

# kamstrup

Modernized legacy systems handle rapid growth and global expansion in the energy sector



## The Challenge

- Eliminate point-to-point connected systems that developed organically rather than strategically in step with company growth
- Reduce risk associated with legacy software slated for decommissioning over the next three to eight years
- Define a smart, cohesive structure to enable a fast, modern approach to development and expansion



## The Solution

- Neuron ESB, an intuitive .NET-based development platform eliminating the need for point-to-point architecture
- Reduce and simplify the number of integration techniques required for enterprise applications
- Increase ease of development and facilitate reuse of data and functionality between applications



## The Benefits

- Efficient and competent partnership with Neuron ESB.
- Demonstrated value between cost, performance and access to expertise and support
- Collaborative and responsive environment fuels fast and easy development
- Flexible, agile development processes drive company-wide vision for growth and market leadership
- Smooth transition from Proof of Concept to multiple deployments worldwide, including evolving projects such as new products and energy factories

*“Neuron ESB enables sophisticated performance, features and function, along with personal communication and support. It’s a very worthwhile relationship, improving current systems and poising us for future performance.”*

– Kim Frederiksen, Enterprise Solutions Architect, Kamstrup

“Neuron ESB quickly became a strong partner to us, supporting our stated vision of being the best in our industry and helping us capitalize on the right technologies to be more strategic, competitive and innovative.”

– Fabrizio Moroni, Enterprise Integration Specialist, Kamstrup

Kamstrup supplies intelligent energy and water metering solutions worldwide. A subsidiary of Danish energy company OK, Kamstrup has employees in 24 countries, helping customers all over the world save energy and develop more efficient ways of working. The company’s vision is to use the most advanced technologies and operations to continually improve its products, services and the customer experience.

## The Challenge

As awareness of the need for energy conservation and sustainability has grown internationally, Kamstrup has experienced rapid growth across all its solution lines, with revenues and employee numbers doubling over five years. “We have a unique opportunity to transform the global energy landscape. As environmental issues have brought natural resource management into greater focus, our solutions demonstrate that if you can’t measure it, you can’t manage it. Our innovative smart meter technology today has applications in electricity, water, and heating and cooling, with the potential to create worldwide impact on how we value, control and extend these resources,” said Kim Frederiksen, Enterprise Solutions Architect, Kamstrup.

The company’s continued expansion presented one particular challenge: its enterprise IT infrastructure was becoming stressed and had difficulty handling communication, connection, engagement and collaboration. “Our systems were linked individually via point-to-point integration, creating an ecosystem of data islands (Figure 1). Where these kinds of operational and engineering challenges could once be solved with a team discussion over lunch, global growth has driven the need to eliminate production processes that are just too difficult to manage and maintain,” said Frederiksen.

The company was also facing longevity constraints on its network and software infrastructure, with systems nearing the end of their operational life. “It was anticipated that several of our systems would be decommissioned over the next three to eight years,” said Frederiksen. “We needed a solution to reduce complexity as well as eliminate the risk of implementing future enterprise applications. Our mandate was to make strategic choices that would move us forward, mitigate inefficiency, and simplify new system applications for long-term operations.”

Kamstrup senior IT experts proactively looked at solution options, seeking a new platform that could modernize legacy systems and establish a flexible growth infrastructure to help them meet new business opportunities worldwide.

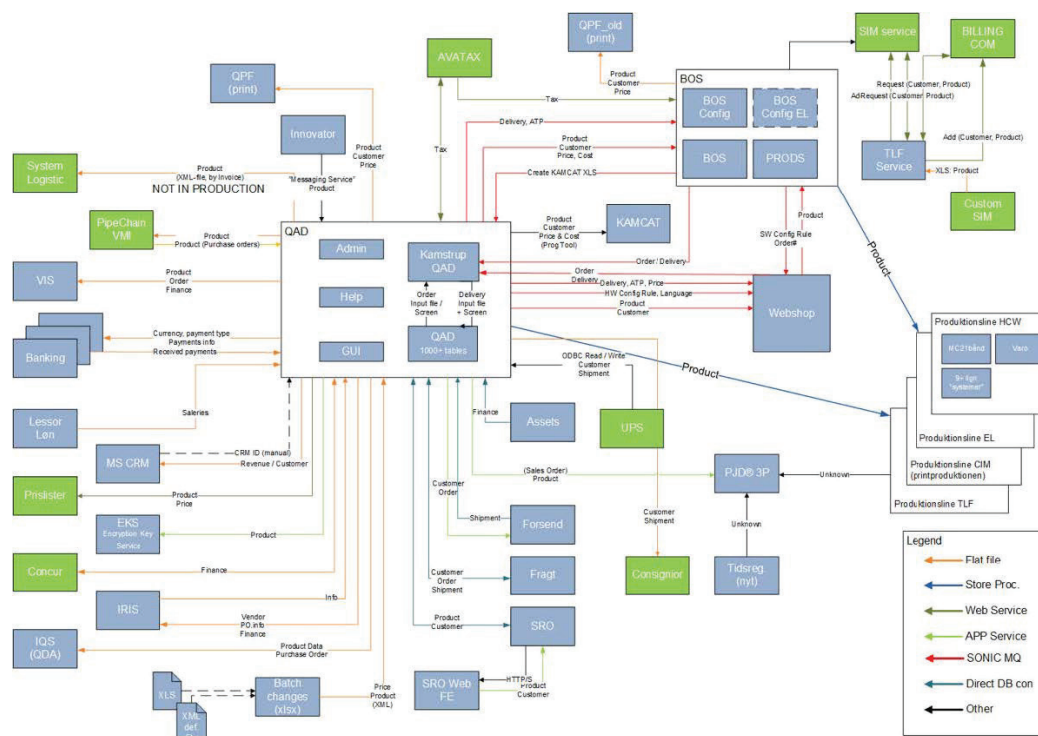


Figure 1: Originally, systems were linked individually via point-to-point integration

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## The Solution

Neuron ESB connected with the Kamstrup IT team through a collaboration partner, recognizing that the Neuron ESB enterprise service bus platform could provide the answer. The system was validated through a proof of concept (PoC) featuring three specific projects, defined to illustrate integration capabilities for Kamstrup’s new application environment. “We wanted to simplify the type and number of integration techniques that were in play by using a full-featured .NET platform. Broadly, we needed to evaluate the platform as a whole to understand how it could support ease of development as well as maintenance, operations, effectiveness and utility,” said Fabrizio Moroni, Enterprise Integration Specialist, Kamstrup.

“Ultimately, we needed to decouple the system, eliminate point-to-point connections and facilitate reuse of data and functionality between applications,” said Frederiksen. “Generic services between the systems could not access in real-time the operational or customer data critical to the business lines.” This was especially important for Kamstrup, because so much of its customer base is centered on customizable devices, such as their flowIQ® water meter. “Managing resources such as water is very specific from region to region. Are we measuring cubic feet? Are we billing in dollars or euros? And is the meter itself underwater or requiring special safety protections or design features that ensure mission-critical performance? As a result of these needs, we offer more than one million configurations based on customer specifications and individual national regulations. At the same time, our engineers need non-stop connectivity and the ability to access information on the size of data payloads, message content and customer requests.”

During the PoC, Kamstrup’s .NET integration capabilities increased substantially, as did the implementation of efficient data flows. Neuron ESB was proven to be an ideal fit and quickly became part of Kamstrup’s overall operations. The company is steadily working on 360° integration of all systems, starting with exchanging data between its subscription manager software and primary ERP system (Figure 2).

## The Benefits

Kamstrup derived immediate benefits from Neuron ESB technology and collaboration. “We have experienced a fast and competent partnership working with Neuron ESB,” said Frederiksen. “It’s an exceptional offering, right-sized in every way. When we have a question, the Neuron ESB team rises to the occasion every time.” Kamstrup executives have also been

pleased with the cost of Neuron ESB, particularly relative to its depth, breadth and scope of services. “The pricing of Neuron is very competitive, compared to other mid-market enterprise solutions. We are not only seeing real value for our investment, but can also see they value us as a customer,” said Frederiksen.

One such instance involved Neuron ESB crafting a customized communication protocol for a specific machine-to-machine data exchange. “We discussed our challenge with the Neuron ESB support team and they were extremely fast in releasing an update that completely addressed our specific needs,” said Moroni.

“Neuron ESB offers us speed and simplicity in being able to adapt service performance, create and deploy new services, and integrate our systems. The platform supports our overall company vision for these goals – and as a team, we have gained flexibility, agility and a defined yet flexible path forward,” said Frederiksen.

Based on the success of its initial deployment, Kamstrup is now using Neuron ESB as a key integration platform on its newly-constructed water factory in Denmark. It’s a fast-moving environment where development needs are evolving rapidly, yet Neuron ESB is readily enabling integration between systems. “All of the data communication is being handled by Neuron ESB,” said Frederiksen. “It is gratifying to see that the technology we instituted in our PoC has proven so successful in just a matter of months. We are well-positioned to fuel our vision for growth, internally and at our many projects and sites across the globe.”

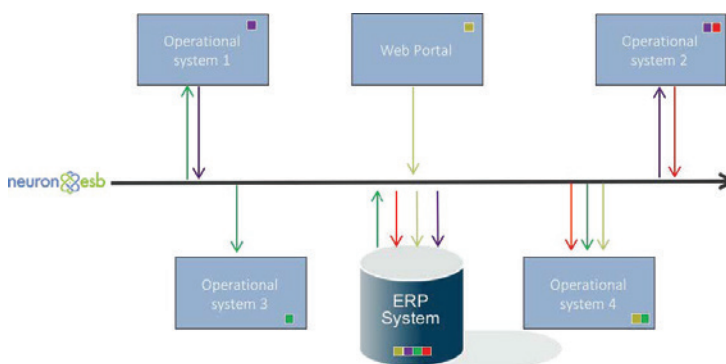


Figure 2: Moving towards an ESB model. Simplified for illustrative purposes.