DASH

Quoting & Scheduling for Build-To-Order Companies

February 2023

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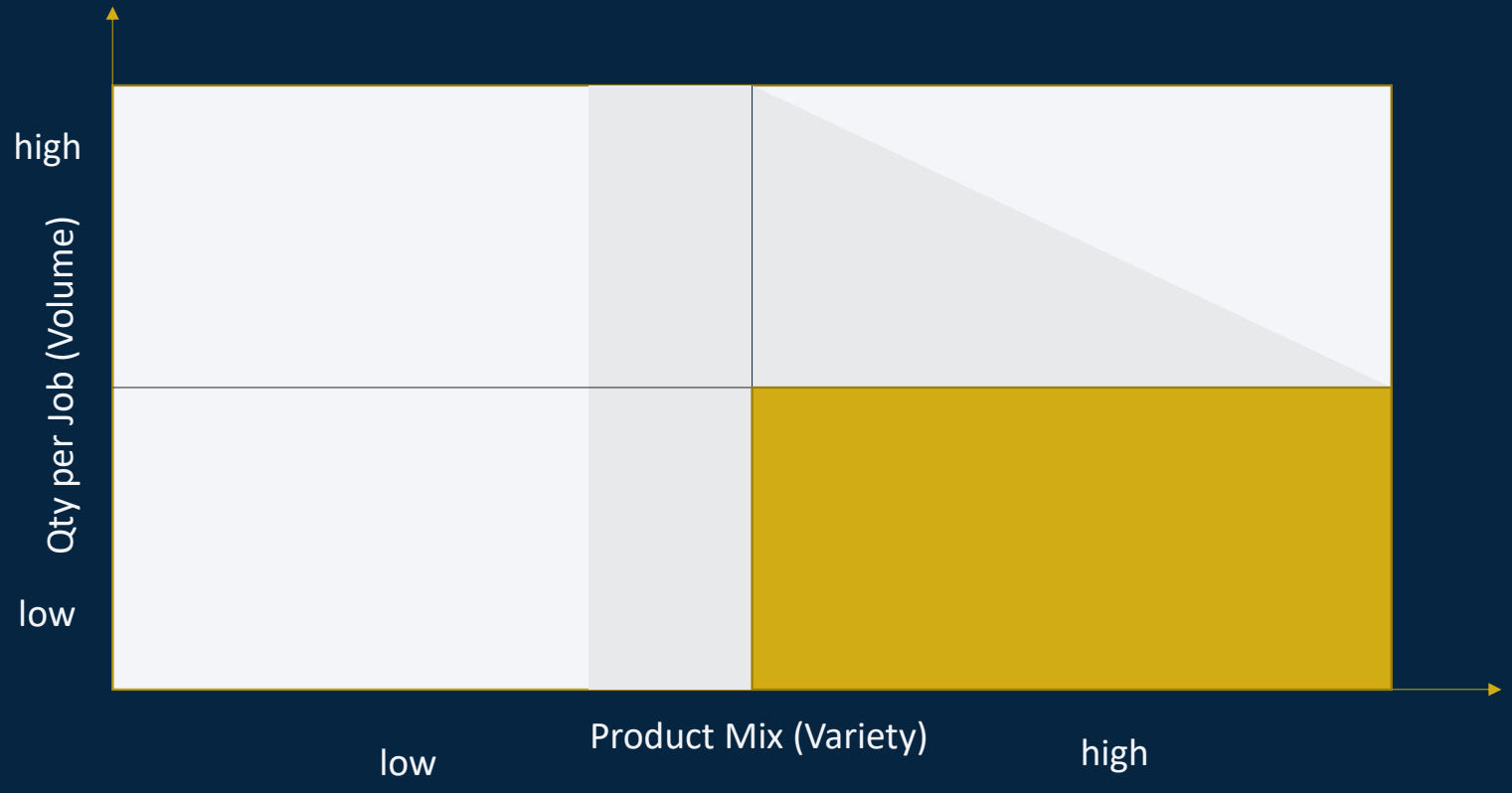
Solution Focus



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Process / Today (Excel)

- Many small businesses manage their quoting process in Excel
- Mistake prone
- Difficult to impossible to “learn” from historical orders vs product features to improve estimating precision
- ERP is **NOT** the solution for the make-to-order business

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Process / Today (Excel) / Features

Quote	Attributes				
	QTY	MATERIAL	RAWWEIGHT_LB	HEATREAT	COMPLEXITY (1,2,3)
Q1000	6	STEEL1	16	YES	3
Q1001	9	STEEL3	15	NO	1
Q1002	3	STEEL1	22	YES	1
Q1003	1	STEEL2	18	YES	2
Q1004	9	STEEL2	25	YES	3
Q1005	8	STEEL2	24	YES	3

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Process / Today (Excel) / Time & Cost

	Per Unit Task Time [min]					
Quote	CUT	MACHINE	HEATREAT	RECEIVEINSPECT	GRIND	SHIP
Q1000	12.0	31.0	38.0	7.0	38.0	10.0
Q1001	5.0	30.0	33.0	9.0	38.0	9.0
Q1002	36.0	105.0	99.0	30.0	105.0	30.0
Q1003	16.0	70.0	62.0	20.0	60.0	18.0
Q1004	12.0	32.0	37.0	8.0	36.0	5.0
Q1005	36.0	99.0	96.0	27.0	90.0	24.0

CUT	MACHINE	HEATI
$ 11.00	$ 28.42	$ 3
$ 4.58	$ 27.50	$ 3
$ 33.00	$ 96.25	$ 9
$ 14.67	$ 64.17	$ 5
$ 11.00	$ 29.33	$ 3
$ 33.00	$ 90.75	$ 8

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Process / Today (Excel) / Pricing

aterial Cost	Cost			Pricing		Profit
	Qty	Total Unit Cost	Extended Cost	Unit Price	xtended Price	Gross Margin
6.40	6	$ 380.40	$ 2,282.40	$ 494.52	$2,967.12	23%
10.50	9	$ 118.67	$ 1,068.00	$ 154.27	$1,388.40	23%
8.80	3	$ 131.63	$ 394.90	$ 171.12	$ 513.37	23%
9.00	1	$ 273.00	$ 273.00	$ 354.90	$ 354.90	23%
12.50	9	$ 339.75	$ 3,057.75	$ 441.68	$3,975.08	23%
12.00	8	$ 391.50	$ 3,132.00	$ 508.95	$4,071.60	23%

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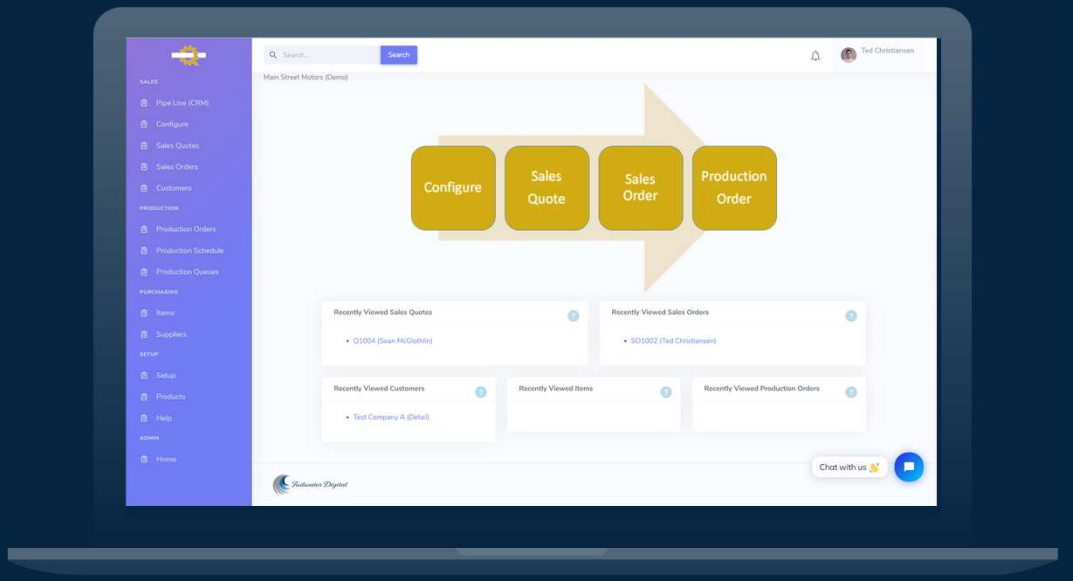
Process / DashQ

- Smart Quote
- Sales (Q + O)
- Production



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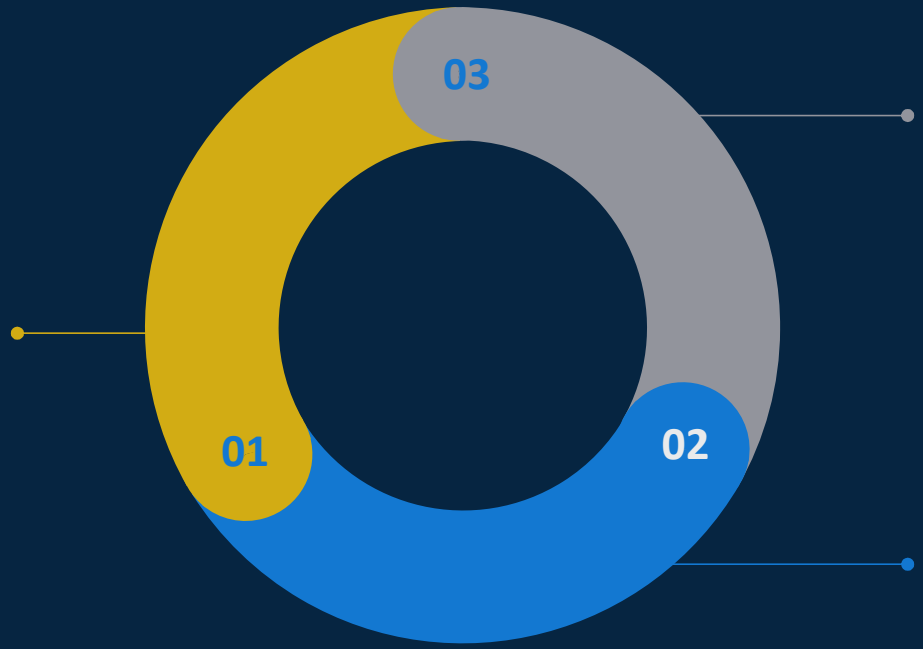
Transform Your Business

Transform Your Business

Smart Quote

Create quotes and in minutes rather than hours

Eliminate Excel and Word



Grow and Improve Profit

Win more orders through understanding win/loss and profitability via AI

Scheduling

Automatic schedule calculation

Production order management and time clocking via tablets for shop personnel

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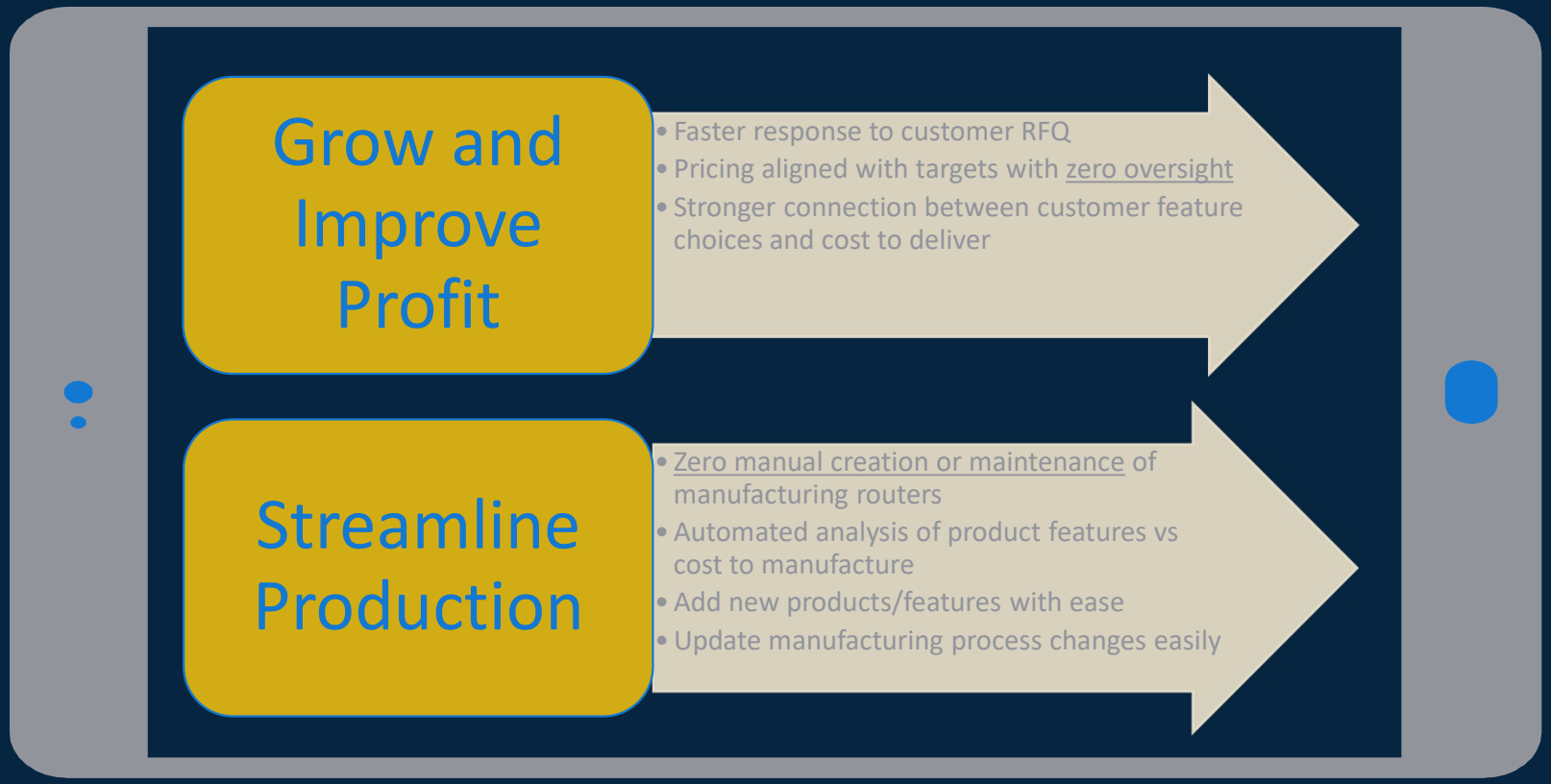
Benefits


Grow and Improve Profit
• Faster response to customer RFQ
• Pricing aligned with targets with zero oversight
• Stronger connection between customer feature choices and cost to deliver
Streamline Production
• Zero manual creation or maintenance of manufacturing routers
• Automated analysis of product features vs cost to manufacture
• Add new products/features with ease
• Update manufacturing process changes easily

Modules

- Pipeline (CRM)
- Smart Quote
- Line Item Builder
- Sales Orders
- Production Orders
- Inventory

Optional Module

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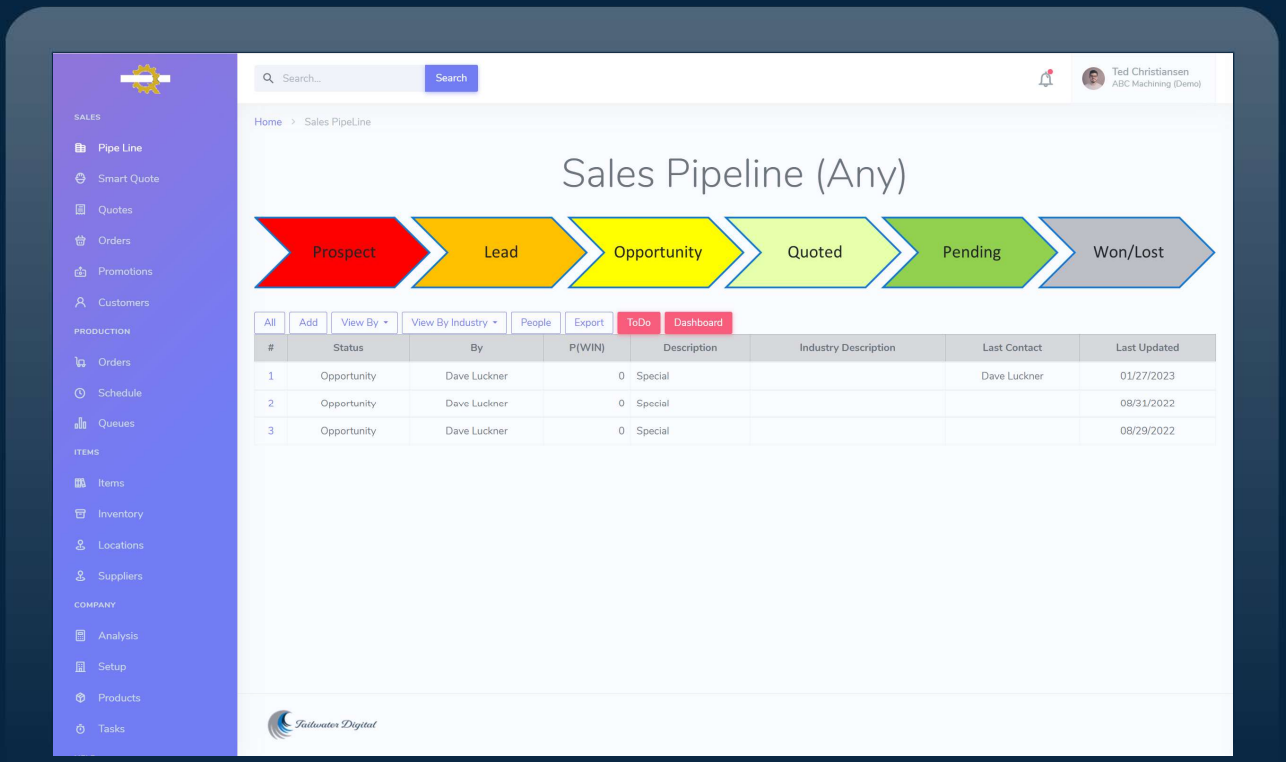
Sales

Pipeline (CRM)



Optional Module

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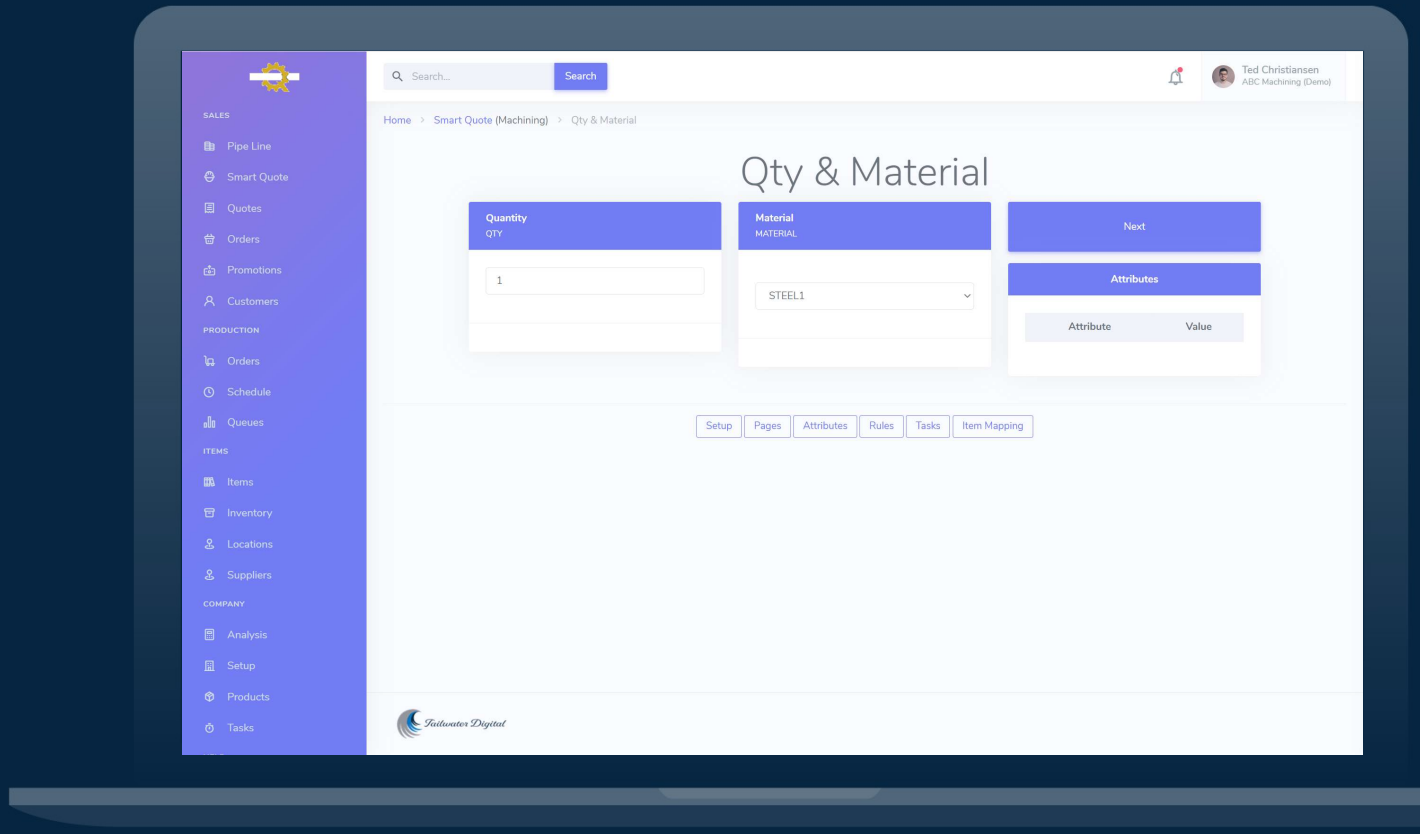
Price in Sixty Seconds w/Smart Quote



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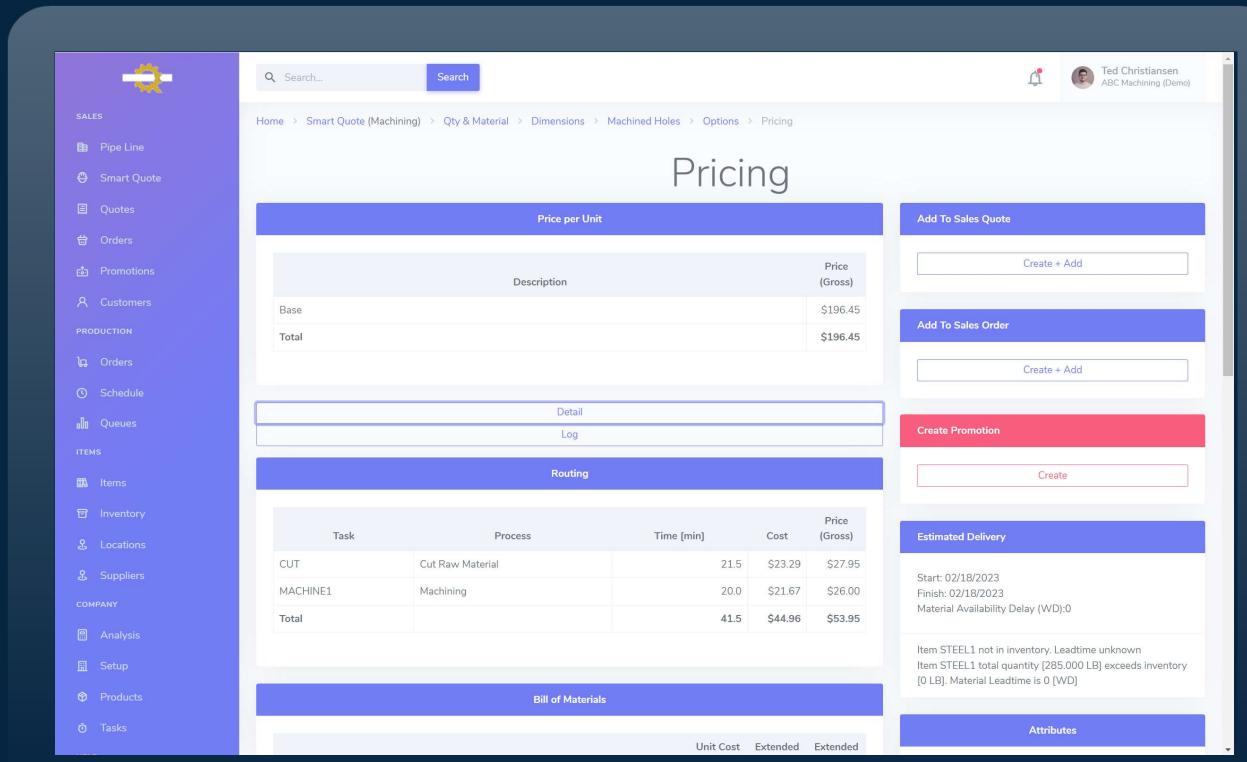
Smart Quote

- Generates:
  - Router
  - BOM
  - Cost
  - Pricing
  - Estimated Delivery
- Add to existing or new Sales Quote or Sales Order



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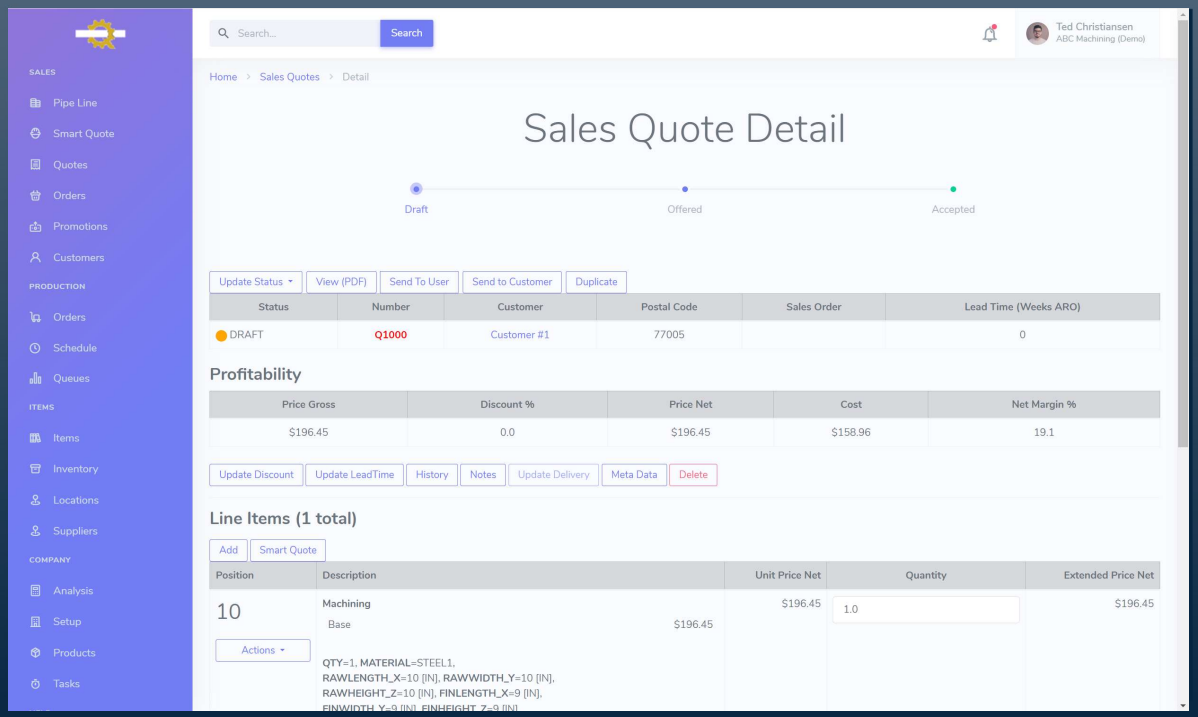
Quote – Configuration Added



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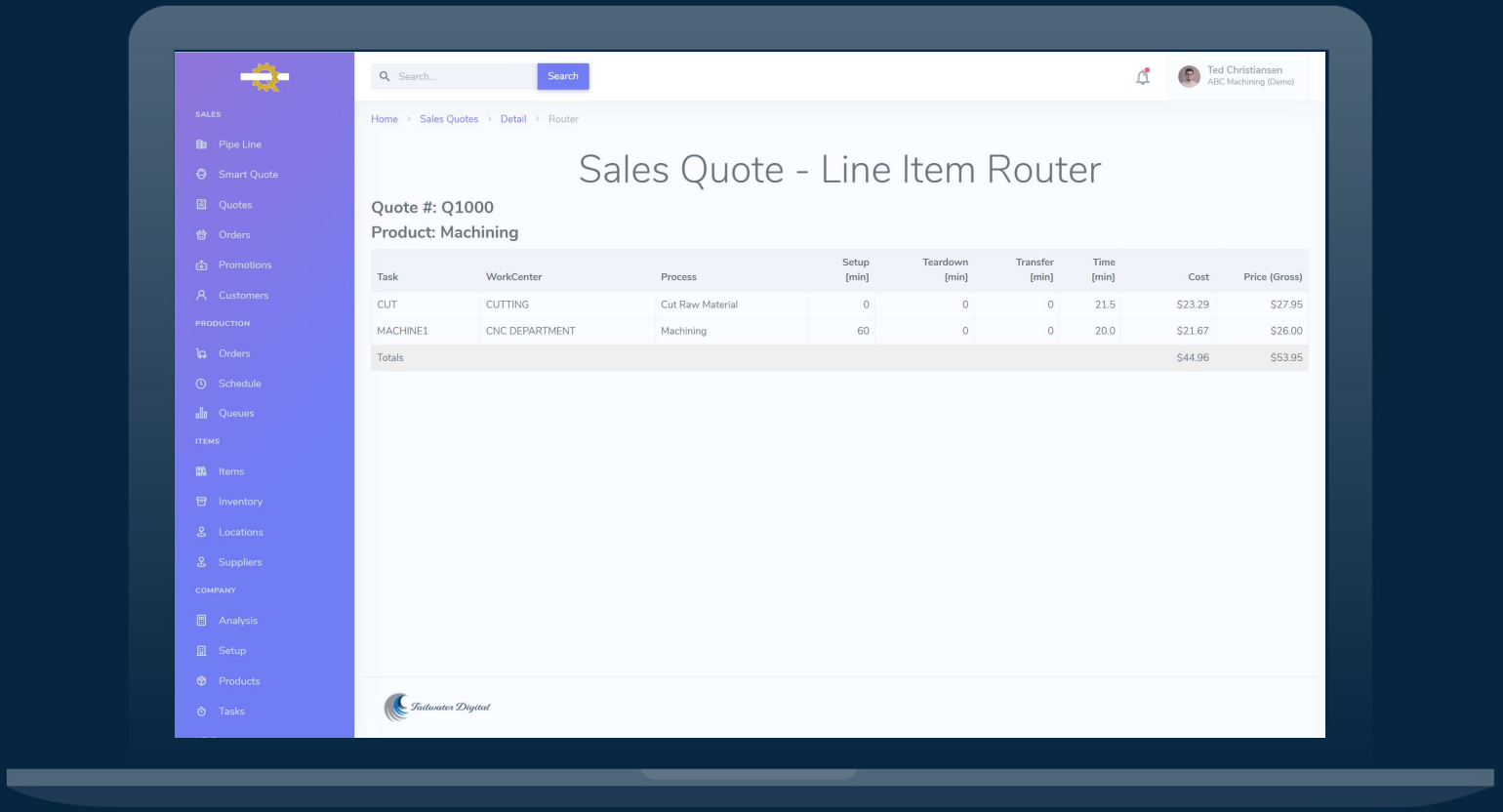
Quote Line Item Router



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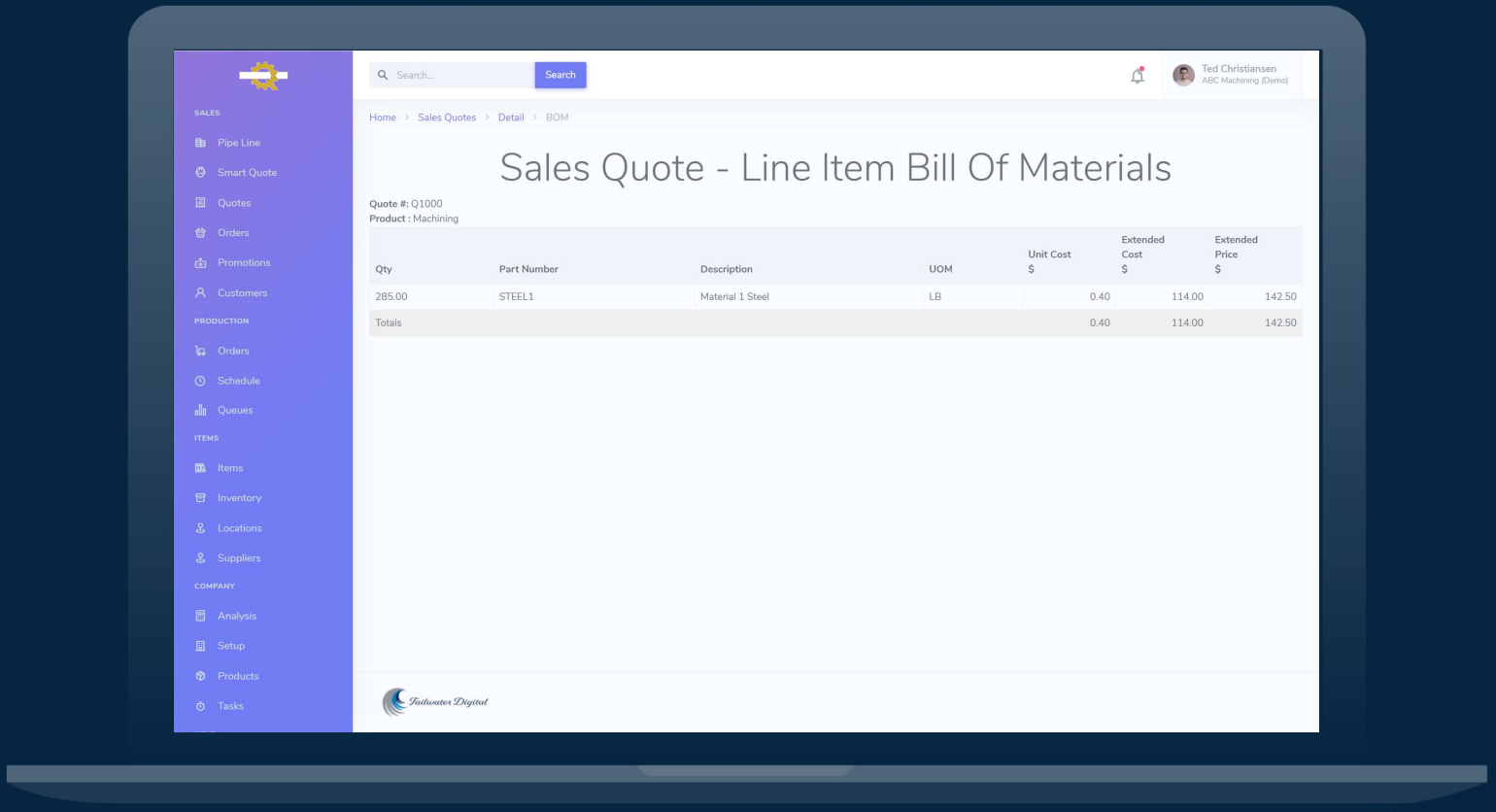
Quote Line Item Bill Of Materials



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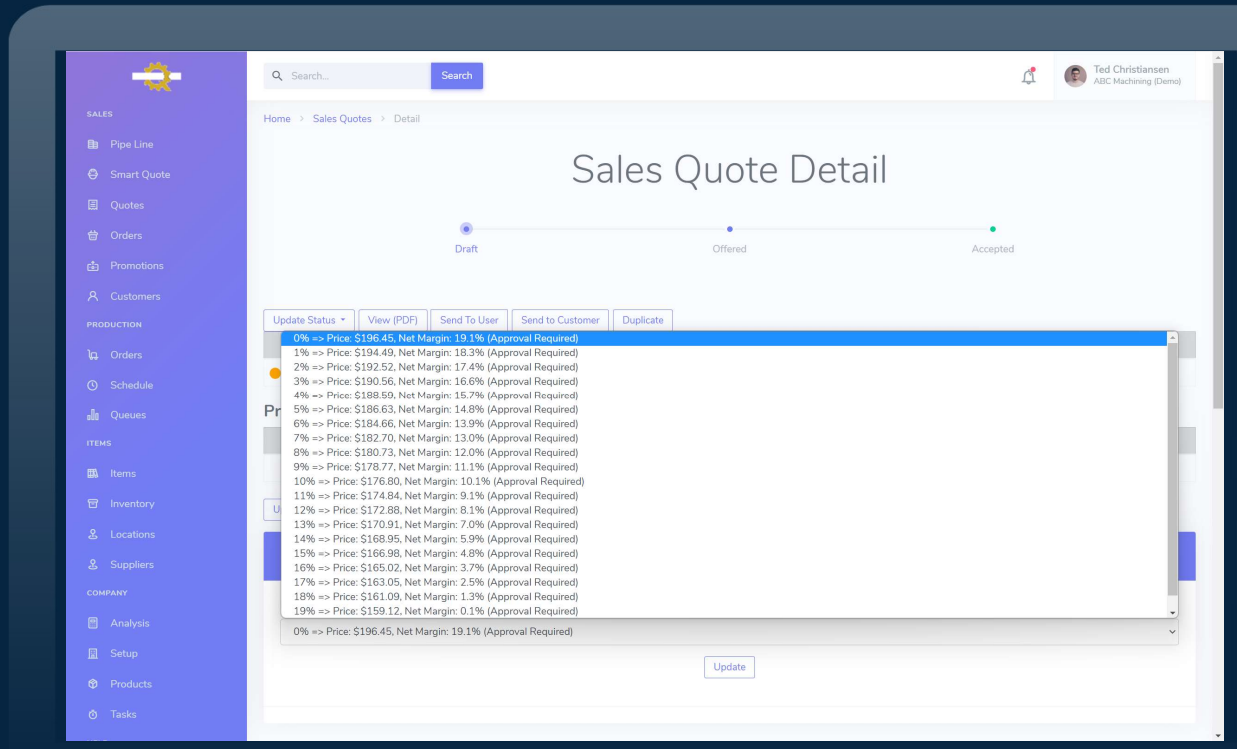
Quote Discounting

- Automatic calculation of net margin for each discount option



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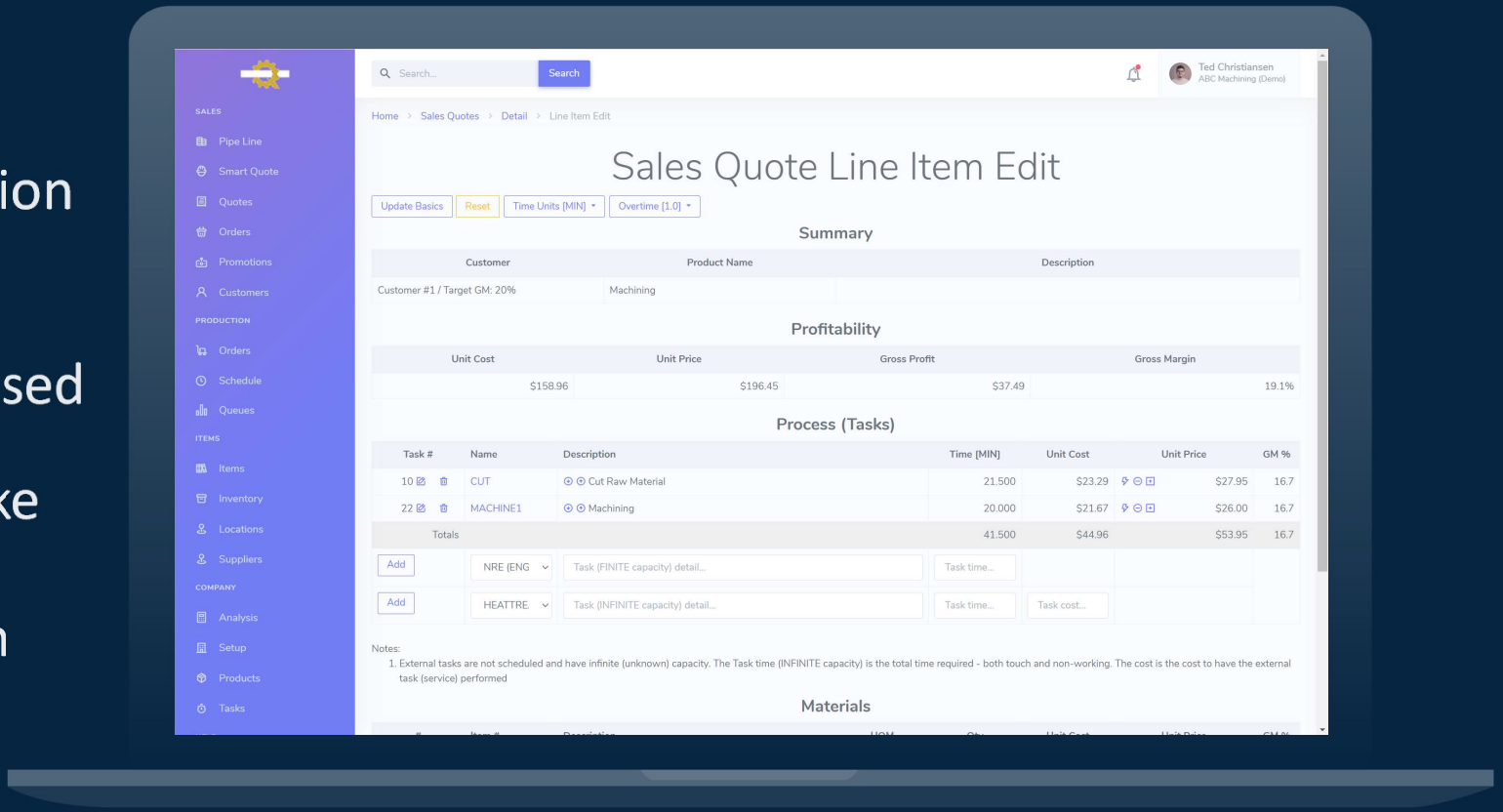
Line Item Editor

- Allows for manual creation of router and BOM
- Can also be used with Smart Quote to make changes
- Supported on Quotes and Orders



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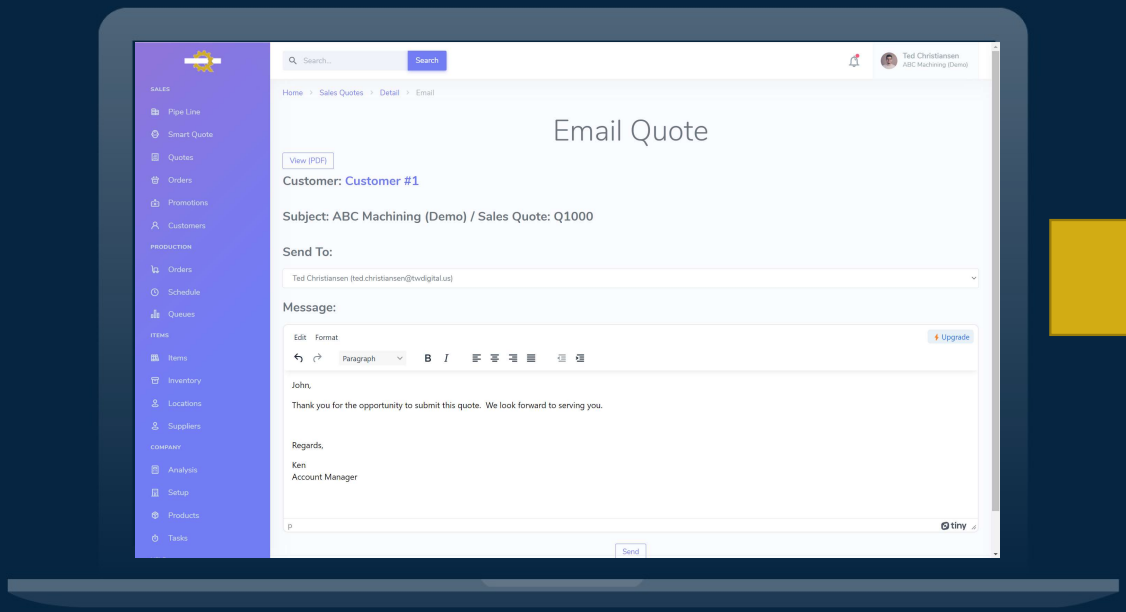
Quote Sharing



Main Street Motors (Demo)

11/3/2021

Customer

[redacted]

Quote # Q1004

In response to your inquiry, we are pleased to submit the following quotation.

Items

Pos	Description	Qty	Net Price	Extended Price
10	**Touring Supersport**	1.0	$23098.32	$23098.32
	Base	$21816.66		
	Power	$291.66		
	Wheels	$0.00		
	Interior	$295.00		
	Entertainment	$695.00		
	ENG=4.7L V8, **PACKAGE**=Sport, **COLOR**=Red, **WHEELS**=Steel, **SUNROOF**=YES, **TOWPACK**=YES, **ENTERTAIN**=Deluxe, **DATE**=11/03/2021			
	Price Net SubTotal			$23098.32
	Delivery - Mode: CO, Carrier: BEST			$0.00
	Price Net with Delivery			$23098.32

Notes:

1. No delivery definition setup for this CPQ instance

Regards,

[redacted]

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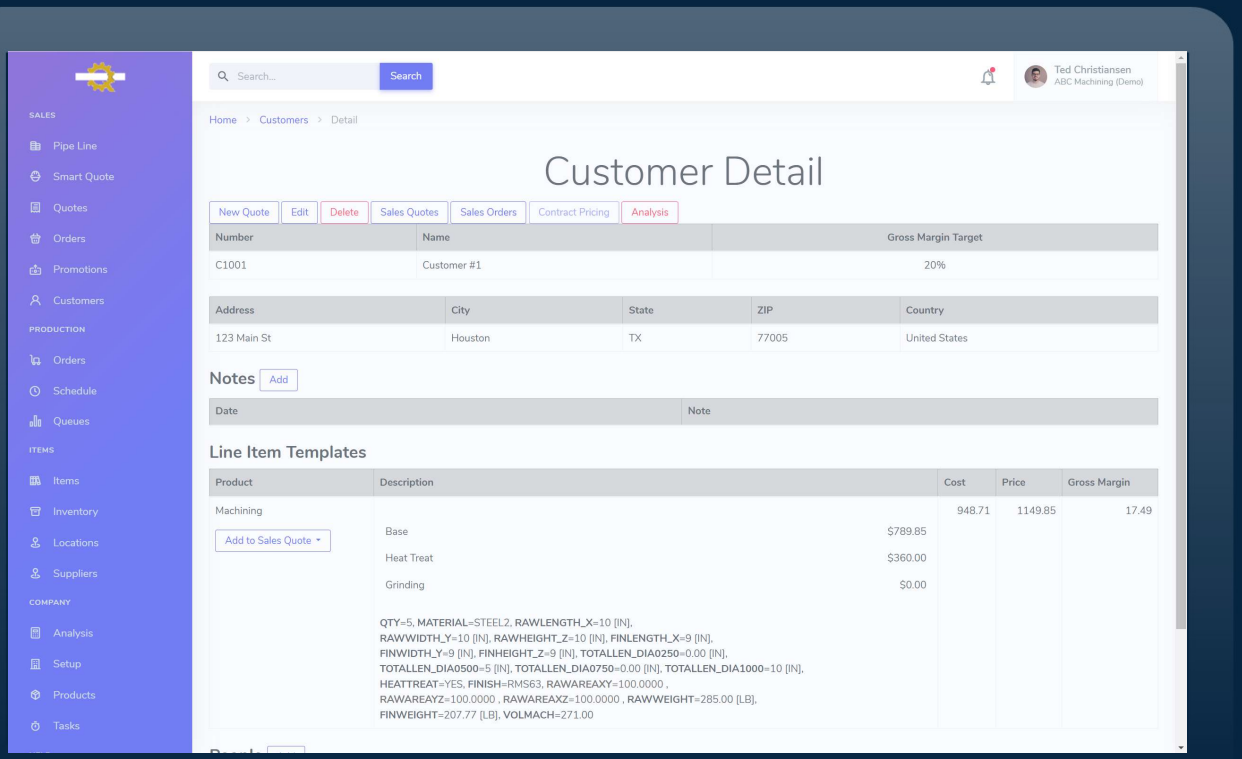
Customers

- Can be managed within DashQ OR
- Synced with another source
  - Import (Excel, CSV)
  - QuickBooks (Online)



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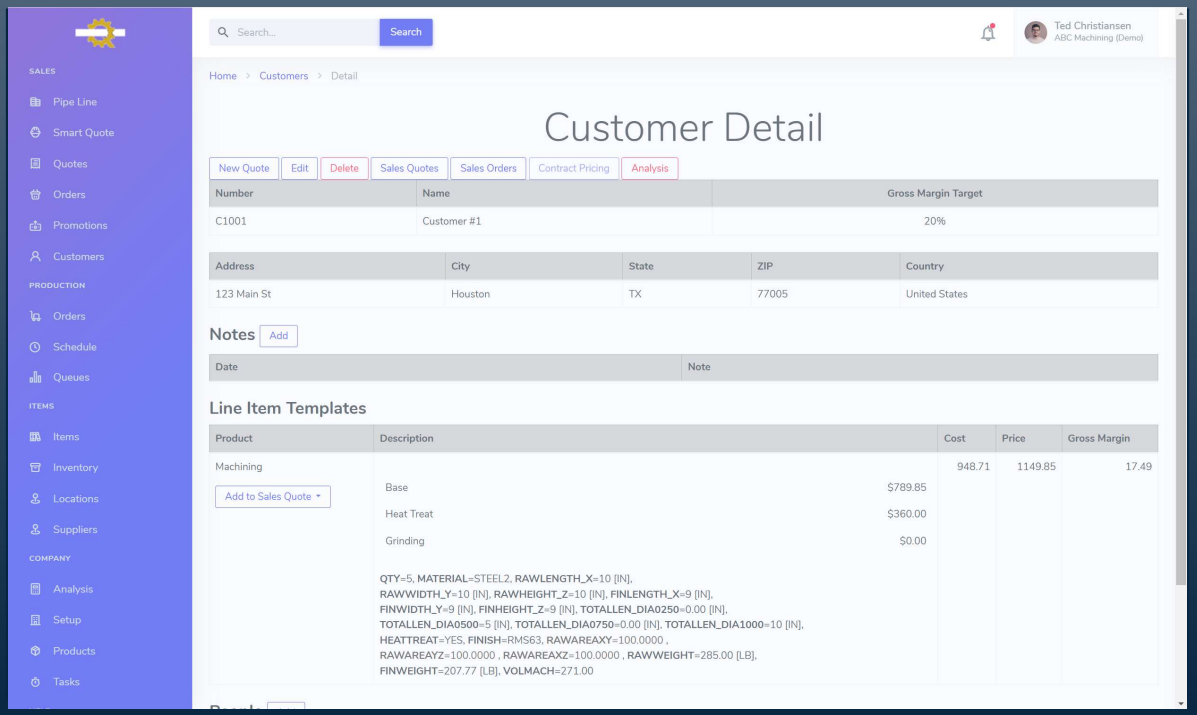
Customers / Line Item Templates

- Save any lineitem as a template to a Customer
- Makes repeat orders faster to setup



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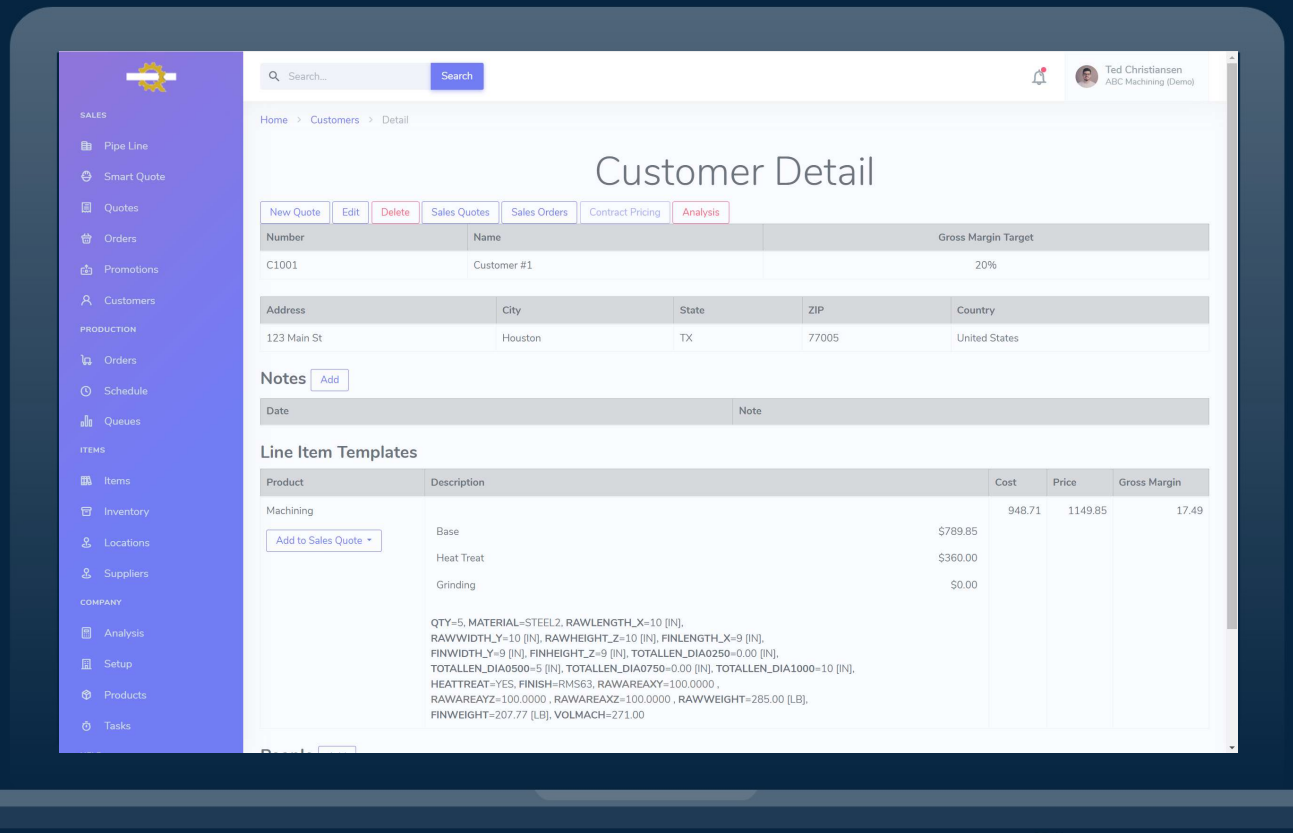
Promotions

- Save any lineitem as a Promotion (ADMIN role)
- Promotions can then be added to Quotes



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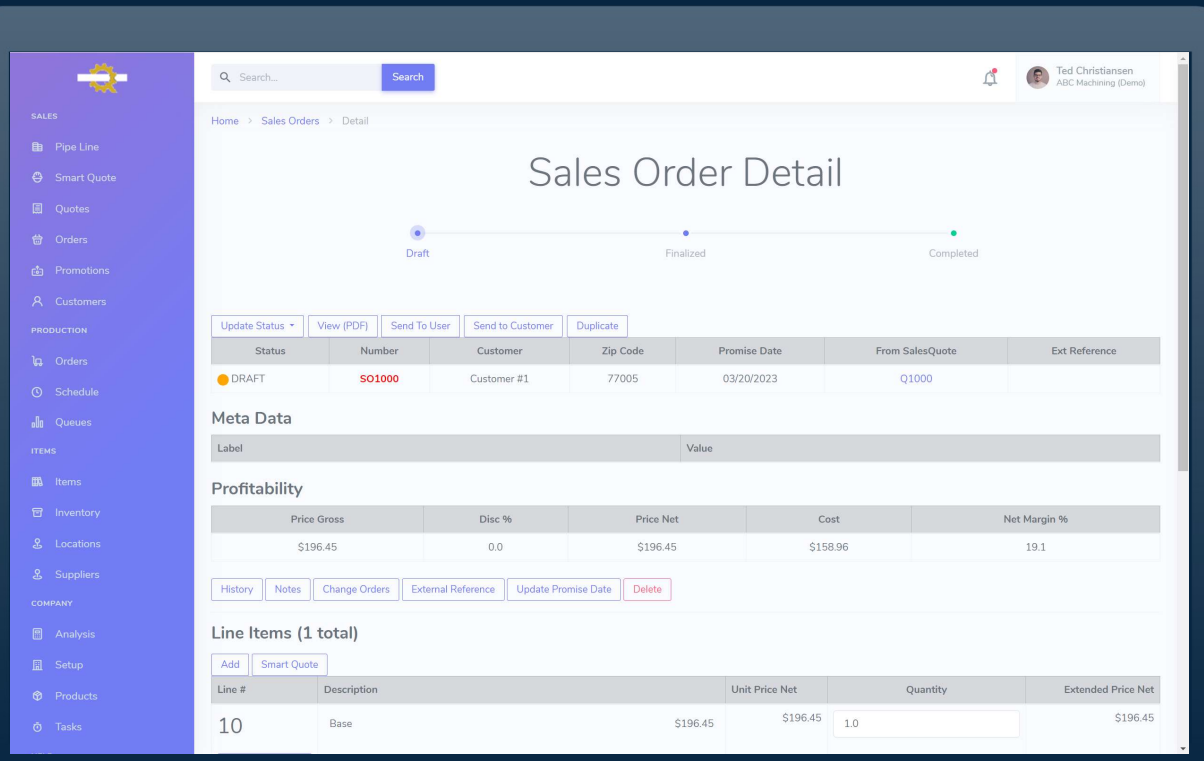
Sales Orders

- Same functionality as Quotes:
  - Creation
  - Editing
  - Status Management
  - Viewing



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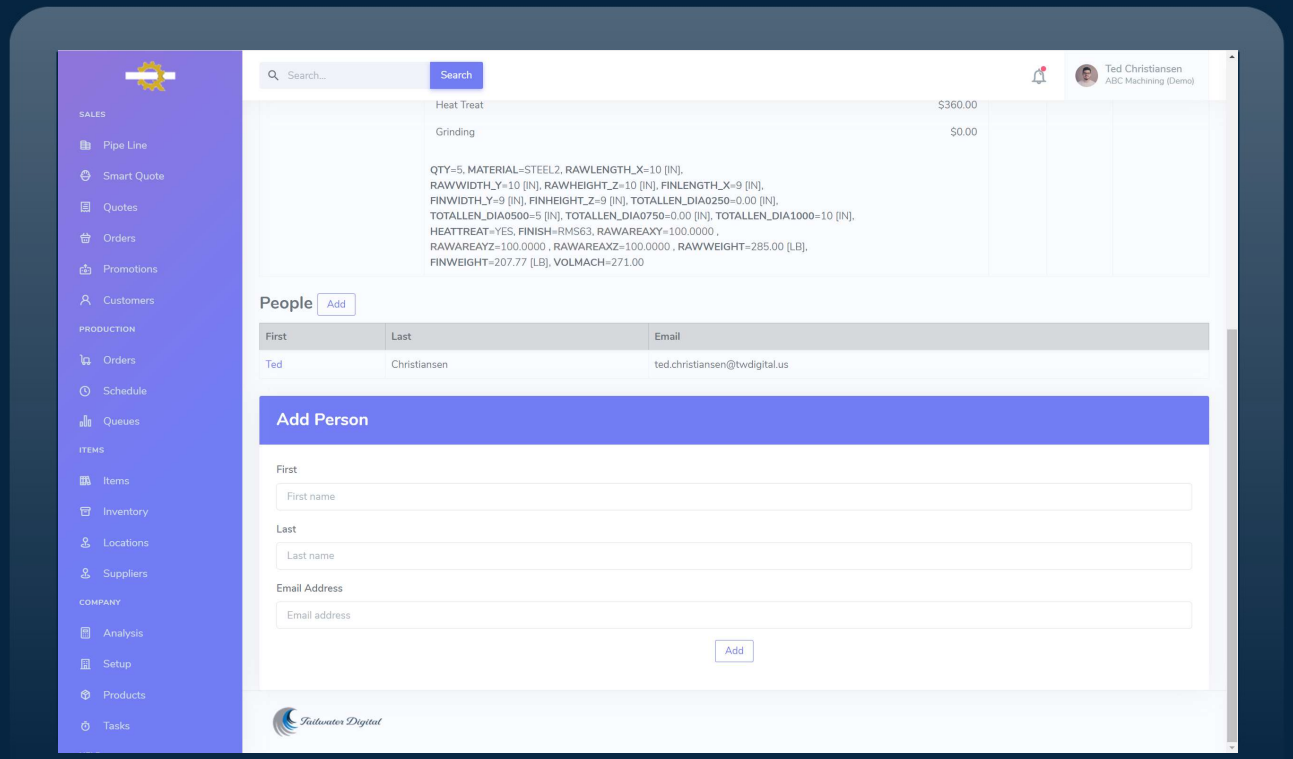
People

- People are associated with Customers
- Used for emailing of Quotes and Orders directly from within DashQ



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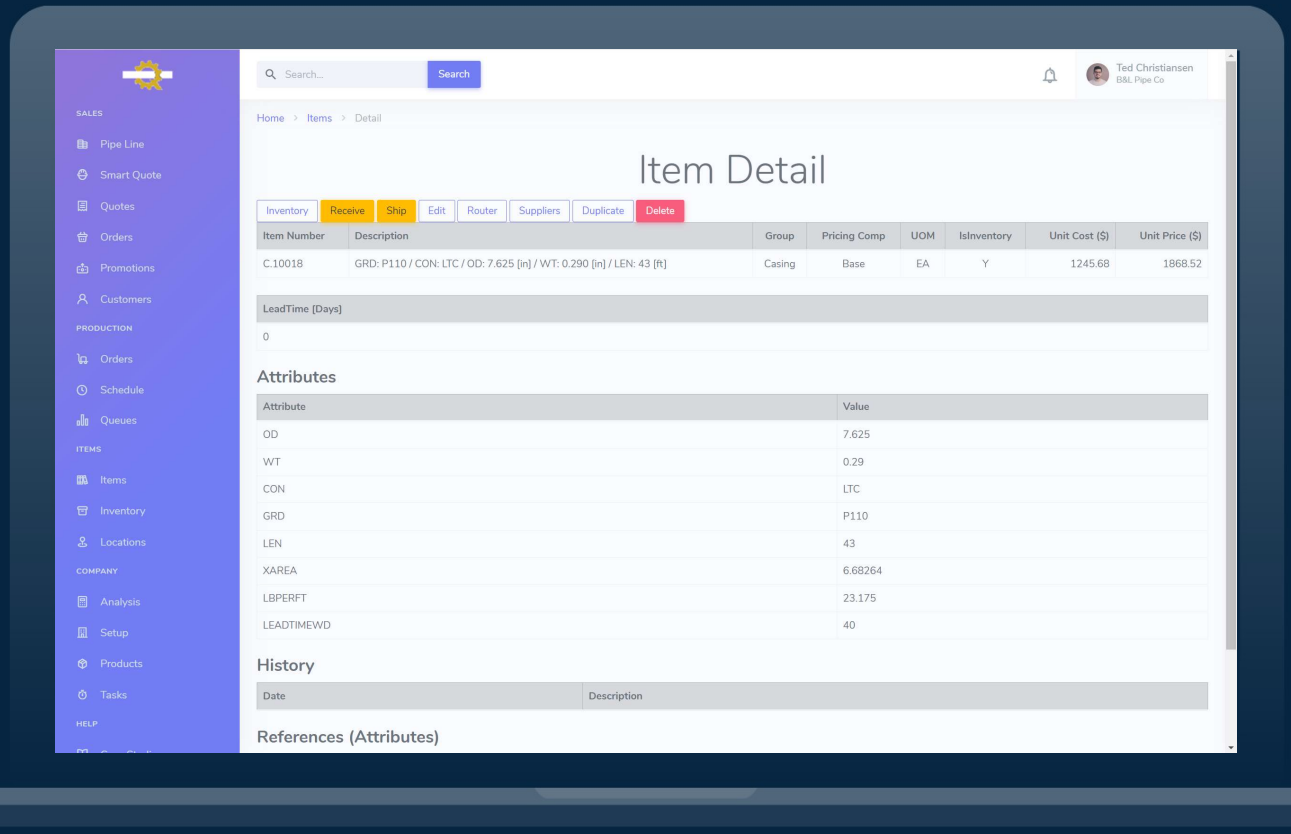
Items

Item Detail

- Item Number
- Description
- Cost
- Price
- Attributes

- Added to BOM dynamically via Smart Quote



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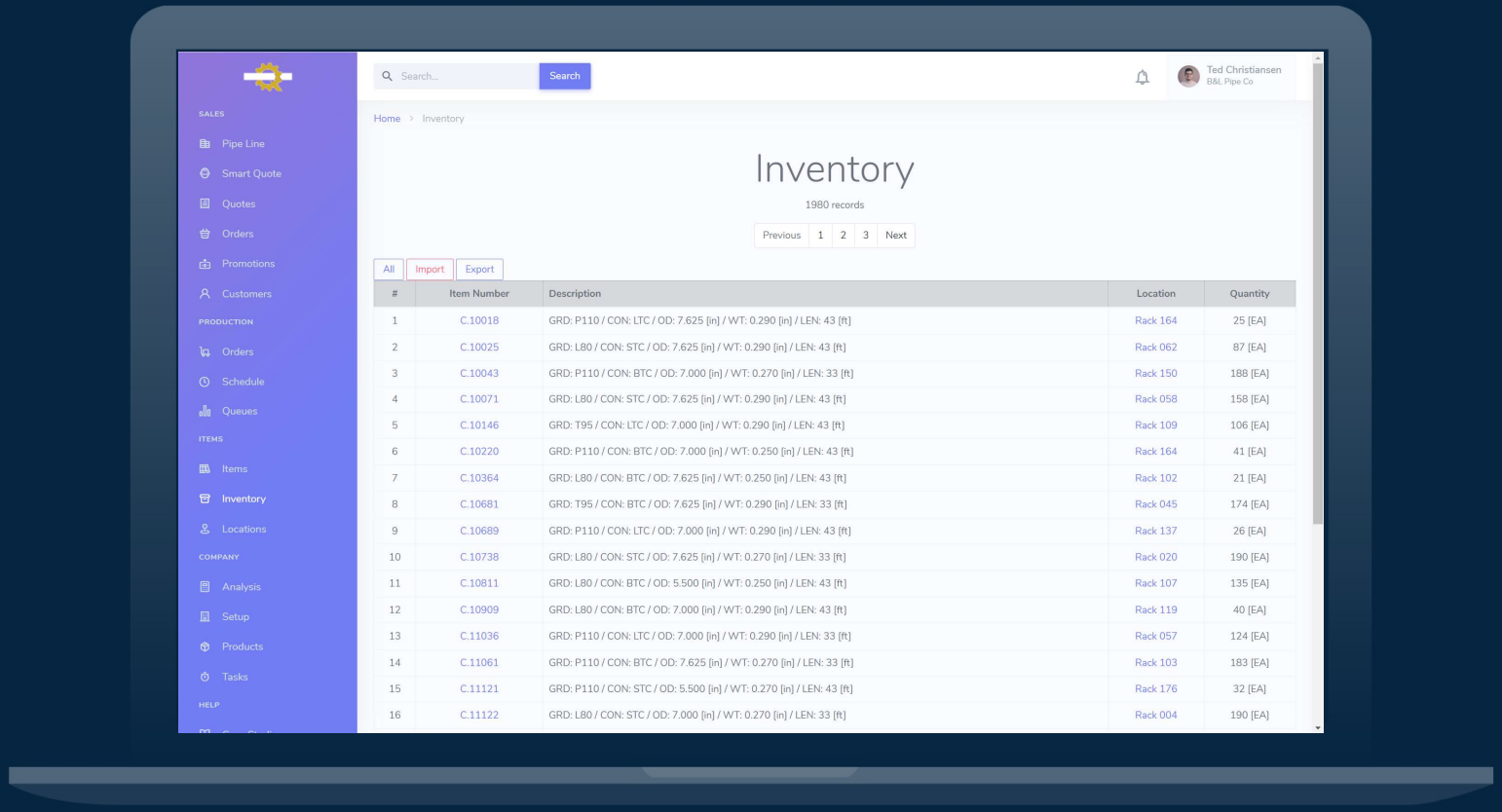
Inventory

Inventory

- Defineable locations, i.e
  - YARD
  - WHSE



#	Item Number	Description	Location	Quantity
1	C.10018	GRD: P110 / CON: LTC / OD: 7.625 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 164	25 [EA]
2	C.10025	GRD: L80 / CON: STC / OD: 7.625 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 062	87 [EA]
3	C.10043	GRD: P110 / CON: BTC / OD: 7.000 [in] / WT: 0.270 [in] / LEN: 33 [ft]	Rack 150	188 [EA]
4	C.10071	GRD: L80 / CON: STC / OD: 7.625 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 058	158 [EA]
5	C.10146	GRD: T95 / CON: LTC / OD: 7.000 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 109	106 [EA]
6	C.10220	GRD: P110 / CON: BTC / OD: 7.000 [in] / WT: 0.250 [in] / LEN: 43 [ft]	Rack 164	41 [EA]
7	C.10364	GRD: L80 / CON: BTC / OD: 7.625 [in] / WT: 0.250 [in] / LEN: 43 [ft]	Rack 102	21 [EA]
8	C.10681	GRD: T95 / CON: BTC / OD: 7.625 [in] / WT: 0.290 [in] / LEN: 33 [ft]	Rack 045	174 [EA]
9	C.10689	GRD: P110 / CON: LTC / OD: 7.000 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 137	26 [EA]
10	C.10738	GRD: L80 / CON: STC / OD: 7.625 [in] / WT: 0.270 [in] / LEN: 33 [ft]	Rack 020	190 [EA]
11	C.10811	GRD: L80 / CON: BTC / OD: 5.500 [in] / WT: 0.250 [in] / LEN: 43 [ft]	Rack 107	135 [EA]
12	C.10909	GRD: L80 / CON: BTC / OD: 7.000 [in] / WT: 0.290 [in] / LEN: 43 [ft]	Rack 119	40 [EA]
13	C.11036	GRD: P110 / CON: LTC / OD: 7.000 [in] / WT: 0.290 [in] / LEN: 33 [ft]	Rack 057	124 [EA]
14	C.11061	GRD: P110 / CON: BTC / OD: 7.625 [in] / WT: 0.270 [in] / LEN: 33 [ft]	Rack 103	183 [EA]
15	C.11121	GRD: P110 / CON: STC / OD: 5.500 [in] / WT: 0.270 [in] / LEN: 43 [ft]	Rack 176	32 [EA]
16	C.11122	GRD: L80 / CON: STC / OD: 7.000 [in] / WT: 0.270 [in] / LEN: 33 [ft]	Rack 004	190 [EA]

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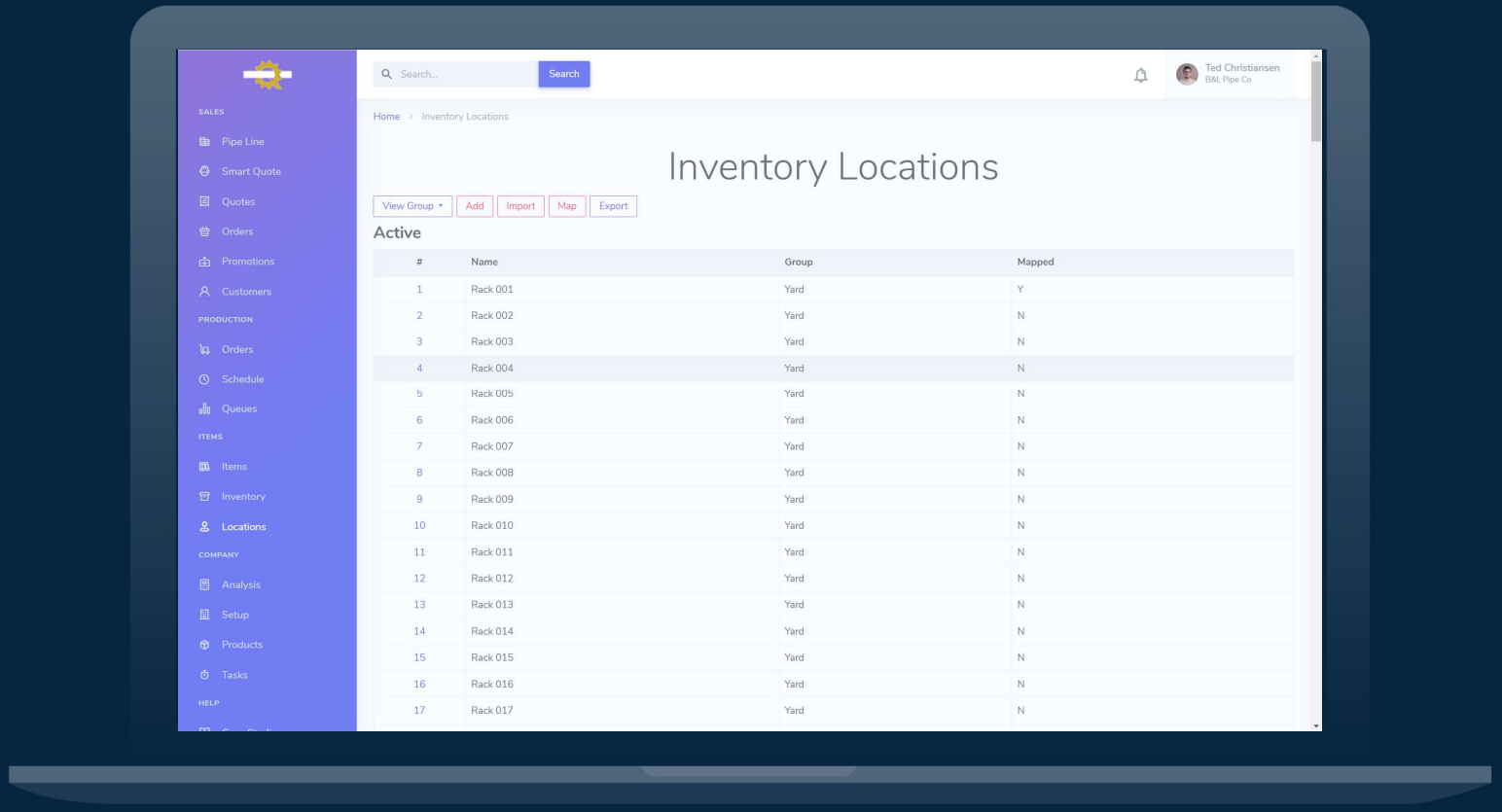
Inventory Locations



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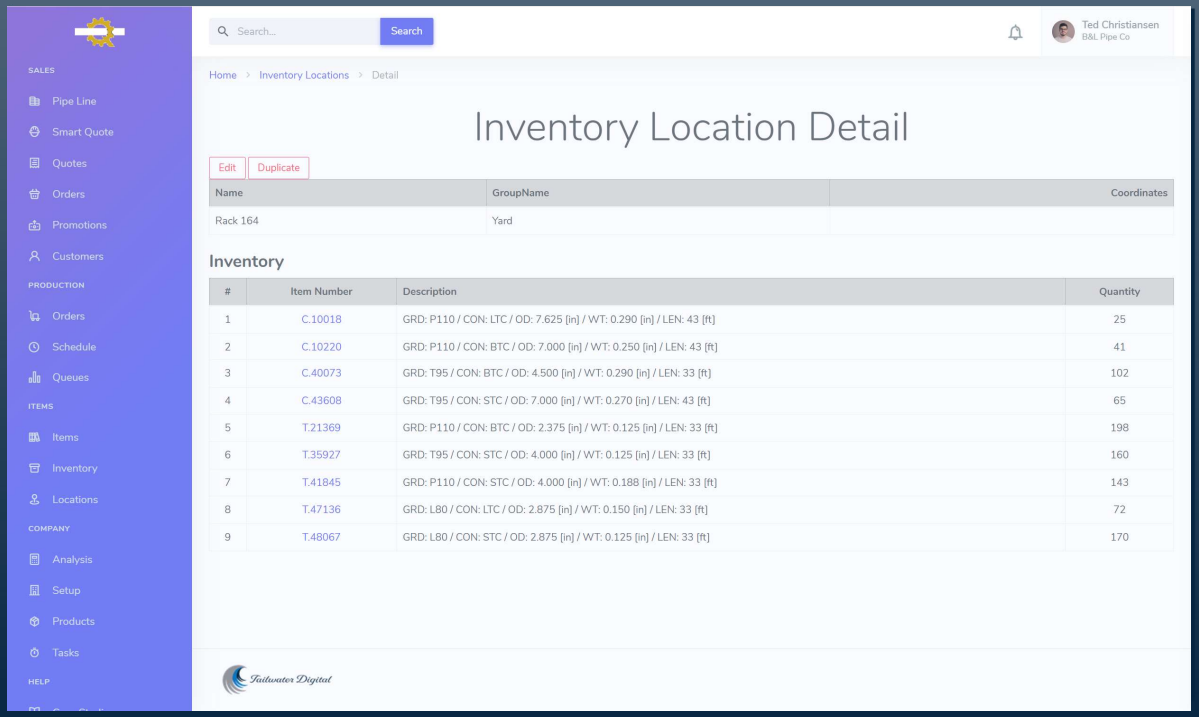
Inventory Location Detail



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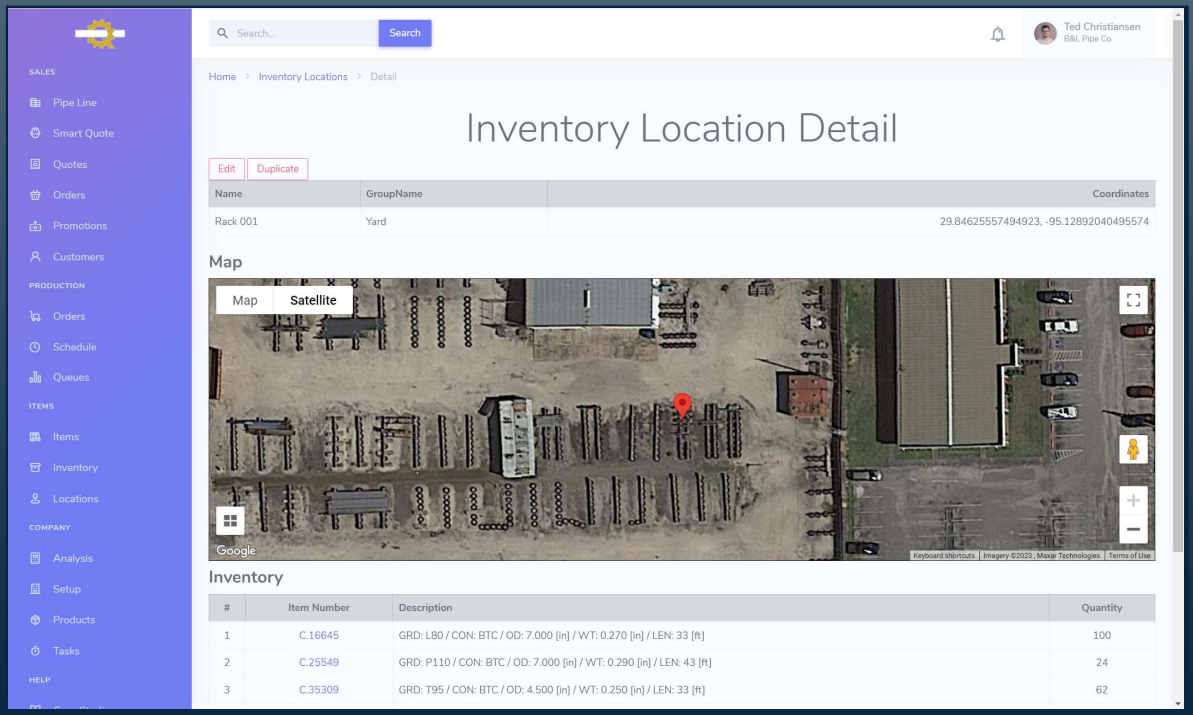
Inventory Map

- Defineable GPS coordinates for any inventory location



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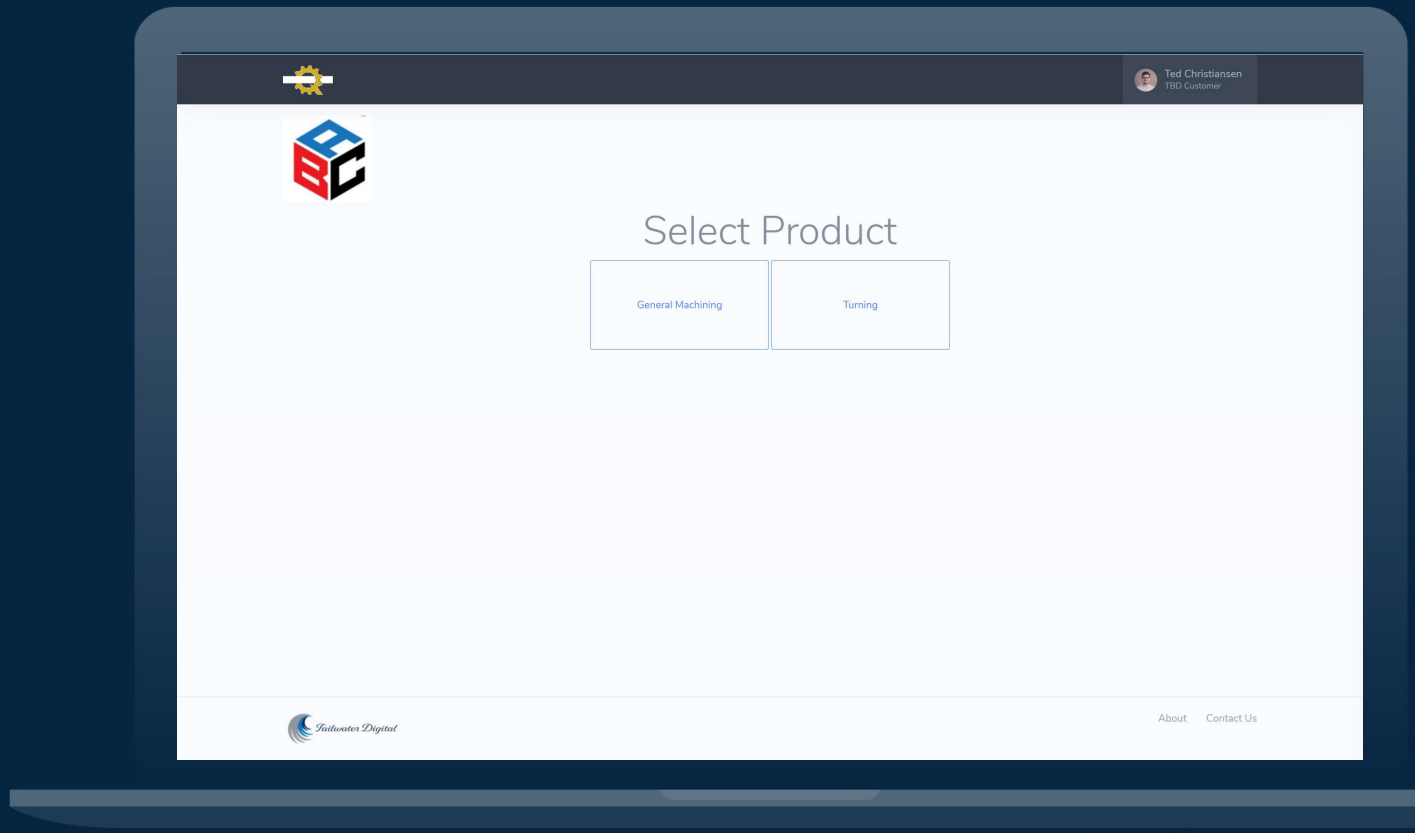
Store

Customer accessible Configurator!

Configurator for Customers (Store)

- Uses the same Setup (pages, attributes, etc) as internal that Sales staff uses
- Once “Submit Order” is pressed:
  - ACCEPTED sales quote is created
  - DRAFT sales order is created
  - Confirmation email sent to customer
  - Email sent to defined list of people internally
- Sales Order (DRAFT) is ready for review and submittal to production
- A history of every configuration is saved
  - Allows for analysis of options chosen

Store – Product Selection



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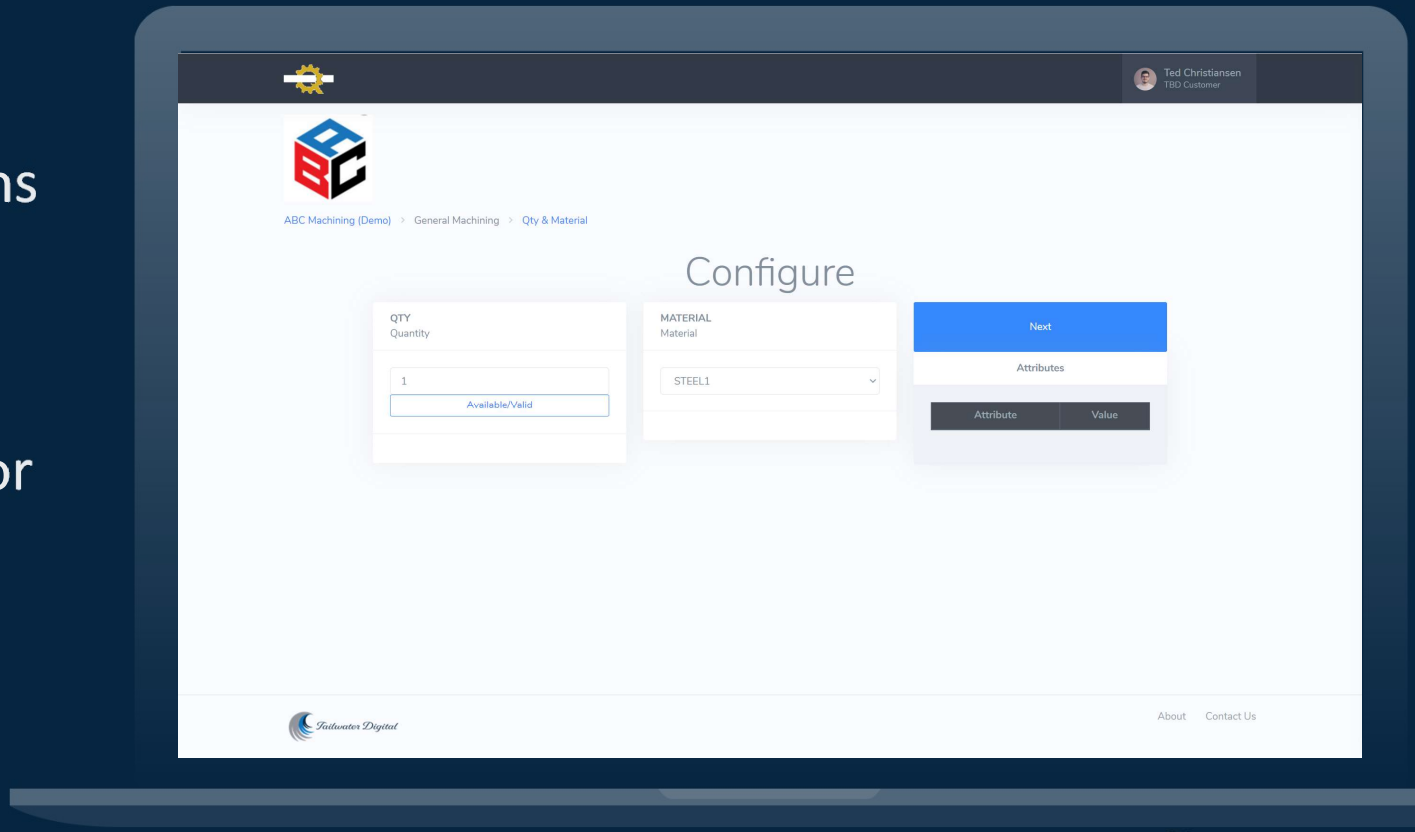
Store - Configure

- Customer chooses options
- Same Pages & Attributes as internal Configurator for Sales team



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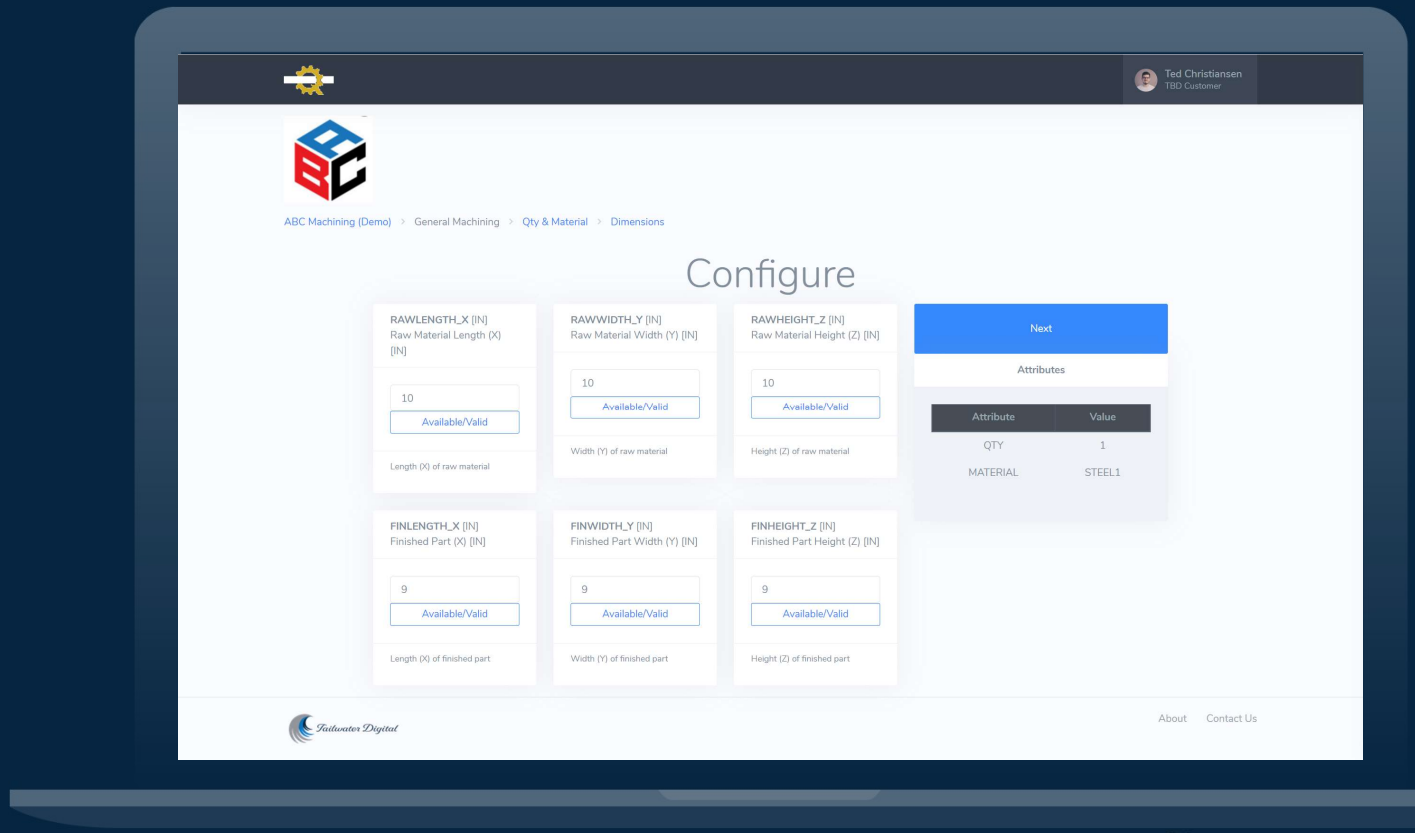
Store - Configure



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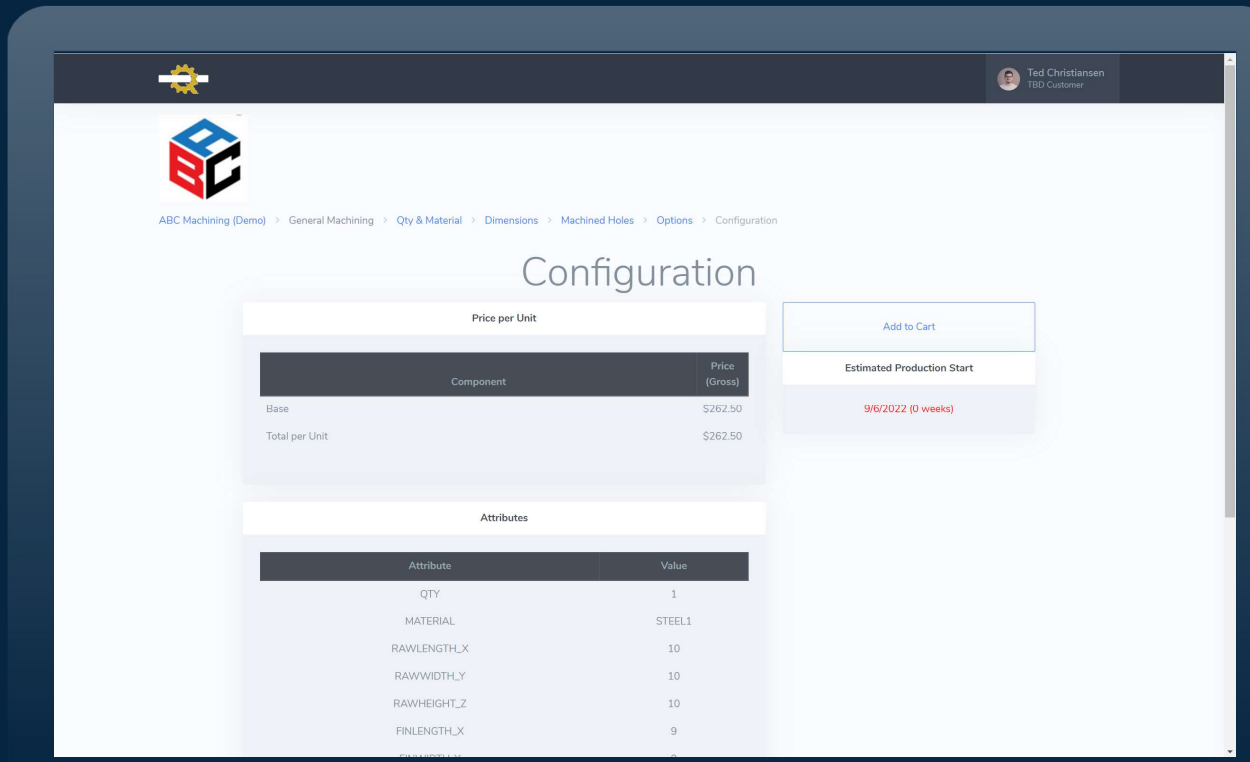
Store – Configuration >> Add to Cart

- Estimated start of Production is shown
- This date comes from the DashQ scheduler



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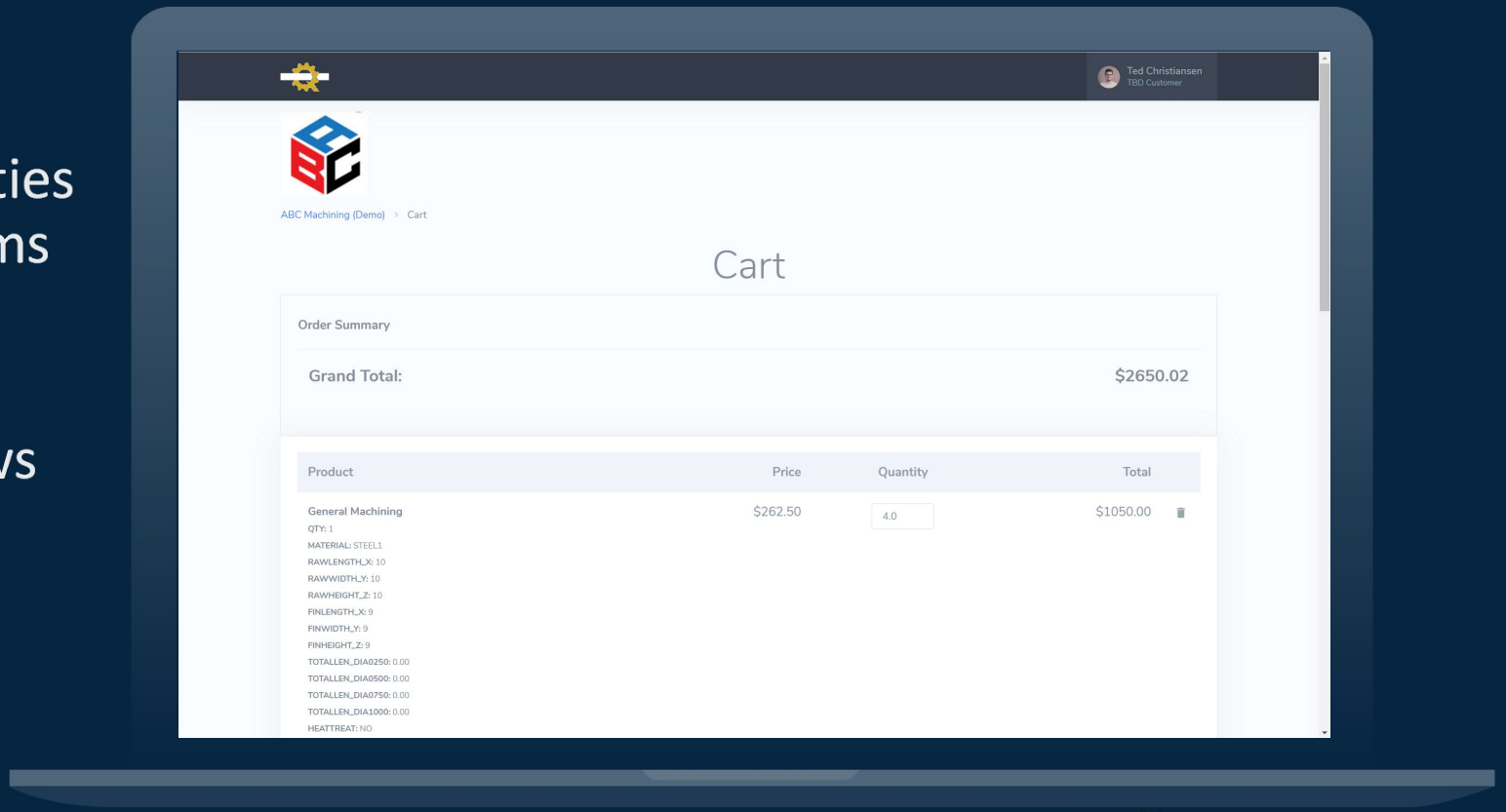
Store - Cart

- Customers can change quantities and delete items from the cart
- Continue Shopping allows customer to configure additional products



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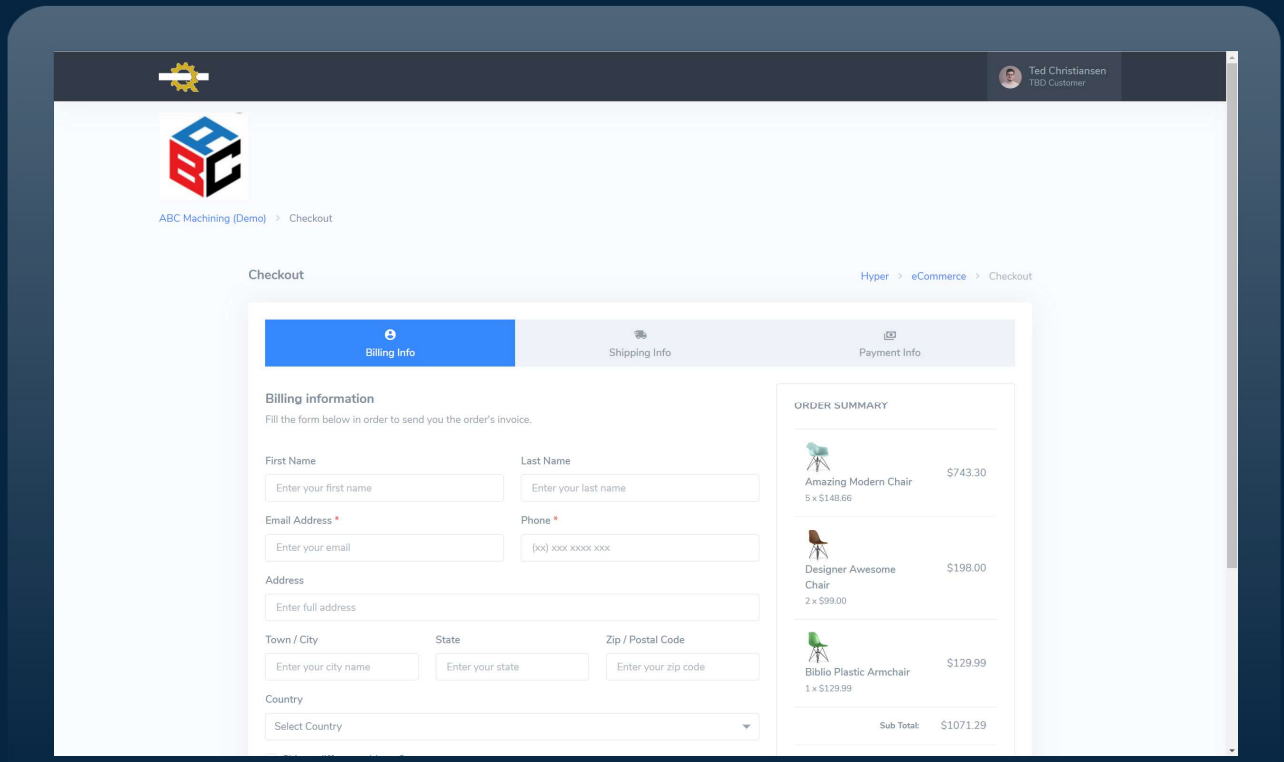
Store - Cart

- Checkout



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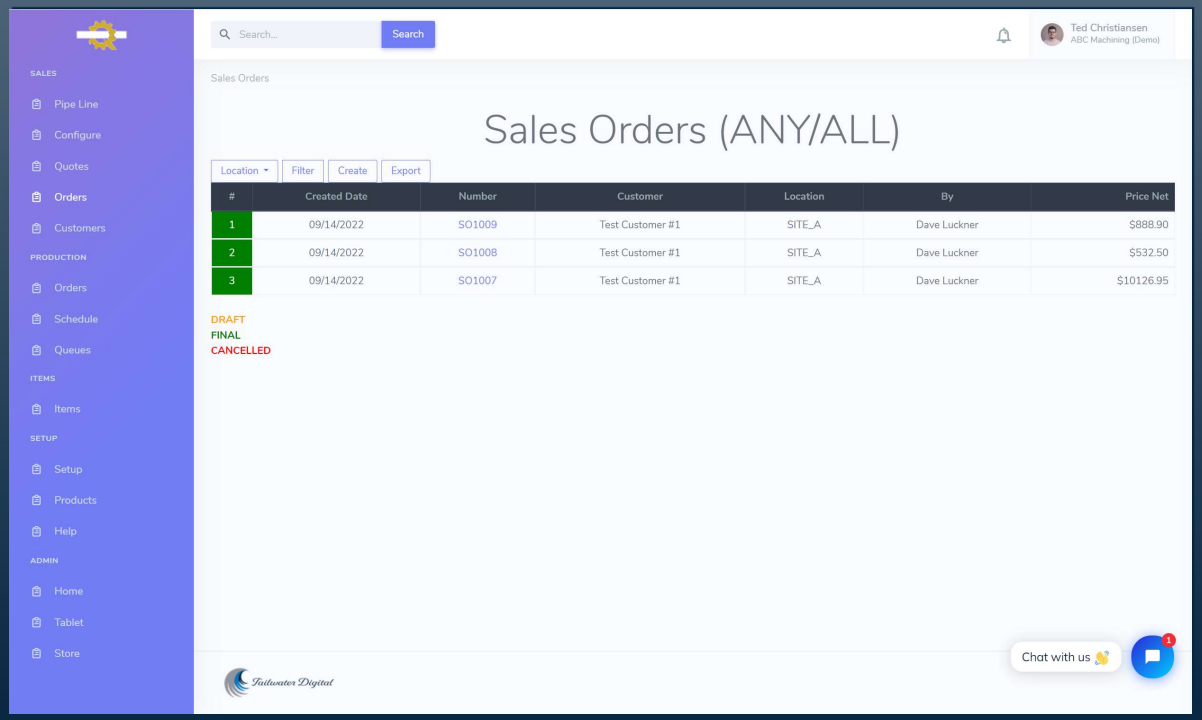
Store – Order Confirmation

- Email sent to Customer and to Sales team
- ACCEPTED Sales Quote created
- DRAFT Sales Order created – ready for review and release to Production



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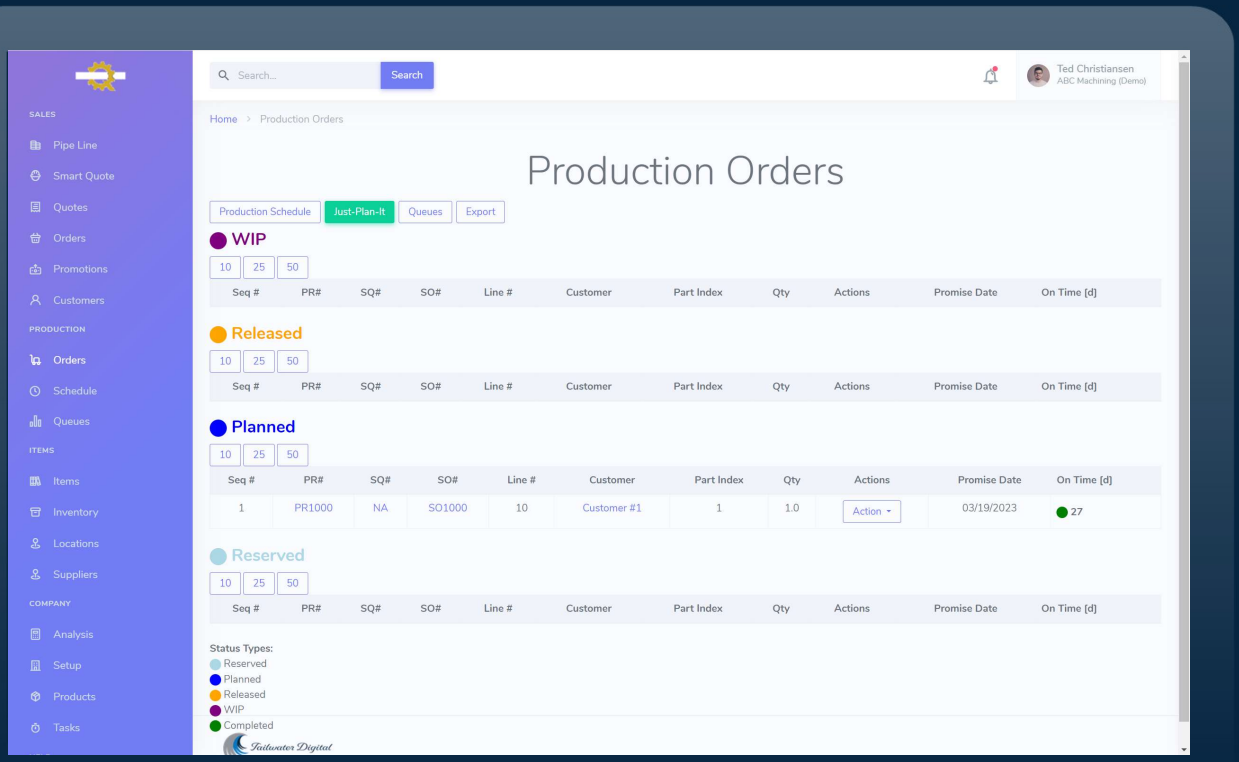
Production

Production Orders

- Sales Order Line Items become Production Orders



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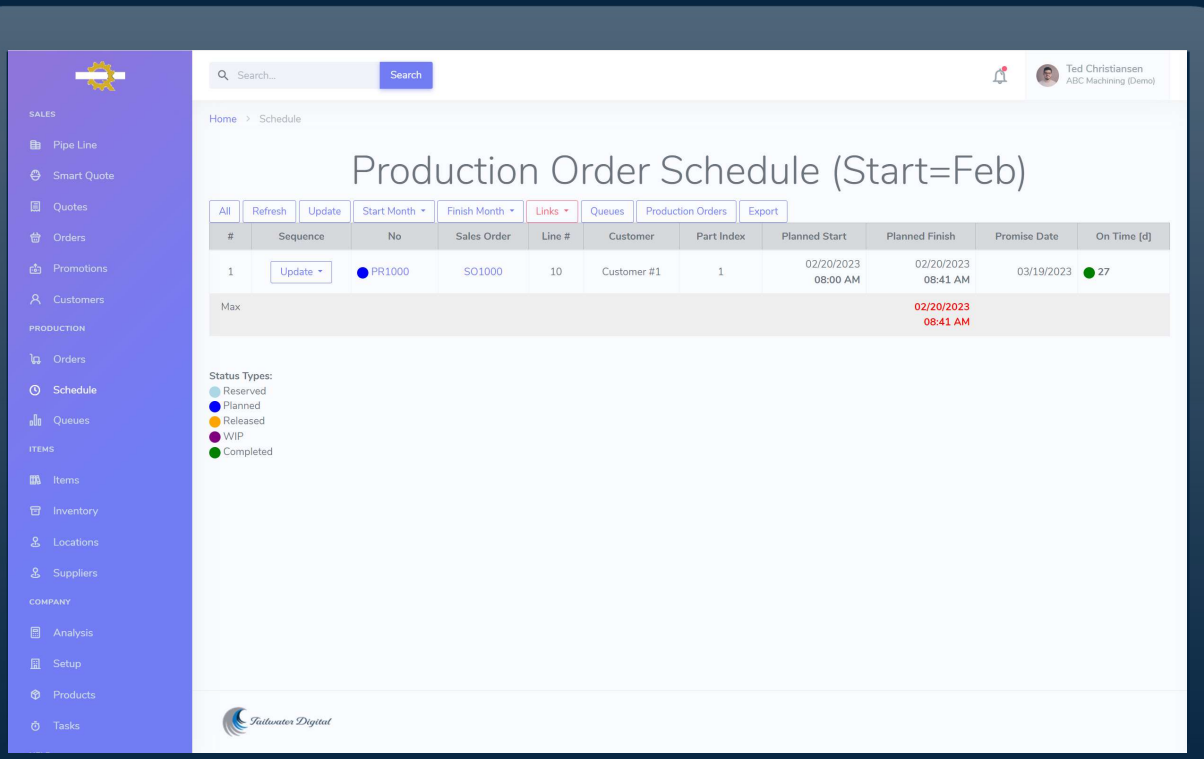
Production Schedule

- Sales Order Line Items become Production Orders



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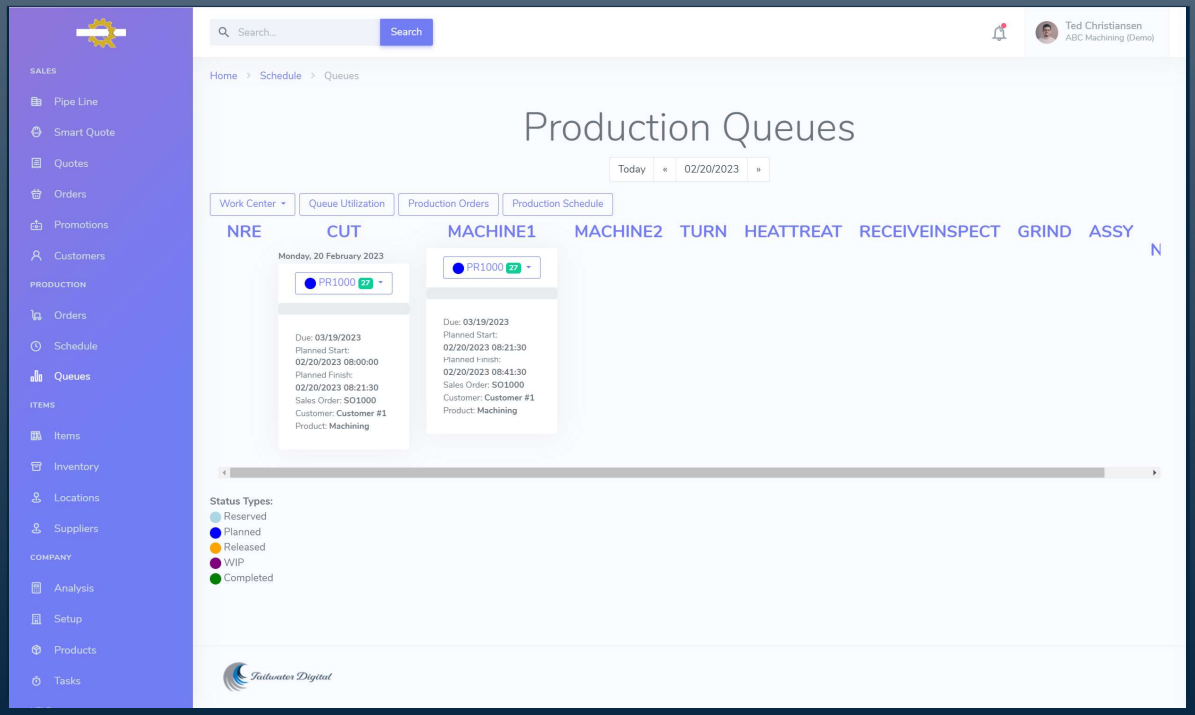
Production Task Queues

- Dashboard of tasks by Queue



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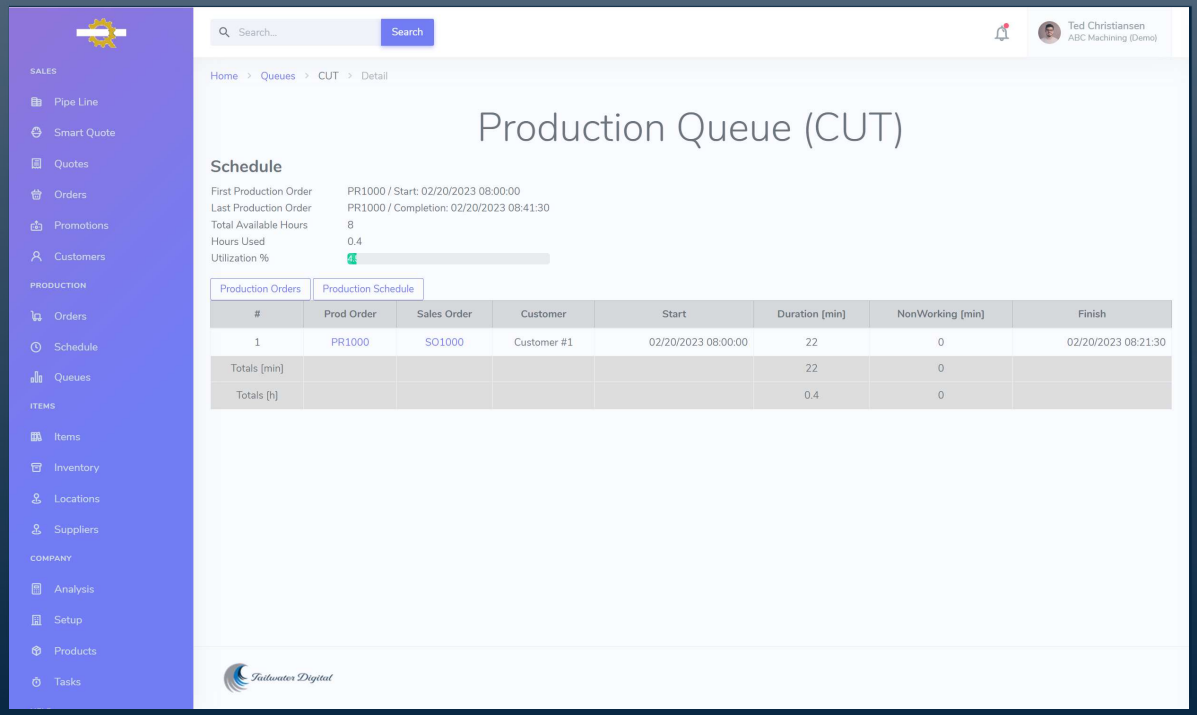
Production Queue by Task

- Production Orders for a Task



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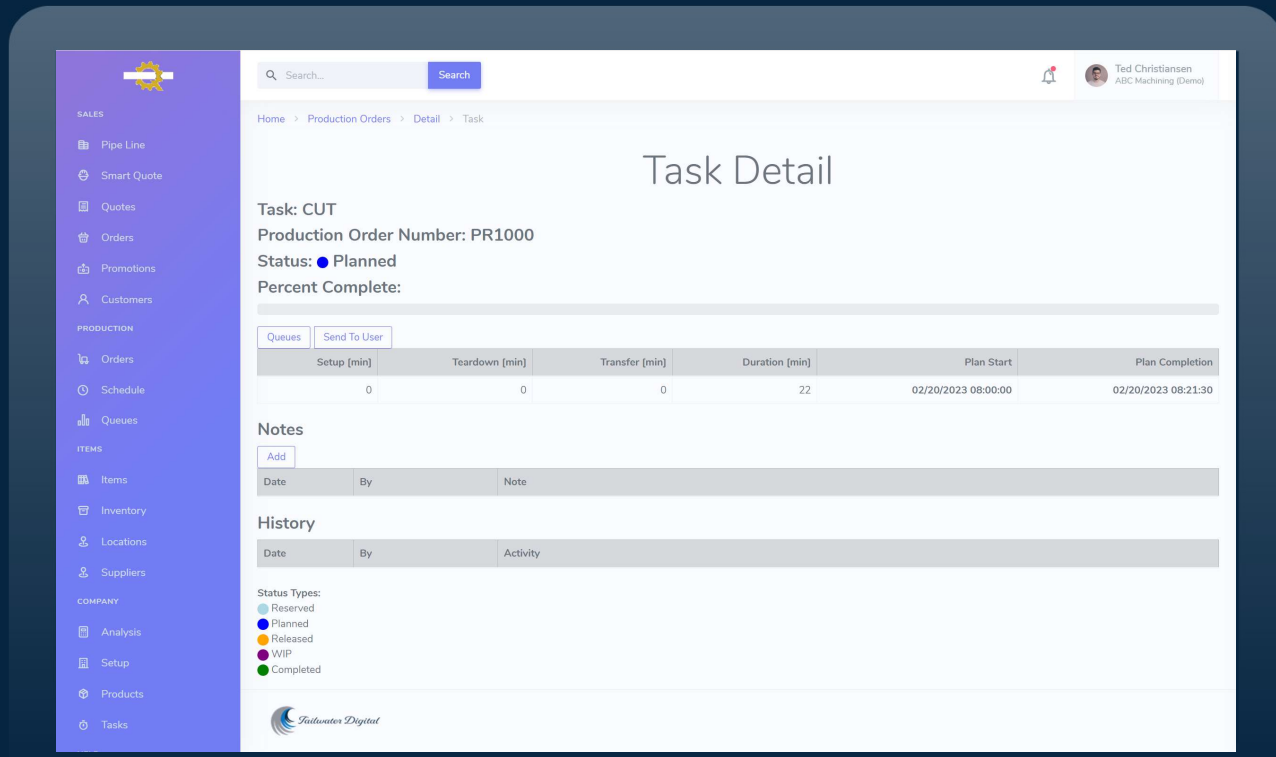
Production Task Detail



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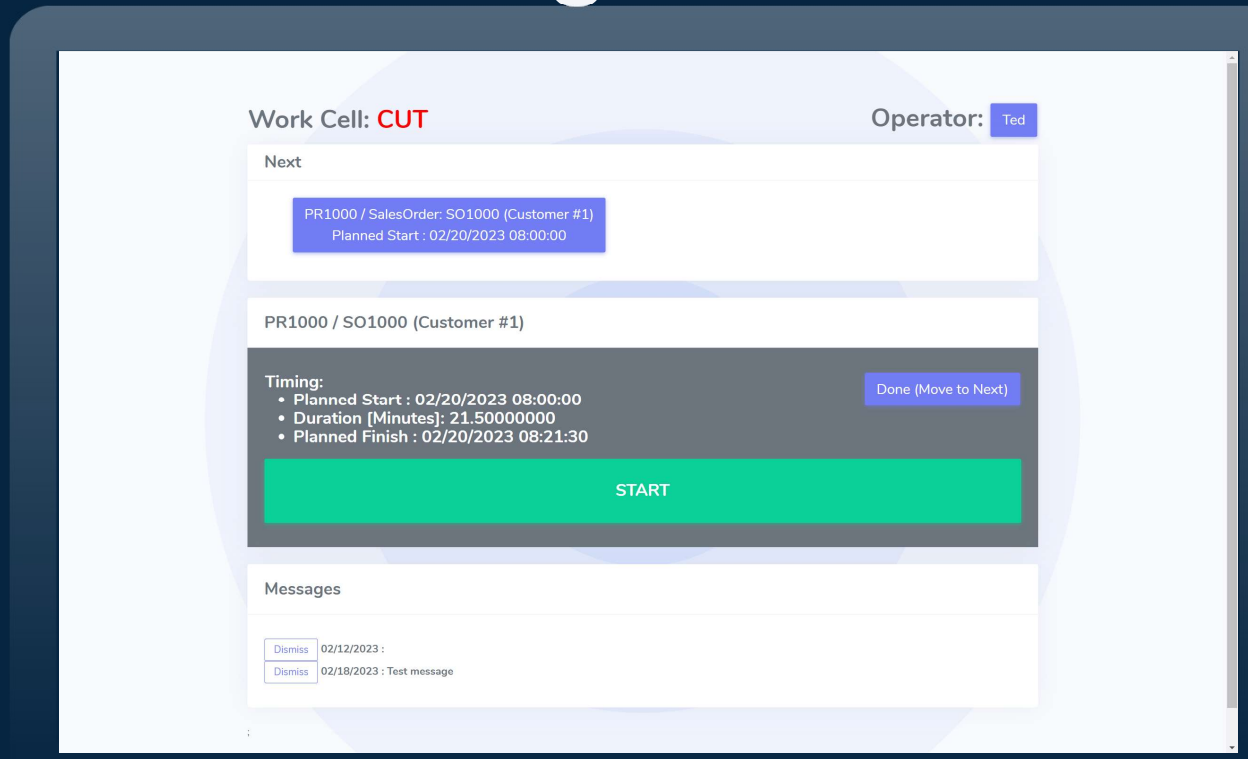
Production Time Clocking

- Provide operators a way to clock time to Production Orders and know what is next in the Queue



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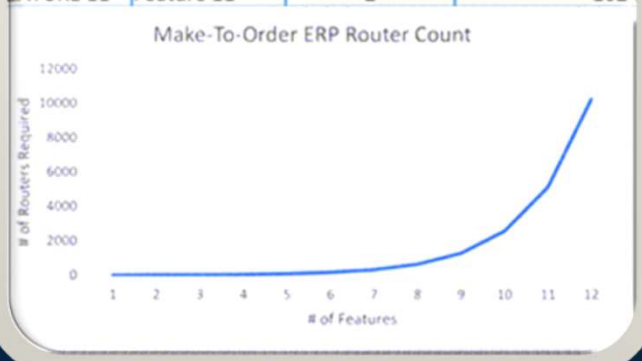
Setup

Router Complexity

- To know the process cost accurately, each line item on every SalesQuote and Sales Order, a router and BOM unique to this line item is required
- Whether a router and BOM are done in Excel or ERP – the effort required to create them is the same
- The time in each router step varies by the complexity of the product features (attributes) – which must be estimated for each step

ttribute	Description	Unique Choices	Combinations
RODUCT	Products	5	
EATURE 1	Feature 1	2	1
EATURE 2	Feature 2	2	2
EATURE 3	Feature 3	2	4
EATURE 4	Feature 4	2	8
EATURE 5	Feature 5	2	16
EATURE 6	Feature 6	2	32
EATURE 7	Feature 7	2	64
EATURE 8	Feature 8	2	128
EATURE 9	Feature 9	2	256
EATURE 10	Feature 10	2	512
EATURE 11	Feature 11	2	1024



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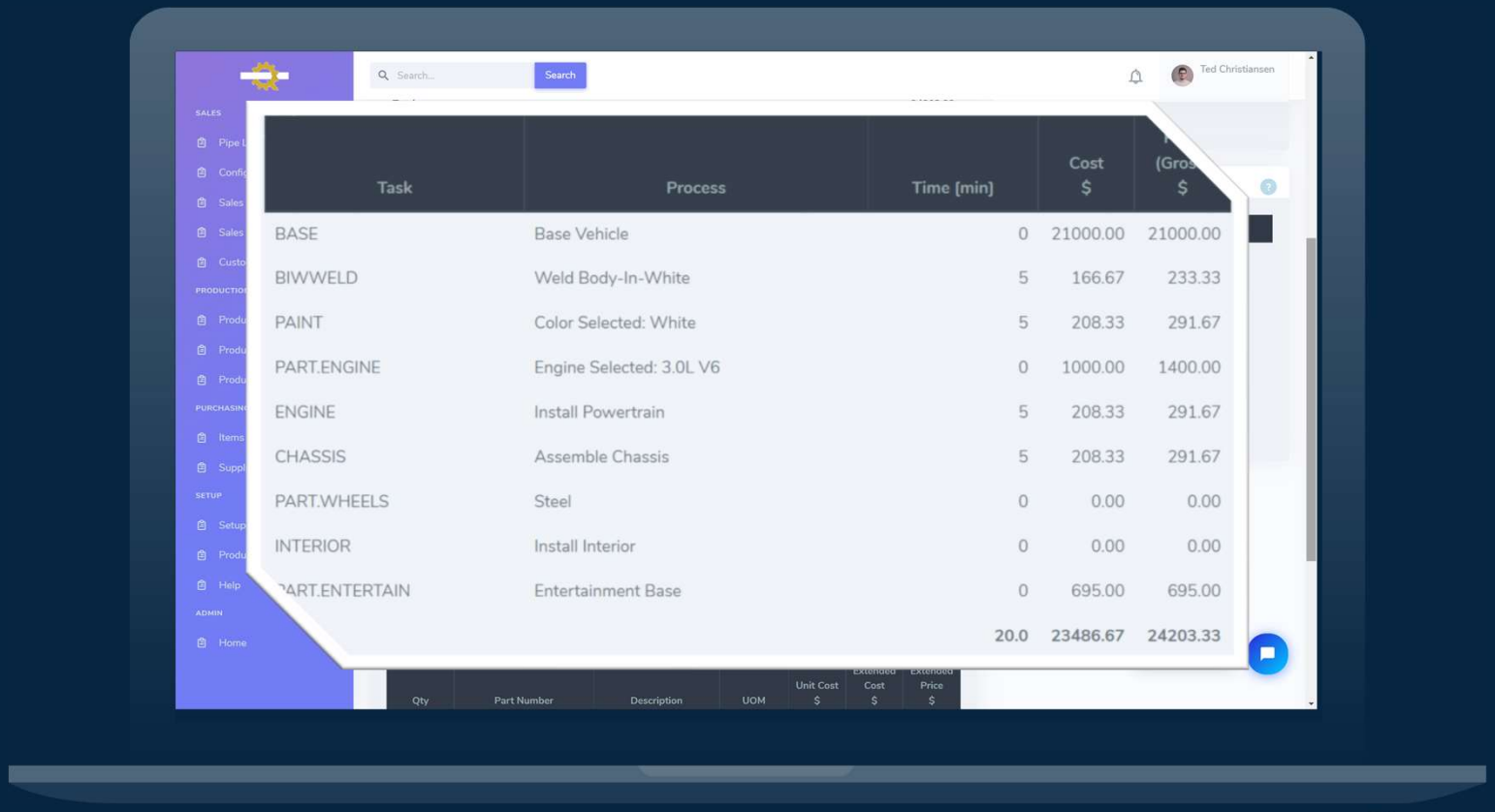
Example Router



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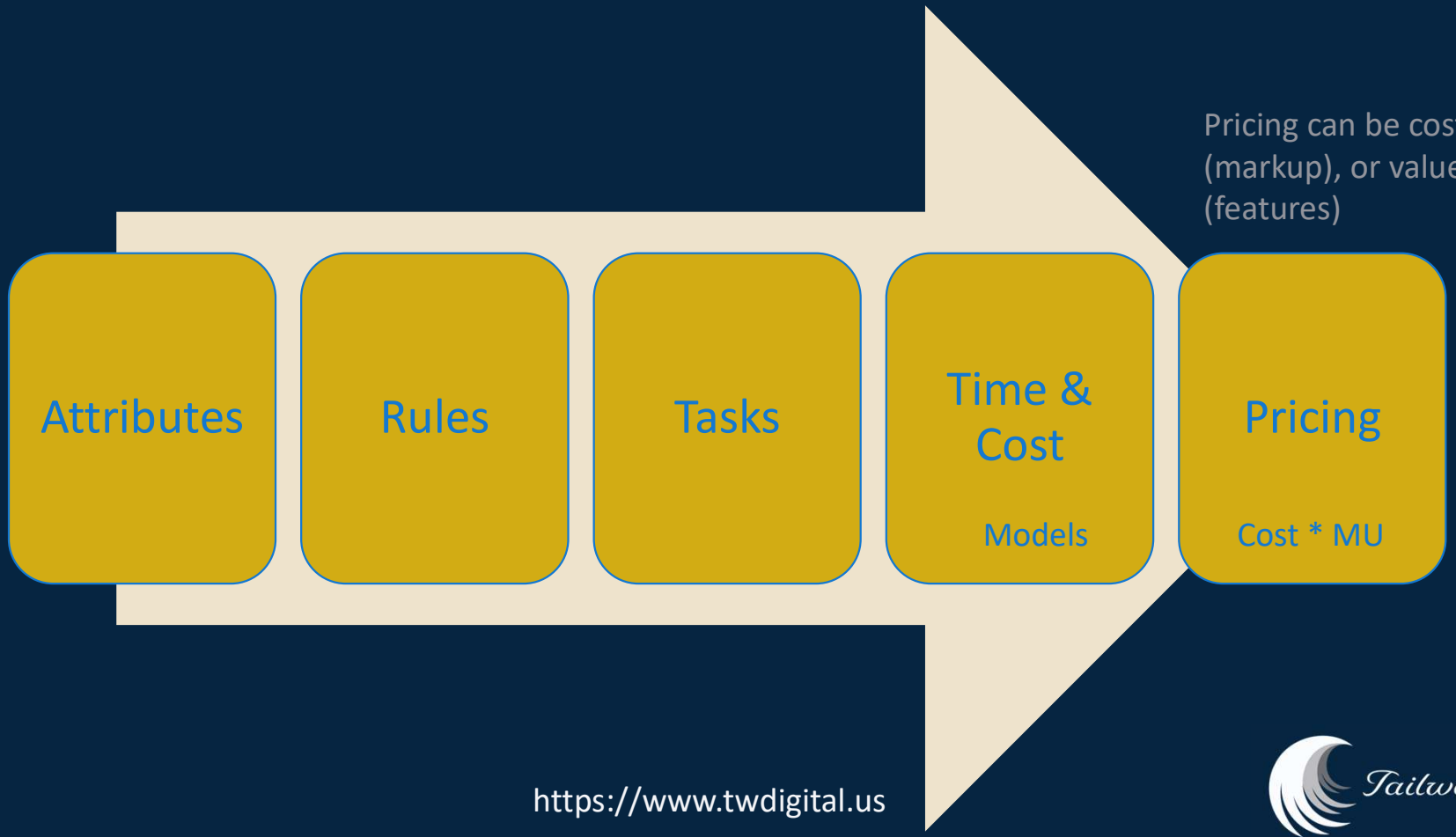
No Router Creation or Maintenance!



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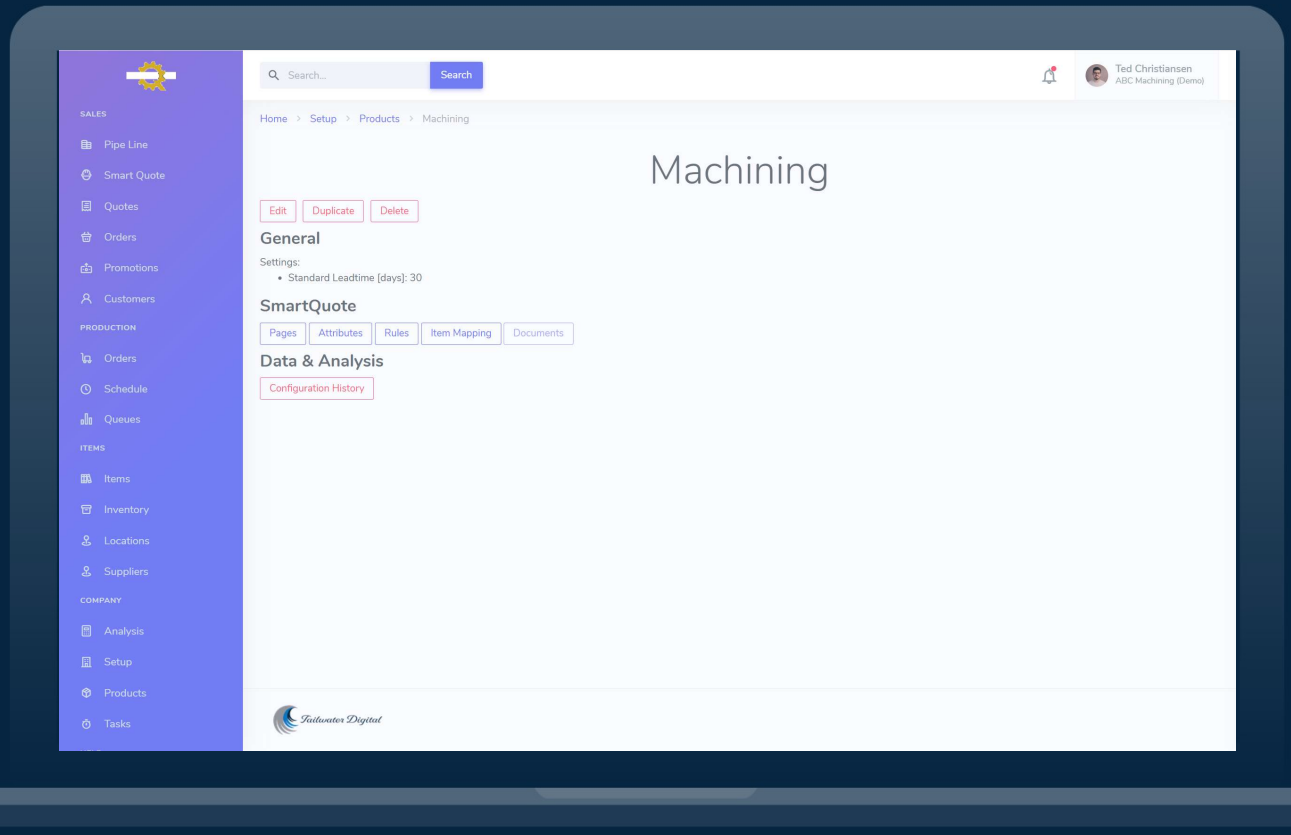
Products

- Each Product has set of
  - Pages
  - Attributes
  - Rules
  - Item Mapping



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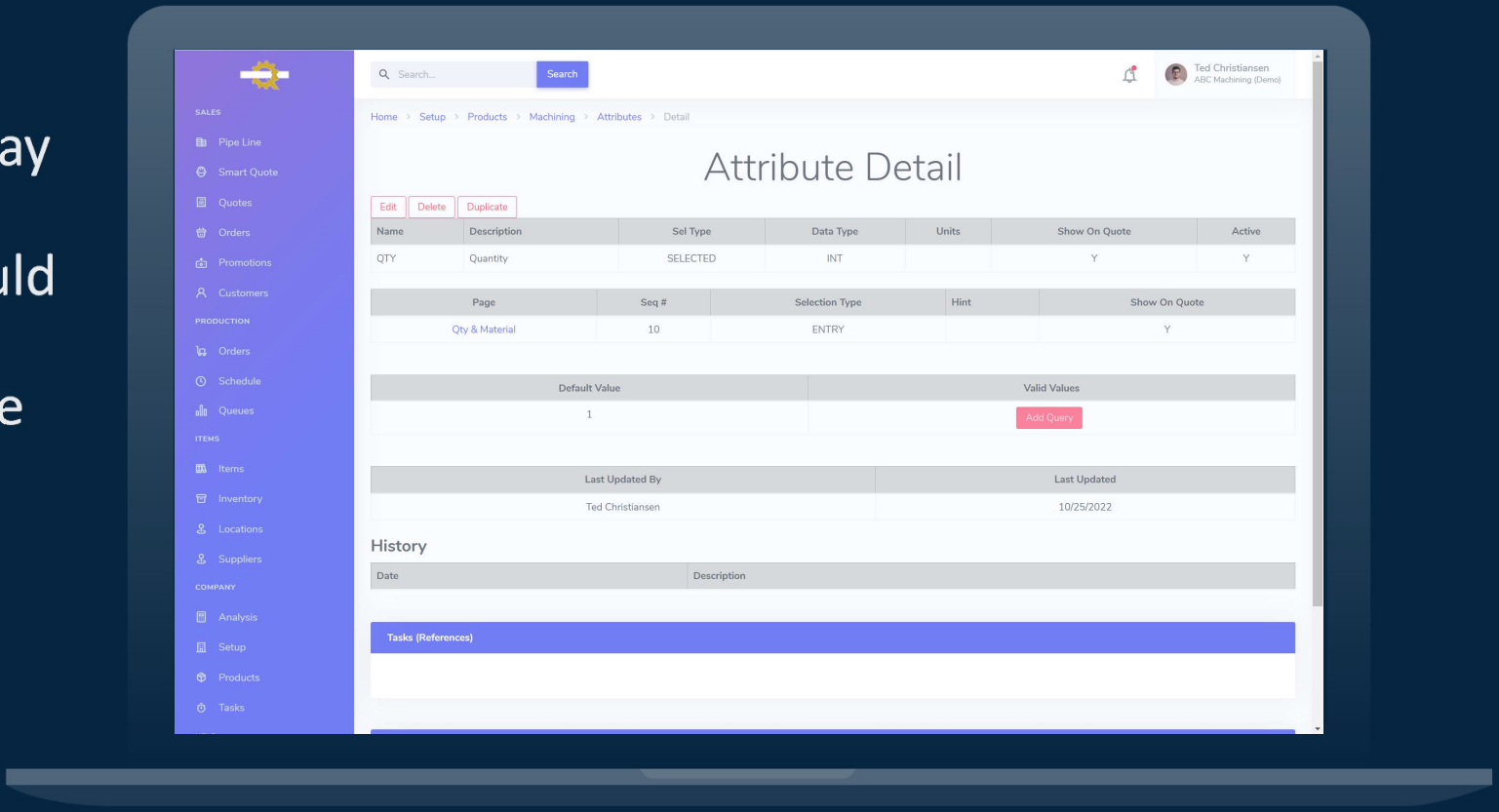
Attributes

- Defines the way in which the customer would choose the options for the product



☑ Export

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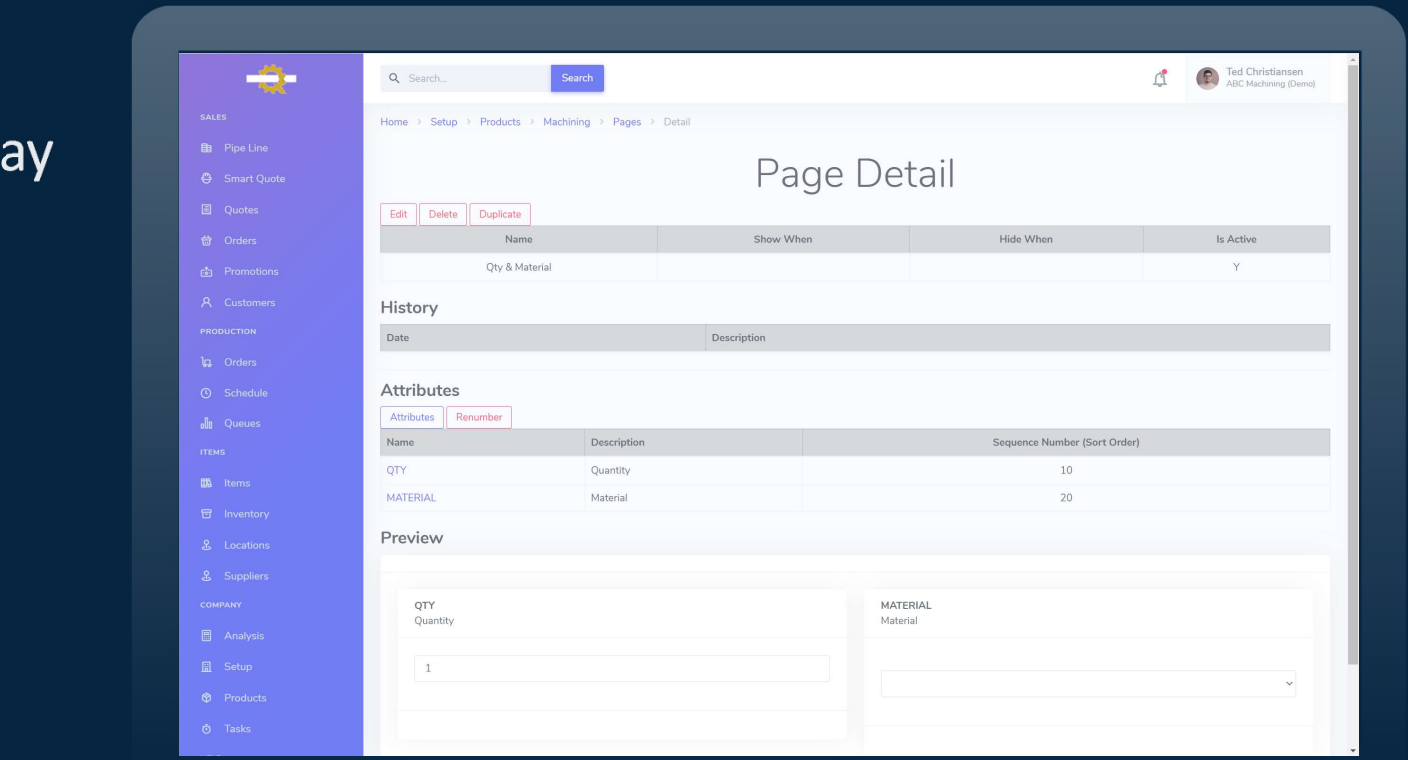
Pages

- Defines the way in which the Attributes are displayed



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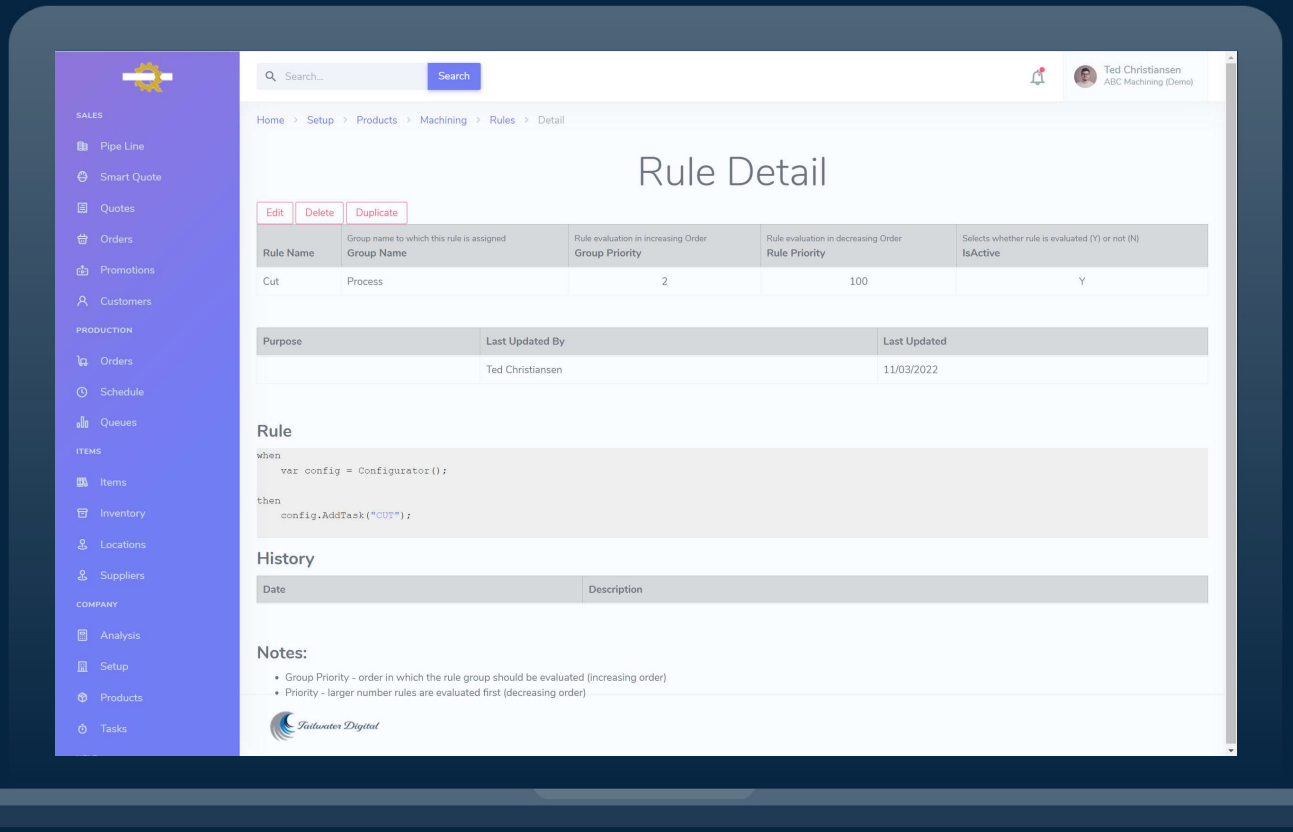
Rules

- Enables dynamic creation of Router and BOM



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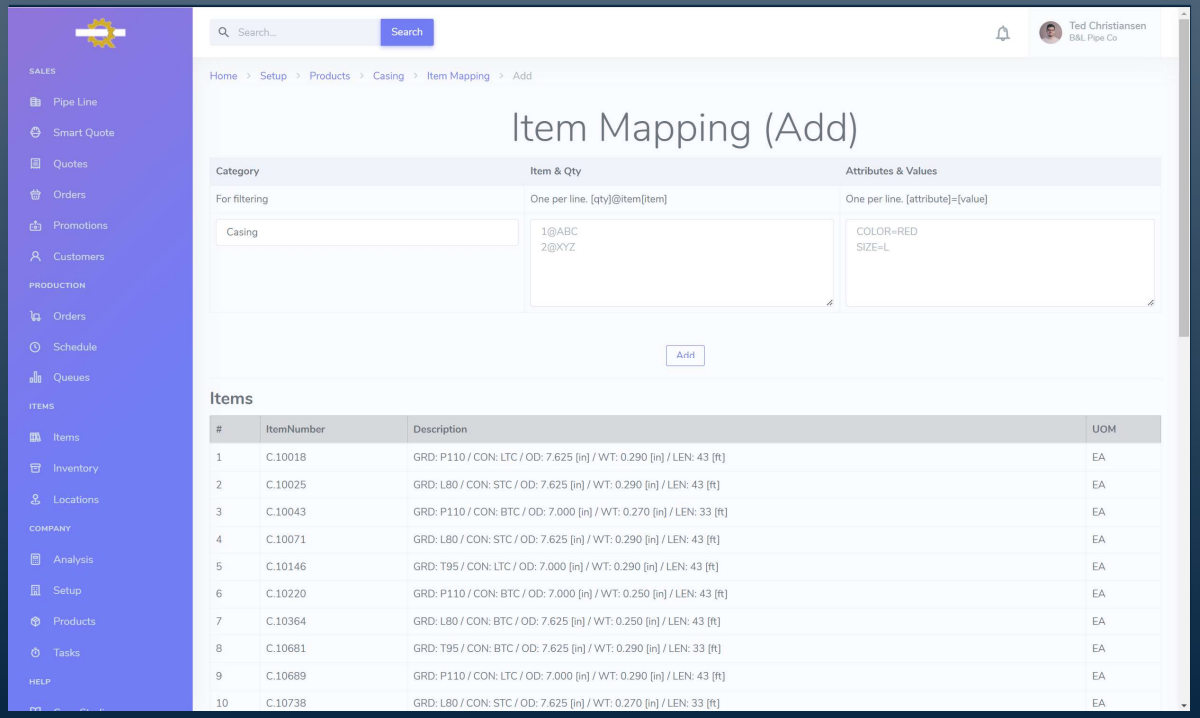
Item Mapping

- Enables the automatic creation of BOM based on Attributes selected



☑ Import / ☑ Export

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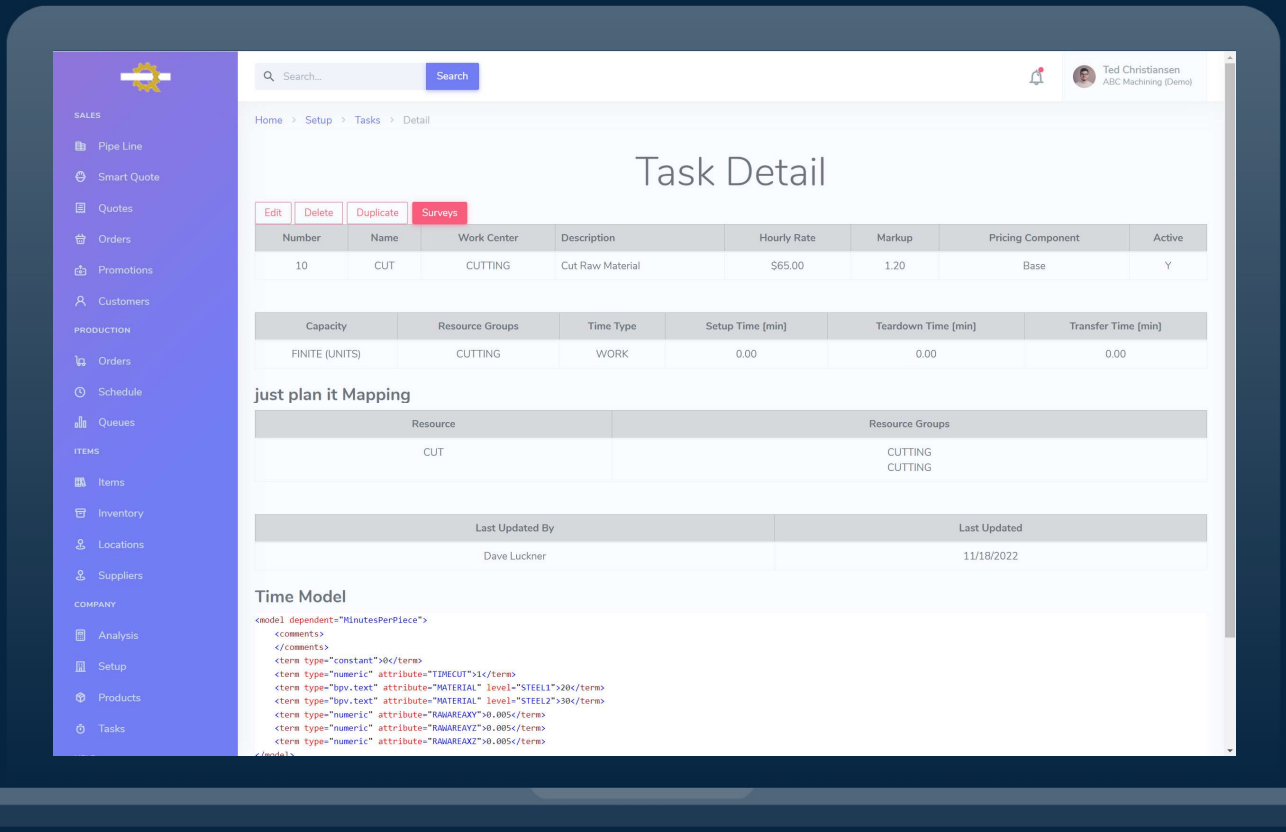
Tasks

- Each production step has a task
- Per Task
  - Shop Rate
  - Markup
  - Pricing Component
- Per Task
  - Time Model OR
  - Cost Model



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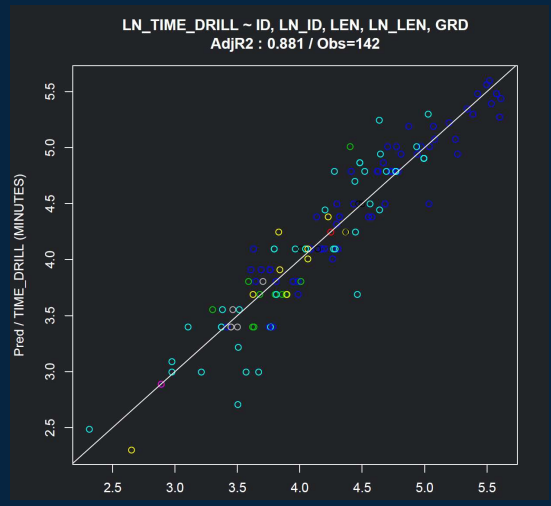
Task Models (Time/Cost)

- Used in Smart Quote
- Time and cost models can be a function of a number of attributes (features)
- Time and cost models can be created by hand or through multiple regression analysis of data

#	Name	Description
1	QTY	Quantity
2	MATERIAL	Material
3	X	Length [mm]
4	Y	Width [mm]
5	Z	Height [mm]
6	VOLUME	Volume CAD [mm^3]
7	SURFACEAREA	Surface Area [mm^2]
8	PARTWEIGHT	Weight [kg]
9	PAINT	Paint
10	FINISH	Primary Finish
11	EXPEDITE	Expedite



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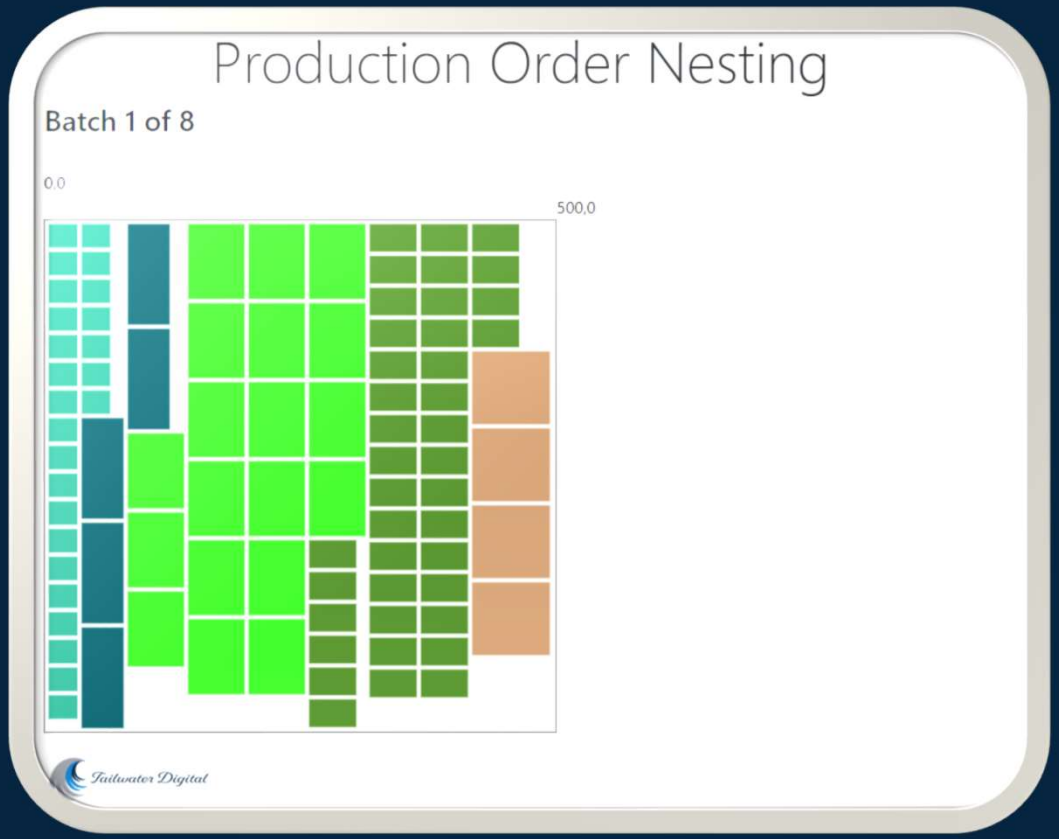
Task Capacity Types

- Capacity Types: FINITE, INFINITE
- FINITE capacity has time model (only)
  - Internal tasks where schedule is controlled
- INFINITE capacity has time and cost model
  - External tasks where schedule is unknown

Task Nesting

- Each task can be assigned a capacity limit (WEIGHT, AREA, VOL) that is used during schedule calculation
- During schedule calculation, task capacity consumption (WEIGHT, AREA, VOL) is evaluated



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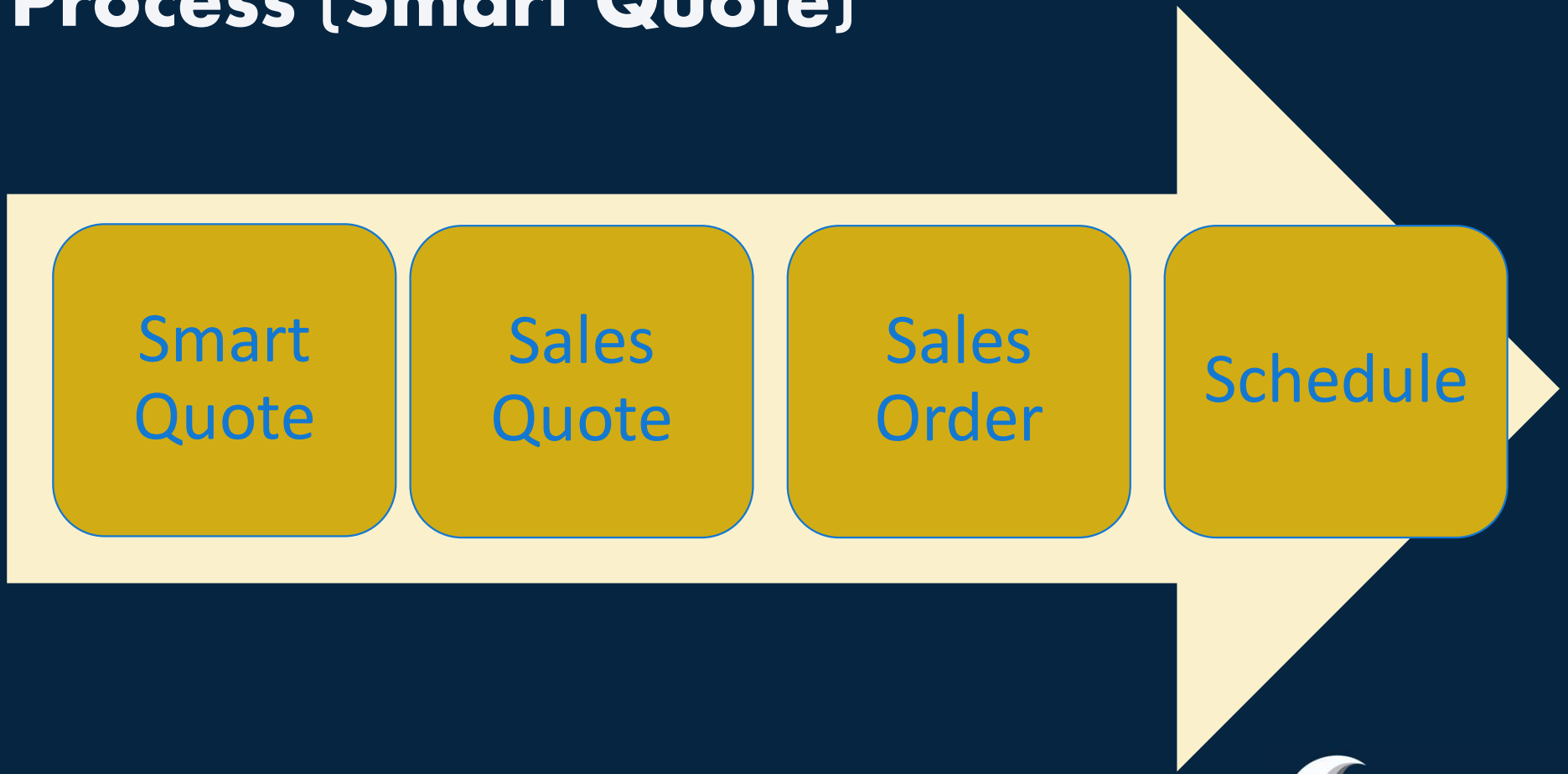
Process (Smart Quote)



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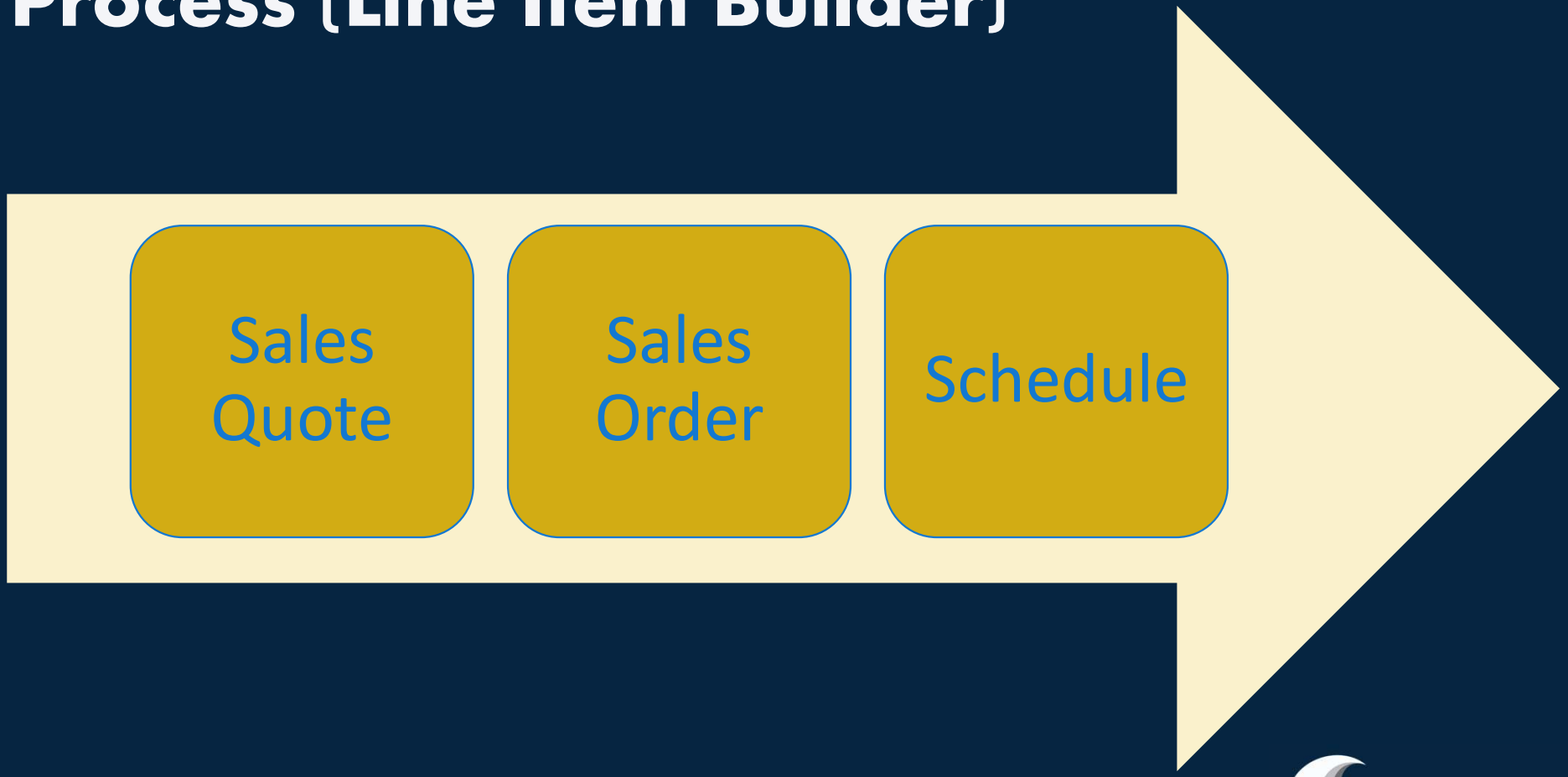
Process (Line Item Builder)



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Process Flow

Integrations

- Just-Plan-It / www.just-plan-it.com
- Possibilities / ERP:
  - SAP
  - Microsoft Dynamics
  - Etc
- Possibilities / API:
  - “Pull” via DashQ API
  - “Push” via DashQ API
- Coming Soon:
  - Quickbooks Online

DASH

Quoting & Scheduling for Build-To-Order Companies

February 2023

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