CONNEQT
Multi Product Best Run Rate
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Cargill

Speaker Introduction

Michael Schemm

Regional Analytics
Intelligence Engineer

Cargill

Images from: https://stgga.upgrade.selectminds.com/about-state-government and https://bleacherreport.com/iowa-state-football

Cargill Background

Founded in 1865 as a Grain business by the Cargill Family

Headquartered in Minnetonka, MN

A primary player in many different Food and Ingredient Spaces worldwide

The GEOS business supports many customers in various industries with all types of Food oils

Objectives for the Presentation

The Power of Capsule Properties

Creating Visuals that Fit your Audience

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Best Run Rate Summary

CHALLENGE

Calculating Best Run Rates for multi-product vegetable oil refineries

SOLUTION

Utilize Seeq to create repeated hourly capsules covering 28 days

RESULTS

New business capability and enhanced process targets

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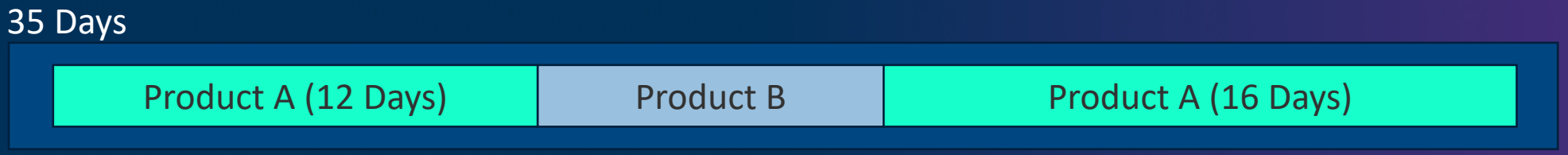
Best Run Rate Calculation

- Best Run Rate is defined as the best 28 days for running for a product
- Process works best by using hours and excluding hours involving changeovers
- Can span through other product runs



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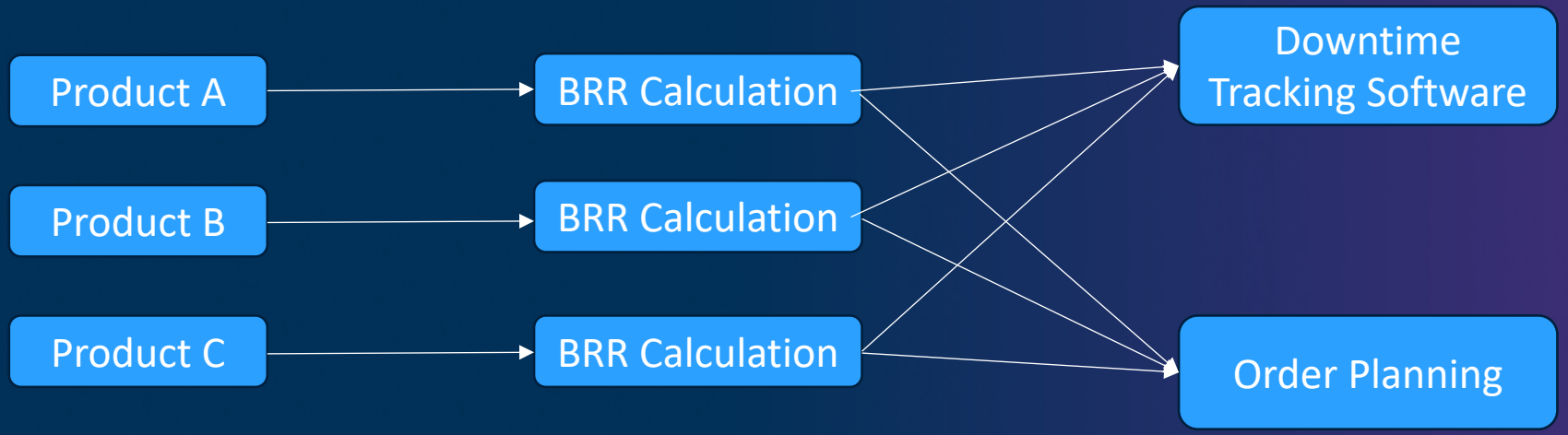
Background Information

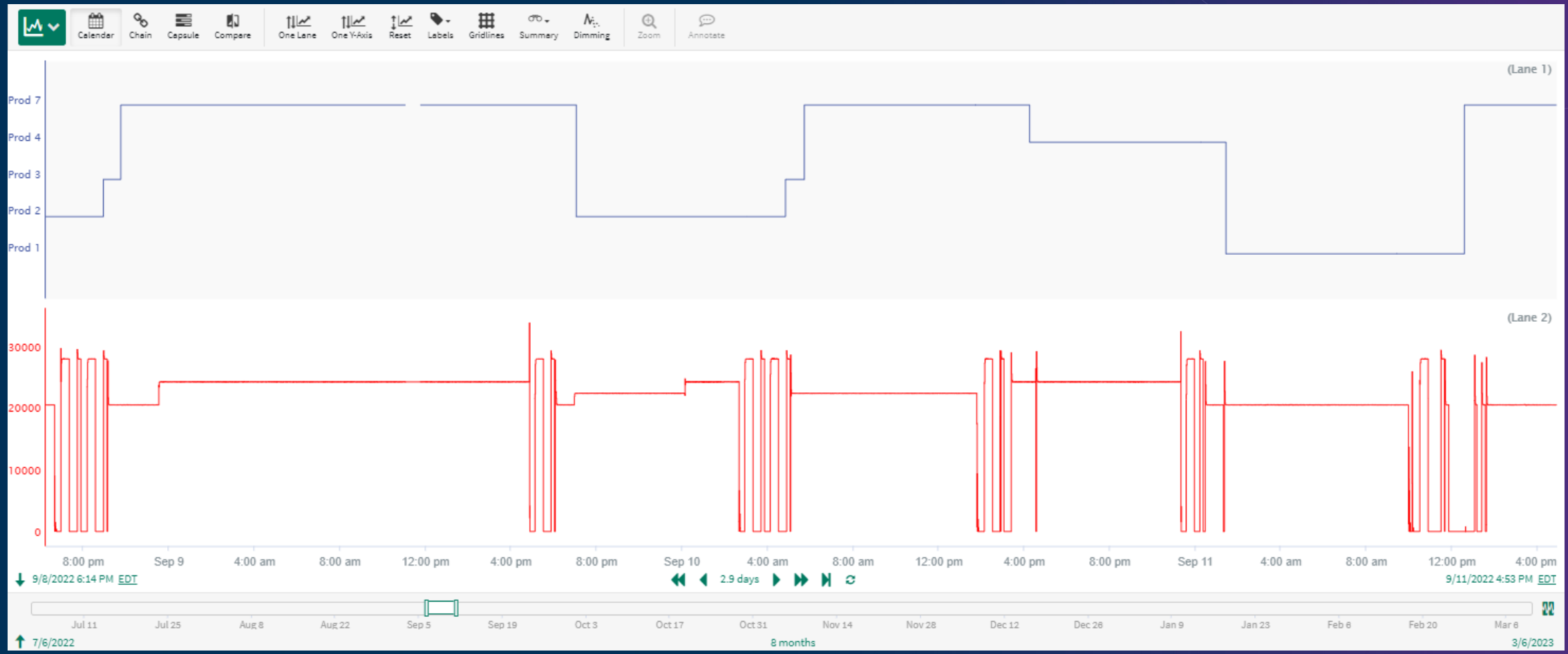
- The GEOS refineries run different oil types through multiple deodorizers
- Products are assigned what is called a Best Run Rate
- Previously attempted with spreadsheet and links to abbreviated time series data



Steps in Seeq

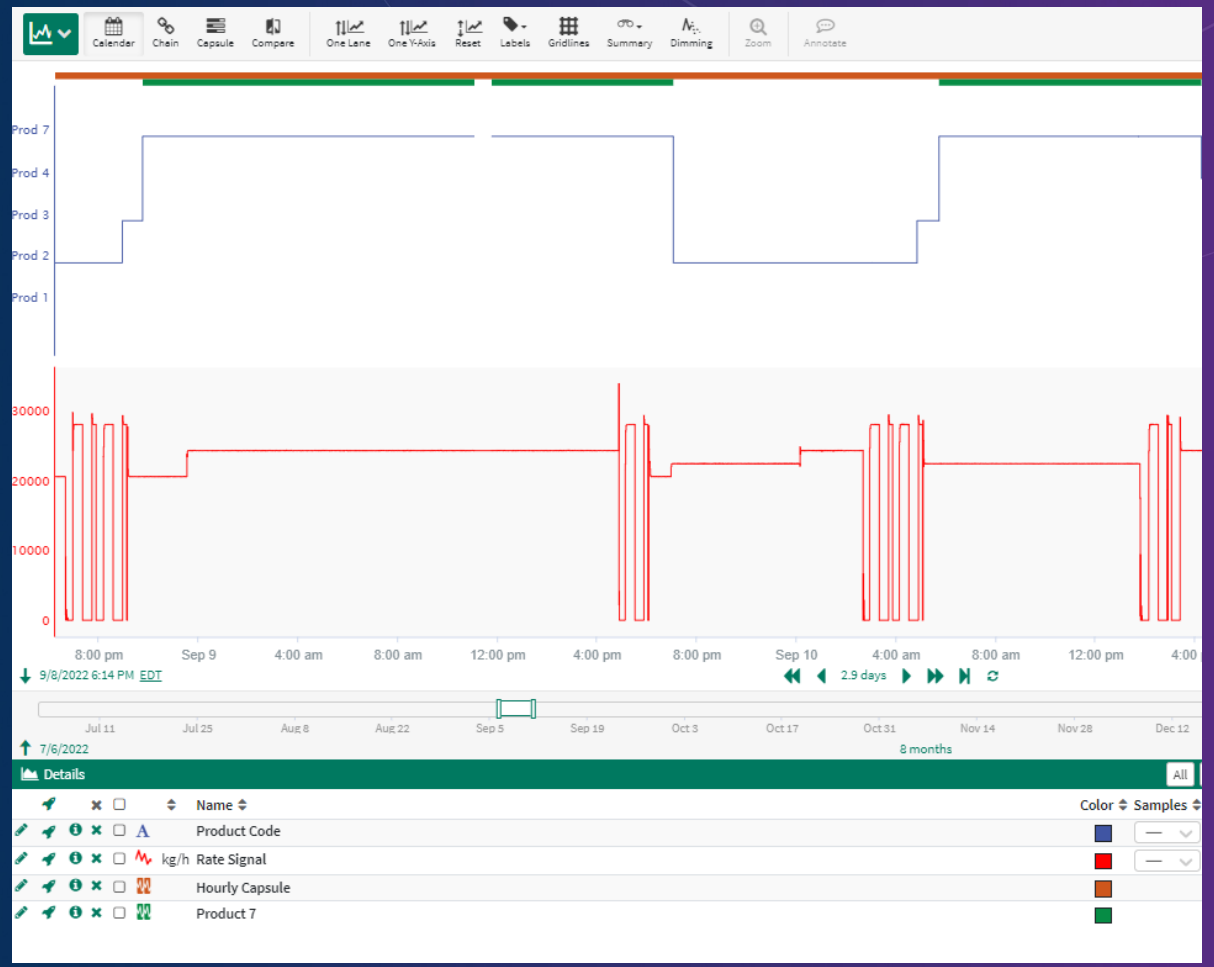
- Collect Signals
- Establish Capsules
- Calculated Hourly Averages
- Continuous Capsules
- Simplifying Capsules
- Export to OData

Seeq Setup

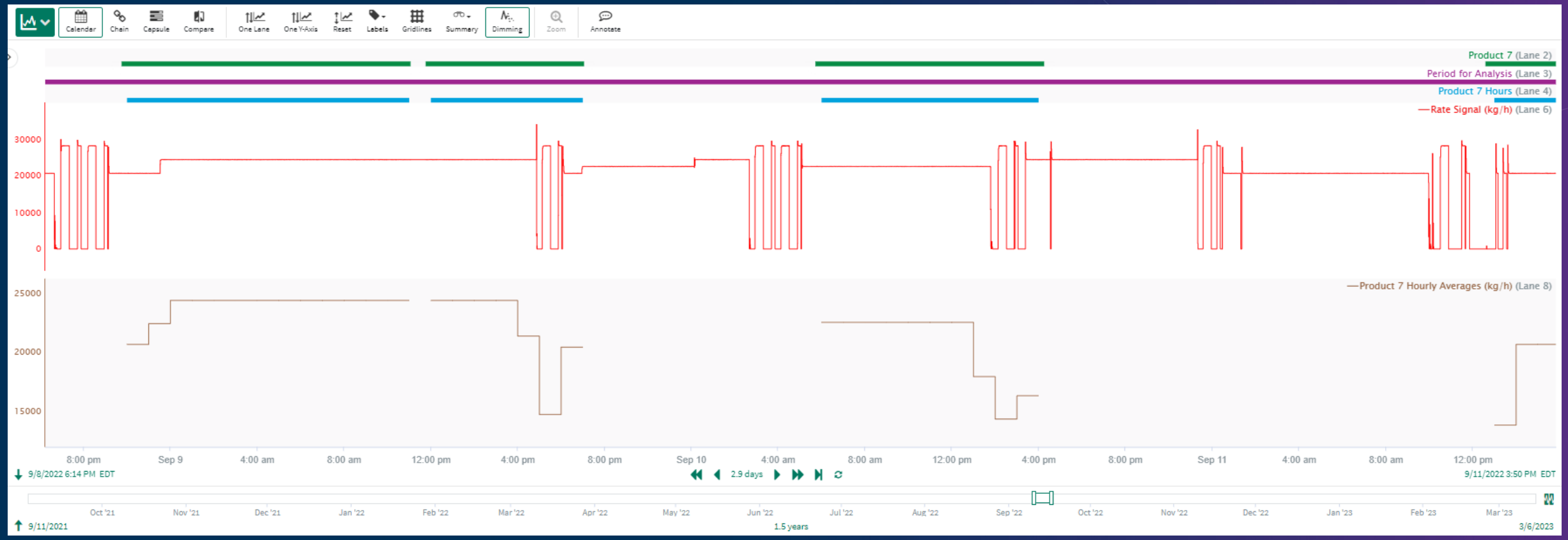

Calendar
Chain
Capsule
Compare
One Lane
One Y-Axis
Reset
Labels
Gridlines
Summary
Dimming
Zoom
Annotate
(Lane 1)
Prod 7
Prod 4
Prod 3
Prod 2
Prod 1
(Lane 2)
30000
20000
10000
0
8:00 pm
Sep 9
4:00 am
8:00 am
12:00 pm
4:00 pm
8:00 pm
Sep 10
4:00 am
8:00 am
12:00 pm
4:00 pm
8:00 pm
Sep 11
4:00 am
8:00 am
12:00 pm
4:00 pm
9/8/2022 6:14 PM EDT
2.9 days
9/11/2022 4:53 PM EDT
Jul 11
Jul 25
Aug 8
Aug 22
Sep 5
Sep 19
Oct 3
Oct 17
Oct 31
Nov 14
Nov 28
Dec 12
Dec 26
Jan 9
Jan 23
Feb 6
Feb 20
Mar 6
7/6/2022
8 months
3/6/2023

Capsule Setup

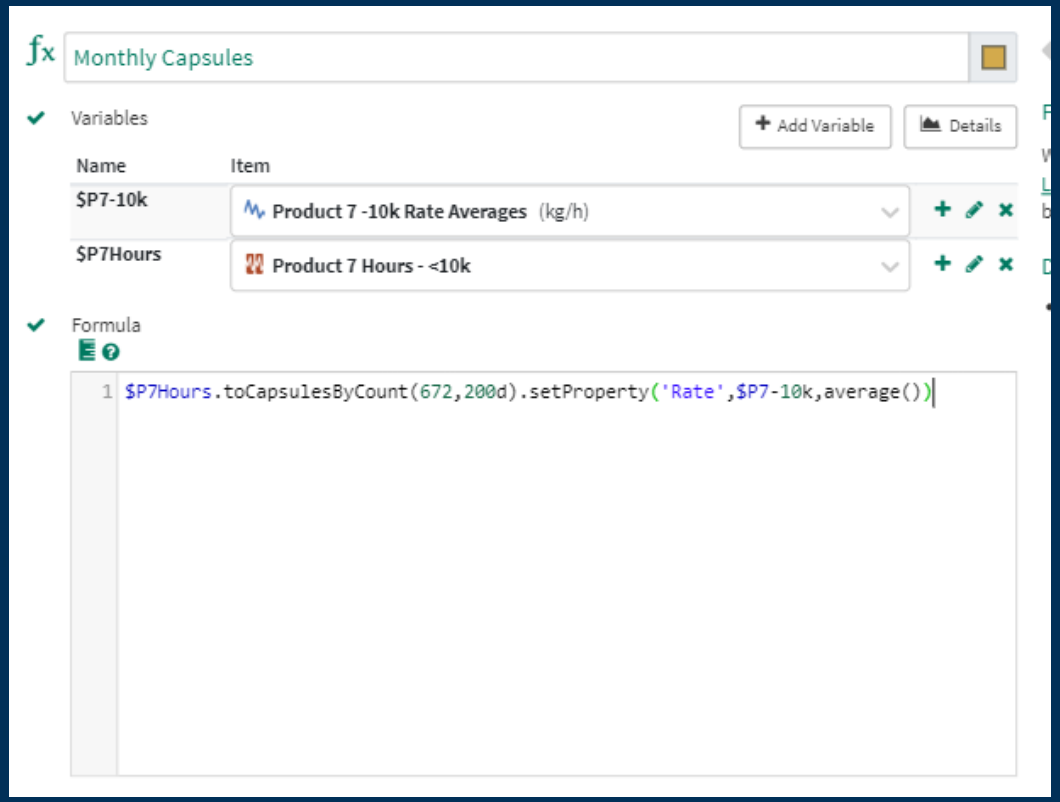
- Start with Hourly Capsules
- Establish the time period for analysis
- Select your first product
- Check if there is 28 Days in the analysis period



Hours and Averages for Product



Continuous Capsules



	Rate
Mar 3, 2022 2:00 AM - Apr 27, 2022 9:00 PM	20266
Mar 3, 2022 1:00 AM - Apr 27, 2022 8:00 PM	20242
Mar 2, 2022 4:00 PM - Apr 27, 2022 7:00 PM	20233
Mar 2, 2022 3:00 PM - Apr 27, 2022 6:00 PM	20223
Mar 2, 2022 2:00 PM - Apr 27, 2022 5:00 PM	20214
Mar 2, 2022 1:00 PM - Apr 27, 2022 3:00 PM	20205
Mar 2, 2022 12:00 PM - Apr 27, 2022 2:00 PM	20195
Mar 2, 2022 11:00 AM - Apr 27, 2022 1:00 PM	20186
Mar 2, 2022 10:00 AM - Apr 27, 2022 12:00 PM	20178
Mar 2, 2022 9:00 AM - Apr 27, 2022 11:00 AM	20169
Mar 2, 2022 8:00 AM - Apr 27, 2022 10:00 AM	20161
Mar 2, 2022 5:00 AM - Apr 26, 2022 8:00 AM	20156
Mar 2, 2022 7:00 AM - Apr 26, 2022 10:00 AM	20154
Mar 2, 2022 4:00 AM - Apr 26, 2022 7:00 AM	20153
Mar 2, 2022 6:00 AM - Apr 26, 2022 9:00 AM	20151
Mar 2, 2022 3:00 AM - Apr 26, 2022 6:00 AM	20142
Mar 2, 2022 2:00 AM - Apr 26, 2022 5:00 AM	20131

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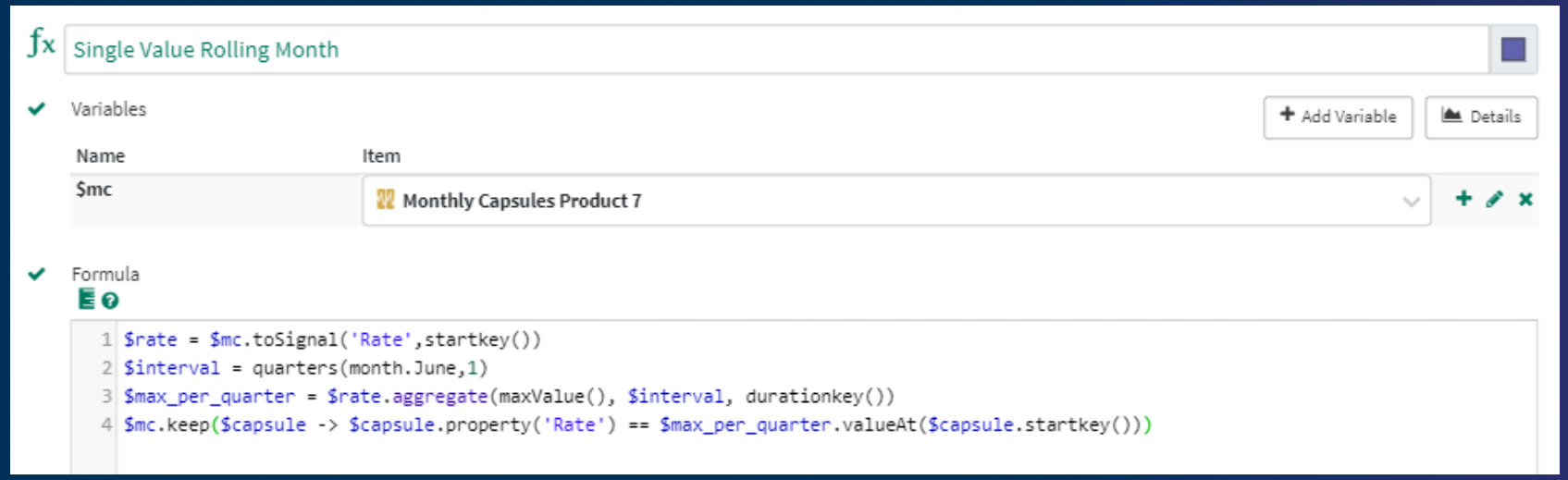
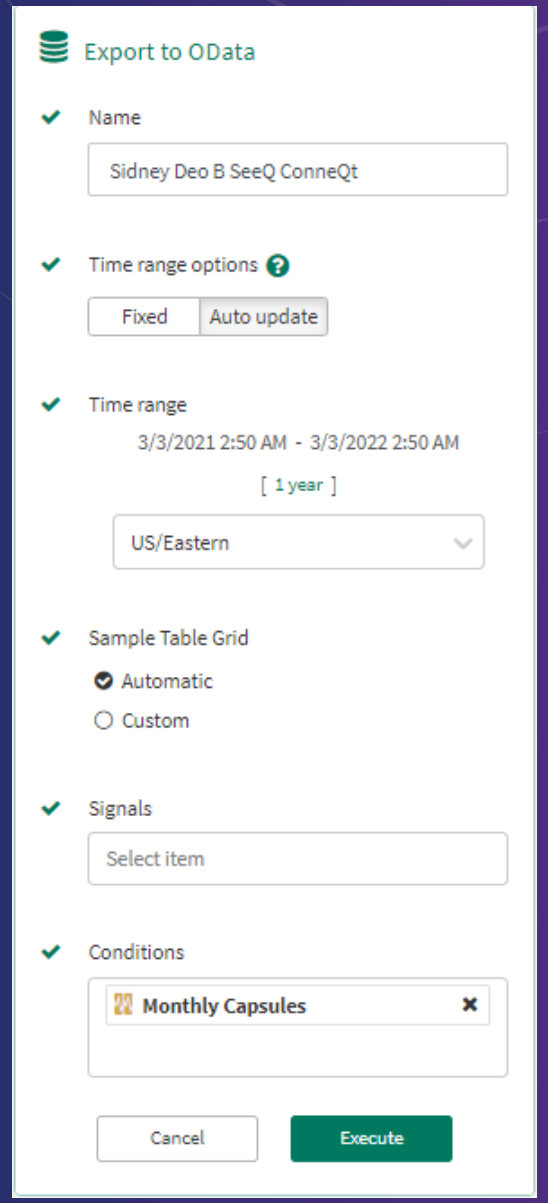
Simplifying Capsules

Two ways to do this

- Formula
- Odata Export





Target Audience

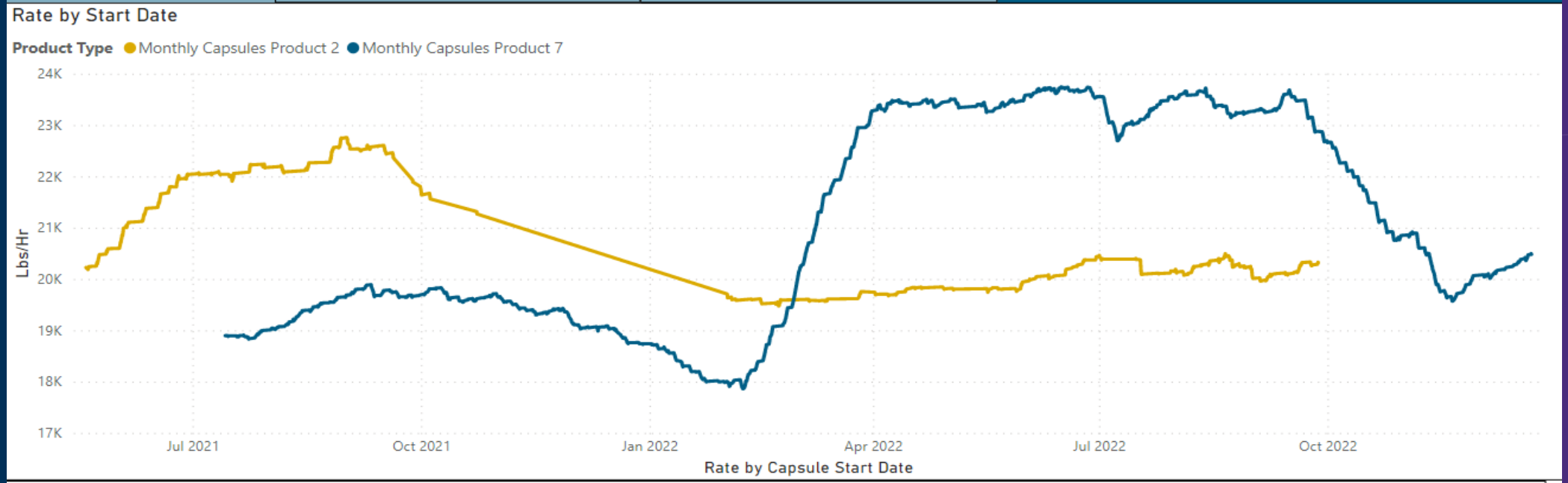
- Continuous Improvement Group
- Supervisors
- Plant Managers

Results

Best Run Rate

Product Type: All

5/19/2021 – 12/22/2022



Capsule Details

Capsule Start	Capsule End	Capsule Duration	Rate for 28 Day Period	Product Type
5/19/2021 3:00:00 AM	9/12/2021 8:00:00 PM	2801:00:00	20,224.90	Monthly Capsules Product 2
5/19/2021 4:00:00 AM	9/12/2021 9:00:00 PM	2801:00:00	20,222.41	Monthly Capsules Product 2
5/19/2021 5:00:00 AM	9/12/2021 10:00:00 PM	2801:00:00	20,219.92	Monthly Capsules Product 2
5/19/2021 6:00:00 AM	9/12/2021 11:00:00 PM	2801:00:00	20,217.45	Monthly Capsules Product 2
5/19/2021 7:00:00 AM	9/13/2021 12:00:00 AM	2801:00:00	20,214.98	Monthly Capsules Product 2
5/19/2021 8:00:00 AM	9/13/2021 1:00:00 AM	2801:00:00	20,212.52	Monthly Capsules Product 2
5/19/2021 9:00:00 AM	9/13/2021 2:00:00 AM	2801:00:00	20,210.07	Monthly Capsules Product 2
5/19/2021 10:00:00 AM	9/13/2021 3:00:00 AM	2801:00:00	20,207.63	Monthly Capsules Product 2

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Thank you