



Business Automation

Relax!

OpenTAS® at work



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Dispatching Reporting
Master Data Contract Management
Truck, Ship, Railcar & Pipeline Management Blending
Quantity Accounting
Shipment Tour Planning Terminal Supply **Security**
Tax Handling Truck Automation Movement Control
Inventory Tank Management
Distribution Biofuels **Invoicing**



OpenTAS® – the 100% Solution

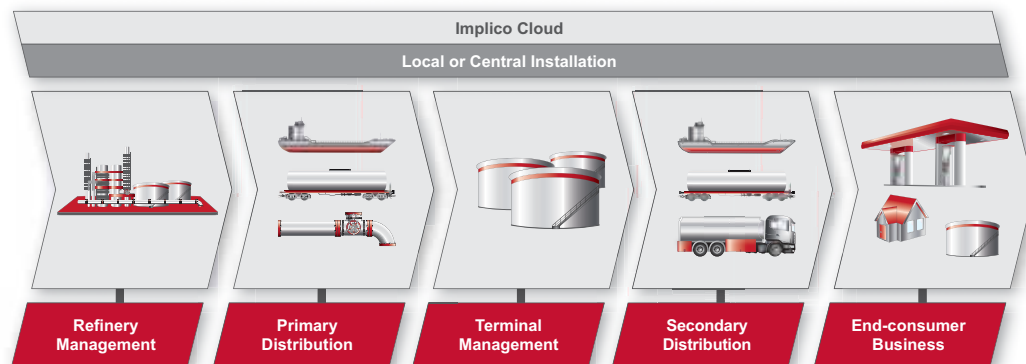
OpenTAS® is the central tool for managing your logistical processes. This proven software solution operates between your SAP®/ERP system (Enterprise Resource Plan) and the field level. It is so efficient that a single system can reliably accomplish tasks heretofore requiring many different tools. For you, this means a radical decrease in your IT landscape and logistical planning at the most sophisticated level possible.

OpenTAS is a modular system that provides management of the entire business processes required in the Supply Chain for the handling

of bulk liquid commodities in the Oil & Gas, Chemicals and the Edible Oils industries. Functionalities in OpenTAS cover the entire spectrum of requirements at the operation facilities e.g. refinery or terminal right up to the ERP system e.g. SAP.

OpenTAS provides exactly the level of system support you need. You decide on the degree of automation, tailored to your marketing environment.

Exploit the numerous practical, economical and strategic advantages which OpenTAS offers. Profit from the 100% solution.





Terminal Automation



Paper-based processes are slow and costly. Frequent errors and manual corrections create inefficiency.



OpenTAS increases cost recovery by improving collaboration to manage supplier relationships more effectively.



Planning



High rates of error and poor inventory accuracy result in a lack of visibility for inventory items.



OpenTAS supports for operations such as in-/outbound movement processing, fleet management and product storage.



Distribution Automation



Forecast planning is absent or performed manually, making the business slow. Poor visibility results in shortages.



OpenTAS streamlines forecasting and requirements planning, ensuring improved forecasting accuracy.



Revenue



Excessive transaction costs as a result of heterogeneous systems and manual business processes.



OpenTAS reduces administrative and operational costs by automating the entry and management of orders.



Transparency & Growth



Obstacles to accessing relevant, accurate information. Executives, managers and employees often work with outdated reports.



OpenTAS provides a full, integrated financial data set that enables business compliance and prediction accuracy.



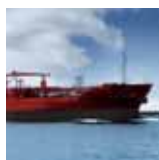
Business View

OpenTAS provides a single solution for all the business requirements in the Oil & Gas downstream industry. OpenTAS ensures that business processes are optimized, transparent, secured and most importantly cost efficient.

- **Simplified IT landscape** therefore IT and maintenance costs are reduced.
- **Immediate response on technical problems** from the industry specialists to support the entire system.
- **Minimized human error** from reduced paperwork and manual processes. With the high level of automation in OpenTAS, data accuracy is easily achieved.
- **Optimizes data availability and improves automation** by ensuring that all captured data are stored in a common repository under a single database.
- **Flexibility to upgrade with enhanced features** at any point in time as OpenTAS can be easily scalable and expanded to meet growing business needs.

Highlights of OpenTAS

- **Reliability**
A reliable system with an exclusive server that is capable to handle complex business requirements without interruptions even if the ERP system is disabled.
- **Security**
OpenTAS adhere to a multi-level security safeguard that can be customized to meet individual security requirements and industry standards.
- **User Friendly**
The standard Microsoft® Windows® user interface menu and dialog controls allow simple and user-friendly execution of all OpenTAS programs.
- **Reports**
OpenTAS offers informative and customized reports for management, customers, regulatory and tax authorities. It can provide monthly and annual reports and a range of programmable analyses and graphical summaries.



Process: Primary Supply

A Round-the-Clock Process

OpenTAS offers you all of the operative components for a complete Supply Chain Management (SCM) solution.

ERP systems such as SAP can now be connected to the operations world. One single highly integrated application is enough to record contracts, control stock processing and execute reliable, finely tuned planning. Loading is carried out quickly and safely. The results are then automatically transferred back into the ERP system as required.

OpenTAS takes into account both basic data and contract building blocks from the ERP system. The integrated planning function helps you to optimally use your transport capacities.

The vehicle-tracking function makes extremely accurate internal and external railcar tracking possible.

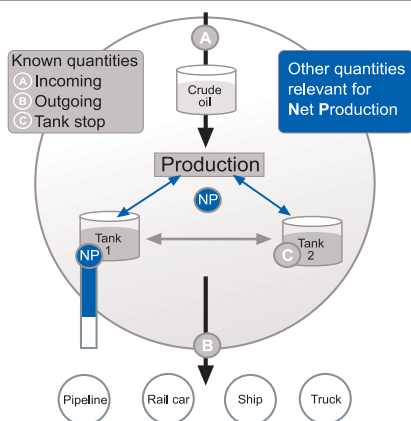
OpenTAS supports all means of transport in the primary supply process – from rail to pipeline and ship. Extensive checks ensure, for example, that the requirements for dangerous goods transport are met, and they protect against overloading.

In addition to the wide range of informative analyses that are already part of the standard product, freely configurable report generators deliver individually defined reports.

OpenTAS automatically checks which documents are necessary for shipping, compiles all required data and prints all the dispatch reports. This includes documents for the receiver of goods, the carrier and the tax and customs agencies.

Numerous open, certified interfaces – for example to SAP – enable optimal data flows between the field, loading, tanks and the ERP system.

Primary Supply / Net Production



Net Production

With OpenTAS NET (Net Production) you always have an overview of the net production in your refinery.

The system analyzes the tank stocks as well as input and output. The product flow is calculated from these measurements; reports show you the exact daily, weekly and monthly balance. This pragmatic approach delivers comprehensive, easily accessible and fast results.

Comprehensive

A refinery's technical measuring systems can only cover 90% of the stocks. OpenTAS also takes the remaining stock into account, for example material that has already been loaded or pre-loaded. Even inputs which are still unbooked in a railcar appear in the stock.

Simple

No specialized knowledge is required in order to calculate the net production. One click is all you need, and OpenTAS gives you the result.

Fast

OpenTAS delivers fast, accurate results with a minimal amount of effort. Through direct

database programming we achieve superb performance: all postings for all products are calculated within seconds – whenever and as often as you want.

With OpenTAS you receive a flexible and efficient instrument to optimally control refinery production, complete with certified SAP interfaces.





Process: Terminal Management

All the Tools You Need

OpenTAS TMS (Terminal Management System) provides all the necessary tools required to effectively manage your refinery or terminal.

It doesn't matter whether you store one or several different groups of products, whether you exclusively store your own products or whether you are a logistics service provider. You will always be in control, able to monitor your processes and to react quickly and accurately.

Quantity Accounting and Inventory Management

- With the integrated and comprehensive quantity accounting you will have real-time access to

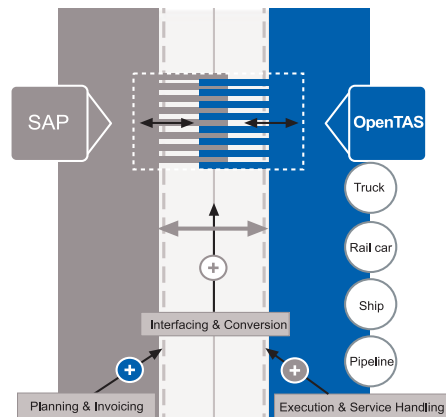
current information about your product stocks as well as inputs and outputs. The numbers can be quickly and easily accessed and are presented in a clearly laid out fashion.

- Quantity Accounting features:
 - Pre-deduction quantity for materials
 - Planning
 - National reserve and storage stock monitoring
 - Ensuring minimal tank quantities
 - VRU Postings
 - Bio fuel additively

Stock Management System

- OpenTAS accurately monitors stocks at the terminal by incorporating data at the tank with product movements within and outside of the terminal. Product movements can be easily and accurately accessed from the system and made available on screen or printed out in an accurate report format.
- OpenTAS is able to manage and control multi ownership of products at the terminal. This unique feature is central for terminal operators to achieve the transparent stock management of third party owners utilizing the storage facility.

Terminal Management / Service Handling



Security Management System

- OpenTAS provides for the security management of trucks and drivers. Verification of drivers' identity can be linked to OpenTAS via access card system and including the Hand-Scanning-Unit with fraud-resistant biometric identification features.

Best Practices: Terminal Processes

Product Movement:

- Pipeline / Ship / Railcar / Tank-to-Tank
- Tank to Pipeline / Ship / Railcar / Tank Trucks
- Vapour Recovery Unit
- Massive Transport Planning
- Loading / Unloading Facility Scheduling
- Load / Unload Planning
- Handling of Pickups
- Load / Unload Execution
- Equipment and Services Planning
- Service Order Handling
- Measurement Planning per Product

Product Storage:

- Planning of Available Storage
- Sales of Storage Facility
- Inventory per Tank / Customer
- Volume Accounting per Tank / Customer
- Strategic Stocks Handling

- Booking by Load and by Delivery
- Booking of Gains & Losses per Tank / Customer
- Customs / Tax Handling
- Contract Handling
- Credit Checks
- Services Accounting and Invoicing
- Stock Reports per Day / Week / Month / Year
- Daily Movement Reports per Customer





Process: Secondary Distribution

Always on the Right Track

The aim is clear: the goods must be transported reliably, punctually and as quickly as possible to the customer with the minimum expense.

OpenTAS RDM (Replenishment & Distribution Management) offers the optimization of transportation and stock delivery to customers with an integrated functionality in the Automatic Stock Replenishment (ASR) module. The ASR incorporates logistic optimization using forecast behavioral pattern generated from historical and seasonally adjusted data captured in OpenTAS. The benefit from ASR goes a long way in minimizing time needed and opportunity costs whilst achieving an effective secondary distribution.

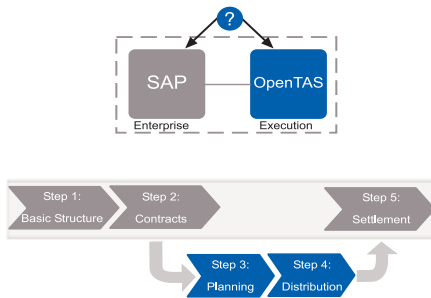
Solution Details

- Transport Logistics, Dispatch Automation and Service Station Replenishment
 - Automation of business processes
 - Integration of tank terminals through OpenTAS
 - Integration of service stations through POS
 - Automated transportation planning
 - Accelerated & optimized planning
 - Integration of transportation companies through on-board computers on the trucks
 - Tracking & tracing
 - Dispatch automation
 - Dispatch optimization
 - Integrated PDA's for Drivers
 - Stock and Materials Reconciliation

Key Benefits

- Optimization & automation of logistic and administrative business process
- Provides clear visibility of the distribution process
- Optimization of transportation and planning
- Streamline IT architecture with minimal disparate interfaces and applications
- Integrated supply chain management process and multi-national capabilities
- Ensure compliance with legislation, regulatory, tax and accounting standards

Order-to-Cash



Example: Delivery to Service Stations

OpenTAS supports the complete service station delivery process, from order taking, planning, loading and unloading to billing.

Here you profit from numerous industry-specific functions. One highly practical feature, for example, is the connection of service stations to OpenTAS. The system then knows their inventory data and technical capabilities, such as the size of the storage tanks. This enables optimal planning. You know exactly which buyer wants how much of which product.

The system is specifically developed to assist you in hiring the correct carrier, to provide high-end fleet management and to optimize your tour planning; completely automatized if desired. The goal is to offer the best possible delivery service while driving the shortest possible distance.

The trip to the customer has enormous cost-savings potential. Use it.

Teamwork with SAP® SDM and IS Oil & Gas®

Logistics is like sports: teamwork is everything. In the dispatch process OpenTAS works well

with other strong team players. Certified interfaces to SAP IS Oil & Gas ensure smooth data exchange, and it goes without saying that OpenTAS also cooperates perfectly with the innovative SAP SDM (Secondary Distribution Management for Oil & Gas) solution.

After all, SAP SDM, marketed world-wide by SAP, was also made by SAP's development partner Implico.

Revolutionize your dispatch processes from order taking to billing. If you want optimal results, use the ultimate tool.

OpenTAS – your 100% solution for all tasks, from you to your customer.





Data Integration in OpenTAS

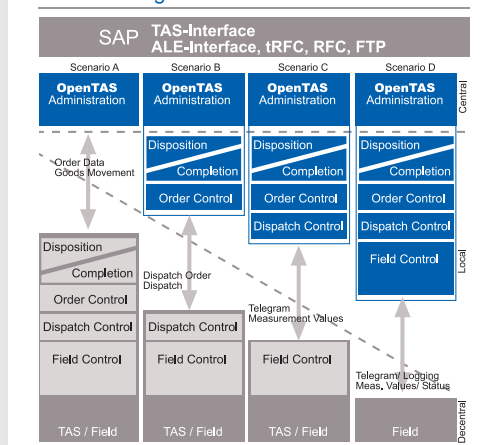
OpenTAS BDP (Business Data Processor) is a sophisticated module under OpenTAS that integrates and processes data and information from all field devices by further presenting them in a single unified data source that is easily utilized at the Business Intelligence and report generation level.

Benefits of OpenTAS BDP:

- **Minimize Modification and Workaround in the ERP System**
Field devices or 3rd party systems can integrate in OpenTAS without changing the business process in the back-end ERP system. It therefore reduces the need for complicated and cumbersome integration to ERP system.
- **Streamlined IT Architecture**
Reduces the need for changes in the IT architecture. Connections with instruments and measurement devices at the field level to the back-end ERP system can be done in OpenTAS thus, reducing unnecessary implementation and integration costs for change and maintenance.
- **Timely and Accurate Data**
Information can be obtained in real-time and on-demand.
- **Reliable Information to Facilitate Informed Decision Making**
Key information to populate the Management Dashboard can be accessed at a key stroke. This is crucial in today's volatile markets to ensure the management team is facilitated with critical information in order to make the right decisions at the right time.
- **Automates Information Delivery Processes**
Accurate information can be automatically retrieved and transferred between systems by using OpenTAS BDP thus reducing errors and accelerating access to the right information.



Rollout & Migration



Further Highlights

Unlimited Rollout

OpenTAS gives you maximum flexibility, whether you need a single local installation, a regional or national solution or even a worldwide roll-out. The system is multi-lingual, can be installed at any location and can be interconnected for a multinational solution. Implico and its regional partners will look after you and your project in every country on the planet.

Simple Migration

Migration is uncomplicated and takes place both quickly and safely. The field components are not affected and can continue to be used to their full capacity. Thanks to the multi-layer architecture you save yourself redundant installations. OpenTAS supports all of the definitive industry standards for communication in the oil, gas and chemical industries, including IFLEXX, PIDX and CIDX.

Step-by-Step Installation

OpenTAS' flexibility is apparent not only when it is up and running but also during installation. Its modular system construction enables you to install the desired functions step-by-step when needed.

Real-time Reporting

With OpenTAS you are always optimally informed. The system continuously takes current data from the ERP or field system and forwards it immediately, according to your requirements. This dynamic feature not only helps your planning but also your reporting. In both areas you are continuously up to date.

Web Reporting

Another OpenTAS highlight is its extensive, current reporting. OpenTAS delivers, among other features, KPI reporting (Key Performance Indicator). You can access all of these reports via the internet.

That's good for you, because you're always informed, and good for your customers, because they can access their specific data within an access range which you define. That's 100% service.



Hardware and Software

■ 64-bit support

OpenTAS supports 64-bit platforms. This will be especially useful for terminal servers and database installations, which can now use more than 3 GB of RAM.

■ Oracle 11 support

Oracle 11g introduces support for the 64-bit Windows systems. Many new features are also included, which simplify administration and lower the total cost of ownership (TCO).

■ OpenTAS database

- Oracle Database 10g Release 2 (10.2.0) on every 32- or 64-bit operating system supported by Oracle (e.g. Windows, Linux, AIX, HP-UX).
- Oracle Database 11g Release 2 on every 32- or 64-bit operating system supported by Oracle (e.g. Windows, Linux, AIX, HP-UX).

■ OpenTAS Client

Supported operating systems:

- Microsoft Windows XP SP3 / Microsoft Windows Vista SP1 (32-bit and 64-bit), Microsoft Windows 7 (32-bit and 64-bit)

- Microsoft Windows Server 2003 / 2003 R2 / 2008 / 2008 R2 (32-bit and 64-bit)

■ OpenTAS Application Server (Automation/interfaces)

Supported operating systems:

- Microsoft Windows XP SP3, Microsoft Windows Vista SP1, Windows 7 (32-bit and 64-bit)
- Microsoft Windows Server 2003 / 2003 R2 / 2008 / 2008 R2 32-bit and 64-bit

■ New hardware supported

- TRM816 Terminal with TCP/IP interface
- Essmann scales with TCP/IP interface
- Timm combi-card reader for Wiegand and RFID cards

■ Further improvements for hardware

- Schaff display panel for the OpenTAS TMS traffic management system
- KCS/KCB device drivers
- Support for Accuload Multi Batch Loading support



Collaboration with SAP

The speedy processing of current data from day-to-day business operations like the daily logistical planning is OpenTAS' home territory, and this is where perfect cooperation becomes apparent. SAP transfers these processes to the OpenTAS system, which offers you comprehensive functionality for optimal planning. Afterwards, OpenTAS transfers the results back to SAP. Simply use the optimal tool for each task, and the final result will also be optimal.

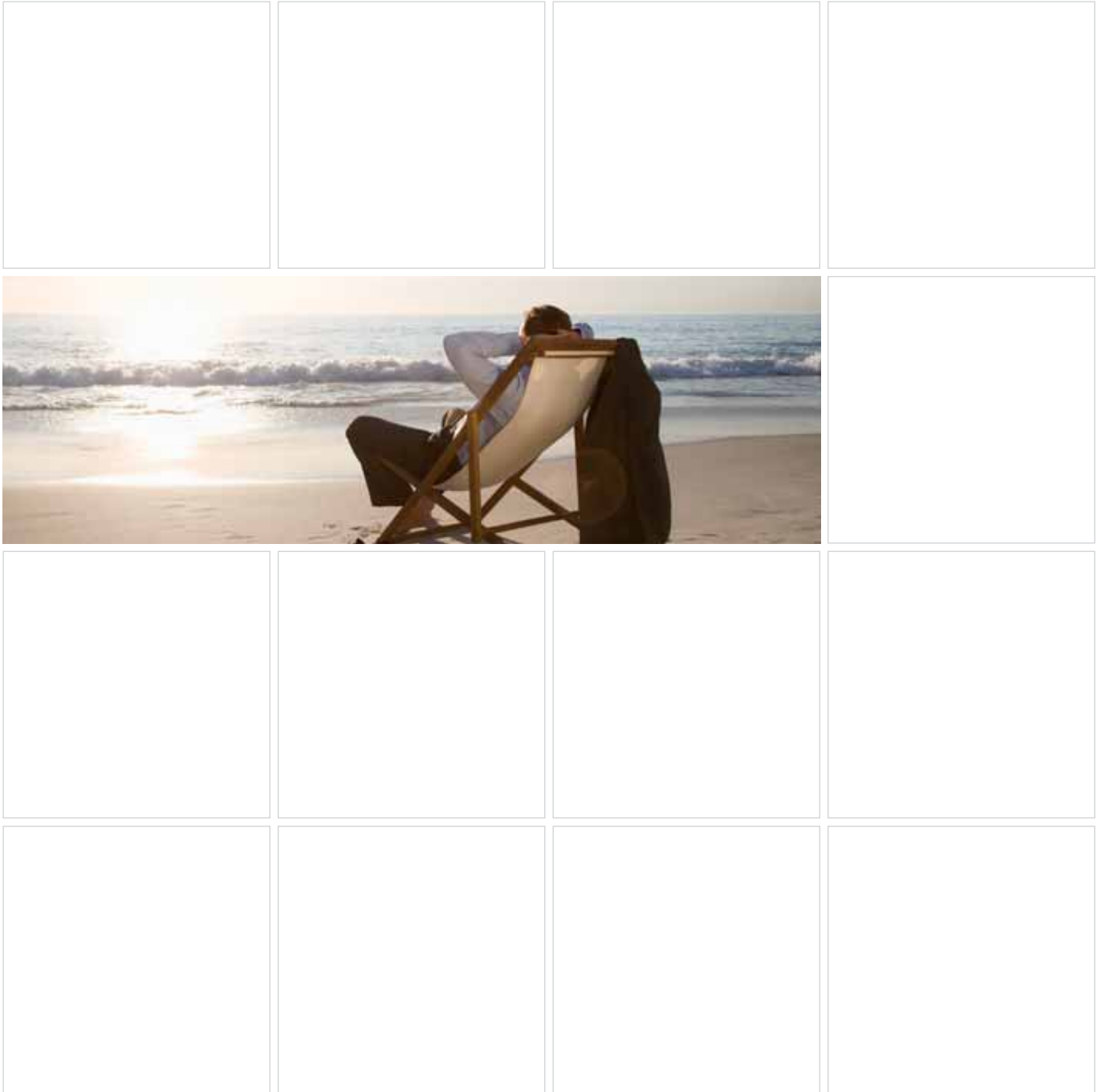
SAP and OpenTAS can deliver the optimal mapping of all business processes into an end-to-end system architecture.

About Implico

The Implico Group optimizes logistics and business processes for oil and gas downstream companies. The international consulting and software company with its headquarters in Hamburg, Germany, has subsidiaries in North America, Europe and Asia. Founded in 1983, the company today employs around 220 staff.

Implico provides consulting services, data services and software solutions for the entire supply chain – from forecasting, order entry, dispatching and tour optimization to data collation and invoicing. Leading oil and gas companies all over the world trust in Implico's industry expertise and high-performance IT solutions including OpenTAS and iGOS.

Implico is a Microsoft Gold Partner, a Software Development Partner of SAP and a member of the Oracle PartnerNetwork. The company was named, for example, Oil & Gas Logistics Company of the Year in 2015 and Best Oil & Gas Software Specialists in 2017. In the field of Terminal Automation Systems, Implico is market leader in Europe, Middle East and Africa (ARC market study, July 2016).



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