SPIL

THINKING ABOUT PROFITABILITY

SPIL CAPACITY PLANNING

Plan Smarter. Produce Better. Deliver On Time.

Optimize resources. Balance workloads. Maximize throughput.
Smarter capacity planning for flat glass fabrication.

SPIL Smart Capacity Planning

Accurate capacity. Realistic commitments.

Capacity Planning converts every order into the machine time it will genuinely consume. It measures capacity in minutes rather than square metres, applies thickness-based processing factors, accounts for setup, transition and dwell time, and schedules backwards from the shipment date.

TIME-BASED CAPACITY

Measure production demand in real machine minutes.

THICKNESS-AWARE

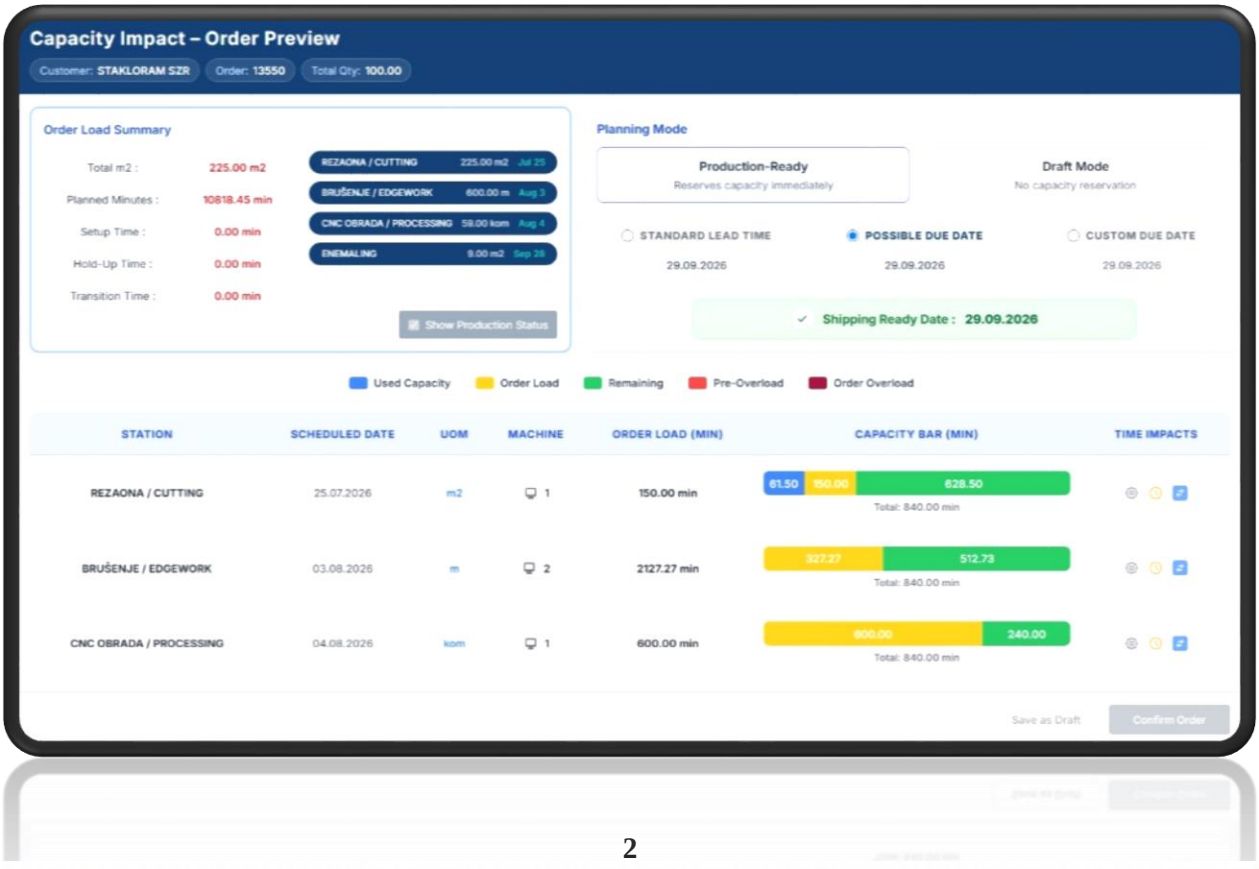
Apply realistic processing factors by glass thickness.

BACKWARD SCHEDULING

Plan from the committed shipment date backwards.

REAL-TIME VISIBILITY

Give sales and planning one shared capacity view.



Capacity Calculation Model

Capacity is measured in time, not area. Identical square metres of 4 mm and 12 mm glass consume very different machine time. SPIL replaces area-based assumptions with a calculated production load.

TIME-BASED CAPACITY	BASE CAPACITY
SQM x Base Time x Thickness Factor	**Shift Duration x Utilisation Factor**

Example: 480 minutes x 80% = 384 usable minutes per shift. The utilisation factor absorbs downtime, cleaning and minor stoppages.

Thickness-Aware Processing Factors

Glass Thickness	Processing Factor
≤ 4 mm	**1.0x**
5-8 mm	**1.2x**
10-12 mm	**1.5x**
> 12 mm	**2.0x**

Every Minute That Shapes the Schedule

CAPACITY-CONSUMING TIME

- Processing time - the core machine cycle
- Setup time - thickness, coating, tool or program changeovers
- Rework and scrap - included through an expected rework factor

Total Load = Processing + Setup

Effective Load = Planned Load x (1 + Rework %)

NON-CAPACITY-CONSUMING TIME

- Dwell time - cooling, curing and stabilisation
- Transition time - movement between production processes
- The machine may be free while the glass is not yet ready

Next Step Start ≥ Previous Step End + Dwell / Transition Time

Planning Methods

Choose a strict capacity ceiling or controlled overbooking, then schedule every process backwards from the committed delivery date.

CLOSED CAPACITY

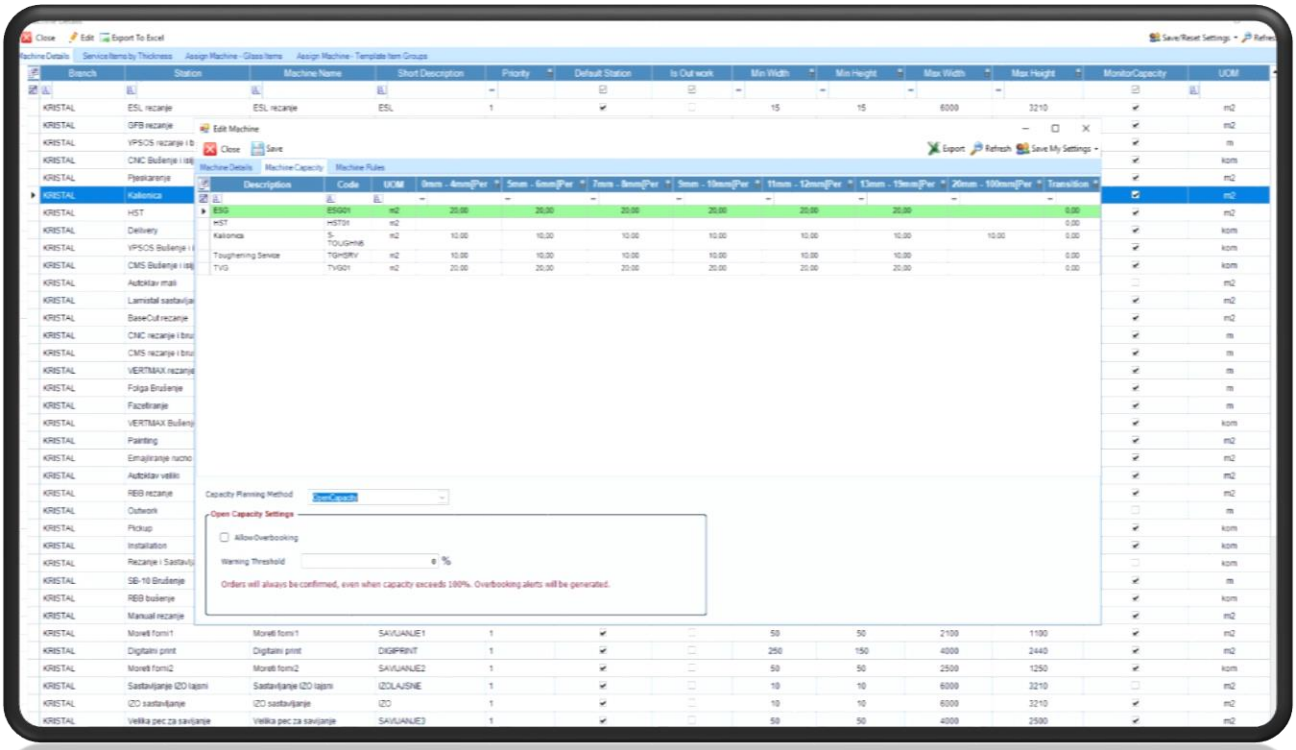
Machine and shift capacity is treated as a fixed limit. Once configured utilisation is reached, further orders move automatically to the next available slot.

Configuration: Max Utilisation %

OPEN CAPACITY

Orders may exceed nominal capacity up to a defined maximum. Orders above the warning threshold are clearly flagged; orders beyond the maximum are rejected or rescheduled.

Configuration: Allow Overbooking · Warning 100% · Max 120%



Intelligent Backward Scheduling

The shipment date is fixed first. SPIL then calculates every production step backwards to determine the latest safe start, reducing storage and handling without compromising the delivery commitment.

ORDER DRAFT MODE

Feasibility is confirmed and the requested shipment date is held as the deadline, but capacity is not reserved. Planner alerts are generated before the planned start. Capacity is booked only when production is confirmed.

PRODUCTION-READY MODE

Capacity is reserved immediately when the order is confirmed. The timeline is locked, and any stage exceeding daily capacity is automatically extended across additional days.

Worked Example - 1,000 sqm Due 20 October

Date	Production Stage
20 Oct	Shipment
19 Oct	Packing
17-18 Oct	Tempering
16 Oct	Processing - holes and cut-outs
15 Oct	Cutting and polishing

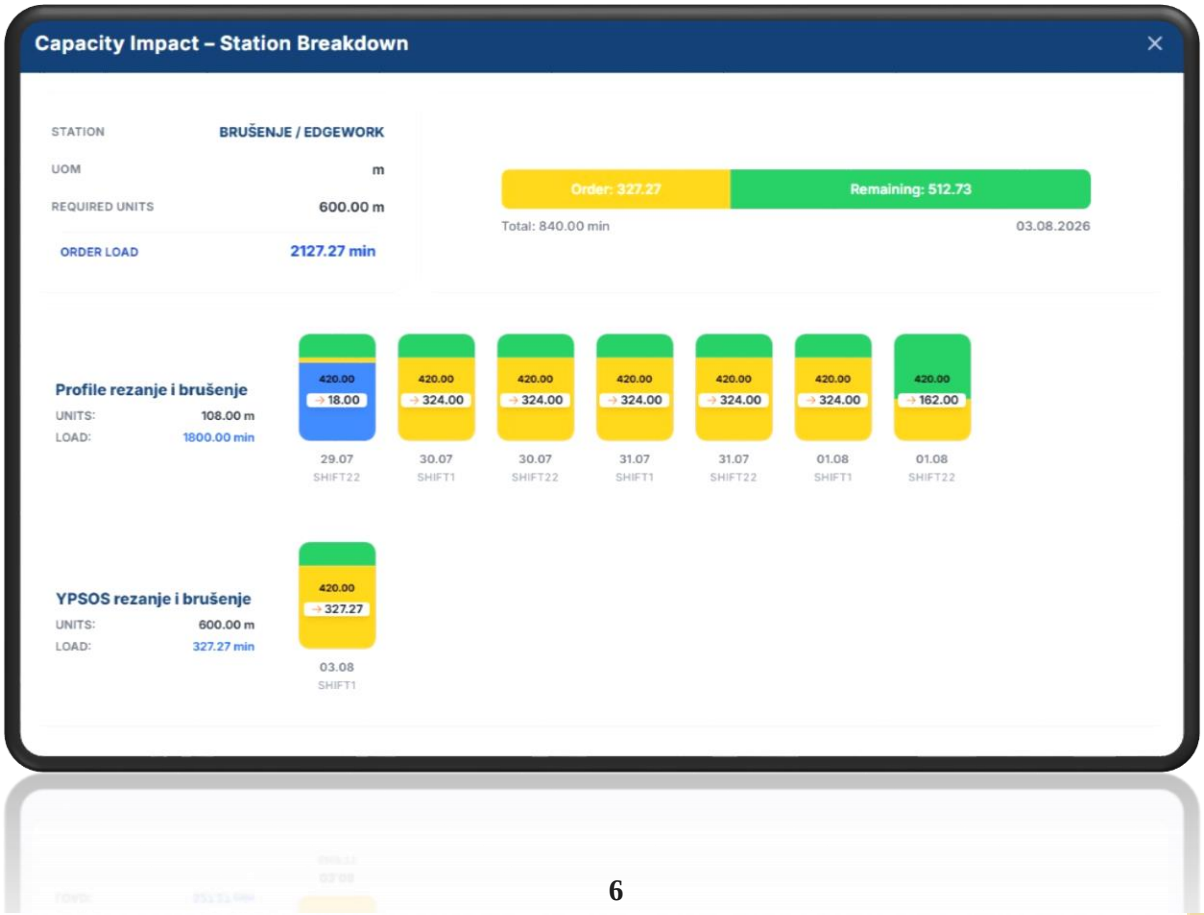
Cutting capacity is 500 sqm per day, so the system automatically allocates two production days where required.

Visibility and Control

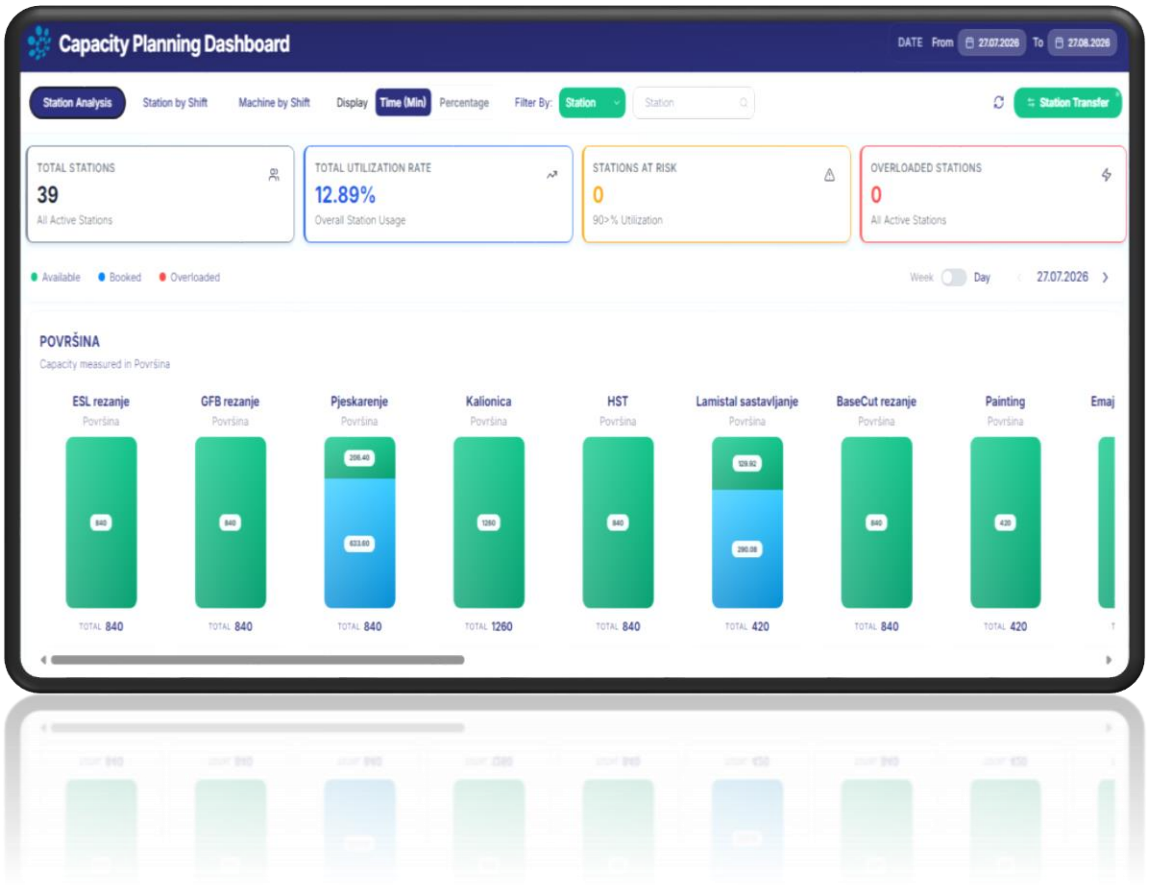
Capacity Impact Order Preview

Displayed before an order is saved, the preview shows available capacity, order load, remaining capacity and any overcapacity by production station. A summary panel provides total load, a recommended shipment date and a clear feasibility status.

Production Station	Available	Order Load	Status
Cutting	68%	22%	Feasible
Tempering	35%	48%	At Risk
IG Assembly	18%	41%	Overloaded



Real-Time Capacity Planning Dashboard



- Four KPI cards: total stations, utilisation rate, stations at risk and overloaded stations
- Three analytical views: Station Analysis, Station by Shift and Machine by Shift
- Colour-coded status: green available, blue booked, red overloaded and yellow above 90%

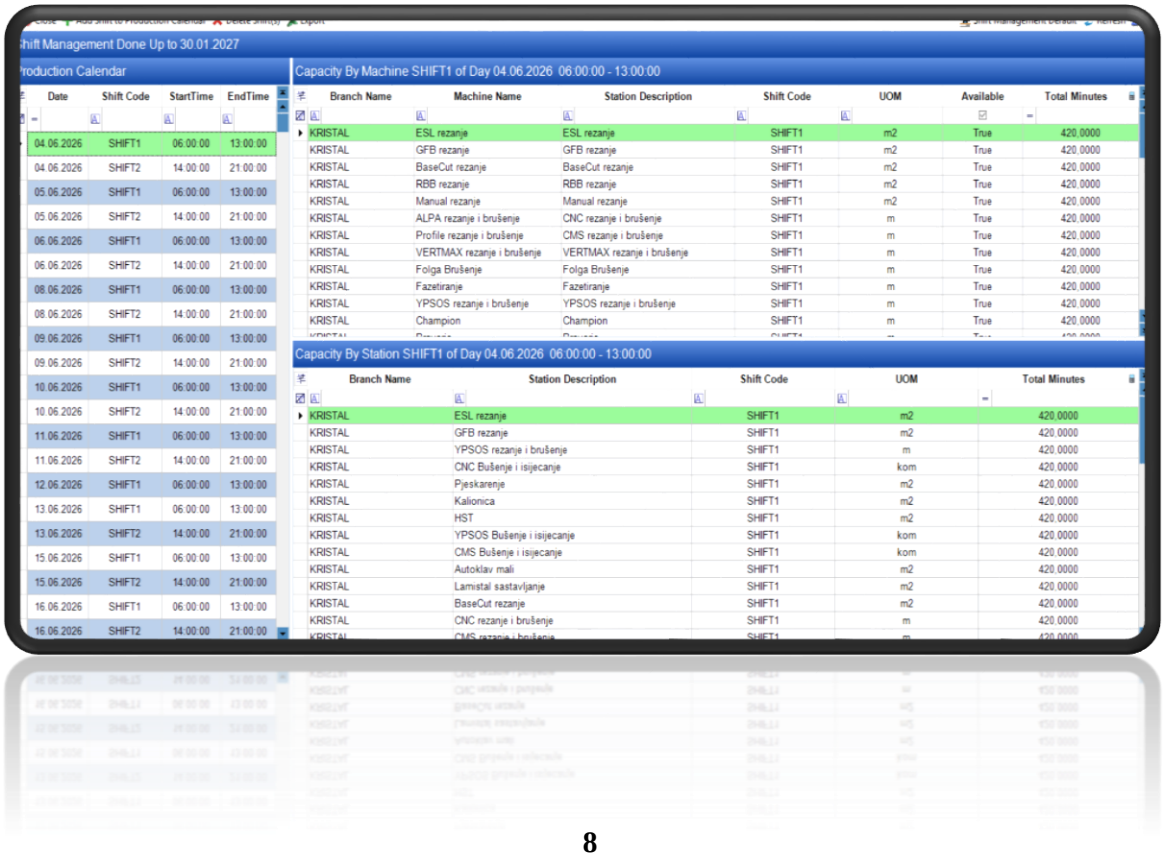
- Drill into any capacity silo for order and batch-level allocations
- Search stations, filter by unit type and switch between values and percentages
- Plan across three shifts: 6am-2pm, 2pm-10pm and 10pm-6am

Business Outcomes

REALISTIC FORECASTING Machine-minute commitments, not guesswork.	**SHARED VISIBILITY** One production picture for sales and planning.	**CONTROLLED OVERBOOKING** Urgent work without hidden overload.
THICKNESS-AWARE LOAD Heavy glass is planned as heavy glass.	**LOWER WIP** Late-start scheduling reduces storage.	**BETTER DELIVERY** More reliable customer promise dates.

Module Structure

Maintenance: Planning Defaults · Shift Management · Machine Defaults · CP Services Defaults **Enquiries: Capacity Planning Dashboard**



Testimonials

Brandon and Peter- Directors
WA GlassKote, Perth – Western Australia

Today, we are Perth's largest manufacturer of glass splashbacks and have now expanded into large format porcelain tiles without the need for further software investment. We recommend contacting SPIL Software and discussing ways to increase your profits.

Steve Reynolds – IT Manager
Chevron Glass Pty Ltd, Adelaide – South Australia

The dedicated SPIL Glass team worked closely with Chevron Glass staff and continue to do so, offering efficient program development and communication with key Chevron staff. A good working relationship has been established and continues to develop.

Christian Auer - Head of IT
Rottler und Rüdiger und Partner GmbH – Germany

Our main company is Rottler und Rüdiger und Partner GmbH, a manufacturer of special machinery for IGUs' and MPK Modelle profile Konfektion GMBH is our subsidiary supplier of final material components for IGU manufacturers and for that we use enhanced features of SPIL Opti to produce those profiles.

Contact & Support

We’re here to help. Reach out to our team for sales, support, or general enquiries across Australia and the USA.

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