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robotron*e⚡sales

Energy Data Management

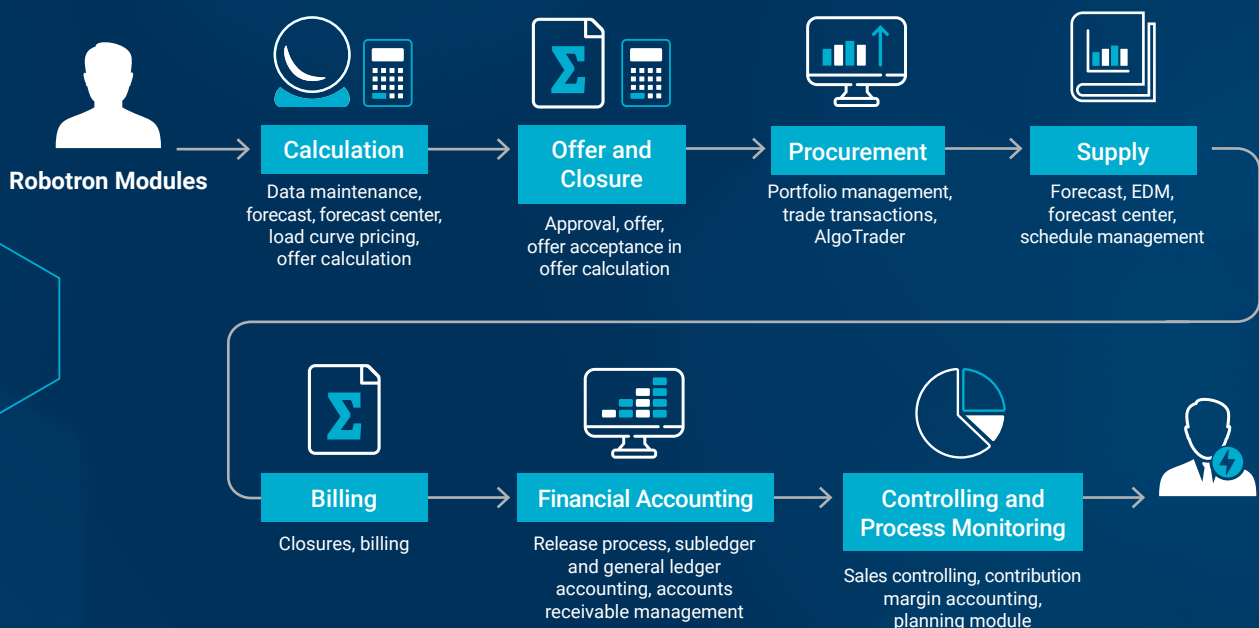## FOR SALES AND PROCUREMENT

ENERGY DATA MANAGEMENT

For Sales and Procurement

One Hundred Percent Sales Power – Automated and Efficient
For the Intelligent Energy Supply of Tomorrow

Specialization in the management and evaluation of large amounts of data and **decades of experience** in the energy industry are reflected in the performance of our software solutions. With this expertise, we have developed a unique service portfolio that covers **all market role requirements** and is continuously expanded and optimized. With the energy data management system **robotron*e⭍sales**, the Robotron Energy Market Platform offers comprehensive solutions for the digitalization and optimization of relevant value creation processes for energy distributors.

All database-based and workflow-controlled modules of the sales value chain in **robotron*e⭍sales** can be **flexibly and modularly** connected. Robotron's module world provides all prerequisites for an optimal and, if desired, **integrated mapping of your entire sales and procurement processes**. We provide a large number of the functionalities of the Robotron Energy Market Platform in various forms (SaaS, PaaS, IaaS) in the Robotron Energy Cloud.

Complete functional coverage of processes with *robotron*e⭍sales*

Robotron Modules

Calculation
Data maintenance, forecast, forecast center, load curve pricing, offer calculation

Offer and Closure
Approval, offer, offer acceptance in offer calculation

Procurement
Portfolio management, trade transactions, AlgoTrader

Supply
Forecast, EDM, forecast center, schedule management

Billing
Closures, billing

Financial Accounting
Release process, subledger and general ledger accounting, accounts receivable management

Controlling and Process Monitoring
Sales controlling, contribution margin accounting, planning module

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Flexible Modules
For Holistic Value Creation and Smart Supply

Forecast

Robotron's forecasting tools provide you with the perfect combination of different methods for fast high-quality and mass-capable short-, medium- and long-term forecasts of load curves. The tools include **intelligent, highly automated forecast management** and **central parameterization and configuration options.**

Offer Calculation

With the help of Robotron's offer calculation, you create individual and competitive offers of any commodity for your customers and prospective customers (RLM, SLP) on the basis **of flexible procurement scenarios** and **freely configurable contribution margin schemes**. If required, these can be combined.

Billing

The Robotron EDM/MDM systems process various transaction data, on the basis of which billing can take place. The cross-commodity **billing module** in **robotron*e∿sales** handles periodic (e. g. monthly, annually) or one-time billing of various billing matters. **robotron*Finanzen** is a powerful, reliable and innovative **financial accounting software** for energy suppliers.

Balancing

The various Robotron modules for balancing (balancing group and contract management, market communication) cover all requirements of the different market processes in a **(fully) automated, modular** and **fully integrated** way inside and outside Germany for the commodities electricity and gas.

Procurement Risk Management

Integrated into the company-wide risk management, the comprehensive functionalities and monitoring mechanisms of Robotron's procurement risk management solution allow for a **quick overview and audit-proof reduction of risk in trading transactions**.

Portfolio Management

With the Robotron solution, you **optimize and monitor** the **demand coverage of one or multiple sales organizations** (sales, generation, and trading portfolio management). A common data model ensures **interface-free cooperation** of the sales modules, portfolio and schedule management.

Contract Management

With the Robotron module for contract management, energy supply companies can offer their customers the possibility to **manage all contracts online**. In this way, customers can view the current coverage levels of their contracts as well as perform active contract management.

Sales Controlling

One module – all key figures at a glance. The **central time series management system** provides the fundamental data basis for modern sales controlling in supply companies. The use of differentiated forecasting techniques for individual consumption as well as the collection of specific procurement, sales and administration costs enable the **contribution margin-oriented** calculation of individual contract closures and the forecast of the contribution margins achieved in the process.

Your Advantages

- ✔ **Complete meter-to-cash process** from a single source
- ✔ **Modular system architecture** for maximum flexibility
- ✔ **Integration capability** into the entire Robotron Energy Market Platform
- ✔ **High data availability** without redundancies
- ✔ High degree of automation
- ✔ **Database-driven** and **workflow-controlled modular world**

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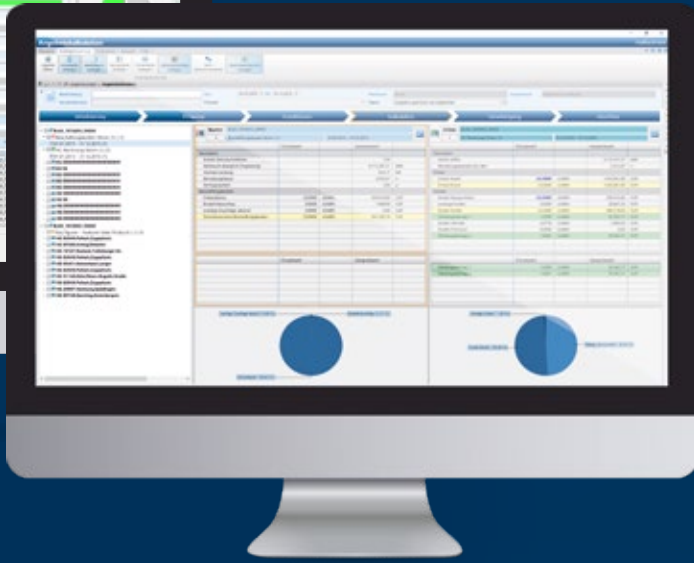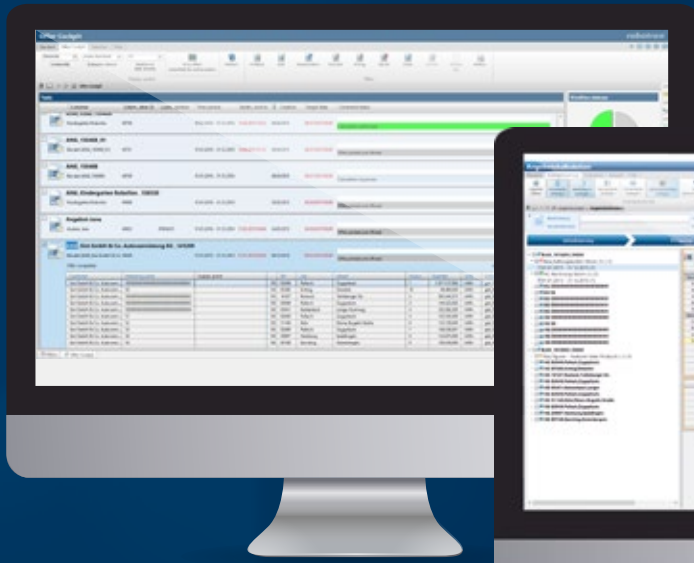
Offer Calculation: With the Offer Cockpit you have all offers with status and components optimally in view.
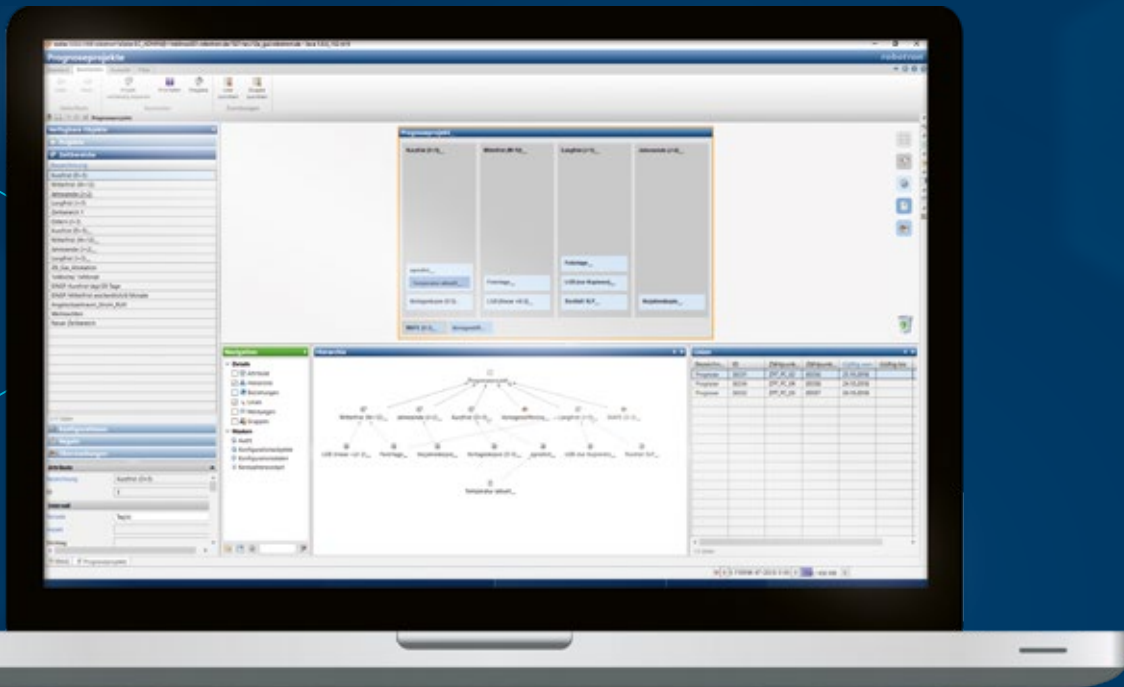
Forecasting: The intuitive interface supports you in quickly creating forecast models based on various mathematical forecasting methods.

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CALCULATION

Minimizing Sales Risks through Forward Planning

Offer Calculation

With the help of offer calculation, sales organizations create offers of any commodity for their customers and prospective customers (RLM, SLP) based on flexible procurement scenarios and freely configurable contribution margin schemes. If required, these can be structured into freely configurable bundles and tranches.

Highlights:

- ✓ Preparation of contribution margin-oriented offers for business customers, also with complex purchase structures

- ✓ Parallel calculation of entire segments of commercial customers

- ✓ Complete, highly automated support of the entire offer process, including all upstream and downstream tasks

- ✓ Various calculation forms such as individual, chain and bundle calculations for prospective and existing customers as well as calculation of multi-year contracts and framework agreements

- ✓ Extensive product generator allows calculation of standard, individual and additional products based on various price sources as well as future, forecasted consumptions and prices

- ✓ Use of different pricing forms possible, such as price time series, formula prices, price sheet prices, tranching and aggregation as a calculation basis

After closure of the calculation, the offer variants can be printed with an integrated document generator. This is done on the basis of self-created templates either in Microsoft Word, Excel or PDF format. A distinction can be made between product-specific documents, offer documents and supply contract documents. The offer calculation is an integral part of *robotron*e⚡*sales* but can also be called up parameterized by a CRM system.

Forecast

The forecasting tool of the offer calculation implements the requirements for a fast, high-quality and, above all, mass-capable forecast. The goal of the integrated forecast center is the fast, efficient and automated processing of different forecasting methods for multiple metering points. In addition, different horizons can be forecasted metering point-exactly (short-, medium- and long-term forecasts). The user is supported throughout the entire process in terms of key figures, visually and with detailed information.

Highlights:

- ✓ Intelligent, highly automatable forecasting modules, as well as their efficient use

- ✓ Central parameterization and configuration options for all objects

- ✓ Analysis mode for monitoring and follow-up

- ✓ Optional connection of the programming language R for the use of own R scripts for certain forecasts

Tools:

- ✓ Forecast center with prioritized execution of all common forecasting methods and time periods for any time period, also with prioritized best picture over multiple different methods

- ✓ Load curve forecast for automated forecast with mathematical methods in the comfortable interface of *robotron*e⚡*predict* (stand-alone) or integrated in *robotron*e⚡*sales*

- ✓ Load curve generator for all time series-based methods with scaling options for updating load curves and rolling out profiles

RLM: recording load curve measurement   **SLP:** standard load profile

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PROCUREMENT OPTIMIZATION

Sales and Procurement Combined

The Robotron Energy Market Platform offers energy distributors and procurers a comprehensive and integrated modular world. Flexible sales processes, efficient action and fast decisions in energy procurement are guaranteed with Robotron solutions.

Portfolio Management

The „Portfolio Management" module can be used to optimize the demand coverage of one or multiple sales organizations. For this purpose, the module offers a **freely configurable portfolio structure** with **book hierarchies of any depth** and enables the **management of multiple portfolios of different commodities**. Trade transactions, (customer) contracts, forecasts and other time series are taken into account.

Risk Management

The „Risk Management" module is based on the „Portfolio Management" module and, with its extensive functionalities, enables a quick overview of the risks of the portfolio. In this way, the module can contribute to risk minimization.

Selected Functions:

- Interface-free cooperation with other modules, such as offer calculation, forecast or schedule management
- Online position management
- Possibility of automatic bookings (rule-based)
- Hedge proposals
- Calculation of financial positions
- Free configuration of evaluations and key figures
- Comfortable visualization of traded positions and quantities
- Integration of own algorithms for calculation of key figures via R interface
- standardized interface to enmacc and Trayport
- complete solution for systemic processing of Power Purchase Agreements

Selected Functions:

- Comprehensive status concept for trade transactions with configurable four-eyes principle
- Automatic calculation of freely configurable key figures
- Limit allocation and monitoring for portfolio-, procurer- or counterpart-related key figures, e.g. open position, Value at Risk, settlement and replacement risk
- Automatic notifications in case of limit violations
- Support of rolling procurement strategies
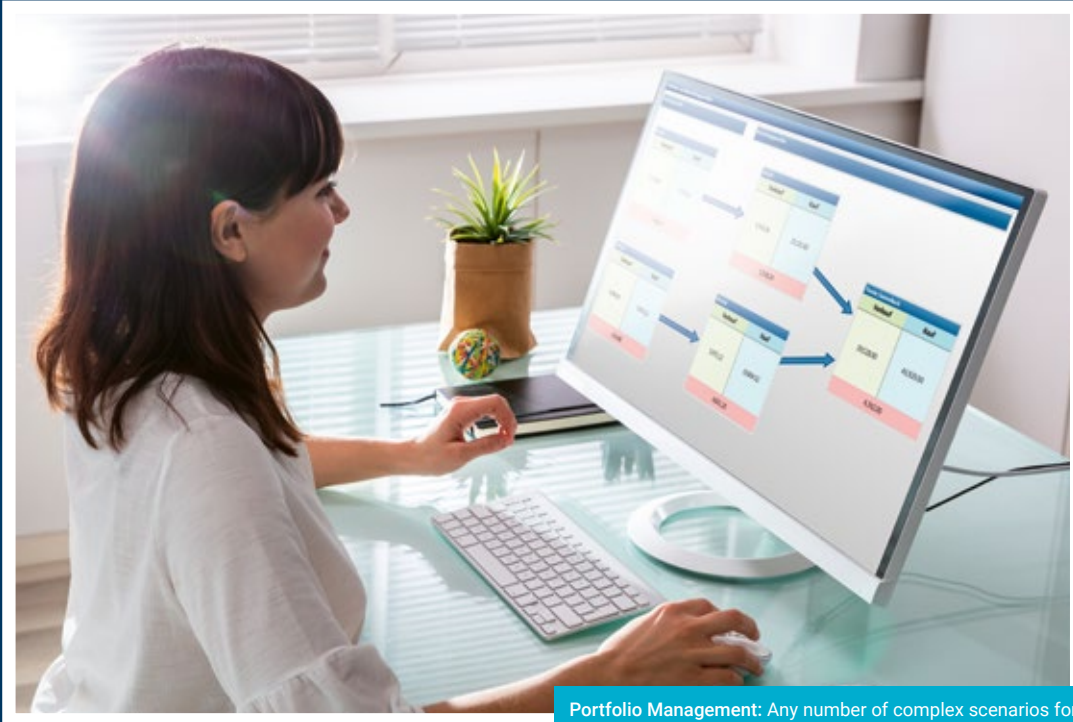- Static and dynamic price limits for planned positions

MtM:	Mark-to-Market	**PnL**:	Profit and Loss
VaR:	Value at Risk	**PaR**:	Profit at Risk

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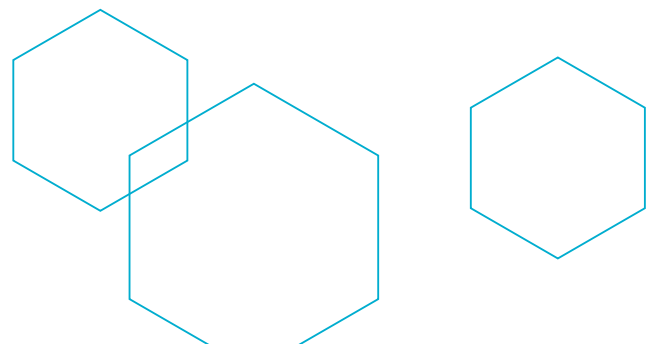
Portfolio Management: Any number of complex scenarios for closing open positions and many other evaluations can be clearly displayed in the portfolio analysis.

Schedule Cockpit: All managed balancing groups, the associated schedules and their statuses can be clearly monitored and processed in one interface.

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BALANCING

Electricity and Gas

The various modules for balancing for electricity and gas cover all requirements of the different market processes within and outside Germany. A variety of tools for aggregation/calculation, balancing group and contract management as well as market communication with the different market partners are available for this purpose.

Gas Balancing

Based on the received MSCONS messages per output point and the allocations on balancing group network operator level, a shadow balancing can be set up in *robotron*e⁄ sales* to check the balancing group settlement according to GaBi Gas of the MAM. The expectation for the import of the allocations can be generated from the own master data view or from the imported declaration lists of the network operators. Following the allocation, the BGM is conveniently supported in identifying allocation clearing cases. In the case of clearing, the bilaterally reconciled quantities are imported under specification of the clearing number and are also used for shadow balancing.

For the balancing group settlement check, both IMBNOT and TRANOT messages are imported and compared with the self-determined quantities. The calculated energy quantities can be evaluated with prices in order to verify the balancing energy, the intraday obligations, the daily RLM difference quantities, the conversion fee and also the SLP or RLM balancing allocation. The verification of excess/shortfall quantities is fully automated on the basis of the allocation lists and the balanced quantities.

The fully automated, modular and integrated balancing solution for electricity and gas is always based on the applicable regulations.

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Electricity Balancing

The balancing module for the electricity commodity offers comprehensive functionalities specially adapted to the needs of the respective market roles for the highly automated execution of the clearing processes within balancing according to MaBiS.

The roles „distribution system operator" and „balancing group manager"/"supplier" (with common/separate energy data management systems) are offered.

The Module for Suppliers and BGM Includes:

- ✔ Implementation of all applicable balancing rules

- ✔ Complete MaBiS message exchange for the market roles supplier & balancing group manager

- ✔ The clearing of the received balancing sums required for supplier and BGM on the basis of the performed shadow balancing

- ✔ Receipt of the balancing group settlement incl. request and receipt of the settlement clearing list

- ✔ Check settlement clearing list against internal results determined in shadow balancing

- ✔ Verification of excess/shortfall quantities

- ✔ Receipt and use of profile definitions, profile sets and profiles including temperature-dependent profiles and solar profiles

- ✔ Request and checking supplier clearing lists

- ✔ Administration and dispatch of assignment authorizations

BGM:	Balancing group manager	**MaBiS**:	Market rules for the execution of balancing group settlement electricity
TSO:	Transmission system operator		
MAM:	Market area manager	**GaBi Gas**:	Basic model for balancing services & balancing rules in the gas sector
iMS:	Smart metering systems		

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BILLING

Cross-Commodity and Flexible

robotron*e∕sales supports you in all installations with basic billing work regardless of the invoicing system used in financial accounting. As a central data hub, this solution is in intensive communication with the existing systems. The technology and methods of integration follow the specifications of the customer's IT strategy. Robotron's technical experts have a broad knowledge in connecting various third-party systems (billing, CRM, trading systems, etc.).

With the billing module integrated in EDM, you can perform both periodic and one-time billing and generate delivery notes. This is done on the basis of measured load curves, standard load profiles, forecasts or calculated consumption quantities.

Highlights:

- Modular configurable billing logic

- Creation of invoices in PDF/Word/Excel format, electronic invoices in EDIFACT-INVOIC format or ZUGFeRD format

- Automatic transfer of accounting records to a financial accounting system in CSV/XML/IDOC/ DATEV or Webservice exports

- Usable for all media and billing issues

- Integrated document and status management

- Optional import of price time series (e.g. EEX exchange prices) or use of the electronic price sheets

- Plausibility check of the values to be settled, as well as all instruments relevant for communication with the market and the respective third-party systems to be connected
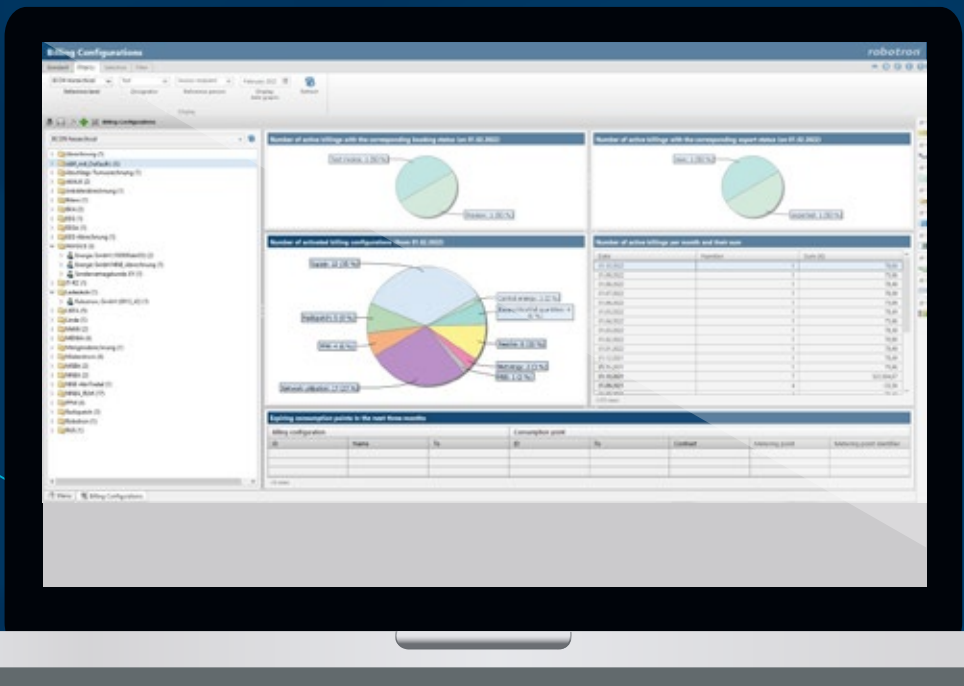
INCOMING INVOICE VERIFICATION

Optimization of Customer-Specific Process Chains

The incoming invoice verification module provides you with a complete, automatable verification process. This includes the incoming invoice import, check routines, e.g. according to official decision tree diagram rules and also the creation of shadow documents and their comparison with the incoming invoice. The system is designed to process mass data. The incoming invoice check also has integrated document and status management, so that the check results can be stored seamlessly and transparently.

The proven billing module is used for shadow document creation. You benefit from the same advantages as with the billing modules, including CSV/XML/IDOC/DATEV export as a posting data record to financial accounting via a configurable standard interface.

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Services/
white labeling

Network
utilization &
other services

Supply
(RLM/SLP)/
dyn. tariffs

Feed-in/
Redispatch 2.0
(EEG, KWKG)

Balancing
groups/
Control energy

**Billing/
incoming
invoice
verification**

Trade
transactions

Excess/shortfall
quantities

Meter location
operation

Metering

E-mobility/
Charging
process

EDM Invoicing: Billing and Incoming
Invoice Verification in EDM

Intuitive: The billing configuration allows
easy editing of the billing parameters.

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PLANNING AND CONTROLLING

Fast and Transparent

An essential component of the Robotron Energy Market Platform is the Sales Controlling module for supply companies. With this solution, you have all key figures at a glance.
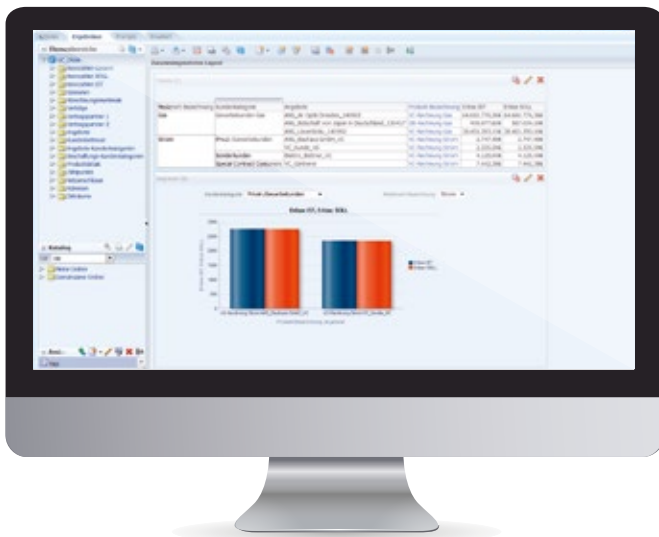
Sales Controlling

The central time series management system provides the fundamental data basis for modern sales controlling in supply companies. The use of differentiated

forecasting techniques for individual consumption as well as the collection of specific procurement, sales and administration costs enable the contribution margin-oriented calculation of individual contract closures and the forecast of the contribution margins achieved in the process.

For all relevant items of the contribution margin scheme, including all revenue components, target and actual data are compared in an ex-ante and ex-post analysis. This also applies to the analysis of customer groups, products, divisions or the entire company.

The company's contract portfolio is examined in contract controlling to determine the performance of the sales organization. The number, volume and revenue of closures are compared with the sales targets. This analysis is supplemented by the offer values weighted with closure probabilities. These analyses can be output with the integrated standard report tools and made available to management with special BI evaluations.

DWH: Data Warehouse   **BI**: Business Intelligence

Sales Balancing and Portfolio Reconciliation with Procurement

The free portfolio formation with sum load curves via consumption and forecasts enables special views of the sales potential. At the same time, evaluations of customer advisors, industries, products, sales segments and balancing groups with target/actual comparisons serve to make the success factors of sales transparent and to fulfill the market role.

The collaboration between sales and procurement can be fully mapped with *robotron*e⁄sales*.

For example, sales can create long-term demand forecasts, weight them with closure and inventory probabilities, incorporate short-term updates, and pass them on to procurement.

As a return, they receive price time series for offer calculation based on the current procurement situation. Our consultants will work with you to optimize the use of the existing modules in *robotron*e⁄sales*.

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MOBILE OVERVIEW

Your Energy Data on the Web

With the modularly developed *robotron*Webportal* , you can provide energy data from *robotron*e⚊count*, *robotron*e⚊sales* or *robotron*e⚊collect* online for your private and business customers.
The *robotron*Webportal* is flexibly configurable for the corresponding user group, regardless of which market role you operate in:

- ✔ Optimal mapping of EDM processes on the Web for different target groups, including smart metering, energy trading, branch management and other self-service offers

- ✔ Can be integrated into existing Web sites, operated as a stand-alone solution in your data center or as SaaS in the Robotron Energy Cloud

With the Web-based Robotron Management Cockpit, energy distributors keep an overview of the key business figures from *robotron*e⚊sales*, *robotron*e⚊count* or third-party systems and create individual evaluations in no time at all.

robotron*Webportal: From load curve analysis to EDM functionalities – a wide range of application options on all end devices.

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ONE CORE – MANY FUNCTIONS

Integrated Core System

Robotron's Energy Data Management systems already offer a wide range of process-supporting functions in their core functionality.

Basic Functions

In addition to the multi-branch capability, the numerous separate modules of the EDM core (master and transaction data management, automatic job processing, calculations, reporting, etc.) form the basis for the high-performance storage and processing of master and transaction data. The high-performance processing of transaction data has already been impressively demonstrated in multiple mass data tests as well as in many installations in productive use at customers of all sizes. Cross-system process automation and control, free grouping options for EDM content, the mapping of numerous other system attributes and a Europe-wide public holiday calendar are also part of the core modules.

Market Communication

Communication automation as part of the basic EDM system reduces the daily workload involved in exchanging data with other market participants. Import and export activities are organized by networking the company-wide communication platforms. The import of various network fee databases for electricity and gas, of EEX prices, weather data, etc. is also carried out via communication automation. Compliance with the latest security and signature regulations applies to all use cases. Likewise, the timely implementation of all market regulations and format requirements for switching processes of all media, and new market regulations, such as MaKo 2022, is part of our portfolio.

Visualization Tools

Individual load curves, group sums, control energy time series, Z-factors, temperatures, pressure ratios, price time series, solar irradiation – i. e. time series of any kind – can be conveniently visualized and analyzed with various tools. Thus, it is possible to determine key figures such as moving average, cumulative line, duration curve, forecast quality and many more already in the graph.

Many Calculation Options

The free compilation of mathematical and statistical calculations with time series is supported system-wide by an extensive formula editor. The assignment to calculation jobs enables an automated execution, which is logically linked and result-controlled. The calculations are executed depending on the data quality of the incoming time series with regard to status and/or plausibility parameters.

Individual Evaluations

In order to keep an eye on all accruing figures and to be able to efficiently process results of calculations and analyses, the system offers numerous evaluation options. In addition to predefined queries and standard reports, users can compile their own evaluations without any SQL knowledge. The „Excel Reports" module offers a wide range of functions for automatically filling and dispatching reports of any complexity in Excel format. This eliminates the need to search for raw data in the system and copy it manually into Microsoft Excel. All reporting processes can be automated on a job-controlled basis.

Flexible Administration

The system has a comprehensive range of tools for the administration of individual or group user rights, archiving functions, logging, monitoring options, tenants, time- and event-controlled jobs (also via workflow) and much more. All jobs can be set up in a central administration interface according to a variety of criteria, processed fully automatically and checked.

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OUR SERVICES

Your Partner from Planning to Operation

✔ **Cloud Solutions:**
Robotron is your innovative service provider for software solutions from the **Robotron Energy Cloud** (SaaS, BPO) and offers modular services for optimal business processes (IaaS, PaaS, BPaaS).

✔ **Projects and Customer Support:**
Benefit from the use of selected modules of the Robotron Energy Market Platform and the extensive experience of our experts. With our flexible and standardized products, we achieve short project runtimes and rapid productive use of your systems.

✔ **Integration:**
The products of the Robotron Energy Market Platform are mostly integrated in a heterogeneous system world as a central data hub. Users of our software can therefore draw on a broad spectrum of realized interfaces and methods as well as extensive project experience.

✔ **Training:**
The **Robotron Training Center** offers a wide range of courses on the Robotron Energy Market Platform.

The course participants are taught knowledge and skills for the efficient use of Robotron products, according to their respective tasks.

✔ **Services and Support:**
As a product manufacturer and operator, we offer you comprehensive support for all aspects of Robotron products. We provide support in planning, setting up and operating harmonizing infrastructures. Sophisticated service-level agreements for operation and service of the products ensure the continuous performance of the systems around the clock. Certified administrators and consultants reliably facilitate your daily operation of the applications with highly specialized services.

✔ **Robotron EDM Appliance:**
With the Robotron EDM Appliance (REA), we provide you with a fully preconfigured, optimized and highly available complete system. The software you require individually from the wide range of the Robotron Energy Market Platform is combined with the necessary hardware to suit your needs.

Stable
Comfortable
Flexible
Specialized

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