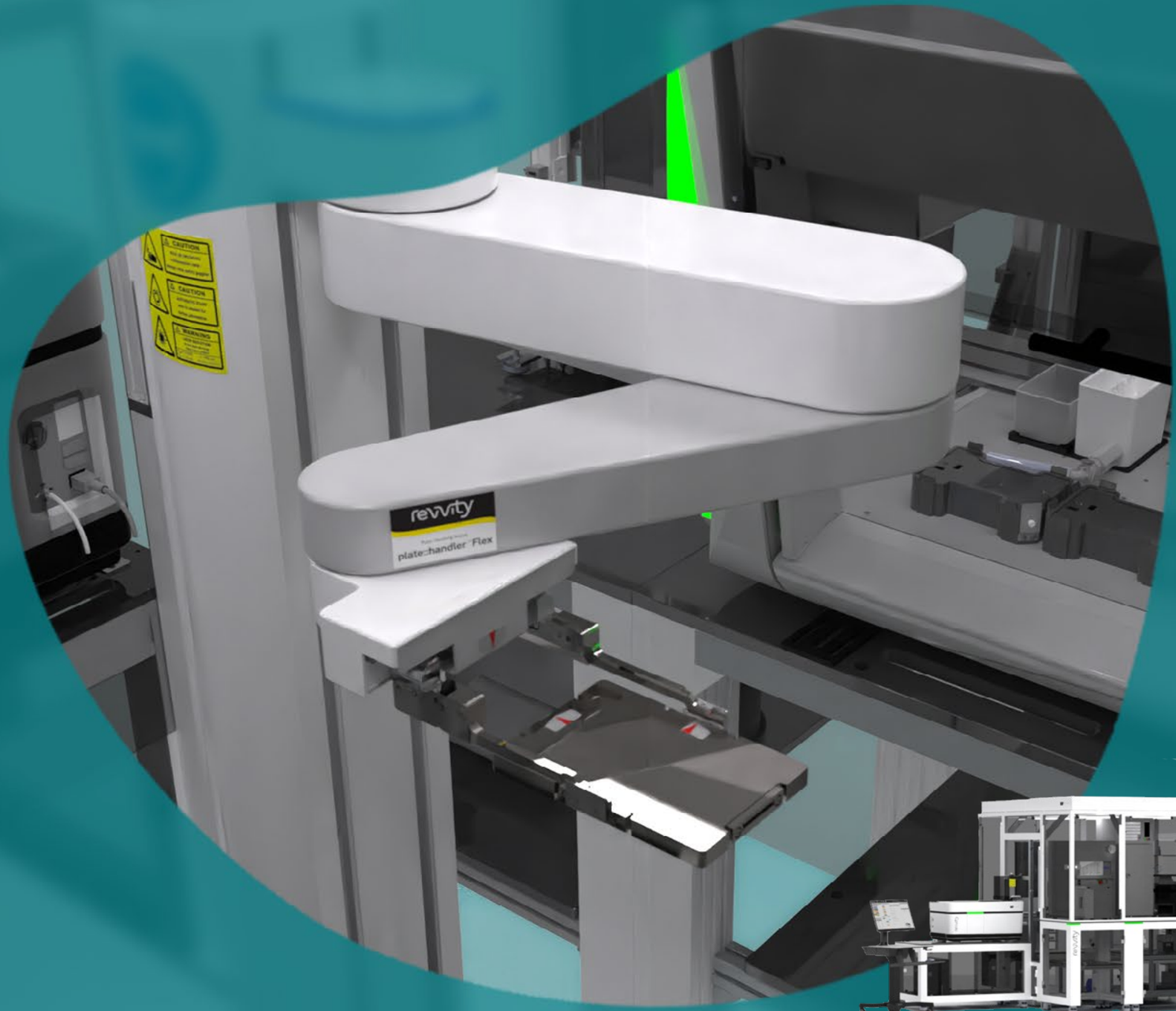
Helping labs do more with less.



Custom explorer™ G3 integrated workstations

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Elevate your workflow with custom automation.

From cellular screening and imaging applications to high-throughput screening and genomics-based applications, custom explorer™ G3 integrated workstations provide innovative application-focused laboratory automation solutions which simplify microplate handling, liquid handling, and detection.

With complete high-throughput multimode plate detection, high content analysis, and liquid handling portfolios, we are uniquely positioned to understand your scientific and application needs. Revvity provides solutions that address the full breadth of your scientific requirements, all from a single source delivering the application support you need. Additionally, a variety of instrumentation from other suppliers can be integrated into an explorer™ G3 integrated workstation.

Why automate your science?

- Improve efficiency
- Increase productivity
- Reduce hands-on time
- Dynamic, real-time decision making
- Equal sample/plate treatment
- Modularity & scalability

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Automation to complement our instrument portfolio

Cellular analysis

- High-content imaging
- 2D and 3D cell culture
- 3D organoid screening
- Stem cell differentiation and maintenance
- Cell painting
- Cell viability and proliferation
- Flow cytometry (sample preparation)
- Cell migration assays
- Apoptosis assays
- Mitochondrial function assays
- Calcium flux assays
- Spatial Biology

Genomics analysis

- DNA/RNA extraction and quantification
- PCR/qPCR setup
- NGS library preparation
- Single cell RNA sequencing sample preparation
- CRISPR-Cas9 screening
- Genotyping

Platefeeding Up to 2 instruments

Workcells Up to 4 instruments

A spectrum of solutions!

Workstations Up to 8 instruments

Platforms Up to 20 instruments

Protein analysis

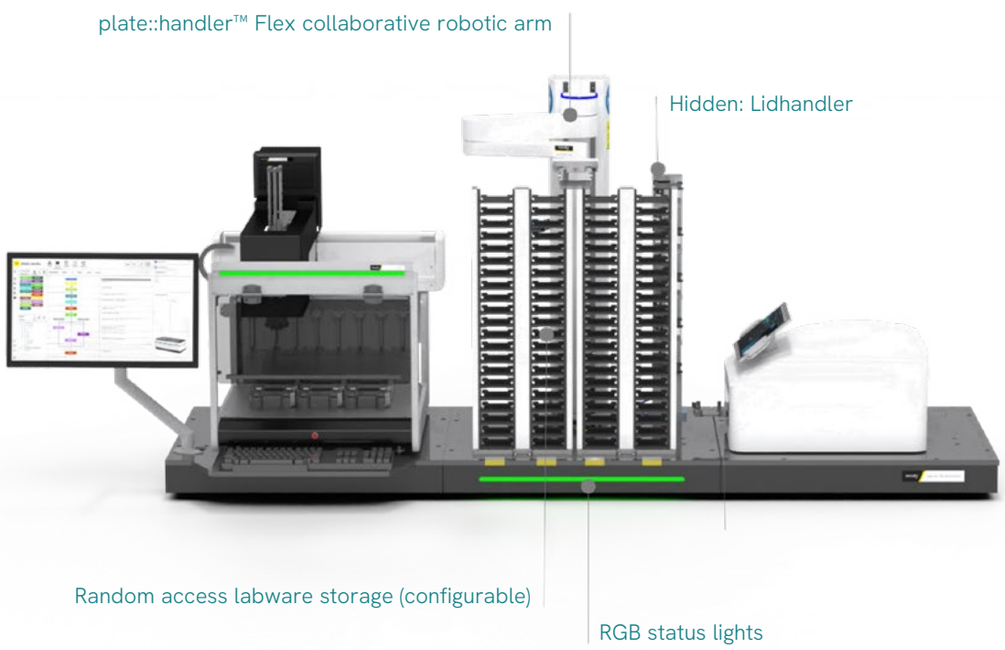
- Immunoassays
- ELISA assays (e.g. GLP-1)
- HTRF/Alpha assays
- Protein-protein interaction assays
- Protein purification and quantification
- MS sample preparation

High-throughput screening

- Compound library preparation
- ADME
- Drug discovery assays
- Antibody screening
- Enzyme activity assays
- Phenotypic screening

Platefeeding and workcells

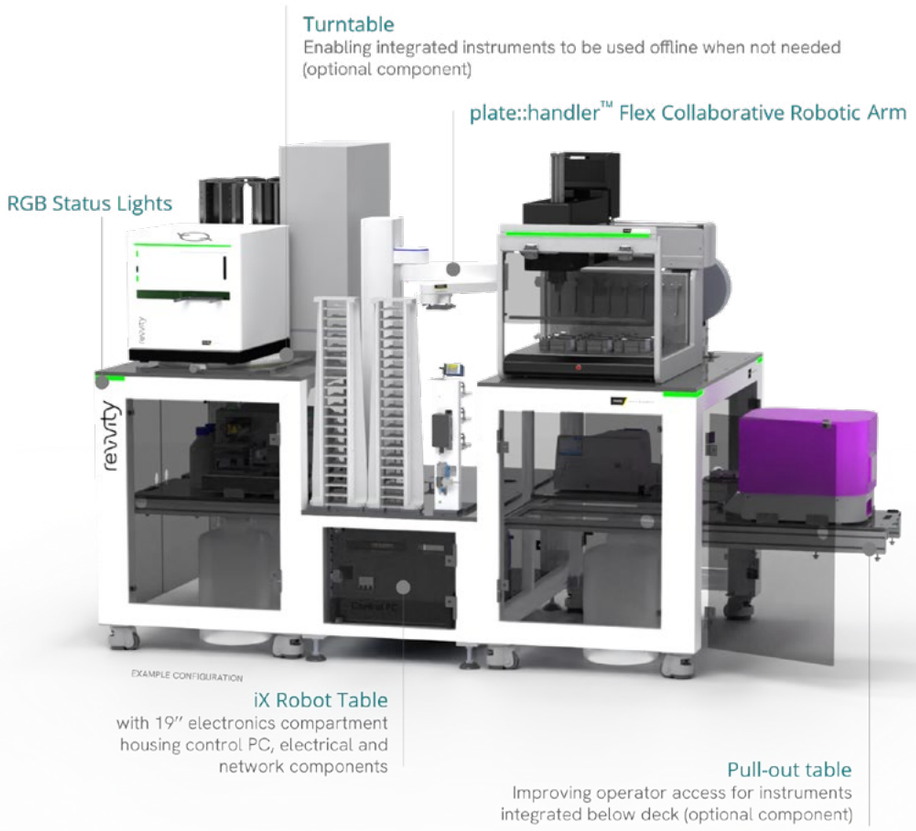
Our platefeeding and workcell solutions provide a cost-effective solution to automating plate handling and/or to streamlining basic workflows involving up to four instruments.



Configuration examples

Workstations and platforms

Engineered for optimal spatial efficiency, our custom workstations and platforms accommodates multiple instruments within a compact footprint while prioritizing operator interaction.



Space saving vertical integration

Example configurations

For research use only.
Not for use in diagnostic procedures.

plate::handler™ Flex robot

- Collaborative, four-axis SCARA robot with built-in safety features enabling side-by-side human-robot cooperation; no safety shielding needed
- Full metal casing, space saving design with motion controllers built into the structure of the robot
- Fast, fluid and quiet movements
- Built-in Servo gripper enabling robot to grip plates on either long or short side
- Hand guided teaching
- Robot available in 3 different heights (400, 750, and 1160 mm), and two different arm length with option to increase lateral reach by placing robot on a linear track (1 m, 1.5 m, 2 m)

From left to right: plate::handler Flex 400, plate::handler Flex 750, plate::handler Flex 1160

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plate::works™ scheduling and control software

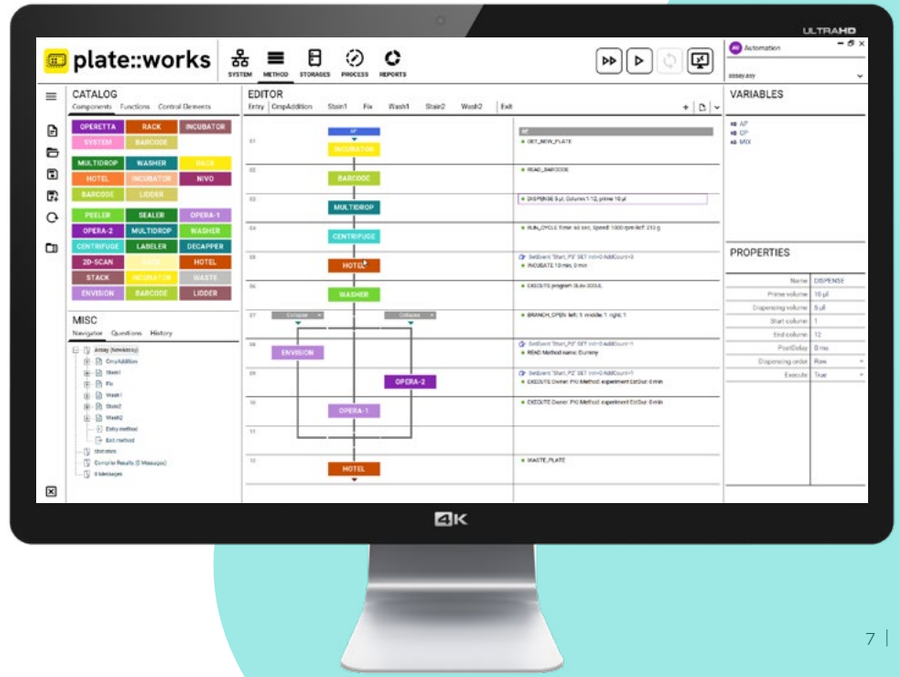
Building on over 20 years of experience

Launched in 1997 to support industrial high-throughput screening applications, plate::works™ scheduling software supports parallel execution of processes within one workcell as well as over multiple connected workcells. With plate::works™ to plan and to continuously optimize labware movements. With full sample tracking and an unlimited nuuber of transportation devices (robotic arms, turntables, grippers, conveyor belts,...) working in parallel and in a coordinated way to increase throughput and efficiency.

Flexible

plate::works'™ event-based scheduling concept, while fundamentally dynamic and hence able to adapt schedule to changes with execution times, instrument errors, in response to results, user changes, ... will empower operators to take fully control of method execution. With check points, branches and the option to fix timings for critical steps, adding a level of control needed to accommodate even the most challenging workflows. With plate::works™ scheduling software to increase operational efficiency by supporting an unlimited number of workflows processed in parallel.

Methods editor



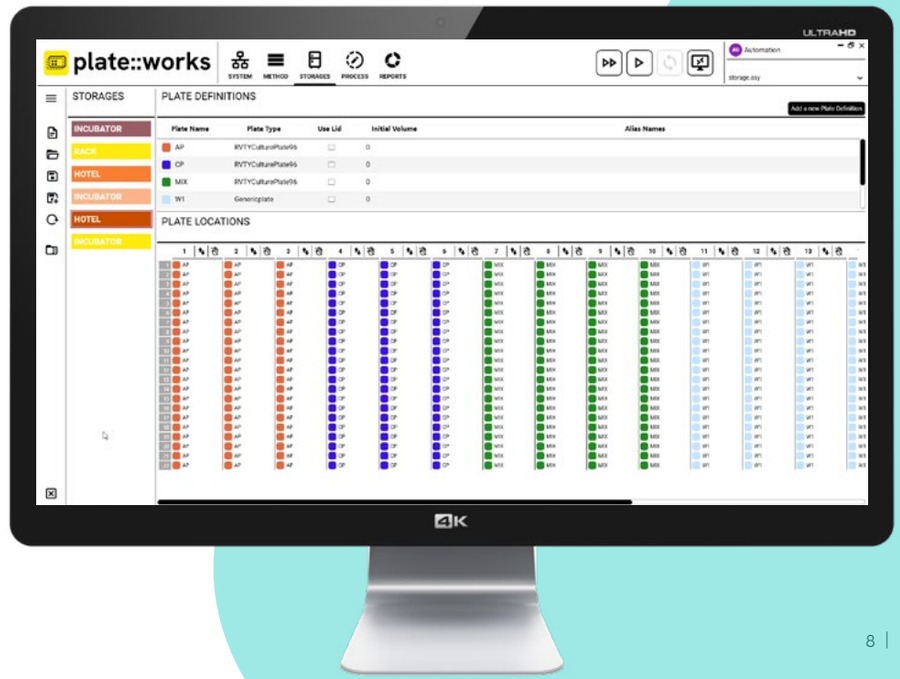
Easy-to-use

To create a new method, operators can drag-and-drop instrument icons to create a workflow. With plate::works™ scheduling software to guide users through the steps to set-up and parametrize automated processes. All labware movements to be planned, optimized and coordinated automatically by the scheduler. With all transportation devices to use speed settings and gripping positions stored in a central labware database. No need for operators to teach-in new plates and/or to plan and program labware movements.

Reliable

Originally developed to support 24x7 automation in an industrial screening environment, plate::works™ incorporates robust error handling mechanisms designed to recover from error situations, making a failed or to be aborted run an exceptional event. Advanced error handling routines will guide operators through the steps and options to get the system quickly back into operation.

Storage editor



Key features:

Event driven scheduling: Combines the advantages of dynamic and static scheduling, enabling operators to control and fine-tune scheduling by adding constraints and/or controlling elements.

Real time decision making & re-scheduling: Supports on-the-fly re-scheduling, allowing critical parameters to be updated at any time during a run, and plate processing to respond to external data or events (e.g., results, conditions, LIMS, scripts).

Parallel methods: Supports the execution of multiple independent methods in parallel.

Multiple robot support: Accommodates an unlimited number of robots and other plate-handling devices (e.g., conveyor belts, turntables, shuttle stations) to move simultaneously and in coordination. The scheduler automatically plans, optimizes, and coordinates plate transportation between instruments.

Continuous/on-demand processing: Supports continuous plate processing, allowing new plates and labware to be added to an already running process. Also supports on-demand plate processing, enabling the system to process plates as they become available.

Pooling: Treats multiple identical instruments as one logical instrument, simplifying programming and providing added redundancy.

Simulations: Allows quick optimization of workflows, enabling testing of different process variants and conditions, and verifying correct execution before committing time and reagents.

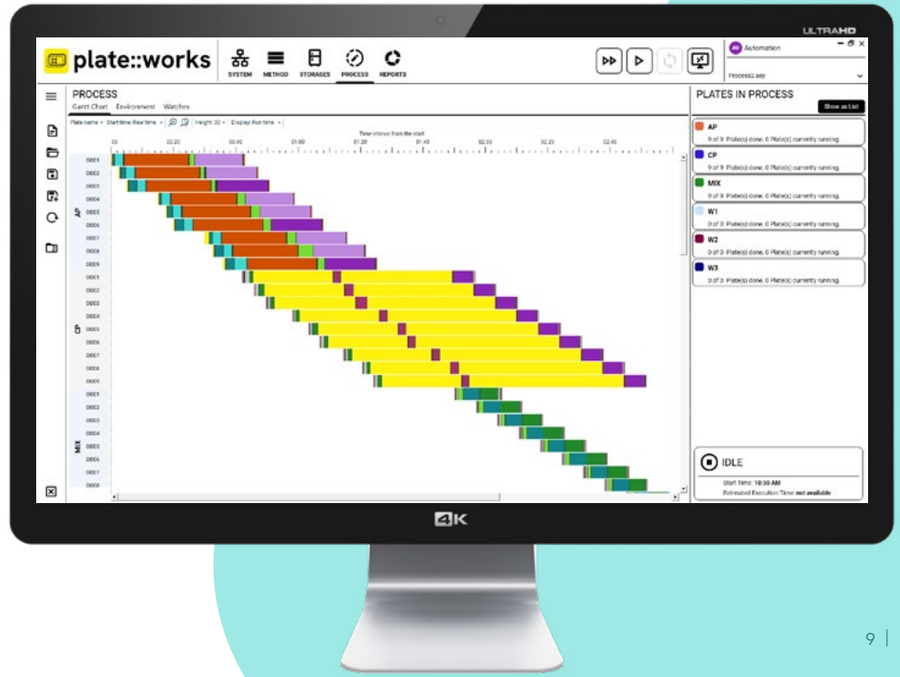
21 CFR 11 support: Enables the setup of regulated processes by providing user rights management and logging changes made to methods.

Worklist support: Plate/sample-specific parameters or conditions (e.g., incubation times, dispense volumes) can be read from worklists. Supports tasks such as cherry-picking, normalization, and other operations reliant on external information.

Scripting support: Allows operators to add custom functionality to the scheduling process.

Offline use: Enables operators to take critical detection instruments offline for manual use until the point where the instrument is required to support the automated process.

Gantt chart



job::manager™ workflow planning software

As part of plate::works, job::manager will allow (multiple) users to plan method execution over longer periods of time, with job::manager to automatically start methods at the scheduled time. Featuring a calendar view, job::manager provides an easy overview about workstation availability enabling operators to interleave multiple runs and/or to break down longer experiments (spanning over days or weeks) into smaller processes and routines which can be re-used.

Key features:

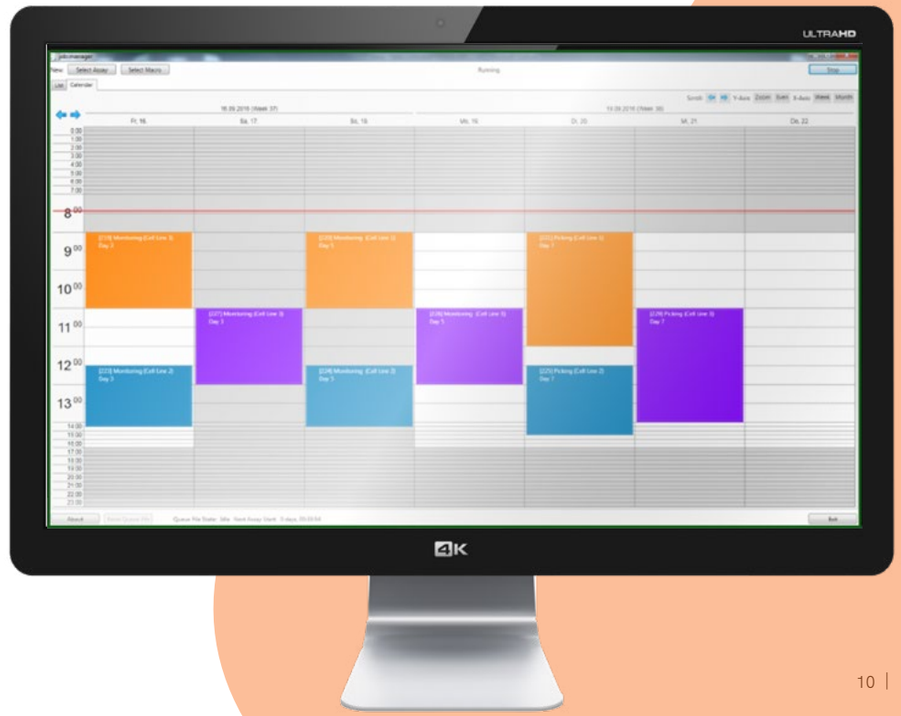
Improve equipment utilization: Plan and execute long-term processes while retaining flexibility to use system for other tasks.

Simplify method programming: Break down long-term processes (running over days/weeks) into more manageable modules.

Quickly set-up multi-day schedules and sequences: Macros to automatically add reoccurring tasks (e.g. daily media exchange) to schedule.

Outlook style "Calendar View": Software to warn users when a scheduled run is approaching.

Support multi-user environments: Inventory management functionality to show operators which positions e.g. in an incubator are already allocated and which are free to add new plates.



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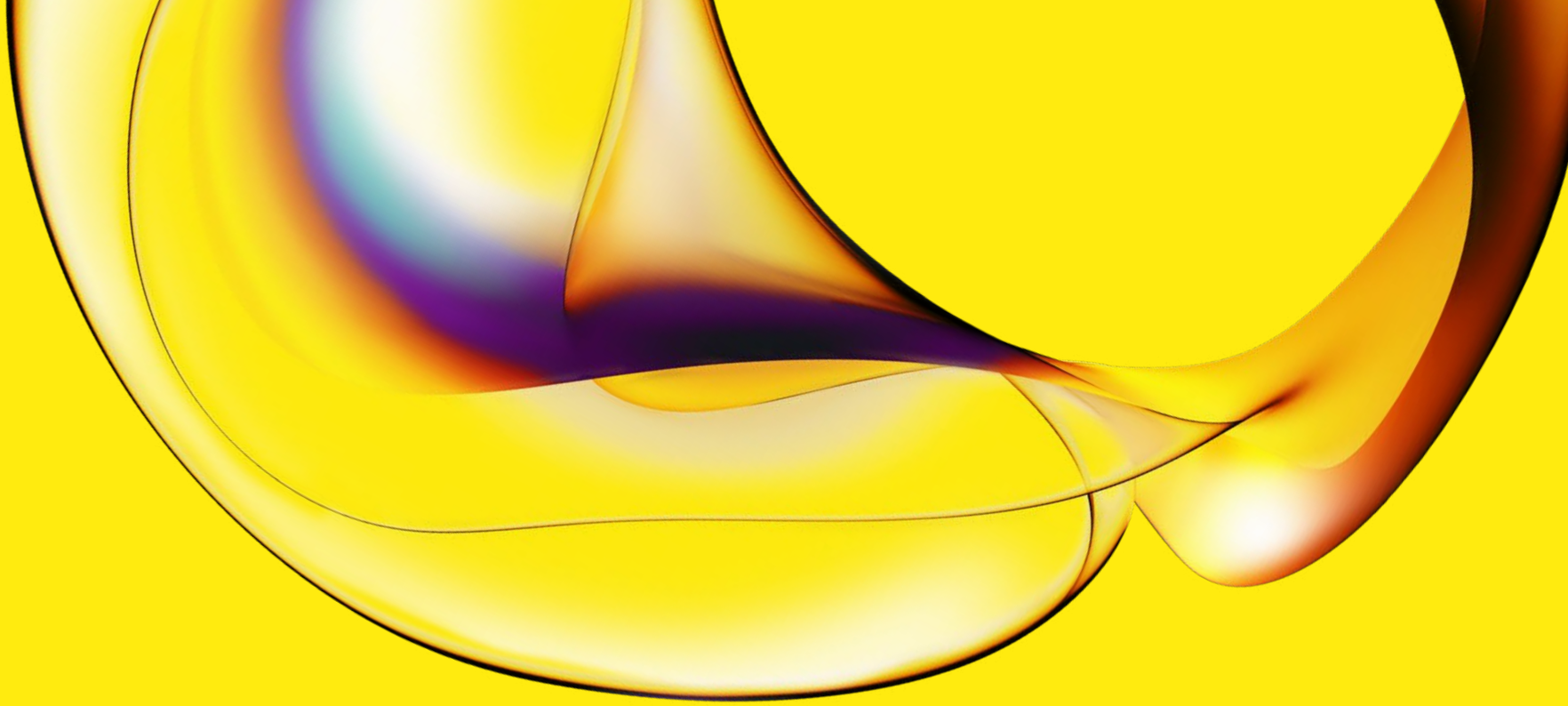
From platefeeding to complete workflow automation solutions

- Instruments and automation from a single source
- Over 20 years of expertise in both instruments and automation
- All workstations using the same hardware and software components



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