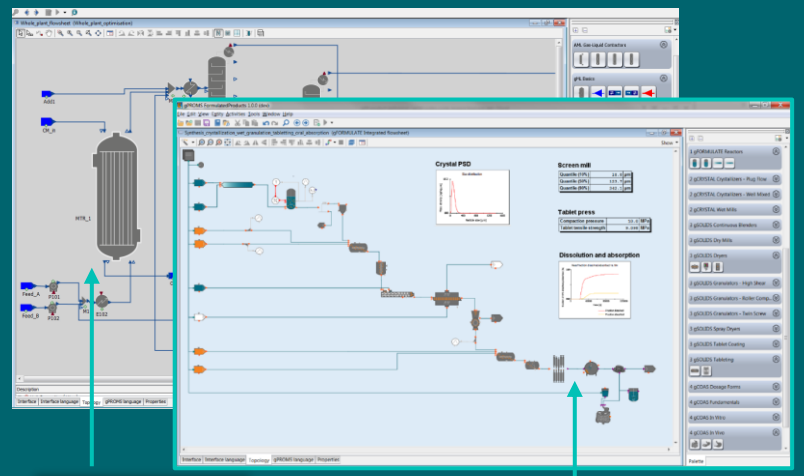
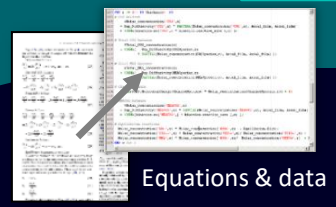
Capture deep process knowledge and deploy it to create value

CONSTRUCT

- Equipment configuration
- Catalyst information
- Physical property data
- Control information
- Operating procedures
- Cost & price data

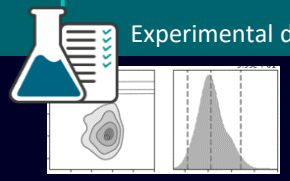
Apply advanced analytic and optimization techniques





Equations & data

CALIBRATE



Experimental data

ANALYZE

- Simulation
- Global system analysis
- Optimization

OPTIMIZE

Digital Design

Explore the process decision space rapidly & systematically

Lock in future value

Create value every day

Digital Operations

Simulate, optimize, operations decision support

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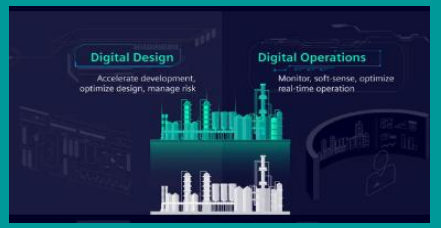
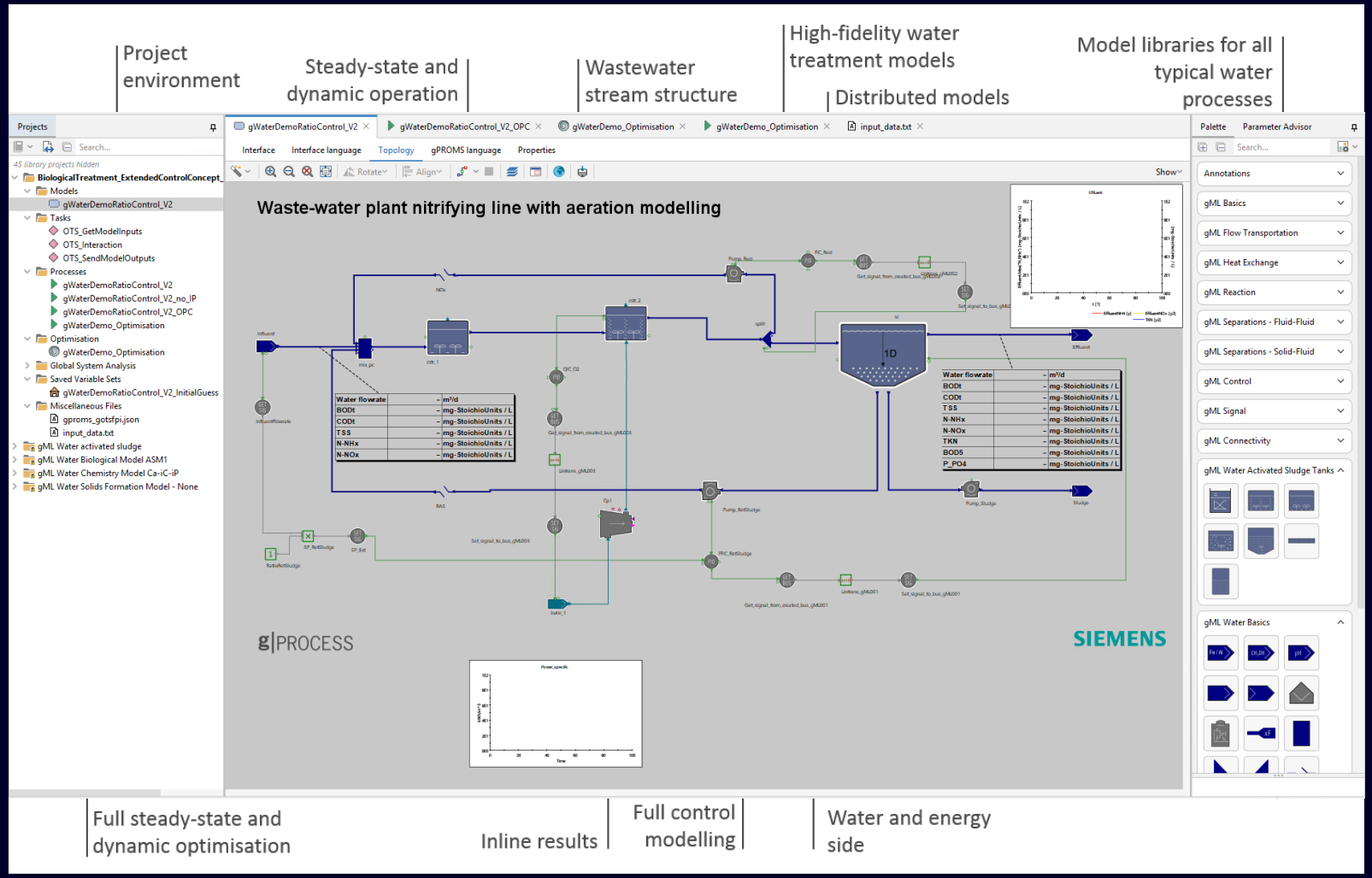


SIEMENS

Treatment Optimizer: Model-based Water Treatment Plant Optimization

High-fidelity Predictive Models for Water Treatment Plants

- Enable rapid exploration of the process decision space for optimizing the water treatment process design and operation
- Provide accurate information for reducing energy, chemical consumption and critical GHG emissions
- Support informed decision making about current and future plant capacity and minimizing capital and operational costs



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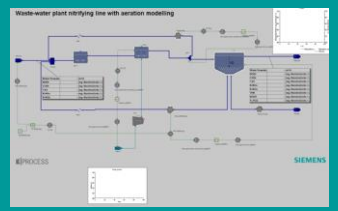

Video for desalination plant

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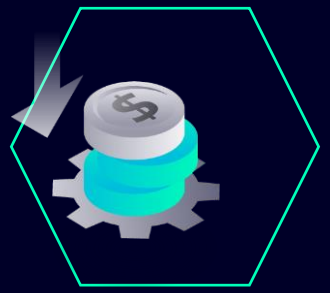
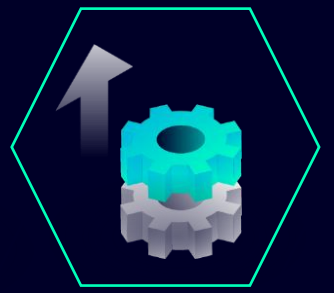
Benefits and Value

Reduce time-to-market by creating more effective workflows in R&D and engineering and eliminate the need for multiple trial and error simulations



Improve process economics with little or no further capital investment through offline and online process optimization

Increase yield and sustainability while reducing energy, emissions and pollutants, without compromising on process quality and efficiency



Determine best achievable design through rigorous mathematically-based process optimization techniques

Quantify risk accurately by exploring the entire process design space rapidly and effectively

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