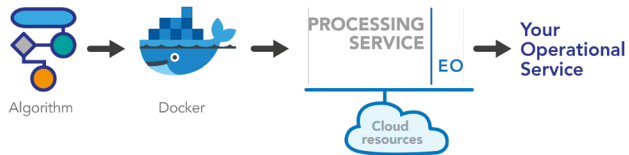# Enabling successful operations in tomorrow's EO missions

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Enabling successful operations in tomorrow's EO missions

Algorithm → Docker → PROCESSING SERVICE — EO → Your Operational Service / Cloud resources

A wide range of Payload Data Ground Segment (PDGS), post-processing and dissemination service software is developed by Werum and in operational use for a number of current EO missions and services in the Copernicus and ESA programmes.

The software is refactured and optimised successively to the operator needs and to required technologies of the next-generation processing environments.
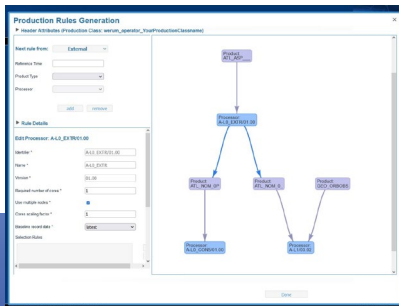
Independent framework for scalability and configurability

The independent framework for operations' services allows for scalability under increasing data load, configurability for new technologies and for demands in public-cloud applications and of mission-specific workflows:

- Independent orchestration or Kubernetes cluster integration
- Coupling to monitoring tools for KPIs
- User access and identity management
- Integrated interfaces for data selection, usage and processing
- Container technology (Docker, Kubernetes)
- Secure and consistent archiving

User interfaces to Werum's orchestration library

Workflow Builder

Resource Allocation

Performance Monitor

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Current use cases and references

– Long-Term Archive Service
– Copernicus Space Components Data Access (PRISM)
– Sentinel-1C Production Service

– Fast Processing Facility

– Core Processing Facility
– Processor Testbed

– Core Processing Facility

– Core Processing Facility
– Generic Processing Orchestration System Prototype

About Werum

With a workforce of over 140, Werum Software & Systems AG is one of the largest independent employers for IT professionals in Germany. For more than 50 years, we have been implementing sophisticated software and systems for customers all over the world, among them many renowned companies from the automotive and aerospace industry as well as scientific institutions and public authorities.

Our activities focus on the support of customer-specific processes in the core areas of test data and information management, Earth Observation, eGovernment and enterprise information management. The software solutions are based on platforms specially developed for these areas.

In the field of Earth Observation, Werum provides solutions for the data processing, archiving and dissemination of, among others, Copernicus Sentinel satellites and ESA Earth Explorer missions like SWARM, EarthCARE, Biomass or FLEX.

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