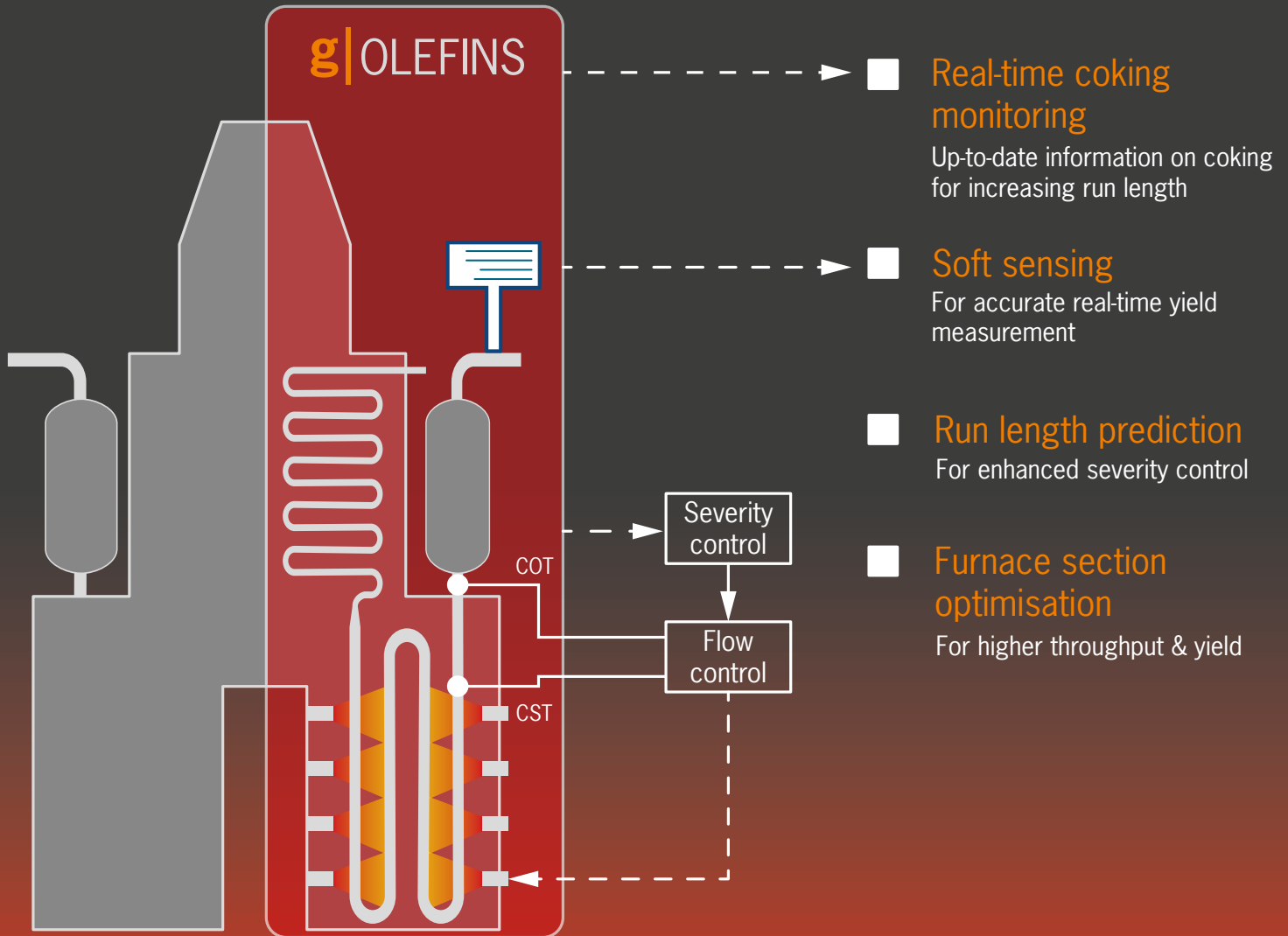


INTELLIGENT DIGITAL OPERATIONS TOOLS FOR OLEFINS PLANTS



gPROMS Olefins is an advanced digital operations suite for online decision support of olefins plants.

A range of digital twin applications combine current and historical plant data with high-fidelity plant models, to provide monitoring of furnace coking, real-time soft sensing, furnace section optimisation and forecasting for decision support.

Implementing PSE's gPROMS Olefins solutions can provide annual economic benefits of **\$10m to \$40m** on a large ethylene plant.



Advanced Digital
Process Twins

A Siemens Business

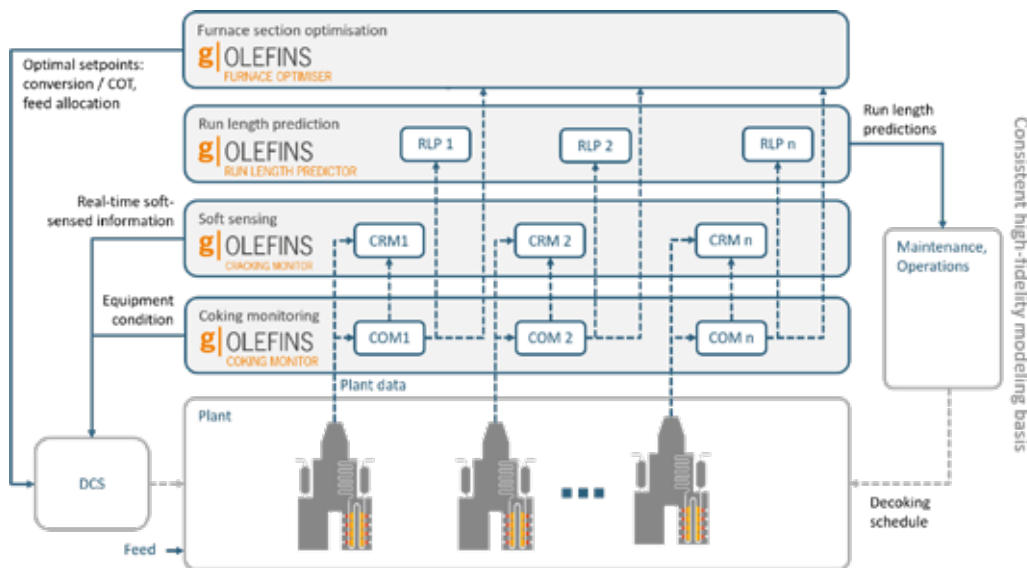
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g|OLEFINS

The gPROMS Olefins suite is implemented as a set of digital process twins that execute within the automation system. The full suite and its interactions are shown below.



“ We improved yield by 2% ”
– SABIC

COKING MONITOR

Accurate daily-updated state of coking deposition in furnace coils – self-tuning capability based on current and historic plant data

CRACKING MONITOR

Real-time soft sensed KPIs – e.g. yields – for use in conversion/severity control, taking into account the current furnace coking state

RUN LENGTH PREDICTOR

Determines the expected end-of-run date for different operating scenarios, based on the current furnace coking state and anticipated operation

FURNACE SECTION OPTIMISER

Real-time optimisation of feedstock allocation and severity/conversion profile, taking into account the current furnace coking state and recycles

DECISION SUPPORT

Tools for operators to perform what-if dynamic analysis of planned operating scenarios, based on the current plant state

... all based on accurate kinetics

For maximum accuracy we tune the cracking kinetics to match your available data as closely as possible

Supply

PSE's gPROMS Olefins digital applications are implemented as turnkey solutions. We work closely with your operations team to ensure that applications are customised for your exact operation, including tuning cracking kinetics to match your plant performance.

Find out how PSE can help drive Operational Excellence in your plant.

pseenterprise.com