DIGITAL. CHANGE. TOGETHER.

sternico

COMAP

# COMAP

## Asset management without company boundaries

COMAP is a CMMS (Computerized Maintenance Management System) that supports the entire process chain in the field of maintenance from planning and commissioning to execution, monitoring and optimization. COMAP was developed especially for the railway industry and any asset can be modelled in any degree of detail. Examples are:

- Freight waggons and passenger trains
- Locomotives and rail cars
- Track-laying machines
- Railway infrastructure

In addition to the central functions in the area of maintenance, COMAP offers further functionalities, such as the management of leasing contracts. In this way, the central processes in the individual companies with their different roles can be optimally mapped:

- Keeper and fleet managers (ECM I - III)
- Leasing companies
- Railway undertakings
- Maintenance workshops (ECM IV)
- Infrastructure managers

A special focus is placed on the obligations resulting from ECM certification. This applies both to freight cars and other rail vehicles. Among other things, the following objectives are achieved with COMAP:

- Creation and administration of the maintenance guidelines
- Commissioning and monitoring of maintenance work in accordance with regulations
- Complete and gapless documentation of the maintenance work and technical configuration of the vehicles
- Further development of the maintenance guidelines and reduction of life cycle costs
- Efficient and digitally supported maintenance process in the maintenance workshops
- Secure, digital data transfer between workshops and ECM/keepers

In order to achieve these goals efficiently, digital data exchange across company boundaries plays a central role. COMAP ensures that data only has to be recorded once or after changes. The entire chain from the manufacturer to the ECM/keeper and the maintenance plant is taken into account.

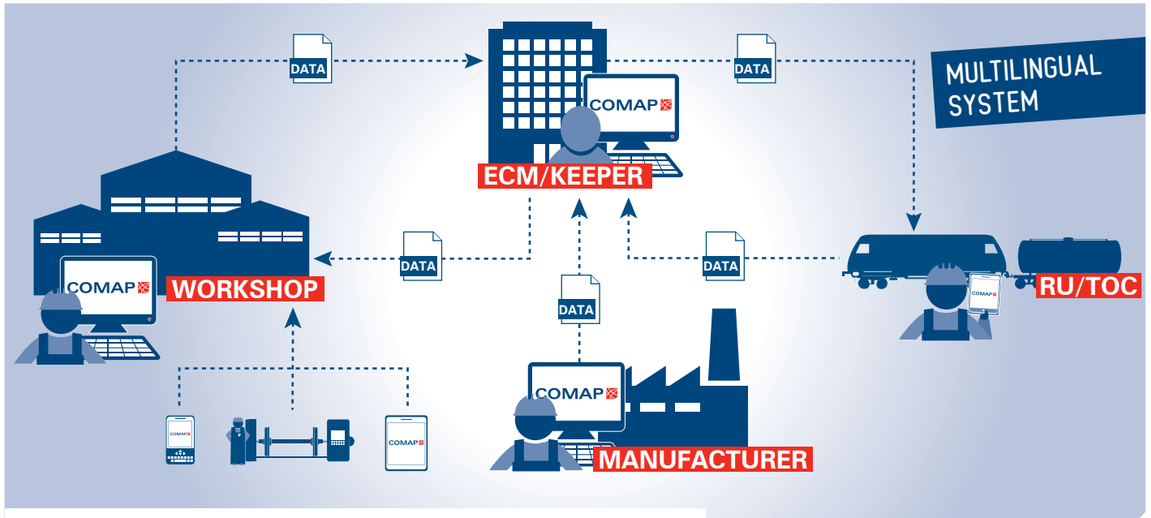
## Facts & Features

### Further software-characteristics at a glance

- Digitizing of business processes
- Fully integrated maintenance program
- Maintenance planning and orders
- Defect and risk management
- Traceability of components
- Document designer for individual reports and protocols
- Analysis and reports
- Offline function
- Connection to ERP systems
- Connection to production machines and measuring systems

# COMAP

## Asset management without company boundaries




EFFICIENT ASSET MANAGEMENT BY DIGITAL COLLABORATION

### Digitize your business processes!

The industrial revolution 4.0 is omnipresent. Many companies are facing the challenge to satisfy the increasing requirements of their customers to access their data at any time.

Furthermore, the pressure of competition is growing, for instance due to the need of more flexible service offers and the improved possibilities of comparison as a result of the technological progress.

By using COMAP you are well prepared to face all these challenges. No matter if your company orders maintenance services or offers the services itself.

Obviously, the supply chain changes over the entire life-cycle of an asset and can be quite different from the beginning. The internal business processes are only one part concerning a comprehensive digitization. Usually a consistently integrated supply chain is not yet implemented. Initially the manufacturer enters a countless number of information into a software solution and the client still receives the information in a waggonload of paper. The communication process with railway undertaking companies and workshops is quite alike. Many software products only facilitate the internal tasks.

Paper doesn´t blush! Reduce your effort caused by piles of paper and use COMAP as your competitive advantage. Take the step towards a wholistic, digital process chain.

„Sustainable success is achieved through efficient processes and far-sighted strategic decisions. In order to achieve this, we cultivate the relationship with our customers in the sense of a partnership. We see it as our task to identify the customers´ needs and to jointly create lasting and holistic solutions in which the customers´ benefits are in the focus."

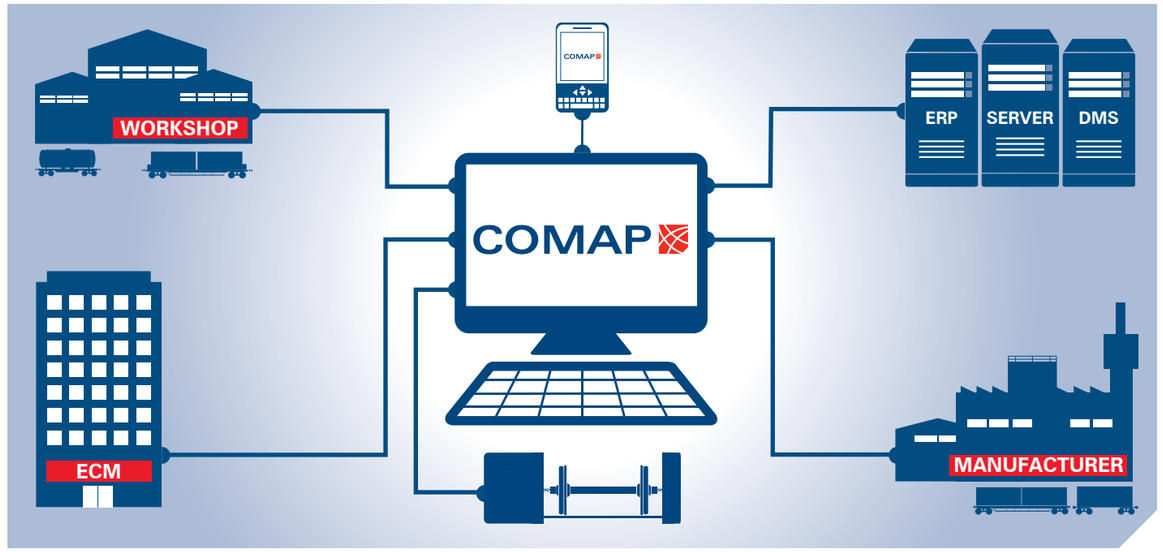
Sico Algermissen
CEO | Partner





# COMAP Professional

## Custom-fit solutions for every enterprise




### The component based system

Users can purchase COMAP Professional, if they need more functionalities than the COMAP Basic version offers or if other vehicles than freight waggons shall be administered. COMAP Professional consists of the Base Module "Professional" and a variety of optional components. By selecting components individually, COMAP can be tailored to the diverse needs of every enterprise.

These combinations allow a custom-fit use in maintenance workshops, for ECM/keepers, for manufacturers or infrastructure managers. Even in companies which combine several of these roles COMAP achieves a goal-oriented application. The system is upgradeable at any time giving the possibility to introduce the software step by step. A detailed description of the Base Module and each component can be found on the following pages.

For companies that are also RU/TOC, Sternico offers the software „DISPOLINO" for the planning and dispatching of transports or shunting tasks. DISPOLINO can be integrated into COMAP via an interface to share relevant data among both systems.

### Cloud application

As an alternative to a classical license purchase, it is possible to obtain COMAP Professional as a service. In this case, Sternico provides a server instance for each customer in a computer center (Microsoft Azure). The data for each client is strictly separated from other client-data using different databases. A company does not require any hardware or administration personnel, only a computer that is connected to the internet. This reduces the costs and allows a user to start working immediately. Furthermore, a high availability can be guaranteed because of the fail-proof server systems. In addition, the system and the costs incurred are adapted according to the actual needs. Thus, investments "on spec" do not have to be made. The advantages are:

- No license fees
- No costs for hardware, operation and administration on one's own server
- Always the latest version of COMAP
- Annual accounting for users required in the following year

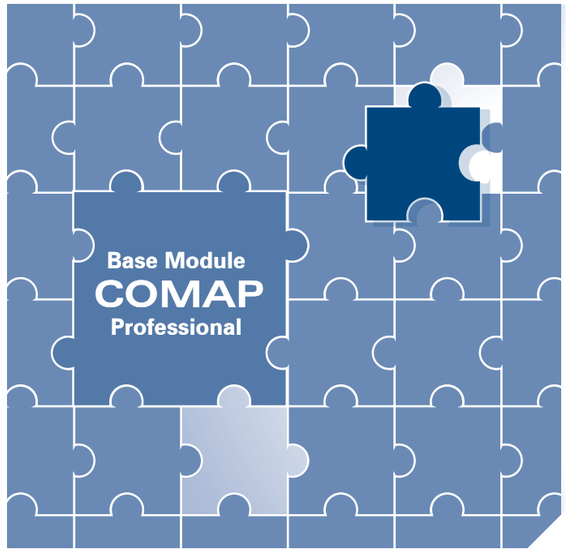
### VPI-EMG 08

COMAP is 100 % compliant to VPI-EMG 08. VPI-EMG 08 is currently developed and managed with the COMAP Architecture Edition at VERS. COMAP users consequently receive all amendments and definitions relating to VPI-EMG 08 first hand.

With the Sternico Software Assurance customers automatically receive all updates regarding VPI-EMG 08 from the moment the new standard is taking effect. This service includes a potential data migration of existing data in order to be able to work according to VPI-EMG 08. Because of that, an unexpected cost trap can be avoided!

# COMAP Professional

## Base Module: Properties and functions




### Product management

The products, for example freight waggons, locomotives and wheelsets, are created and administrated in the Product Management. For each product a range of key data can be managed. In addition, measures taken or planned can be seen, as well as the assignment to the orders.

A product, which has been created, can be configured according to the definitions in the Structure Administration. All vehicles and components can be created manually or at the click of a button based on structural templates or type series.

Workshops have the opportunity to configure a waggon structure for reception (waggon arrival) and a structure for dispatch (waggon departure). Because of that it can be documented how the product was configured at the beginning and at the end of the stay at the workshop. This allows the user to document modification measures in workshops and enables hire companies to identify changes during a leasing period.

Sub-products can be installed in or removed from a product structure. For instance, a wheelset can be installed to a waggon and all of the wheelsets data, including the attached photographs and documents, can be taken over into the waggon. In principle, this function allows the installation and removal of all other components as well.

Electronic work papers allow recording the individual data, which is acquired per product, and reporting work executed and used material. According to the work profile, the user will see exactly the fields he needs in his area of work. Besides, he can see at a glance which compulsory data he has to enter. This information is based on the order and maintenance plan. In addition to recording new values, unchanged values can be validated.

Technical data as well as data concerning work tasks, time and material can be recorded online and offline. Offline means that the computer or the mobile device that is used for data recording does not have to be connected to the server. Thus, waggon data can also be recorded when there is no WIFI or UMTS/LTE connection. The synchronization takes place as soon as the device has reconnected.

In addition to the technical data, work executed or used material it is possible to assign attachments, for example photographs, documents and protocols to a product. The assignment takes place through the technical structure. For instance, a photograph can be assigned to the bearing on the inner A side of the third wheelset of the waggon.

### Measure management

Measures can be created and managed in COMAP. A measure specifies which actions have to be taken in a workshop and which technical data has to be or was documented. A measure can include scheduled maintenance plans as well as repair actions. It is possible to bundle single work steps, which for example derive from a project, with other measures.

If multiple measures exist for one product, they can be merged together. This allows the user to commission and execute repair works and scheduled maintenance plans in one step.

Individual maintenance levels can be defined in COMAP. If maintenance plans, projects and work steps shall be created, the additional components “Maintenance Plan”, “Project Management” and “Work Step Catalogue” are needed.

> Maintenance plans, maintenance levels and work steps published through VPI-EMG 08 can be used in the COMAP Base Module.

### Order management

Commissions and production orders can be created and administrated based on defined measures in the component Order Management.

Commissions enable the ECM/keeper to generate detailed maintenance or repair orders which can be printed to PDF and sent via e-mail automatically.

Workshops can create production orders and use digital work papers in COMAP to provide the production orders digitally. If production orders are provided and work is reported back digitally, the software validates the technical documentation regarding completeness according to the production order. A further check concerning accuracy can be carried out via the component rule designer.

### Dater transfer

COMAP permits the ZIP-based data transfer according to VPI-EMG 08. This means that waggon and wheelset data can be received from and sent to any IT system which conforms to VPI-EMG 08.

In addition to the technical data, events and attachments can be transferred digitally. Prospectively, this will be extended concerning errors and defects as well as work steps. COMAP ensures that the generated ZIP files conform to the current VPI-EMG 08 scheme. Following the example of VPI-EMG 08 the digital data exchange will be available for locomotives as well.

### Data history

The data history allows reviewing all data recorded for a product over time. Additionally, the software includes basic features of a document management system (DMS) and can access all historic attachments. This functionality covers major requirements of an ECM to hold available all technical data of its rolling stock. Furthermore, maintenance workshops can access the prior workshop cycles of a waggon or wheelset.

### Work profiles

By setting up work profiles in COMAP, it can be determined which user can view and edit what type of product data. Additionally, it can be determined which user can report what kind of work. An employee in wheelset processing will automatically only see the wheelset data and work steps according to his workstation using his electronic work papers. This provides a high degree of transparency and data security.

The software considers the product configuration and ensures that only applicable data and work can be edited and reported. Work profiles can be created and administrated. This way, all input masks can be adjusted to the company’s own processes and users can be guided in their work. Additionally, an option in the work profile configuration can be set which allows filtering the input masks shown by client and/or order. This ensures that only relevant data will be recorded.

### Structure administration

The Structure administration is the basis for COMAP and allows the data modelling of products and components.

#### Product structures:

Product structures define all technical structures which form the basis for products (vehicles, wheelsets, etc.). Product structures determine composition and properties of products. Any kind of product structure can be created and administrated. Thus, COMAP is able to completely model locomotives, commuter trains or infrastructures.

#### Product types:

Product types can be defined based on product structures. A product type, for example, is a waggon, a wheelset or an engine. Moreover, it is possible to add other product types such as distributors, for instance. Products have the characteristic that they can be installed or removed in/from products and that they have their proper history.

> With waggon and wheelset two product types are preconfigured in COMAP for VPI-EMG 08 users.

#### List administration:

The list administration allows defining selection lists for data fields of product structures. These lists specify a set of entries which the user can pick from in data recording for the data fields that they are connected with. This facilitates the data entry for the employees and results in data that is easy to analyze.

#### Type series:

Type series allow the user to create templates for vehicles from which waggons or wheelsets are generated in the product administration. This way it is possible to define templates for waggons or trains with specific characteristics, such that a template could completely preconfigure a tank waggon with four wheelsets. In addition to the product structure, operating and maintenance limits can be defined. Corresponding maintenance levels can also be allocated to a type series to avoid false commissioning.

#### Part catalogue:

Part catalogues can be defined for each component in the product structure. It is possible to create, for example, a catalogue for brakes. In data recording these catalogues can be accessed. Selecting a part from a part catalogue executing a measure will automatically set the defined values of the selected part. Parts from the catalogue can be used in series and work steps as well. The part catalogues can be extended to fit the customers´ needs if necessary.

> If COMAP is used to comply with VPI-EMG 08, the complete structure administration will be preconfigured by Sternico.

### Component traceability

According to EWT (European Wheelset Traceability) an ECM has to provide for the traceability of wheelsets. The software guaran-

tees a gapless traceability of all wheelsets as well as of all other components. The history of install/removal procedures that can be accessed is bidirectional.

For a wheelset COMAP shows the vehicles it was installed in and for a wagon COMAP shows all wheelset that were installed in it. This also applies to all other components. The components which are to be traced can be defined freely by the user. This allows the user to trace for instance bogies and distributers with their own history as well.

## View management

Views are tabular lists of products, measures and errors/defects which can be administrated in COMAP. If wheelsets are managed in COMAP, the standard view shows all existing wheelsets that correspond with search and filter fields. This way, a wheelset with a specific wheelset number can be searched or a list can be requested which includes only wheelsets that are currently installed in a waggon.

The software uses standard views and allows the user to create further individual views and to use them for analyses. It is possible to define company-wide views which are available to all users or to set up individual views for single users. Within the definition of a view the user can access the complete technical data, master data as well as orders in any combination.

Te following parameters can be accessed for each view:

- Permanent filters which limit the listed products, measures and errors/defects
- Search fields which are offered to the user using the view
- Information (columns) of the tabular list

For example, a view could be configured that lists all waggons that should be finished within the next five days. Alternatively, a view could be defined to search wheelsets of a certain type and customer. The list of wheelsets found could then show columns for the wheelset number, wheelset type, customer and the storage location.

## Master data management

COMAP includes master data for products such as the product status or a leaser. If additional master data is needed, those data fields can be defined. The user can create new data fields, for example, based on dates or selection lists as well as system tables like user accounts or departments and suppliers. All these fields can be accessed in the View Management.

It is possible to define in which product types these fields can be accessed and which departments have the rights to read or write these fields.

The following example explains the functionality: The field “Priority“ is created based on a selection list for the product type „Waggon“. The selection list has the entries “high“, “medium“ and “low“. Then the field will be assigned to the department “Production planning“ with rights to read and write in the field while the department “Production“ only gets rights to read. Now the department “Production planning“ can access the field for every waggon to set a priority but the department “Production“ can only read the priority.

The Master Data Management provides the opportunity to adapt COMAP to proper needs. Furthermore, it is possible to create the product-dashboard individually with different master data, contract data and technical data to have all necessary information available at a glance.

## Signing of data

Technical data which has been recorded can be signed by entering a PIN. Two different goals can be achieved by this. On the one hand data is protected from modifications. On the other hand signing data can be used to affirm the correctness of the data entered. This way, the data recording can be separated into two process steps. In the first step the worker records data and in a second step the data gets validated by QA and signed. Especially for safety relevant parts like brakes this verification is to aim for.

## Mobile Package

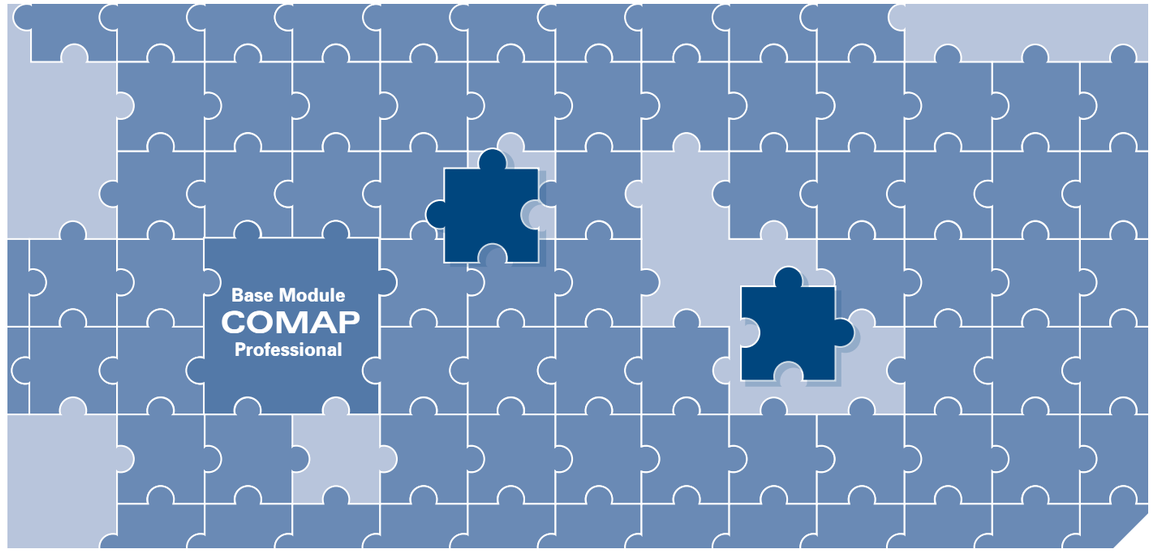
COMAP can be used by all appliances that run a Microsoft Windows desktop operating system. Therefore, mobile use of laptops or tablet computers is possible. In order to enhance the usability of mobile devices the Mobile Package includes a special touch user interface has been developed for finger-tip operation. It is possible to switch between the standard and the touch user interface for each device as needed.






# COMAP Professional

## Components: Properties and functions




## Maintenance planning

This component allows setting up complex maintenance plans with a simple to use graphical editor. The plans may contain cyclic elements as well as coupled elements and are fully versioned including an approval process to comply with ECM requirements. The software automatically creates future measures based on the maintenance plans. Plan maintenance stays based on time and operational parameters, such as mileage or motor hours. In case of planning based on operational parameters, COMAP forecasts the date of the next limit. To make use of operational parameters the component Operating data management must be licensed.

COMAP automatically assigns maintenance plans to assets using conditions. E.g. COMAP could assign maintenance plans based on the asset series, plan A is assigned to series 4711 and plan B is assigned to series 0815. Another way to set up a condition is the use of lessors. This way it is possible to assign a different maintenance plan to an asset if the lessor transports special products, for instance in case of tank waggons which thus need a special treatment of gaskets. For a specific vehicle it is also possible to define that not the current version of a plan is valid for this vehicle, but a previous one.

It is also possible to set up component-based maintenance plans. Thus, for instance, it is possible to use time-based intervals for tank inspections and mileage-based parameters for wheelsets. According to the maintenance plans, COMAP plans and creates all measures including the correct maintenance levels automatically.

Control contractual lead-times and budgets combined with maintenance companies and maintenance levels and work to execute. Find overlong lead-times and interference factors easily using tabular and graphical reports and take appropriate actions.

## Work step catalogue management

This component allows the creation and administration of work step catalogues. Aside from work step code and name, instructions as well as drawings or other attachments can be specified for each work step. It is also possible to define which technical data has to be recorded when executing a work step. For the combination with material the component Material and Spare Parts Management is needed.

Set up work steps can be used to create maintenance levels and work sequences for repairs. For each vehicle and vehicle configuration individual maintenance levels can be created based on the linkage between work steps, part type catalogues and product structures. Defined work steps and maintenance levels can be planned and commissioned using the Measure Management.

In case that material was combined with a work step, this material can be reserved automatically. An interface to an ERP-system like SAP can be implemented to fit individual needs. In this case the component Webservices is needed additionally.

An integrated version control permits monitoring all changes including a release process. The version control takes into account

the work step itself as well as the maintenance levels. Changes on work steps will inform the user automatically regarding effects in maintenance levels.

If Sternico delivers the software with the preconfiguration for VPI-EMG 08, all work steps defined by VERS will be available.

## Defect and risk management

The central function of this component is recording and managing defects. Different functionalities are available depending on the application area.

Defects found by a maintenance workshop or a RU/TOC can be recorded and classified.

Furthermore, it is possible to define repair procedures based on work step catalogues which can be accessed during the recording of defects. This way, the list of work steps to be executed for a maintenance procedure can be extended by those work steps necessary to rectify.

The ECM/keeper can document defects on the vehicle reported by the RU or the maintenance workshop in COMAP. COMAP enables the classification of defects for analyses and subsequent processes. In this way, the maintenance guidelines can be further developed and life cycle costs can be reduced. Claims to damages can be carried out by entering and assigning responsibilities.

## Material and spare part management

The Material and Spare Part Management separately extends the technical information of part catalogues by information about quantity/stock, minimum quantity in stock as well as information about the storage location.

Within the work step catalogue it is possible to assign material to a work step. ECM/keeper can use the Material and Spare Part Management to control the replacement parts and material to be provided in different maintenance workshops. In this case the component Positioning is needed additionally. Maintenance workshops profit especially from the linkage with the product configuration and the data recording.

## Personnel management

This component is used to plan shifts and qualifications of personnel. The shift planning in COMAP allows the administration of different shift rhythms and the assignment of personnel to shifts. Detailed shift plans can be created using week plans and a long term planning.

Qualifications and necessary trainings can be assigned to personnel and administrated. By linking qualifications to work steps COMAP ensures that only sufficiently qualified personnel can confirm the completion of work steps. COMAP monitors as well if a worker can maintain his qualification due to the times he executed a work step in a set time frame. Further functionalities of the Personnel Management are requests for overtimes and personnel relocation which are used via workflow processes with different approval-levels including the work council.

## Positioning

The component Positioning allows adding location information to products and material as well as the history preservation. Depending on the type of product and type of position a variety of processes can be represented. For example, the complete storage movements can be visualized for a stored component like a distributor valve.

## Workshop planning and control

This component allows planning workshop schedules and workshop capacities. Visualize, plan and control measures and orders including internal and contractual lead-times. Manage and control all events occurring during maintenance, which have effect on lead-times. Such an event could be missing material, which results in a state “Waiting for material X”. This state affects the actual lead-time negatively which may lead to an extension of the contractual lead-time. Communicate events digitally between ECM/keeper and workshop to inform e.g. about missing material and interrupted maintenance processes.[3]

## Project management

New build and modification projects can be administrated in the component Project Management. Products can be assigned to projects which can be scheduled using the component Measures Management.

This allows for example the modification of brake pads for a group of waggons within a project. Each measure resulting from a project is tracked and the process can be supervised. In combination with the Maintenance planning it is possible to configure the excecution of a project in such a way that it falls in time with a planned measure with a certain maintenance level.

## Contract management

This component allows managing contracts between lessor and lessee as well as management mandates. A contract contains terms and conditions such as rates or validity periods for assets (e.g. locomotives or waggons). It is possible to configure contract chains and parallel lease of assets beside the simple case of direct lease.

Management mandates control the responsibilities given by the asset owner to the asset administrator. This includes e.g. ECM duties or ordering services from workshops in the name of the asset owner. Depending on these tasks the correct documents can be created automatically directly in COMAP and sent via e-mail - for instance an order in the name of another company.

## Operating data management

The operating data management is divided into two parts. On the one hand it provides the interfaces and services, for retrieving the operating data from the assets (e.g. locomotives). The services have been developed regarding availability and scalability so that the data can be transferred reliably in case of larger fleets and numerous operating parameters. The operating parameters may include parameters like operating hours, mileage, oil temperature etc. as well as geoinformation and error messages or conditions.

On the other hand the component provides the possibilities for evaluating and processing the collected information. For example, fault conditions can be set in relation to selectable operating parameters. Histograms can be created and these can be used for the maintenance planning. Repair measures can be derived and performed from these parameters.

## Rule designer

The Rule Designer serves the quality assurance of technical data recorded or imported. Templates can be created with the designer that define how technical parameters of a product are linked together. For example, a rule could be established which defines that only a certain type of wheelsets X can be installed in bogies of type Y. If this rule gets violated while entering data or importing data, COMAP indicates the incorrect data constellation.

The user can define as many rules as needed and connect them via logical links. In addition, mathematical operations can be used to verify, for instance, tolerances: |Diameter wheel A - Diameter wheel B| < 1mm.

The configuration is being carried out using a graphical user interface which allows addressing all structure elements, attributes, selection lists and parts. Assuring the data quality when using digital data exchange plays a central role for ECM/keepers. By using digital data exchange with maintenance workshops many manual tasks will not be applied anymore, and part of the conventional quality assurance is reduced automatically. To build an efficient process that assures high quality, an automated validation of data using a proper rule based system is necessary.

Aside from existing checks for errors, maintenance workshops can assure that errors while entering data will be reported to the user instantly using the Rule Designer. This allows timely intervention in the maintenance process and corrections can be made.

## Web portal

The web portal gives possibilities to analyze data in the software and graphical plotting of data. Different data sets can be connected and configured such that the individual evaluation of data is possible. Dashboards can be created as websites to show data in a graphical manner and in form of tables. These websites can be used in the local intranet or integrated into web portals for clients. The management and clients profit from relevant live data evaluations.

## Document management

To fill in the forms and documents correctly many functions can be used for the creation of place holders. It is possible to access many data objects in COMAP like technical data, work steps, contract data, etc. These functions can be used to model very complex reports. It is also possible to make functions generally available to ensure that multiple documents have access to the same function. This way the parametrization needs less effort. With one click a report is created that always contains live data.

For every document customer-specific templates that also support multilingualism can be configured. This allows, for example, to easily create the Operating Authorization reports for client A and client B which differ only in a few data fields.

Via a classification of single customers, using the Order Management, all documents related to an order can be generated instantly in the right language at one click. Automatically, the documents generated will be linked to the products, archived with the technical structure and sent to the customer electronically via VPI-EMG 08 for freight waggons and the norm for locomotives accordingly.

Additionally, COMAP includes the standard protocols which have been published in VPI-EMG 08 like the Operating authorization or the Wheelset repair document. These can be filled with data from the COMAP database and generated into PDF files.

## Measure equipment

This component allows to administrate all measuring equipment in the maintenance workshop. For each measuring device data like measuring units and measurement range can be specified aside from master data. Attachments like photos and documents can be stored as well as departments can be assigned to each measurement equipment. In addition, the calibration intervals of equipment are supervised. All calibration processes are version controlled with the relevant data.

A measuring equipment can be assigned to an attribute in the Structure Administration. In this case the software checks if measuring units of the device and the attribute coincide. This will influence the behavior of input fields in data recording and it can be

guaranteed that a measuring equipment is specified. To assure a high data quality the user can only select among measuring equipment which is assigned to him and is calibrated at the time.

The assignment of measuring equipment to the data recorded allows printing those device numbers on protocols which the data is listed on. It is also possible to analyze data by listing, for example, all measurements of a specific measuring equipment in a specific timeframe. This way all products that have been measured by a measuring equipment can be identified.

## Webservices

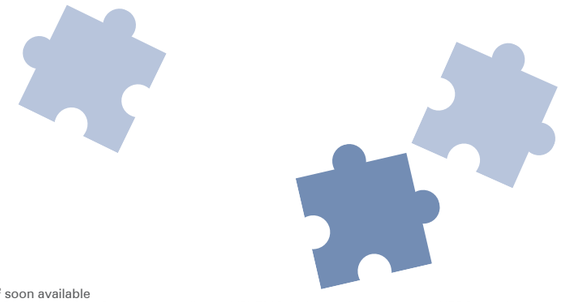
Webservices can be used to connect external systems. They can be created and configured freely via the graphic user interface. The technical data and the order in which the data has to be sent or accessed through the new connection can be defined by the user.

This way it is possible to exchange data with other systems, such as ERP systems or manufacturing machines which leads to a high software integrity and thus, to an ideal dataflow within the company. For example, an ERP system could access the technical data which is needed for order processing automatically from COMAP. If desired, a complete configuration for the connection to "RSRD[2]" can also be delivered by which the waggon data can be transmitted. A connection to VTG's Hermes portal can also be provided for direct transmission of maintenance data according to VPI-EMG 08[2]. This eliminates the need to log in and upload data manually via the website of the Hermes portal.

## Plugins

The component Plugins allows COMAP to integrate specially created function blocks, so called Plugins. A Plugin includes a specific user interface as well as an interface to machines and can be placed directly into a work profile. This way, data from machinery can be accessed directly from data recording. This procedure is especially suited for machinery without its own user interface like torque wrenches.

Additionally, a remote operation of a machine can be realized from within a work profile. For example, a coining machine can be connected to label wheelset marks. The worker can transfer all relevant data to the machine and execute the labelling process. A Plugin has to be created for its specific usage by Sternico.



[2] soon available
[3] Digital transfer of events according to VPI-EMG 08 is possible as soon as VERS standardizes and officially publishes these events.





# Sternico

## About us


With our products and services, we, Sternico, are a reliable partner for companies in digital change and enable them to design efficient and secure business processes. We create the ideal space for our employees to develop the innovative and high quality solutions needed for this.

**To fulfill our mission and realize our visions the "Sternico CEES" determines our actions:**

### COLLABOATIVE

Every employee contributes independently to the common success of Sternico. This enables us to create individual, innovative and sustainable solutions together with our customers. The trustful handling of their sensitive information as well as the legally compliant processing of personal data is of great importance to us.

### ENTHUESIASTIC

Our enthusiasm for innovation and the targeted use of the latest technologies is the basis of our passion. Flexibility, agility and continuous improvement characterize our culture. Driven by the desire to find appropriate and efficient solutions, we develop high-quality software and services.

### ENTREPRENEURIAL

Our actions are characterized by entrepreneurial thinking and adherence to our compliance. In addition, all employees make their individual contribution to the implementation and further development of the integrated management system. Together we create added value for our customers, which not only means progress for them, but also gives them a decisive advantage.

### SOCIAL

Sternico is the community formed by its employees. Through their individuality and collegiality they shape our familiar and common working atmosphere. To create the right space for their abilities we support them with flexible working conditions and individual advancement.

# The full version of COMAP is used by:

ALSTOM

BBL BAHNBAU LÜNEBURG

ATELIERS DE JOIGNY
Member of the VTG Group

bbw BAHNBAU WELS

CFL cargo

CT-X Rail Service AG

FWN FWB FEW

Holcim

JOSEF MEYER

LAPPWALDBAHN

LINEAS

On Rail

REVA SA SIMERIA

SIEMENS

STAG

SweMaint
MAINTAINING YOUR RAILWAY LOGISTICS

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VPS VERKEHRSBETRIEBE PEINE-SALZGITTER
Ein Unternehmen der Salzgitter Gruppe

VPI EUROPEAN RAIL SERVICE GMBH

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