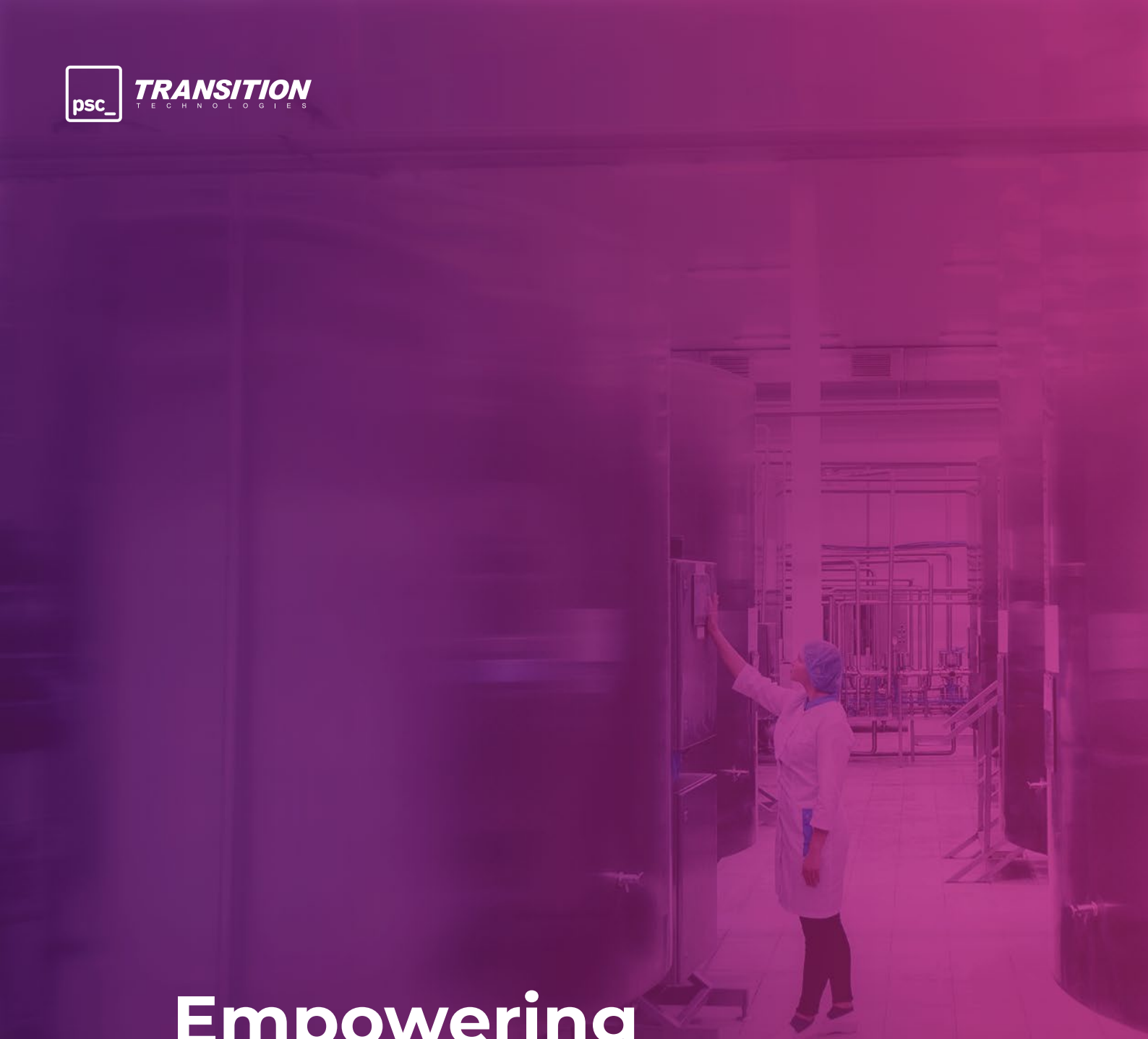
psc_ TRANSITION TECHNOLOGIES



_Empowering Sustainability and Energy Efficiency

How Energy Advisor Revolutionized Utilities Management in the Food Industry

Success Story

_About Transition Technologies PSC

Transition Technologies PSC is a team of more than 900 experts in **IoT**, **Cloud, Augmented Reality**, **Machine Learning**, **Enterprise PLM** and other technologies critical to digital transformation. Through offices on 3 continents, it serves clients worldwide in the automotive, energy, consumer goods, heavy industry, media and telecommunications, healthcare, services, software and technology sectors. As a Global System Integrator, the company works with international partners (**PTC**, **Rockwell Automation**, **Atlassian**, **Microsoft**, **Google**, **AWS**, **BMC**, **RealWear**) to create and implement IT solutions that revolutionize the way products are designed, manufactured, managed and maintained.

_About customer

One of the **leading global players in the food industry** is headquartered in the USA and supplies confectionery and pet food worldwide. With a workforce of over 140,000 employees, this company has achieved remarkable success and recognition in its field. One of the plants located in Poland was chosen to implement innovative solution program in the energy monitoring and management area as a pilot, before rolling it to more than 30 plants across the EMEA region.

_Business challenges and needs

The client's vision was to create an organizational culture based on understanding **the impact of everyday decisions on the consumption of energy** and other utilities, while also building the mindset within the crew, based on awareness and continuous improvement in this area. The strategy focused on two key pillars:

1. Launching **sustainable development** initiatives.
2. **Optimizing consumption** and cost of utilities.

It quickly turned out that achieving the assumed goals was not so easy. The data for the reports aimed at presenting the current status were collected manually from many distributed systems, then prepared, collated and analyzed. Each step was tedious, error-prone, and required the involvement of many people and systems - and in the end, the information became quickly outdated. This made it impossible to thoroughly analyze current data and set goals related to sustainable development initiatives and monitor progress, reduce costs, and optimize consumption. **There was no possibility to analyze how consumption was distributed in the context of not only specific machines or production lines but also specific products** - which would open the way to further analysis of profitability.

Therefore, a decision was made to implement a system that would enable monitoring of media consumption, and thanks to the unification and centralization of information on production and related consumption of energy, water, steam and other utilities - **further and more in-depth analysis in real time** was achieved. Based on the existing, fruitful cooperation and experience - a decision was made to implement the solution by Transition Technologies PSC.

_The Solution

Being **one source of truth** incorporating the data from various enterprise systems as well as directly from the shop floor, the solution allows the customer to analyze and understand all critical aspects related to utilities. Real-time dashboards as well as historical reports enable to drill down on what is the breakdown of the consumption; what is the efficiency of particular areas and machines in relation to utilities (e.g. energy efficiency); what are the areas of improvement.

Scheduled reports delivered via email allow the organization **to focus on what are the most important insights** from the latest period. Energy Advisor consists of ready-to-use modules. Real-time dashboards as well as historical reports enable the following:

- **Drilling down** on what is the breakdown of media consumption.
- **Testing** the efficiency of particular areas and machines in relation to utilities (e.g. energy efficiency).
- **Identifying** the areas of improvement.
- **Generating** scheduled reports delivered via email.

_The Result

The solution is built on top of the **Industrial IoT Platform** – **ThingWorx**. It leverages one of its biggest capabilities: ease of integration (i.e. Factory Talk Historian, MES, ERP and BMS systems) and industrial connectivity (via Industrial Connectivity Platform - Kepware).

Leveraging ThingWorx's powerful architecture and user-friendly mashups, we've crafted a system that supports understanding of energy consumption in production from the shop floor to the top floor. Due to close with customer's key users, it became adopted by all services and became the backbone for sustainable development initiatives, slashing utilities consumption and production costs.

Energy Advisor, a comprehensive solution, delivers substantial benefits in cost reduction and supports sustainable development initiatives. This leads to enhanced operational flexibility, competitive advantage, and improved market positioning. The results of implementing Energy Advisor are as follows:

- **Automation and integration of data** from various sources save significant time of tedious, manual work and eliminate errors in data compilation.
- Improved **visibility of data** and awareness of the current situation expose how the activities of individual shop-floor workers affect utilities consumption; enabling a focus on **continuous improvement** in this area.
- Comprehensive **analysis capabilities identify bottlenecks** and optimize areas for ongoing enhancement.
- Appropriate sensor placement provides a simple tool for maintenance teams to analyze **installation tightness** and **prevent losses**.
- These outcomes highlight the transformative impact of Energy Advisor on both **operational efficiency** and **sustainability practices**.

The unification of data collection, aggregation and calculation of KPIs streamlines the understanding of the utilities consumption profile. This enables setting goals for energy efficiency initiatives and tracking their progress and effectiveness. Not only at the local level, but in the long run - also globally. Furthermore, this unification allows for benchmarking machines, lines, and plants, opening up completely new opportunities for improvement.

_Additional materials needed

> ***The maturity and environmental responsibility of this Customer is astounding.***
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> *Combining this with the ability to deliver business value on a global scale - and with having a strategic vision - it can be a role model for other manufacturers. We are proud that we could participate in this fascinating journey.*

Jakub Kaczynski
Industrial Portfolio Director at TT PSC

Application Screen Shoots