

A SMARTER WAY TO FORECAST:

Advanced Seasonality

Michael Polutta, Product Manager

Dario Aguero, Senior Director, Customer Success

Blue Ridge



BLUEPRINT 2019
PLANNING FOR A FLEXIBLE FUTURE

WHAT MAKES A GOOD FORECAST?

- Accuracy
 - If the forecast is wrong, it hurts
- Responsiveness
 - Responding appropriately to changing demand

WHAT MAKES A GOOD FORECAST DIFFICULT TO ACHIEVE?

- Responsive, but not too responsive
 - Some changes in demand are lasting
 - Some changes in demand are events that do not repeat
- Too Responsive?
 - You'll either be overbuying or risking service

WHAT ARE THE CURRENT CHALLENGES?

- Creating profiles is subjective and time consuming
- No standard way to train buyers to identify seasonal items (other than looking at the charts)
- Generic profiles are not precise
- There is no easy way to identify items that are no longer seasonal

SO WHAT CAN YOU DO?

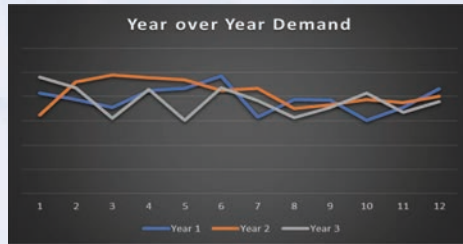
- Trust your intuition
 - Uh, good luck with that
- Design the system to find and adapt to patterns

TAKING ADVANTAGE OF PATTERNS

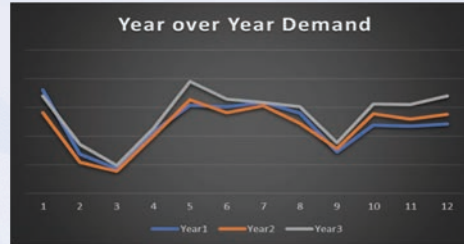


ITEMS HAVE DIFFERENT SELLING PATTERNS

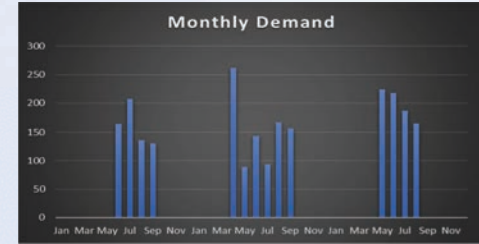
CONTINUOUS



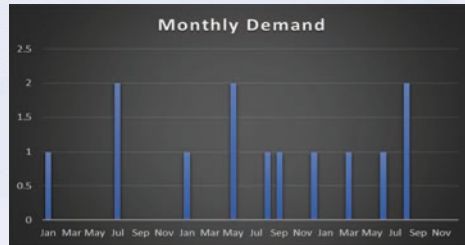
CONTINUOUS REPETITIVE



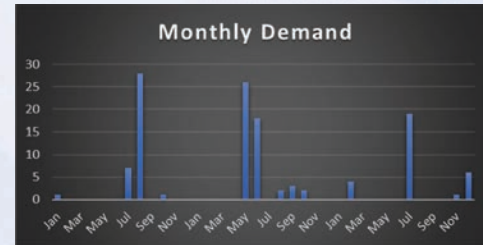
SEASONAL SELLING



INTERMITTENT



LUMPY



WHICH HAVE A PATTERN?

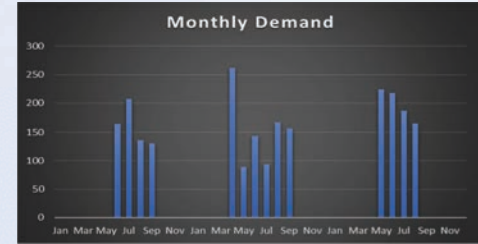
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CONTINUOUS REPETITIVE



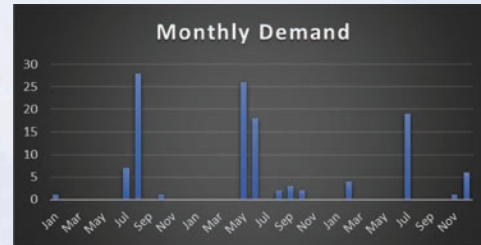
SEASONAL SELLING



INTERMITTENT

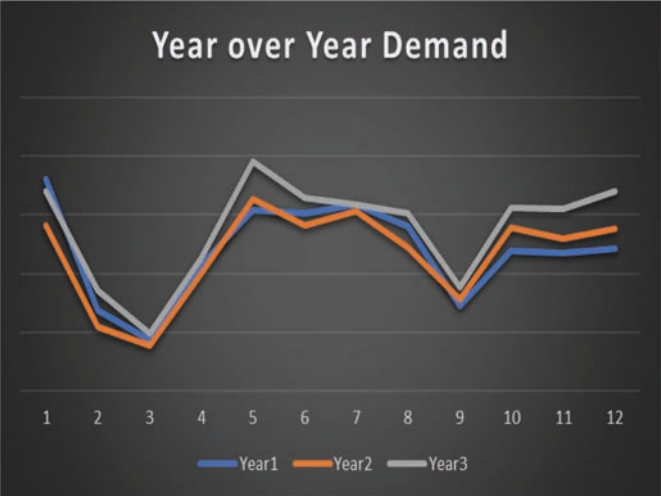


LUMPY

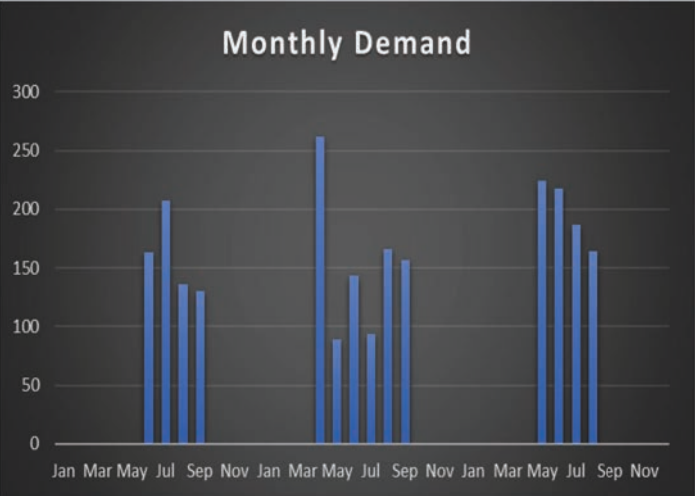


THESE TWO DO

CONTINUOUS REPETITIVE

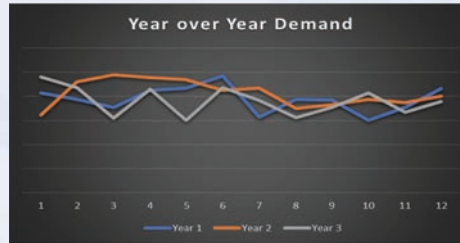


SEASONAL SELLING

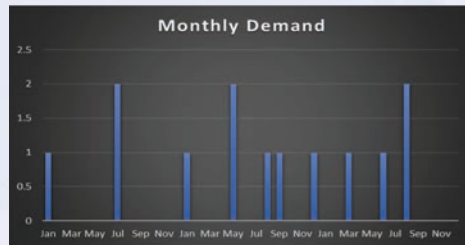


CAN WE DO ANYTHING FOR THE OTHERS?

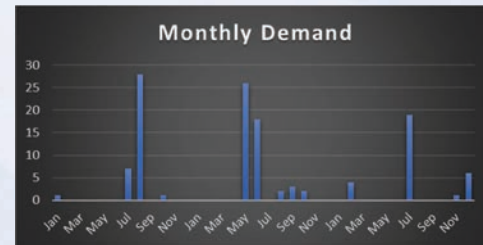
CONTINUOUS



INTERMITTENT

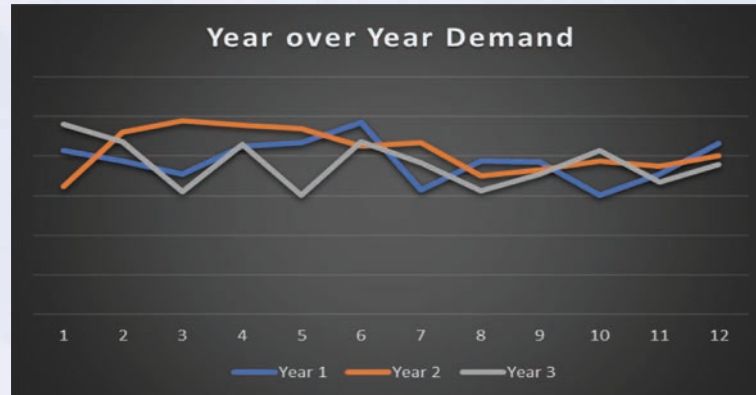


LUMPY



THIS ONE HAS NO PATTERN

CONTINUOUS

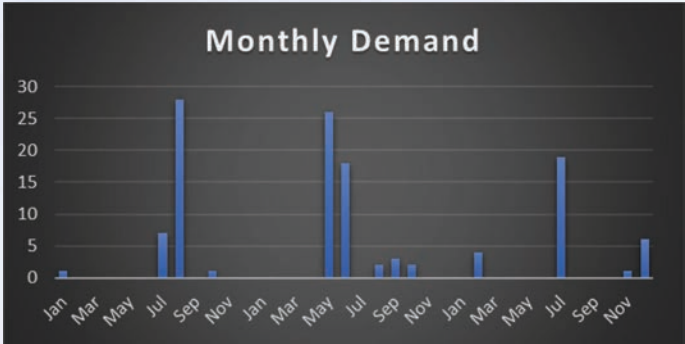


THERE IS A SIMILARITY HERE

INTERMITTENT

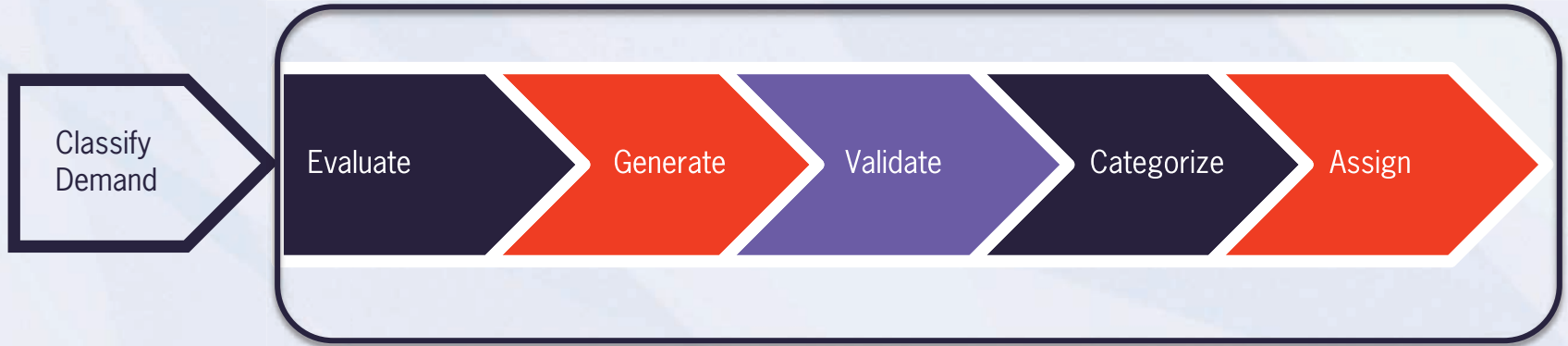


LUMPY



A SOLUTION IS AVAILABLE NOW

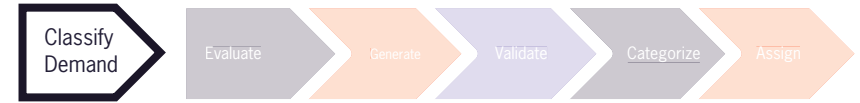
SEASONAL PROFILE



Demand Classification and Seasonal Identification

CLASSIFY DEMAND

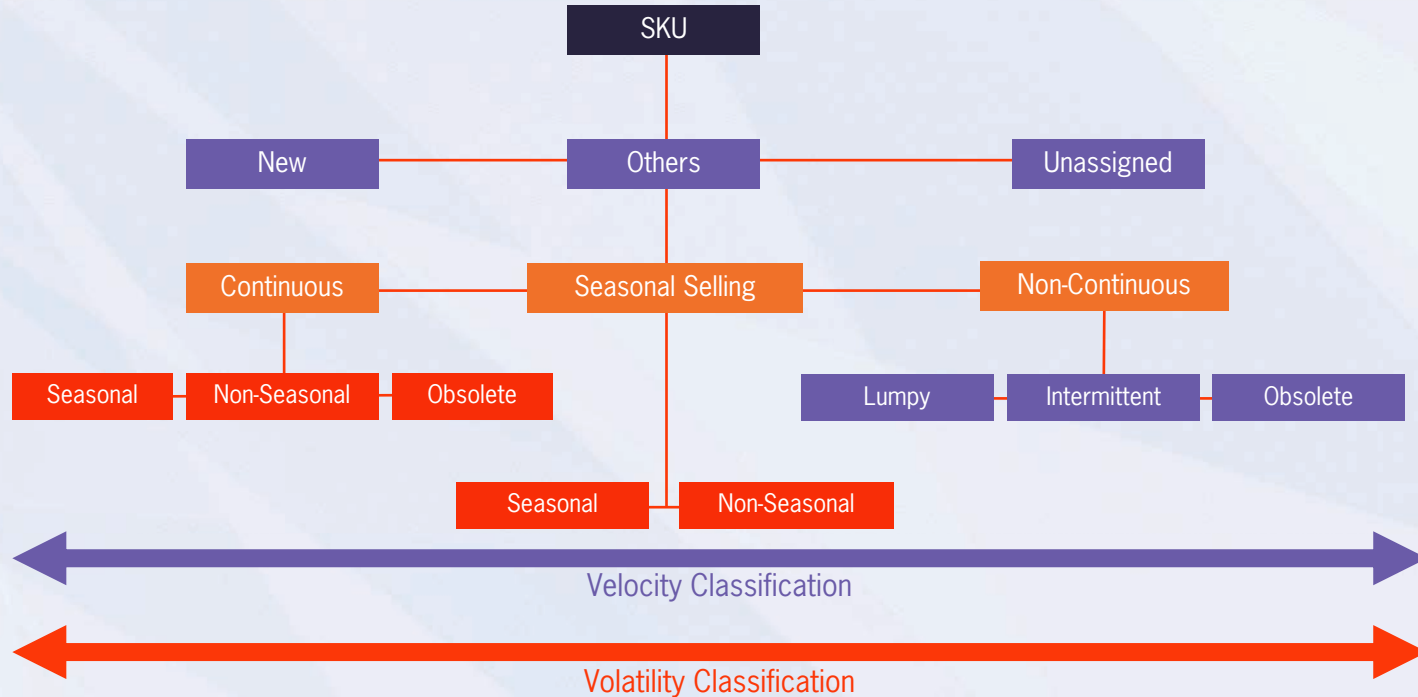
SEASONAL PROFILE



Classify based on their demand

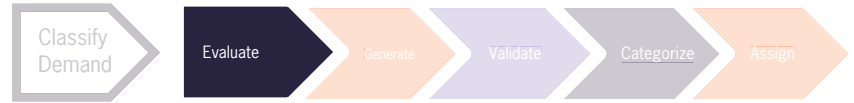
- (History) characteristics
- Product Life cycle
- Sparsity
- Volatility
- Velocity

CLASSIFY DEMAND



EVALUATE

SEASONAL PROFILE



Pattern Match Score:
92%

- Year over year pattern match
- Adjusts to account for calendar flips

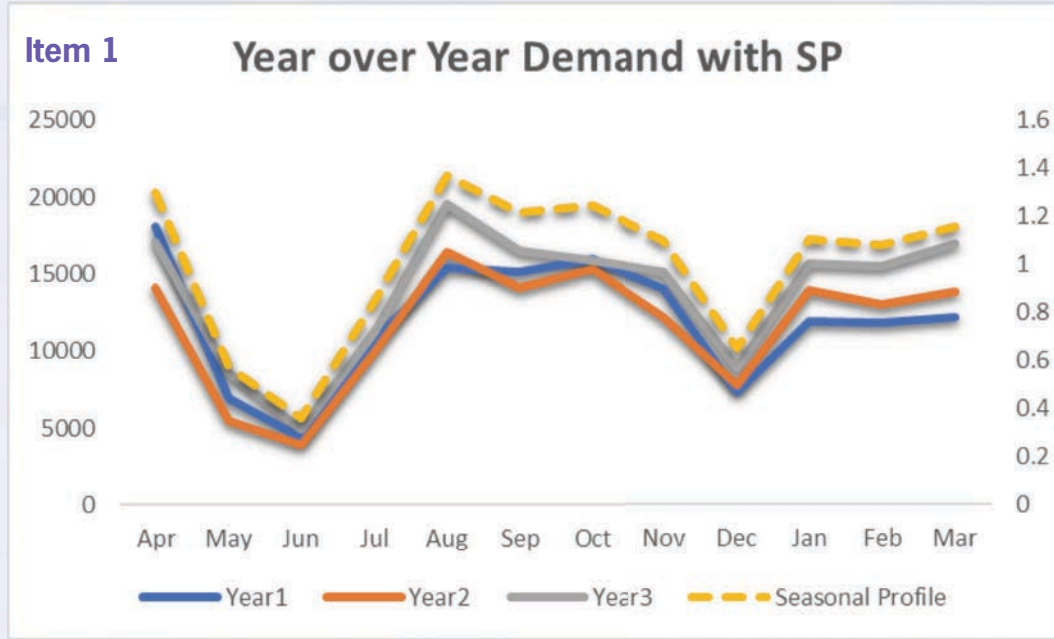


Pattern Match Score:
21%

- Establishes repeatability through pattern recognition algorithms

GENERATE

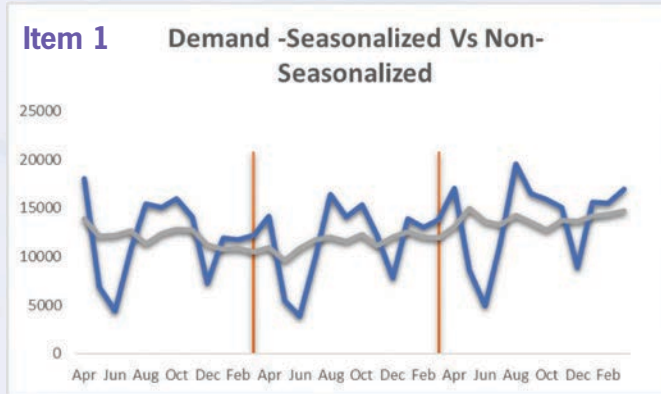
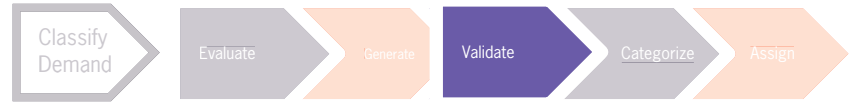
SEASONAL PROFILE



- Pattern blending
- Year over year importance automatically incorporated
- Seasonal significance measured and the profile automatically adjusted

VALIDATE

SEASONAL PROFILE



Seasonal Value Add:
65%

- Back test the seasonal profile
 - Validate before accepting to improve confidence in the profile
- Seasonal Value Add (SVA)
 - Measure of value add to forecast
 - The higher the value, the higher the expected forecast accuracy

ADVANCED SEASONALITY LIST

Blue Ridge - Clarity Replishm: x

dev.brinv.com/2017.1/AdvancedSeasonalityList.aspx

Apps BR.2017.1 BR.IRA Product Strategy BR Demo env Current Roadmap

User: bphibrick System Name: Nicholas Test System Date: 9/13/2018 - Logout

BLUE RIDGE

Dashboard Daily Tasks **Advanced tasks** Administrative Reports Help

Advanced Seasonality Custom Views Event Planning Export Library Forward Buying Kitting Mass Maintenance Profiles Projections Supply Planning

Advanced Seasonality List [+ Add Advanced Seasonality](#)

No Filters Selected

ID	Description	Status	Created	Scheduled	User Name	Last Run
3	rupesh - dev error while saving	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
5	Nikhil_Test_46	[Completed]	9/26/2018		Philbrick, Brock	10/1/2018
6	hamant test	[Error]	9/26/2018		Philbrick, Brock	9/26/2018
12	NT1	[InProgress]	9/26/2018		Philbrick, Brock	9/26/2018
13	NT2	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
22	Dev test 9/26/2018 - 3:01 PM	[InProgress]	9/26/2018		Philbrick, Brock	9/26/2018
24	Devtest 3:20 PM 9/26/2018	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
28	NT3	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
31	big data rupesh	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
32	hamant_test1	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
24	NT4	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
35	Dev-test-9:40 PM-9/26/2018	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
26	Dev Test-5:42 PM	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
37	Copy Of NT4	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
38	Copy Of Copy Of NT4	[Error]	9/26/2018		Philbrick, Brock	9/26/2018
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40	Copy Of Copy Of - Copy Of NT4	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
41	Copy Of Copy Of Copy Of - Copy Of NT4	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
42	Copy Of Copy Of Copy Of Copy Of - Copy Of NT4	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
43	Copy Of Copy Of Copy Of Copy Of Copy Of - Copy Of NT4	[Error]	9/26/2018		Philbrick, Brock	9/26/2018
44	check huge data save rupesh	[Simulated]	9/26/2018		Philbrick, Brock	9/26/2018
45	NT3	[Error]	9/26/2018		Philbrick, Brock	9/26/2018
46	Copy Of Copy Of Copy Of Copy Of Copy Of - Copy Of NT4	[InProgress]	9/26/2018		Philbrick, Brock	9/26/2018

Page 1 of 1 100 items per page 1 - 92 of 92 items

ADVANCED SEASONALITY

The screenshot shows a web browser window with the following details:

- Browser:** Chrome, address bar shows `dev.brinv.com/2017-1/DCSP.aspx`.
- Page Header:** BLUE RIDGE logo and navigation tabs: Dashboard, Daily Tasks, **Advanced Tasks**, Administrative, Reports, Help. User info: `Users: bphlbrick System Name: Nicholas Test System Date: 9/13/2018 - [Logout]`.
- Page Title:** Advanced Seasonality Manager.
- Form Fields:**
 - Description:
 - Run Schedule: Immediate Scheduled Last Run Date:
 - Automatically Assign Profiles: All, Strong, High, Medium, Low
 - Minimum Seasonal Match Threshold %: Use Global
 - Minimum Seasonal Value Add Threshold %: Use Global
- Buttons:** Cancel, Submit.
- Footer:** [0 results]

ADVANCED SEASONALITY

Description:

Run Schedule: Immediate Scheduled

Last Run Date:

ADVANCED SEASONALITY



[0 results]



[17864 results]

▼ ▼ ▼

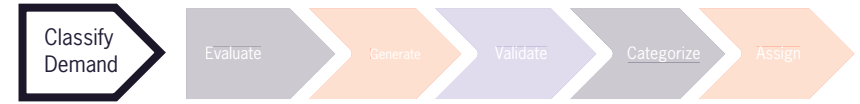
AND

ADVANCED SEASONALITY

Minimum Seasonal Match Threshold % Use Global

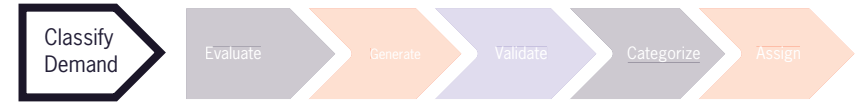
Minimum Seasonal Value Add Threshold % Use Global

CLASSIFY DEMAND



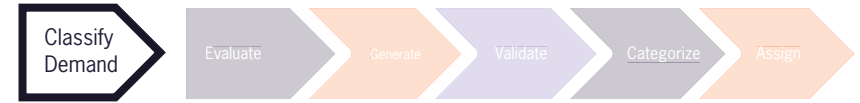
- **Seasonal match score** is a «strength of pattern» measurement that takes year over year repeatability into account. Higher values mean higher pattern consistency.
- **Seasonal match threshold** is the minimum required value to proceed further with profile generation.

CLASSIFY DEMAND



- The **seasonal value add** is a proxy for relative improvement of forecast accuracy vs. no profile. Higher values generally correspond with lower standard deviation (when compared with history).


CLASSIFY DEMAND



- The **strong/high/med/low** is a measure of the relative improvement in forecastability that also considers year-over-year information. This is verified via back-testing the profile against history.
- The **Seasonal Value Add threshold** is the first step in calculating strong/high/medium/low. It must first pass this minimum improvement threshold to be further classified.

ADVANCED SEASONALITY

Items

 No Filters Selected

[Export](#) [Assign Profiles](#) [Remove Existing Profiles](#)

Selected Items	Strong	High	Medium	Low	Non-seasonal	Not evaluated					
<input checked="" type="checkbox"/>	Item ID	Description	Location	Supplier ID	Supplier Name	Ship Point	Seasonal Value Add	Seasonal Match Score	Profile Name	Profile Source	
<input checked="" type="checkbox"/>	00611293	[REDACTED]	01	0026150	[REDACTED]	Default	38 %	85 %	00611293-01 - AS -10/1/2018	System	
<input checked="" type="checkbox"/>	00653609	[REDACTED]	01	0026150	[REDACTED]	Default	19 %	73 %	00653609-01 - AS -10/1/2018	System	
<input checked="" type="checkbox"/>	00896050	[REDACTED]	01	0014765	[REDACTED]	Default	28 %	76 %	00896050-01 - AS -10/1/2018	System	
<input checked="" type="checkbox"/>	00591082	[REDACTED]	01	0025179	[REDACTED]	Default	39 %	74 %	00591082-01 - AS -10/1/2018	System	

ev.brinv.com/2017.1/DCSP.aspx?asid=55&statusId=3#

ADVANCED SEASONALITY

Automatically Assign Profiles All

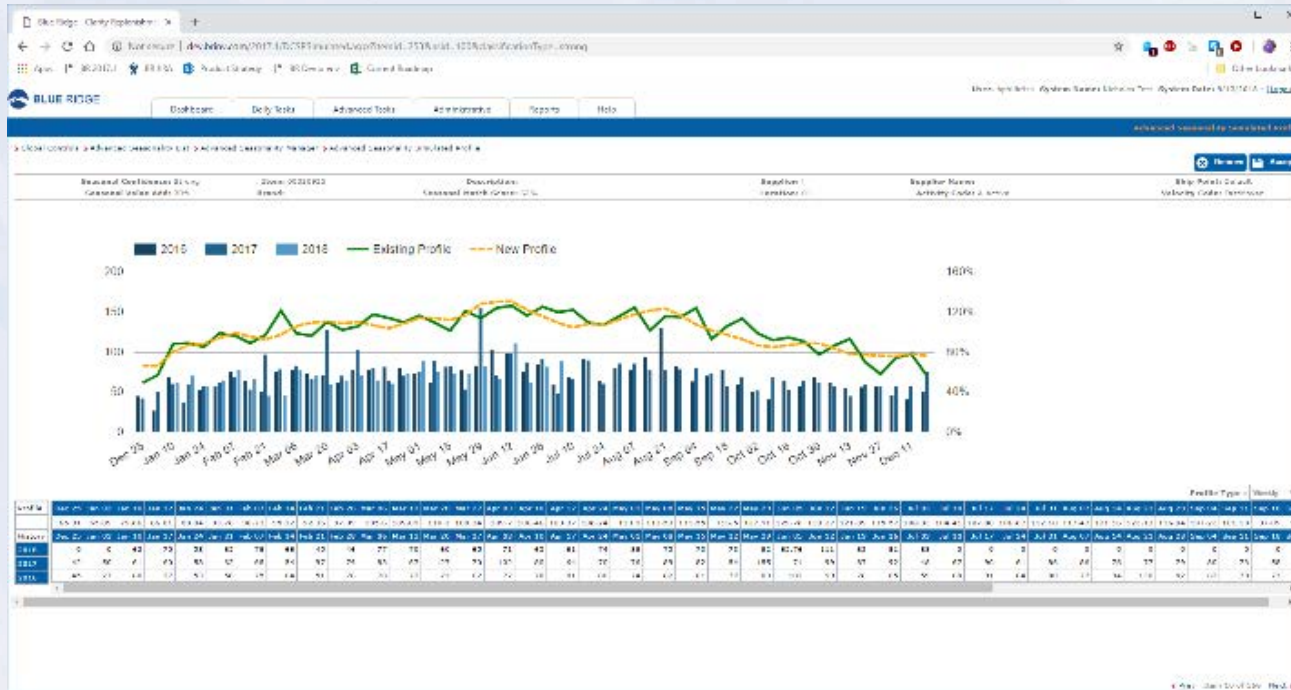
Strong

High

Medium

Low

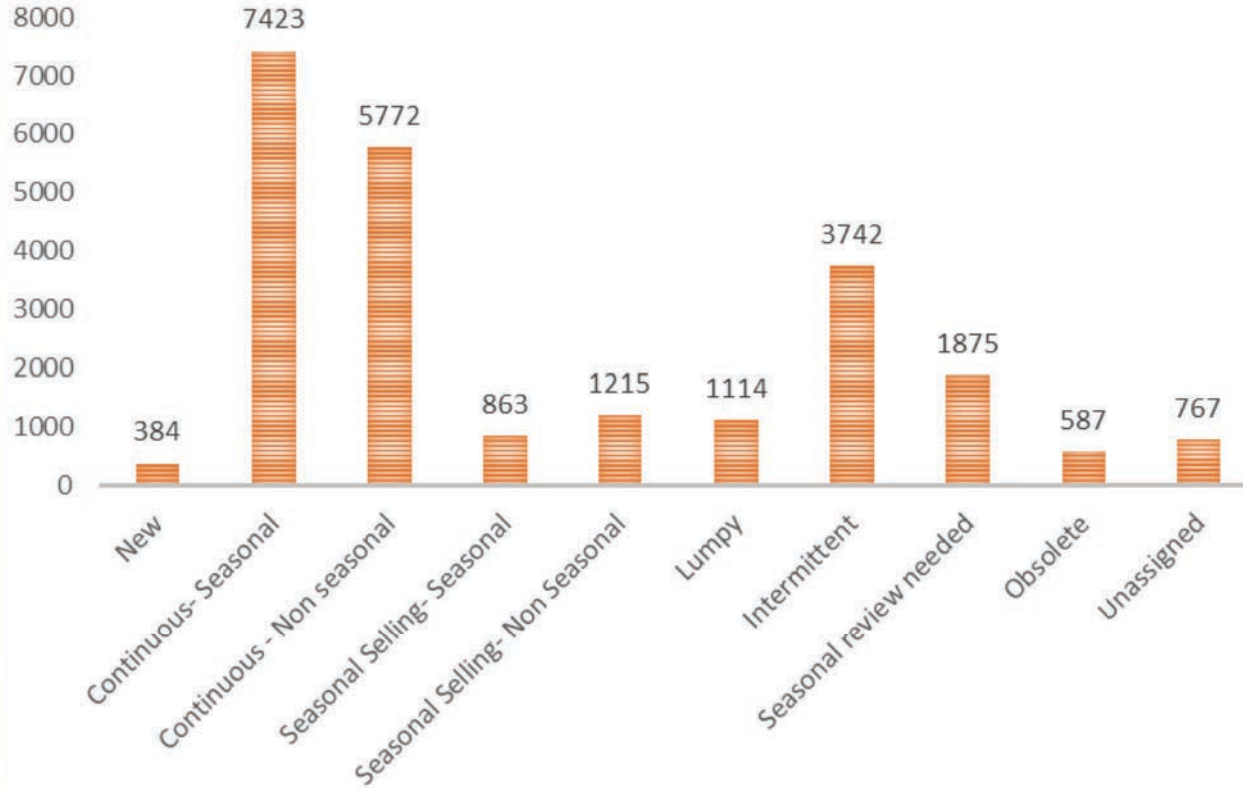
EXISTING AND PROPOSED PROFILES



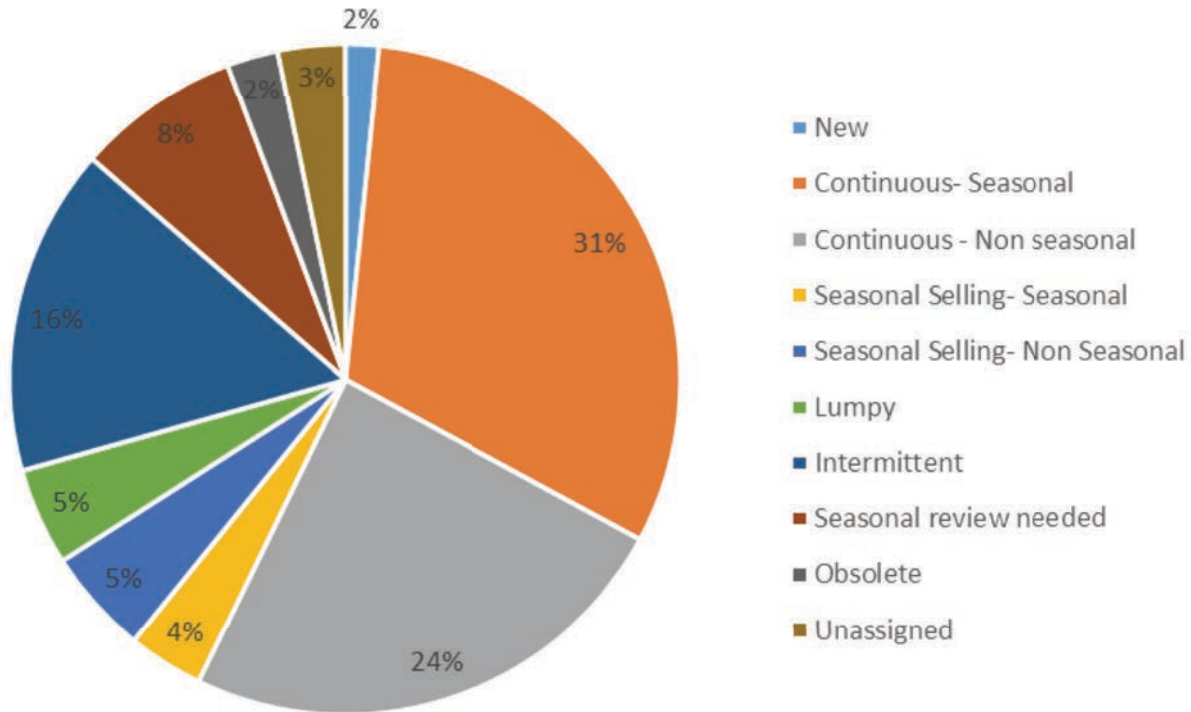
ADVANCED SEASONALITY

<u>Selected Items</u>	<u>Strong</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Non-seasonal</u>	<u>Not evaluated</u>
No items qualify for a seasonal profile.						

CLASSIFICATION DISTRIBUTION

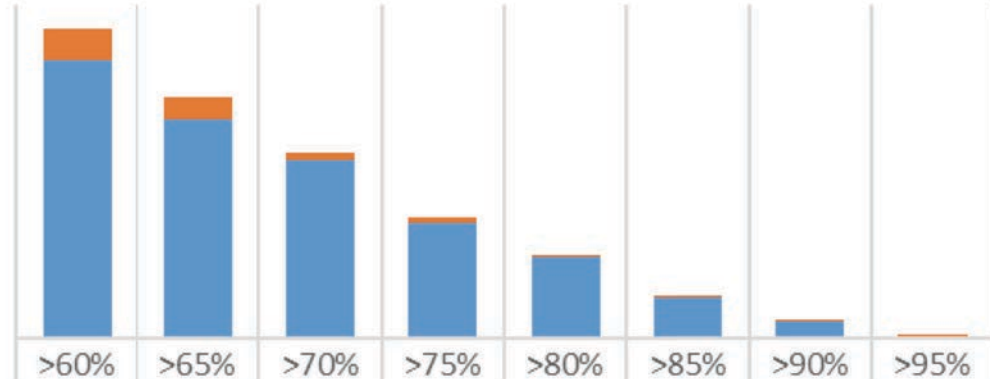


Classification Distribution



SEASONAL PROFILE REVIEW

■ Profiles assigned
 ■ Profiles needs review



■ Profiles needs review	981	636	224	189	64	24	14	2
■ Profiles assigned	8339	6591	5349	3437	2437	1237	537	84

PATTERN MATCH

VALUE PROPOSITION

CONFIDENCE

- Evaluating if a profile is a good fit
- Evaluating whether a profile is a help or a hindrance
- Metrics driven by pattern recognition

SPEED

- Auto-assign (based on configuration)
- Auto-run (based on schedule)
- Categorized seasonal strength analytics

IMPROVED PLANNING

- Improved Forecast Accuracy
- Reduced Safety Stock
- Reduced Forecast Exceptions
- Aligned Inventory