



delaware

# the ultimate playbook for mill products

innovate, automate, and  
optimize your workflows FAST

we commit. we deliver.

# table of contents

industry overview	3
industry challenges	5
FAST mill products	7
faster time-to-market	9
improved shop floor control (MES)	10
optimized production planning	11
conclusion	12
the delaware difference	13
contact us	14
appendix - solution components	15
Mill Products Best Practices for SAP S/4HANA	17
Predefined Product Structures for Sheet-Fed Products	17
Technical Document Interface	17
Engineering Cockpit	18
Pricing Cockpit	18
SAP-JDF-Interface for Prepress Workflow Management	18

SKU Cockpit	19
Sales & Distribution Cockpit	19
Sequence/Combined Production Planning Cockpit	19
Composer	20
Roll Management Cockpit	20
PP/DS Extensions for Specific Scheduling Requirements	20





# industry overview

## Technology innovations are disrupting the mill products industry.

True, the technology of making various packaging products is well-known and has been around for a long time, but that's not the full story. The mill products industry is a varied, complex, highly technical, and fast moving sector - one that's embracing innovations throughout the entire value chain. Digitalization is becoming a vital requirement to connect machinery with the IT systems to integrate and automate business processes.

Though not often noticed, mill products is also crucial to the engines of commerce. At the heart of any developed economy is mill products. It's part of how logistics and supply chains operate and how goods are delivered.

All our consumer goods, health care products, and any product requiring holding, displaying, delivering, or even branding require some sort of printed packaging. Printing and packaging is simply everywhere: from highly converted cartons for perfume flacons with hidden product security marks to ensure brand protection to cartons for drugs which include embossed braille for sight-challenged individuals to flexible packaging for crisps and chocolate bars to bags for pet food and even pouches for sensitive medical devices to point-of-sales displays. With commercial printing, the expansive variety of printing and finishing technologies continues: decor printing for laminated floor panels, offset printed brochures, magazines, books, digitally printed labels, and security printing for money bills and passports, just to name a few.



## With industry best practices and end-to-end digital workflows, mill products companies achieve:

- **Lower implementation costs** because industry processes are available pre-configured, right out-of-the-box
- **Increased productivity** through automation, functional cockpits, and digital workflows
- **Reduced waste** due to combining orders on one roll or sheet
- **Increased capacity** due to less rework and optimized scheduling
- **Decreased ERP implementation risks** because of proven industry best practices on standard SAP S/4HANA
- **Reduced reliance on Excel spreadsheets** and offline, ad hoc databases
- **Improved compliance** with regulations and new legislation through agile digital workflows

Successful companies possess efficient, effective, and agile business processes across their entire value chain. FAST mill products helps mill products companies achieve these capabilities with industry best practices right out-of-the-box.





# industry challenges

Are these challenges and pressures familiar?



**Entrenched technical debt**



old, obsolete, and unstable legacy systems and platforms that are highly customized and not upgradeable



**Inadequate functionality for industry processes**



Industry best practices not available in standard software functionality



**Predominance of manual processes and workarounds**



Stop gap manual interventions to compensate for substantial gaps in processes and functionality



**Disparate data silos**



issues with master data like management of SKUs and product specifications

## Why now...

Because technology modernization with digitalization is becoming a vital requirement to produce the tangible business outcomes needed to drive profitability and growth. Seamlessly connecting machines (IoT) to end-to-end business processes while integrating specs and data into digital workflows enable automation of business processes.



**lower costs**



**increase revenue**



**ensure operational excellence**



# best practices for real business outcomes

“The delaware FAST mill products solution reduces cost, waste, and downtime to help expand margins and enable future growth through faster production cycles and increased capacity.”



# delaware's FAST mill products solution

delaware's FAST mill products is an integrated end-to-end ERP solution for the mill products industry based on best practice industry processes. It is built on and powered by standard SAP S/4HANA. Through digital workflows and business process automation, FAST mill products is a game-changing technology platform.

## Solution Proposition:



### Faster Time-to-Market

- Based on SAP Mill Industry best practices
- Pre-configured solution components
- Best practice business processes standard in SAP S/4HANA



### Improved Shop Floor Control

- Automation
- Traceability
- IoT integration
- Digital workflows



### Optimized Production Planning

- AI-enabled sequencing
- Dynamic scheduling
- Combined orders to reduce waste
- Pre-configured Industry Master Data Model



## The delaware FAST mill products solution is pre-configured with best practices specific to the mill products industry:

- Flexible data model with master data control over SKUs
- Manufacturing Execution System (MES) with specific industry functionality
- Smartly designed solution components
- Functional cockpits (grouping of transactions to accelerate transactional processing)
- Product lifecycle management
- Configure-Price-Quote (CPQ) processes
- Make-to-Order processes
- Engineer-to-Order processes
- Robust business intelligence to optimize planning and scheduling
- IoT (Internet of Things) integrations
- CAD software integrations for better control over design, graphics, and artwork

The solution empowers users to create flexible master data through the complete product lifecycle. It enables rule-based validation of customer requirements against manufacturing capabilities, enabling exceptional control of processes on the shop floor, and then optimizes bill of material (BoM) creation and routings. By digitizing workflows, it facilitates the combining of production orders through its AI-sequencing capabilities for detailed scheduling.





# faster time-to-market

Because mill products best practices have been integrated into standard SAP S/4HANA, very little customization, if any, is needed to implement the delaware FAST solution. Standard processes are available right out-of-the-box with pre-configured solution components specific to the mill products industry. This means that implementations are significantly faster.

“ Implementations are typically **40% faster** because out-of-the-box mill products best practices eliminate the need for major customizations. ”

The FAST solution has been designed and refined by mill products professionals over the course of 25 years. Because of this deep-domain expertise, what works has been built directly into the solution while what does not work has been left out.

More than just speed and accelerated implementations, faster time-to-market also decreases TCO because reducing the number of customizations and enabling the adoption of best practices lower costs throughout the entire software lifecycle:



Less expensive projects



Faster time-to-value



Reduced development costs



Reduced maintenance costs

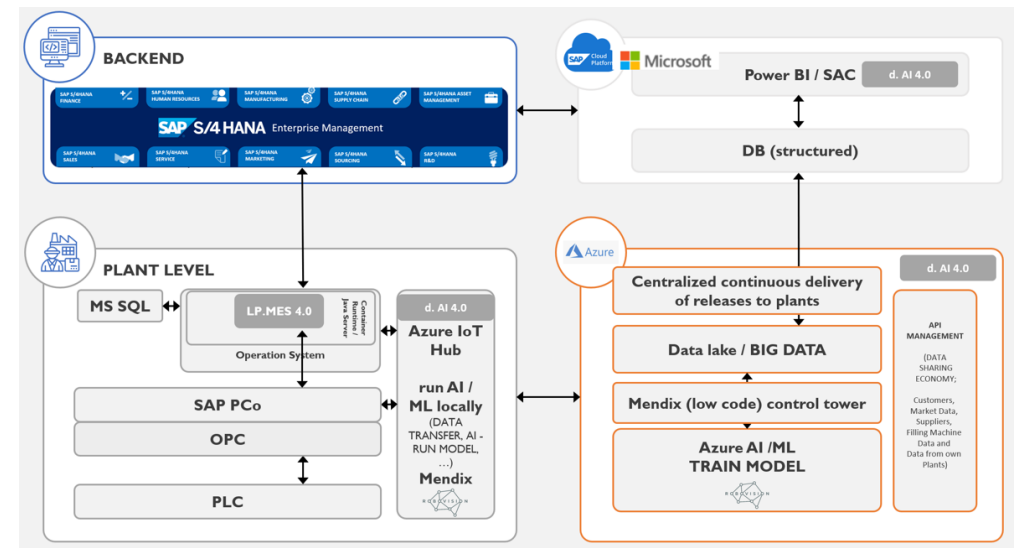
# improved shop floor control

FAST mill products' Manufacturing Execution System (MES) automates shop floor data collection with IoT-based batch and handling unit (HU) with managed GI/GR material flow, time, yield, and waste confirmations and integrated quality inspection result recording:

## delaware offers an MES tailored for the mill products industry

- Single-/multi-plant cloud or on-premise deployment depending on customer business needs
- Addresses all requirements of shop floor data collection including HU-based material movements including GI & GR, label printing, quality inspection, and end-to-end batch & HU traceability
- Provides industry 4.0 capabilities with Sensor/PLC integration, visual and quality control, predictive PM/QM & OEE reporting
- delaware MES can be deployed on SAP MII, SAP BTP, or MS Azure (roadmap)

## Industry 4.0 NOW ready MES Architecture



Automation of SAP transactions within end-to-end digital workflows cuts processing time by 90%. For example, material setup can be reduced from 20 minutes to under 2 minutes.





# optimized production planning

**Scheduling production runs is one of the most important and complex processes within mill products.** The delaware FAST product data model plays an important part in the powerful planning functionality the solution offers for single or family packaging SKUs. It supports product specification lifecycle management with version and status control and integrates with packaging design software for structural and graphical one-up and sheet/roll layouts.

The master data model is at the core of FAST's production planning and scheduling capabilities. Using dynamic parameters and real business intelligence, the FAST platform supports AI-enabled order sequencing and combining of orders. With these capabilities, the operator can process multiple SKUs (two or more different SKUs on the same run) with similar coloring and structural designs on one sheet or roll, thereby eliminating unnecessary color and tool changes.

Other solution highlights include:

- Automating and accelerating co-printing decisions for short-run SKUs to increase run length to achieve higher output rates
- Reducing setup waste and make-ready time by decreasing ink and tool changes through improved product family campaign planning
- Leveraging alternative manufacturing layouts and work centers to reduce idle time in case of raw material shortages

Optimizing scheduling can bring tremendous value to operators. Combining multiple packaging designs increases capacity and reduces waste, leading to major costs savings for customers because of the costs and time involved in color and tooling changes. Finally, seamless IoT integrations with robots handling sheets and rolls enable full business processes automation (no need to manually key in data).



**Increase capacity  
and throughput**



**Increase  
productivity**



**Reduce  
waste**



**Faster  
turnaround**

# conclusion

FAST mill products is pre-configured with industry best practices; built on and powered by standard SAP S/4HANA.



Faster  
time-to-market



Improved shop  
floor control



Optimized production  
planning

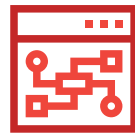
Delivering lower TCO and operational savings with connected end-to-end business processes, digital workflows, and expanded transaction processing through operational cockpits and industry-specific functionalities

# why choose us? the delaware difference



## Pre-configured solutions

SAP certified accelerators built on best practices - we call them our FAST solutions



## Deep industry knowledge

Specializing in complex mill products industry



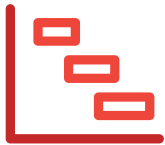
## Experienced consultants

Our subject matter experts have 15+ years of implementation experience



## Best practice process framework

Business processes that are tested and validated to be industry best practices



## Project implementation governance, methodologies and tools

We bring everything you need to make your project a success



## Training academies

Curriculum, documentation, demonstrations, and hands-on exercises ready for roll-out to project teams or end users



## Consistent track record

delaware has over 20 years of successful SAP delivery



## Speed & agility tied to a business case

Leading the industry in speed of solution realization and program delivery tied to a robust business case

3500+ employees across 31 offices in 16 countries





If you'd like to learn more about delaware's FAST mill products solution, please message either John Gretter or Harbert Bernard

### Our experts



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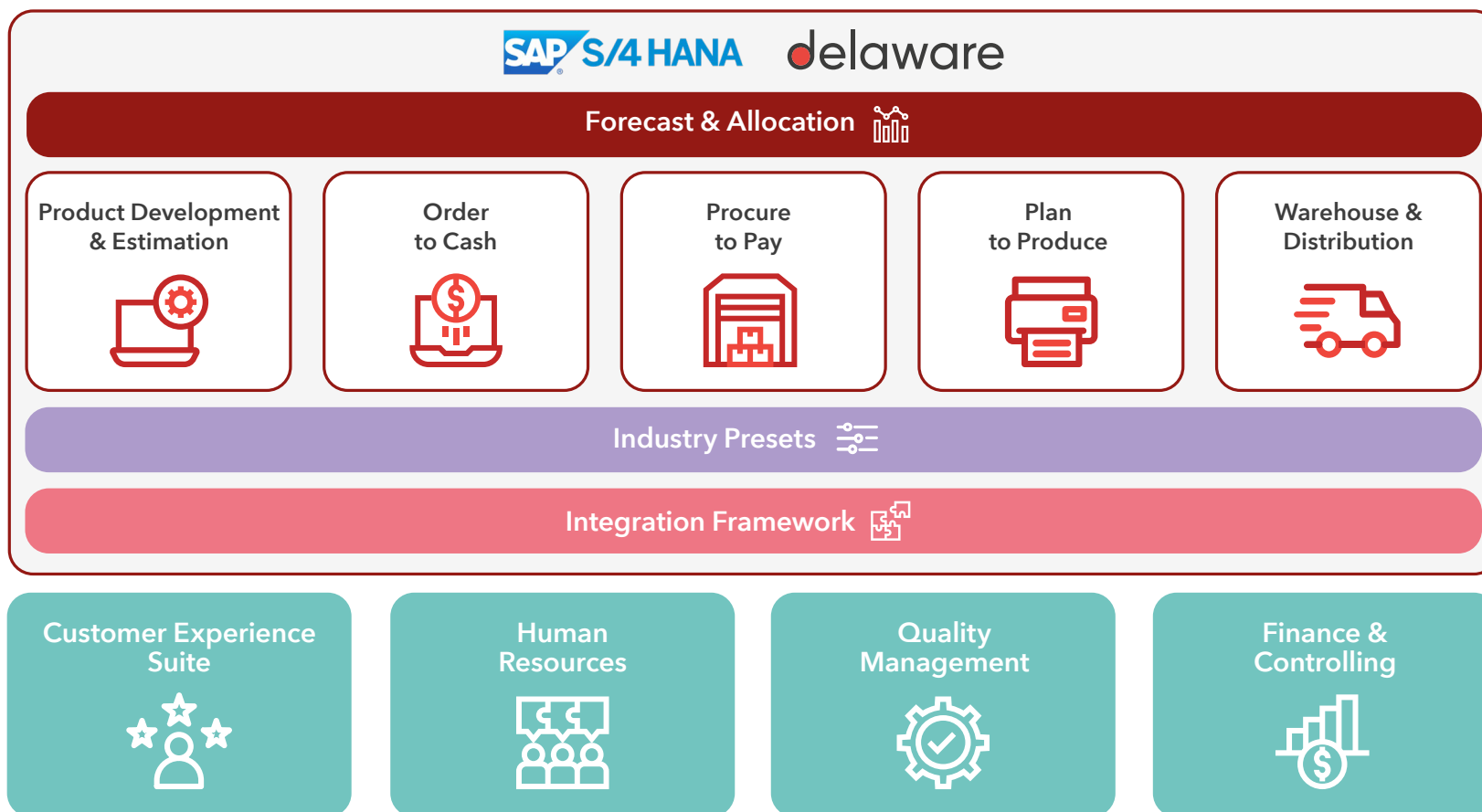
**we commit. we deliver.**

# appendix

12 solution components in delaware's FAST  
mill products solution for those looking for  
more details



The delaware FAST mill products solution is designed to meet business requirements “out-of-the-box” by providing pre-configured settings for industry best practice processes. It covers financial accounting, controlling, engineer-to-order, configure-price-quote, sales and service order management, materials management and procurement, production planning, process optimization and execution, quality management, and warehousing and shipping - with a flexible data model for each micro-vertical in the mill products industry.



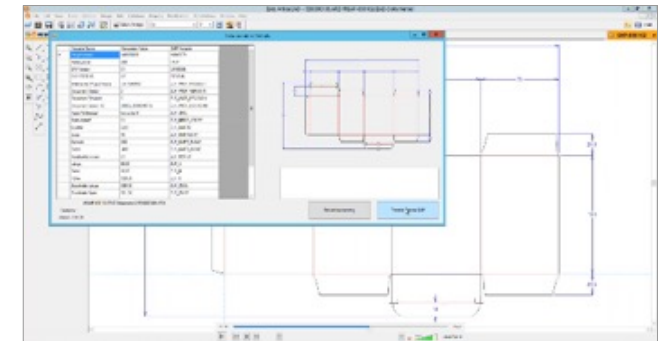
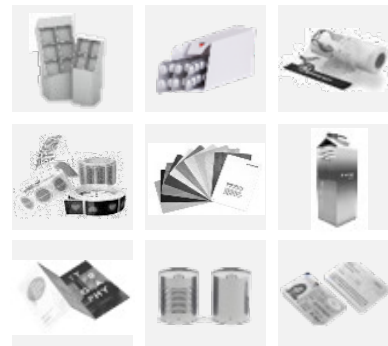
As a comprehensive industry solution with built-in industry best practices, standard right out-of-the-box, companies experience the lowest possible total cost of ownership (TCO).



# solution components

A pre-configured solution enriched with solution components on SAP S/4 standard core.

Cockpits to group along functional processes and automate standard processes:



## Mill Products Best Practices for SAP S/4HANA

Provides predefined configuration settings for core end-to-end business processes and functions.

## Predefined Product Structures for Sheet-Fed Products

This component for single or multiple parts products includes configurable assembly copy masters for various mill products products, which enable a process-oriented specification of all production resources for single and multipart products with SAP S/4HANA standard transactions.

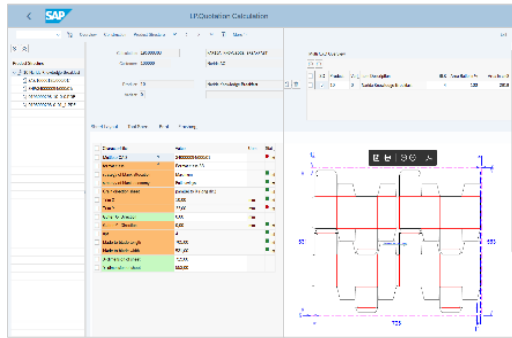
## Technical Document Interface

The interface exchanges specification data between SAP S/4HANA and technical systems such as CAD systems for the creation of structural or graphical one-up designs and sheet layouts.



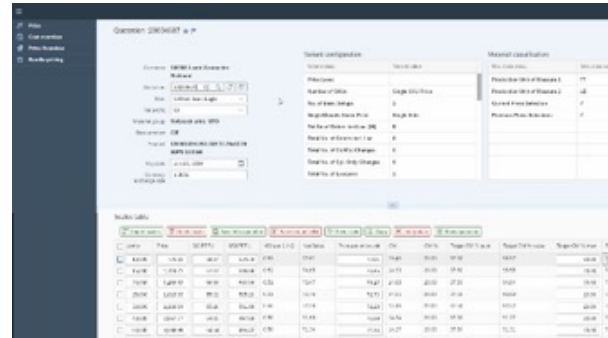


# solution components



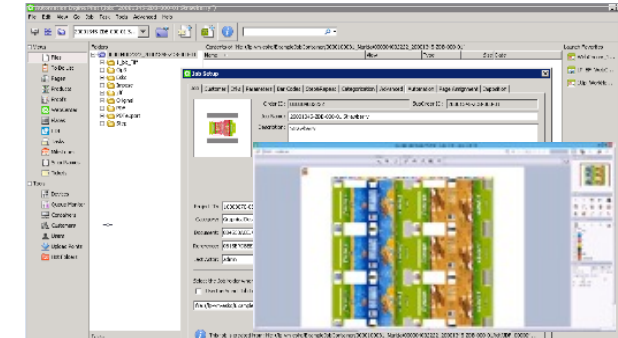
## Engineering Cockpit

Engineering Cockpit with the optional online integration of CAD systems for the automated calculation and optimization of the one-up design using in-house developed structural design templates.



## Pricing Cockpit

Sales price determination tool includes functionality for creation, display of scale quantities, and technical variants in parallel. Individual price strategies can be configured. Agreed sales prices can be downloaded or saved as condition records.

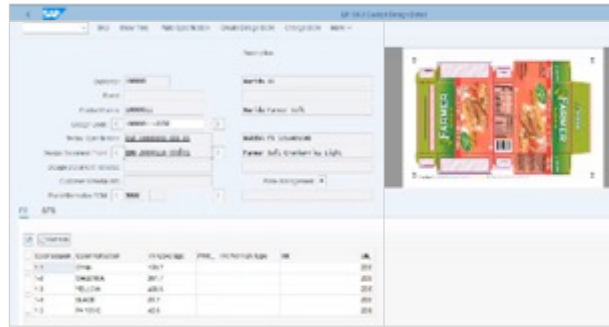


## SAP-JDF-Interface for Prepress Workflow Management

The JDF integration of the EskoArtwork Automation Engine with SAP S/4HANA enables a bi-directional data exchange, status monitoring of prepress jobs, and triggers step & repeat tasks as well as tool production automatically.

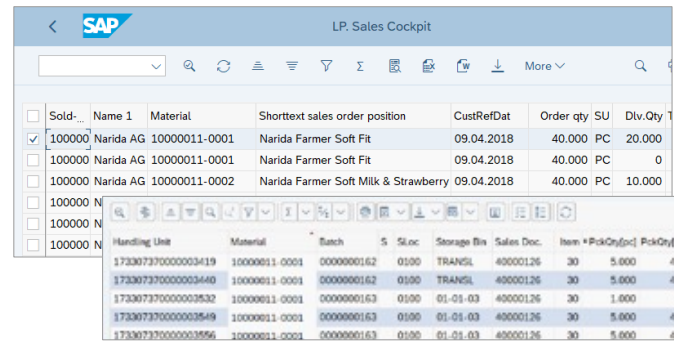


# solution components



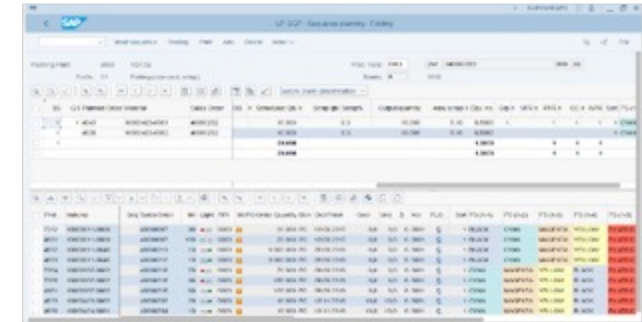
## SKU Cockpit

The SKU Cockpit enables the specification and automatic creation of multiple SFG or sales items (SKUs) in multiple organizational entities in parallel, including specification documents and printing tool specifications (e.g. offset, flexo or roto printing tools) as well as the customer material information record.



## Sales & Distribution Cockpit

The Sales Cockpit supports the creation of call-offs and delivery creation scenarios in 1 or 2 steps (direct picking or later) as well as the creation of consignment deliveries.

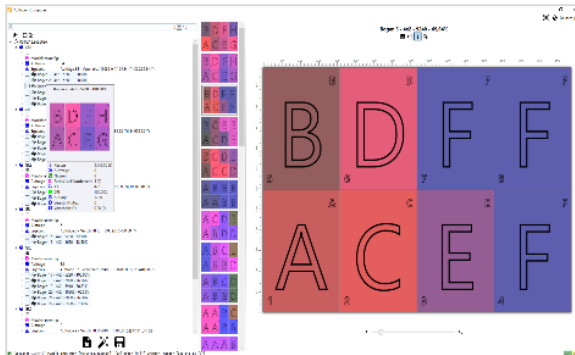


## Sequence/Combined Production Planning Cockpit

The Sequence Planning Cockpit supports work scheduling to sequence or combine planned orders (mill order) with the objective to reduce make-ready and change-over times within printed and unprinted product families. Trimming or composing tools can be integrated to reduce waste.



# solution components



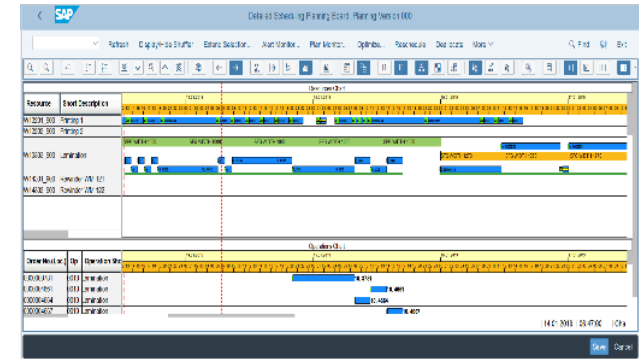
## Composer

The Composer imports pre-selected sales orders for SKUs of a given product family from the Sequence Planning tool to compute the optimal sheet/roll imposition by taking into account the order quantity per SKU, the available material, or tool dimensions and color rotation.



## Roll Management Cockpit

The Roll Management Cockpit enables the characteristic-based search and display for MTS and MTO manufactured handling unit stock, batch classification, and handling unit data in one screen. Furthermore, it is possible to assign free available rolls to sales and production orders, to deallocate rolls from customer stock into free available stock, or to reassign them to a different customer stock.



## PP/DS Extensions for Specific Scheduling Requirements

The functionality extends the integrated production planning and detailed scheduling functionality in SAP S/4HANA (PP/DS) for reducing automatic setup time calculation considering selected product configuration characteristics, which have an impact on the make-ready/change-over time calculation.





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