



Operational
Excellence
& Quality



Growth &
Innovation



Technology



Workforce
Development

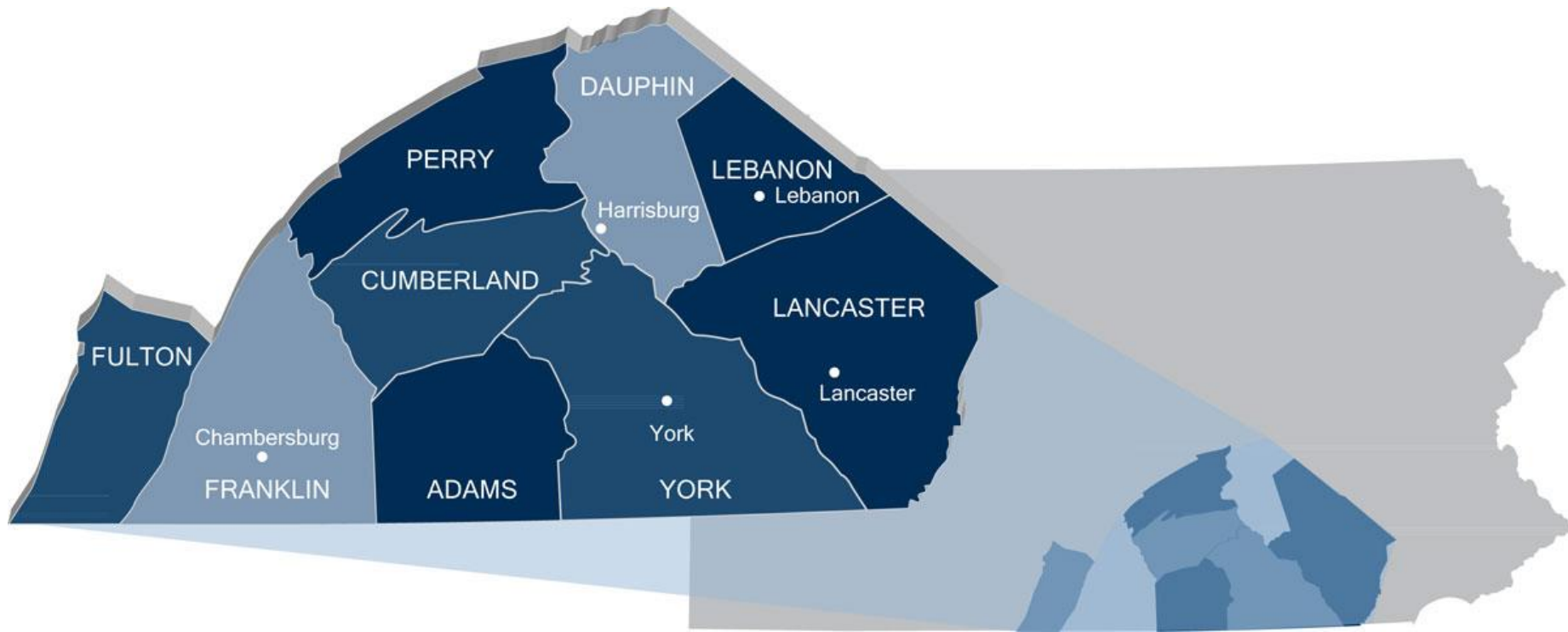


www.mantec.org

Your Resource Driving Manufacturing Innovation

THE CONNECTED FACTORY FOR SMMS- OPPORTUNITIES AND CHALLENGES

MANTEC SERVICE AREA



MANTEC's 9 county region includes over 2,400 manufacturers in diverse industries.



MANTEC SERVICE AREA

- Largest industry sector in Adams, Franklin, Lebanon and York Counties
- 108,331 employees in South Central PA
- 14.16% of total South Central PA workforce
- 2,400 establishments in South Central PA



Glatfelter



WHY MANUFACTURING MATTERS

- Diversity of manufacturing- we make everything!



TECHNOLOGY

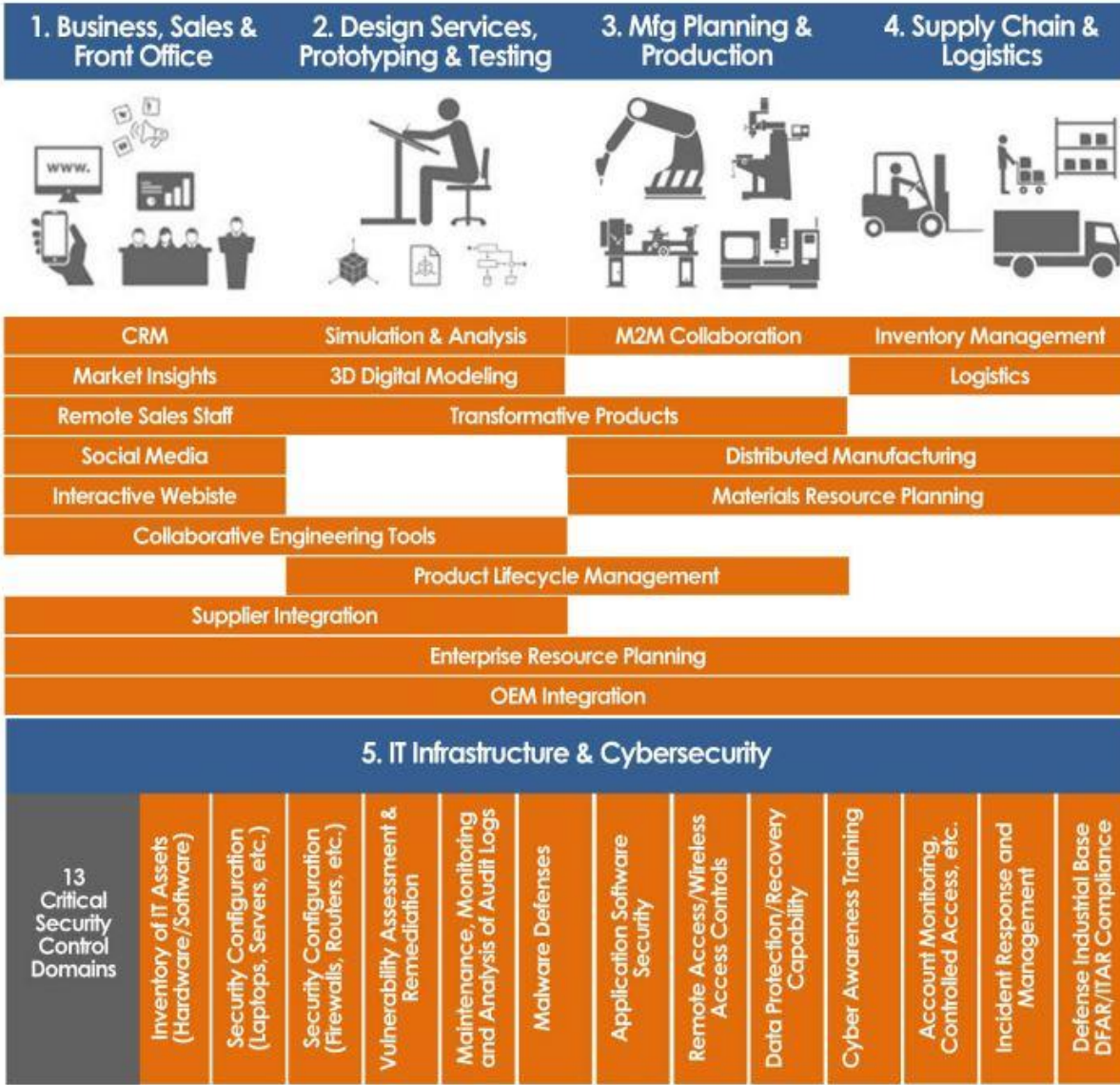
- Integrating IT systems throughout the enterprise
- Automation
- Robotics
- Additive Manufacturing/ 3-D Modeling
- Predictive Maintenance
- ERP
- Cybersecurity



JLS Automation



DIGITAL INTENSITY SOLUTION MATRIX



Operational Excellence & Quality



Growth & Innovation

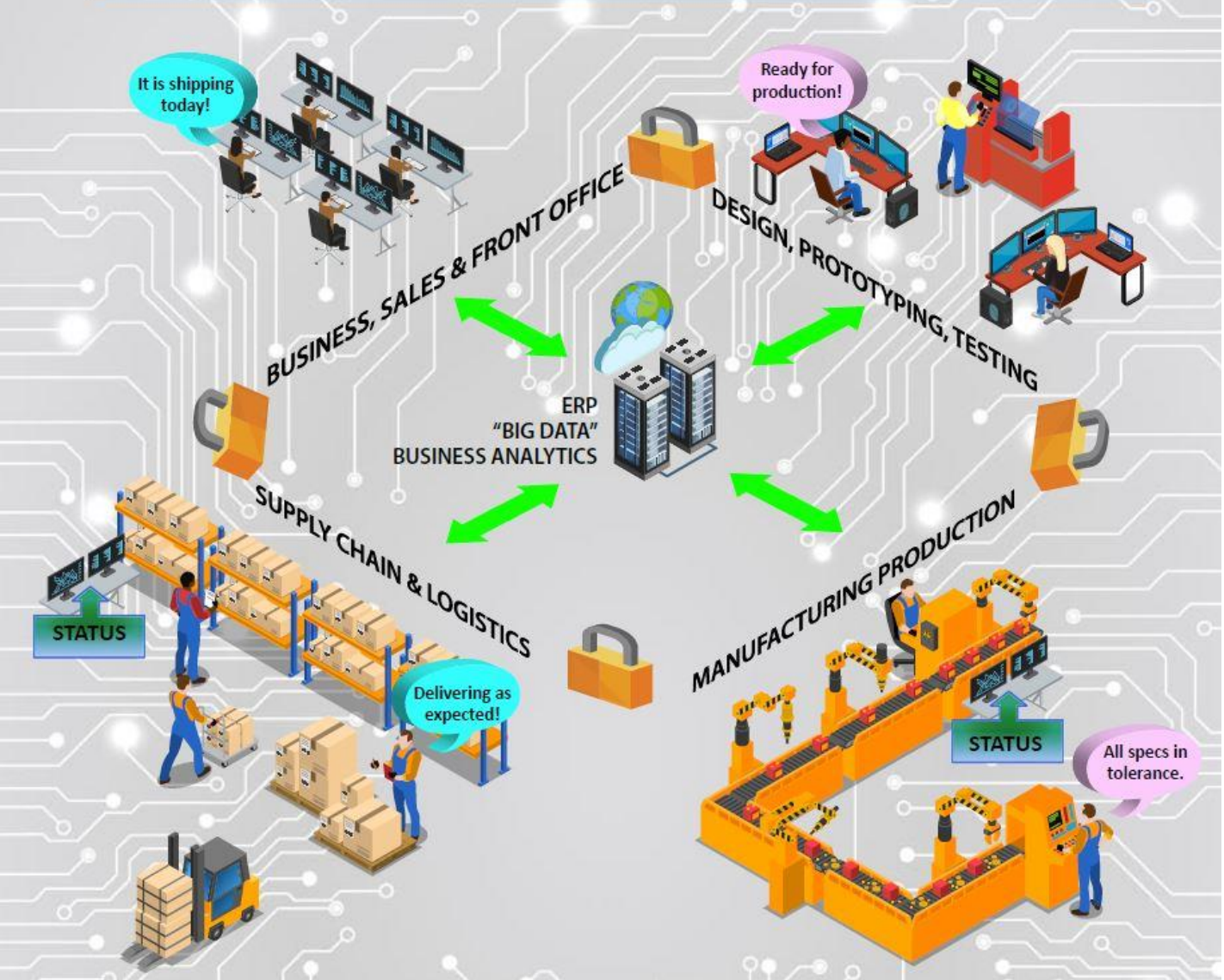


Technology



Workforce Development

The Connected Factory



SMART MANUFACTURING



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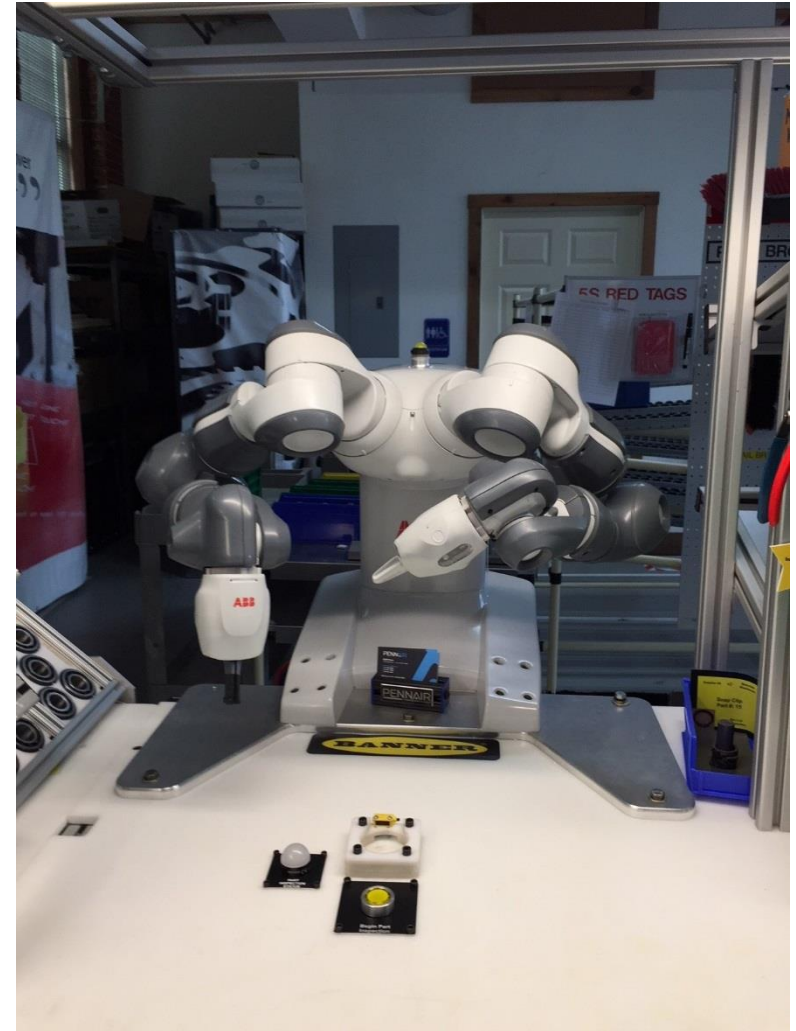


Technology



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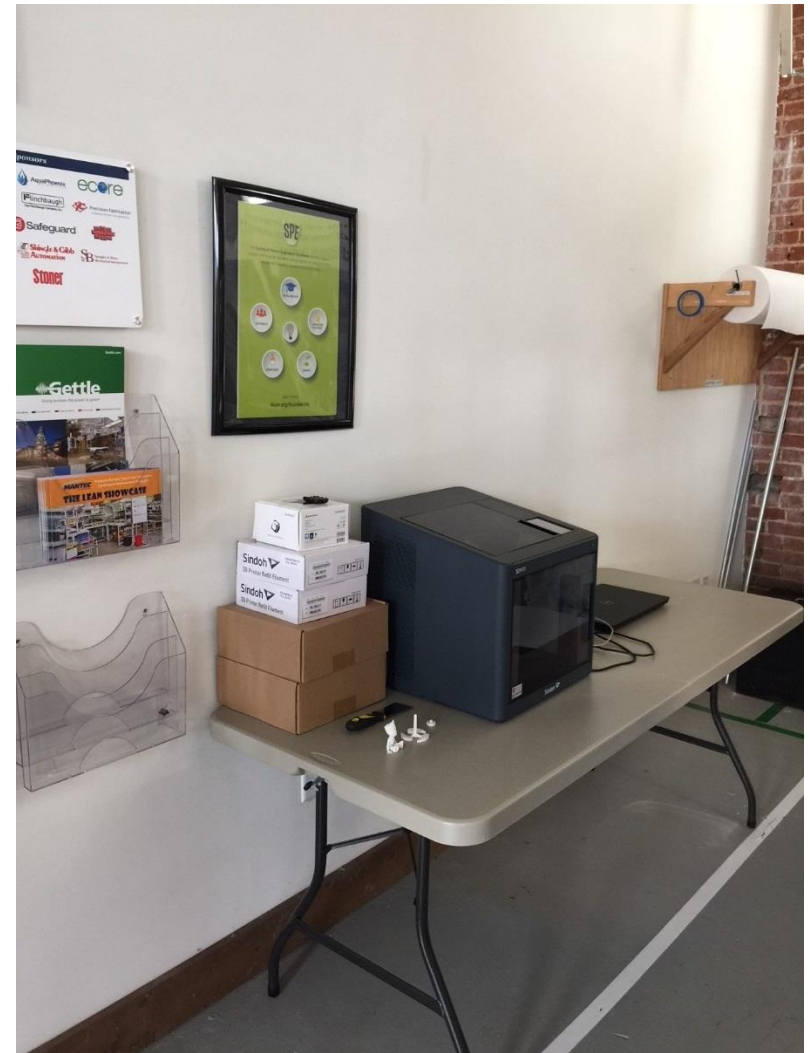
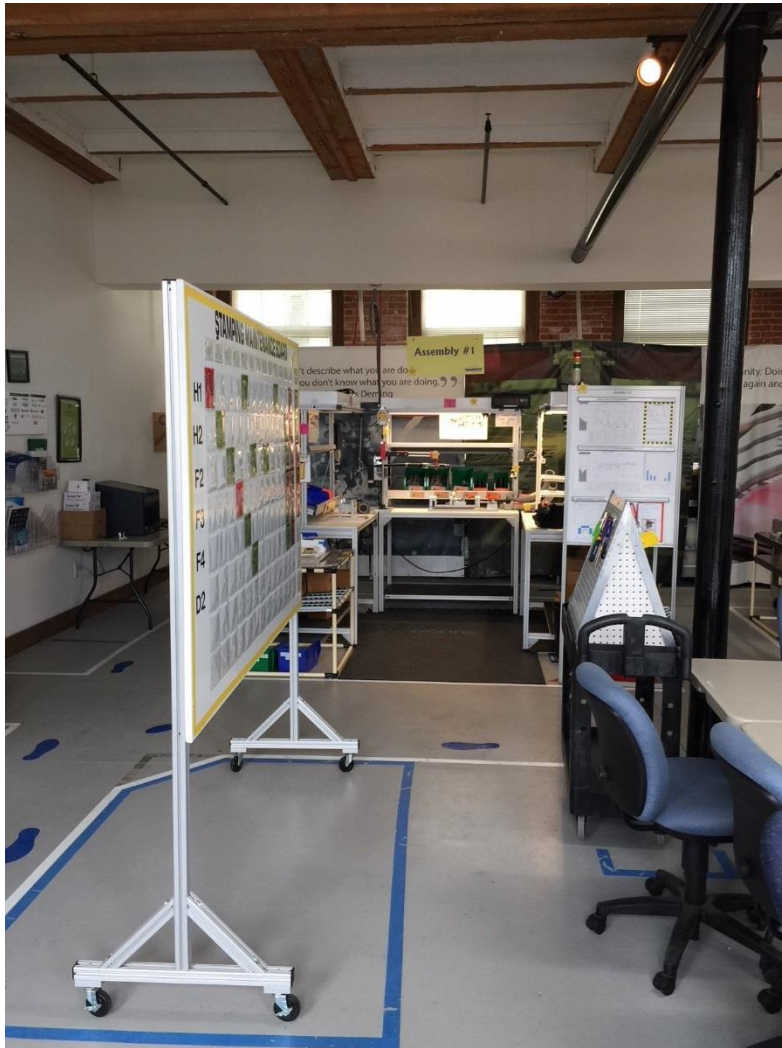
SMART MANUFACTURING/LEAN AUTOMATION



SMART MANUFACTURING/LEAN AUTOMATION



SMART MANUFACTURING/LEAN AUTOMATION



Examples of Predictive Maintenance



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Utz Quality Foods, Inc.



**DELIVERED
FRESH!**





Utz Heritage

1921

Bill and Salie Utz started the Hanover Home Brand Potato Chips in Hanover, PA. The hand-operated equipment Salie made about fifty pounds of potato chips per hour. While Salie stayed home making chips, Bill delivered them to “mom and pop” grocery stores and farmer’s markets in the Hanover, PA and Baltimore, MD area.

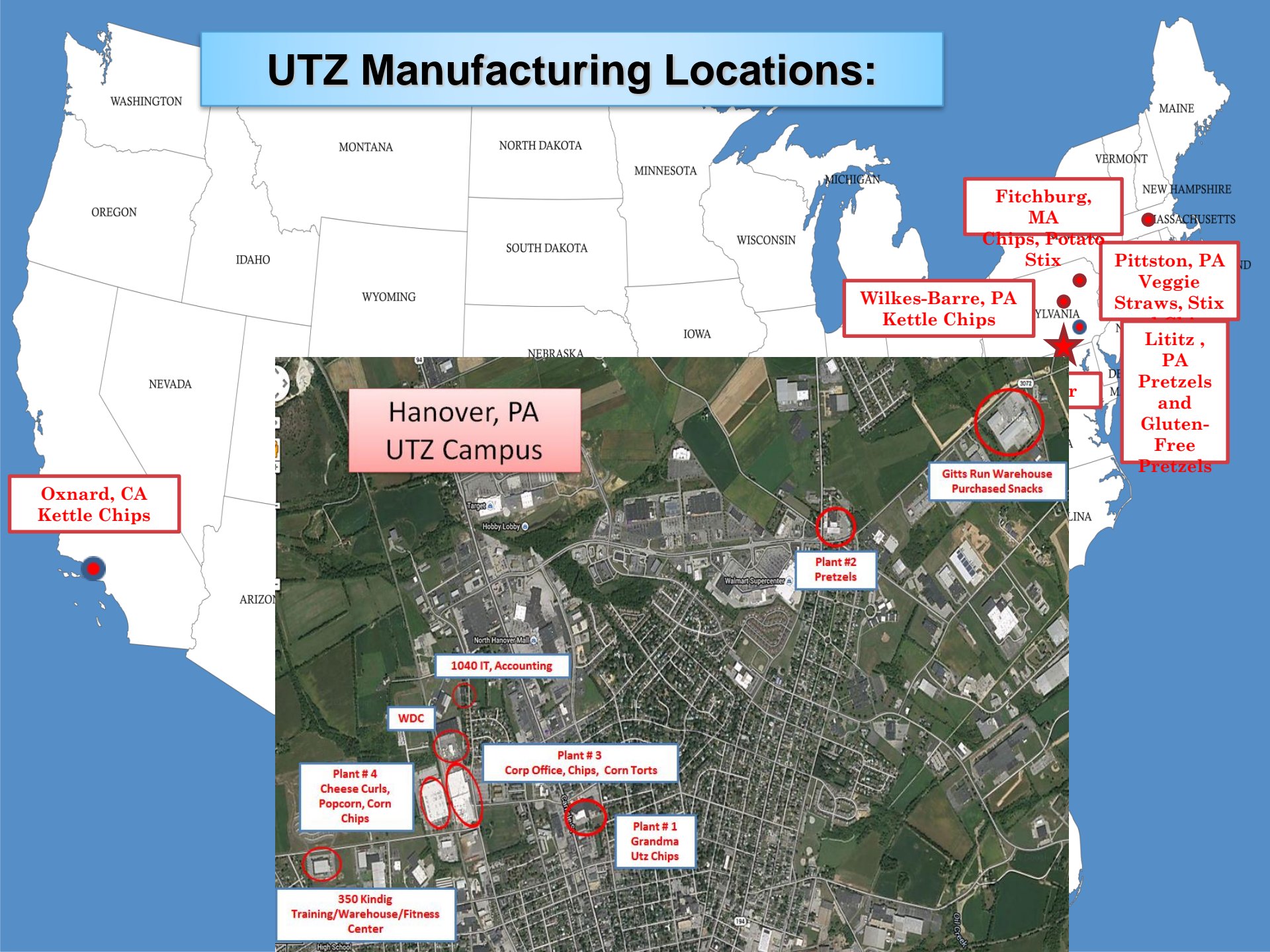
2001

Through the years, the family owned and operated business, run by Bill Utz’s grandson Mike Rice as CEO, continued to thrive and grow. In 2010, 80 years after its founding, Utz had grown to over \$200 million in annual sales.

2015

Today, Utz is the largest independent privately held snack brand in the United States. It continues to be family owned and operated, with almost \$650 million in sales, a 1,300 + plus route sales force, with 11 production facilities on both coasts and 61+ Utz DC’s & 13+ Distributor locations to support Utz’s DSD and National operations. Through our National Sales Accounts, Utz products can be found in all 50 States, Canada, and Mexico and some overseas countries as well. Club stores such as Sam’s, Costco’s and BJ’s and Mass stores like Wal-Mart & Target all sell Utz products as well.

UTZ Manufacturing Locations:



Oxnard, CA
Kettle Chips

Fitchburg, MA
Chips, Potato Stix

Wilkes-Barre, PA
Kettle Chips

Pittston, PA
Veggie Straws, Stix

Lititz, PA
Pretzels and Gluten-Free Pretzels

Gitts Run Warehouse
Purchased Snacks

Hanover, PA
UTZ Campus

Plant #2
Pretzels

1040 IT, Accounting

WDC

Plant #4
Cheese Curls, Popcorn, Corn Chips

Plant #3
Corp Office, Chips, Corn Torts

Plant #1
Grandma Utz Chips

350 Kindig
Training/Warehouse/Fitness Center

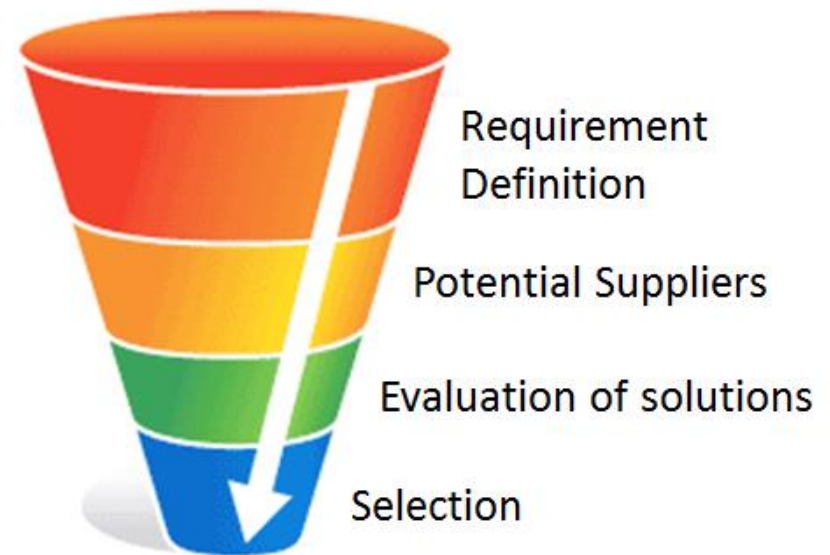
SELECTION PROCESS

Requirements:

- Real time data
- Paperless environment
- Improved Communication
- Use of OEE as a performance measure
- Data that is detailed, and can be used to drive action
- Ability to focus on issues with the biggest impact

Selection Criteria:

- Stability of supplier
- IT infrastructure
- Complexity of implementation
- Cost
- User friendly operator interface
- Organizational Fit



REDZONE



Manufacturing Data System

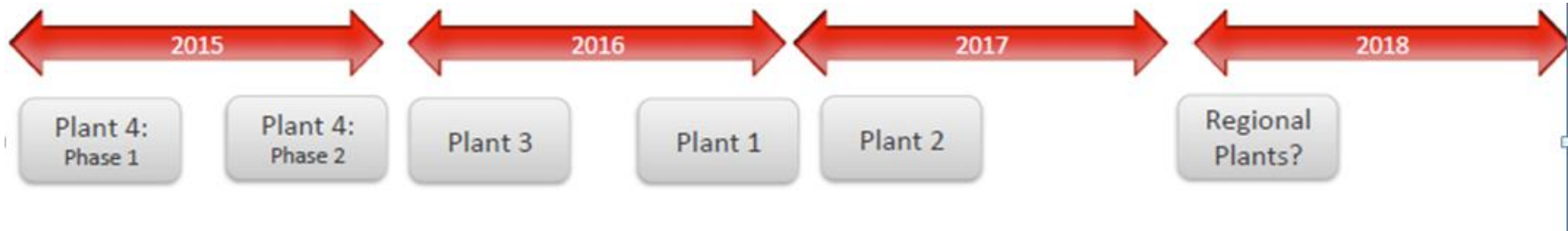


- Selection of Redzone software

REDZONE

What Can Redzone Do For Utz Quality Foods

- **Improve cost per Lb by increasing throughput & reducing Operational costs**
 - Real-time visibility and data capture of all processes to drive immediate action
 - Address minor “hidden” losses; downtime, speed loss, C/O, Ops DT
- **Provide factual quantifiable data to support decisions & operations focus**
 - Eliminate manual paper collection & “non-value” admin burden
 - Data to identify biggest opportunities & support capital decisions
- **Transfer Sustainable Model for Efficiency Improvements**
 - Empower the shop floor with information & skills for quick action
 - Consistent way of measuring & managing performance across all plants











REAL TIME EQUIPMENT MONITORING

Real-time OEE Management & Automated Data Capture



PoolPak®

DEHUMIDIFICATION THAT WORKS

UNITARY SYSTEMS				APPLIED SYSTEMS			
COMPAK™		RECOSWIM®		POOLPAK®		CLIMATEPAK®	
AW / HCD SERIES	RCP SERIES	RECU SERIES	RECA SERIES	MPK SERIES	SWHP SERIES	VHR SERIES	
SUPPLY AIR 700 - 8,000 CFM	SUPPLY AIR 3,500 - 7,000 CFM	SUPPLY AIR 1,600 - 5,750 CFM	SUPPLY AIR 5,000 - 30,000 CFM	SUPPLY AIR 10,000 - 40,000 CFM	SUPPLY AIR 4000 - 30,000 CFM	SUPPLY AIR 7,000 - 50,000 CFM	
2 - 12 TONS	10 - 12 TONS	2 - 60 TONS	2 - 60 TONS	30 - 90 TONS	15 - 80 TONS	N/A	
							
VERTICAL	HORIZONTAL	ROOFCOMPAK					
AW (H/V) - AIR & WATER HEATING	AW (H/V) - AIR & WATER HEATING	RPO - ROOFCOMPAK OPTION	XF - OUTSIDE CROSS-FLOW	XF - OUTSIDE CROSS-FLOW	S - SUPPLY FAN	S - SUPPLY FAN	SE - SUPPLY EXHAUST FAN
HCD (H/V) - HIGH CAPACITY DEHUMIDIFIER	HCD (H/V) - HIGH CAPACITY DEHUMIDIFIER		HP - HEAT PUMP (BASE SYSTEM)	HP - HEAT PUMP (BASE SYSTEM)	SE - SUPPLY EXHAUST FAN	SE - SUPPLY EXHAUST FAN	
			HP-XF - HEAT PUMP CROSS-FLOW	HP-XF - HEAT PUMP CROSS-FLOW	SEP - SUPPLY EXHAUST PURGE FAN	SEP - SUPPLY EXHAUST PURGE FAN	
							SR - SUPPLY & RETURN FAN



Now, PoolPak® technicians can access your unit's system performance from anywhere. Offering you peace of mind, Virtual-Tech® Plus alerts PoolPak® when an error occurs. With on-line data-logging and trending, equipment adjustments can be made within minutes to ensure your pool facility is kept under optimal control at all times. If a repair is needed, Virtual-Tech® Plus saves the cost of an initial costly service technician inspection.

Virtual-Tech® Plus is standard for all PoolPak® MPK models. As of May 1st, 2016, Virtual-Tech® Plus VHR is standard for all ClimatePak® VHR models.

Virtual-Tech® Plus Features:

- **Wireless** - using on-board cellular data service, requires no wiring, networking or firewall issues
- **No Install Required** - configured at the factory, only requires unit power to start transmission
- **Remote Diagnostics** - PoolPak® factory can troubleshoot an issue remotely before having to send a service tech for an extra inspection visit
- **Data Trending** - PoolPak® factory can choose up to 20 vital system parameters (more than 500 available points) to track over time
- **Efficient Operation** - PoolPak® can provide real-time energy savings from your equipment choice
- **Building Automation** - works in parallel with other BAS options (LonWorks®, Modbus®, and BACnet)

Virtual-Tech® Plus is the ideal for maintaining facility operation at all times.

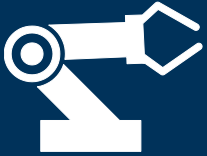




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