

Miba Industrial Bearings Intuiflow – (DBR+/R+)



The Team Behind the Change



Angela Cassidy is the Supply Chain Manager for Miba Industrial Bearings OE, where she leads end-to-end supply chain activities across two facilities, covering demand and supply alignment, capacity planning, inventory strategy, and customer service improvement.

She brings more than 15 years of experience across procurement, production planning, inventory management, logistics, and multi-site manufacturing operations. Her background includes leading supply chain transformation efforts, implementing new planning methodologies, and developing strategic stocking and supplier programs.

She is APICS CSCP certified and passionate about building strong teams and creating scalable supply chain solutions that deliver measurable results.

JoAnn Davies is the Master Scheduler for Miba Industrial Bearings OE, where she has spent the past four years driving production planning and coordinating schedules, resources, and inventory to keep manufacturing running efficiently.

She brings 29 years in supply chain and operations experience. Sixteen of those were in over-the-road logistics and freight brokerage, building expertise in transportation management and freight consolidation, followed by eight years supervising shipping and receiving operations, where she led inventory control and warehouse teams.

Throughout her career she has built a strong reputation for organization, communication, and driving operational efficiency across the supply chain.



MIBA INDUSTRIAL BEARINGS US OE – Our Markets and Products



**ENERGY
GENERATION**



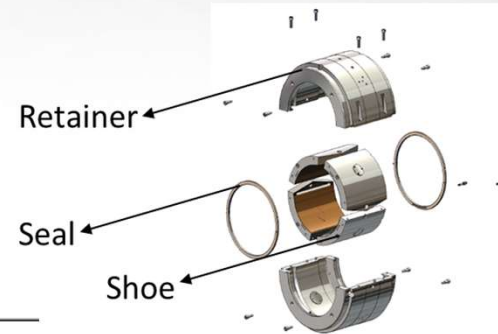
**ENERGY
TRANSMISSION**



**ENERGY
STORAGE**



**ENERGY
USE**



Application Focus / SBS

- Gas Turbines
- Generators & Motors
- Steam Turbines
- Compressors
- Gearboxes
- Pumps

End Market Focus / Industries

- Power Generation
- Oil & Gas
- Marine / Defense
- Chemical Industry
- General Industry

MIBA INDUSTRIAL BEARINGS US OE – Our Markets and Products



Fixed geometry bearings

- Thrust and journal bearings
- Standard and customized solutions
- Uni- & bi-directional designs
- Cost effective solution



Tilting pad bearings (Thrust and journal)

- Thrust and journal bearings
- Standard and customized solutions
- Directed & flooded lubrication
- Standard & self equalizing thrust



Combined bearings

- Thrust and journal bearings in a single carrying ring to reduce axial length
- Fixed geometry or tilting pad
- Customized solutions
- Easier assembly and installation



Bearing pedestal assemblies

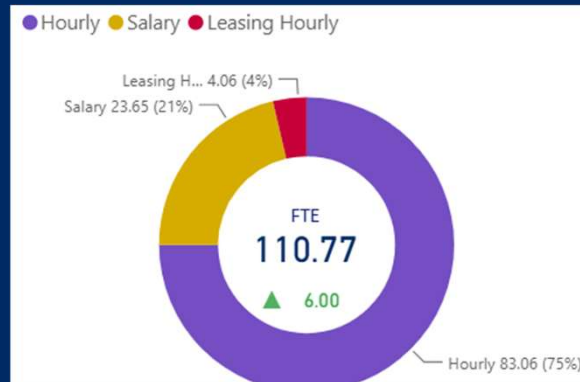
- Pedestal assemblies can include journal and thrust bearings
- Primarily used for electric motors, generators and shaft lines when a separate bearing housing is required

Miba Industrial Bearings U.S. – Grafton

Grafton, WI, United States



Employees: 106



Founded: 1968 - Orion
Acquisition: 2009 - John Crane
2018 - MIBA
Size : 90,000 sq.ft

Quality Certificates

ISO 9001 : 2015

ISO 14001 : 2015

ISO 45001 : 2018

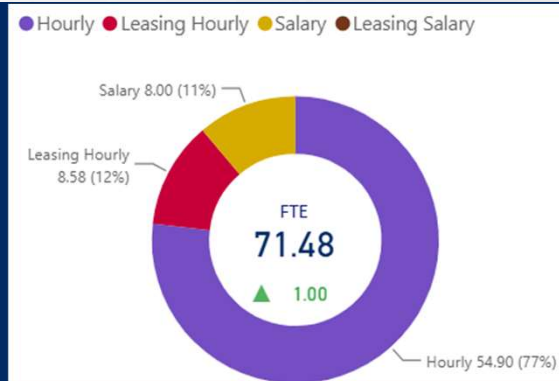


Miba Industrial Bearings U.S. – Columbus

Columbus, NE, United States



Employees:



Founded : 1979 - Orion

Acquisition: 2009 - John Crane
2018 - MIBA

Size : 60,000 sq.ft

Quality Certificates

ISO 9001 : 2015

ISO 14001 : 2015

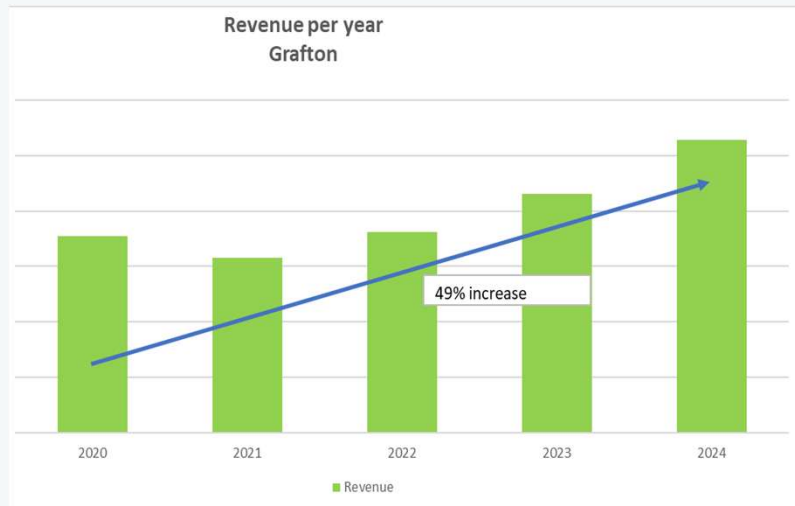
ISO 45001 : 2018



2023 – Growth at risk without a new way to plan

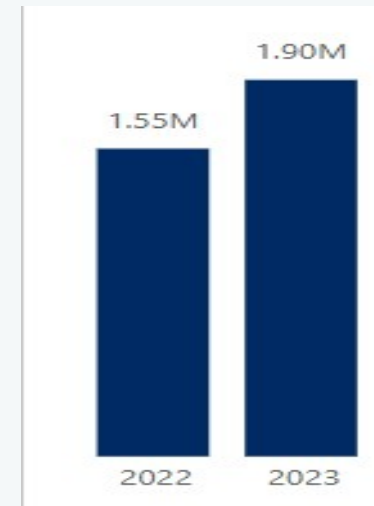
Revenue per year – Grafton

2020 – 2023 : revenue growing steadily
2023: baseline year for new planning system



Customer Backlog - Grafton

2022 : 1.55M 2023 : 1.90M
2023 : highest backlog of the period



2023 – Growth at risk without a new way to plan

On Time Delivery - Grafton

OTD to promise date:

2022: 5.4%

2023: 25.7% **(1 in 4 orders on time)**



The Case for Change -

Growth at risk without a new way to Plan, Schedule and Execute

- Backlog at its highest point – orders outrunning capacity.
- Only 1 in 4 orders shipping on the promised date.
- Revenue growing, but delivery reliability lagging.

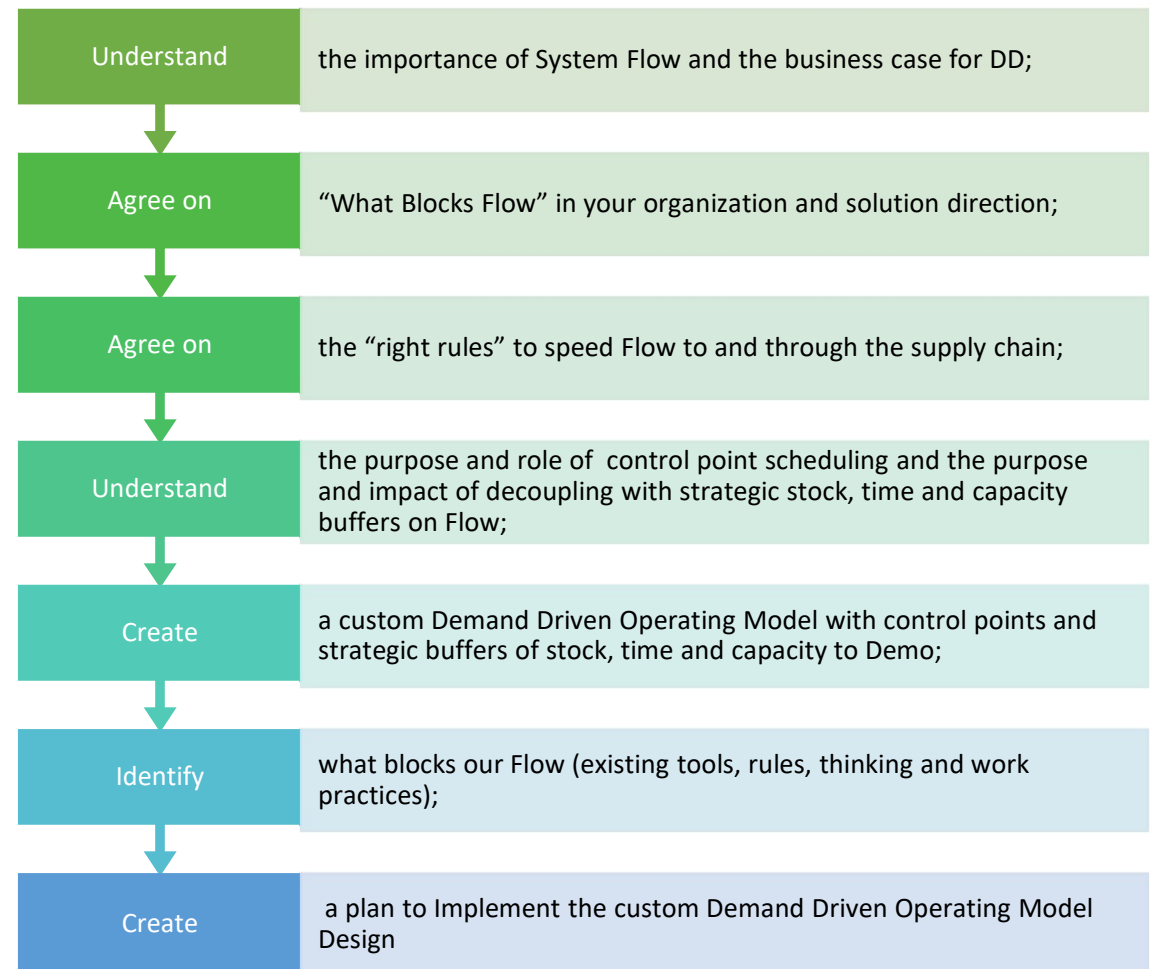
Our Industry Challenges -

- Long lead buy, outsource and manufacturing Cycle times (up to 24 months.)
- Long product life and a spares market with small volumes and erratic demand.

We chose to work with Constraints Management Group and Demand Driven Technologies.

15-year track record with our sister company - Miba Bearings US.

Phase 1: 3-day DDOM Workshop with our leadership group to accomplish 7 objectives.



Previous Planning, Scheduling & Execution Pain Points

High variation in workload

Constantly changing priorities

Constant fire fighting

Resource intensive planning and replanning

Lack of visibility – reactive vs. proactive at every resource level

No visibility to changing/floating bottlenecks – capacity issues everywhere

Customer escalations (expedites) driven by unrealistic promise dates

Skilled machinist and labor scarcity – we chased our floating bottlenecks

Production flow:

- Starts & Stops
- Assembly missing components

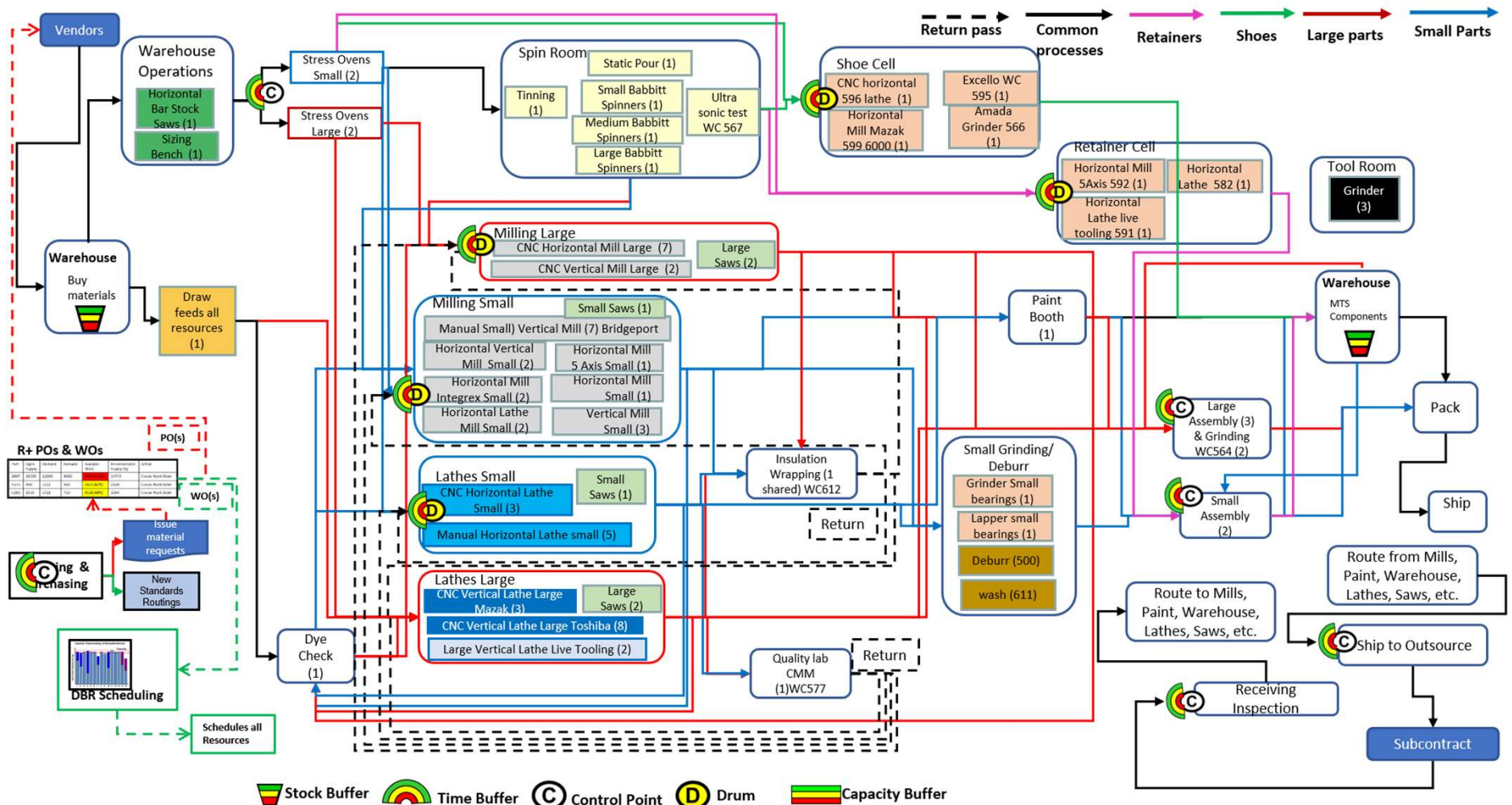
INVENTORY:

- High WIP
- Stock too much / too little

We connected our *symptoms* and the 4 root causes **Blocking Flow**:

- **Flat BoMs** - No stock decoupling points to protect material availability to need date.
- **Infinite capacity scheduling** – We forward scheduled to due date.
- **Start everything as early as possible** – All orders are released to the floor ASAP.
- **Efficiencies measured at every resource** – “keep everybody busy” all the time.

We designed our *DDOM Flow Map* and a *Project Plan* to solve the 4 issues.



DDOM solution set to solve our core issues.



Flat BoMs - No stock decoupling points to protect material availability to need date.
strategic dynamic stock buffers – short independent planning – visible priorities

Strategic semi-finished
and component child
part BoM insertions to
decouple lead times

Visibility to daily material
planning priorities

3 stock inventory methods –
Dynamic MinMax & 3 Zone
Dynamic and 3 Zone
Replenishment Override

Execution Alerts:

Current Inventory Alert advises
current inventory is lower than
Expected Daily Usage

Execution Alerts:

Material Synchronization
Alert advises if supply and
need dates are mismatched

Material planning stability

DDOM solution set to solve our core issues

Infinite capacity scheduling – We forward scheduled to due date
Start everything as early as possible – All orders are released to the floor ASAP

finite drum schedules pace work – time and capacity buffers protect the Drum schedules

Strategic control point Drums:

- Backwards scheduled at
- Finite capacity scheduled
- Realistic Promise Dates for production execution

The Drum schedules:

- Set the pace for all resource in their routings
- Non-drum schedules with planned “sprint” capacity

Drum schedule priorities:

- MTO based on Days Late
- MTO based on % Buffer penetration

WOs can be auto grouped by material, setup, etc. or manually grouped by the Scheduler inside a time horizon (2,3, etc. days)

Nonbuffered Children WO due dates are “packeted” and aligned to their Parent start dates

All strategic Control Points scheduled start times are protected with time buffers in their routing.

The Scheduler’s Workbench:

- Material Availability check
- User Defined Fields
- Scheduler “WIP Notes”
- WO Partial Unrelease

Schedules account for Planned Capacity Downtime

DDOM solution set to solve our core issues

Efficiencies measured at every resource – “keep everybody busy” all the time.

Real Time Visibility helps everyone execute the plan & schedule

- Everyone’s metric is “on time to schedule and the buffer I feed”
- Efficiency metrics are reserved for Drums.

Every resource’s Dispatch shows:

- WO priority
- WO current operation status
- Expedited WOs at the top **in red**
- Current Buffer status **E G Y R L**

Schedule Execution work practices:

- Daily “all hands” Buffer to review schedule exceptions
- Backlog visibility used for recovery planning and priorities
- Choke release of new work to “Drum” flow if “sprint” isn’t enough
- Enforce timely transactions

Implementation Journey

- ◆ **Gaining employee commitment and engagement took time**
- ◆ **Built a clear understanding of the system and its functionality**
- ◆ **Lead the transition to the cloud-based version**
Address interface challenges and debug the system
- ◆ **Establish data accuracy as the foundation by cleaning up routings, lead times, and master data**
Then keep “cleaning” and “adapting” as you improve
- ◆ **Training and coaching for schedulers, supply chain and manufacturing leadership**
Redefining roles and daily routines, not just deploying a tool
- ◆ **Buffer profiling reviewed by a cross-functional team (SBP) before implementation**
- ◆ **Phased rollout – starting with our Grafton, WI facility in 2023 and then extended to our Columbus, NE location in 2025**
- ◆ **Feedback loops and regular reviews to refine the model as we learned and improved**

Key Changes Delivered by the Implementation

1 Centralized master scheduling for MIBUS OE

- Optimize help between sites (resources, parts, materials...)
- Sustainability and consistency for our customers
- Supply chain driving the production schedule

2 Demand & Forecast driven material planning

- Direct linkage of production schedule to sales orders
- Optimizing Material Planning with ADU and FDU
- Buffered inventory will be in the shop
- Planning materials in shorter planning window

3 Redefined manufacturing leadership mindset

- Focus on execution + adherence of schedule
- Buffer management and management of constraints
- Provide expert opinion once concerns appear
- Problem solving mind set – no longer scheduling for dollars

4 Adherence to the proposed schedule

- Feedback loops in place
- Production Model is continuously refined and improved
- Data driven decisions vs decisions based on perceptions

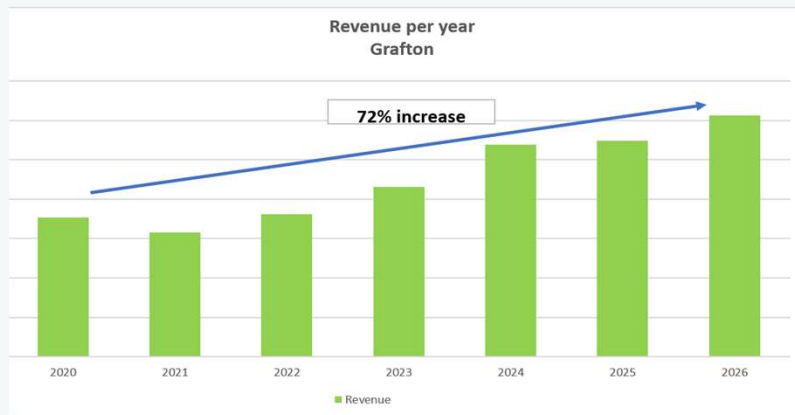
In summary | Supply chain now drives one centralized master schedule tied directly to sales orders, with Demand Driven material planning (ADU) and dynamic stock buffers over a shorter horizon. Manufacturing leadership owns execution, buffers and constraints, while feedback loops and data-driven decisions keep refining the production model.

2025 – Success with Demand Driven

Revenue per year – Grafton

2020 – 2024 +49% Revenue Growth

Our revenue met our projected growth curve while our backlog was coming down



Backlog per year – Grafton

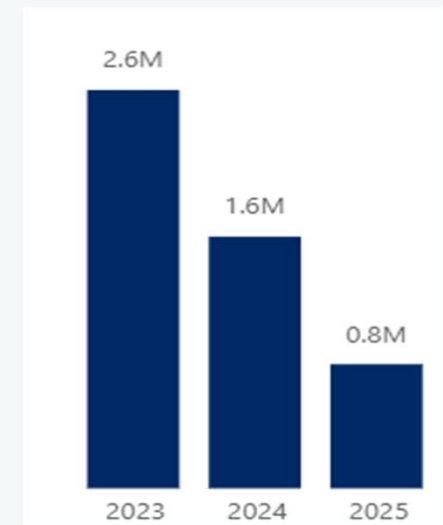
2023 – 2025 backlog reduced roughly 70%

*Backlog value – Grafton,
Bearing Division*

2023 : 2.6M

2024 : 1.6M

2025 : 0.8M



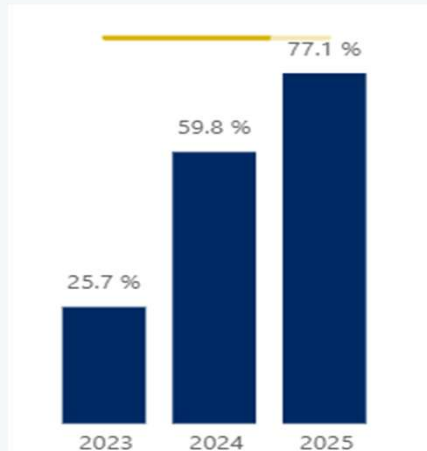
2025 – Success with Demand Driven

ON Time Delivery – Grafton

2023 – 2025: +51%

*On Time to Promise –
Grafton, Bearing Division*

2023 : 25.7%
2024 : 59.8%
2025 : 77.1%



What We Achieved – Grafton

Actual results vs. projected, 2023 to 2025

- Backlog 0.8M vs 2.6M at the 2023 baseline – +70
- On time delivery 77.1% actual vs 25.7% starting point
- Best months of 2025 held above 80% to promise date
- Revenue +49%, tracking toward the projected curve
- Gains delivered without rebuilding backlog but.....

The Case for Change - 2025/26 Growth at risk



Our old DDOM assumptions were not in tune with our new Demand

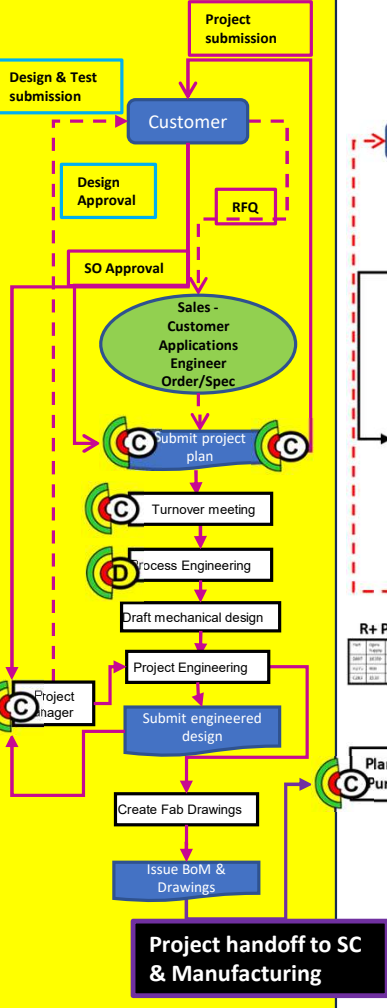
- On Time to Promise peaked in 2025 in the mid 80's and continued trending down in 2026 with backlog trending up.
- New Product handoffs from Engineering were late – Late to promise before manufacturing and purchasing had the Drawings, BoMs & Routings.
- Our Supply Chain Constraint moved from Manufacturing to Engineering.
- Existing Product Growth changed our product mix and moved our manufacturing “Drums” from machines to skilled labor.
- Our historical ADU stocking strategy did not protect our future product deliveries.

We needed a *DDOM Remodel* and new *Tools*

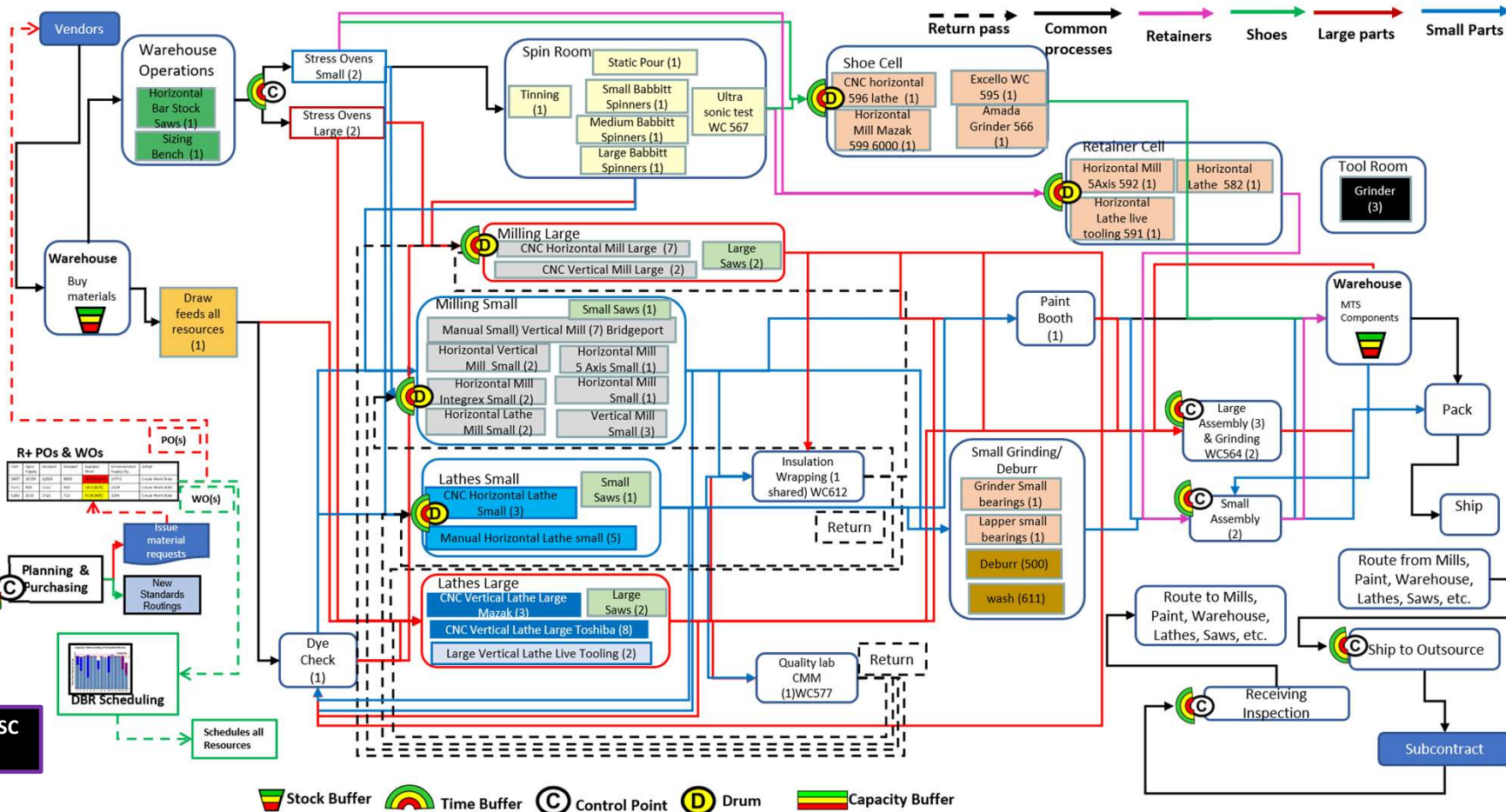
2026 Remodel and Next Steps

- Manufacturing Drum remodel from Machine capacity to Machinist Skill Sets.
- New Scheduling Execution Dashboard. “Real time Alerts” to deep dive Flow, Capacity and Time Buffers for daily execution decisions and “Trending” of Stock, time and Capacity Buffer Exceptions for improvement action priorities.
- Gain the skills and tools to Adapt our Model:
 - DDS&OP using FDU for new product and a Blend of ADU and FDU for product with planned increases/decreases.
 - New diagnostic and trending dashboard reporting.
- Expanding Engineering to our DDOM Flow Map with a Project Scheduling & Execution implementation scheduled for 4th quarter 2026.
- Monthly Model review that includes Engineering with update actions.

Engineering Information and Document S&E



Future DDOM From *Quote To Cash* Go Live 4th Quarter 2026





Questions?

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