KEMINCONNECT™

Augmenting your process with a versatile digital platform

KEMIN®
liquiSMART™

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READY FOR THE DIGITAL REVOLUTION IN YOUR PRODUCTION PROCESS?

As industry 4.0 signals a revolution in the manufacturing industry, Kemin wants to be part of this trend and extend our offering.

Today, our application systems apply our solutions in diverse industries, from raw materials, to feed, pet food, proteins meals, etc.

Through an 'industrial IoT platform' we can even better integrate our solutions in your process. Our digital platform is called 'KEMINCONNECT'.
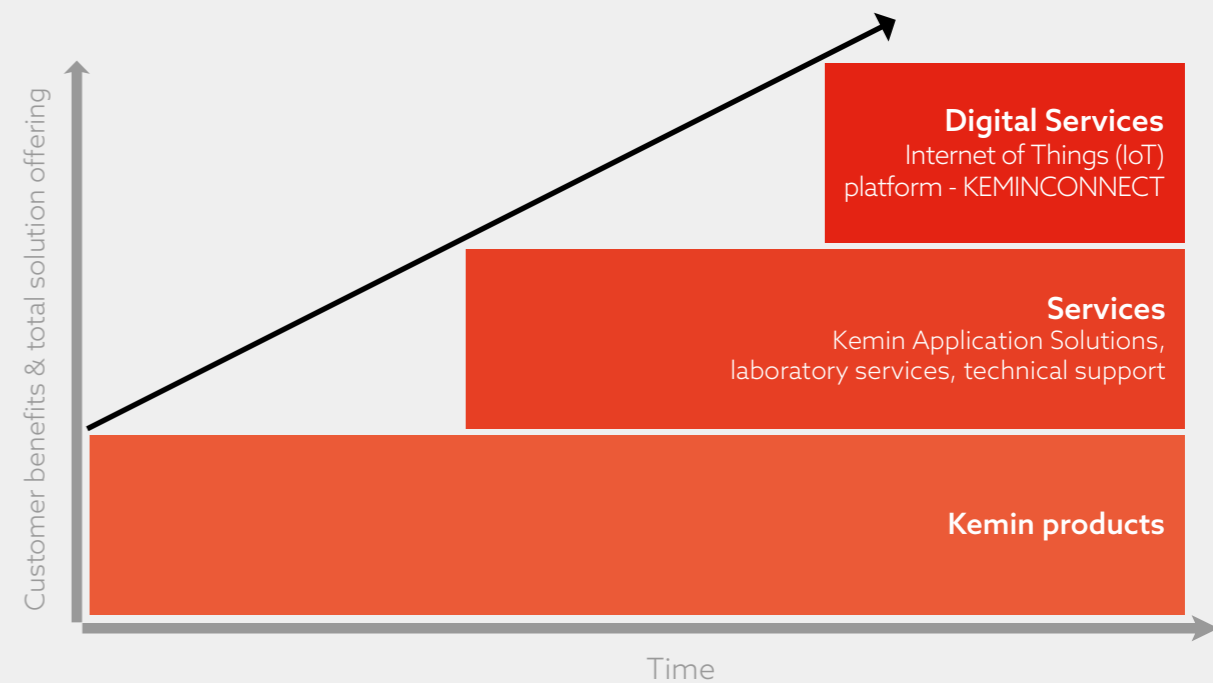
An ongoing technical revolution within our industry

Industry 4.0 describes the trend of automation and data exchange in industrial environments using modern, smart and digital technologies. Through connecting machines and linking them to the industrial "internet of things (IoT)", an integrated value chain can be created. This leads to increased automation, improved communication, self-monitoring and production of smart machines that can analyze and diagnose issues without the need for human intervention. Industry 4.0 creates what has been called a "smart factory".

Industry 4.0 signals a change in the traditional manufacturing landscape and creates enormous opportunities for the animal nutrition and health industry. Kemin wants to be part of this growth to further extend our offerings.

Today, Kemin's application systems already apply our products in the production process of feed mills, crushing facilities, rendering facilities, pet food facilities, and more. Through industrial IoT, we can better integrate our application into our customers' production.

Imagine that a sensor measures the oxidative status of the meal at a rendering facility and gives real-time updates linked to the antioxidant application system. Or imagine a feed mill in which the application of an antimicrobial is done simultaneously with the Salmonella risk assessment, which is measured through sensors. Through connecting different machines and processes, Kemin can revolutionize the production process.

Axes: Customer benefits & total solution offering (vertical) / Time (horizontal)

Digital Services
Internet of Things (IoT)
platform - KEMINCONNECT

Services
Kemin Application Solutions,
laboratory services, technical support

Kemin products

![KEMINCONNECT logo]

KEMINCONNECT is Kemin's in-house developed application management platform. It is tailor-made to the requirements of our customers operations to transform process data into information and knowledge.

This cloud-based industrial IoT platform ensures you to acquire and analyze real-time data from multiple applications at different locations, yielding insights and alerting you when needed. The knowledge and insights KEMINCONNECT is offering you, will enable you to better understand how our program benefits the processes & operations. It is a tool to ease data-driven decision making.
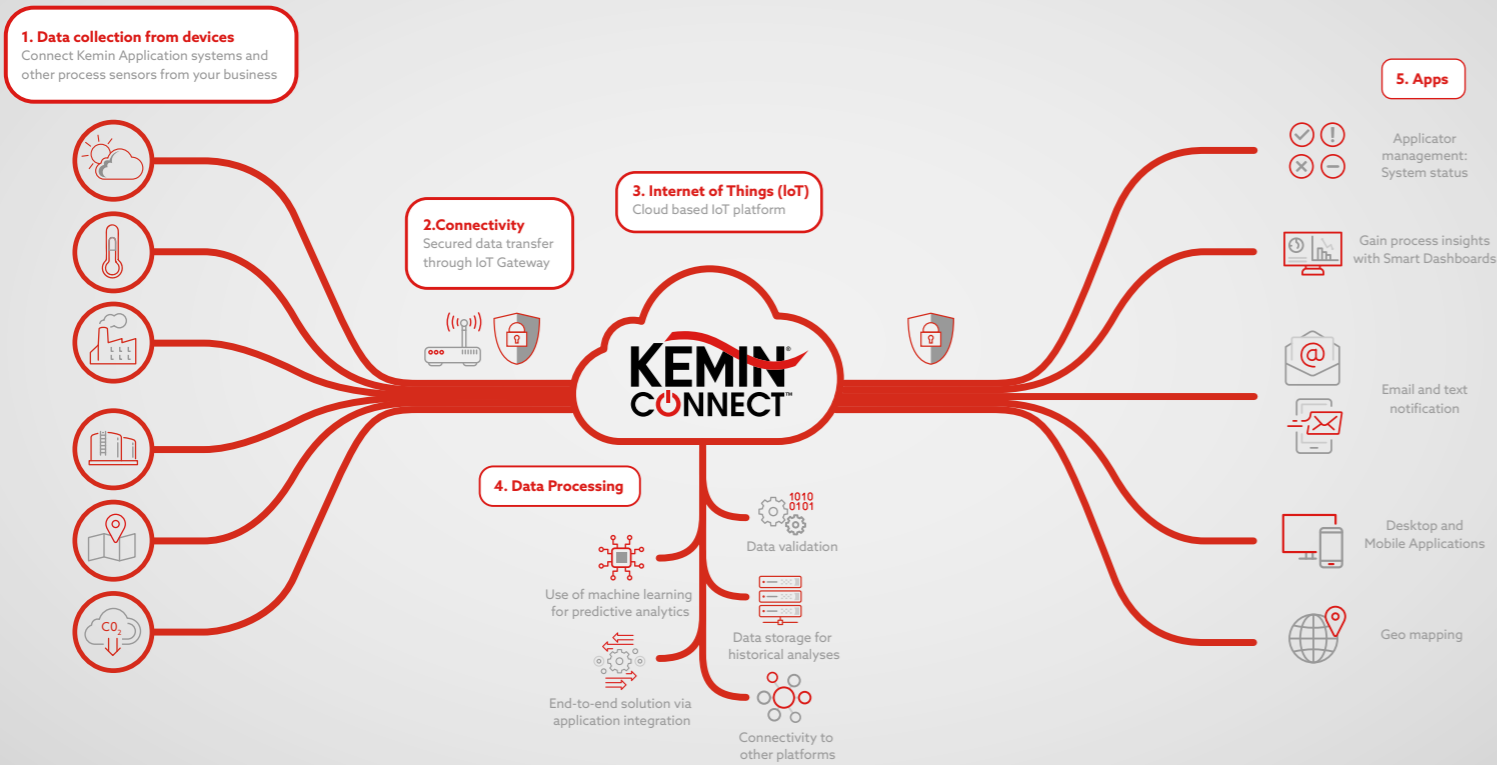
The KEMINCONNECT platform is customized for our liquid application solutions. With the support of Kemin's automation software experts, the platform can easily be scaled and deployed so you can benefit from its functionality.

Find more information in our FAQ document

Benefits of KEMINCONNECT

Streaming data analytics for monitoring and process optimization

Easy & fast connectivity by the Kemin team to give support on the application system & its software

Intelligent machine learning will bring new insights to your processes

Use data from the application systems for improved decision making

Access to data, dashboards & support will result in a unique user experience

Access to tailor-made reports and dashboards of the installed application system

What is KEMINCONNECT™?

1. Data collection from devices
Connect Kemin Application systems and other process sensors from your business

5. Apps

2. Connectivity
Secured data transfer through IoT Gateway

3. Internet of Things (IoT)
Cloud based IoT platform

Applicator management: System status

Gain process insights with Smart Dashboards

4. Data Processing

Data validation

Use of machine learning for predictive analytics

Data storage for historical analyses

End-to-end solution via application integration

Connectivity to other platforms

Email and text notification

Desktop and Mobile Applications

Geo mapping

Overall KEMINCONNECT will result in

- Increased efficiency & productivity of the application system
- New process insights for your business to make strategic decisions
- Our commitment to service and support
- Increased agility & reactivity

The digital journey

KEMINCONNECT further expands Kemin's integrated solution offerings. Dedicated services, such as the Kemin Application Solution team, our Customer Laboratory Services and technical support, have always augmented Kemin products. Now, with the digital platform KEMINCONNECT, we are pioneering what extended services mean in our industry.

KEMINCONNECT consists of three phases in the journey, each of them with a different objective and level of complexity

KEMINCONNECT™ Digital house
Industry 4.0 phased outcomes

Customer Value

TRANSFORMING
- Maximize quality, safety, productivity and profitability
- Business transformation
- Integrated solutions

ASSISTING
- Unveil new process insights
- Reduce cost and increase productivity

MONITORING
- Reduce downtime
- Increase customer experience

- Easy access
- Connect sensors/applicators
- Collect data for use in apps

- Aggregate and analyze data
- Machine learning
- Predictive analytics

- Big data Lake
- Machine learning, Artificial Intelligence
- Closed loop/Prescriptive actions
- Self-optimizing

bulkTANK MONITORING   **applicator** MONITORING   **millSMART™** ONLINE   **millSMART™** HYBRID   **millSMART™** PRØLINE

*under development

MONITORING
is all about gathering and analyzing collected data from a remote location. Different sensors are used to collect data, which can include temperature, pressure, product flow, humidity, amperage, etc. Based on the collected data, we aim to optimize your inventory, supply chain and service levels, decrease operation costs, and improve your experience.

ASSISTING
describes the data collected from different touchpoints by aggregating and analyzing it to provide you with new process insights that allow for predictive actions and analytics. This reduces your overall cost and increases productivity and ease of implementation for our programs.
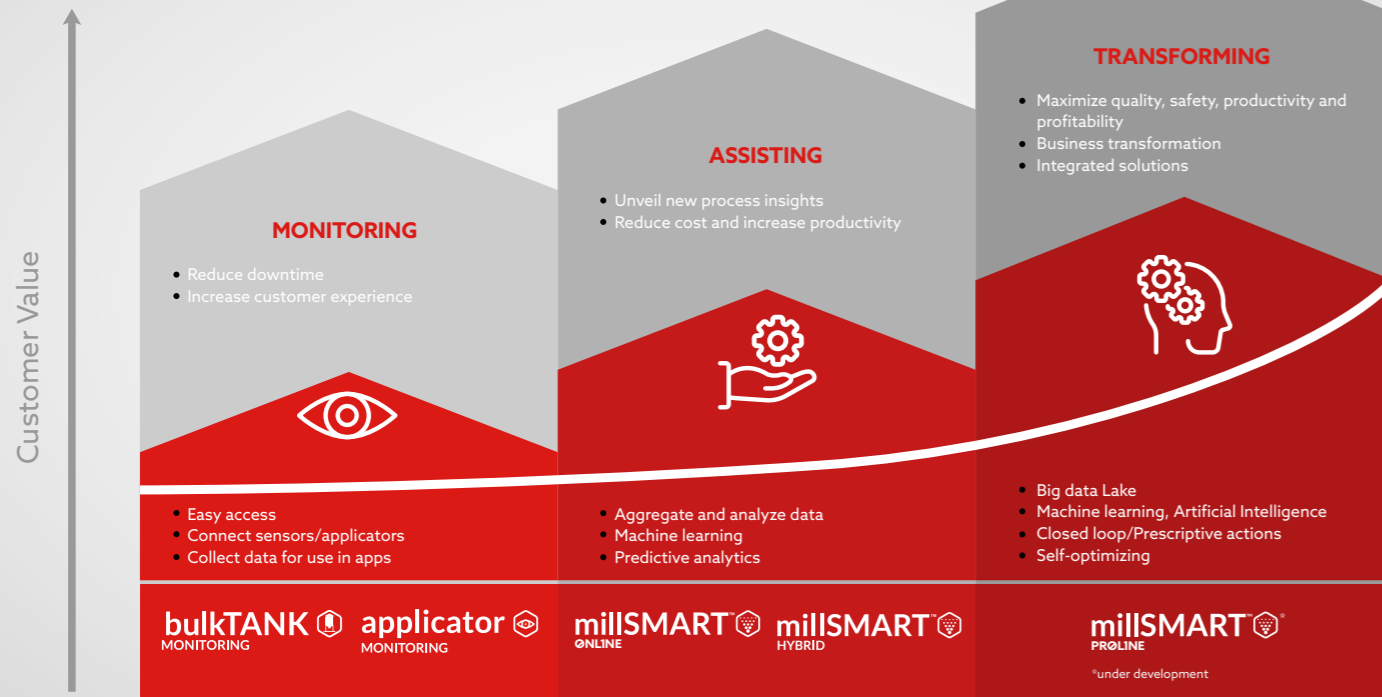
TRANSFORMING
provides prescriptive insights, including artificial intelligence and machine learning, to enable self-optimizing processes. This service improves quality, safety, productivity and profitability in all your processes.

MODULES AVAILABLE:

bulkTANK Monitoring

Bulk Tank Monitoring lets you check Kemin product levels in multiple tanks, across multiple sites, all from your computer or smartphone for real-time access.

The best-in-class technology provides accurate and repeatable level readings.

The data is visualized in smart dashboards to optimize on-time deliveries, reduce costs, improve efficiency, and create peace of mind.

Applicator Monitoring

This app is an effective applicator dashboard which gives you the ability to monitor the system and see problems as they're happening.

Proactive customer support assures the continuity of our services, builds trust and loyalty.

Most application systems are PLC controlled in combination with a Human Machine Interface (HMI), like a touch panel, to monitor and control the system locally. The dosing system pushes process data via the industrial IoT gateway in an end-to-end secured protocol to the KEMINCONNECT platform where it's validated, aggregated and stored.

millSMART™ ONLINE

The millSMART ONLINE application is an effective dashboard which allows you to see the added value of the millSMART program in real-time.

The applicator sensor data is pushed via the industrial IoT gateway in an end-to-end secured protocol to the KEMINCONNECT platform where it's validated, aggregated and stored.

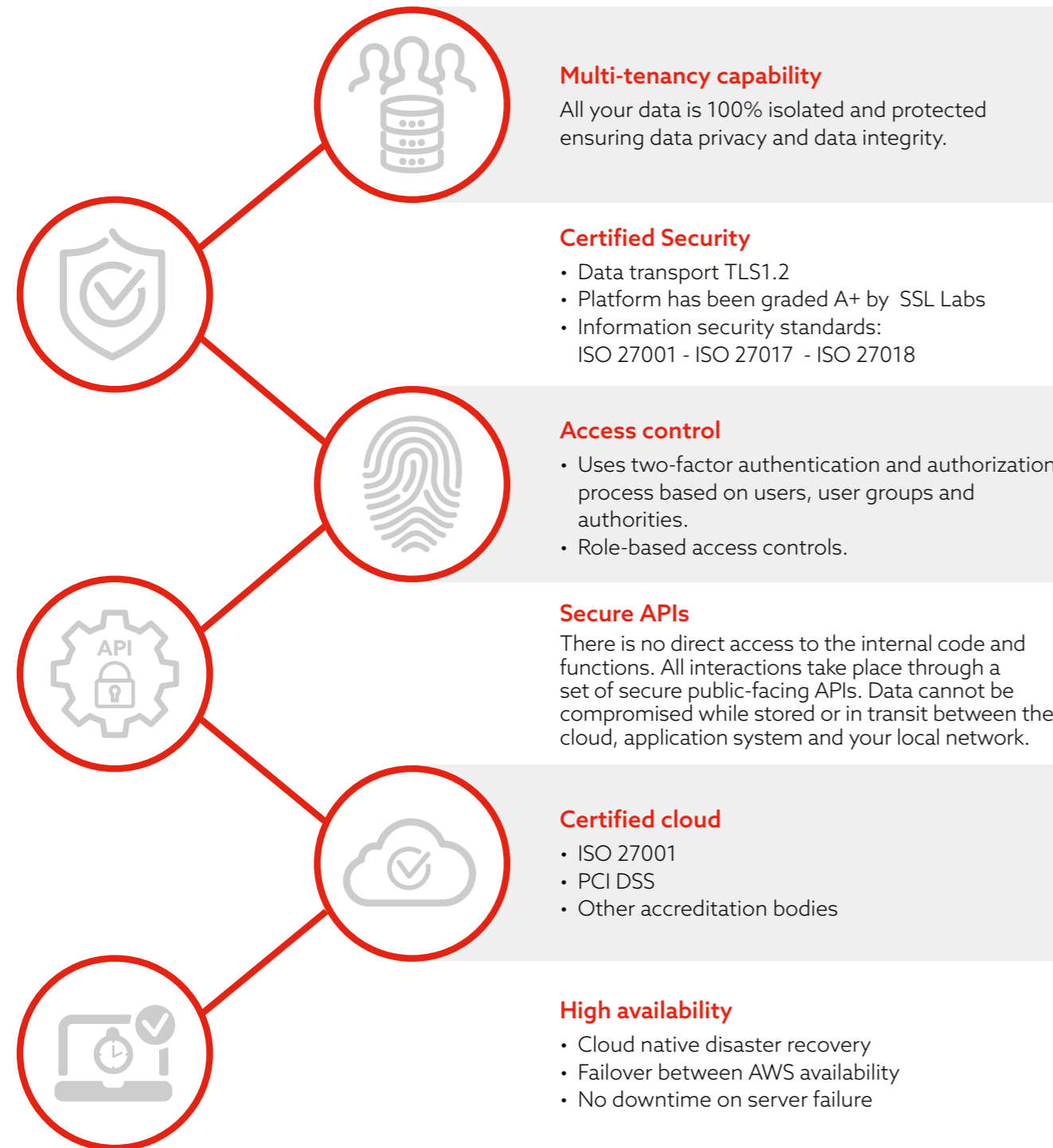Smart dashboards visualize the millSMART KPIs in such a way that numbers data make sense.

Real-time data at your fingertips allows you to discover new insights and unlock the full potential.

READ MORE INFO HERE | WATCH THE QUICK TOUR

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KEMIN liquiSMART

Security Solutions

A crucial element of the platform is data security. KEMINCONNECT was developed based on the highest level of end-to-end security settings, ensuring all data is safely stored.

Multi-tenancy capability

All your data is 100% isolated and protected ensuring data privacy and data integrity.

Certified Security

- Data transport TLS1.2
- Platform has been graded A+ by SSL Labs
- Information security standards:
  ISO 27001 - ISO 27017 - ISO 27018

Access control

- Uses two-factor authentication and authorization process based on users, user groups and authorities.
- Role-based access controls.

Secure APIs

There is no direct access to the internal code and functions. All interactions take place through a set of secure public-facing APIs. Data cannot be compromised while stored or in transit between the cloud, application system and your local network.

Certified cloud

- ISO 27001
- PCI DSS
- Other accreditation bodies

High availability

- Cloud native disaster recovery
- Failover between AWS availability
- No downtime on server failure

Capture the benefits of digitalization through KEMINCONNECT for your operations & business

KEMIN
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Kemin Industries, transforming the quality of life

Kemin Industries is a global manufacturer providing local, innovative nutritional and health solutions for a changing world. We strive to sustainably transform the quality of life every day for 80% of the world with our products and services.

With liquiSMART we focus on adding value to the operations of professionals active in the agribusiness by combining superior liquid application products with extensive application services, laboratory services and technical support.

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