

ALKEGEN



Demand Driven World – Alkegen Case Study 2026

Confidential



We brought together two leading companies to take on some of the world's biggest challenges.

Alkegen is a global leader in developing and providing high-performance specialty materials designed to positively impact the environment by saving energy, reducing pollution, and improving fire safety for people, buildings, and equipment.



Helping The World Breathe Easier, Live Greener, & Go Further
Than Ever Before

ALKEGEN



A Global
Footprint to
Deliver Global
Solutions

Alkegen has over 60
manufacturing facilities
and 9,000-plus employees
worldwide.

Solutions That Insulate, Filter, Seal & Protect

Insulation & Thermal Management

High-temperature thermal management products and engineered thermal components for industrial applications.

Filtration & Catalysis

Specialty filtration and catalysis products, including revolutionary fiber-based technologies for air, liquid, and industrial applications.

Battery & Mobility

Advanced materials for thermal barriers and electrical protection, battery separator technology, and revolutionary silicon fiber anode materials.

Fire Protection & Construction Material

Industrial construction applications requiring lightweight, thin materials to prevent flame penetration and achieve significant temperature drops. Geosynthetics offer a range of applications from construction to repair of roads and transport.



Sealing & Gasket Solutions

Superior sealing performance across automotive, heavy-duty diesel, small engines, and off-road equipment.

Solutions
Filter

ALKEGEN
ALKEGEN

Sealing & Gasket Solutions Business Unit

Materials Manufacturing

Fulton, New York
Hoosick Falls, New York
Beaver Falls, New York
Sohna, India

Parts Manufacturing

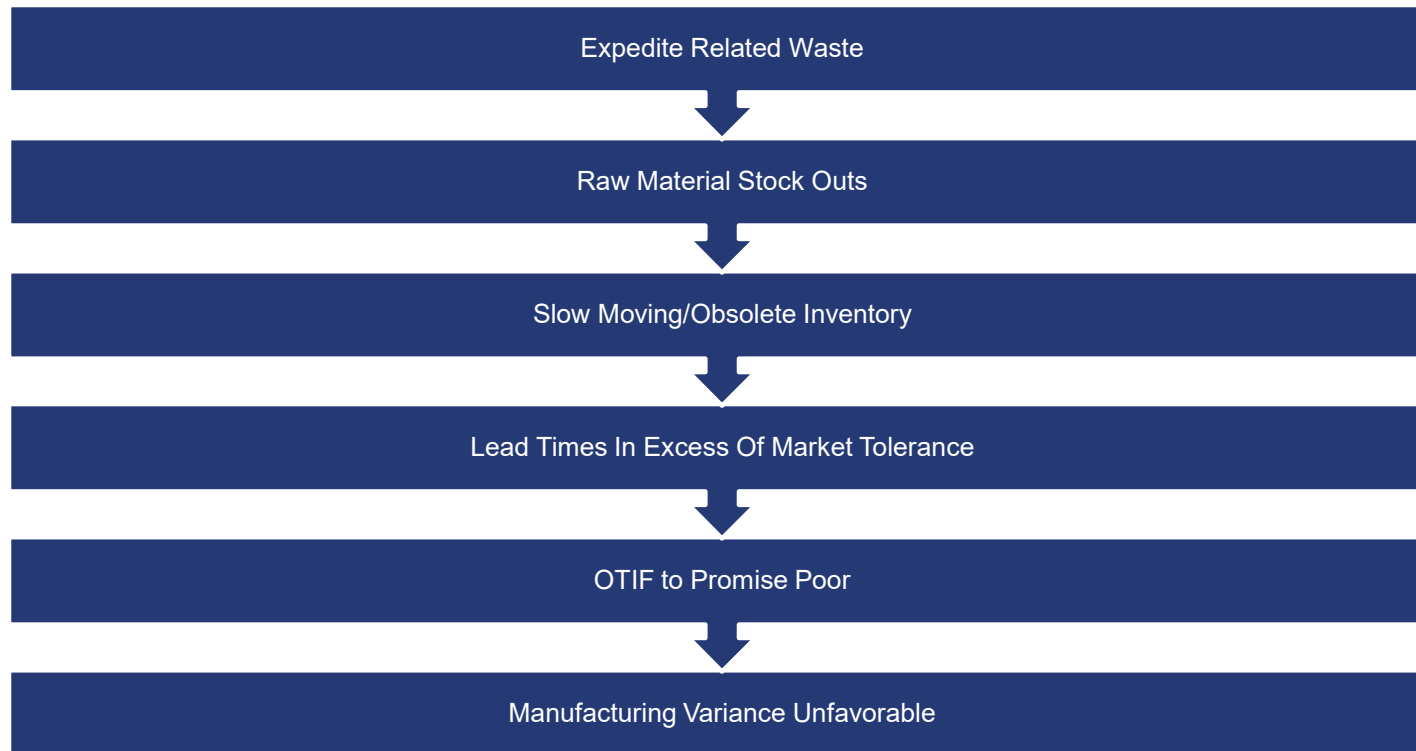
Lancaster, Pennsylvania
Marshalltown, Iowa

Distribution

Asia Pacific



Sealing Business Unit Starting Point Q3 2025

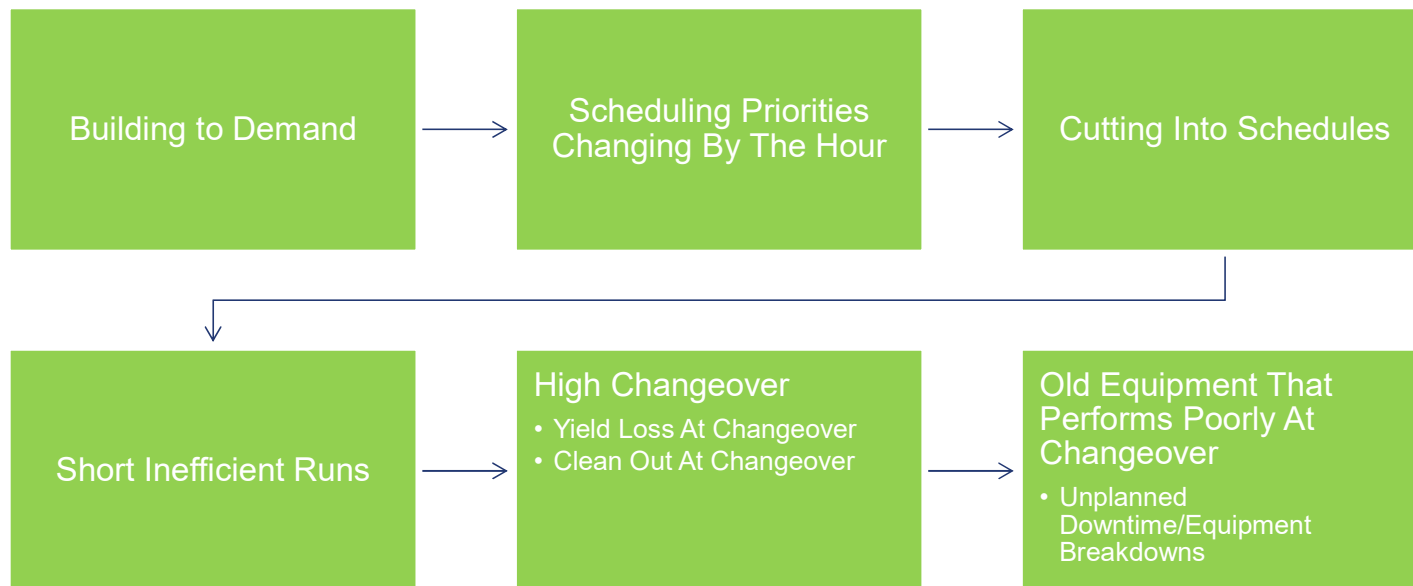


Warehouses Full Of Inventory... That The Market Did Not Want

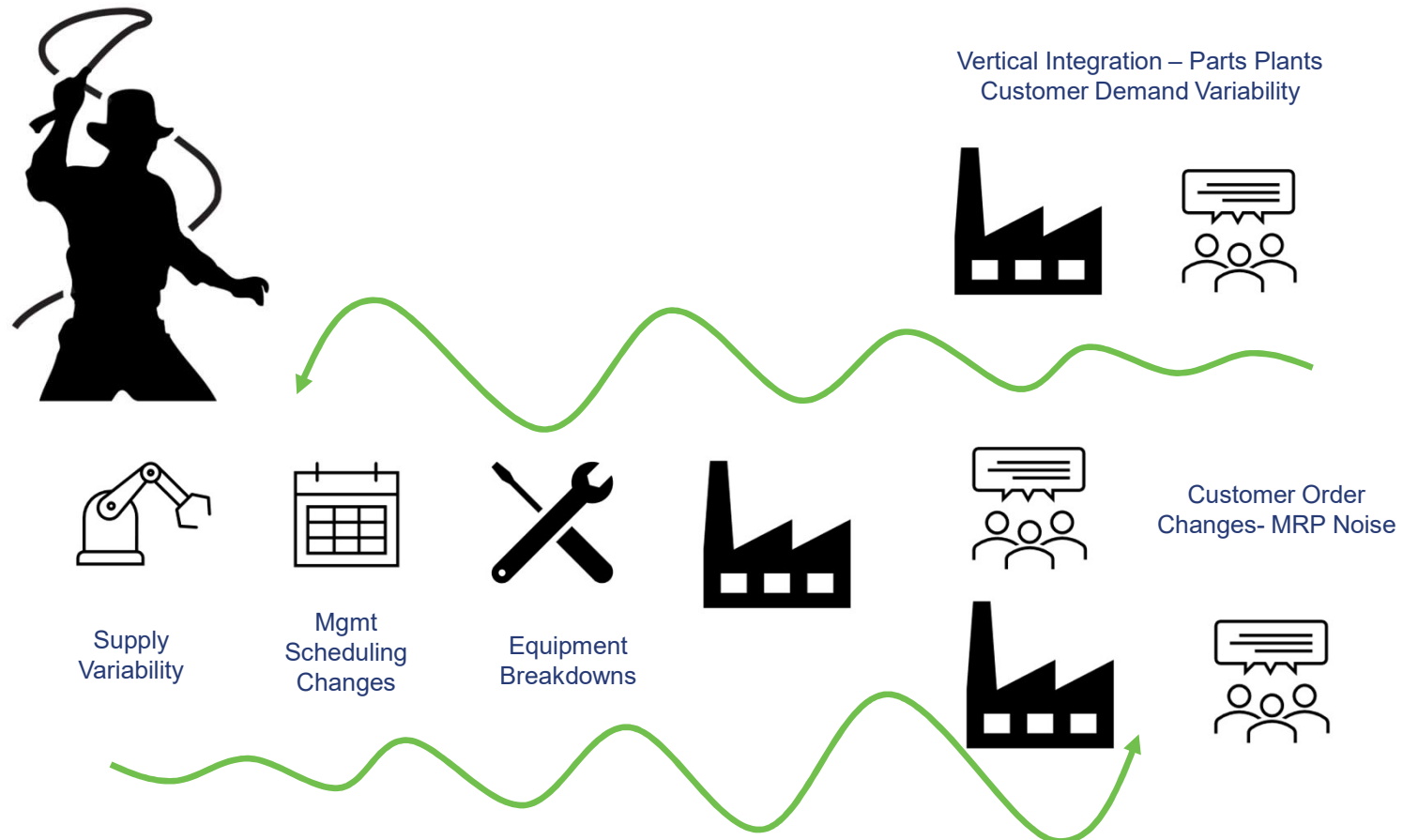
*Warehouses bursting at the seams with inventory, not what the market wanted.
'Too Much Of The Wrong, Not Enough Of The Right'*



Running to Demand & Chasing Revenue Living The Measurement Nightmare



Massive Variability – Bullwhip Effect



Demand Driven Materials Requirements Planning

DDMRP History – Lindsey Rousseau

2005 Operating Multiple Manufacturing Sites Utilizing Theory Of Constraints Practice

- Partnered With Constraints Management Group

2011 DDMRP Implementation Rex Materials Group

- Inventory Performance Was Low
Highly Successful

2012 Demand Driven Planner Certified, Seattle WA

2015 DDI Presenter Rex Materials Group Case Study

2016 SCTech Presenter Rex Materials Group Case Study

2016-2026 Adapting Alkegen To Becoming Demand Driven



The Global Authority on Demand Driven



The logo for Rex Materials Group (RMG), featuring the letters "RMG" in a bold, sans-serif font, with "Rex Materials Group" written in smaller text below it.

where there's heat, there's RMG!™

Rex Materials Group

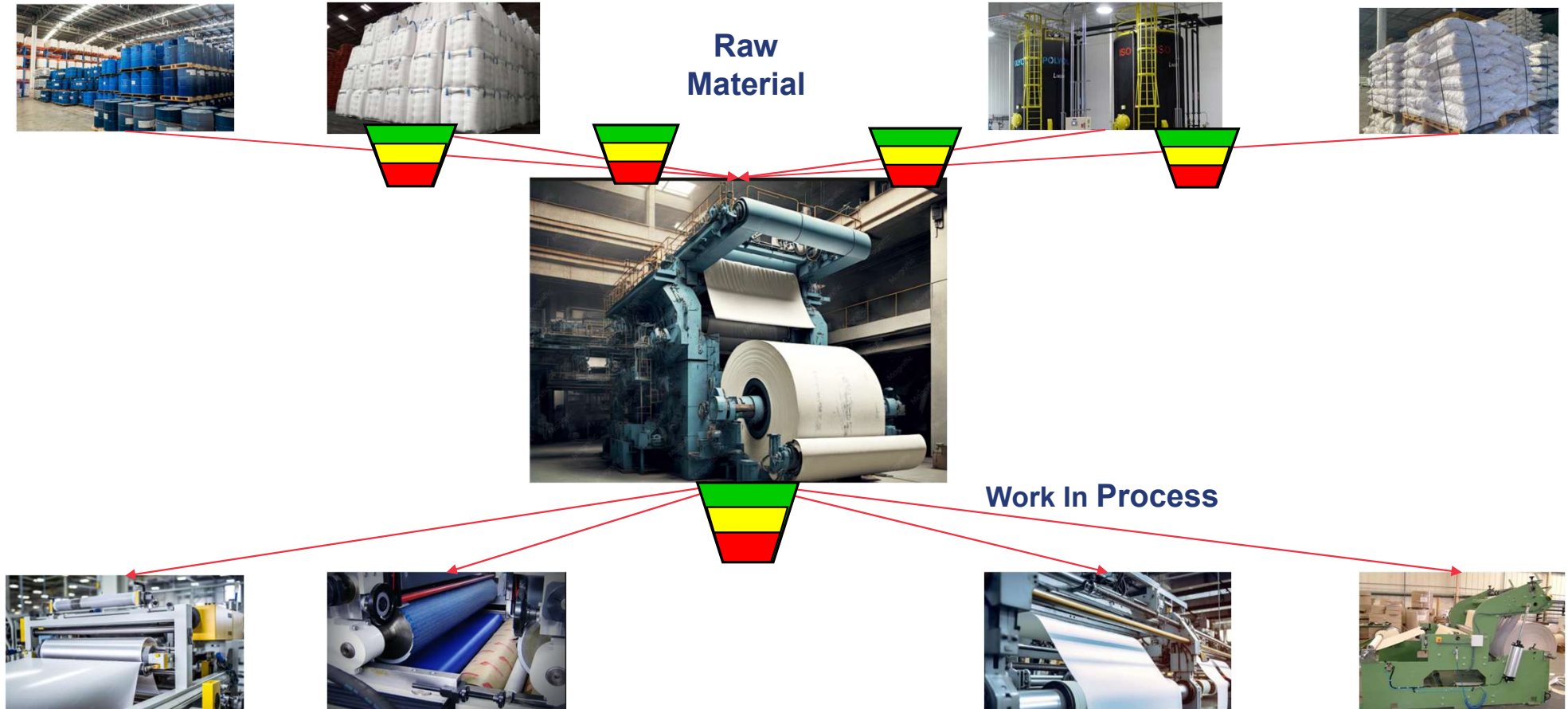
Case Study

Adapting DDMRP to ETO & MTO

March 26, 2015

Rex Materials, Inc., P.O. Box 980, Fowlerville, MI 48836 Phone: 517/223-3787, Web: www.rexmaterials.com, Email: info@rexmaterials.com

Step 1. Identifying Decoupling Points



Leadership Buy In Working Capital Increase, Variance, Reduction, Improved Delivery Performance, Reduced Lead Times

Implementing DDMRP Requires Working Capital Investment – Defining The Expected Results

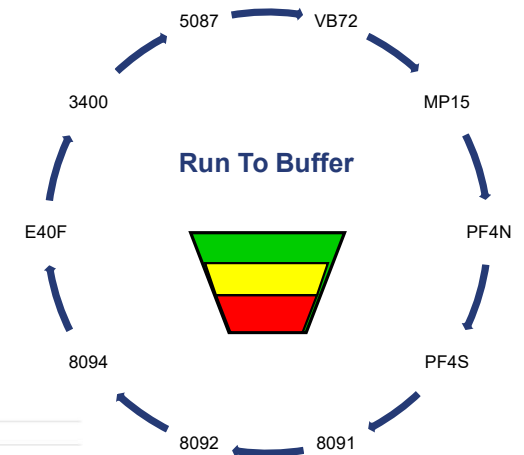
Return on The Working Capital Investment – 40% Fewer Changeovers

- Reduced Yield Loss – Feet/Min x Changeover Reduction
- Wash Out Time – Hours Down x Changeover Reduction
- Start Up Time – Hours Down x Changeover Reduction

Reduced Lead Time, Improved Market Response To Internal And External Customers

- Expedited Freight Reduction/Elimination

Job Title	Labor Hour \$		Hrs Down		Avg FPM	Mins Lost Start Up
Stock Prep						
		Avg Wash Out Time	1		53	7.2
Refining Controller		Shut Down	1			381.6
Machine Tender		Start Up	1.5			
Back Tender						
3rd Hand		Avg Loss Wash Out	\$ -		Avg Loss \$	\$ -
4th Hand		Avg Loss Shut Down/Up	\$ -			
PM Utility						
Total/Hr	\$ -					
		2025 Changeovers	364		2026 Changeovers	216
		2025 Wash Out	\$ -		2026 Wash Out	\$ -
		2025 Shut Down/Up	\$ -		2026 Shut Down/Up	\$ -
		2025 FPM Loss	\$ -		2026 FPM Loss	\$ -
		2025 Est Changeover Loss	\$ -		2026 Est Changeover Loss	\$ -
		Lancaster OT				
		Lancaster Expedite Freight			MFG Variance Reduction	\$ -
		Mtown OT				
		Fulton PM3 OT				
		Fulton Converting OT				
		Airfreight EU				
		Expedite Freight Lan & Mtown				



Step 2. Inventory Sizing- Determining Right Size & Execution

Step 3. Dynamic Adjustments

ERP System Setting Reorder Point:
No Demand Visibility = Reorder Top of Yellow Zone, Full Demand Visibility = Top of Red Zone, Partial Demand Visibility
use calculation provided below in AG

Part Number	Yellow Zone - Operating Inventory lead time	Green Zone - Order Qty MOQ EOQ	Red Base	Red Safety	Red Zone (Red Base + Red Safety)	Additional Demand Visibility	Reorder Point Partial Demand	Reorder Point N Demand Visibility	Qty To Order (Green Zone)	Order Yes/No	MOQ Review	Spike Review Required	Average On Hand	Top of Green (Total R,Y,G)	Total Inv: On Hand + On Order	On Order	On Hand Inventory
147760	183	200	121	40	160	80%	197	343	200	No Action	Yes	No	260	543	405	200.00	205
151148	15,570	44,000	15415	10174	25588			41159	44000	No Action	Yes	No	47588	85159	79976	0.00	79976
151151						80%				No Action	No	Yes	0	3700		0.00	3700
151154	43,605	43,169	43169	28492	71660	80%	60057	115266	43169	No Action	No	No	93245	158434	103719	42000.00	41719
155973	2,516	2,490	2490	822	3312	79%	4069	5828	2490	No Action	No	No	4557	8318	6345	4624.00	1221
169005	60	450	59	59	118	58%	77	177	450	No Action	Yes	No	343	627	1287	0.00	1287
169009						78%				No Action	No	Yes	0	5508		3675.00	1633
169010	346	2,200	342	113	455	58%	478	801	2200	No Action	Yes	Yes	1555	3001	6408	2200.00	4208
169211	3,022	6,600	1995	1975	3969	79%	4442	6992	6600	No Action	Yes	No	7269	13592	10000	0.00	10000
169736	1,365	16,000	901	594	1495	75%	2125	2859	16000	No Action	Yes	Yes	9495	18859	12916	0.00	12916
169748	0	33	0	0	1	58%	0	1	33	No Action	Yes	No	17	34	50	33.00	17
169800	9	30	6	6	11	0%	7	20	30	No Action	Yes	No	26	50	46	29.80	16
169802	8	475	8	8	16	58%	8	24	475	No Action	Yes	No	253	499	1342	0.00	1342
173000	18,789	19,000	12401	8185	20586	80%	25258	39375	19000	No Action	Yes	No	30086	58375	46551	38000.00	8601
173686	25,699	25,442	25442	8396	33838	80%	42955	59536	25442	No Action	No	No	46558	84978	75296	60000.00	15296
173702	45,411	29,971	29971	9891	39862	80%	35425	85223	29971	No Action	No	No	54847	115244	104642	80300.00	24342
173719	7,916	17,616	7837	7759	15595			23511	17616	No Action	Yes	No	24403	41127	37527	0.00	37527
173845										No Action	No	Yes	0	0	0	0.00	0
173846						80%				No Action	No	Yes	0	0	0	0.00	0
173900	22,412	17,500	7396	7322	14718	80%	32648	37130	17500	No Action	No	No	23468	54630	37276	35282.92	3993
173901	90,694	29,929	29929	9877	39806	80%	112361	130500	29929	Order	No	No	54770	160429	103000	53000.00	50000
173910	210	345	139	137	276			486	345	No Action	Yes	No	448	831	681	345.00	336

- Inventory Sizing Is Determined Using DDMRP Algorithms In Excel. Lead Time, MOQ, Usage History, Are Extracted From The ERP Systems And Used To Determine Red/Yellow/Green Buffer Zones.
- Some ERP's Have Been Adapted To Provide Suggestions To Make/Buy. In Other Cases The Excel Tool Is Used For Ordering And Manufacturing Suggestions.

MRP3000-02 MT ERPLX PRODUCTION ENVIRONMENT TONC559S1 8/18/26
ERPPRODC Planning/Pegging Inquiry LROUSS 10:27:37

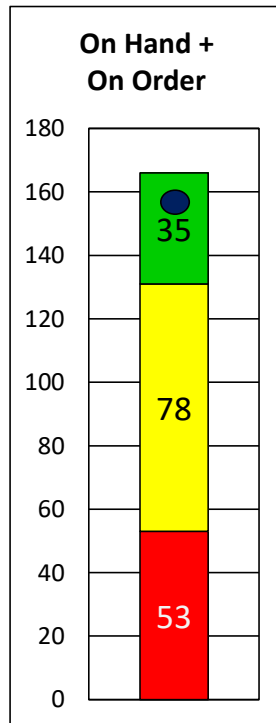
Item MT-GRAPH-29-2 + Type Raw Material
.025(.0225-.0275) X 5.875(-0/+ .125) X LF 70 LB/FT" On Hand 260495.000
Facility 109 + Class NO Lead Time 45 0 U/M LF Alloc Mfg 30300.000
Order Policy Incremental Lot Size 108000.000 Alloc Cus .000
MRP Code N Activity Incr Lot 18000.000 On Order .000
JIT Code N Horizon Date 8/17/26 MRP Dat 183921.000 Non Net .000
Method 1 Orders Consume Forecast Batch 1.000
Method 2 Orders Consume Forecast Demand Fence Date 10/15/26 Yield 100.00
Control Date Lead Times 1 2 3 4 5 Total

Ref#	Qty	Rel	Due	Fr	Wh	Ref#	Qty	Need	Balance
Action									
						M00442954	30300.000	090926	230195
						Plannd	36360.000	102026	193835
						Plannd	6060.000	111126	187775

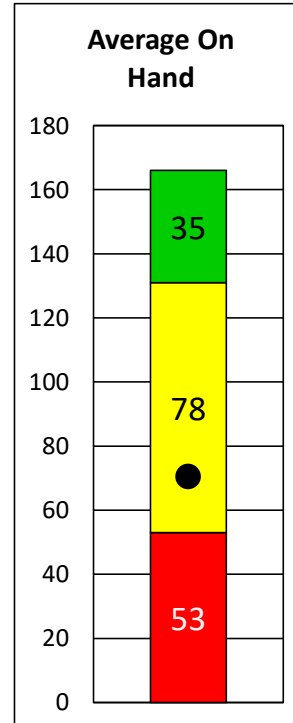
F1=Help F3=Exit F4=Prompt F5=Refresh F7=Backward F24=More Keys

Step 4. Site Level Execution – Demand Driven Planning Using The Zones For Execution

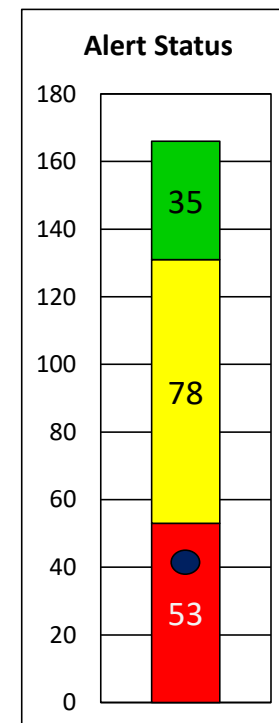
On Hand + On Order
Is The Supply
Generation (Planned)



On Hand Inventory In
Yellow Zone Is
Optimal



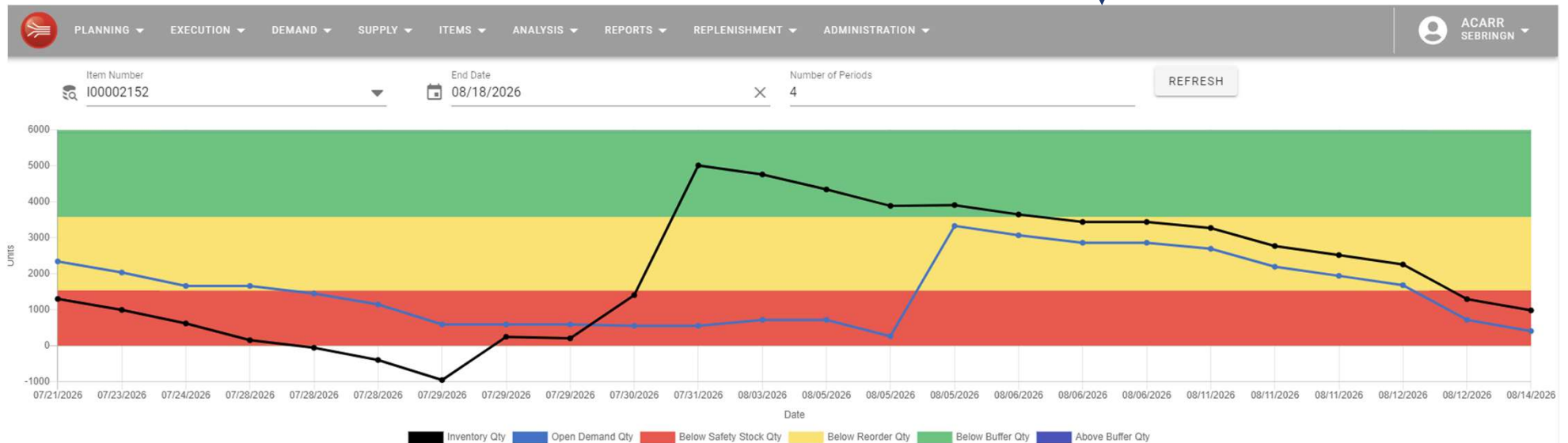
On Hand Inventory In
Red Zone Requires
Action- Expedite



Step 5. (Next Step) – Upgrade ERP System To Be Demand Driven Current ERP Systems Do Not Support

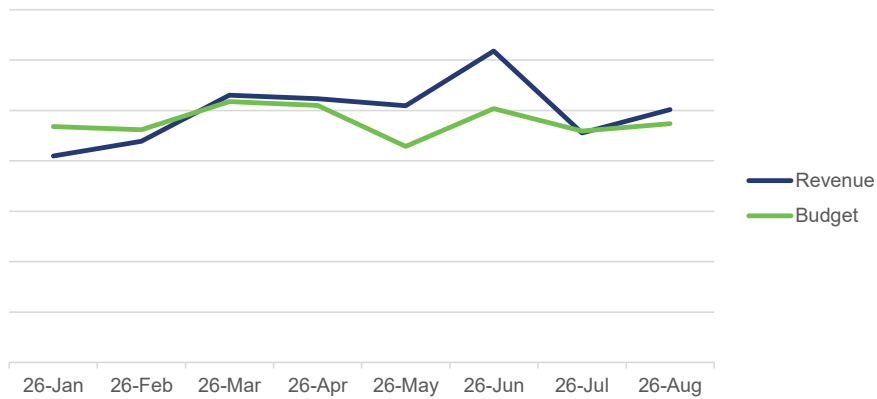
New Flow = On Hand + On Order – Sales Order Demand

Modern Planning Tools Provide Forward Projections – Visibility To Shortages & Excess Allowing For Modifications To Planning

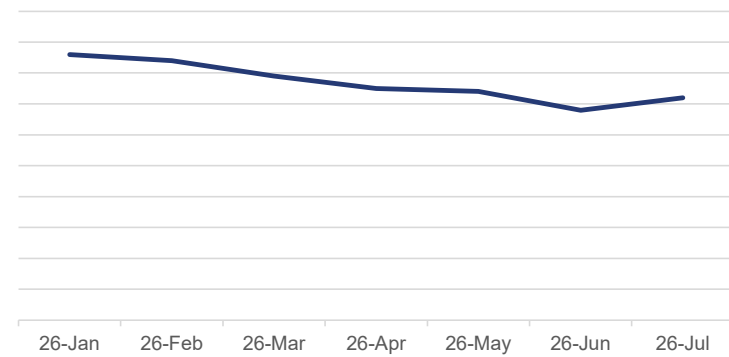


Measuring Success Alkegen KPI's Showing Improvement

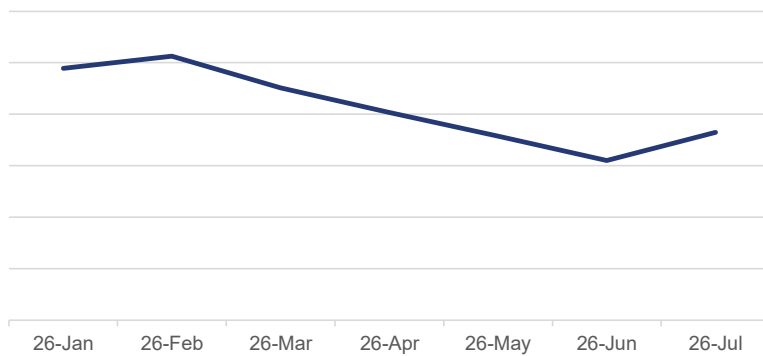
Revenue Beating Budget



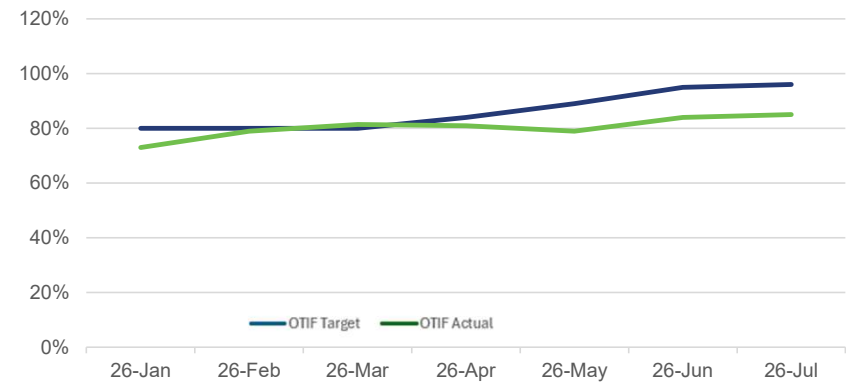
Days Inventory On Hand



Variance



On Time In Full To Promise



Next Steps Measure Performance

Cost: Expedite, Variance, DIO

- Variance Improvement Due To Running In Efficient Product Cycle & MOQ
 - DIO Optimization

Service Level OTIF

- Internal & External On Time In Full To Promise
- Internal & External On Time In Full To Request

Lead Time Reduction

- Demonstrated Lead Time
 - Market Desire By Product Family- Customer Request
 - Current Lead Time = Order Entry Date – Shipment Date

Buffer Performance

- SKU's Red/Yellow/Green/Blue On Hand % Total
 - Red – Too Little 10% or Less
 - Blue – Too Much 10% or Less

Demand Driven Materials Requirements Planning, DDMRP Full Mobility Team Roll-Out

Site	Team Member(s)	Status	Actions	Due Date
Pirson	Amy Baker & Ana	In Process	Data Collected, Buffer Levels Determined, RM – Confirm Min Bal AS400. FG – Run Process & Calculation	9/30
Pune	Vishwa Palki	Review Status – Implemented	Maintenance, Quarterly Review, Inventory Performance Reviews	9/30
Holywell	Sian Hodgkiss & Pete Evans	In Process	Data Collected, Buffer Levels Determined, RM – Confirm Safety Stock SAP. WIP & FG – Run Process & Calculation	9/30
South Africa	Ian (Heather)	In Process	RM Data Collected, Review & Implement. WIP & FG – Run Process & Calculation	9/30
Widnes	Victoria Graham	In Process	RM Data Collected, Review & Implement SAP. FG – Run Process & Calculation	9/30
Firetower	Tim Huttenlocker & Will Healey	In Process	RM Data Collection In Process, Review & Implement AS400. WIP & FG – Run Process & Calculation	10/31
Fulton	Jason Mattice	Complete	Maintenance, Quarterly Review, Inventory Performance Metrics, Visual Aids On Production Floor Being Tested	
Lewis	Amy Barkley	RM – Complete WIP/FG – Not Started	Monitor RM, Implement WIP/FG, Quarterly Review, Inventory Performance Reviews	9/30
Hoosick Falls	M. Brewster & S.Schroeder	Data Prepared	Review Data, Implement BPCS	10/31
Marshalltown	Lindsey & Chris Saacke	Complete	Maintenance, Quarterly Review, Inventory Performance Metrics	
Lancaster	Shannon Theurer	RM – Complete WIP/FG – Not Started	Monitor RM, Implement WIP/FG, Quarterly Review, Inventory Performance Reviews	9/30
Sohna	Rahul W & Tejas Shete	Not Started	Training, Data Collection, Implementation – Site Not Utilizing BPCS Missing Data	10/31