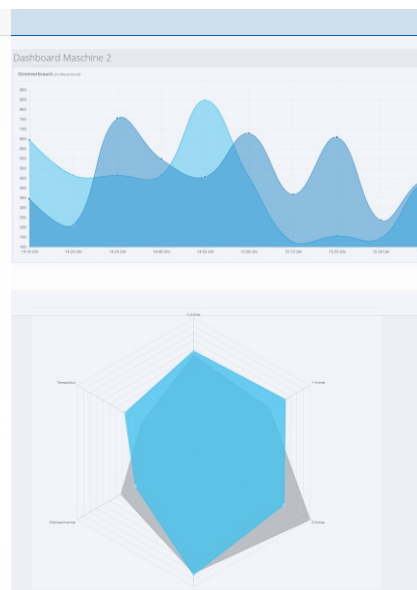


# Industry 4.0 and IoT

*connected production*



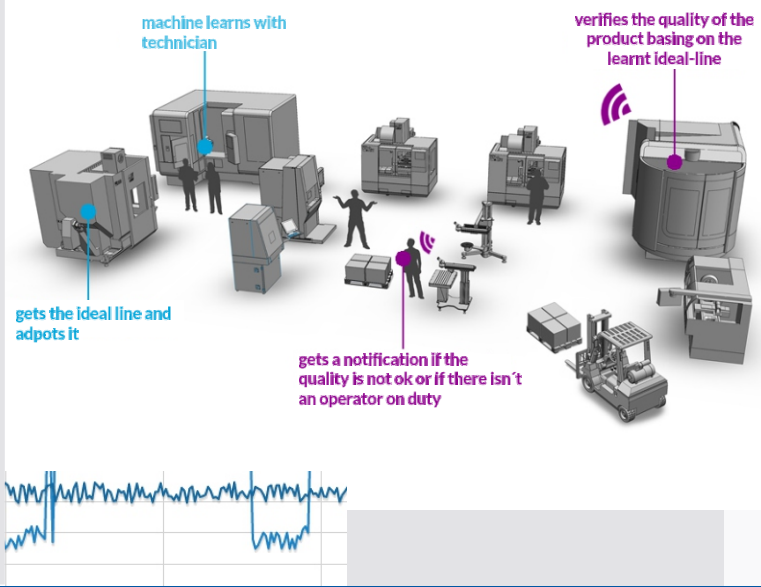
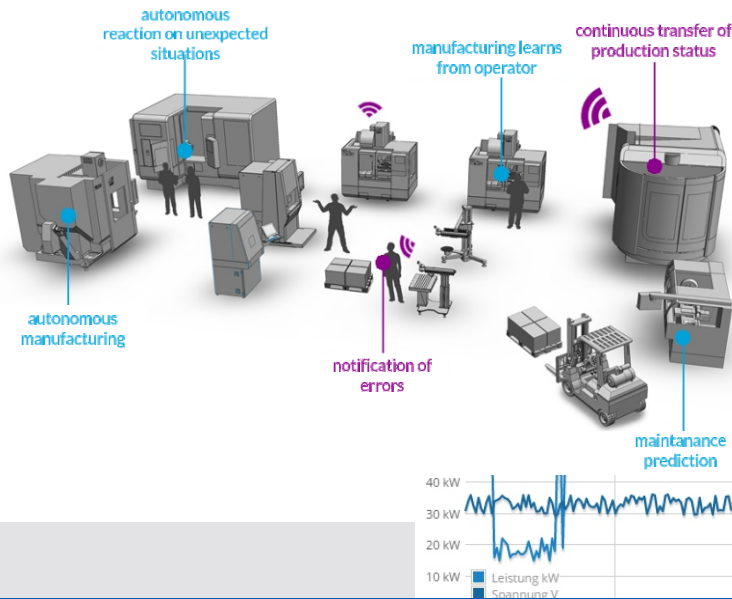
[www.connected-production.com](http://www.connected-production.com)



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# Industry 4.0 and IoT

*intelligent manufacturing*

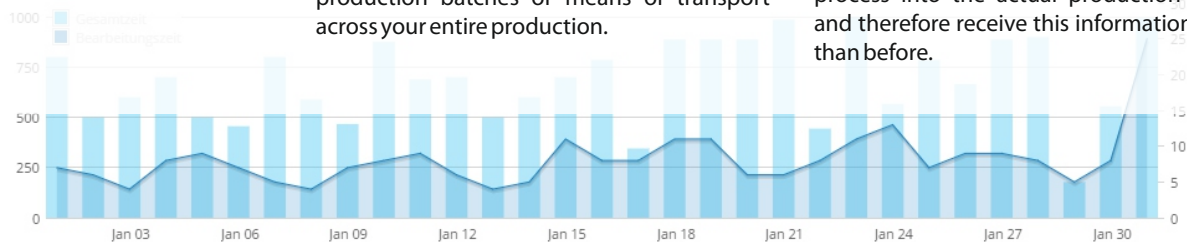


## Intelligent production

The smart combination of sensors, the continuous analysis of the acquired data and automated control based on the learned data.

Together with your employees' expertise the systems learn how to react quickly and directly to any eventualities in your production and suggest the ideal line for production for you.

We support you with the analysis, networking and control using CEP and ERP.



## Locate objects in real-time

If you let machinery and objects communicate with each other digitally using standardised protocols and a digital image of your production all the elements involved in production can inform each other.

Each production unit knows exactly when the material is ready or which production step follows next.

Locate objects like transport containers, production batches or means of transport across your entire production.

## The smart factory learns too

The asset of any enterprise is its employees' experience.

Intelligent systems learn too from your specialists, learn patterns of behaviour and can therefore react faster and more targeted than with a conventional TARGET / ACTUAL comparison.

We are shifting the quality checks previously carried out at the end of the production process into the actual production process and therefore receive this information sooner than before.

# state-of-the-art technologies

*We combine state-of-the-art technologies with existing structures.*



## Condition monitoring

Seamless monitoring through to predictive maintenance: you will be surprised how well your machines know themselves.

Detect the threat of machine failure early and prevent unnecessary and expensive downtime.

Our systems' smart predictive models save money thanks to targeted maintenance. Get information about your production units' state of health through different communication channels and react in good time.

## Real-time data analysis

Our systems receive data from the plants' sensors in real-time and analyse them in real-time.

Thanks to the use of in-memory processing, sensor data is analysed and processed in real-time.

As a result of this you have real-time mapping of your production at any time and can access key figures any time and anywhere.

## User notifications

Communicate with the systems and be informed according to your own requirements.

Regardless of where you are and what you're doing.

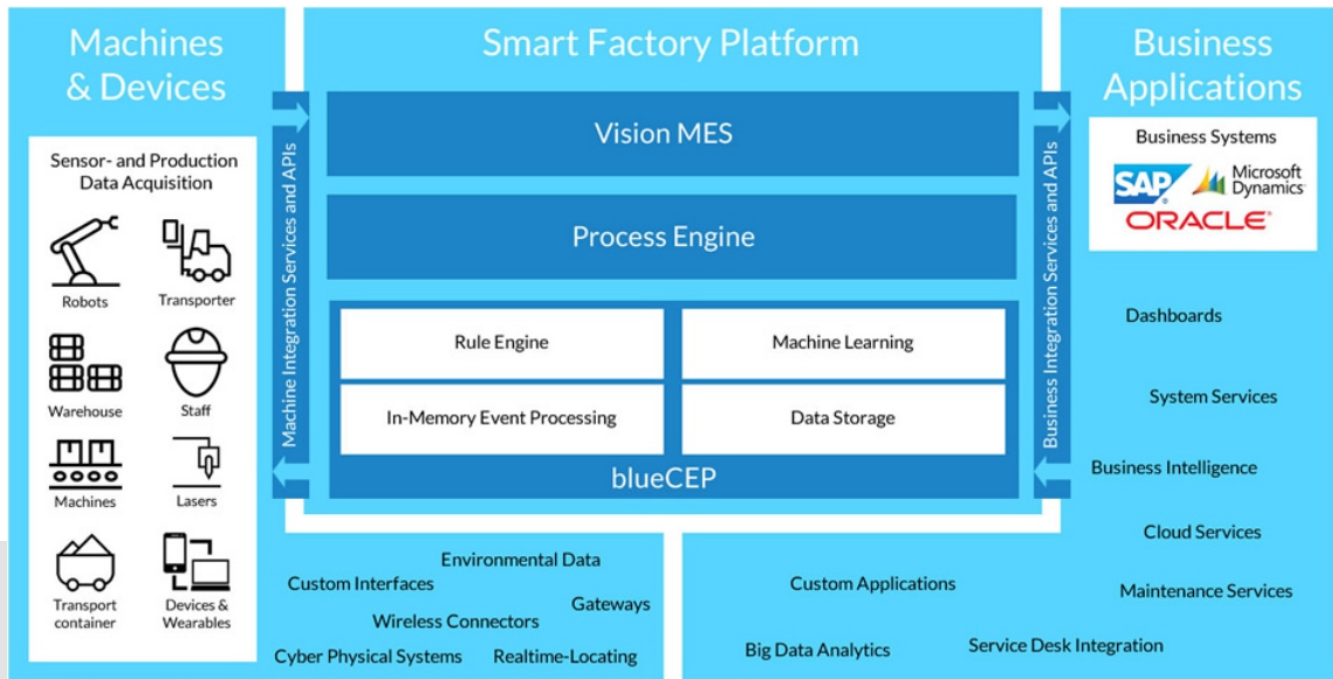
Whether you're a production manager or machine operator: our systems always keep you up-to-date.

This enables efficient controlling, targeted production planning and the best possible support for different machines.

In future you will always know what is going on in your company at any time.

# the Smart Factory Platform

*Our innovative software is an integrated solution from the sensor to application.*



## in the factory

Our sensor systems collect various values, for example vibration, position, weight and much more from different plants, equipment, locations and transporters.

In addition to the data from the production plants, a digital map of production is sent to the smart factory platform without interruption.

We have even developed special adapters for older plants to make them smart. Thanks to the use of familiar protocols and extendible interfaces there is even nothing to stand in the way of integrating customised solutions.

A modern real-time location system ensures that objects and even people can be located within the factory. It is even possible to notify people using this.

## the platform

At the heart of the Smart Factory platform is blueCEP. Thanks to the use of state-of-the-art CEP and in-memory technologies all the incoming data is processed in real-time.

Together with the historical data from data storage the integrated machine learning can instantly calculate predictions, modifications and patterns. The rule engine carries out actions based on this, e.g. by requesting maintenance or sending an alarm to an employee.

As a result, blueCEP can in turn independently control actuators in the factory.

In order to consider the resources, production process and work processes for these actions the process engine ensures that the allocated actions go to the right recipient. For this the system also uses production data from the Vision MES.

## lots of applications

The Smart Factory platform offers its services via a standardised interface for other systems. This allows, for example, for production orders to be sent directly from an ERP system to the platform. We deliberately use open and flexible interfaces so that it is not just existing but also future systems that can be connected.

The Smart Factory platform also includes various software connectors in different programming languages. Using these you can easily connect your own sensors to the platform on the one hand.

On the other hand the integration of real-time data or querying historical data is also possible without any problems.

We are continuously improving our products.  
We reserve the right to make changes to the same without prior announcement.  
Errors excepted.

# Smart Factory ready



## THE SMART FACTORY

*Whilst Vision's laser and production systems already meet all the requirements of smart CPPE, we offer this intelligence of the future for old machinery or plants by other manufacturers too.*

*Only the integrated networking of all units involved in the production process allows for the required increase in efficiency and therefore higher output and lower production costs.*

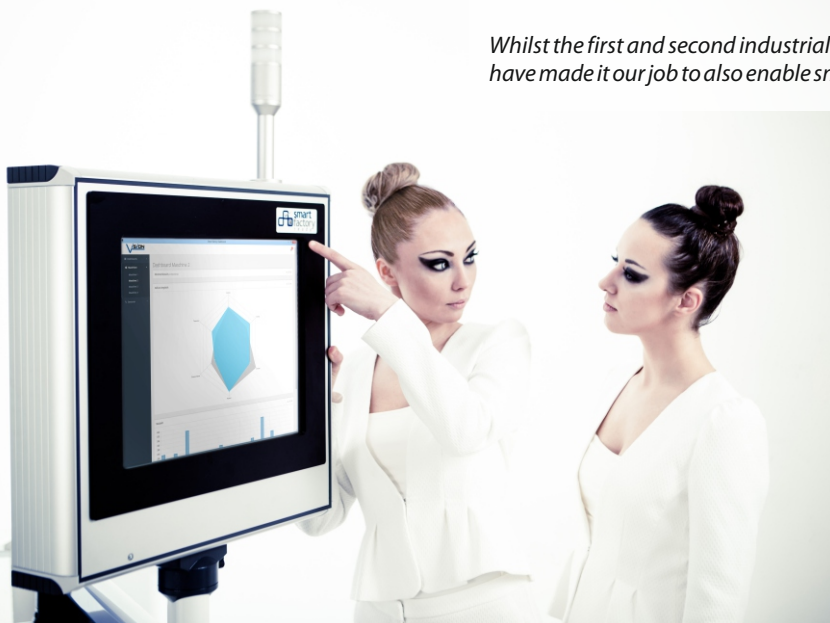
*Vision's smart systems and optional connectors to, e.g. SAP Business One, SAP R/3 or SAP S/4HANA make your production transparent, controllable and monitorable.*

*The centralised control system's intelligent algorithms show you the sought-after ideal line for production and controls according to this, if required.*

## INDUSTRIE 4.0 MADE IN GERMANY

*We see Industrie 4.0 as the top "Made in Germany" product as the driving force behind the German industry. And under this motto we are working worldwide with our partners on launching this industrial revolution.*

*Whilst the first and second industrial development was initially reserved for major production corporations, we have made it our job to also enable small and medium-sized enterprises to benefit from this innovative edge.*







**GLC**  
CERTIFIED  
ISO 9001



#### BY CABLE OR WIRELESS

Depending on the local situation we offer a wide selection of different networking options.



#### SOFTWARE FOR PC, TABLETS OR WEARABLES

The system should adapt to you: that's why we offer analysis and control across all hardware to suit your requirements.



#### SECURITY AND CONTROL 24/7

Smart systems never sleep: leave production control to a tireless system.



#### CLOUD SERVICES

If you like you can save and share your production data across locations in a private Cloud. Your data is always secure.



#### LEARNING BY MAGIC

Smart systems learn from the best: your professionals. Decision-making patterns are not permanently programmed but are geared towards your specifications and examples.



#### INCREASED EFFICIENCY THAT PAYS OFF

Find your ideal line, discover untapped potential and increase your efficiency. It definitely pays off!



#### SECURITY IS GIVEN TOP PRIORITY

Your data and experience are your potential. Our systems have one important task: to keep your information secure.



#### TRIED AND TESTED 5-STAR TECHNOLOGY

You can rely on our systems – together with our strong partners we offer your customised solutions.



#### FOR EXISTING FACTORIES

Thanks to additionally available "smart connectors" our customers don't only integrate machinery and systems from Vision Lasertechnik but universal hardware also allows them to integrate older machinery from other manufacturers and "non-smart devices"!



#### CONTINUOUS DIGITALISATION

Dangerous "bottlenecks" can only be avoided using integrated concepts. Together with you we analyse the weaknesses, potential and solutions that make your production more efficient and secure.



#### COMPATIBLE AND OPEN

Our systems grow with you; this means that you are well armed for the future too and can certainly take on the challenges of the future. This also applies to machinery and plants from all manufacturers, regardless of the year of manufacture.

[www.vision-lasertechnik.de](http://www.vision-lasertechnik.de)

Vision Lasertechnik für Forschung und Industrie GmbH

Lügensteinweg 27  
30890 Barsinghausen

Telefon: +49 (0) 5108 / 6446-0  
Telefax: +49 (0) 5108 / 6446-11

E-Mail: [i40@vision-lasertechnik.de](mailto:i40@vision-lasertechnik.de)  
Internet: [www.vision-lasertechnik.de](http://www.vision-lasertechnik.de)