



High-performing machinery, fast transportation — end-to- end information logistics for the Krone Group

- Central ECM platform with DMS, archive, eRecords, BPM
- Digital records for customers, vehicles, machinery, cars and suppliers used across the company
- Workflow for employee entry/exit
- Automatic inbound invoice processing with SAP integration

The company

For the past 112 years, the Krone Group has made it its mission to deliver top quality and innovations. Operating out of Spelle, Germany, the company is a leading specialist in commercial vehicles and agricultural machinery.

Krone's success story began in 1906, when the master smith Bernhard Krone and his wife Anna inherited a farm and a guest house in Spelle, Germany. Bernhard Krone built a village smithy across from the guest house, where he offered horse shoeing and repairs. He quickly gained many customers from neighboring villages. Starting in the mid-1920s, his sons Bernhard and Heinrich took over the business and began with the construction and production of agricultural equipment. In 1963, the third generation of the Krone family acquired property in Werlte, Germany. Here, a branch factory was built that initially manufactured agricultural trailers and platform trucks. Then, in 1970, the company switched to producing trailers and semitrailers for road freight transport. Berhard Krone (the fourth) took the helm of the Krone Group in 2010. Over the preceding decades, the company had founded further subsidiaries and had expanded internationally. After the merger with Brügger in 2016, the Krone Group team grew to approximately 4,500 employees. Krone operates internationally and generated revenue of around 1.9 billion euros in the fiscal year 2016/2017.



Management summary

Uniform company-wide document management

The system landscape of the Krone Group, a leading commercial trailer and agricultural machinery specialists, was full of information silos spread out across the company. Document-centric processes had become slow and cumbersome due to the fact that employees could not find the information they needed. Oftentimes only certain department employees knew where to find specific information. Should someone not be at work, it would take the others a long time to search through paper record binders or file servers to find information.

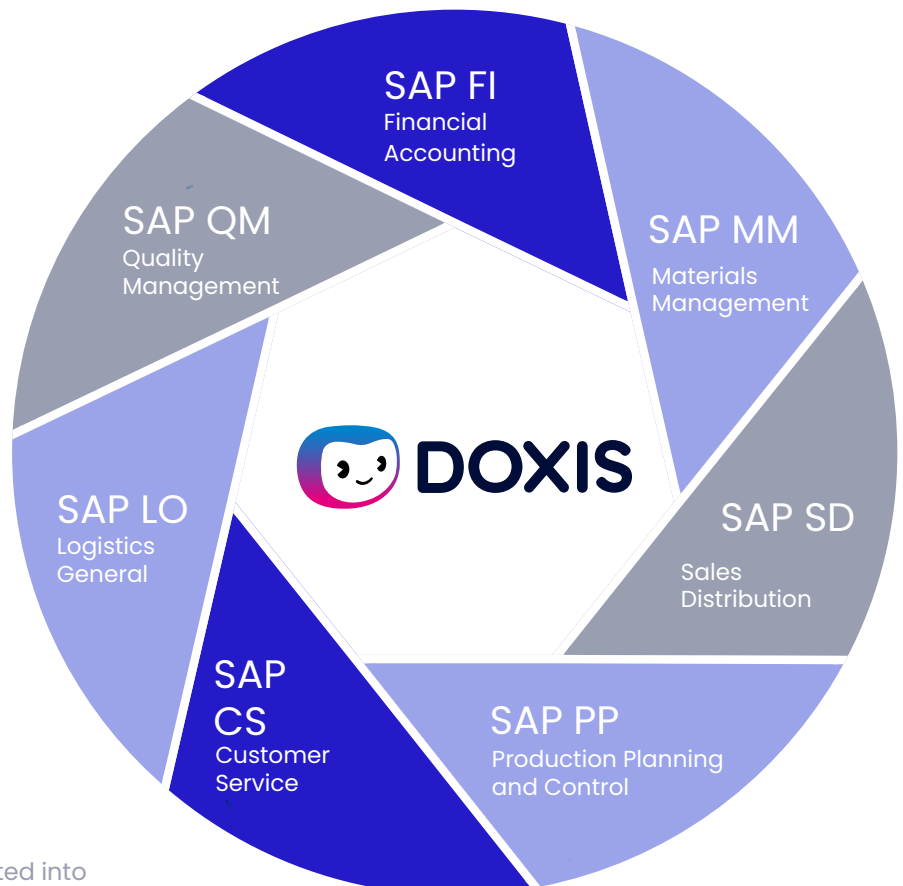
Today, both the employees and the management team greatly appreciate the centralized ECM solution, which was launched in 2012. The Doxis iECM suite from Doxis has fundamentally improved the way Krone works, enabling it to launch a uniform and transparent document management system across the company and to easily get rid of its information silos. Business processes are now digitized and supported by numerous electronic records (e.g. records for machinery, vehicles, suppliers or cars). The records are linked to the SAP modules in use and automatically receive input in the form of SAP data such as orders, material master records, price lists and units lists. One highlight is the digital employee entry and exit workflow, based on Doxis BPM, which facilitates simultaneous cross-departmental collaboration. Furthermore, Krone plans to connect its own supplier portal with Doxis.



Eliminating information silos with ECM

Almost every European car driver has seen the characteristic blue logo on the underderride guard of semitrailers: K-R-O-N-E. In addition to semitrailers, Krone's product portfolio for commercial trailers includes container chassis, carrier systems, trailers and superstructures, and CEP shuttle vehicles. Beyond the blue crown of Krone (which means "crown" in German), there is also the green crown logo, which represents Krone's other line of business in agricultural high-tech engineering. As one of the premier specialists in forage harvesting technology, Krone manufactures disc mowers, rotary tedders, rotary rakes, self-loading/forage wagons, round balers and large square balers, as well as the BiG M (mower conditioner) and the BiG X (forage harvester). Krone's BiG X 1100 is the most powerful farming machine in the world – a true harvesting giant made in Spelle, Germany.

Also gigantic was the company's document volume in 2012. All of Krone's documents were randomly distributed throughout the system landscape. They were often stored in information silos completely out of their context. Lars Schmerge, ECM Project Manager of Bernard Krone Holding, recalls: "Nobody knew where documents were located – they were either in the old archive, an outdated AS/400, saved on various hard drives, in email mailboxes, or in paper record binders stored in wire boxes in the basement." Many employees created their own local folder structures and saved supplier documents there. When someone was on sick leave or vacation, colleagues or other departments could not access their documents, which delayed business processes, for example, in purchasing. When employees left the company, it was possible that important supplier documents were never found again, not even after asking the supplier itself. "This caused us to lose valuable knowledge and information," reports Schmerge. This situation motivated the IT department of the Krone Group to search for a sustainable and secure alternative to avoid these risks in the future.



Doxis is deeply integrated into Krone's SAP modules



Project facts and figures

TOPIC:	ECM with archive, DMS, eRecords, BPM and automated inbound invoice processing
CUSTOMER:	Bernard Krone Holding SE & Co. KG
INDUSTRY:	Commercial trailers, agricultural machinery
EMPLOYEES:	4,497; almost 800 are Doxis users
CUSTOMER SINCE:	2012
Doxis SOLUTIONS:	Doxis iECM suite with an archive, DMS, BPM, eRecords, automated inbound invoice processing and verification, SmartOffice Plus
INTEGRATION:	SAP (FI, MM, SD, PP, CS, LO, QM, C4C), COS, Microsoft Office, Microsoft Exchange, Hydra, Estos
DOCUMENT VOLUME:	Scope of legacy data migration: 2.6 million documents; total number of documents currently stored in the DMS: 14.6 million; new documents each year: 2.5 to 3 million
HIGHLIGHTS:	Based on Doxis BPM, digital records for machinery, vehicles, suppliers, customers, orders, personnel, contracts and cars with SAP connection, personnel entry and exit workflow

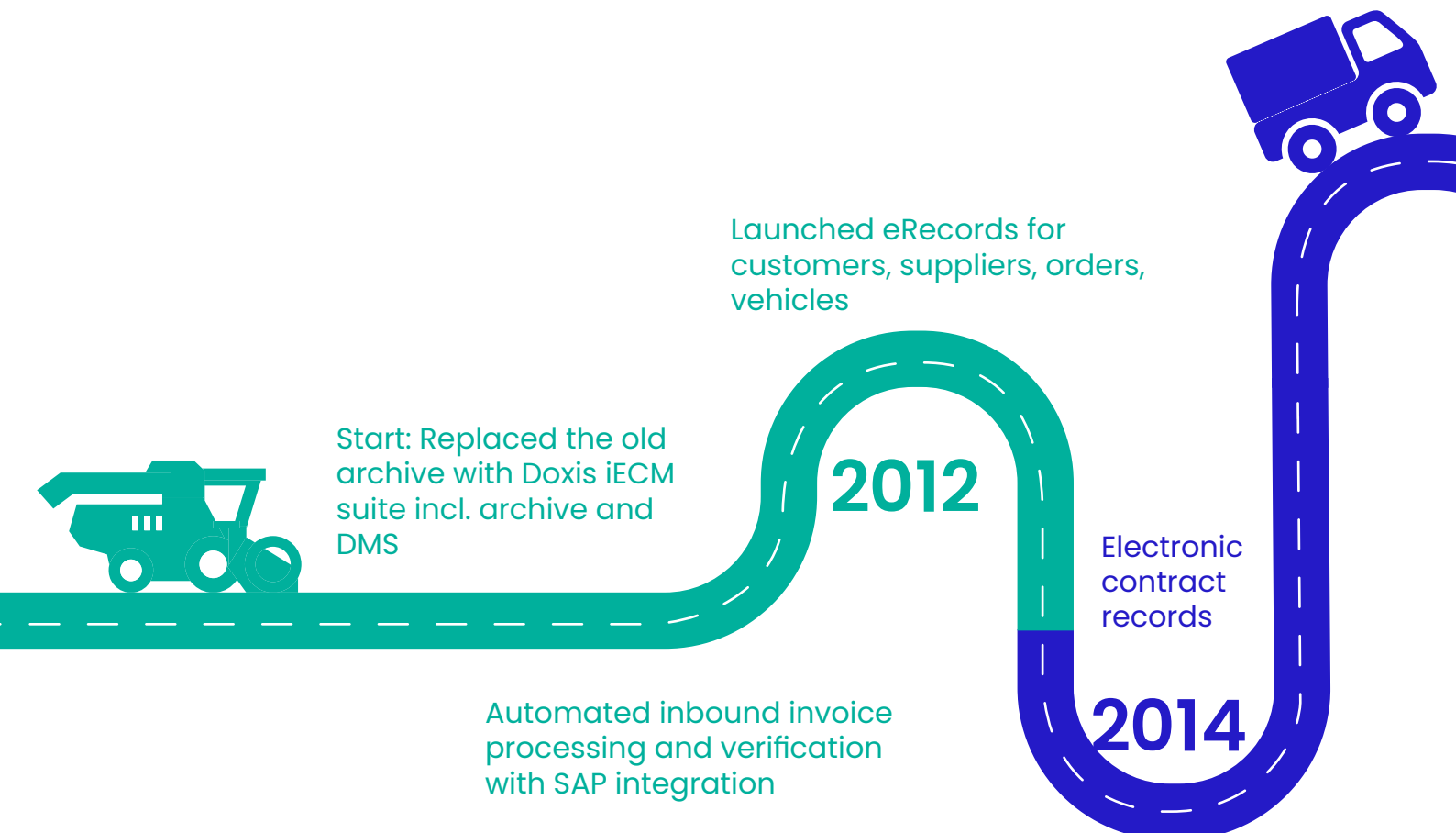
Target: Uniform document management

The company was looking for a company-wide ECM solution for uniform and transparent document management. It needed to be implementable on an international scale, to digitize and automate document-centric business processes, and to support them with eRecords. Beyond this, the Accounts Payable department was to receive automated inbound invoice processing. One important technical requirement was that the system had to be capable of integrating into the leading systems. "The connection to our SAP systems was a top priority," Schmerge stresses. Krone also had very clear criteria for selecting a vendor. "We looked for a German ECM vendor that could quickly help us with support requests. Fast communication was important to us," says Schmerge. Furthermore, the software vendor should develop its own solutions and have extensive experience in the ECM field. "These are the reasons why we chose Dosis – from the very beginning, they were on eye level with us and the Dosis solution fulfilled all of our requirements."

Dissolving the legacy archive

Kicking off the ECM project in 2012, Krone first dissolved the AS/400 archive, which was no longer sustainable. "Support was no longer offered for it. Also, there was no guarantee for the availability of spare parts for the legacy archive," explains Sandra Nee of the IT department at Krone. It was high time for a migration. The good news for Krone's IT department was that Dosis had a proven migration concept ready to go. Five million data objects and documents were migrated quickly and securely to the Dosis archive during operation.

After the first step went off without a hitch, Krone directly began to build a digital record structure in the ECM system – initially in the sales department. The countless paper record binders were to gradually disappear from the cabinets.





Doxis performance in figures

- ▣ 5 million SAP inbound/outbound documents were migrated securely from the legacy AS/440 archive to Doxis during operation
- ▣ Today there are a total of 14.6 million documents and SAP data objects in the central ECM system
- ▣ Over 3 million documents are added each year

And there were quite a few of them: For every order, for instance, a Krone sales reps used to create a binder with hundreds of documents, including print-outs of email correspondences. All of this was to end with the new ECM solution. "We first started to gradually scan documents like empty container notes, order confirmations or other accompanying documents, which we then filed centrally in electronic records for suppliers, customers and orders in Doxis. This way, our sales team always has access to them," describes Schmerge.

Electronic machinery and personnel records



2016



Doxis connection to future supplier portal

2018

Employee entry and exit workflows based on Doxis BPM

Electronic car records

2015

"Thanks to Doxis's migration concept, we were able to quickly and securely migrate about three million legacy documents to Doxis during operation."

Lars Schmerge, ECM Project Manager, Bernard Krone Holding SE & Co. KG



Supplier records for Purchasing and Quality Assurance

An important part of the Doxis solution at Krone are the electronic records. Many different eRecords are used throughout the international corporation. One of the first eRecord solutions was for suppliers, launched in 2012. They enabled Krone to not only document the entire life cycle of the business relationship with the supplier, but also the attributes and quality of the supplies.

Multiple departments have centralized access to the supplier records, which are closely linked to SAP. Everyone collaborates across department lines. Per drag-and-drop, Krone's buyers can file email correspondences or offers, for example, for welding components or trailer wheels. Furthermore, the record is directly filled with orders, material master data, and price and unit lists directly from SAP. The quality assurance department then adds documents such as inspection reports and acceptance protocols (e.g. inspections of the standard dimensions of welding bores) to records. This means that all information is securely stored and always readily accessible to Krone employees, supporting them, e.g., in end of the year talks with suppliers, as Schmerge explains: "Our team is able to draw conclusions based on the information in the digital supplier records regarding what went well in the supplier process and what needs to be optimized next year, also in terms of material quality."

From call to record: ECM and telephony software ensure highest quality service

To further improve the service quality, Krone integrated the telephony software Estos into Doxis. When an external call comes in, the ECM system recognizes which customer is calling based on the telephone number and gives the service supporter a direct link to the digital customer record. The supporter has a 360-degree view of everything related to the customer and can directly provide information: starting with the notes from the last phone call, to submitted offers and new orders, to the history of concluded transactions of the past years.

Information always on hand with eRecords in sales

For the sales team in the business unit commercial vehicles, several types of eRecords – e.g., the vehicle eRecord – are readily available and connected to SAP. "For instance, every time a trailer is filed in the SAP system as a material number, a corresponding digital vehicle record with all related data and documents is set up in Doxis," reports Nee. Such a record includes plans, operation instructions, parts lists, TÜV acceptance protocols or labeling templates for vehicles – all of which are directly available to Krone's sales team in the context of the vehicle. It is a similar situation in the business unit agricultural machinery, where digital machinery records make work much easier. What's practical is that sales colleagues can switch from one customer record to a machinery record in one click. If, during a sales talk, a customer has specific questions about the braking performance of a machine, the Krone employee can view these numbers in the brake inspection report and immediately answer the questions.

In addition, employees from the technical departments will soon be able to view and update documents in the electronic records. For example, if the brake parameters of a farming machine change, the technician can directly update the corresponding machinery record with the new or modified values. Thanks to versioning, a Krone employee can always tell which changes were made on which date and time. This also enables the employee to compare how the braking performance of specific farming machinery has improved over a given time period.





"The digital car records enable our purchasing department to successfully manage the entire company fleet, including all of the related information."

Sandra Nee, IT department, Bernard Krone Holding SE & Co. KG



Digital car records bring together leases and more

Since 2015, the purchasing department of the Krone Group has been using digital car records to manage the company fleet and to maintain an overview of all related information. "Our employees used to have to search through many paper binders to find, say, a lease," describes Nee. "Back then, documents for five different cars were stored in one binder." Today, all documents for one company car are located in the digital car record. By running a full-text search based on the license plate number, the driver's name or the car type/model, it's easy to find documents such as applications, leases, invoices, accident reports or photos of damage. And what if an employee was driving a bit too fast? "Yes, even these snapshots are saved in the record of each car," Nee adds with a wink.

Automated invoice processing

Even in Accounts Payable, the Krone Group has been utilizing Doxis with an SAP connection since the end of 2012. This has enabled the company to completely automate inbound invoice processing. All invoices that arrive per email, on paper or in an IDoc format are automatically captured, classified, verified in the SAP system (using verification criteria like name, invoice issuer address, VAT number, etc.) and forwarded to the Accounting department for validation and release. Once the payment release has been issued, the invoice is posted and archived in the appropriate digital customer or order record in an audit-proof and accessible way. In addition to the locations in Spelle and Werlte, Germany, Krone's subsidiaries also use Doxis in their country language in France, The Netherlands and soon in Turkey and Great Britain.

The benefits for the Krone Group

- faster processing times
- better capturing quality throughout all inbound channels
- ability to meet cash discount deadlines
- a constant overview of all open invoices



"Our sales team is able to find all important information in machinery and vehicle eRecords. This includes brake inspection reports, TÜV acceptance protocols and price lists. They are always able to provide immediate information."

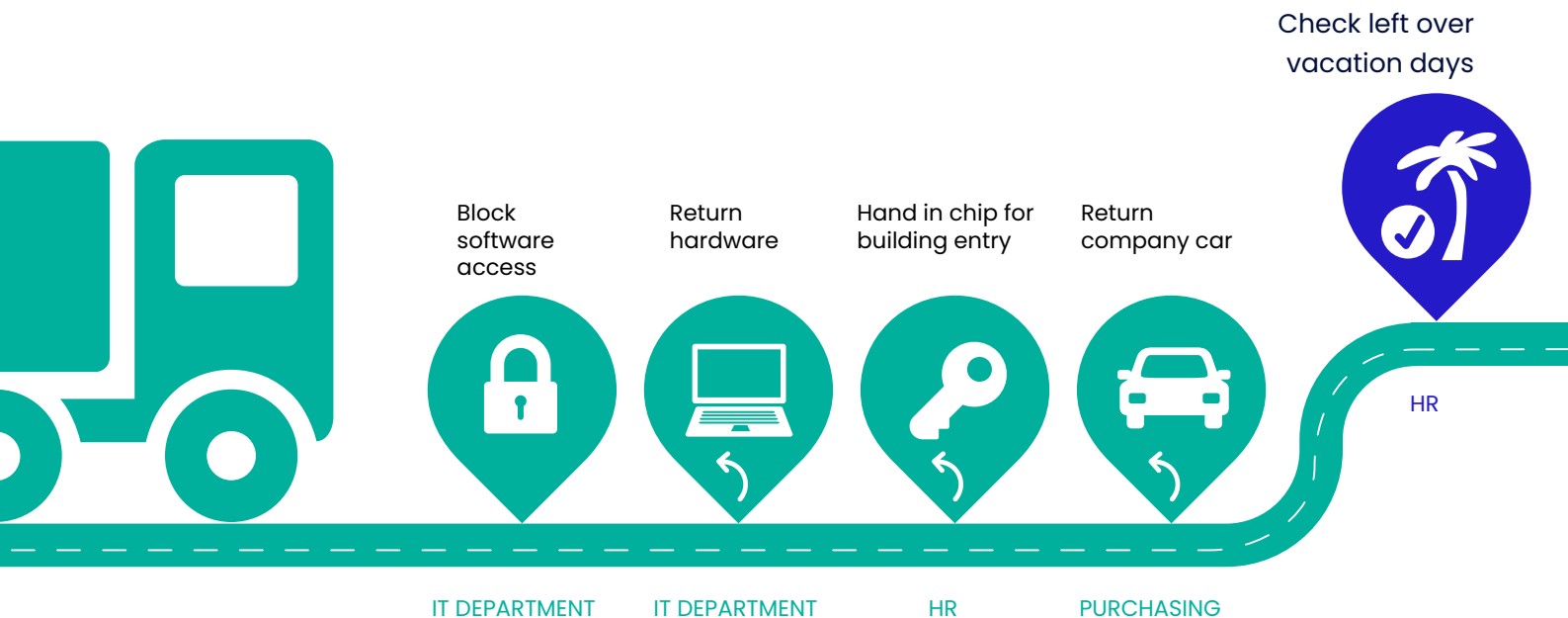


Lars Schmerge, ECM Project Manager,
Bernard Krone Holding SE & Co. KG

Everything's ready for the first day of work: Employee entry workflow

After such a positive experience working with Dosis, the Krone Group has continuously added to its ECM solution. The uniform ECM technological platform has made it possible for the company to implement various solutions and plan for future ones. The Krone Group wants to automate and speed up more and more business processes using Dosis. Case in point: One of the next steps is to launch and implement workflows for employee entry and exit with Dosis BPM. In addition to the IT department, which for now primarily works with the workflow, further departments, such as Purchasing and HR, will be integrated into the workflow later on.

As soon as someone is hired, the HR department enters the starting date in the time recording software called Hydra. Because Hydra is integrated with Dosis, a new personnel record is automatically created. The HR team files applicant documents such as the résumé, certificates, letters of reference and the cover letter. The Dosis workflow simultaneously sends a notification to the IT team that the new employee will start her or his job on day X. The notification contains the tasks that the IT department has to complete by the employee's first day. "I can think of a



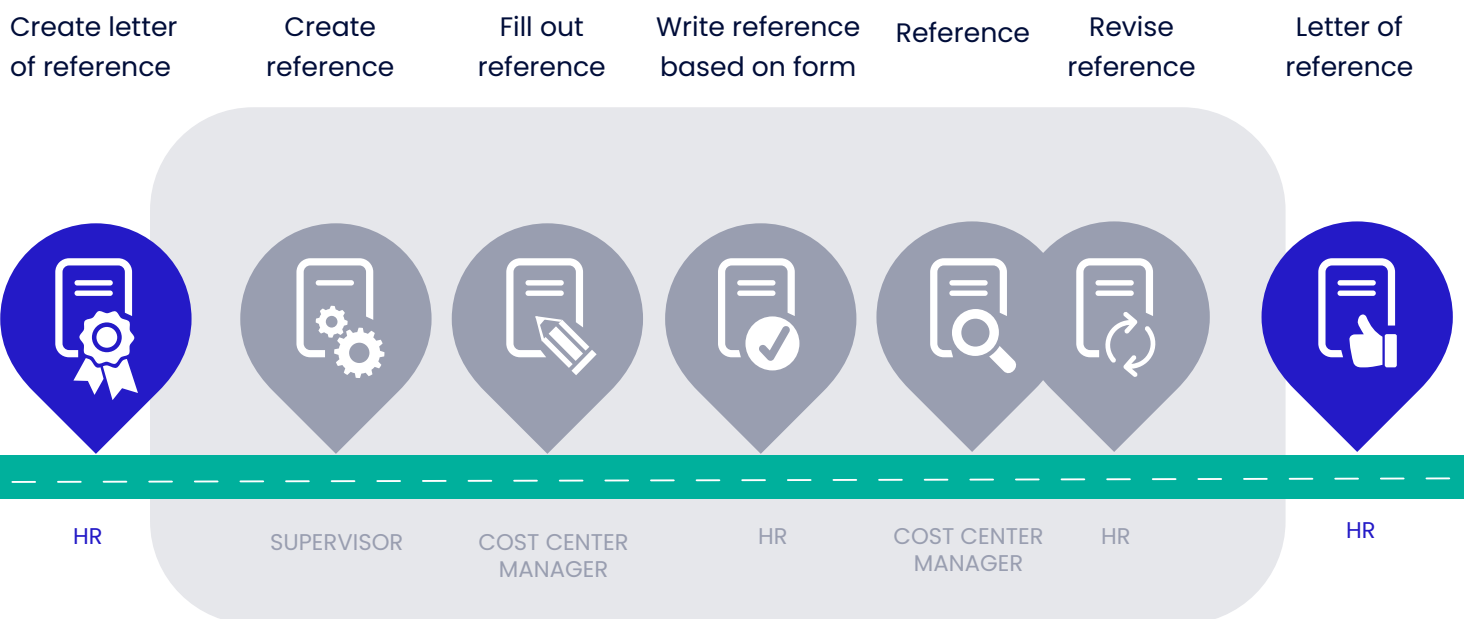
whole bunch of tasks that need to be finished. For example, creating chips for building entry, arranging a company laptop or smartphone, setting up access accounts for SAP and Doxis or preparing an email account," lists off Nee. Other departments such as Purchasing are also supposed to be integrated into the workflow, for example, if a company car is a part of the employment contract. Krone's employees are to have everything at their disposal already on day one. "To guarantee that everything is on time and complete, we can always see which tasks are unfinished and then act accordingly," says Nee.

If an employee leaves the company, the Doxis workflow initiates the next steps. Software access must be blocked and hardware, the chip for building access and the company car must returned on time. Aside from the IT and Purchasing departments, the HR department will also be directly integrated into the workflow. At any time, Krone can easily add further tasks such as "Verify remaining vacation days" and "Create reference letter".



"With the employee entry workflow based on Doxis BPM, we are confident that new employees get the right software access, hardware and chip for building entry on time."

Sandra Nee, IT department,
Bernard Krone Holding SE & Co. KG



Sample of the employee exit workflow based on Doxis BPM



Prepared for what's next: Connecting suppliers with Doxis

Krone has launched a new initiative in 2018 to create a supplier portal. Doxis will also play a prominent role here and be directly connected to the portal. For example, if a supplier uploads its certificates, technical drawings or QA welder reports, these are automatically assigned to the supplier eRecord, which is available to Krone's employees worldwide. "This will be a true benefit for our Quality Assurance department; they won't have to chase down these documents anymore," remarks Schmerge positively.



See DOXIS in action

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