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METALS & MATERIALS





Joy Hensold, Remote Process Diagnostics Engineer





A Day in the Life: Success Factors for Remote Monitoring

Joy Hensold

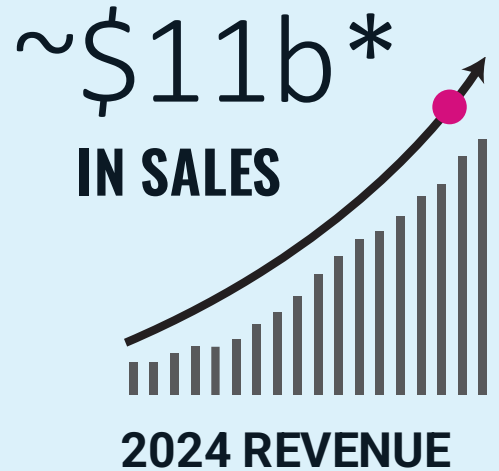
Remote Process Diagnostics
Engineer

Owens Corning

OWENS CORNING AT A GLANCE



CONSECUTIVE YEARS
AS A FORTUNE® 500
COMPANY



25,000+
EMPLOYEES PLUS
1 PINK PANTHER



COUNTRIES WHERE
WE OPERATE

A residential and commercial building products leader

ROOFING | INSULATION | DOORS

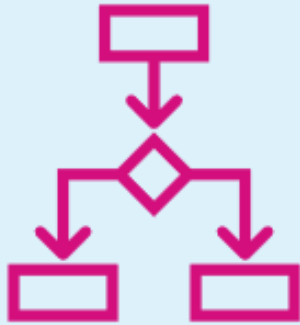


Remote Monitoring Menu





Success Factors



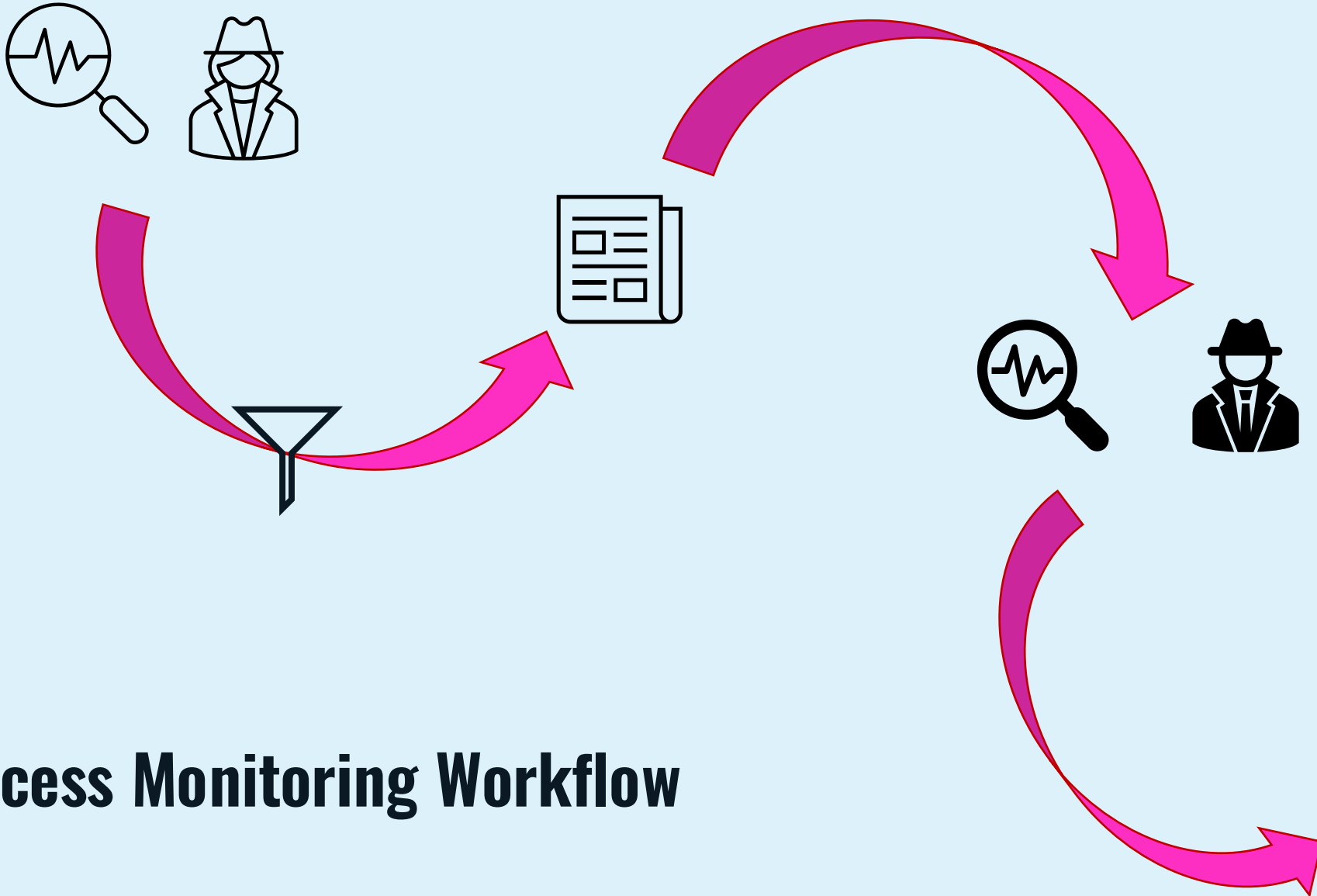
Enterprise Perspective



Freedom to Fail

Remote Monitoring Menu





Process Monitoring Workflow



Remote Process Diagnostics Engineer:

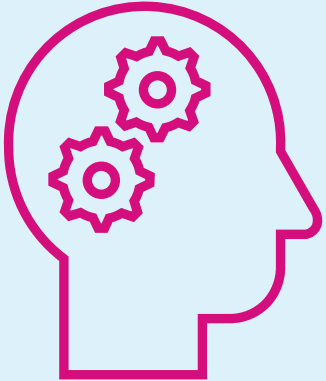
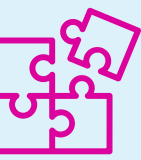
- **Reviews** plant data related to **KPIs** to detect **anomalies/trends**
- **Investigates** potential contributing factors (product change, control model status, etc.) for a **possible explanation**



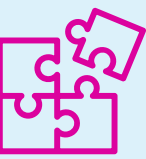
Success Factor: contextual thinking



Success Factors



Contextual Thinking



Remote Monitoring Asset Tree » Toronto/TO1

Unit #01 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #03 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #05 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #07 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #09 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000
Unit #02 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #04 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #06 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #08 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #10 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000

3/30/2025 6:00 PM CDT

Remote Monitoring Asset Tree » Toronto/TO1

Unit #01 Uptime Sum: 37537 Count: 1 Average: 37537.0000	Unit #03 Uptime Sum: 2 Count: 1 Average: 2.0000	Unit #05 Uptime Sum: 10113 Count: 1 Average: 10113.0000	Unit #07 Uptime Sum: 6902 Count: 1 Average: 6902.0000	Unit #09 Uptime Sum: 10809 Count: 1 Average: 10809.0000
Unit #02 Uptime Sum: 1965 Count: 1 Average: 1965.0000	Unit #04 Uptime Sum: 917 Count: 1 Average: 917.0000	Unit #06 Uptime Sum: 136 Count: 1 Average: 136.0000	Unit #08 Uptime Sum: 166569.665 Count: 1 Average: 166569.665000	Unit #10 Uptime Sum: 9898.983 Count: 1 Average: 9898.983000

4/3/2025 6:00 PM CDT

1.5 hrs → 30-45 min

Remote Monitoring Asset Tree » Toronto/TO1

Unit #01 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #03 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #05 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #07 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #09 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000
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3/30/2025 6:00 PM CDT

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Unit #01 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #03 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #05 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #07 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #09 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000
Unit #02 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #04 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #06 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #08 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000	Unit #10 Deviation > Limit, Excluding Camera Sum: 0 Count: 1 Average: 0.0000

3/30/2025 6:00 PM CDT

4/3/2025 6:00 PM CDT

TO1 Air Lappers

NE Air Lapper Pressure Average: 0.0000	NW Air Lapper Pressure Average: 0.0000	SE Air Lapper Pressure Average: 0.0000	SW Air Lapper Pressure Average: 0.0000
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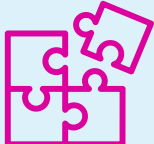


TO1 Air Lappers

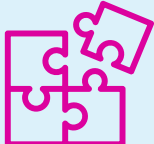


1.5 hrs → 30-45 min

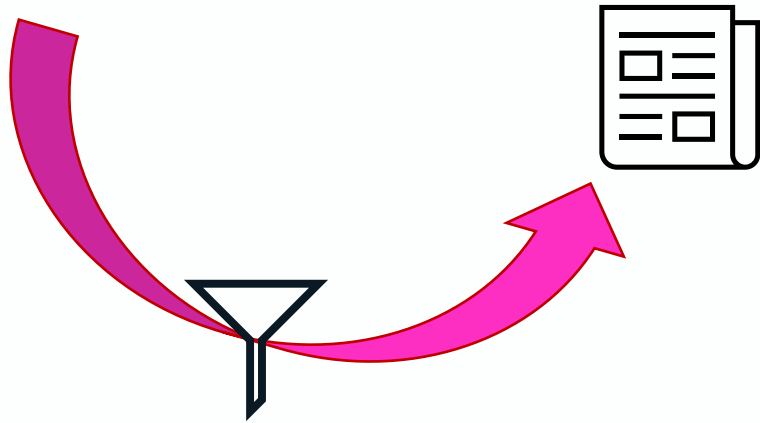
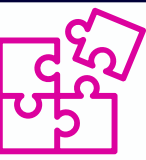
Streamlining the Workflow: Adding Context



Streamlining the Workflow: Tables



Run Date	Product ID	Revenue Headline SP	Avg Revenue Headline	Previous Year Month Average Revenue Headline	Avg Score	Previous Year Month Average Score
Mar 31, 2025 1:57 PM	Product ID 12345	359.23	384.6	373.16	7.0811	6.9449
Apr 1, 2025 6:36 AM	Product ID 12345	310.22	321.17	312.43	6.5583	6.0849
Apr 2, 2025 3:00 AM	Product ID 12345	360	373.13	361.27	6.6955	7.2648
Apr 2, 2025 7:15 AM	Product ID 12345	360	374.06	367.13	7.0389	7.2817
Apr 2, 2025 11:05 PM	Product ID 12345	359.97	389.7	382.33	7.3427	6.9262

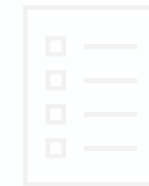


Remote Process Engineer:

- **Compiles** Insights across all KPIs into a **report** for filter team
- **Shares** Insights approved by filter team in **Teams List**

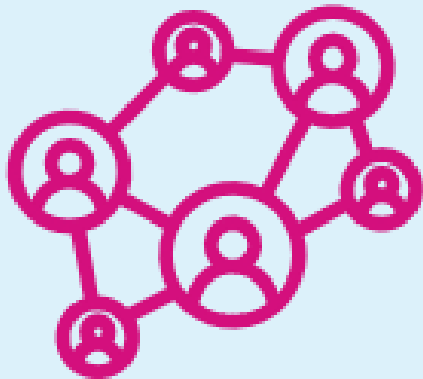
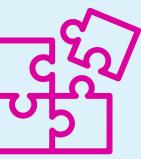


Success Factor: leverage your network



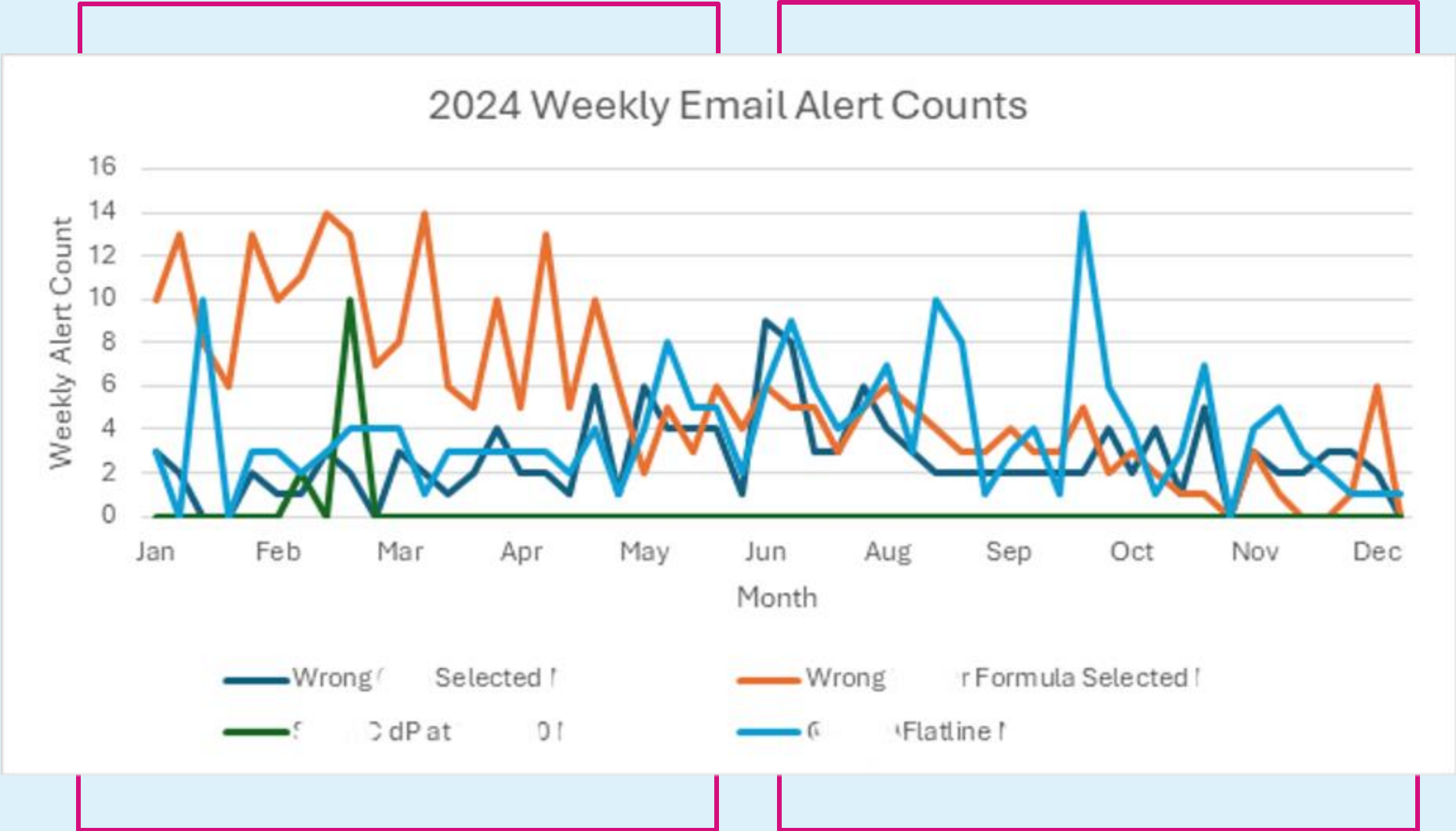
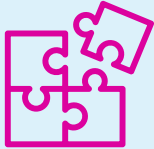


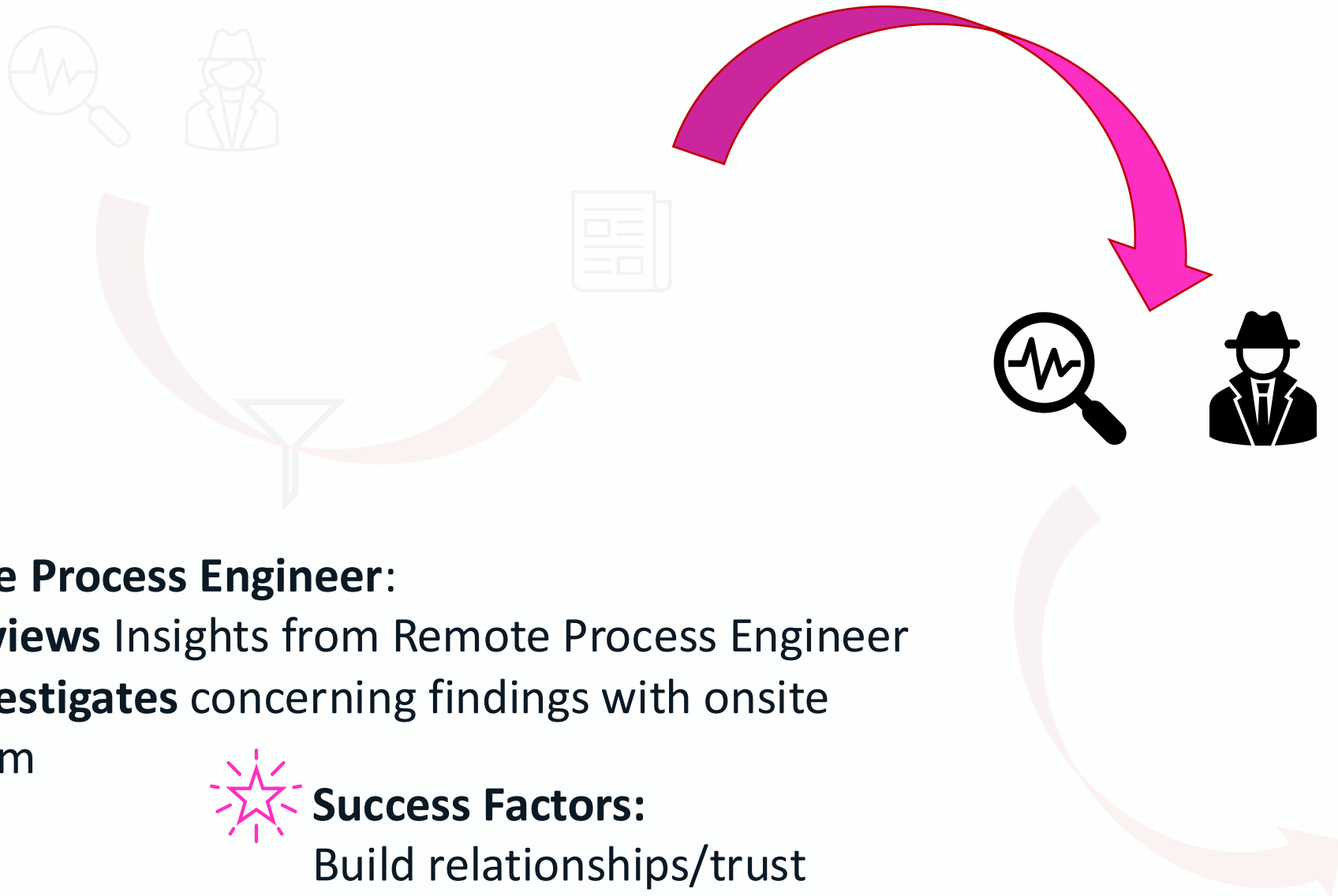
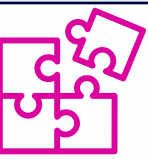
Success Factors



Leverage Your Network

Teams List: Categories





Onsite Process Engineer:

- **Reviews** Insights from Remote Process Engineer
- **Investigates** concerning findings with onsite team

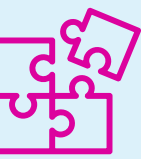


Success Factors:

Build relationships/trust
Dedicated plant resources



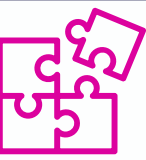
Success Factors



Build Relationships/Trust

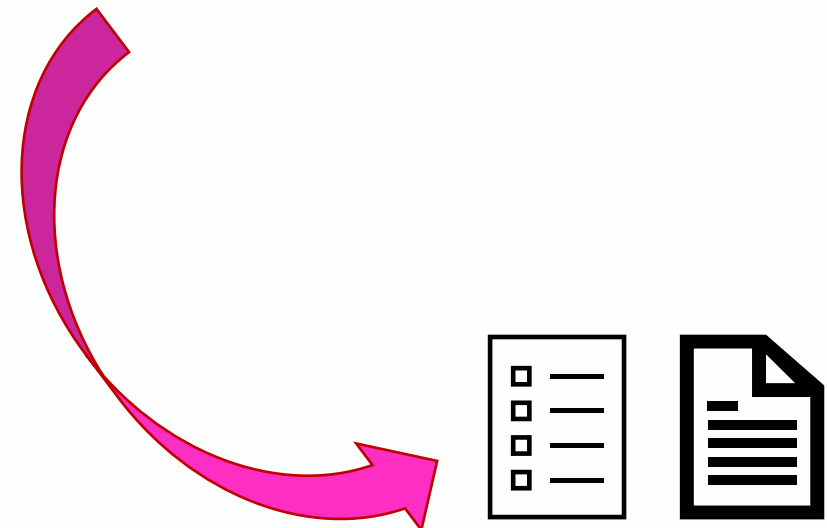


Dedicated Plant Resources



Onsite and Remote Process Engineers:

- Record **conclusions/learnings** from investigation in the Teams List
- Create **action items** where follow-up is required



Remote Monitoring Menu



ASSET-FOCUSED DASHBOARDS

Dashboards that focus on the health of a particular asset

PROCESS MONITORING VIEWS

Views that, when combined, provide a holistic view of process performance

ON-DEMAND DATA PACKAGES

Sets of data that can be used to troubleshoot common failure modes

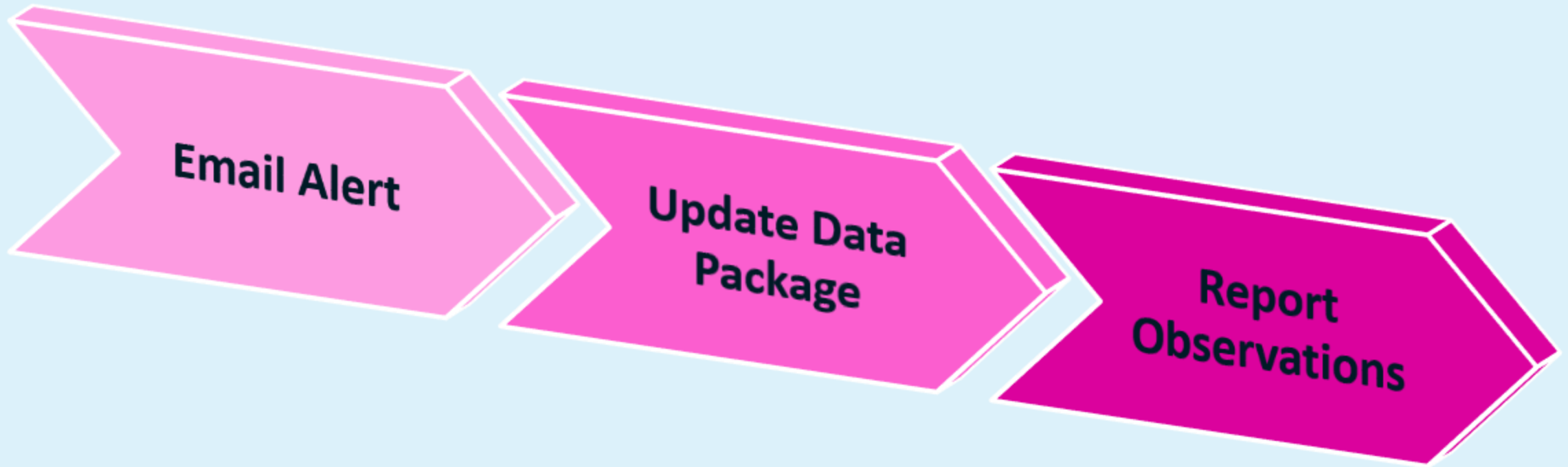
AUTOMATIC ALERTS

Alerts sent to plant staff immediately when a condition or combination of conditions is satisfied

AD HOC ANALYSES

Analyses completed upon request to complement ongoing plant investigations

On-Demand Data Packages



On-Demand Data Packages



Properties

Comments

Editor

SA I, RH, CL

SA I, RH, CL

Process Engineer

Creator: Joy Hensold
Created: Jan 29, 2025 4:52 PM
Updated: Feb 25, 2025 3:31 PM
State: ✓ Saved
Seq Content: 7 pieces
Time Zone: America/Toronto

Asset Selections

Configure an asset selection for Seq content

Date Ranges

Fixed Date Ranges

Run Dates
Mar 31, 2025 6:40 AM - Apr 1, 2025 6:40 AM

Recent Version History

SA I, RH, CL

SA I, RH, CL

Process Engineer

UPDATE DATE RANGE TO RUN DATES

CURRENT VS THIS MONTH LAST YR

	Product ID	Duration	Ramp Height Avg	Previous Year Month Average Ramp Height	Ramp Height SP Avg	Ramp Height Deviation	Ramp Height CE Avg Max	Ramp Height CE Avg Min	SA I Avg	Previous Year Month Average SA I	SA I Min
Mar 30, 2025 11:14 PM	Product 1 Description	11:27:18.000	441.02	463.15	433.26	7.751	491.08	349.59	7.0842	5.5075	4.82
Mar 31, 2025 10:43 AM	Product 1 Description	03:14:09.000	338.88	329.75	310.43	28.447	363.51	318.61	6.611	5.6414	4.78
Mar 31, 2025 1:59 PM	Product 1 Description	16:37:26.200	384.63	373.17	359.23	25.401	425.97	278.06	7.0837	6.9489	3.83
Apr 1, 2025 6:38 AM	Product 1 Description	04:53:33.422	325.52	312.35	310.32	15.202	370.87	277.59	6.8762	6.0859	4.21

SAWDI

RAMP HEIGHT

Forming Model ON

SA I

Product 1 Description

Product 2 Description

No of Chutes In

Avg Ramp Height, Ramp Height SP (Ramp Height SP) (ft)

Ramp Height C (Ramp Height Center Filtered) (ft)

Ramp Height E (Ramp Height E Filtered) (ft)

Ramp Height W (Ramp Height W Filtered) (ft)

P105 Recipe (P105 Recipe Now Running) (ft)

P105 Total Flow (TO1 P105 Total Flow) (ft)

Product 1 Description (IPOP Product Description) (ft)

Product 2 Description (IPOP Product Description) (ft)

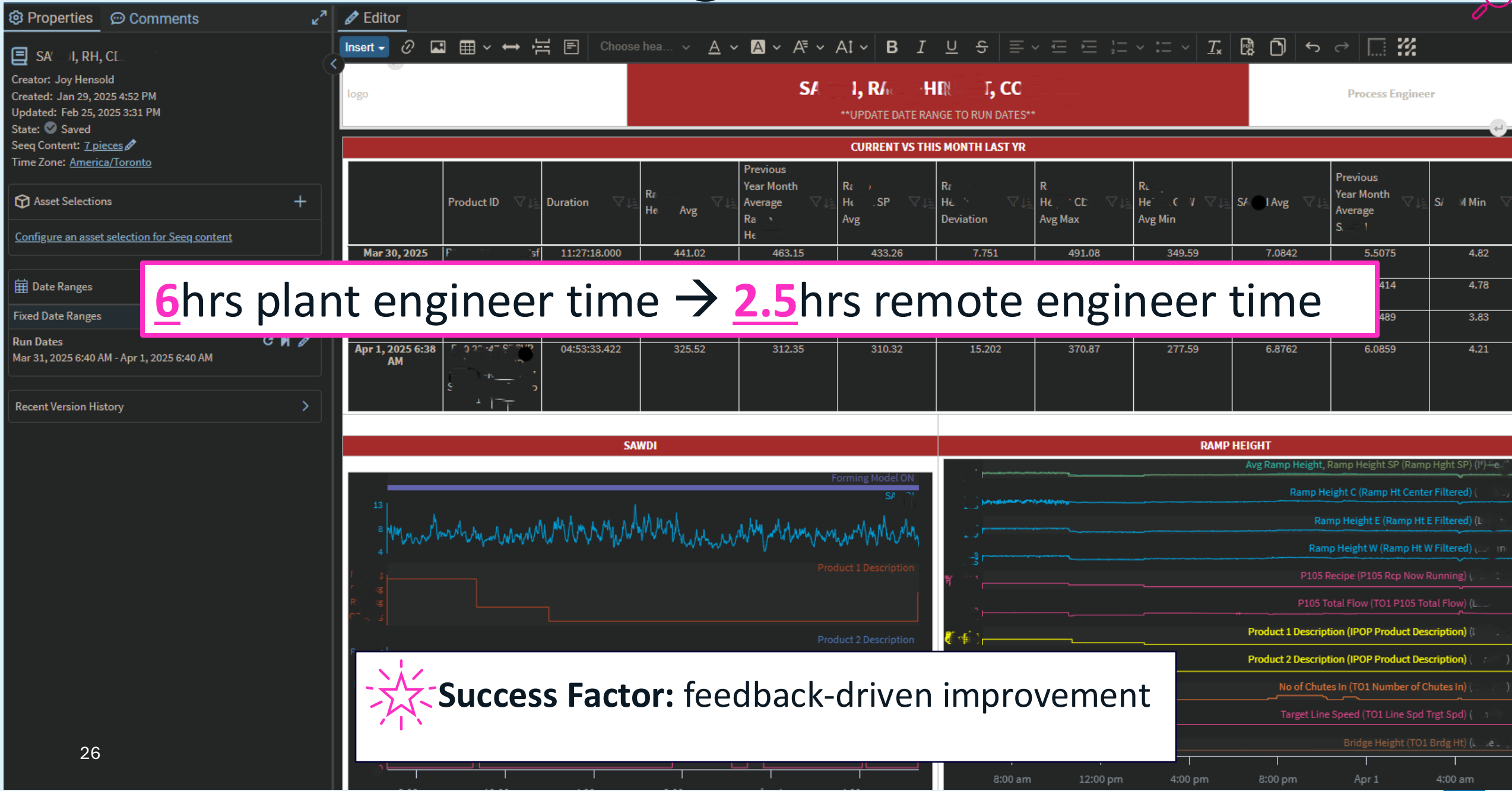
No of Chutes In (TO1 Number of Chutes In) (ft)

Target Line Speed (TO1 Line Speed Target Speed) (ft)

Bridge Height (TO1 Bridge Height) (ft)

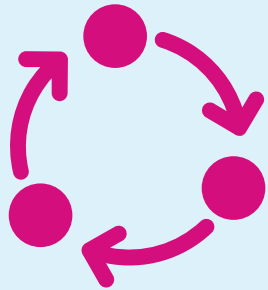
8:00 am 12:00 pm 4:00 pm 8:00 pm Apr 1 4:00 am

On-Demand Data Packages



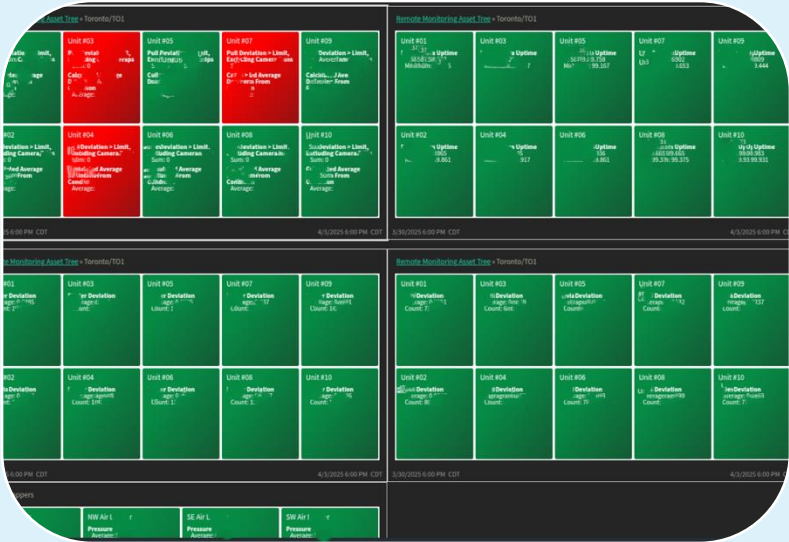


Success Factors



Feedback Driven Improvement

Recap: Streamlining Methods



Treemaps

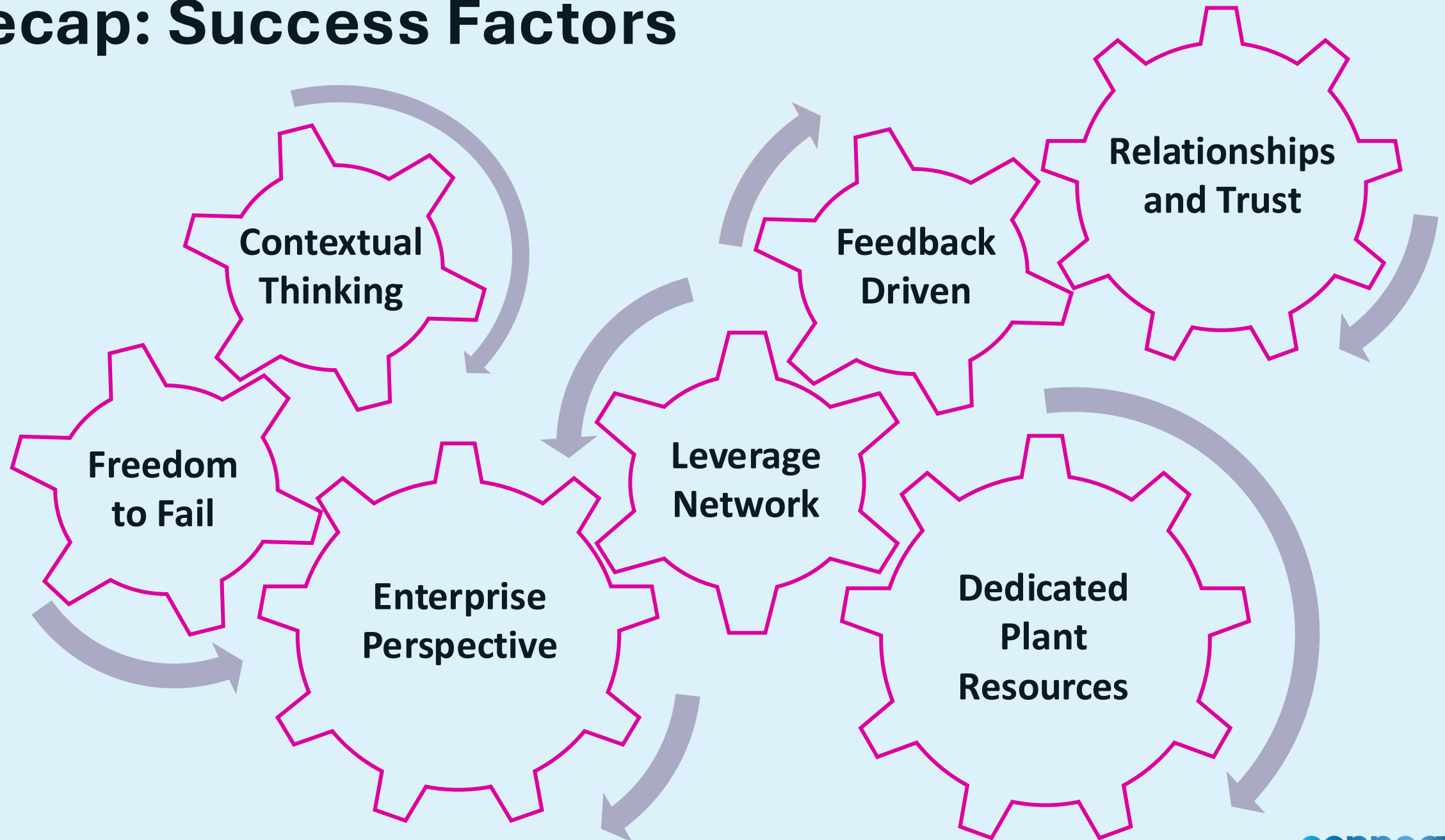


Contextual Views

	Rt He SP	Avg Rt He SP	Previous Year Month Average Rt He	Avg SP
	359.23	384.6	373.16	7.08
	310.22	321.17	312.43	6.55
	360	373.13	361.27	6.69
	360	374.06	367.13	7.03
	359.97	389.7	382.33	7.34

Tables

Recap: Success Factors







SeeQ®

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QUESTIONS?





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THANK YOU

Joy Hensold

Remote Process Diagnostics Engineer

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