

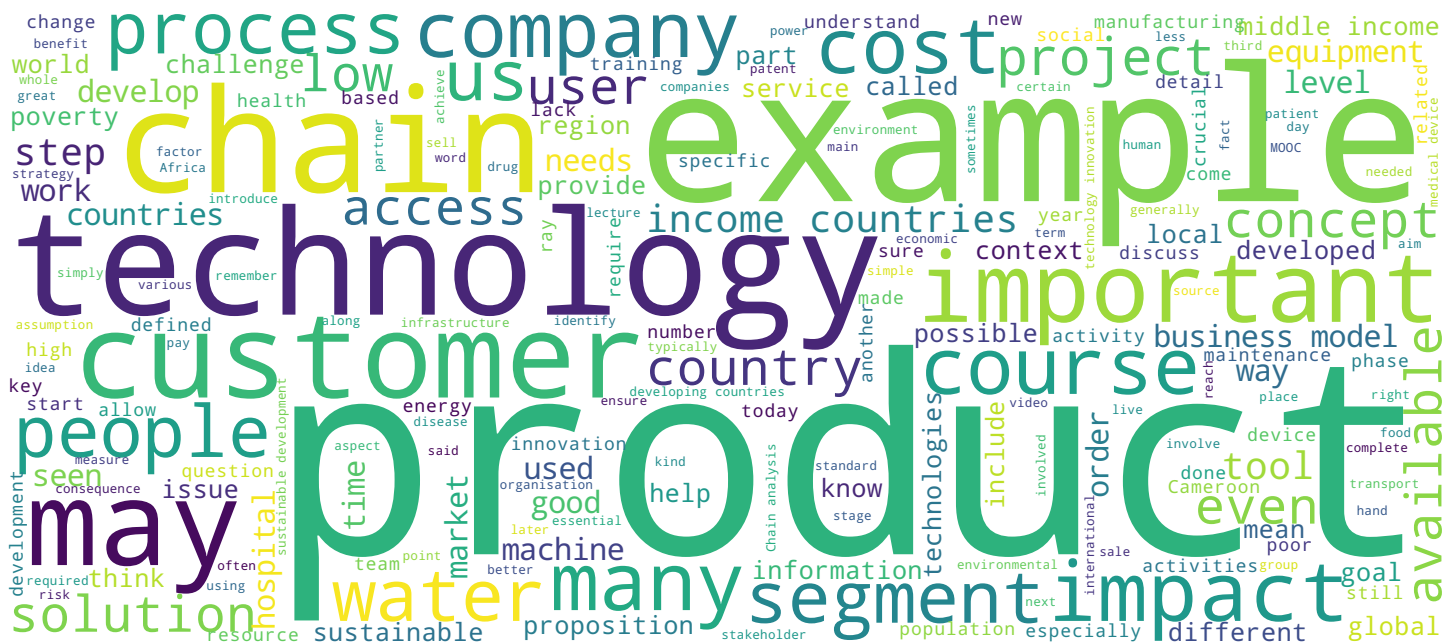
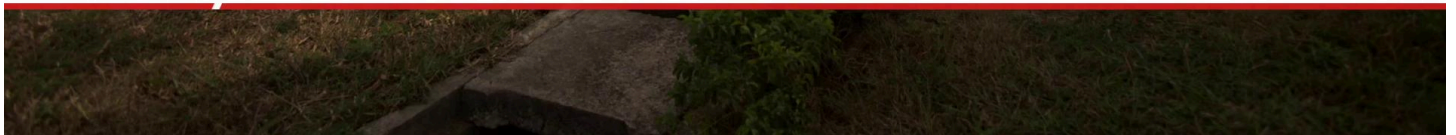


Technology Innovation for Sustainable Development

The Product Value Chain: overview

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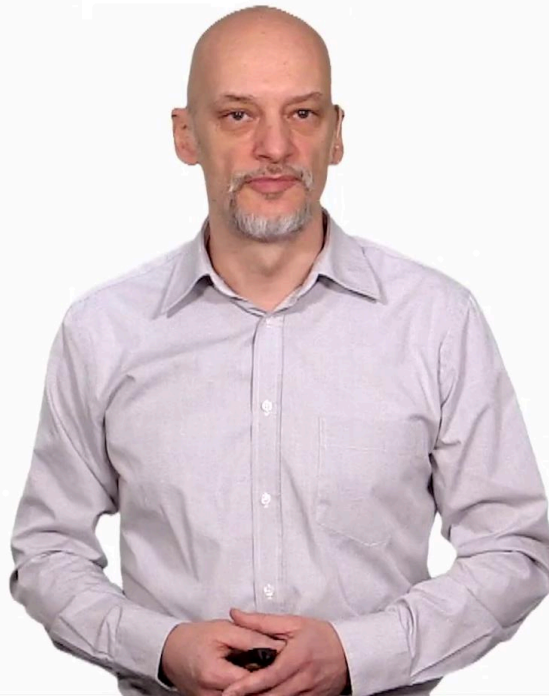
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Hello. As we have seen in a previous video, we now have a tool and approach to define our theory of change and how our project will lead to impact on a specific issue. Now we need to look into the technological product that we want to develop and how this product will be made available to the user. There are several questions that we will need to answer. How can we capture the key activities and steps needed for our product to be available to our user in a sustainable way? How can we identify all the stakeholders whose intervention is crucial? How can we make sure that we have captured most of the technological and business constraints? In this chapter we will introduce a new tool to you, which we have developed to help envision the chain of activities that are required in order to achieve our goal. We call it The Product Value Chain analysis tool. The concept of Value Chain was developed by Michael Porter back in 1985. As he had defined it, the Value Chain referred to the organisation of a company or a business unit as a whole. The idea was that each group of activity in the company, such as operations, logistics or marketing, are a segment of the chain.

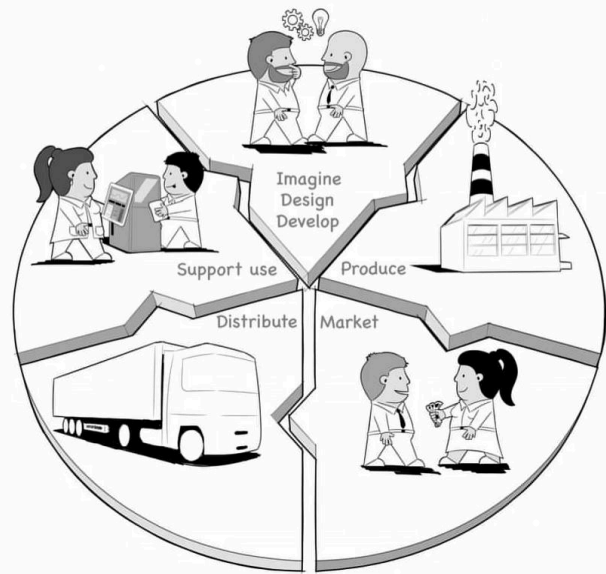
Notes

Summary



0m 10s

The Product Value Chain



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Each segment consumes resources and adds value to the final output of the company. This definition is not the one that we will use here. Our concept of Value Chain, which we explain in the this chapter, focuses on the product itself and not on the internal organisation of a company. In fact, making the product available to the user may involve a whole series of companies and other organisations. Again, remember that each segment of the chain is an activity that adds value to the customer and for the various stakeholders involved. As we will see later, this is related to the value proposition that will be created and provided to the people who need it. Analysing the chain is vital and there is a tight relation between each segment and the final product, as well as between one segment and another. What you see here is a generic and basic form, which can be used as a starting point. However, you will have to expand it and tailor it to your specific technology. Each activity should be further subdivided into smaller segments, which will help you to identify key suppliers, partners and other stakeholders. So let's now have a quick overview of this Product Value Chain before we take a deeper dive into each segment.

Notes

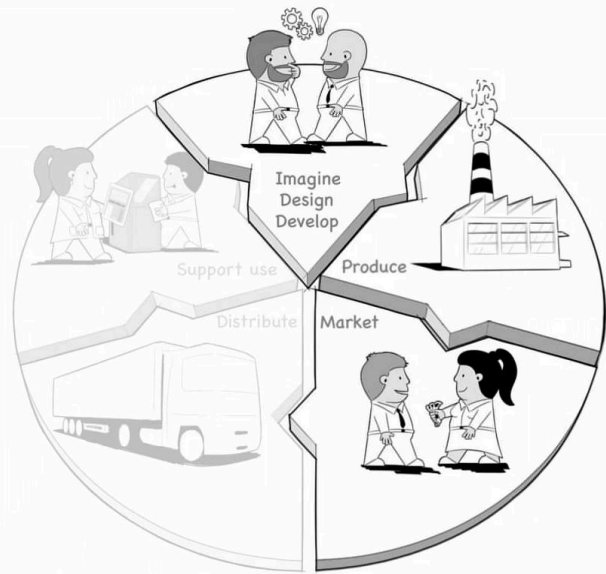
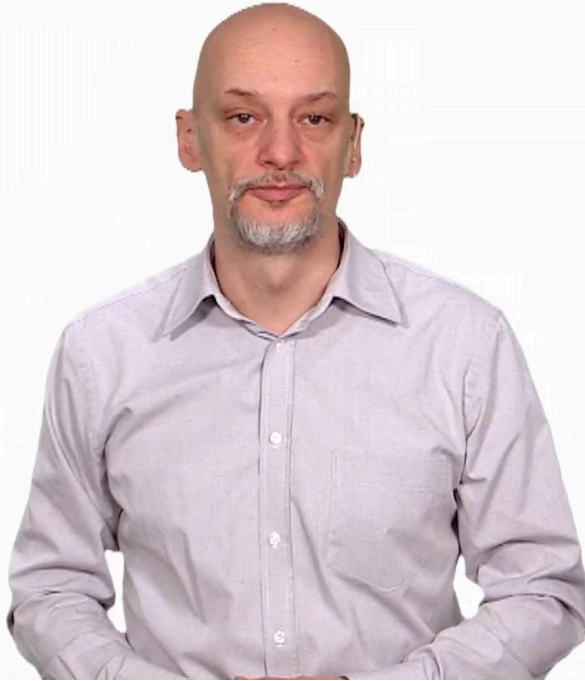
Summary



1m 33s



The Product Value Chain: Market



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Any technology or product will first need to be imagined, designed and developed. We thus naturally start the Value Chain analysis with this segment. This early stage involves creative thinking, but then concepts must be refined and adjusted to the industrial constraints, the needs of the customer, the legislations and many other factors that must be accounted for. The aim of the Produce step is to manufacture the product with a constant quality and at the cost target that has been defined. Production methods need to be tailored to the volumes that will be needed, as our technology deployment grows and scales up. This step does not only include own manufacturing but also takes into consideration all kinds of subcontracting types that you may put in place with partners to reach the best price-quality ratio. It also encompasses the supply chain management required to manage the flow of raw material, components and semi-finished goods all along the production flow until the product is finalised and tested. The next one is the Market step. The aim is to sell the product at the right price, which means that it has to be competitive on the market while still offering a sustainable profitability to your organisation.

Notes

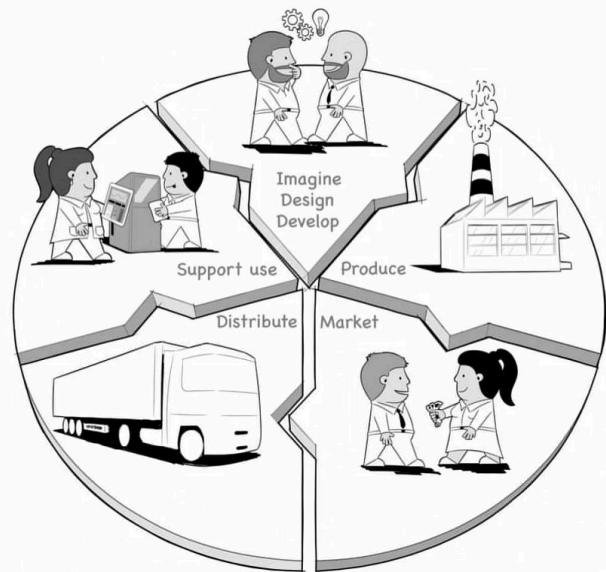
Summary



2m 53s



The Product Value Chain: Support Use



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We know that affordability is a crucial concern as we think about solutions for low and middle income countries. However, this step involves looking at the complete value proposition for customer, not just the product. For example, alongside the product, there may be a need for training which is part of the value proposition. This step will also involve market analysis, business model definition, branding, publicity and so forth. In a later chapter of this MOOC, we will introduce a very effective tool to develop and analyse innovative business models in detail, which is called the Sustainable Business Model Canvas. A very important segment is related to all the activities needed to bring the finished product from the producer facility to the user. This is our Distribute segment. Distributing the product includes topics such as packaging, logistics, customs clearance or insurances. This segment of the Value Chain often represents a major roadblock/hurdle in the countries we are considering, for all sorts of reasons, such as geography, climate or governance. Our final step is one that is, unfortunately, often overlooked, especially when considering deployment in low and middle income countries.

Notes

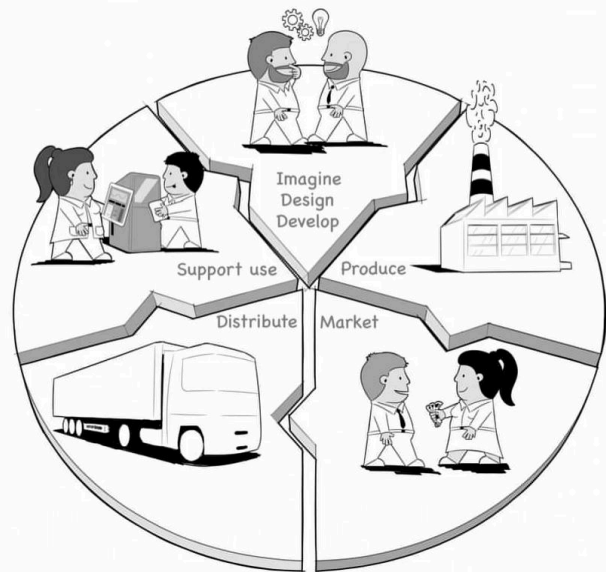
Summary



4m 22s



The Product Value Chain: Support Use



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As we have seen, the level of failure of products is huge when they have originally been designed for industrialised settings and they are delivered to customers in developing countries without any second thoughts. This is largely a consequence of neglecting to investigate the context and behaviour of users. The Support Use segment of the chain is a vast subject starting from when a product is received by the user all the way to when it is decommissioned and recycled. Note that the process is circular. This is because one day the product will become obsolete and the whole cycle starts all over again.

Notes

Summary



5m 56s



1. All segments interconnected
2. Generic to specific & expanded

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I would like to make a few additional general remarks on this Product Value Chain. First, although it is shown as a process with arrows linking the different segments in a chronological way, it is essential to understand that all the steps are interconnected. They must all be taken into consideration early on, even as we are just starting to work on the concept. For instance, when designing the product, you will need to have information about what options are available for manufacturing, about market requirements, distribution constraints and about how it will be used, maintained and recycled. Second, what we have represented here is a Generic Value Chain, which should be used mainly as a starting point. Your project could be to develop any kind of technological products, such as a new type of housing technology, a machine, a drug or an IT application. The Product Value Chain needs to be tailored to this product and expanded in much more detail. However, a fundamental rule is to keep it as simple as possible but not simpler, as Einstein once said. In some cases, not all steps will be applicable, but it always makes sense to go through the Value Chain and ask yourself if a specific step is relevant to your product or not.

Notes

Summary



6m 43s



1. All segments interconnected
2. Generic to specific & expanded
3. Iterative tool
4. Diverse team required

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Third, when beginning your project, you will not have all the information at hand. You will need to make assumptions. As your product gets more mature, you will be able to confirm or refute these assumptions. You will also identify new, relevant parameters that you did not consider at first. The Product Value Chain analysis, like all of the tools proposed in this course, is intuitive and must be reviewed regularly all along your project. Fourth, to successfully use this tool, you need to use it as a team. It is crucial to involve people who have the knowledge that you may be missing. For example, if you are a marketer, you may want to at least involve an engineer and so on. If you are someone from an industrialised country, make sure to involve someone who has a deep understanding of the country or region you are targeting. In the next videos, we will move to a more detailed discussion of the different segments. For each one, we will discuss some key strategic topics to be aware of and which are especially relevant to low and middle income countries. Goodbye.

Notes

Summary



8m 16s