

People Power!

What the Nordic energy market is getting right

Mathias Calonius & Arttu Tolonen

Every energy company should challenge themselves with the following questions:

- What would an ideal energy company be like from a consumer's perspective?
- In what role can you create the most value in a market where consumers are both users and producers of electricity?
- How can an energy company be a market orchestrator and an energy provider if it doesn't own the production assets?

Innovative companies like **Nest (Google)** and **Tesla** that enter industries with the aim of finding new, disruptive business models are trying to find the answers to these questions every day. Their focus is on the consumer and how to provide a better service. In many industries, including energy, Finland is a good model for disruption and

early adoption of new paradigms.

Customer centricity is the key

Finding the right problem to solve is frequently the most underrated part of the innovation process. To come up with a good problem definition you have to be deeply immersed in the customers' lives and know their needs and challenges inside out. That's how you create insights that reveal the opportunities to create significant value for both your customers and your own company. Love the customer's problem.

As processes go, innovation and product development are profoundly different from manufacturing and production. **Thomas Edison**, one of the great innovators in

electricity and a founder of **General Electric**, once said, *“The real measure of success is the number of experiments that can be crowded into 24 hours.”* If you have a vision to guide you, you can steer significant innovations past all obstacles.

Futurice believes there are three themes that can be used to leverage existing businesses or disrupt an industry and the consumer is at heart of all of them:

- Make consumers active participants in the market via smart meters and home automation.
- Empower consumer impact via their own actions and choices.
- Use artificial intelligence to revolutionize customer service.

Through working with industry leaders in the Nordic energy market, we’ve gained a number of insights into how these themes can be utilized.

Smart meters and home automation turn consumers into active participants in the market

Mandatory smart meters provide consumers in the Nordic energy market with direct access to hourly spot markets and home automation gives them the ability to participate in energy markets. Eventually, distributed electricity production will turn

consumers into electricity producers.

Companies will eventually do the same and the savings potential far outstrips that of homes and consumer services. A 10% decrease in the energy consumption for a major corporation will result in millions saved.

Electricity companies must find a new role.

Companies can build value by optimizing electricity usage by up to 20% or 30%, at both the individual household and grid level. In the home, heating may be automatically lowered when away from home, electricity purchases optimized for cheaper times of day and electricity-hogging appliances identified. At the grid level, optimization produces a more efficient electricity system, as peak time usage decreases. Everyone is rewarded for participating in the effort.

Nordic energy companies are now launching their first generation of value-adding services that optimize electricity usage or sales as a service with fixed monthly fees.

The race is on to find the right formula to change the market.

Case: Helen Termo – intelligent heating lowers costs

The price of energy fluctuates depending on the source, as well as day-to-day and time of day. Termo is an intelligent system for controlling the heating of detached and semi-



Helen mobile services

detached houses. It uses weather data and information about price fluctuations, as well as a variety of energy sources to heat a home when energy is at its cheapest. Terno allows users to monitor their energy consumption on an hourly basis. Electricity used during low-cost hours is usually produced using the most ecologically sensitive methods, so Terno has a beneficial impact on the environment as well as the homeowner's wallet.

For more information: [Helen Terno](#)

Case: Fortum Fiksu – control energy consumption remotely

Fortum's Fiksu is a tool for monitoring and controlling, via computer, tablet or smart phone, the heating of your home or other properties. For electrical heating systems, Fiksu offers intelligent control and monitoring features that allow users to switch lamps or

heating elements on or off via SMS, as well as remotely monitor energy consumption. For oil heating systems, Fiksu provides a new generation control system that chooses between oil and electricity based on which is cheaper at any given time.

For more information: [Fortum Fiksu](#)

Empower consumers' ability to have an impact with their own actions and choices

People want to do good things. They want to make the world a better place. For companies in the energy industry, this presents a major opportunity to renew and disrupt the industry.

Decisions made by large energy companies have a significant impact on society. Corporations are not seen as easily approachable and people generally perceive that they make decisions solely in their own

interest. It doesn't have to be so. The ongoing revolution among younger generations doesn't take place at demonstrations or barricades – it's about meaningful common acts that change living environments for the better.

Energy companies should create action platforms - setups that enable people to behave in ways and achieve things they could not achieve individually or without the help of companies with deeper knowledge and resources. This approach challenges the necessity of owning large, capital-intensive assets. Companies like **Airbnb** are carving out great deal of value in their markets, with zero assets.

What if production assets were distributed and owned by consumers instead of energy companies?

The role of the company will change. It will go from being a prime mover to providing people with an opportunity to work towards achieving their common goals. This makes people a lot more committed to the

relationship.

Case: Helen's Suvilahti Solar Power Plant – customer-owned solar panels produce ecological energy

The Suvilahti Solar Power Plant is located in central Helsinki. Its output is 300 kWh and it increases the amount of solar energy connected to Finland's grid by 10%. Estimated annual production is 260,000 kWh. The plant provides consumers with access to the energy markets by allowing them to buy the output of their personal panel for a monthly fee. It's an opportunity for people in Helsinki to use locally produced energy and gives people who don't have an opportunity or resources to install solar panels on their property access to solar power.

For more information: [Suvilahti Power Plant](#)



Case: Suvilahti Solar Power Plant

Use artificial intelligence to revolutionize customer service

In 10 years' time, customer service, as we know it today, will have disappeared.

While it may be an exaggeration to say that redefining customer service and sales operations can revolutionize the energy industry, they do represent a huge untapped potential in raising productivity and profitability levels. Customers want service. They'd rather not think about whether they've made the right decisions regarding their electricity agreements and heating.

How could we deliver this? What does the customer service organization of the future look like?

Over the coming years learning algorithms

and automated robot scripts will greatly improve the productivity of customer service. This may sound like science fiction, but we've built systems like this and they only take weeks or, at most, months to implement.

Every time an issue that has come up previously arises, the customer service representative has access to the best suggestions for the right answers. Alternately, an automated script may take care of the task on behalf of the consumer or he or she might use intelligent self-services. The system gets better every time it's used.

Case: Improved customer service processes at Caruna produce cost savings

Caruna wanted to turn some of their analog



Case: Caruna

processes digital while making their delivery processes more efficient. Since launch, the site has been continuously developed towards improved business performance. Using analytics allowed Caruna to build a web portal that enables customers to make the necessary work orders and subscriptions themselves, thereby improving the self-service rate and cost-to-serve. User-centric design principles and lean usability testing were used to create a better customer experience and improve the quality of the service users receive.

Based on the analytics, users have adopted the renewed service processes, so the site is fulfilling its purpose effectively. Bottom line? Doing the right things the right way adds up to better service and less costs.

For more information: [Caruna](#)

We can help

Furice offers services that help utilities find answers to the vital questions we started this article with.

They range from strategy audits to crash courses that foster innovation culture and the development of innovative services in your organization

<http://www.furice.com/services>

Mathias Calonius,

DACH, Nordics, UK,
mathias.calonius@furice.com,
tel. +358 500 424 090

Helmut Scherer,

DACH,
helmut.scherer@furice.com,
tel. +49 176 11017722