



M+F | Systems

COTAS: TRANSPARENCY IN THE TANK FARM

The software solution for greater flexibility



SYSTEM OVERVIEW

The complete solution for product transfer

The Terminal Automation System **COTAS** is the complete solution for automating small, medium and large tank terminals. It has accumulated hundreds of years of trouble free reliable operation all across Europe, thus offering unrivalled user friendliness and integrity through the Windows graphical user interface.

The PC-based **COTAS** loading computer system coordinates all system modules in the tank farm, from product reception and inventory control to product delivery. It is connected with all the instrumentation in the field and controls the loading processes.

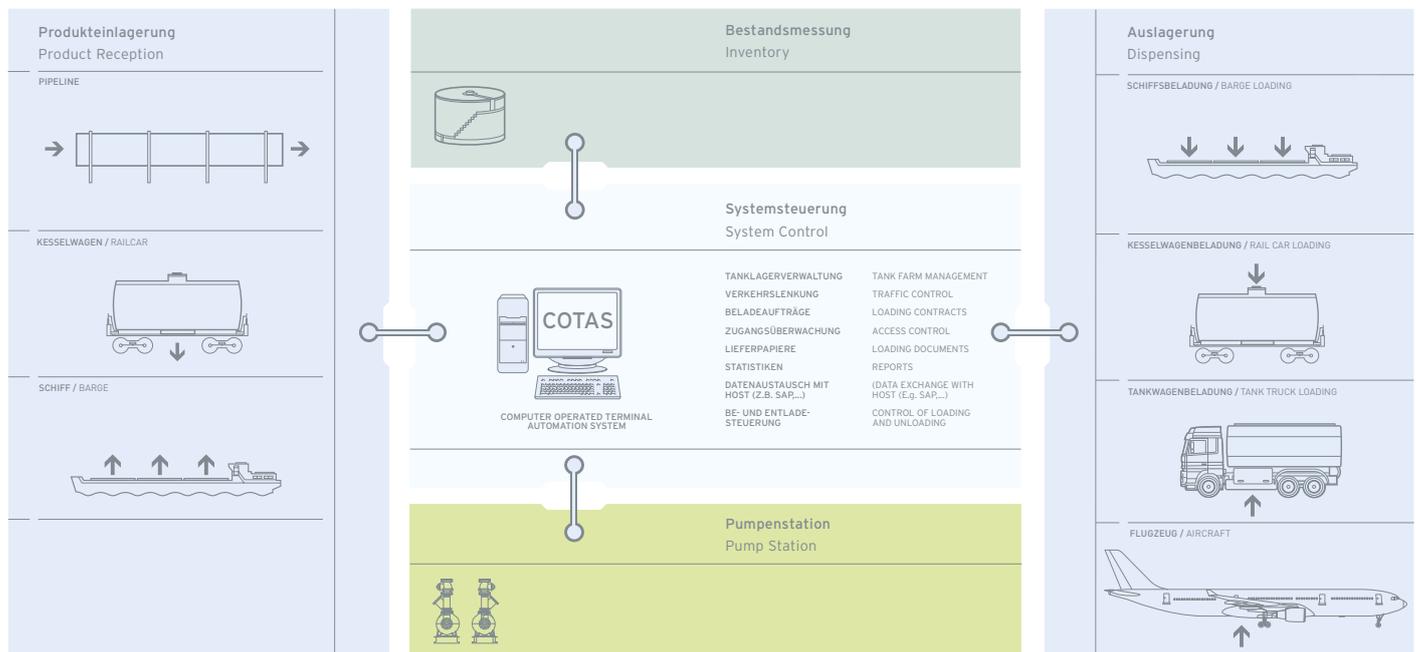
To standardize the communication between the different systems (PLC, Flow Computer, Level gauges etc.) **COTAS** uses OPC-technology for the trouble-free interconnection of these modules.

COTAS communicates both with Host systems like SAP as with 3rd parties via internet. It looks back on many years of experience with SAP communication.

It fully integrates product reception from pipeline, railcar or barges with storage management and product delivery. It communicates with ID-Systems and it can include a video documentation database. Therefore, it offers maximum security and safety during operation times.

COTAS loading computer systems are scalable and can be used in both small and very large tank farms.

COTAS terminal automation systems are in use on an international scale and can be operated in many languages at the click of a button. Due to their client-server architecture, they are easily accessible and adaptable to changes in the installation or new IT-requirements.



TERMINAL DESIGN

Virtual handling of any application

With just one system, you can substantially improve the productivity, safety and efficiency of bulk oil handling in your terminal. **COTAS** controls and automates the entire process of product receipt, inventory control and truck- / ship- or railcar loading.

No matter, if the receipt or loading of product is handled by railcars, pipeline or barges; no matter which level gauging system is already in use: **COTAS** will handle virtually any application.

The system not only deals with the loading process itself, but also covers administrative tasks such as daily receipts, monthly accounts and product management.

The good news for you: a substantial streamlining and acceleration of the loading procedure, enhanced data security, safety of operational procedures plus sinking of costs. Your personnel requirements can be drastically reduced - even in the case of partial automation.

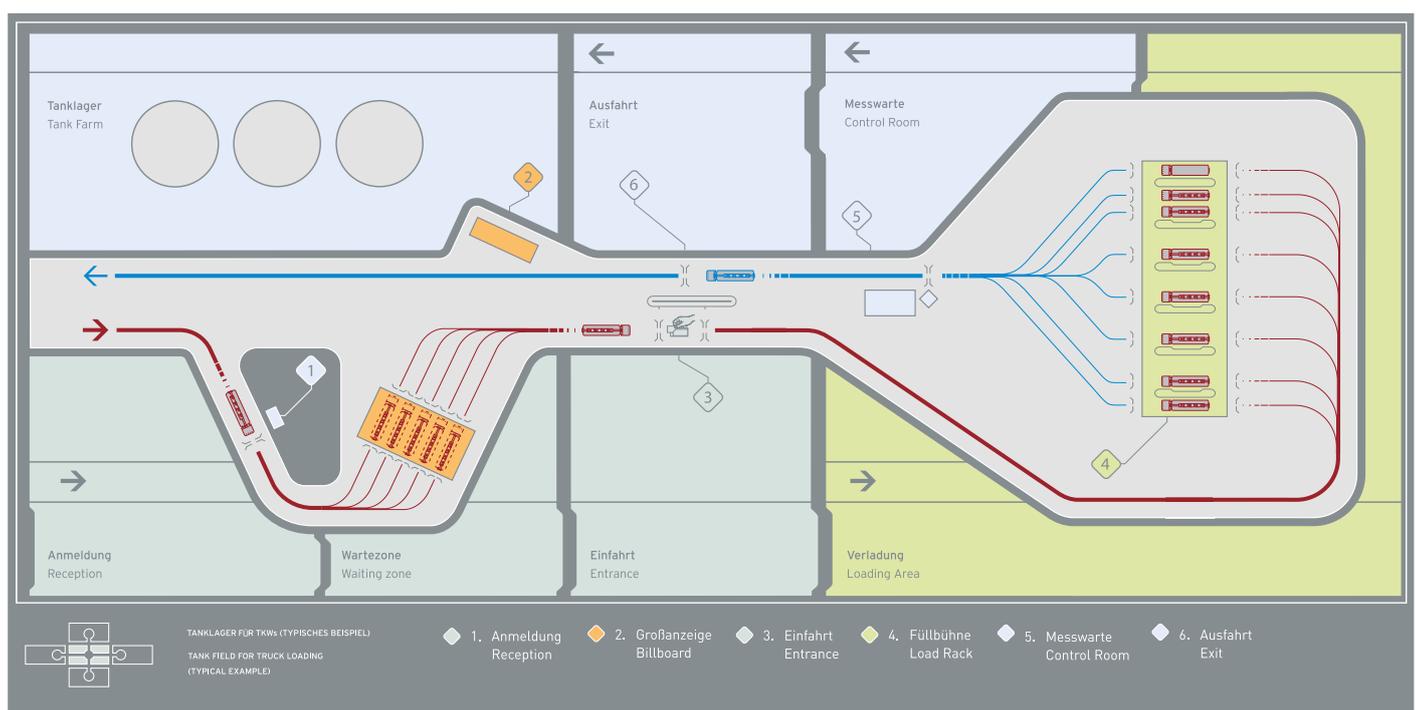
The modular structure of the **COTAS** system means that it is both highly flexible and adaptable: It can be set up from individual components to match your current and future requirements and the size of your terminal.

This means that terminal automation can be carried out one step at a time and extended when required. The tailor-made system consists of standard components which results in an excellent cost/benefit ratio.

And because it is an open system, it is eminently suitable to meet all future developments and demands. The technical level and workmanship of **COTAS** components are characterised by their extremely high level of quality.

→ **Integrated solution:** a comprehensive overall understanding of all automation steps thanks to M+F flow computer technology

→ **Short implementation times:** as an industry-specific software solution with rapid adjustability to suit customer requirements





M+F | Systems

PROGRAM FUNCTIONS

All features at a glance

→ System Configuration

- Log in
- Define user
- Storage data
- Product groups
- Raw products
- Set up tanks
- Tank compound
- Tank surveillance
- Product definition/final products
- Set up meters
- Product text
- Tax type

→ Truck Management

- Customers/addresses
- ID-cards
- Trucks
- Barges
- Rail cars

→ Configuration of loading orders

- Contingents
- Loading orders

→ Inventory/Accounting

- Product movement between tanks
- Product movement with/without measurement
- Change of product dedication
- Product dedication measured/unmeasured
- Change of accounting
- Additive adjustment
- Inventory difference
- Inventory difference measured/unmeasured
- Depreciation of products
- Dehydration
- Product changes

→ Active loadings

- Document data
- Missing amounts
- Manual loading
- Generate manual loading order
- Assign manual loading order
- Change density
- Change tanks
- Change raw products
- Preselections
- Block meters
- Abort selection
- Product reception
- Product reception manually/measured

→ Overview/Statistics

- Journals
- Inventory
- Single inventories
- Measurements

→ Reports

- Change of density
- Product movement list
- Truck loadings
- Meter reports
- Customs declarations

→ Utilities

- System Support
- Log out
- Languages
- Printers

→ Archives

- Archiving
- Journals
- Delivery notes

PROGRAM STRUCTURE

Suitable for all specific needs

MODULARITY

The program structure of **COTAS** is modular. All function modules are individually selectable and will be configured upon the customer's individual requirements.

Alongside with future changes in the terminal's functions, it is possible to include additional functions in **COTAS** at any time.

Every **COTAS** installation is tailor made to the extent that only the required system functions are included. This avoids irritation for the operative staff and simplifies both training and operation efforts.

RELIABILITY

COTAS installations are in use on an international scale in over 70 installations in more than 13 European countries. They have proved their ruggedness in hundreds of operation years with many oil companies.

COTAS gets continuously developed further in order to increase its number of functions and its performance.

FLEXIBILITY

All development tools of **COTAS** are industry standard. All interfaces with field instruments and PLCs are based on the latest OPC-technology. This means that all field instruments are easily interchangeable with no changes in the **COTAS** OPC interface at all.

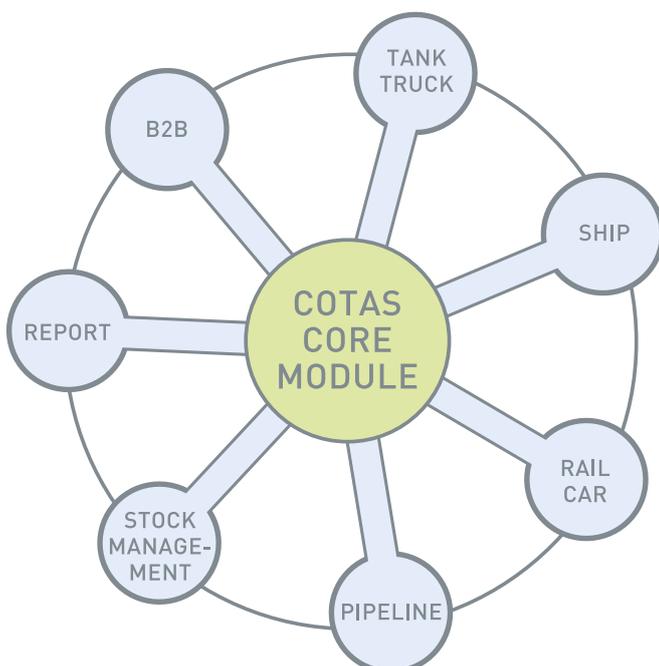
The SAP-interface is field proven in hundreds of operation years.

SECURITY

There are configurable levels of access authorisation. So, it is possible to assign all kinds of activities to certain levels of authorisation via password access.

There is a full coverage of identification of all vehicles in the tankfarm. **COTAS** also offers video database documentation of all defined transactions in the tankfarm, thus ensuring maximum security and retrackability of past events in the tankfarm or terminal.

- **Modularity:** a broad selection of **COTAS** modules to satisfy varying requirements and configurable to suit the specific needs of the customer
- **Database independent:** open interfaces
- **EMCS integration:** fully automated integration in the European EMCS system for the movement of excise goods under duty suspension





M+F | Systems

OPC-TECHNOLOGY: MAXIMUM FLEXIBILITY

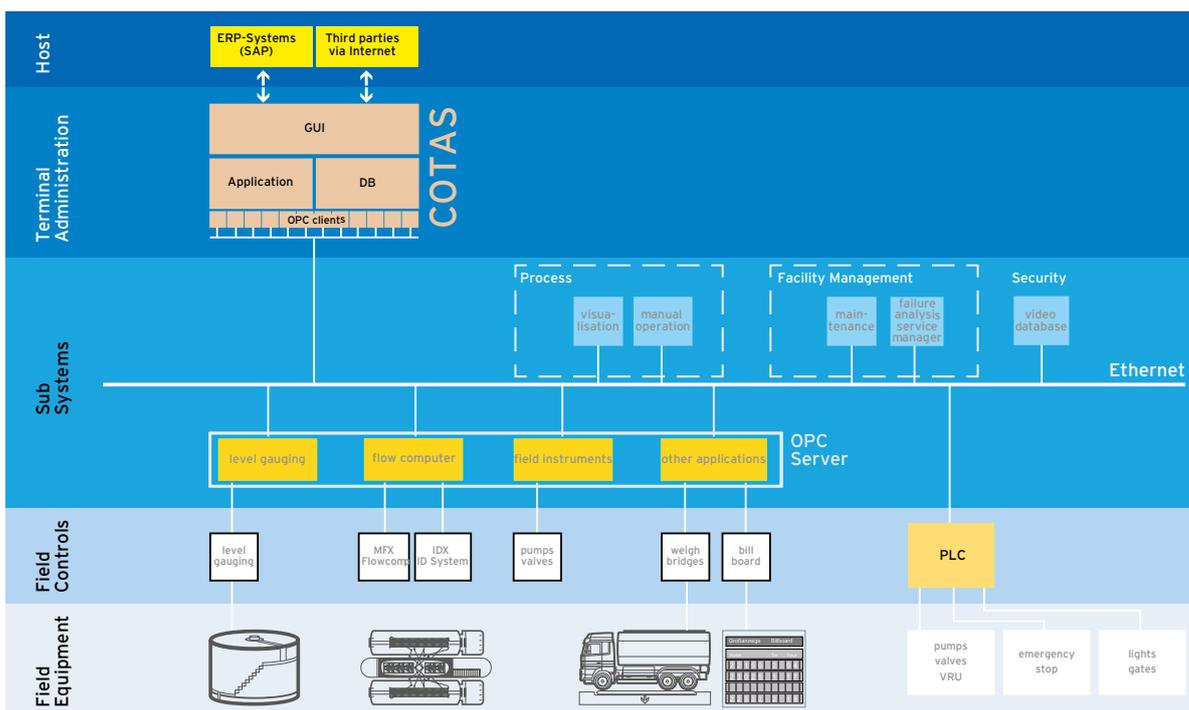
Combination of any pieces of hard- and software

OPC makes it possible to combine any pieces of hard- and software in a process control environment without using special drivers.

COTAS acts as an OPC-client in a network that connects all field instruments like flow computers, level gauges and ID-card readers to an OPC Server. This enables **COTAS** to communicate with any OPC-compatible device without any individual interfacing.

OPC (OLE for Process Control) is a widely used standard technology for communication with industrial field instruments. It is an important extension of the field bus concept. It standardises the communication to an extent that any amount of OPC-servers and clients can easily cooperate.

- **Plug an Play:** capability in process control environments
- **Independence** of any manufacturers
- **Exchangeability** of any compatible components
- **Easy connection** of software systems for visualisation, measurement systems, maintenance tools
- **On-Line** data logging



EMCS: EUROPEAN BUSINESS WORKFLOW

Announcement and handling of transportation under tax exemption

Mandatory within the European Union since 01.04.2010 (Release 1.0) respective 01.09.2014 (Release 2.1) for all good transports between member states or inside the same country under tax exemption. EMCS is based on a in-time announcement of outstanding

transports prior to the initiation of the transport. Transports are only allowed to be released when the EMCS confirmation message has been successfully received from the local customs IT system and a unique ARC (Administrative Reference Code) has been assigned.

EMCS SERVICE PROVIDER

M+F acts as a certified service provider for the European EMCS system covering the registered transport of goods under tax exemption. Thereby we are offering the full range of EMCS related business processes for opening or closing product movements according to the current release EMCS 2.1.

The communication with the customs is realized through our own clearing center allowing the customer to connect to the system through a user friendly management application protected by a named log in with configurable user rights

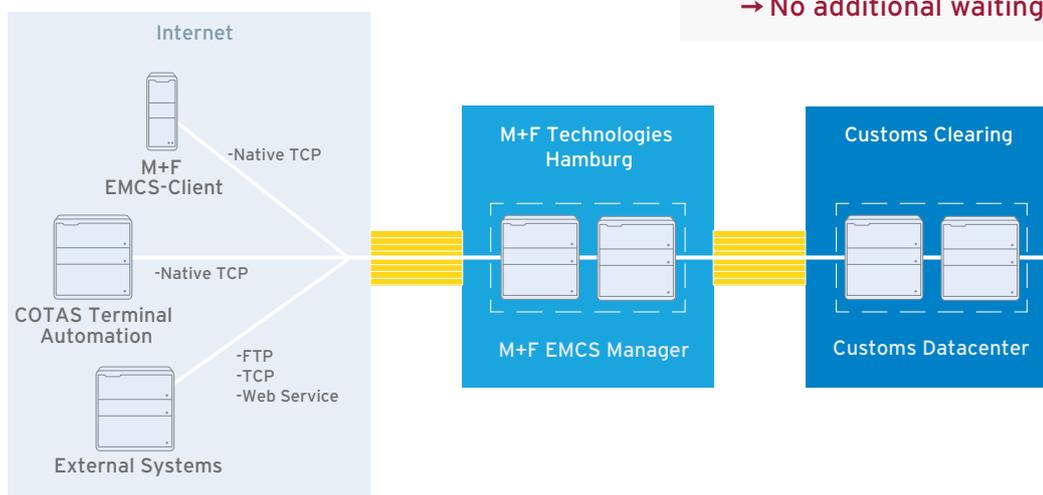
- Automatic EMCS shutdown managements
- Automatic email notifications
- Multi-client enabled
- Easy transaction creation through prefilled templates

EMCS IN COTAS

Due to our strong experience in the EMCS handling as certified service provider we have been able to implement the deepest integration of the EMCS functionality into the COTAS system allowing the provision of fast and efficient automatic EMCS announcements with immediate gathering of the EMCS confirmation data from customs

during the creation of the delivery papers for each means of transport on the delivery side. The EMCS integration on the receiving side allows the automatic generation of nominations inside COTAS as soon as the transport is announced to EMCS on the sender's side.

- Deep integration with the EMCS business workflow
- Automatic creation of EMCS announcements in time and w/o operator interaction
- Full EMCS workflow: product delivery and storage chain
- No additional waiting time for paper creation



M+F Technologies GmbH



© M+F Technologies GmbH | Photo credits: © istock.com and own stock

Helbingtwiete 5
22047 Hamburg | Germany

Phone +49 (0)40 72550 0
Fax +49 (0)40 72550 111

info@m-f.tech
www.m-f.tech

9176-0001-0044



Member of the J.H.K. Group