



+ Managing processes

+ Optimising processes

Software for utilities and industry

Energy Management

Production Management

Infrastructure Management



PSI 



PSI: Process control and information systems

PSI is an independent software producer that has been a technological leader in process control and information systems since 1969.

PSI's cutting-edge software products are used to manage energy and material flows, workforces and passengers at utilities and industrial enterprises. They map the technical and commercial processes in our standard software with individual adjustments and take the entire process to a higher level of efficiency, safety and quality through mathematical optimisation.

PSI software thus ensures safe, efficient energy supply and optimised production and logistics processes worldwide. We guarantee maximum competitiveness, technological independence and investment security for our customers.

Reasons for choosing PSI software.

We provide outstanding software products for our customers, applying all our experience. We are continuously enhancing our standard solutions and adapting them to current requirements.

In the innovation process, PSI also uses the successful four-phase model for product development. PSI collaborates with industry-leading pilot customers and scientific institutions right from the initial phase to ensure customer benefit from the outset.

The PSI Group has been certified in line with the ISO 9001 quality standard since 1994. IT security certification in line with ISO 27001 has been in place throughout the Group since 2014.





Process optimisation

PSI software incorporates experience gained over several decades in thousands of successful projects as well as engineering and business-management process expertise from the energy sector, the metal and automotive industries, logistics and transport. Physical, stochastic and business-management models such as hydraulics of pipeline networks, metallurgy models and electricity-grid topologies are applied in the software. Optimisation calculations from analysis and engineering, e.g. optimal power flow, are used in these models with real-time measured values or simulation data. Progressive operations-research methods such as graph theory, Dijkstra variants, linear and stochastic programming, high-criteria fuzzy logic and neural networks are also increasingly applied.

In almost all optimisation methods, PSI goes far beyond commercially available, often excessively simplified methods, and frequently combines multiple methods and models in a professional manner. The business process targets are formulated as multi-criteria or even high-criteria key ratio systems with high mapping accuracy, geared towards the respective situation and highly optimised. With this advanced software, customers can gain a lasting edge over competitors in your markets through efficiency, flexibility, quality and security, thus ensuring growing commercial success.

Scalable and in real time

Our highly scalable, flexible and integrable software products are particularly suitable for large volumes. They enable real-time synchronous collection and processing of very large data volumes and simultaneous access of multiple users. Through in-memory real-time databases and Java-cluster technology, customers can expand their PSI software at any time and integrate it with legacy or third-party systems via EAI software buses.

High availability

In line with application requirements, PSI delivers systems with availability of up to 99.999 percent, including for the extremely high availability of electricity grid management. To this end, in addition to common methods such as cold and hot-standby servers, we have also created unique virtualisation with n-fold redundancy of all communication, process-connection and computer equipment – including across multiple centres and emergency locations.

Investment security

As a technologically and commercially independent, leading-edge software manufacturer, PSI provides long-term investment security. We have been providing our customers with regular updates, comprehensive services and maintenance for over 45 years. Ongoing enhancements of our software products in the form of security updates and functionality upgrades ensure adaptation to future requirements. In addition, proprietary or third-party software can be integrated through use of successful open standards such as Java™, Eclipse and Linux™, provision of integration aids such as EAI tools, script languages, software buses and portals as well as certified linking with legacy standards.

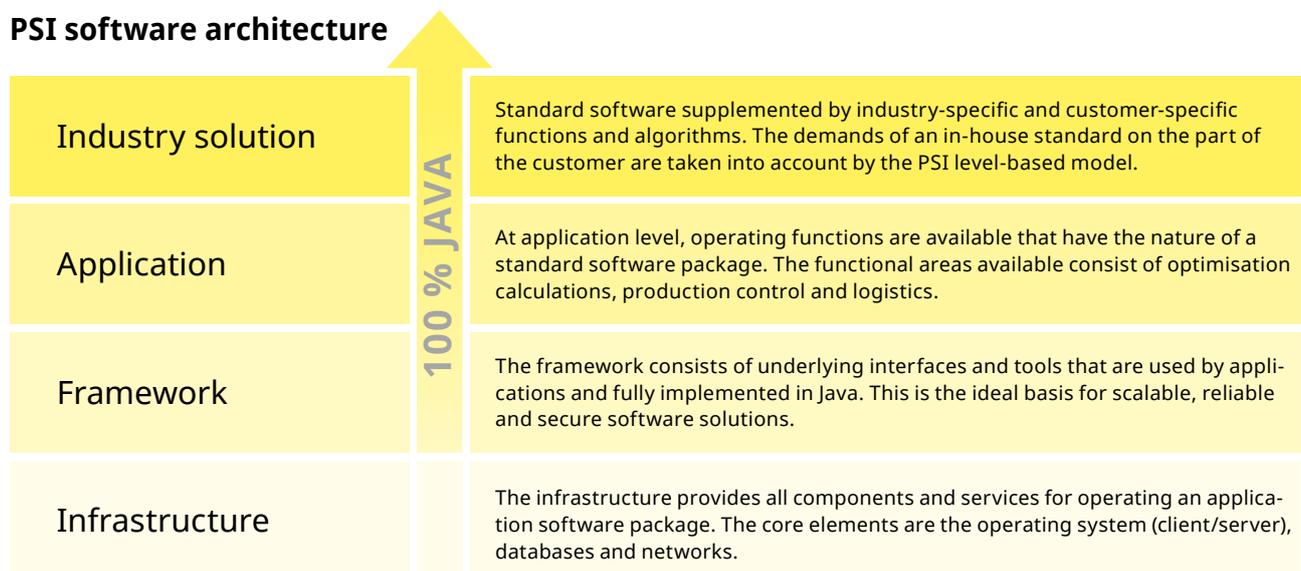
The strengths of our software architecture.

The PSI technology platform combines the best elements of more than 45 years of software experience. The high-availability, scalable framework based on the latest Java technology forms the shared high-performance platform for all PSI products.

On the basis of model-driven software development, PSI applies global standards such as the Eclipse Modelling Framework (EMF) in order to achieve independence from technology cycles. Adaptations to essential customer requirements can be made quickly and flexibly through a modern user interface as well as numerous productivity improvements to the software.

The new PSI Click Design provides freely adaptable user interfaces and a new dimension in configurability. Depending on the profile, users can generate new screens and views with an intuitive graphic editor. In this way, menus, list and table dialog boxes, detailed views and the composition of complex dialog boxes relating to run time can be easily adapted and saved in profiles via drag & drop. This reduces costs for customer-specific adjustments (cost of change).

PSI software architecture



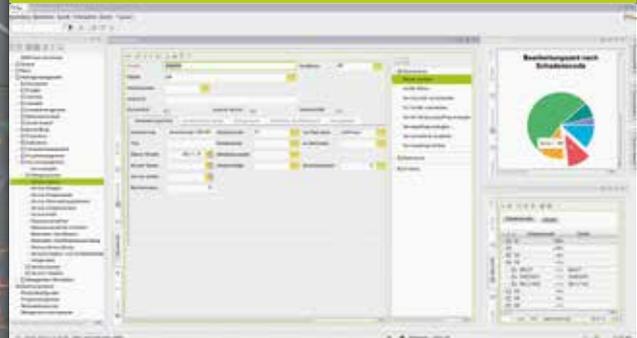
Real-time and high availability



PSI solutions were developed for reliable real-time management and optimisation of success-critical business processes.

- + High-availability cluster
- + High error tolerance
- + Redundant process interface
- + Business-critical 24/7 applications

User-friendly



Modern, intuitive user interfaces help users to get used to the product quickly and get to grips with complex interdependences quickly.

- + Configurable, personalised displays
- + Support of mobile devices and innovative operating concepts
- + 2D/3D visualisation of structures and interdependences such as systems and networks

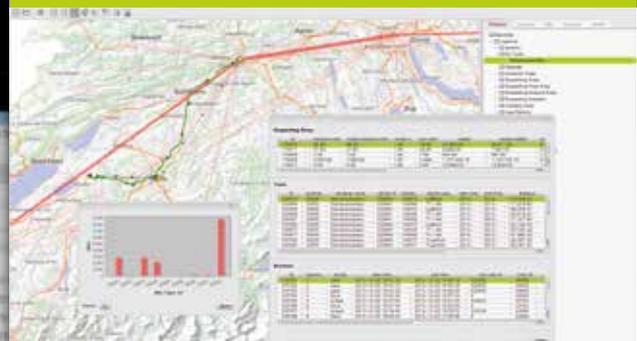
State-of-the-art technology basis



PSI uses state-of-the-art software technology and applies global industry standards that guarantee future viability.

- + Multi-layer client-server architectures
- + Model-based architecture for simple adaptation and expansion with the Eclipse Modelling Framework (EMF)
- + Supports different operating systems and databases
- + Based on the latest Java technology

Options and functions



A wide range of functions are available as standard, and they can be supplemented by the open system architecture.

- + Workflow management through process models for high productivity
- + Extensive selection of interfaces and standard services
- + Integration of project-specific expansions without reconstruction of the system
- + Configurability with PSI Click Design



+ Energy Management

We ensure efficient energy supply.

In the energy sector, PSI's high-availability systems make a key contribution to efficient, reliable supply with electricity, gas, oil and district heating in the liberalised energy market.





PSI develops smart control systems for companies in the energy industry for management of large supply networks. These high-availability control systems help to ensure safe, environmentally-friendly provision of energy. This makes them a key factor in achieving a successful energy transition.

Electricity and combined energies



PSI control systems enable management of complex network structures and therefore support decentralised energy supply as well as the use of renewable energies.

- + Network control technology
- + Operational and failure management
- + Energy data and grid utilisation management
- + Combined energy control systems
- + Catenary line control systems
- + Industrial energy networks

Gas, oil, water



Management of gas and oil pipelines involves extensive planning and simulation options.

- + Control systems for gas grids and pipelines
- + Gas, oil, product and water management systems
- + Planning, simulation forecasting
- + Monitoring of gas quality
- + Certified leak detection and location system

Energy trading and sales



PSI's integrated energy-business solutions support all trading, sales and planning processes.

- + Planning, analysis and optimisation
- + Integrated energy trading and sales
- + Portfolio and risk management
- + Auditing of gas-metering systems
- + Allocation and invoicing
- + Optimal unit commitment
- + Virtual power stations



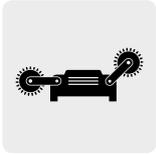
+ Production Management

We save resources.

PSI's production management unit develops software products for production planning, specialised production-control tasks and efficient logistics, focusing on optimisation of use of resources and enhancing quality and economic efficiency.



Resource extraction



For coal mining, PSI process-control solutions for monitoring, control and maintenance of automated processes.

- + Control systems for resource extraction
- + Maintenance
- + Logistics

Metals, aluminium, copper



PSI develops integrated software solutions for production management in metal production and processing.

- + Metals supply-chain consulting
- + Planning and optimisation
- + Production control
- + Process automation
- + Material logistics and transport optimisation
- + Energy and quality management

Manufacturing industry



A comprehensive software range for production processes for discrete manufacturing from planning to machine level.

- + Production planning and control (ERP, MES)
- + Adaptive production control
- + Supply chain management (SCM)
- + Just-in-sequence production and supply (JIS)
- + Process control systems (JLS, APS)

Logistics and airport



For operators and users of logistics systems, PSI develops software solutions for management of complete logistics networks and in hubs.

- + Storage management systems
- + Multi-modal transport planning
- + Intraday transport optimisation
- + Airport logistics

Optimisation



Software for optimum planning and control of business processes.

- + Multi-criteria optimisation and decision-making software Qualicision® for production and maintenance
- + Route and stock optimisation
- + LP optimisation for bottleneck machines
- + Analysis, numerics, stochastics and special optimisation



PSI has started to prepare its products for the requirements of the Industrial Internet at an early stage. To this end, we are working closely with leading partners from science, research and industrial enterprises.

We are ready for the Industrial Internet.



+ Infrastructure Management

We ensure mobility.

PSI develops and integrates process-control solutions for monitoring, control and efficient operation of infrastructures and operations in the fields of transport and security.



Public transport



The control-system solution from PSI allows the control and monitoring of operations for companies in the public transport sector.

- + Operations-control technology (ITCS)
- + Depot management
- + Dynamic passenger information



Our innovative control technology for infrastructures ensures optimum, efficient processes. Consequently, passengers reach their destination safely and on time while enjoying top-quality service.

Rail transport



Solutions for public rail transport for efficient control of rail operations as well as automatic train dispatching and energy-optimised driving.

- + Train management
- + Depot management
- + Dynamic passenger information
- + Video management

Road traffic



Process-control solutions allow monitoring, control and maintenance of traffic telematic infrastructures such as road networks, tunnels and bridges.

- + Control systems for road traffic
- + Telematics and operations monitoring
- + Maintenance
- + Contract management

Safety



PSI solutions ensure safe operation of public infrastructures and help to meet the requirements for flood prevention.

- + Combined transport and flood solution
- + System for irrigation and water drainage
- + Communication and video management

Airport logistics



In the airport logistics sector, PSI provides software solutions for passenger and baggage handling for airports, airlines and ground handlers.

- + Efficient baggage-control system
- + Flight-plan management
- + Display system

Comprehensive services worldwide.

To ensure smooth operation of our software products, PSI provides comprehensive services. As well as identifying, analysing and implementing technical requirements, our experienced project managers provide intensive support throughout the the entire implementation process, in the migration of existing data and in the company-wide rollout. Professional training for users, programmers and partners guarantees safe application.

Our customers also benefit from regular updates and extensive maintenance. Ongoing enhancements of our software products in the form of updates and upgrades ensure optimum adaptation to future requirements.



Our experienced employees provide long-term support for our customers, ensuring high-quality solutions.



Our network of system integrators, consultancy and implementation partners guarantees top-quality service worldwide.





+

32 locations
in 17 countries.

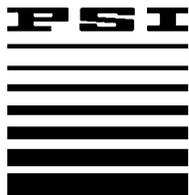
With an extensive network of sales and service partners supplementing our own locations, we guarantee that our customers have experienced, professional contacts in their vicinity.



More than 45 years of software expertise.

Creation

1969



PSI Gesellschaft für Prozesssteuerungs- und Informationssysteme GmbH established in Berlin. First order from the steel industry.



Development

1976



First major successes as a software provider for the energy-supply sector.



Joint-stock corporation

1994



The company is converted into a joint-stock corporation.



Expansion

2006



Branch in Russia, new sales partnerships in Eastern Europe and Asia.



Innovation

2010



PSI develops its first integrated control system for mines.



USA/rollout

2011



PSI establishes a subsidiary in North America. Start of rollout of the new PSI technology platform.



IPO

1998



IPO on 31 August.



Restructuring

2002



Generation shift in top management. PSI is restructured into a control-system enterprise.



Expansion

2004



PSI establishes subsidiaries in Poland and China.



Export

2012



Successful export strategy confirmed by numerous major international orders.



Acquisition

2014



PSI continues to extend its market leadership in production-management software for the metal industry.



Technology

2015



PSI makes further progress on the future topic of the Industrial Internet in the context of several research projects.



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