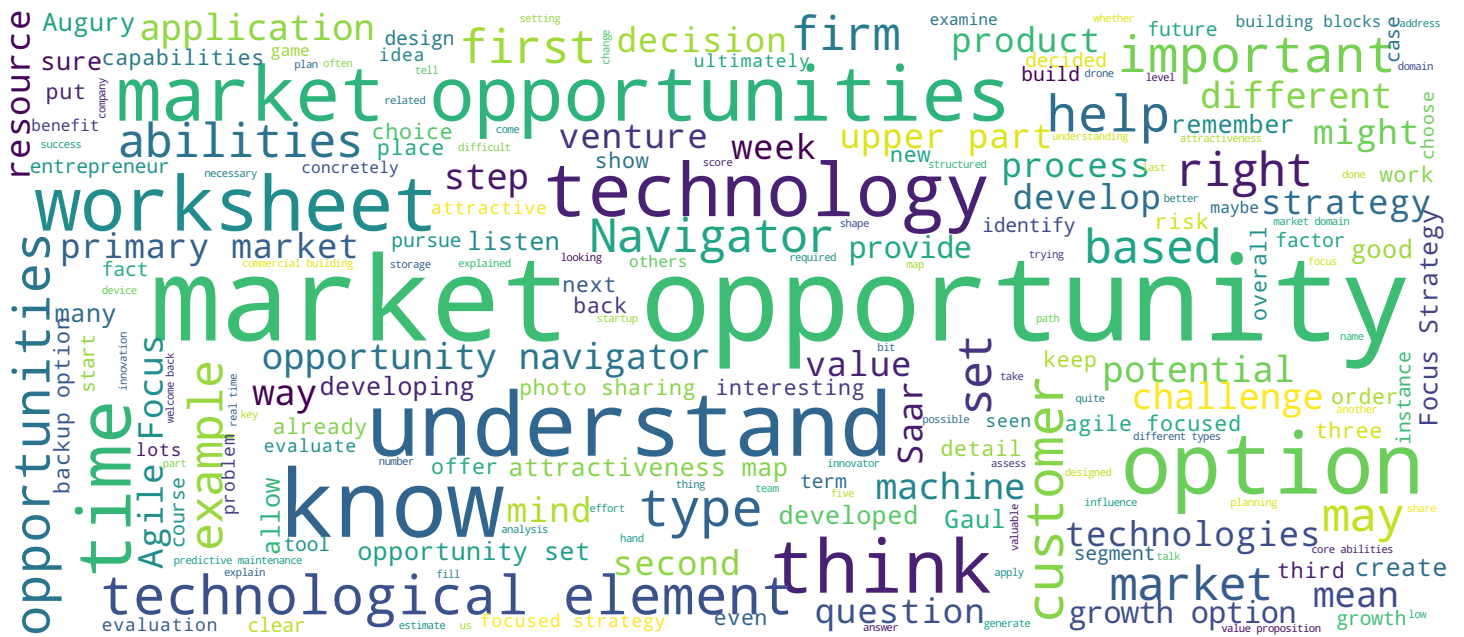


2.2 What are your unique abilities?

The de-linking process



Search MOOC



Video



The de-linking and re-linking process



Two important stages for generating market opportunities:

1) De-linking: describing your unique abilities independent of any (envisioned) product

2) Re-linking: combining your abilities in different ways to create multiple applications and customers

Which markets to play in?

So how do you actually generate this all important market opportunities step. There are two key steps that are necessary to accomplish this first important goal. The first step is called de-linking. The second step is called re-linking the de-linking step is one where you look at your technologies your abilities in their own right. That means independent of any product that you may or have already envisioned in depend of any market that you may already have seen so really try to understand your technologies in their own right as if there is no application to a certain market domain intended for them. Second you would then say OK we have this technological, these technological elements and we try to relate them to different markets domains. So it's de-linking and rethinking. We have decided a website that actually walks you through this important process. And let me first explain to you in some detail how this worksheet is set up before we then go deeper into the de-linking step.

Notes

Summary



0m 04s

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES	1	2	3	4

Identify your market opportunities (a market opportunity = any combination of application+customer):

Which applications can you offer with your core abilities? Who may need them? Zoom in to further segment each customer group.

	APPLICATIONS	APPLICATIONS	APPLICATIONS
CUSTOMERS	 	 	 

 Place the market opportunities you would like to evaluate in the Market Opportunity Set.

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So this is the worksheet that was already shown to you. This is the worksheet 1 for the generation of market opportunities which should ultimately then lead to your market opportunity set it is structured in a fairly straightforward manner. You see on the upper part the abilities your technological elements that you possess or where you want to develop in the future and below you have the identification of market opportunity step where you actually try to understand which applications you can offer with your core abilities who may need them et cetera.

- Notes

Summary



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE



Which markets to play in?

- Notes

Notes

Summary





Technology “in its own right”

1

WORKSHEET 1

NAME DATE

GENERATING MARKET OPPORTUNITIES

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES	 	 	 	



When we talk about abilities and technologies, we mean a set of resources and capabilities that you currently have, and also those that you are currently developing or planning to develop.

Which markets to play in?

In that sense you know you know if you have a fifth one that you identify you would at this fifth element to the worksheet as well. So this upper part of the worksheet is really about your abilities about your competencies about your technology and you're trying to understand those elements in the right meaning decoupled from any application that you already had in mind. So to get a good understanding of what you can potentially do with your abilities competencies etc. you will need to think about them in their own right meaning You imagine them in a more general way that is decoupled from the specific product idea or a customer need that you may have originally had in mind. For instance your unique ability can be an important. Know how that you are processing about a specific process. A rare resource that you have developed or a special capability in manufacturing that you have developed over time as well. These technologies that you have at hand want to develop. They can be broken down into core elements based on their unique functionality such as pattern recognition for instance, or based on their structure design such as nano sized, such as in an Access camera. So think about your technology in all practical terms as it's being comprised of building blocks with certain functionalities. Not these building blocks up here.

Notes

Summary



3m 09s

Listing & characterizing your unique abilities



Think about the main building blocks of your competences, such as:

- Core technological elements
- Important know-how about a specific process
- A rare resource that you own
- A special capability etc.

Describe their main properties as well as the functions they can perform

Which markets to play in?

Here are these examples that I just mentioned. Try to understand and this is now in the blue box, try to understand the main properties as well as functions that these technological elements can perform.

Notes

Summary



4m 38s

Technology “in its own right”

1

WORKSHEET 1

GENERATING MARKET OPPORTUNITIES

NAME

DATE

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES				



When we talk about abilities and technologies, we mean a set of resources and capabilities that you currently have, and also those that you are currently developing or planning to develop.

Which markets to play in?

So you would write the name of the technological element give it a name and then below it you write the function of all the properties that describe this technological element.

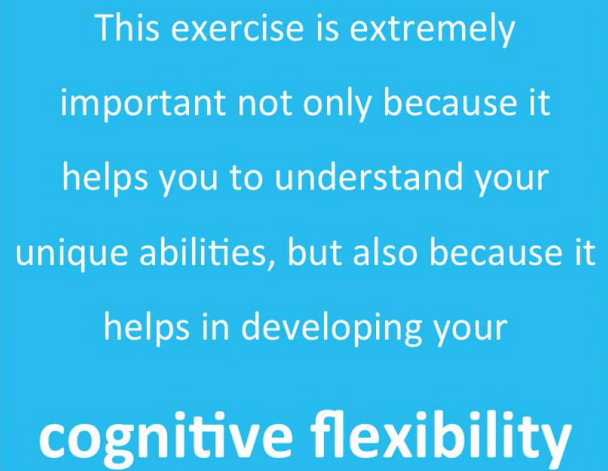
Notes

Summary



4m 50s

ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE



- Notes



Example: Augury



Which markets to play in?

So let me give you an example that illustrates more concretely how you feel in that first part of the worksheet. These friendly folks here are Saar and Gaul. These are two good friends who always wanted to found Estrada, you know like many people out there. One day back in 2011 Gaul was a software engineer back then was sent to India by his employer to diagnose a machine that didn't work properly. He had to fly thousands of miles for that. But as he entered the room he simply heard with a clear sound that the problem was not the software but rather a mechanical malfunction. It wasn't at this moment that an idea came into his mind. Why can't we simply develop something that listens to machines to diagnose the problems. A quick technological investigation revealed that developing this technology would be difficult yet doable. But as they started working on this project Saar and Gaul quickly realized that machines are literally all around us all the way from complicated manufacturing lines to simple home appliance so how can they know what type of machines they should listen to and which market opportunities should they focus on.

Notes

Summary



5m 19s

MACHINES TALK, WE LISTEN.

We are bringing Predictive Maintenance to new markets.
By "listening" to a machine we can tell if it is working properly,
has a malfunction and even predict future failures.

Which markets to play in?

So as we progress along the three steps of the market opportunity and navigator we will revisit the example of Saar in Gaul and the firm agree to make it more intuitive for you to apply the market opportunity navigator and to understand what actually Mark Saar and Gaul chose as their initial opportunity and what else was in store for them. So a glories technology is really about this idea of we listened to machines. Their slogan says machines talk we listen as you see on the slide and their tagline is we are bringing predictive maintenance to new markets by listening to a machine we can tell if it is working properly has a malfunction and even predict future failures. So if you think about this type of value proposition that they are putting out there it already tells you a lot about they have vast opportunity space that is in front of them because they have lots and lots of different machines in working out there. And they could basically listen to all types of machines and different very different types of settings.

Notes

Summary



6m 33s

Generating Market Opportunities

NAME Augury

DATE _____

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES



Listening Hardware

Records vibrations and ultrasonic
Small
Portable
High sampling rate



Algorithm

- Detects changes
- Real time analysis
- Designed for big data
- Based on machine learning
- Builds malfunction 'dictionary'



APPLICATIONS

CUSTOMERS



Place the market opportunities you would like to evaluate in the Market Opportunity Set.

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So let's fill in all Worksheet 1 for Saar and Gaul. You know, by the way I explained it already you can already take guesses of what type of technological elements they have. Now let's look at this a bit more detail. In order to listen to a machine what do you need to do you have to have some hard to get device that has some, some listening power. Well you have to have some device some smartness built into some algorithm that is actually able to detect what's going on. And you have to have a user interface that allows you to communicate with the technology with the hardware to understand what is actually going on there to understand ultimately what type of machine failure could be out there and try to understand what type of maintenance programs etc. can be launched based on that technology. But think about it in a more systematic manner. We can say this technology that they have developed has three main components it's listening hardware it has a number of features and abilities, it can record vibrations and Ultrasound, it can it's fairly small, it is portable, it is a high sampling rate. The second part the second technological element is actually the algorithm, it detects changes and it allows real time analysis.

- Notes

Summary





WORKSHEET 1

Generating Market Opportunities

NAME Augury

DATE

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES



Listening Hardware

Records vibrations and ultrasonic
Small
Portable
High sampling rate



Algorithm

Detects changes
Real time analysis
Designed for big data
Based on machine learning
Builds malfunction 'dictionary'



User Interface

Easy and intuitive
Suits iPhone and Android platforms
Generates tailored reports & statistics
Online management platform



APPLICATIONS



CUSTOMERS



Place the market opportunities you would like to evaluate in the Market Opportunity Set.

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It's designed for big data. A lot of data points that are collected. It's based on machine learning. And actually it's a kind of a cool feature built a malfunction dictionary over time. The third key element that Saar and Gaul developed is the user interface. It should be easy intuitive. It should fit the iPhone as well as Android phones. It generates tailored reports and statistics and it has an online management platform. So if you think about Saar and Gaul glorious court technological elements there are three and they have different features. And this is all you need to do to fill in this upper part. It sounds kind of simple how I portrayed it and it's actually a straightforward process but only if you are able to do delink yourself from a certain market to me.

Notes

Summary



9m 03s

Example: Biotia



Improving the hospital environment
through the power of genomics.



Which markets to play in?

Another interesting sample is biotia, and this sample is actually quite different to the first example from Saar and Gaul that we looked at which was mostly based on technological elements but also is based on the country or know how that is embedded within one person Neefe O'Howrah and she's the resent Ph.D. graduate it in the whole field of genomics. So let me show you what her know how it is about and how that can be partitioned into certain components.

Notes

Summary



10m 00s



WORKSHEET 1

Generating Market Opportunities

NAME Biotia

DATE

List the venture's core abilities or technological elements

Characterize them based on their functions and properties. Describe them in a general manner, independent from your (envisioned) product.

ABILITIES



Sampling Abilities

Complex natural systems
Widely spread
Not evenly distributed



Experimental Design

Understanding of full
experimental process



Pathogen Monitoring

All pathogens
Real time analysis
Large data sets
Next-gen sequencing models



APPLICATIONS



CUSTOMERS



Place the market opportunities you would like to evaluate in the Market Opportunity Set.

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So the first component needs sampling abilities so Neefe is really, really good in understanding complex natural systems that are widely spread not evenly distributed. She's also quite good at experimental design to understand the full experimental process and finally she has a certain strong ability in pathogen monitoring that involves all types of pathogens. She can do a real time analysis of large data sets. And she's also really good with pathogen monitoring and understanding the next generation sequencing models. And based on these three types of unique abilities and know how she decided to create a startup that can offer environmental surveillance solutions using the power of genomics.

Notes

Summary



10m 25s

Sometimes a feature can be valuable in itself



flickr

Which markets to play in?

A third and very interesting examples actually flicker. You all know this company it's today a photo sharing community site that is very popular. But they didn't start off like this. They started off, in fact in 2002 by developing a multiplayer online game with real time interaction through instant messaging and one feature of this game was a chat environment with photo sharing which quickly became valuable in its own right and surpassed. The game itself in popularity leading the firm to put Actually the game on hold and to focus on developing a new photo sharing community site. So if you think about flick a flicker and this upper part of the worksheet the photo sharing ability which has been one of the technological elements that they could have put in there. And based on that we then can develop multiple applications as we explain in the next segment to you.

Notes

Summary



11m 09s

Summary



Think about and describe your technological elements and abilities in the most generic manner, as they will form the basis for different applications!

Which markets to play in?

So in some of these examples and what I explained before. Tell one clear message try to think about your technologies in their own right now in the most gentle manner possible. Because only then you will understand the flexibility inherent in your technology and that there are many other opportunities out there that you can potentially cater to.

Notes

Summary



12m 03s