

Technology forecasting for strategic decision making - An Introduction
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Introduction to Vacuum forming case study & FORMAT handbook

You never find what you are looking for in a refrigerator. Anyway, so hello and welcome to the technology forecasting course for strategic decision making. So, this is a course where we will use different examples from different walks of life and I believe that you need a case study to use for this purpose. And I will be showing you a case study that we worked on as part of a FORMAT project.

So, this is the handbook for the project called 'FORMAT' which is Forecast(ing) and Roadmapping for Manufacturing Technologies. This is a project that we, Professor Dmitry, who is my co-teacher, Dmitry Kucharavy and myself, we worked on this project for developing a methodology, technology forecasting methodology to help business decision makers to forecast what kind of techno...

So, why am I standing in front, near a refrigerator talking to you about this? Vacuum forming is what was the case study that we took as part of the FORMAT project itself. So, what is vacuum forming? Vacuum forming is, as you can see, this is the big machine, on your slide you can see three gentlemen standing in front of the big machine called Vacuum forming. These are our colleagues from the project, from the FORMAT project, a European Union funded project.

So, vacuum forming is a technique, a technology, a machine used for making parts that go inside a refrigerator like this one. So, it is based on vacuuming, vacuum; you put a material, you put in a vacuum, you make the part exactly the shape that you want using this machine. So, that was the technology we took. Now, what, why was it so important? At that point of time, as part of the case study, we looked at the business context.

Business context is important for technology to operate within. As you would have heard professor Dmitry talk about it, is the business context is where the technology forecast operates, it needs to be used within that context. So, in this case, the Vacuum forming case, it is the fact that the annual maintenance contract was overdue or was due to be renewed, okay. Now, it is not a single year renewal or a two years renewal, but we are talking decades.

So, this is at least a couple of decades, 20 years. So, we were, the company, Whirlpool was looking at investing in Vacuum forming's annual maintenance contract, this machine's annual maintenance contract which is worth millions of Euros. So, there are two possibilities. One, is that the technology just goes obsolete after, say, five or ten years and the company is, and they take a decision saying, I am going to renew the contract, then they are stuck with this machine and after ten years, you know, when the technology goes obsolete, now what do I do?

I have this machine, I cannot do anything, I have renewed the contract, okay. Now, that is one possibility. The other possibility is they decide not to go with the renewal and then you find that it has actually lasted 20 years, okay, the Vacuum forming technology has lasted 20 years. Now, that means you lose out, okay, you lose out on the technology, you had a machine invested because you did not know what was going to happen, you decided against it, okay.

So, this is the decision to be made, whether to renew or not. If you renew, there are certain consequences, if you do not renew there are certain consequences. But a well-informed decision is what the business decision-maker was looking at. So, we took that up as a case study for technology forecasting and we said, the question to be answered in this case is - will Vacuum forming technology last for this application of the refrigerator making the refrigerator parts, will it last for 20 years?

At the end of 20 years, in this particular geography, which was Europe, I think Africa and they were looking at that market, and will last that time? Okay, if it... and at the end of the Tech forecasting project, they did have evidence, models to suggest that yes, it is going to last. Then, it is up, of course it is up to the business decision-maker to make the decision. But now, they are armed with this particular piece of information from the technology forecasting exercise.

So, this is what we are going to be looking at as a case study, as to how technology forecasting can help in forecasting in a business context, I mean in a business scenario. And in the meantime, I will drop in the URL for downloading the handbook, it is available for free. You can download it as an offline version or if you are interested, you can even use it as an online version and conduct your exercises, this, the Vacuum forming case study in its entirety is also on the website [FORMAT hyphen project dot eu \(format-project.eu\)](http://format-hyphen-project.eu).

I will leave the URL either in our discussion forum or in the description in this video. Okay, so you can download this, it has lots of steps on how to use the methodology, okay. This methodology that we use as part of this project of, I am sorry, for this course, also is similar to what you will find in FORMAT. It is very very similar in spirit, in style and you can use this, or you can use the FORMAT methodology or you can use what we are suggesting as part of the course.

Okay, so that is about what we are going to be doing in this part of the course. I just wanted to introduce the case study so that you can, the business context itself. Thank you so much and have a good day.