 4, 5 and 6 for all types of users.
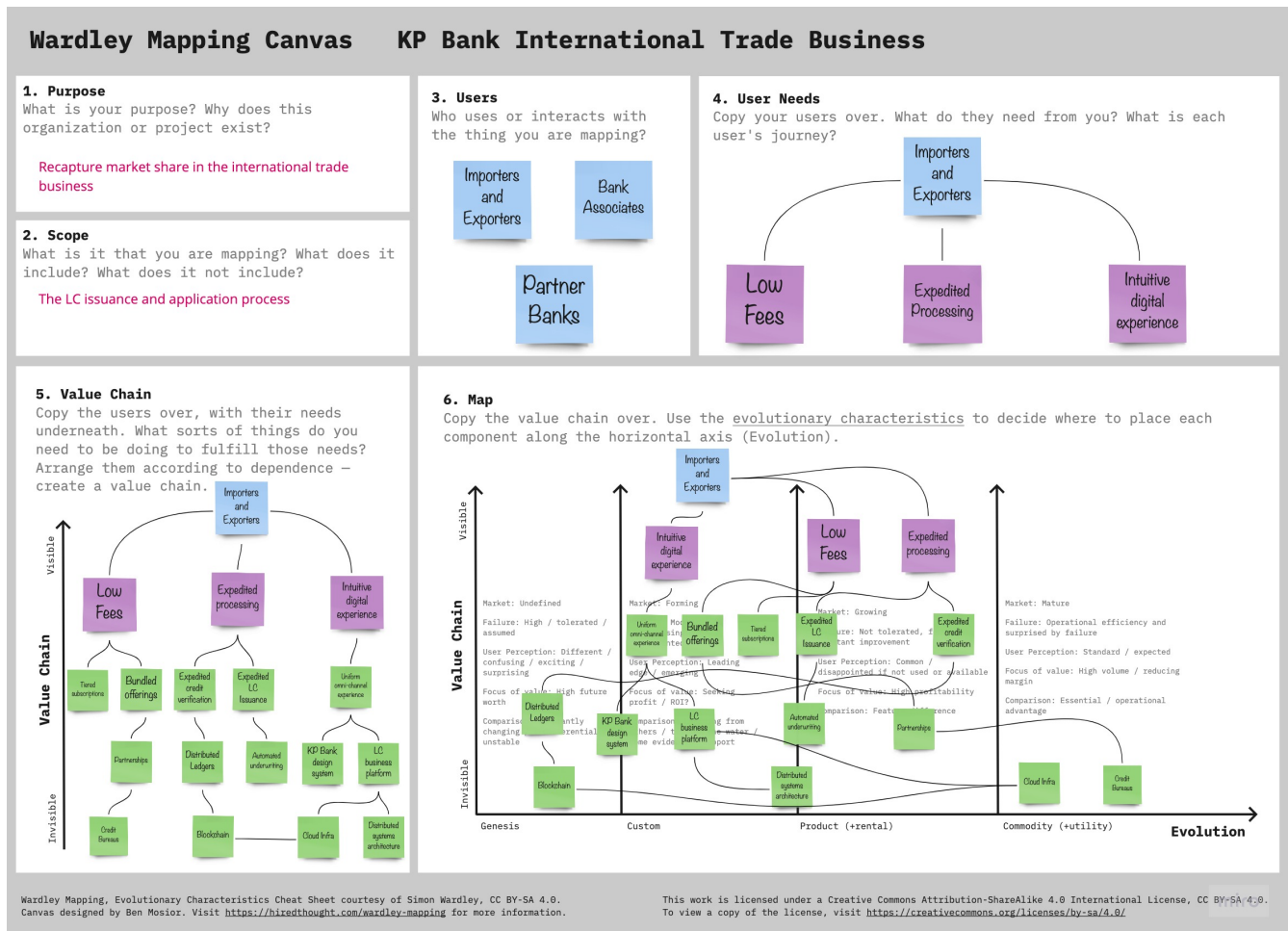

Figure 4. Wardley map for the international trade business at KP Bank

The Wardley map makes it easy to understand the capabilities provided by our solution, their dependencies and how value is derived. It also helps depict how these capabilities play out in comparison to those offered by competitors, allowing you to prioritize attention appropriately and make build versus buy decisions.

We have examined a number of lightweight and collaborative techniques to quickly gain an understanding of the problem space and the impacts we can have on our users and to our business. Each of these techniques is fairly lightweight and can be completed within a matter of a few hours. Each enables us to zoom in on the most impactful areas of the business and maximize ROI. In our experience, it is worth experimenting with more than one of these exercises (potentially all of them) as each can highlight a different facet of the business/user needs.

International trade products and services

International trade is fraught with risk, which then presents a degree of uncertainty over the timing of payments between the seller (exporter) and the buyer (importer), especially due to the lack of trust between the parties involved. For exporters, until payment is received, all sales are

gifts. Consequently, exporters prefer receiving payment as soon as the order is placed or at least before the goods are shipped. For importers, until the goods are received, all payments made towards a purchase are donations. Consequently, importers prefer receiving goods as soon as possible and delaying payment until the goods are resold to generate enough money to pay the seller.

This situation presents an opportunity for trusted intermediaries (such as KP Bank) to play a significant role in brokering international trade transactions in a secure manner. When it comes to KP bank, it offers a number of products to facilitate international trade payments as listed here:

1. Letter of Credit (LC)

2. Documentary Collections (DC)

3. Open Account

4. Cash-in-advance

5. Consignments

The diagram below shows the risk profile of each of these payment methods from both an exporter's and importer's perspective:
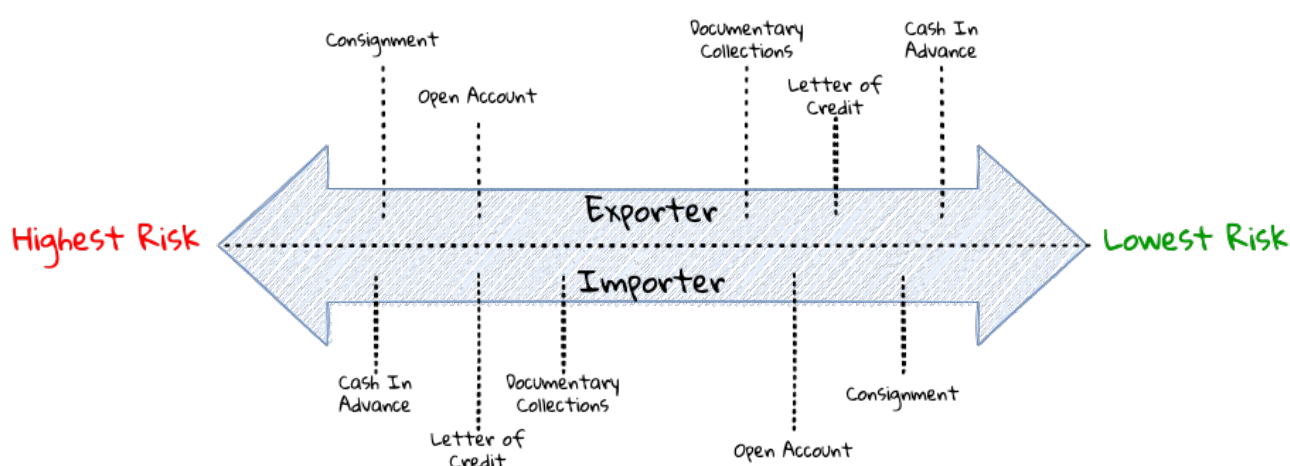

Figure 5. Risk profile of international trade payment methods

As is evident here, the Documentary Collections and Letter of Credit products offer a good balance in providing solutions that are relatively secure from the perspective of both parties. The involvement of trusted intermediaries like KP Bank are required to play in the fulfillment process makes these payment methods less risky for both parties. From the bank's perspective, streamlining the process for these products on a priority also provides a greater business opportunity compared to the other products. Between the two, the Letter of Credit product satisfies most criteria outlined against user needs in the recently concluded business strategy sessions we elaborated above. Hence, the stakeholders at KP Bank have decided to move forward with investing heavily against the Letter of Credit product at the outset.

In the next chapter, and indeed the rest of the book, we will elaborate on how we can improve the Letter of Credit application, issuance and related processes making use of tenets that align closely with the tenets of DDD.

Summary

In this chapter, we have explored a variety of techniques that help establish whether a problem is the right one to be solving. Specifically, we looked at business value canvas and the lean canvas to clarify the business strategy for both startups and established enterprises alike. We then looked at impact maps which enable you to unambiguously correlate business goals to user impacts and the deliverables needed to create that impact. Finally, we looked at Wardley maps to further drill down areas that are important to focus energies on through establishing build versus buy decisions and the importance of business strategy in relation to the competitors and the relative risk involved when treading on uncharted waters.

In the next chapter, we will look at techniques and practices to drill down further and gain an understanding of the Letter of Credit business so that we can start crafting domain model(s) to enable us to arrive at an appropriate solution.

[1] https://blog.leanstack.com/what-is-the-right-fill-order-for-a-lean-canvas/