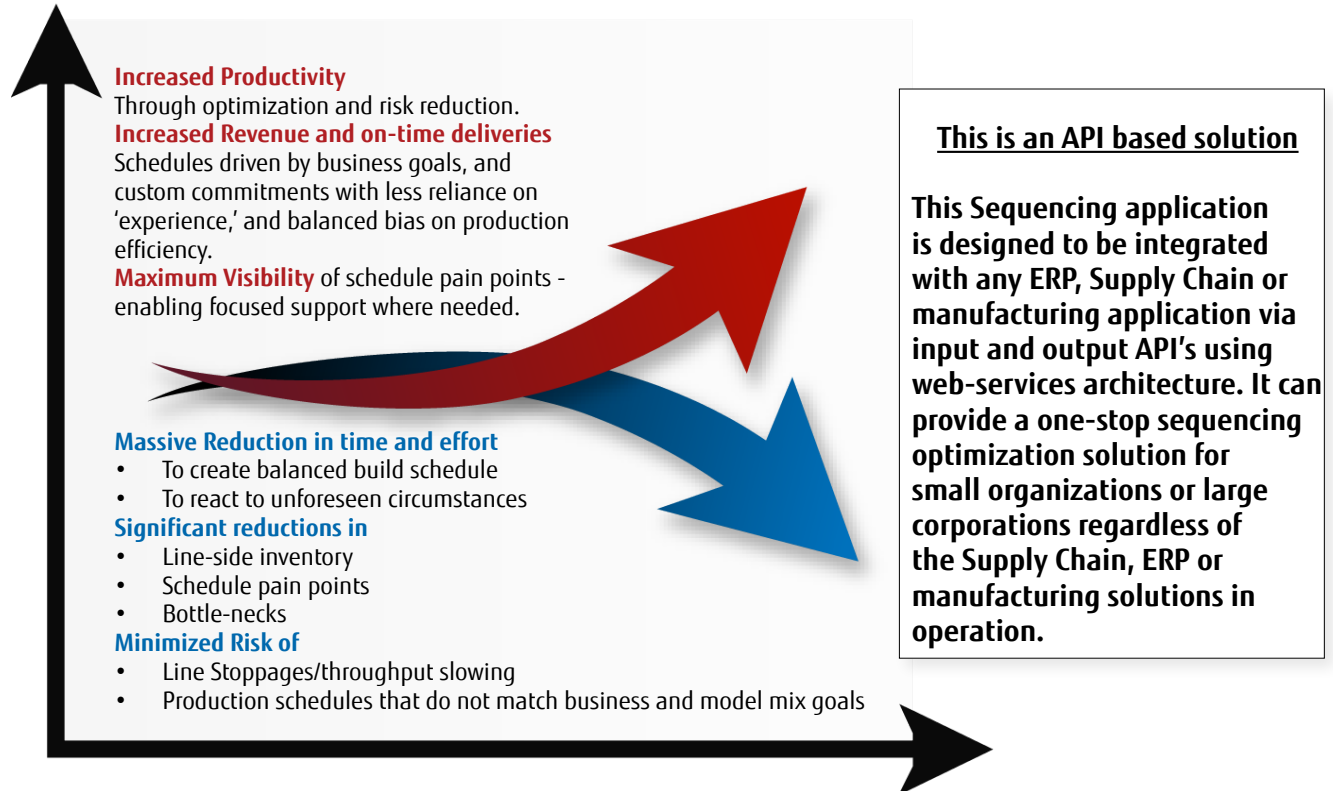# SEQUENCING

The GLOVIA G2 Sequencing application is designed to rapidly identify the optimized production sequence of mixed model orders flowing down a production line or through a manufacturing cell.

Increased Productivity
Through optimization and risk reduction.
Increased Revenue and on-time deliveries
Schedules driven by business goals, and custom commitments with less reliance on 'experience,' and balanced bias on production efficiency.
Maximum Visibility of schedule pain points - enabling focused support where needed.

Massive Reduction in time and effort
• To create balanced build schedule
• To react to unforeseen circumstances
Significant reductions in
• Line-side inventory
• Schedule pain points
• Bottle-necks
Minimized Risk of
• Line Stoppages/throughput slowing
• Production schedules that do not match business and model mix goals

This is an API based solution

This Sequencing application is designed to be integrated with any ERP, Supply Chain or manufacturing application via input and output API's using web-services architecture. It can provide a one-stop sequencing optimization solution for small organizations or large corporations regardless of the Supply Chain, ERP or manufacturing solutions in operation.

What would typically take a highly experienced planner many hours, can be accomplished in minutes using the GLOVIA G2 Sequencing application.

The rapid provisioning of schedules in complex business scenario's using automatic optimization routines are at the heart of the G2 sequencing capability.

Highly visual capabilities allow planners to quickly assess multiple simulated plans.

Where appropriate - drag and drop simulations can be used with either individual or 'blocks' of orders during the fine tuning of the final production schedule.

Highly flexible constraint rules allow manufacturers and assemblers to build optimization rules that are personal and specific to their business. These optimization rules are then deployed in the sequencing routines to create a balanced and optimized production schedule based on multiple factors that typically include:

• Ensuring customer delivery and factory production commitments are maintained,
• Eliminating the risk of stopping production,
• Achieving model-mix targets to ensure revenue and profit goals, and,
• Maximizing production efficiency.
• Avoiding Assembly Line backups and bottleneck Work Stations
• Ensuring Consistent production Takt Times

Simulations and 'visual scorecards'

'In-memory' simulation capabilities provide the ability to very quickly create multiple 'what-if' simulations using multiple scenarios, multiple rules, and, multiple iterative 'layers' of optimization.
The color displayed against each scheduled 'slot' provides a visual 'scorecard'. This allows the user to quickly assess different simulations. It also allows them to home in on any areas where improvements in one or more of the critical optimization indicators may be required.

Mouse-over capabilities provide access to the full details of any conflicts that may be resulting in a low level of business optimization. The schedules in these areas can then be re-scheduled by changing the emphasis in the optimization layers and rules, or, by a manual drag and drop. The drag and drop process provides the ability to immediately simulate what the result will be by 'hovering' over any number of slots to test what the optimization result will be. The 'hover' capability provides both the visual scorecard and details of the optimization conflicts on ALL slots affected by the move.

Each simulation can be saved or discarded and will not affect the current production schedule until a simulation is specifically selected to update the current production schedule.

Before Optimization   **After Optimization**

Optimization rules that are flexible and personal to the business

Optimization rule definitions are built by users within the GLOVIA G2 Sequencing application and do not require programming skills.
To meet the needs of the constantly changing business environment, and, provide continuous improvement – optimization rules can be quickly and easily added, maintained, enabled and disabled.
Examples of scenarios and rules that can be defined when developing the optimized plan:-

- Customer delivery commitments,
- Business Revenue and profit objectives,
- Component and Raw Material Supply constraints,
- Line-side storage and Feeder Line restrictions,
- Supplier Delivery Schedules,
- Model complexity and Build difficulty,
- Tooling and 'Change-over' considerations,
- Unplanned plant disruptions,
- Health and Safety considerations,
- Skills, shifts, workday & maturity plans.

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