



Case Study - SKANSKA

Romonet Software Suite delivers immediate business efficiency improvements to Skanska

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Skanska, one of the world's leading data center solution providers, chose Romonet Software Suite to help improve energy efficiency and capacity planning in the design of a large, mission-critical data center environment for a Fortune 500 client.

Profile:

Skanska is one of the world's leading providers of construction and construction management services. It is one of the most innovative solution providers in the data center industry.



Challenge

Skanska's Mission Critical Center of Excellence challenged its internal team and partners to develop new approaches to cooling, incorporating higher efficiencies without increasing risk, maintenance or operating costs. The system had to:

- Eliminate expensive chiller plants
- Automatically adjust to dynamic IT loads
- Deliver the lowest energy use, including 100% outside air-cooled systems
- Use significantly less water than conventional or air cooled systems
- Allow increase in density over time without increasing footprint
- Enable a low PUE to be achieved from the first phase of rack deployments
- Self-optimize in response to changing atmospheric conditions

Skanska needed an innovative way to model the new approach, compare its total cost of ownership against conventional data center configurations, and prove out the engineering to guarantee infrastructure performance.

Solution

Romonet Software Suite enabled Skanska to accurately model and compare

performance, operational efficiency and cost across a wide range of variables over the projected lifetime of its client's facility. They were able to accurately predict capacity, energy efficiency, total cost, and risk across the entire data center supply chain with proven 98% accuracy against metered data.

Benefits

Romonet Software Suite allowed Skanska to model a wide variety of 'what if' scenarios to determine how facilities would perform under varying configurations, workloads and environmental conditions. With a clear and accurate view of the effects of change on power consumption, risk and TCO, Romonet Software Suite provided the information to optimize for any environmental or variable workload condition.

Reducing the cost of meeting business goals

For Skanska, the ability to demonstrate and guarantee the energy efficiency, TCO and reliability of their data center designs is paramount. At the same time, in a business environment where IT demand is increasingly dynamic, being able to optimize the provision of IT services in line with business needs is a significant



“Romonet™ Software Suite is a powerful predictive modeling and analytical tool that we use to evaluate data center TCO inclusive of workload on new technologies that we develop. Romonet Software Suite allows Skanska to rapidly refine our solutions to optimum performance and to guarantee that performance to our clients.”

Jakob Carnemark, Senior Vice President, Mission Critical Center of Excellence, Skanska.

challenge.

“One of the major issues is that in the past, data centers have been designed to deliver good PUE on the assumption of optimum asset utilization,” says Jakob Carnemark, Senior Vice President, Mission Critical Center of Excellence at Skanska. “In reality, particularly during the early stages of deployment, PUE will be much higher because the effects of part loading or variable loading have not been accounted for. Our approach is to change the delivery methodology and guarantee the efficiency of the IT infrastructure around the needs of our clients.” Successfully optimizing data center design for energy efficiency and TCO against variable IT work loads and external conditions requires a reliable assessment of how changes to the data center impact on efficiency, cost and risk – holistically and at a component or activity level. However, until now there has been no accurate and straightforward way to measure the true cost of delivering IT services, or forecast the financial and operational impact of proposed changes to infrastructure or IT equipment. delivering their predicted ROI. This unique capability of Romonet Software Suite enables the Bank to prioritise and implement capital investment and change projects safe in the knowledge that actual ROI and TCO can be very accurately and easily modelled and tested.

The future of data center risk and cost management

Romonet Software Suite provides the tools for Skanska to make informed decisions about the future behavior of their data center designs based on facts, not assumptions.

It uses sophisticated mathematic computation and computer aided simulation to set new standards in non-intrusive, risk-free predictive modeling. Romonet Software Suite helps identify design improvement opportunities by analyzing energy consumption, stranded capacity, IT equipment utilization, energy saving opportunities, carbon emissions and costs – by device, by IT application, by business unit, or by location.

Romonet Software Suite is now a vital part of Skanska’s planning and design process. “It allows us to model all sorts of ‘what if’ scenarios,” explains Carnemark. “And it graphically demonstrates to clients the efficiencies our plans will achieve, reconciling changes in business practice with cost structure by modeling the capacity required for projected workloads and identifying opportunities to reduce, avoid or defer expenditure and remove risk.”

With the ability to rapidly configure and test multiple design options, Romonet Software Suite evaluates the performance of different technology choices, equipment

and operating environments at variable loads. “It provides us with a robust way to optimize the energy efficiency and capacity of an IT infrastructure around specific business needs,” comments Carnemark. “We can quickly assess how changes impact on operational cost and TCO and demonstrate how modular builds can optimize performance. Romonet Software Suite proves the point to our clients and underwrites the effectiveness of our approach.”



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