



2026 DYNAMICS CON Vegas



Make, Plan, Deliver

Manufacturing 101:

Getting Started



Session Objectives

What will you learn today in 101?

1. Understand the data requirements for Mfg
2. Understand setup choices that impact Mfg
3. Ability to use info to create a functional Mfg environment



Session Objectives

...And if you stick around for 201?

1. Options to automate Mfg functionality for consumption and output
2. System-generated Production Order suggestions
3. Other tips and tricks



Who am I?

- Purdue University – '08
- Family Man – 3 kids
- Avid Gamer (mostly Xbox)
- Cooking/Eating Enthusiast
- Self-made Mechanic...
- Fun Fact: AFRICA



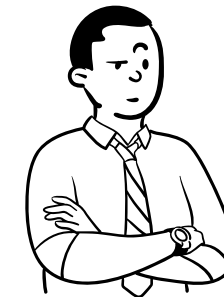
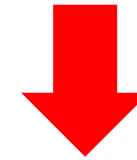
Agenda

- Purpose of Manufacturing within Business Central
- How does it achieve that purpose
- Functional Areas of Manufacturing
- Setup Tips



Purpose of Manufacturing

- To produce an Item (Finished Good) into Inventory
 - Quantity on Hand goes Up
- To consume Items (Raw Materials) from Inventory
 - Quantity on Hand goes Down
- To track Costs (Material and Capacity/Machine Time)
- To track Subcontractor purchases/costs



How does it Achieve Purpose

- Production Orders, a **RECIPE** for success!
 - Tracks Bill of Material
 - Tracks Routing (Sequence of Operations)
 - What Machine/People
 - How Long
 - Any Subcontractors?
 - Record Output
 - Std. Cost vs. Actual Cost & Variance



Bill of Materials



BOMs* (for short)

- Think of a BOM like the ingredients in a recipe.
- What unique ingredients are required?
- How many of each are needed?
- When do I need them in the process?

Ingredients

- 2 pounds ground beef chuck
- 1 pound bulk Italian sausage
- 3 (15 ounce) cans chili beans, drained
- 1 (15 ounce) can chili beans in spicy sauce
- 2 (28 ounce) cans diced tomatoes with juice
- 1 (6 ounce) can tomato paste
- 3 stalks celery, chopped
- 1 large yellow onion, chopped
- 1 green bell pepper, seeded and chopped
- 1 red bell pepper, seeded and chopped
- 2 green chili peppers, seeded and chopped



Routing



Routes

- Think of the Routing like the Directions/Instructions on a recipe.
 - What action do I need to do for each step? Chop, mix, or stir?
 - How long on average does it take to do each of the steps?
 - Bonus: What specific ingredients are used in a particular step?

Directions

Step 1

Chop vegetables; celery, yellow onion, green/red bell peppers, and green chili peppers.

Step 2

Heat a large stock pot over medium-high heat. Crumble ground chuck and sausage into the hot pan. Cook, stirring frequently, until meat is evenly browned. Drain off excess grease.

Step 3

Add canned goods; Pour in chili beans, spicy chili beans, diced tomatoes, and tomato paste.

Step 4

Add vegetables; celery, onion, bell peppers, chili peppers,



Subcontractor



Subcontracts

- Operations that fall under two conditions:
 - Cannot be done in house
 - Should not be done in house
- Cannot Be Done
 - Specialized process required to be done by a vendor
 - Materials/tools/expertise not available in house
- Should Not Be Done
 - No available capacity in house within needed time frame
 - Better time/cost efficiency when done at a vendor



Setup

• Mfg Setup - Capacity

• Inv Setup - Planning/Scheduling

General

Normal Starting Time	<input type="text" value="8:00:00 AM"/>	Cost Incl. Setup	<input checked="" type="checkbox"/>
Normal Ending Time	<input type="text" value="11:00:00 PM"/>	Copy location code into value ent...	<input checked="" type="checkbox"/>
Preset Output Quantity	<input type="text" value="Expected Quantity"/>	Include Non-Inventory Items to P...	<input type="checkbox"/>
Default Consumption Calculation ...	<input type="text" value="Expected Output"/>	Load SKU Cost on Manufacturing	<input type="checkbox"/>
Show Capacity In	<input type="text" value="MINUTES"/>	Allow Finishing Prod. Order with ...	<input type="checkbox"/>
Planning Warning	<input checked="" type="checkbox"/>	Default General Business Posting ...	<input type="text" value=""/>
Doc. No. Is Prod. Order No.	<input checked="" type="checkbox"/>	Default Flushing Method	<input type="text" value="Pick + Manual"/>
Dynamic Low-Level Code	<input checked="" type="checkbox"/>		

Planning

Current Demand Forecast	<input type="text" value=""/>	Blank Overflow Level	<input type="text" value="Allow Default Calculation"/>
Use forecast on locations	<input type="checkbox"/>	Combined MPS/MRP Calculation	<input checked="" type="checkbox"/>
Use forecast on variants	<input type="checkbox"/>	Default Dampener Period	<input type="text" value="5D"/>
Default Safety Lead Time	<input type="text" value="1D"/>	Default Dampener %	<input type="text" value="0.0"/>



101 Key take-aways

- What is a Production Order?
 - A listing of components and operations that output inventory
 - Bill of Material – components
 - Routing – operations
 - Output – finished goods
 - Much like a cooking recipe with ingredients and directions
 - Subcontract operations can be sent out to have vendors complete a portion of the production process



Make, Plan, Deliver Manufacturing 201:

Automation and Advanced Configuration



Agenda

- Automated Consumption and Capacity Entries
- Automated Output?
- Automatic Production Order Suggestion (MPS)
- Versioning of BOM/Routes
- Configuration Options



Automatic Item Consumption

- Item Card > Flushing Method
 - Optional:
 - Routing Line > Routing Link Code
 - BOM Line > Routing Link Code

How it works:

- Flushing Method is the trigger!
 - Forward happens at the start
 - Backward happens at the end
 - Manual adds a lot of unnecessary work!
 - Routing Links are the key



Directions

Step 1

Chop vegetables; celery, yellow onion, green/red bell peppers, and green chili peppers.

Step 2

Heat a large stock pot over medium-high heat. Crumble ground chuck and sausage into the hot pan. Cook, stirring frequently, until meat is evenly browned. Drain off excess grease.

Step 3

Add canned goods; Pour in chili beans, spicy chili beans, diced tomatoes, and tomato paste.

Step 4

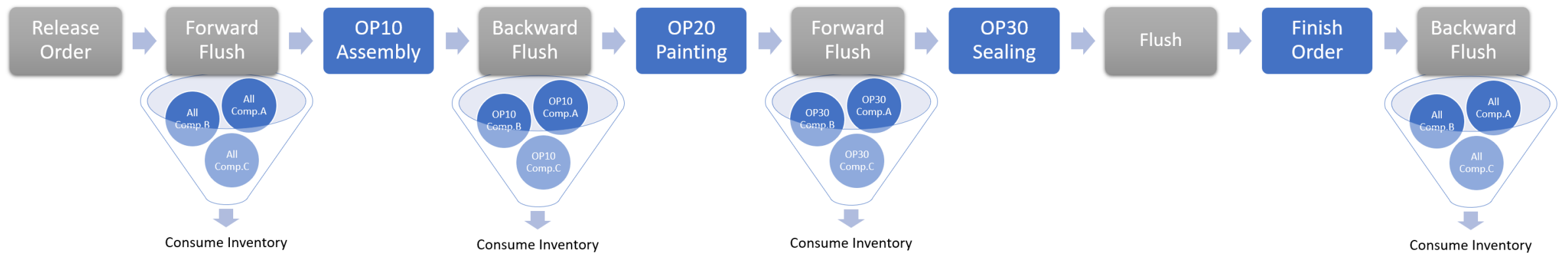
Add vegetables; celery, onion, bell peppers, chili peppers,



Flushing Stages

- When can flushing occur?

Before Order Begins	Before Operation Begins
After Order Ends	After Operation Ends



Automatic Capacity Entries

- Work/Machine Center > Flushing Method

How it works:

- We can set up each of our Work/Machine Centers with their own flushing method
- Flushing occurs based on the expected output
 - Capacity is calculated as $\text{Setup Time} + (\text{Run Time} \times \text{Quantity})$
- Calculated when Production Order is set to FINISHED



Automatic Output?



Automatic Output?

- Hands-off Automation

How it Works:

- All proper flushing methods setup for items and work centers
- Releasing an Order and immediately Finishing it can trigger:
 - All flushed operations for materials
 - All flushed capacity
 - All output into inventory



Automatic Production Order Suggestion

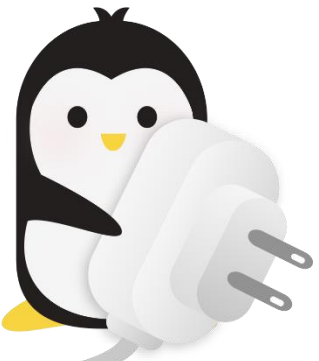


Automatic Production Order Suggestion

- MPS (Master Production Schedule)

How it Works:

- Difference between MPS and MRP?
- Plans direct demand Finished Goods
- Use the Planning Worksheet for most efficient process



"From Chaos to Control: Simplifying Production in Business Central"
Presented by: Ben Baxter, Accent Software, Inc.
Lazuli 7; 10:15 - 11:15 AM; Thursday 05/14



Versioning



Versioning (aka Revisions)

- Tracking of changes in Design
- Preventing orders from being created that aren't ready!

How it Works:

- Version STATUS tells the system what to use
- Multiple versions can exist and be changed on a Production Order on the fly
- Starting Dates allow you to plan for your product future!



Optional Configuration Setups



Multi-Level (Nested) Production Orders

- Item Card > Replenishment Tab > Manufacturing Policy
 - Make-to-Stock (traditional; Prod. Order per Item)
 - Make-to-Order (ability to nest Orders)

Production

Manufacturing Policy

Make-to-Order

Make-to-Stock

How it Works:

- **Both** Parent and Subassembly must be set to Make-to-Order
- Production Order indents Lines for each level
 - Each with their own BOM and Routing
- Can mix and match – some subassemblies can be MTS

Phantom BOM

- BOM Line > Type = Production BOM

How it Works:

- The BOM will show the Phantom “Item” (Prod. BOM No.)
- When the Production Order is created the Phantom explodes it's BOM
- Works with Routing Link Codes and Planning (MRP)



Routing Status Analysis

Prod. Order Routing Lines: All | Analysis 1 | +

	Status / Routing Status...	Prod. Order No.	Operation...	Type	No.	Description	Starting Date-Time	Ending Date-Time	Sum(Setup Time)	Sum(Run Time)	Pivot Mode
1	Finished								20.00	150.00	<input type="checkbox"/>
2	Finished								20.00	150.00	<input type="checkbox"/>
3		101001	10	Work Center	100	Ingredient Prep	8/31/26, 3:40 PM	8/31/26, 3:50 PM	10.00	0.00	<input type="checkbox"/>
4		101001	20	Work Center	200	Cutting Prep	8/31/26, 3:50 PM	8/31/26, 4:00 PM	0.00	10.00	<input type="checkbox"/>
5		101001	30	Work Center	300	Combining	8/31/26, 9:55 PM	8/31/26, 10:00 PM	0.00	5.00	<input type="checkbox"/>
6		101001	35	Work Center	500	Bakery Outsource	8/31/26, 10:00 PM	8/31/26, 10:00 PM	0.00	0.00	<input type="checkbox"/>
7		101001	40	Work Center	400	Cooking	8/31/26, 10:00 PM	8/31/26, 11:00 PM	0.00	60.00	<input type="checkbox"/>
8		101002	10	Work Center	100	Ingredient Prep	6/30/26, 3:40 PM	6/30/26, 3:50 PM	10.00	0.00	<input type="checkbox"/>
9		101002	20	Work Center	200	Cutting Prep	6/30/26, 3:50 PM	6/30/26, 4:00 PM	0.00	10.00	<input type="checkbox"/>
10		101002	30	Work Center	300	Combining	6/30/26, 9:55 PM	6/30/26, 10:00 PM	0.00	5.00	<input type="checkbox"/>
11		101002	35	Work Center	500	Bakery Outsource	6/30/26, 10:00 PM	6/30/26, 10:00 PM	0.00	0.00	<input type="checkbox"/>
12		101002	40	Work Center	400	Cooking	6/30/26, 10:00 PM	6/30/26, 11:00 PM	0.00	60.00	<input type="checkbox"/>

Search...

- Status
- Prod. Order No.
- Operation No.
- Type
- No.
- Description
- Starting Date-Time
- Ending Date-Time
- Setup Time
- Run Time
- Wait Time
- Move Time
- Routing Link Code
- Routing Status [Prod. Or...

Row Groups

- Status
- Routing Status [Pro...

Values

- Sum(Setup Time)
- Sum(Run Time)
- Sum(Wait Time)
- Sum(Move Time)

Create new analysis



201 Key take-aways

- Is Automation for me?
 - Flushing can provide automatic consumption and output as basic or full-cycle as you would like!
 - Using the system to generate order suggestions based on demand
- Keeping better info on your Products
 - Versioning and how to keep track of product changes
 - Other advanced setup to manipulate how orders get processed





Thank you for attending!



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