





Tetra Pak

Key Facts:

Company: Tetra Pak

Description: Tetra Pak is a world's leading food processing and packaging solutions company. Working closely with its customers and suppliers, Tetra Pak provides safe, innovative and environmentally sound products that each day meet the needs of hundreds of millions of people in more than 160 countries.

Employees: 25,000

Industry: Food & Beverage

Country: Global

Products Used:

• Intergraph Smart Suite: Engineering, Design and Information Management Solutions

Key Goals:

- Improving customer experience
- Enhancing productivity and quality of the engineering force
- Enable real-time collaboration between design, engineering and construction departments

Tetra Pak Collaborates with Hexagon to Digitally Transform Plant Engineering Design and Lifecycle Management

Identifying Goals

Tetra Pak is a world-leading food processing and packaging solutions company. The company's processing business is built on providing solutions engineered to meet customer's needs in the food processing industry in the categories of Dairy, Beverages, Prepared Food, Ice Cream, Cheese and Powder. These customers are spread globally and include a range from small local producers active in one or few markets to global multinational players active all over the world, thus having a wide spread of needs and focus areas.

At the end of the 1990s, Tetra Pak created an in-house tool to support their engineers in designing the right plant solution and selecting the right equipment. The solution was called Computer Aided Plant Engineering (CAPE). This was Tetra Pak's first step to connect a CAD tool to a database giving the engineers great support in the design and documentation of solutions, not only when working with P&IDs but also when creating bill of materials for cost calculation and purchasing purposes.

Over the years, the tool was further developed and expanded to extend the functionality, but as with all computer-based systems, there comes a time when inhouse development and maintenance becomes more difficult, and obsolescence is inevitable. This is mostly due to the resources and time needed for continuously improving a system with legacy architecture, while newer technologies are opening up for more effective alternatives.

In order to modernise and future-proof their way of working, Tetra Pak embarked on a digital transformation journey to create a Smart Solutions Platform for plant engineering design and plant lifecycle management.



Tetra Pak's Smart Solutions Platform will digitalize the company's plant engineering design and plant lifecycle management.

The key goals for the digitalization initiative are:

Improving customer experience:

- Enhance the customer experience when doing business with Tetra Pak;
- Ability to visualise and share the customised solutions early in the process;
- Improve transparency during the design process by enabling joint virtual design reviews and VR/AR walk arounds before installation in real life.

Productivity and quality improvement for the engineering force:

- Having one single source of truth for all relevant data and project information;
- Make it easy to do design "right the first time" and discover mistakes early in the design process to avoid issues when at site;
- Working in one joint system, avoiding mistakes and delays in communication.

Future business opportunities:

- By managing a "digital thread ", Tetra Pak can maintain a closer, continuous relationship with the installed customer base.
- The client experience can be improved as clients can easily maintain, upgrade and expand their solutions across the full lifecycle by use of a digital twin.

Overcoming Challenges

Tetra Pak's decision to move away from an in-house system to a commercial software was fuelled by certain challenges brought upon by having a legacy system:

- Maintaining an in-house propriety system is expensive, burdensome, and takes resources away from other activities;
- Difficulty to keep pace with technology development in software outside of own core competence area;
- Future-proofing the company to continuously improve customer experience becomes increasingly important;
- Ensuring Tetra Pak becomes a more attractive organisation to work for, and with.

The sheer magnitude of the digitalization project brings its own challenges: more than 2000 engineers in Tetra Pak's global organisation are impacted by this change."

Helena Eliasson

Director Project and Automation Engineering Office Tetra Pak Processing Solutions & Equipment



Hexagon solutions help Tetra Pak to design "right the first time" and discover mistakes early in the design process to avoid issues when at site.

"Our main business is to provide the food & beverage industry with world leading plant solutions, built on our core competence in food processing and production. We searched for a partner that could provide a software solution and support building our expertise into a new digital engineering platform, enabling us to focus on providing our clients the best customer value and experience while driving our own productivity as well.", says Helena Eliasson, Director Project and Automation Engineering Office, Tetra Pak Processing Solutions & Equipment.

When searching for a technology partner, one of the major challenges for Tetra Pak was balancing flexibility and customisation of the solution with their specific business needs. The company was looking for a solution that would not need excessive customisation but still provide the required functionality and productivity improvements.

In addition to this, the sheer magnitude of the digitalization project brings its own challenges: Tetra Pak is working with more than 2,000 engineers impacted around the globe. The task of adjusting the way the engineers work, from the drawing-based mode that is the case today, to the future model based way, needs to be done in a way that secures the quality and efficiency of the deliverables.

Realising Results

In 2017, Tetra Pak started to investigate the market to see what the latest technology options were. It was clear that the company didn't want to continue with in-house development but to rather find a partner that could provide software that could be specified to Tetra Pak's needs. After a careful consideration, Tetra Pak selected Hexagon as their collaboration partner for the digital transformation initiative. The Tetra Pak-Hexagon collaboration is now one year into the joint project of building the new Smart Solutions Platform for plant engineering and plant life cycle management.

The collaboration started by forming a joint team for development. This core team includes both global experts and end users, who collaborate to develop solutions to the right level and functionality. The project uses agile developing method by deploying multiple releases to constantly test and challenge the status quo to ensure that the new platform will meet the needs of the end-users.

Hexagon is providing Tetra Pak with extensive experience from digitalization initiatives from other industries, such as chemical, oil & gas and shipbuilding. Hexagon technologies are used as a backbone to digitally transform Tetra Pak's plant engineering expertise, design and data management.

Presently the combined Tetra Pak-Hexagon team are working toward enhancing the solution. Initially the outcome for Tetra Pak will be improving the way they manage customer experience, providing faster, easier methods to design solutions, generate models, drawings and also quotation documents, with increased accuracy. This will provide Tetra Pak with a competitive advantage in servicing their customers.

Additionally, Hexagon's suite of solutions can support Tetra Pak from Design through Manufacture, into Operation with customers. By making use of the engineering data created during the design of Tetra Pak's modular solutions and packaging this valuable information as part of the solution for customers, Tetra Pak extends the value of



The Smart Engineering Platform enables Tetra Pak's clients to easily maintain, upgrade and expand their digital solutions.

the created data from Design all the way to Operation, ensuring a consistent Digital Thread over the plant lifecycle. This means that customers receive more value, and a richer experience from Tetra Pak solutions.

Moving forward

Tetra Pak's plan for executing the digitalization programme spans over three years. The first step was to develop the solution – this is currently ongoing with support of Hexagon. During the second step, the first deployment will go live and during the final step more functionality will be added and the decommission of the legacy platform will be finalised.

The creation of the Smart Solutions Platform involves not only the 2000+ engineers, but also management in all levels in the organisation, global experts and end users.

When asked about any best practice information on how to manage such a large-scale digitalization project, Helena Eliasson comments: "Choosing the right technology partner is essential, but only one part of the puzzle. Continuous communication, preparing the receiving organisations for change, while creating buy-in and awareness across the organisation is key for success. You will need to focus not only on the tools, but also on competence development and facilitating the acceptance of the new way of working."

Choosing the right technology partner is essential, but only one part of the puzzle. Continuous communication and preparing the receiving organisations for change, while creating buy-in and awareness across the organisation are key for success.

Helena Eliasson

Director Project and Automation Engineering Office Tetra Pak Processing Solutions & Equipment



Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.9bn EUR. Learn more at hexagon.com and follow us @HexagonAB.

