



Webinar Efficiency-as-a-Service (EaaS):

Energy efficient food and process industries through servitisation

17 March 2022, 13:00 – 14:00 CET

Questions from participants

Moderators:

- > Arno Nijrolder, Business Analyst Sustainable Energy at **EIT InnoEnergy**
- > Dimitris Karamitsos, Senior Energy Efficient Business Developer at **BASE**

Speakers:

- > Walter R. Stahel, member of the Strategic Foresight Board of **circulareconomyalliance.com**
- > Ilmir Gareev, Global Product Manager IoT and new businesses at **Atlas Copco**

Session 1 – Circular and Performance Economies

Questions for Walter R. Stahel

1

The discussed circular and performance economies models can have beneficial impacts on aspects such as climate or use of resources. Given that the model already has been discussed for quite some years within the boards of various companies, what are some of the main barriers for companies to adopt this model? Why is it not yet taken up to scale?

Well first of all, the circular economy and the performance economy are disruptive business models. It is mentally and profitably difficult to move from the linear industrial economy into the circular performance economy.

Secondly, you will have to decide what and how you are changing. Accepting the liabilities involved in the circular and performance economy will shy away risk averse companies.

A third reason is the fear of stranded capital if your past optimization has been focussed on the existing processes and technologies within a linear industrial business model. If you change you may need to write off a lot of these investments. Companies like Elon Musk's Tesla or Space-X have had the big advantage of having nothing to write off in starting a new business from scratch, whereas all the other established market competitors such as Boeing had to write off past investments when changing the rocket technology. Then it is a question of speed and competitiveness. As a newcomer, working with young people, you don't know the things that don't work, so you do them, unlike an experienced person.


Disruptive technologies must be promoted actively, either on selling the advantages of CO₂ emission reductions or waste reductions, or of the maintaining embodied carbon and water. How to motivate people to change depends also on industrial sector a company is active.

2

How can we avoid having one player that basically becomes the major service provider and eats the competition away?

The basic rule is not different from the rule in the linear industrial economy. The first player who jumps into the market offering a better service, may in the long run retain about 50% market share. All the following players will have to share the remaining 50%. This was the case with photocopiers, IBM, Tesla.

The circular economy and performance economy are basically about innovation and competitiveness. If you are the pioneer taking the risks, you have a good chance of retaining quite a substantial market share, while other people will follow it.



SpaceX was followed by Odyssey Moon. In the meantime, there are about half a dozen competitors selling space transport services. But if you are the first and successful, you will have a track record that is difficult to beat for any other follower. So it is finally a question of competitiveness.

3

As a company active in the production of food, for instance an industrial bakery, may consume significant amounts of energy for compressed air/heating/cooling/refrigeration. What should it do to stimulate suppliers of these services to bring more circular and energy efficient propositions, perhaps that are in line with the thinking of the performance economy?

It is very simple. Think of NASA and its rockets, instead of asking for offers to buy new equipment, you ask for offers for the performance or result of this equipment.

This is also how Thomas Rau, an Amsterdam architect, forced Philips to produce the Light-as-a-Service proposition. When working on a new office building many years ago, he stated 'I don't want to buy lamps, I want to buy light'. Philips might have thought in the first instance, crazy guy, but then once you start thinking about hotels or airports, one of the main cost factors with regard to lightbulbs is not the purchase costs of the lightbulbs itself, but the costs of the labor and scaffolding needed to change the lightbulbs. If you sell Light-as-a-Service, you will quickly get the knack that you need to produce lamps that last are forever, so you profit from not having to change the lightbulbs. Your income stays the same, but your costs go down and your profit goes up. This is the big difference compared to selling lightbulbs.

4

How should financing adjust to servitisation?

Many European investors are also risk-averse as we don't have the same kind of risk capital that you will find in the US and a few other countries.

There is a recent successful European example, concerning a machine tool manufacturer who wanted to sell the service of his machines instead of the machines – pay per use. For this it needed a much longer finance carpet and found Munich Re, a leading re-insurance provider in the world, and its subsidiary risk management company, which put up the finance.

As an investor who finances technical systems, you must understand the technology and the market with a long-term view. A long-term horizon is typical for reinsurance and insurance companies. While banks normally are judged on quarterly results, and annual bonuses for employees, hence they may be less interested in long term profits.



How would you say is the best way to approach financiers, let's say if you would approach a financier, to prove it is a valuable project to finance?

If you take for example infrastructure projects, such as the viaduct of Millau in France, or an airport in Korea. The important thing is that you must have a multitude of skills, including design, finance, construction, operation and maintenance, repair. Then you must try to build a system that potentially will last forever.

Look at Atlas Copco or Xerox, they both use modular design with standardized components. You also need foresight, planning for uncertainty. For example, if technological progress moves from electromechanical to digital, which was the case 20 years ago, it can break your neck if you have to scrap your equipment and start from new. But if you have a modular system, you can reuse existing components in the new world, only the electromechanical components that have become superfluous need to be replaced.

So, you must include updating and upgrading options to provide technical flexibility from the beginning in your system. If you can show that to financial institutions in a convincing way, they may lose part of their risk aversion and invest in your company.

Session 2 – Servitisation in practice:

Questions for Ilmir Gareev:

1

Typically, what would be the length of contracts?

Customers compare the AIRPlan offer with leasing offers, where banks apply fixed periods for leasing. For AIRPlan, we only have a minimum period, which is 15 months. After this period, there is no obligation to stay with this product.

2

Let's say I am a client, we subscribe to a membership, scared at the end of the day that we will be paying more, or locked in, and thinking that, maybe we should have bought the equipment. What would you say to a customer that is comparing the two scenarios like this?

Starting with the price, the as-a-service proposition will cost around 25% equipment value in a year. That is the average ratio. It depends on your consumption, as there is a variable part.

But the value doesn't stop there. Other advantages can be having access to better technologies on the market, plus high reliability of the equipment. Normally when you buy, there is an SLA contract. But now you have the incentive at Atlas Copco to go and repair or replace as quickly as possible, without the customer having to worry about this. This could also be put on the balance from a value perspective.

3


How do you typically finance your projects and contracts?

As Walter told, it is difficult for companies that are already active on the market for years to change to such a different business model. After all, companies will always get used to a flow, so for us it was also a challenge. We realised that we can do it step-by-step and then finance it ourselves.

We currently do not have a third party financier but finance it ourselves, as that approach worked for us. We started with bringing the proposition to just three countries, while now we are expanding, and now we bring AIRPlan propositions to 80% of countries worldwide.

4

Does AIRPlan also mean a different approach in terms of revenue recognition for Atlas?



That is true and a good question, indeed we had to overcome this issue. We approach it as seeing two streams, the asset, being a machine, and the service. We recognized the revenue in two ways, one is linear (depreciation of equipment), whereas the service is based on service that was done in a certain period. Thereby revenue recognition considers two parallel flows. We were happy to be working in SAP to enable implementing this.

5

Does AIRPlan include the energy cost?

Initially we were thinking that including the energy costs into the proposition should be part of our final goal, and we still think it should be. Currently, our customers pay for the electricity costs separately, and we use their electricity for running the AIRPlan equipment. But on how we try to reduce the electricity consumption, we use only the most efficient machines. The next step for us would be providing the total solution, where we will also include electricity. Right now we are only offering as-a-service solutions with electricity separate.

6

What is the most important factor regarding whether or not you include or exclude electricity? Is it the regulation side?

Yes. I think it is easier to do it here in Europe, whereas in some countries it is more complicated because the electricity providers are state owned. We are a global player with the same offer worldwide. On this factor, we cannot distinguish over markets right now, and that is the main reason we don't have it as a solution right now.

7

How would you say is the best way to approach financiers, let's say if you would approach a financier, to prove it is a valuable project to finance?

It is all about when the project can be healthy enough to either continue or start.

In our case we always do an audit of the whole system at the customer. Then we realize savings can be realized, either in terms of energy efficiency or regarding the process improvement. For instance, if you have a lot of outdated or old equipment, then we would identify a risk of machine breakdown. Based on the conducted analysis and air demand, we conduct calculations in order to provide an offer with our solutions. We always calculate all the steps in money terms, such as the energy savings, process savings, also in many cases footprint, as systems can be smaller.