

The background is a dark blue gradient. On the left side, there are several vertical teal lines of varying thicknesses that curve slightly towards the right. At the bottom, there are several horizontal teal lines that also curve slightly towards the right, creating a sense of depth and movement.

# Business Automation

MAKING IT EASIER TO GET WORK DONE

# What interested you about this webinar?

- My idea or service just isn't selling
- My business profit or revenue is down
- My customers aren't happy anymore
- My employees are too stressed out or too worried
- My managers are too stressed out or too worried
  
- I want to learn more about new technology

Greg McFalls

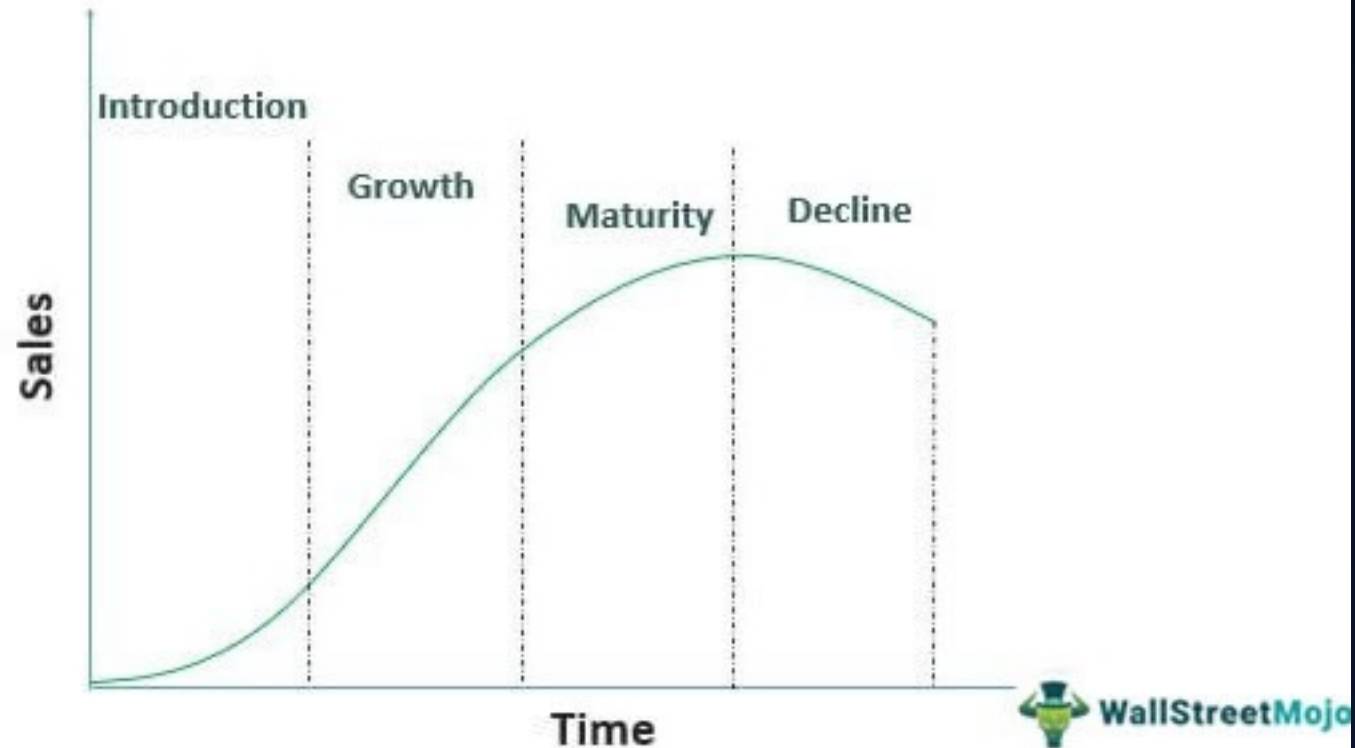
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Running a business is difficult

## Business Life Cycle



# Introduction Stage Automation



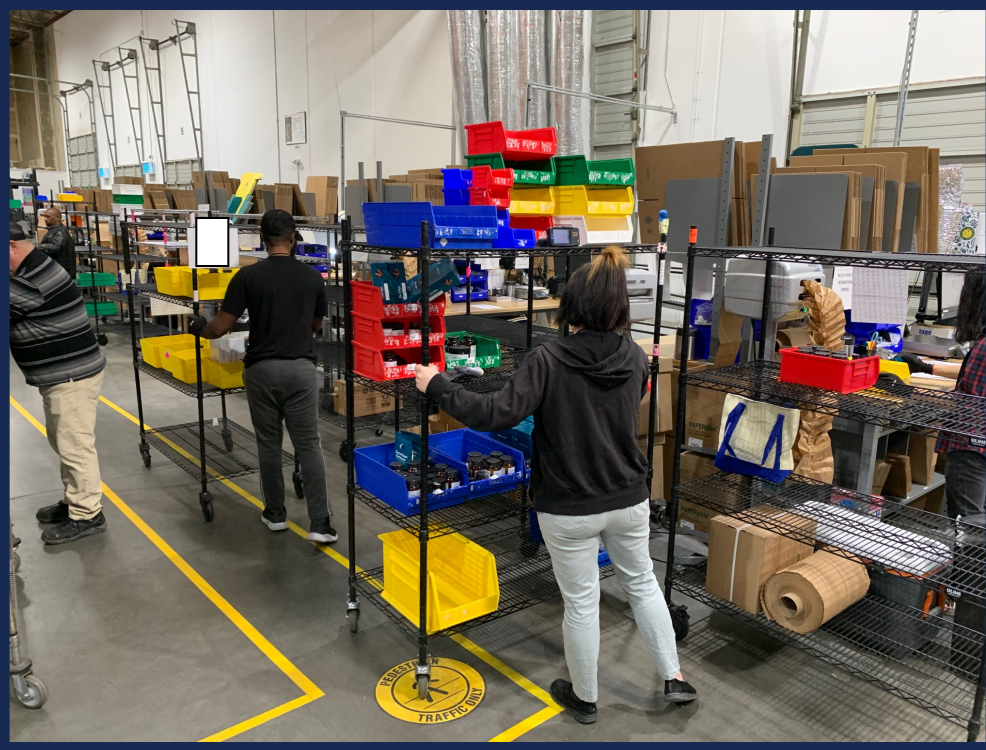
# The Growth Stage – Yikes!



# Are you actively doing kaizen and/or process improvement activities?

- Yes, Lean Manufacturing
- Yes, Six Sigma
- Yes, Theory of Constraints
- Yes, Total Quality Management
- Yes, Industrial Engineering
- Yes, we have a dedicated team that handles this
- Yes, our leader tells us what to do
  
- No, not really

# Kaizen



## Value Stream Mapping

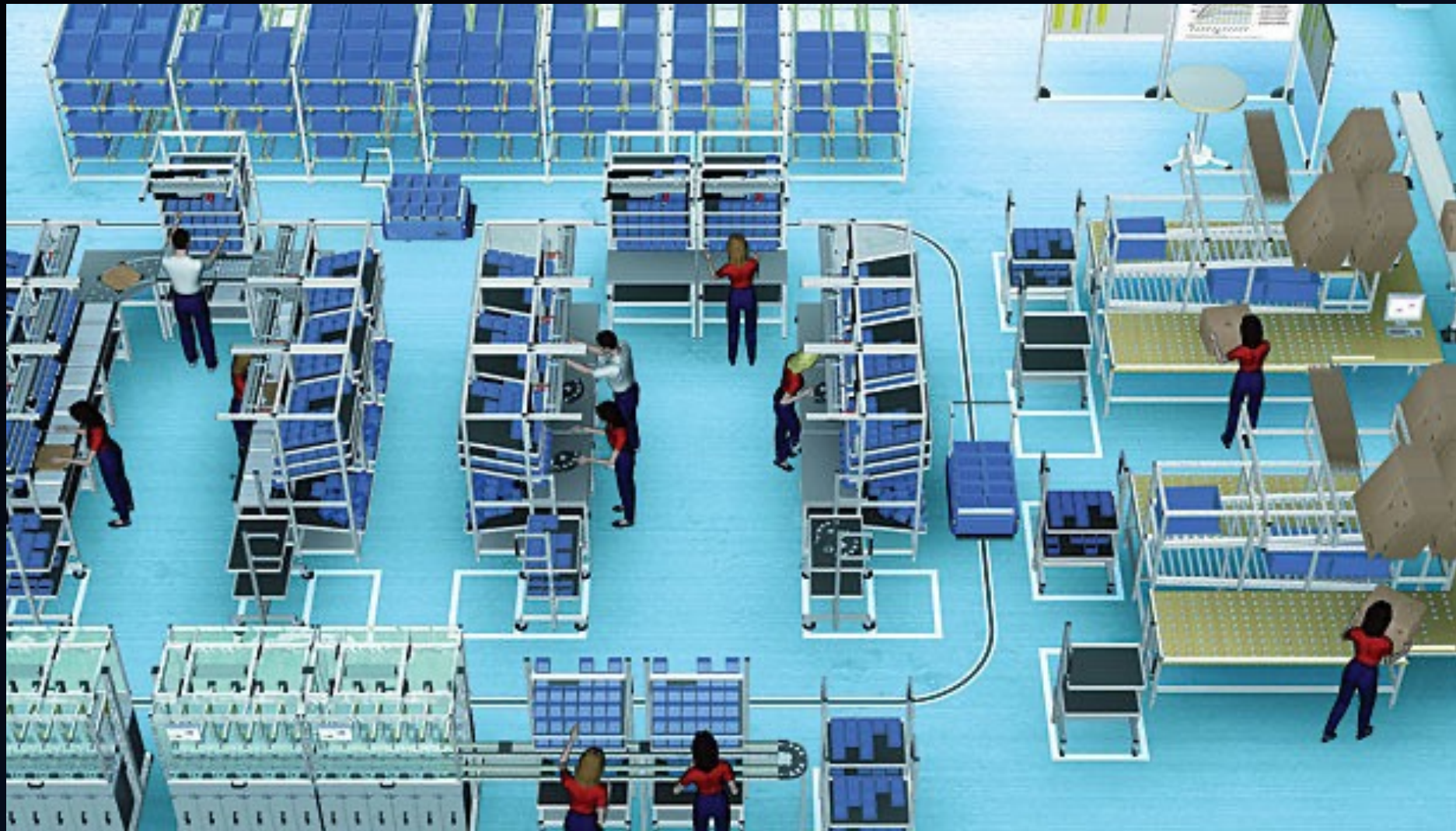






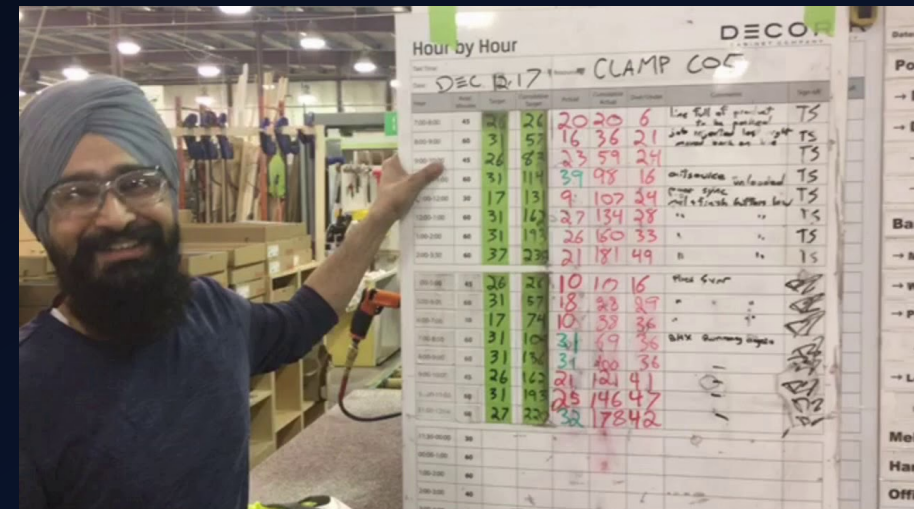


Take your Lean Journey to the next level...



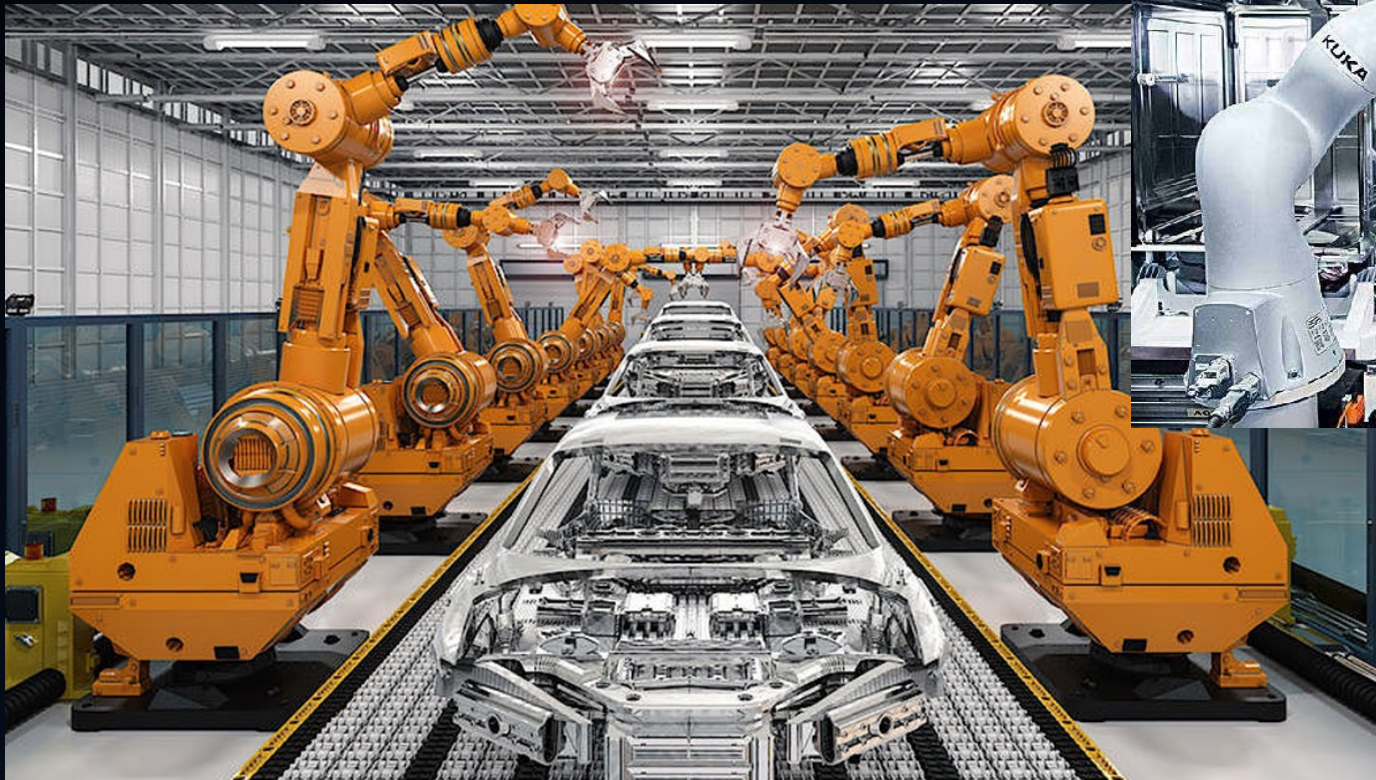
# A few questions to think about ...

- Are we on time or behind schedule?
- How many orders were late yesterday? Last month? Today?
- How many machines or production lines are currently down? Why?
- How many safety issues happened last week? Are they fixed?
- How do you track quality-related information? Work instructions?
- Do you use hour by hour charts?  
How did yesterday's charts look?
- Are you improving?



# Automation

**Moving a necessary step previously done by a human worker to a non-human solution without impacting safety or quality**



# Automation

- **Physical Systems**
  - Robots, Cobots, Sensors, PLCs, Vision Systems, Conveyor Systems
- **Business Systems**
  - Data Entry
  - Reporting & Dashboards
  - Analytics (real-time)
  - Machine Learning
  - Work Instructions
  - Scheduling
  - Purchasing
  - Tech Support

# Physical Systems



# Business Systems



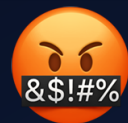
# What can we do to make ERP easier to use?



One System For Everything



How many of us enjoy using ERP software?





# Necessary ... but confusing

Shipment Edit Goto System Help

Execute Track Shipment Cancel Shipment Reports Change HU Manual Shipment Trailer Management

External HU 4561 Shop Rates HuCnt 1 Pkg 1 of 1 Auto Rate Shop Auto Ship

Sold To Ship From Ship To Small Parcel FedEx Contents Previous Shipment

Name ATLANTA COMPANY  
 Attention ATTN JOHN DOE  
 Addr 1 2345 GLENLAKE PKWY  
 Addr 2  
 City ATLANTA State/Prov GA  
 Postal code 30328-3447 Country US  
 Phone/Fax 999-999-9999 / 999-999-9999  
 Customer # 0000003250

Address Validation

Shipment  
 Carrier FedEx Ship Date  
 Service FedEx Ground 11/15/2010

Payment  
 Payment Pre Paid 3P/COLL Acct  
 3P/COLL Zip 3P/COLL Country

Packaging  
 Packing Customer Package 1 of 1  
 Weight via HU 0.50 LB

Carrier Service Rates

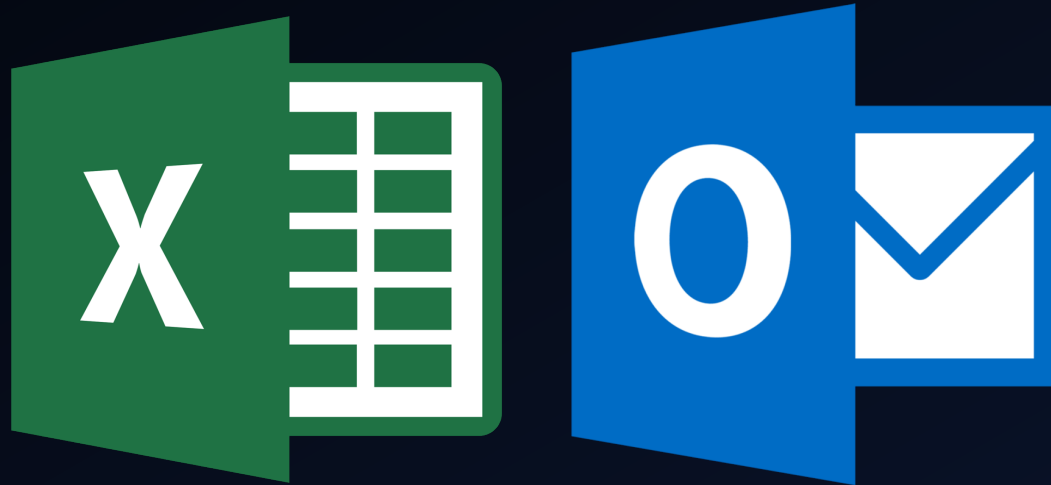
Carrier Code	Carrier Name	Carrier Service ID	Carrier Service	Carr Rate	Currency	Transit Tm	Delivery Date	Priority
FDXG	FedEx Ground	FEDEX_GROUND	FedEx Ground	6.12	USD	5.00	11/20/2010	1
FDXE	FedEx Express	FEDEX_EXPRESS_SAVER	FedEx Express Saver	14.74	USD	3.00	11/18/2010	1



A \$1 billion company will spend \$500,000 to implement an ERP solution. It takes 24-36 months plus training.

It will cost them 2-3% of their revenue per year \$20-\$30 million ... every year

Updates cost \$100-\$200k to implement



 **monday.com**

 **Jira Software**

 **Trello**

 **slack**

**IBM  
COGNOS®**

 **+ a b | e a u®**  
A Salesforce Company

# Do you use an ERP solution currently?

- Yes, Sage
- Yes, SAP
- Yes, MAPICS
- Yes, Dynamics
- Yes, JobBOSS
- Yes, ProShop
- Yes, some other system
  
- No, not really

**How is it working for you?**

# The Role of Middleware



# Example – Currency Counting



# Example – Injection Molding



CELL J1	VIEW CHART	CELL J2	VIEW CHART	CELL J3	VIEW CHART	CELL J4	VIEW CHART
STATUS	200 OF 300	STATUS	176 OF 500	STATUS	456 OF 500	STATUS	32 OF 275
FO	35038961	FO	35040903	FO	35040405	FO	35039759
PART	4300PSP334BT	PART	4622PSP330B	PART	4300CASE195997A1	PART	M300C04C7869
MOLD	ATKS (4 CAVITY)	MOLD	ASED (4 CAVITY)	MOLD	ASOQ-S (4 CAVITY)	MOLD	ANCB-A (2 CAVITY)
MAT	4300	MAT	4622	MAT	4300	MAT	4300
CT	ACT: 39.6 PLAN: 38.9	CT	ACT: 45.7 PLAN: 51.6	CT	ACT: 41.8 PLAN: 40.0	CT	ACT: 34.8 PLAN: 40.1
CT % TO PLAN	1.7% ↑	CT % TO PLAN	11.4% ↓	CT % TO PLAN	4.3% ↑	CT % TO PLAN	13.1% ↓
EST TIME	11:13am	EST TIME	11:59am	EST TIME	11:05am	EST TIME	12:07pm
MIN LEFT	16	MIN LEFT	62	MIN LEFT	8 ENDING SOON	MIN LEFT	70
CURRENT OA%	0%	CURRENT OA%	83%	CURRENT OA%	36%	CURRENT OA%	78%
		PRODUCTION STOPPED 34 MIN AGO					
CELL J5	VIEW CHART	CELL J6	VIEW CHART	CELL J7	VIEW CHART	CELL J8	VIEW CHART
WAITING FOR THE NEXT FO 1 MIN		STATUS	1098 OF 1000	STATUS	30 OF 250	STATUS	8 OF 500
NO FO SELECTED		FO	35038786	FO	35040495	FO	35040357
CURRENT OA% 0%		PART	M300C99J7020	PART	4700J03000	PART	4700C04D7862
		MOLD	ALSL-A (6 CAVITY)	MOLD	AMMB (3 CAVITY)	MOLD	ANQO (4 CAVITY)
		MAT	4300	MAT	4700	MAT	4700
		CT	ACT: 24.4 PLAN: 30.0	CT	ACT: 69.9 PLAN: 41.0	CT	ACT: 8.0 PLAN: 44.9
		CT % TO PLAN	16.7% ↓	CT % TO PLAN	70.3% ↑	CT % TO PLAN	82.2% ↓
		EST TIME	OVERPRODUCTION	EST TIME	12:22pm	EST TIME	11:13am
		MIN LEFT	-	MIN LEFT	85	MIN LEFT	17
		CURRENT OA%	113%	CURRENT OA%	23%	CURRENT OA%	0%
						PRODUCTION STOPPED 57 MIN AGO	

# Operator Assist Solutions

- Sensors and Switches to automatically detect events
- Robotics to assist operators
- Vision Systems
- Pneumatic Systems
- Logic Controllers
- Algorithms for forecasting, scheduling, service, maintenance
- Maker kits for custom logic and one-of-a-kind solutions
- **Front-end UI's for ease of use, reporting, dashboards**



As Simple or as Complex as you need





# Building your own Business Automation Solutions

- It's never been easier to create intelligent & user-friendly solutions
- You are limited only by your imagination
  - No licensing fees for most software solutions
  - Start small, try, fail, learn, get better (PDCA)
  - Your terminology, your process, your way
- Compliments your Lean Journey very well
- Works with your ERP – not against it or in place of it

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