HOW TO CHOOSE THE RIGHT SCADA
SCADA for today and tomorrow

This article will show the main features and properties of SCADA systems that you should care about when choosing the right supervising system for your business.

Supervisory **C**ontrol **A**nd **D**ata **A**cquisition supposed to be **versatile solution** for any type of industry. This indicates that it is developed properly. Logging data and controlling them is the same in a production line as well as in a solar plant, indeed. Every SCADA system must have a reporting tool that is able to evaluate the data and enable to predict the root causes and other irregularities. The main milestones of data control are:

1 **COLLECT DATA** ▶ 2 **VISUALIZE YOUR FACTORY** ▶ 3 **MAKE SMART DECISION**

Basics

During the process of choosing ideal SCADA, let´s focus on present and future. The solution has to fulfil most of these requirements to **ensure the competitiveness, increase of the productivity and decrease of the total costs.**

1) Compatible and universal

Using **multiplatform** solution ensures no complication when changing the operating system in the company. Exclude incomplete SCADAs which work only on Windows. It gives you better flexibility.

Windows

Linux

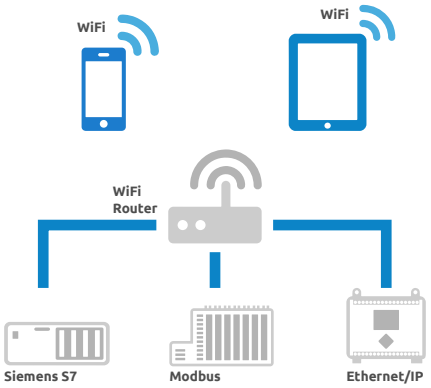
Mac

Example: Corporate strategy has changed and the parent company (USA) decided to switch OS from Windows > Mac OS. It costed thousand of Euros to adapt systems and new SCADA had to be found for the subsidiaries.

SCADA also supposed to be **multiprotocol** and cover most of known PLCs or RTUs and their protocols to maintain versatility. SCADA that is impossible to connect to used PLC is just a waste of time and the company will spend a lot of money to make it work. So do not forget about the communication with the existing hardware.

There are the main industry established protocols that should support the chosen SCADA:

OPC UA • **EtherNet / IP** • **Modbus** • **ProfiNet**



The most important for the future is definitely the first one – OPC UA (Unified Architecture). It is maintained by the independent organisation to ensure better connectivity with the PLCs and RTUs. Surely, most PLC manufacturers will provide OPC UA native driver for their PLCs in the near future.

Example: B&R Automation has developed and used their own protocols for PLCs for many years. The management have decided to switch to OPC UA - internationally recognized standard – to simplify the access to the Programmable Logic Controllers.

2) Operating costs and future needs

SCADA system has a long term influence to the daily processes in the factory. It is highly recommended to inform about the possibility to upgrade existing SCADA, how much does it cost and so on. There are plenty of companies profiting from services like upgrades, trainings, technical support. They know that their customer is dependent. On the other hand, some companies offer that services are included in the base affordable price.

If the company is successful, the development allows expansion. So it is crucial to choose the right SCADA system that enables expansion such as: unlimited number of clients, simple connectivity to the Web, connection for more PLCs even from multiple vendors, etc.

Some SCADA systems meet the criteria of modern age including completely web based connection, mobile SCADA applications. Someone calls it Industry 4.0, someone Internet of Thing. The important announcement says: take the SCADA that is part of this concept and develops new products because it will probably mean, that your future provider is constantly improving.

Tip: Specific examples of safeguards: HTTPS secure access, secure remote connectivity based on VPN technology, User access levels, independent security audit.

3) Security

Secure access belongs to the cornerstones of quality supervising system. System should protect from unauthorized users, hackers and other threats. Make sure the selected system has the best available security.

4) Customized solution

Almost every company in the world has their own Corporate Design. It is a summary of requirements and recommendations about how to present the company. Almost every SCADA is able to offer the language you prefer - unfortunately nothing more. There are a few companies that can implement corporate identity including colours, logos or font style just with several clicks. Choosing them means saving time and the SCADA will fit into the corporate strategy.

The bigger the SCADA provider is, the harder to have special needs of the system. For this reason, it is always better to choose smaller or mid-sized proven company – they are likely to meet the customer requirements.

5) Services

To buy a product is just the beginning. The installation of the software, professional trainings for the maintenance, operators and other staff, optimization of processes, regular inspection.... Make sure that these services are either included or at least known of their price. The technical support supposed to be available just in time to avoid the delays in production.

6) Pricing policy

In SCADA world, there is not a good idea to focus on price because it says literally nothing. Plenty of cheap SCADA systems are much better than the expensive ones and conversely. A lot of middle sized companies can seamlessly compete with the most famous brands. Take care about **added functions and services** companies are able to offer, willingness to create customized solution and also provide a full service including software development tool and reporting tool. Actually, pricier the better is no longer true in this segment.

7) Something extra

Take the advantages that some SCADA companies offer. The most favourite is mobile application to be connected with the factory all day long from anywhere. There are two ways how to supervise the factory from smart devices. Standard way is via web browser and this should be supported by every SCADA system (reality is not there yet). The second option uses mobile operating systems (Android, iOS, ...) and monitoring is possible through **mobile application.** That is the future of factory monitoring!

Tip: Some of the installations are placed in the middle of nowhere without server or desktop, no permanent machine operator available. Even there some providers offer suitable solution. This little box contains not only SCADA but also hardware to facilitate the work and connectivity. This box enables to log and control easily and nonstop. Most suitable for small and middle sized project e.g. solar plants or hydropower plants.