Tatsoft is a premier Platform Developer for real-time data monitoring, SCADA and HMI Systems, Distributed Data Aggregation and Advanced Visualization tools. With over 25+ years of experience solving complex problems, the Tatsoft team has industry-proven expertise working with leading companies worldwide, to deliver robust industrial applications in a wide variety of industries and environments, from plant floor to the executive management level.

# Case Study - OEM Software Solution for Electric Utility Market

| Company | Industry | Location | Website |
|---|---|---|---|
| Spin Automation | Utilities | Brazil, India, Canada and others | https://spinengenharia.com.br/ |

## Challenge

Create an industry specific product software offering in the Electric Utility and Alternative energy market.

## Solution

Brand label Tatsoft's FactoryStudio and customize functionality specific to the current and ongoing needs of their target market.

## Results

Quick time to market with greater functionality and lower cost to customize than to try and develop in-house. A robust software platform and technology partner to continue to enhance the SPIN software product offerings today and into the future.

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Spin is an OEM partner of Tatsoft and is a great example of how companies can embed FactoryStudio into their own solution and create software based product offerings for their vertical market. Spin uses the FactoryStudio software platform to develop several solutions that they offer as their own brand labeled product called Action.NET. Spin was considering writing their own product but found Tatsoft's FactoryStudio, which enabled them to get a product to market faster with much greater built-in functionality than for what they had planned.

Tatsoft's architecture provided Spin the capability to customize FactoryStudio by creating custom symbols and components that encapsulated their intellectual property gained with more than 25 years in the Electric Utility industry. They also used Tatsoft's driver toolkit to write several Electric Utility specific real-time drivers like IEC-61850 and DNP 3.0. Spin needed an open, robust, and flexible software framework to deliver an intrinsically secure supervisory control product that was built on modern technology.

When SPIN met the Tatsoft team they immediately saw not only the value of FactoryStudio's flexibility to be customized to their specific product need but also discovered that the Tatsoft technical team would assist in creating customizations to the software based on their detailed requirements. The development process began with a brainstorming session where the two groups exchanged ideas and explored FactoryStudio's standard functionality as well as the product's extensive capability to be easily customized in many different ways including but not limited to:

- Custom symbols and complex reusable Components
- Auto-creation of Tags, Alarms, Device Points, Historian and Graphics
- A software framework to enable their real-time industry specific analytics
- Driver toolkit to develop new protocols for their product

SPIN also liked the fact that they could take advantage of all of the standard functionality that is built-in to FactoryStudio. This advanced functionality gives their product leading capability and required no further development. The highlights of this group of included features that they use extensively include:

- Mobile and HTML5 Displays
- Integrates the OSIsoft PI System supporting PI and PI Asset Framework
- Supports scripting in C#, VB.NET, JavaScript and Python
- Built-In robust project management and audit trails
- Security and High Availability

Spin is a company that works with automation oriented to the electric market, specifically developing SCADA, Gateways, FLISR and OMS software and integrating these solutions into power companies (GTD – Generation, Transmission and Distribution).

Here is a quick look at several products they developed for their "Lean Automation" solution as it applies to Wind Farm Automation.

***Spin has created several "Lean Automation" components with FactoryStudio:***

The "Wind Power" component that generates an application that monitors wind farms, using two types of wind turbines, Suzlon S95 and GE/Alstom ECO-122. The component can be changed to include other wind turbine models. These wind turbines were selected because they deal with the automation of real complexes, which used these turbines.

"Asset Monitoring" component provides for fast generation of an asset monitoring application, where the user defines the various IEDs or Intelligent Electronic Device (IED) that will be used, for example, to monitor substation transformers and as a result the application is generated and it also serves as a gateway, sending the data to a centralized asset management application that monitors several substations. In addition to the gateway, the application generates HTML5 screens that can be locally accessed, at the substation, or remotely. IEDs from different manufacturers can be used to monitor the assets of the substation.

In case of communication failure with the central computer, data from several weeks can be stored at the gateway, to be sent when the communication is reestablished. In case of failure at the IEDs or sensor that this application controls, the gateway software has routines that help to identify the failure.


***Concept of Components Lean Automation Applied to Wind Farms***

A cell from a Lean Automation (LA) application is called a component. The design of the application adds components that allow generating a wind farm monitoring solution with a few clicks.

For each template they group all the tags of the represented element, identifying for each tag the rule to create that individual item of the template, the conditions of associated alarms, whether the same goes for historical and the associated trigger and the address of the point in the IED where it is located.

***Creating the objects associated with the basic templates***

For each type application, generated through LA, a library of symbols is created that will be used in all the screens that allow the monitoring and control of the represented elements. Thus, for each type of wind turbine, tower, park, etc. symbols will be created and placed in the library.