Giving
the best

Solutions for
food & beverage
industries
Your desire to produce healthier food products accessible to the greatest number of people

Our expertise and solutions for the food and beverage industries
Together, we help you to be more competitive and flexible with no compromise on food safety and your commitment for a greener and more responsible world.
Your challenges

- Improving your competitiveness
- Encouraging flexibility and innovation
- Guaranteeing food safety
- Contributing towards sustainable development
An industry with no equal

Distributing healthier and safer products, adapting to large variations in the costs of raw materials and energy, meeting the changing habits and tastes of consumers and the continual changes in regulations, taking into account the necessity of constructing more environmentally friendly “green” factories, contributing towards feeding a greater number of people, and so on. These are just so many challenges that make the food and beverage industries a world apart where, in order to give the best, competitiveness and responsibility must be managed hand in hand and without any compromise.

You make a commitment to do your best

Many challenges lie before you to meet your customers’ expectations:

> Staying ahead or at top in an extremely competitive market
> Being innovative and flexible to adapt quickly to the changing expectations and conditions of the market
> Improving the nutritional qualities of your products and guaranteeing their food safety
> Achieving your aims of sustainable development by reducing your ecological footprint and contributing to the social development of your employees and customers

In collaboration with you, we make commitments

> As an expert in automation and electrical distribution, we are your partner in implementing your projects right from the start and over the entire life cycle of your installations.
> With you, we design suitable solutions by combining our knowledge of your industry, the flexibility of our systems, the quality of our products and the strength of an international network.
> Whatever the business sectors in which you operate, we promise, in collaboration with you, to power and steer your processes, machines and buildings. In this way we contribute to your success and sustainable development.
The spirit of growth is shared
Competitiveness

Going further in operational excellence

To succeed in this extremely competitive environment, it is necessary to constantly invent new ways of producing better, quicker and cheaper, and enable you to anticipate problems and take correct and timely decisions. You need partners who are capable of building and implementing innovative solutions jointly with you. You need to prioritize tools assisting collaboration of teams during all phases of your projects - design, commissioning, operation, maintenance - and availability of composite information in real time.

Building cheaper factories more quickly

Our solutions for the food and beverage industry are based on expertise, methodology, reuse and simplicity.

> Our experts and partners know your markets and their constraints. They help you specify your installations and advise you on the best solutions.

> Our international teams coordinate the actions necessary for implementing complex projects using many suppliers throughout the world.

> Our local facilities enable us to find suitable solutions at the best cost.

75% reduction in investment for building a new factory in Asia
Sharing information for operational efficiency

Managing information well is a key factor in success. The aim of our collaborative control system is to create a link between each user and tool available. It aids team working for fast and appropriate decision-making.

> Our collaborative development tools enable the members of different teams to work together by sharing data that is always up to date. The result? Optimized project management and shorter implementation times.

> With object libraries dedicated to the food and beverage industry, you re-use well tested and standardized expertise and good engineering practices for each new installation or plant extension. This minimizes risks and commissioning time and operation is made easier.

> Users of the system can obtain any information from different areas effortlessly for problem solving. They can make decisions on the basis of accurate and accessible information contributing to operational efficiency.

J.J.G.
Operation Manager - Malt beverage brewing company

"The objectives for our new refrigeration automation system were simple: a low-cost, inherently reliable system, readily accessible and understandable by maintenance personnel.

The solution from Schneider Electric provides many numerous benefits. The redundancy solution based on Modicon Quantum HotstandBy PLC not only guarantees system reliability, but readily permits control and equipment maintenance. In addition, the entire control system was less expensive than a larger supervisory DCS system with unneeded hot standby redundancy. Cost savings were also achieved by working the old equipment into the new architecture. Utility costs were minimized."
Maximizing the use of your industrial tool

Your plants must produce at their maximum capacity, quite often 24 hours a day, 7 days a week. Each unscheduled stoppage leads to production losses and sometimes causes damage to the equipment.

To increase the availability and productivity rates, you can act on a number of factors:

> Our monitoring and diagnostic tools can quickly detect failures, perhaps even anticipate them. On the one hand, you minimize corrective maintenance and reduce production stoppages when carrying out work.

On the other hand, you can schedule your maintenance operations better, making it quicker to start up your equipment again.

> The use of redundant architectures for all or part of the system makes it possible to overcome hardware failures so as to guarantee the required level of availability.

> Measuring the operating time and performance for each item of equipment (Overall Equipment Effectiveness) encourages continuous improvement actions to be put in place.
Speeding up future developments
Managing your energy supply costs better

Recent fluctuations in the price of oil have demonstrated the need to have control over energy sources and supply costs.

> Our technology helps you make the best decisions about purchasing energy. Using a complete view of your energy profile, you compare the scenarios that offer the best results. You reduce your long-term financial risks associated with price fluctuations, reduce your costs through bulk purchases and manage multi-source supply contracts.

This is achieved through:

> Monitoring all energy costs in composite reports
> Participating in energy spot market programs
> Monitoring price changes on the Internet in real time
> Starting up your generators or reducing load automatically when thresholds are crossed.

Our expertise
- Collaborative approach
- Process automation
- Machine automation
- Performance measurement
- Advanced control
- Energy management

Increasing the efficiency of your packaging lines

Machine manufacturers have made innovations in this field, replacing traditional mechanical solutions with new technologies.

> Fully digital movement command functions are more flexible. They control increasingly accurate and dynamic servo systems.

In the forefront of this revolution, our Packaging Solutions business has already installed over 30,000 machines worldwide. We take care to coordinate with suppliers so that their machines are integrated perfectly into the overall automation strategies for unrivalled performance.

Optimizing the control of your continuous processes

Competitiveness is also achieved through control of complex continuous processes where conventional controllers reach their limits. Our advanced control solutions provide significant gains, enabling:

> More consistent quality
> Cost reductions (energy consumption, controlling product characteristics closer to commercial limits, etc.)
> Greater stability
> Better knowledge of the process.

J.J.
Operations Manager
Ahold Coffee Company.

“We are highly satisfied with the solution proposed by Schneider Electric. Their performance measuring system provides us with important data enabling us to continually improve our planning and production process. It was an obvious choice for us; their solution is complete and open, and meets all our current and future requirements.”

Increasing the efficiency of your packaging lines
Up to +30%

Increase in the rates of your production lines by using our technology based on synchronized servomotors
Seizing all opportunities

Your industry needs to be able to react fast to produce on demand, carry out special orders, and change recipes and packaging lines on the fly. In short, you must be able to adapt your production tool quickly.

Batch process management
On the face of it, the search for flexibility may seem to contradict with the need to guarantee the quality and safety of your products in strict compliance with procedures and regulations.

> Based on the latest version of international standards S88 or S95, our batch process management tools reconcile these objectives. They manage your material recipes, formulations and manufacturing procedures, and plan how production is carried out whilst optimizing the use of equipment for the process.

Interface with ERPs
Automation alone is not sufficient for gains in productivity.

> These depend, to a great extent, on the integration capabilities of the company’s different information systems (Enterprise Resource Planning, Manufacturing Execution Systems, etc.). This interface gives you a clear and composite view of each situation in order to make the necessary decisions.

> Our solutions provide total transparency in real time in order, for example, to receive technical data, preparation instructions or expected deliveries and to return manufacturing reports, deliveries and material consumptions.

Stocklist management
Efficient stock management is the balancing factor between flexibility and economic efficiency.

> Our solutions incorporate a module which provides increased visibility of the management and cost of your stocklists.

> This overall approach, identifying and recording all stock movements from reception to dispatch, increases your production through optimized planning.

Fast and simple packaging line changes
The 3rd generation of machine automation systems offers increased flexibility for your packaging lines.

> Based on synchronized servomotors, our technology increases throughput by up to 30% compared with earlier generations. It makes it simple and quick to change formats and styles of product packaging.

> The machine’s operating parameters are stored and selected easily by the user to change to new packaging in just a few minutes, without modifying the programming.

Our expertise
- Batch process management
- Stocklist management
- Interface with ERPs
- Machine automation

8 months from the idea to production of the first yogurts
B. Tavares
Production Manager

"Right from the start Schneider Electric put in a lot of effort as a partner on our new business models. Their process automation expertise right from engineering of the plant enabled us to construct solutions suited to our new markets. We especially appreciated the ability to provide turnkey solutions from electrical distribution to process and packaging automation. Schneider Electric was able to transfer and maximize its expertise as close as possible to our plants, allowing reconciliation between fast response and cost. Their presence with all our key OEM partners in Asia and Europe is an aid to fast response and efficiency in international coordination of our projects."
Safeguarding a relationship of trust

People’s health is far too important to take the slightest risk. Compliance with standards, high quality ingredients and checking of critical points are the key elements that make a brand name trusted.

Making it easier to validate your production systems

The design of your projects assumes particular importance for ensuring the food safety of your products in compliance with the regulations.

- Our development tools simplify these steps by making libraries of pre-tested functions available.
- Conforming to standard 21CFR-11, they rely on user profiles and so strengthen access controls. They also provide change monitoring and version management.

Identification and measurement systems

Quality control relies on identifying products and materials and measuring their main characteristics.

- In this regard we offer a wide range of products taking into account the specific constraints of your industry such as the environment or compliance with hygiene requirements.
- Our solutions are applicable right from delivery of materials, with, for example, identification of trucks by radiofrequency tags (RFID), up to packaging and dispatch with detection of many quality criteria of the finished products and identification of batches and pallets.

42%

Increase in the number of product recalls in the United States during the last 3 years
"The taste of quality"
Traceability and genealogy

The data collected at each stage in the manufacturing processes must be processed in order to generate corrective actions. They must also be stored and available for quick consultation for verification or management of possible crisis situations.

- Providing such a system ensures the capability to locate batches affected by a problem detected later on a raw material or during a manufacturing stage. You are therefore able to selectively inform customers who have received these batches so they can be withdrawn.

- Similarly, the traceability system can make it possible to trace back to the cause of a problem detected on a batch and identify all the batches liable to have the same fault.

Secure power supply

Food safety also relies on making the traceability tools reliable.

- It is often necessary to install secure power supplies. This will enable systems to continue operating for a certain length of time after an unexpected power loss, so putting production into a fallback state and saving the necessary parameters. Our solutions incorporate leading products in this field.

Building security

Food quality and safety cannot be separated from building security and management.

- Air quality, control of temperatures in manufacturing rooms or cold stores, access control and anti-intruder security: all these are parameters that must be taken into account in HACCP studies and for which we provide positive, fully-integrated answers.

Our expertise

- Development tools making validation easier
- Identification and measurement systems
- Traceability and genealogy systems
- Secure power supplies
- Building supervision and security
With the findings that 1/6th of the world population is suffering from malnutrition, and in the face of increasingly visible signs of global warming, many companies have initiated sustainable development programs. In proposing our automation and energy control solutions, we want to share the same commitments that will eventually result in competitive advantages.

Reducing the impact on the environment

Having better control over resources and avoiding waste are two fundamental concerns in an environmentally-friendly approach.

> In order to seize all opportunities, there is a simple methodology: measure and analyze, then act and improve. Our energy consumption analysis solutions optimize the use of utilities (water, air, gas, electricity, steam) and minimize the impact on your cost centers. You can reduce your consumptions by an order of 8 to 10%.

> To go even further, there are many solutions that can be implemented, such as:
  - Optimizing supply tariffs for the energy consumption of equipment and buildings, manufacturing processes and cold stores
  - Improving the quality of the energy
  - Limiting water consumption and waste through a systematic approach to cleaning procedures.

Contributing towards reduction of packaging

One of the challenges of the food and beverage industry is to reduce packaging and outer wrappings whilst offering attractive products that are easy and pleasant to use.

> Significant results are obtained through use of the latest generation of packaging machine automation systems developed by our division. The accuracy and repeatability of these systems means that higher quality and more economical packaging can be obtained.

Increasing security

Our systems help you improve your security systems for people, processes and products.

> Security systems integrated into automation solutions for processes and machines
> Systems for building access control and installation surveillance
> Systems for production monitoring and complete traceability of batches.

Contributing towards a better diet for the most deprived populations

Helping you design installations capable of making products accessible to the greatest number of people: this is our commitment.

> We place the best experts from our implementation centers at your disposal, together with our local partners, and coordinate all machine and process element suppliers spread over the 5 continents. Your investments are reduced as much as possible, so making your products more affordable.

Our expertise

- Energy management
- Security system
- Machine automation
- Process automation

8 to 10% Reduction in energy consumption through using our solutions
The relevance of our solutions? A complete answer to your key issues related to the design, development and correct operation of your production sites. By being understood in its entirety, the performance of the process is increased through allowing each person, at their own level, to work better, with less stress.

- Schneider Electric solutions

Value added at each stage of the process

Improving your competitiveness
Encouraging flexibility and innovation
Guaranteeing food safety
Contributing towards sustainable development

- Building management
  - Lighting and ventilation management

- Electrical distribution
  - Medium and low voltage
  - Secure power

- Process automation
  - Collaborative Control System
  - Dedicated object libraries
  - Local network management
  - Redundant architectures
  - Advanced process control

- Energy management
  - Consumption analysis
  - Energy audit
  - Purchasing management

- Building security
  - Video surveillance
  - Access control

20
A complete range of dedicated services

Helping you obtain the best from your teams and installations

Project management
Looking for commitment on our part for your modernisation projects and new plants? You can count on the experience and involvement of our teams and the support of our partners.

Using the specific tools we have developed (engineering and design software, migration tools and dedicated libraries), production shutdowns are restricted to the minimum.

We help you improve the plant performance, proposing solutions for the modernization of your current control and electrical distribution systems and providing solutions for your new installations. And we can provide longer term support by:

> handling design and deployment of a standardised solution and tools on a project that can be applied in other sites,
> associating maintenance of the installed base with planned modernisation.

Advice and expertise
Need a new method, or skills on a point considered particularly important? Our experts and consultants offer to help you analyse what exists and to define and deploy specific solutions.

For operation
In operations or preventive maintenance, our tools and methods enable you to access accurate diagnostics from our systems: electrical distribution equipment, intelligent motor control centers, communication networks, speed drives, process control systems. In case of intervention, a detailed and commented report is provided following our technical visit.

For modernisation and new projects
> At pre-project stage, our consultants help you assess opportunities, define solutions, estimate budgets and propose deployment techniques. With diagnostics, recommendations and results of feasibility studies, you validate and secure your project.
> For project steering, our experts provide support in preparing specification studies (software standardisation, architecture diagrams, etc.), assistance on solution deployment and results checking.
Maintenance contracts

Do you count on long-term reliability and performance of your installations? Let’s build together your custom services contract.

Services pack or made-to-measure:
> telephone support for priority access to our experts centre,
> web access to benefit from latest version software,
> stock of our branded replacement parts on your installations or in our warehouses,
> assurance of on-site assistance within a guaranteed time.

We help you anticipate technical risks and perform essential modernizations by taking account of equipment obsolescence. It avoids penalizing production shutdowns. You control maintenance costs by optimised replacement parts stock management.

Replacement parts and repairs

Does your competitiveness depend on your reactivity to breakdowns and malfunctions? We can help you limit downtime periods.

From our stock we can supply you with tested and certified replacement parts compatible with your installed equipment.

By contract you can stock on your installations replacement parts which remain as our remote stock until its effectively used.

Finally, you have also available a strong distribution channel network, present worldwide, that opens to you another access point to our products.

Training

Does safety of your operation and plant performance depend on constant adaptation of the skills of your personnel? We can help you:

Identify your training requirements by systematic analysis of levels and functions of your teams, propose training modules covering your installed automation equipment, follow up acquisitions by ongoing training, offer training modules designed to suit your timing and locations.

You have available over 50 training centres with high technology learning tools, professional trainers expert in both industry and teaching, standard or customised courses on-site or on our installations.
Due to possible changes in standards and equipment, the features described in this document in the form of text and images are subject to confirmation by Schneider Electric.

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