



IFS CASE STUDY

SHOP ORDER MANAGEMENT

Date: 10/24/2025

Author: Ritankar Pal

Table of Contents

Contents

Executive Summary3

Background / Challenge4

Solution / Approach.....5

Implementation6

Results / Metrics7

Lessons Learned / Best Practices8

About ESS.....10

Appendix..... **Error! Bookmark not defined.**

Executive Summary

This study highlights how IFS ERP revolutionized manufacturing operations by implementing structured Shop Order management for discrete production. Prior to implementation, our client faced significant challenges in tracking production costs, managing materials efficiently, and maintaining accurate production schedules. These challenges not only affected operational efficiency but also limited visibility into resource utilization and cost performance, making it difficult to scale production or respond quickly to market demands.

By leveraging IFS ERP's advanced manufacturing capabilities — including detailed Routings, Product Structures, and comprehensive Shop Order execution — the organization gained end-to-end control over its production processes. Shop Orders enabled precise planning and scheduling, automated material allocation, and monitored labour and machine utilization, significantly reducing manual effort and operational errors.

Key business and operational outcomes of the implementation included:

- **Enhanced Cost Visibility and Control:** Real-time tracking of Work-in-Progress (WIP) costs and systematic monitoring of deviations from standard and estimated costs provided actionable insights for cost optimization.
- **Improved Scheduling Accuracy:** Shop Orders and routing-based planning allowed for optimized production scheduling, ensuring timely completion of jobs while balancing resource constraints and reducing bottlenecks.
- **Streamlined Production Oversight:** Comprehensive Shop Order execution enabled the organization to monitor production progress, track material consumption, and manage labour and machine efficiency with greater precision.
- **Operational Efficiency and Productivity Gains:** Automation of routine production processes and integrated workflows minimized delays, reduced errors, and freed staff to focus on higher-value activities.
- **Strategic Decision-Making Support:** Enhanced visibility into production, costs, and resource allocation empowered managers to make data-driven decisions, improving responsiveness to market demands and supporting scalable growth.

By adopting structured Shop Order management in IFS ERP, the organization achieved improved operational control, cost efficiency, scheduling precision, and production visibility — transforming its manufacturing operations into a more predictable, efficient, and strategically aligned process.

Background / Challenge

In manufacturing, achieving predictable, cost-effective production requires precise control over operations, resources, and materials. The organization faced significant challenges in managing its production processes due to limitations in its legacy system, which lacked the capability to consistently define, execute, and monitor manufacturing tasks. These gaps affected operational efficiency, cost visibility, and production predictability, creating a pressing need for a more structured, data-driven approach.

1. Inconsistent Cost and Time Tracking

Tracking production time, setup durations, and operational costs was cumbersome and prone to inaccuracies. Without standardized benchmarks for run times or cost allocations, the organization struggled to monitor performance across production runs, evaluate efficiency, and identify cost-saving opportunities. This inconsistency also made it difficult to compare planned versus actual costs, leading to unforeseen deviations that impacted profitability.

2. Material and Capacity Management

The organization experienced challenges in managing material requirements and production capacity. Monitoring workloads across multiple production lines was inefficient, and the timely issuance of material requisitions was often delayed. Limited visibility into material consumption and resource utilization led to bottlenecks, stock shortages, and under- or over-utilization of work centres. These inefficiencies not only slowed production cycles but also increased operational costs and reduced responsiveness to customer demand.

3. Lack of Process Standardization

Operations were performed inconsistently, with little formal definition of sequences, work centres, or quality checkpoints. The absence of standardized processes made it difficult to ensure consistent production quality, predict throughput, and implement repeatable best practices. This lack of process rigor limited the organization's ability to identify inefficiencies, track deviations, or optimize resource allocation, ultimately affecting production reliability and customer satisfaction.

Given these challenges, the organization recognized the need for an end-to-end Shop Order management solution within IFS ERP. This included defining basic Shop Order data, creating and maintaining orders systematically, and analysing production data to identify cost drivers, bottlenecks, and areas for improvement. By implementing a formal Shop Order framework, the company aimed to improve operational efficiency, enhance cost visibility, and establish a standardized approach to production planning and execution.

Solution / Approach

We implemented a comprehensive Shop Order management framework within IFS Discrete Manufacturing, empowering the organization with greater production control, cost transparency, and operational efficiency. Our approach focused on building structured workflows, accurate resource planning, and complete end-to-end visibility for discrete manufacturing operations.

1. Shop Order Data and Product Structures

We began by configuring the core manufacturing data — defining Product Structures (BOMs) to capture all components and sub-assemblies, and creating Routings to outline operation sequences, assign work centres, and specify machine and labour run times. This ensured every Shop Order had standardized instructions, minimizing variability and improving consistency across production runs.

2. Structured Production Workflow

We designed a clear, system-driven workflow covering demand creation, material allocation, operation execution, and final stock receipt. By automating these stages in IFS ERP, manual intervention was minimized while providing real-time visibility into Work-in-Progress (WIP), inventory, and production status.

3. Resource and Capacity Planning

Work Centres were configured with parameters for capacity, efficiency, and default resource allocation, while Labor Classes were defined to manage worker groups, costing, and scheduling. This setup enabled accurate lead-time calculation, optimized production sequencing, and improved utilization of available resources.

4. Managing Subcontracted Operations

For external operations, we implemented External Work Centres that automatically generated Purchase Orders when Shop Orders were released. This seamless link between internal and subcontracted work ensured cost accuracy, timely delivery, and consistent product quality across the supply chain.

5. Scheduling and Execution Flexibility

We leveraged Forward and Backward Scheduling within IFS to meet production targets efficiently. Tools and Work Instructions were automatically copied from Routings, ensuring operators had all required guidance directly at the workstation — improving accountability and reducing delays.

6. Shop Order Completion

Upon completion, finished goods were received into inventory, with WIP costs automatically transferred to the final product. We ensured this process-maintained traceability, cost integrity, and audit-ready documentation across the entire production cycle.

Implementation

We meticulously executed the Shop Order lifecycle in IFS Cloud, building on a strong foundation of basic data to ensure accurate, standardized, and efficient production execution. Our approach focused on preparing and validating all essential manufacturing data before Shop Orders were created, enabling seamless operational workflows.

1. Basic Data Setup

We configured critical manufacturing data, including:

- **Bill of Materials (BOMs):** Complete product structures capturing all components and sub-assemblies, ensuring accurate material requirements.
- **Routings:** Detailed operational sequences specifying work centres, labour classes, machine and labour run times, and quality checkpoints.
- **Work centres:** Defined capacity parameters such as maximum hours per operation, default resource allocations, and efficiency factors.
- **Labor Classes:** Grouped workers by skill and role, linked to operations, and assigned costing rates to support accurate labour tracking.
- **Tools and Work Guidelines:** Configured tools associated with operations and attached detailed work instructions, ensuring operators had all required resources and guidance.
- **Material Definitions:** Ensured all raw materials, purchased parts, and semi-finished goods were properly defined, linked to BOMs, and available for allocation in production.

This foundational setup allowed Shop Orders to be executed with precision, providing consistent and repeatable manufacturing processes.

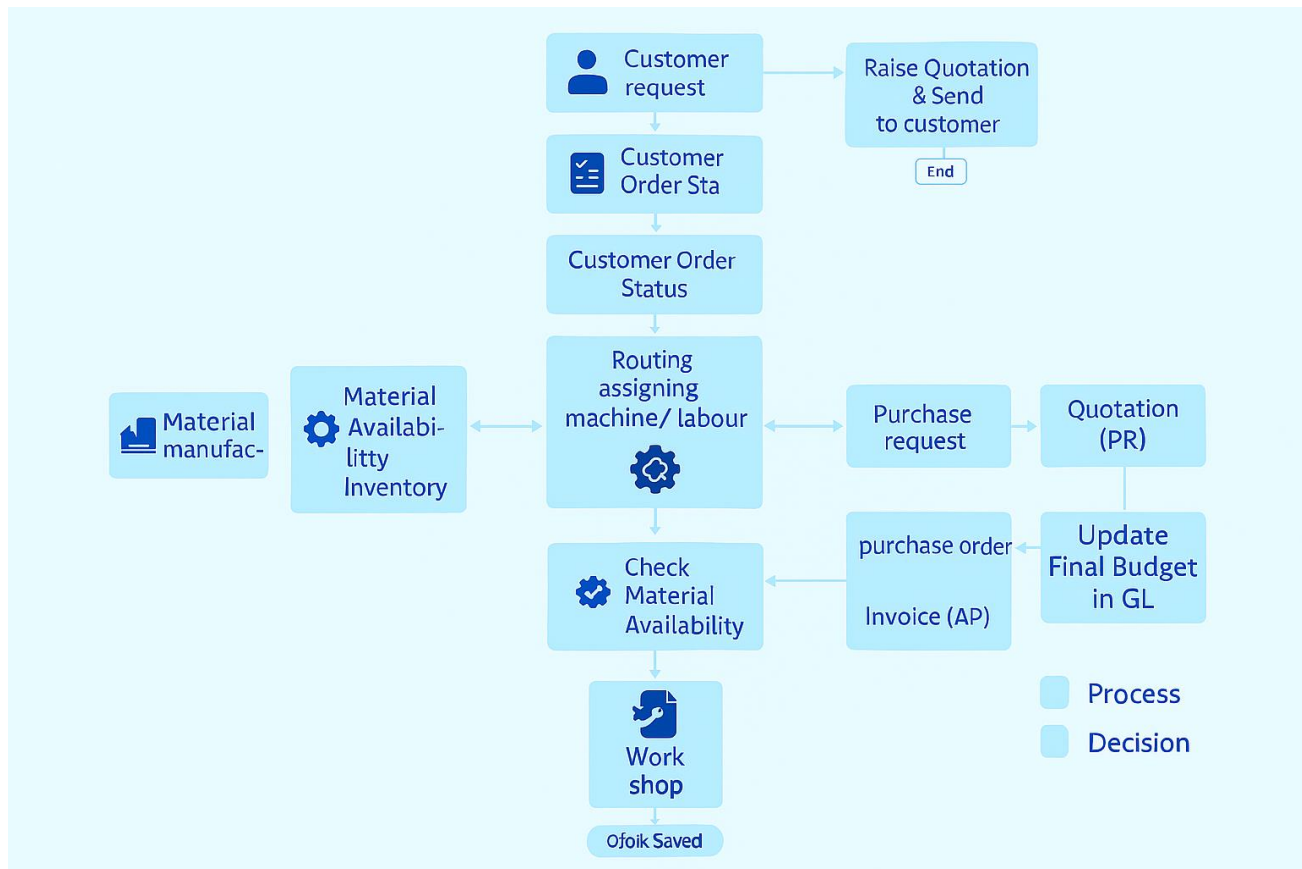
2. Shop Order Lifecycle Execution

With the basic data in place, we implemented the full Shop Order process:

- **Creation:** Shop Orders were generated from MRP, Sales Orders, or Next Level Demand, with automatic validation of component availability.
- **Release and Material Handling:** Orders moved to the Released state; materials were reserved and issued to production to minimize interruptions.
- **Operation Reporting:** Operators recorded machine and labour hours through the Shop Floor Workbench, automatically updating operation statuses.
- **Subcontracted Operations:** Outside operations were managed using “Ship WIP to Supplier,” generating purchase orders and tracking returned processed materials.
- **Scheduling:** Forward and Backward Scheduling tools optimized operation timing, while tools and work instructions were automatically attached for operational clarity.
- **Completion:** Finished goods were received into inventory, transferring WIP to the final product and marking the Shop Order as Closed.

By focusing on comprehensive basic data setup and validating it thoroughly, we ensured that production could proceed smoothly, with accurate cost tracking, resource allocation, and real-time visibility into Work-in-Progress (WIP). This hands-on approach highlights our expertise in standardizing complex manufacturing operations in IFS Cloud, setting the stage for measurable efficiency gains.

Flowchart



Results / Metrics

By implementing a structured Shop Order lifecycle in IFS Cloud, we enabled the organization to transform its manufacturing operations, delivering measurable improvements in efficiency, cost control, and operational visibility. Key outcomes included:

1. Enhanced Cost Visibility and Control

- Accurate tracking of Work-in-Progress (WIP) and labour costs allowed the organization to monitor deviations from standard and estimated costs in real time.
- We ensured that every Shop Order captured material, labour, and machine costs, enabling informed decision-making and reducing cost overruns.

2. Improved Scheduling Accuracy and Production Planning

- With standardized Shop Orders and routings, production scheduling became more predictable.
- Forward and Backward Scheduling tools enabled efficient planning, reducing idle time, optimizing resource allocation, and improving on-time completion rates.

3. Streamlined Material and Resource Management

- Automated material reservation and issuance reduced stock shortages and minimized delays in production.

- Work centres and Labor Classes allowed the organization to optimize resource utilization, balancing workloads and improving productivity across all operations.

4. Increased Operational Efficiency

- By automating Shop Order execution, including operation reporting and subcontracted work tracking, we reduced manual interventions and administrative effort.
- Operators could focus on value-added tasks while the system handled data capture, WIP updates, and workflow tracking, ensuring consistent process execution.

5. Better Supply Chain Coordination for Subcontracted Operations

- The “Ship WIP to Supplier” functionality streamlined coordination with external suppliers, ensuring timely delivery of processed materials and accurate cost tracking for outsourced operations.
- Integration with purchase orders and automatic WIP updates improved end-to-end visibility across the supply chain.

6. Data-Driven Insights and Decision Support

- We configured the system to provide real-time operational data, allowing managers to track progress, identify bottlenecks, and analyse deviations.
- These insights supported proactive planning, reduced downtime, and enabled continuous process improvement.

Through our comprehensive implementation, the organization gained predictable, efficient, and fully transparent manufacturing processes, with improved cost control, optimized scheduling, and streamlined resource management. The result is a scalable, data-driven production environment that supports operational excellence and informed decision-making across discrete manufacturing operations.

Best Practices

1. Build a Reliable Data Foundation

Accurate Product Structures (BOMs), Routings, Work Centres, and Labor Classes are critical for consistent production outcomes. We emphasized strong data validation and periodic governance to ensure long-term accuracy and cost control.

2. Utilize the Complete Shop Order Lifecycle

Managing each Shop Order through all stages — from Planned to Closed — ensures full traceability and real-time production visibility. Automating material reservations, WIP updates, and operation reporting further enhances accuracy and reduces delays.

3. Align Capacity and Material Planning

Balancing MRP with Capacity Requirements Planning helps prevent resource bottlenecks. We recommended using both forward and backward scheduling in IFS to optimize production based on delivery priorities and lead times.

4. Empower Real-Time Operation Reporting

Capturing labour and machine time directly on the Shop Floor Workbench eliminates manual reporting errors. Real-time data entry supports accurate costing, performance tracking, and timely decision-making.

5. Streamline Subcontracting Processes

We ensured external operations are fully integrated using the “Ship WIP to Supplier” functionality in IFS. This maintains visibility of outsourced work, ensuring materials, costs, and quality remain under control.

6. Strengthen Costing and Variance Analysis

Automated costing templates and variance reports help identify inefficiencies between planned and actual production. These insights guide continuous process optimization and better financial performance.

7. Enhance Shop Floor Efficiency

Embedding digital Work Instructions and Tool Guidelines directly in IFS improves operator productivity and reduces quality issues by making critical information easily accessible during production.

8. Drive Continuous Monitoring and Improvement

We promote proactive WIP tracking, timely Shop Order closure, and dashboard-driven performance analytics. This enables manufacturers to respond quickly to bottlenecks and sustain operational excellence.

About ESS

Enterprise Software Solutions Inc. (ESS) is a premier enterprise resource management (ERP) implementation and support company, recognized for delivering successful projects across **manufacturing, distribution, and service** verticals for over **15 years**.

As a dedicated **IFS Gold Partner**, ESS specializes in comprehensive ERP implementation and migration services across **manufacturing, construction, and service** sectors.

Core Services and Expertise

ESS offers complete, end-to-end ERP services, including:

- Full-cycle ERP implementation — from IFS Cloud licensing and customization to deployment support across service, manufacturing, and finance modules.
- Post-implementation support and managed services.
- Seamless third-party integration using APIs and middleware.
- Robust data migration and transformation solutions.

With **over 50 years of combined team experience**, ESS has successfully implemented and customized ERP systems for industries including **service, engineering, manufacturing, and distribution**. ESS also has deep expertise in **Epicor P21 ERP** implementation.

Technical Proficiency

ESS is widely known for its ability to:

- Bridge legacy and modern ERP platforms — synchronizing systems like IFS and Baan.
- Leverage deep technical knowledge in **RESTful APIs** and **IFS customization**.
- Develop proprietary extensions around **Microsoft, SAP, BAAN**, and **IFS** technologies.
- Enable **predictive maintenance** through IFS ERP implementations.

Mission and Focus

ESS's mission is to reduce client risk by ensuring **flawless, on-time delivery** through proven experience, technical innovation, and proprietary extensions.

We help organizations overcome challenges such as:

- Growth bottlenecks and scalability limitations.
- Risks from end-of-life or unsupported legacy systems.
- Manual, error-prone customer integrations.
- Rising operational costs from outdated technologies.

By combining strong industry expertise with modern ERP innovation, **ESS ensures every client's investment delivers a long-term strategic advantage**.

Global Presence

ESS operates globally, with offices located in **Kansas (USA)** and **Hyderabad (India)**.