Introduction

Vantage™ Overview

- Vantage™ is a global natural chemistry company that creates, produces and sources high-end and tailored specialty chemicals and ingredients incorporated into everyday products that nourish, care, sustain and enhance performance
- Vantage™ serves multiple key markets from four business units including: Oleochemicals, Performance Materials, Personal Care and Food

Christopher Tracy

- 25 years in progressive Finance and Operations roles; 3½ years at Vantage™ as the Director of FP&A
- My enjoyment comes from building FP&A teams with people that are focused, dedicated and have a humble service spirit
- I focus on using technology to improve manual work; provides the balance to be proactive with analysis and help the company drive forward using actionable data

Raw Material to Finished Goods Project

Understanding the Need

Execution – Model Demo

Next steps

Understanding the Need – Raw Material to Finished Goods

Transitioning from reactive processes to proactive processes

Reactive

Proactive

Raw Material to Finished Good Model

Applies future raw material trends to each individual product we manufacture and sell for more agile product management process

Financial Statistics on Vantage™

- Total Raw Material Spend in 2021 - <u>$613M or 72%</u> of Total Spend

- Total Number of Raw Materials used in 2021 – <u>1,300+</u>

- Total Number of BOM's (Bill of Materials) Associated with Sales in 2021 – <u>14,000+</u>

- Total Number of Customers with Sales in 2021 – <u>3,600+</u>

- <u>11</u> different ERP systems with <u>20+</u> different instances (each entity acting independently from a systems perspective)

- Operations around the world, with sales into <u>95</u> countries in 2021

How it Started – The Market

Raw Material to Finished Goods - Understanding the Need

Unpredictable Market

- Some of Vantage's top raw materials more than **DOUBLED** in the matter of months

Ripple Effect

- Raw materials picture represent **MILLIONS** of dollars of raw material spend – even small increases have a ripple effect across the business

Playing Catch-Up

- Our businesses were only able to see the true impact of raw material increases after it hit the bottom line
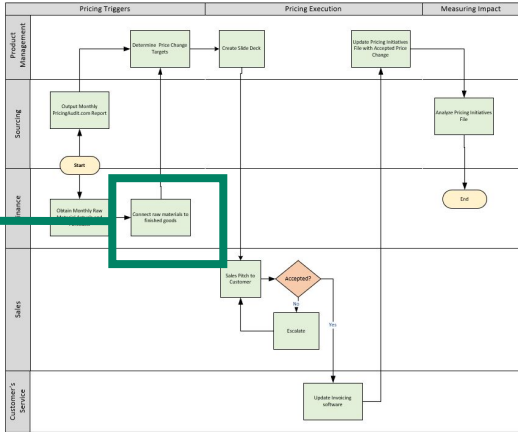

Vantage's Top Raw Materials - 2021

Aug,1.008237185

Jan,0.491232649

RM 1
RM 2
RM 3
RM 4
RM 5
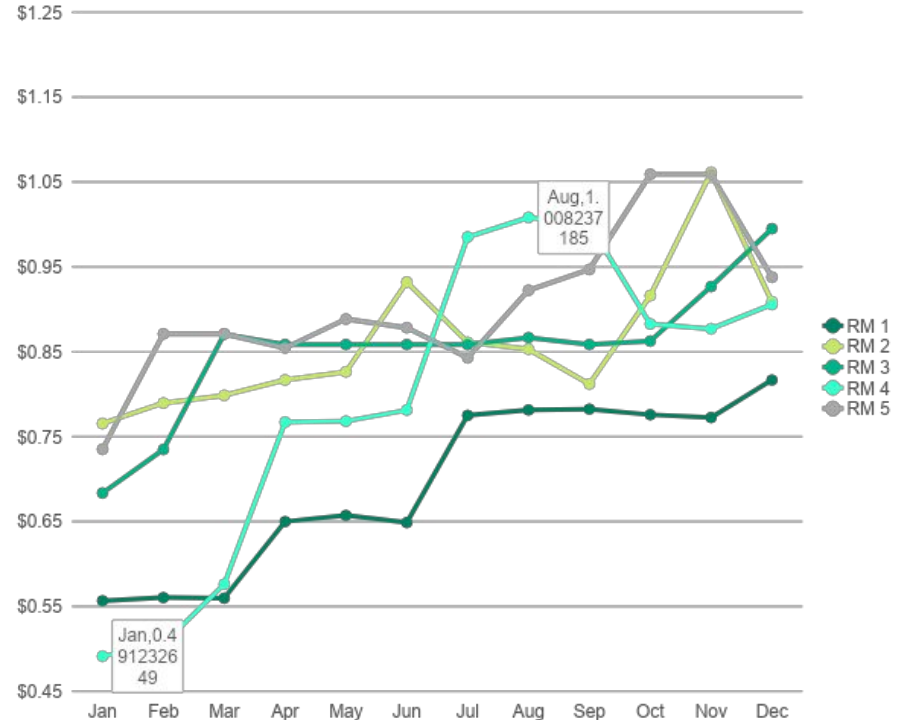
How it started – Within Vantage™

Raw Material to Finished Goods - Understanding the Need

Through the pricing process mapping activity, lack of understanding of raw material impact on finished goods was indicated as a gap across the organization

Pricing Excellence

Through the strategic plan model development, a major gap in the model was receiving meaningful inputs for direct cost information

Strategic Planning

Oleochemicals (3000)	2022	2023	2024	2025	2026
	Change in Direct Costs / lb				
Direct Costs					
Stearic	1.50%	1.50%	1.40%	1.40%	1.40%
Oleic	1.50%	1.50%	1.40%	1.40%	1.40%
Glycerin (tallow)	1.50%	1.50%	1.40%	1.40%	1.40%
Glycerin (veg)	1.50%	1.50%	1.40%	1.40%	1.40%
CNFA	1.50%	1.50%	1.40%	1.40%	1.40%
DFA	1.50%	1.50%	1.40%	1.40%	1.40%
Residues/Other	1.50%	1.50%	1.40%	1.40%	1.40%
Split	1.50%	1.50%	1.40%	1.40%	1.40%
Non-Manuf Fatty Acids	1.50%	1.50%	1.40%	1.40%	1.40%

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Migrating Cost Data from Current Process

Actual Cost Data Manually Tracked by Business Unit

Monthly Sourcing Files

Forecasting Future Cost was Manual Process in Excel

Raw Material Cost Indexes

- Needed a central place to manage all 14,000+ bill of materials for Vantage™, since these are currently tracked either manual or in separate systems

- One central data point to manage both historical and future raw material costs per unit; this would essentially be input for the RM to FG model

- Model creates connection between RM input and FG costs, especially given that many FG use several RM each and have different ratios depending on the recipe's

Model Basics – Two Inputs and One Output

Input

Each raw material's cost per UOM (actuals and forecasts)

RM Cost

Input

Each finished good's bill of materials

BOM

Output

Each finished cost per UOM (actuals and forecasts)
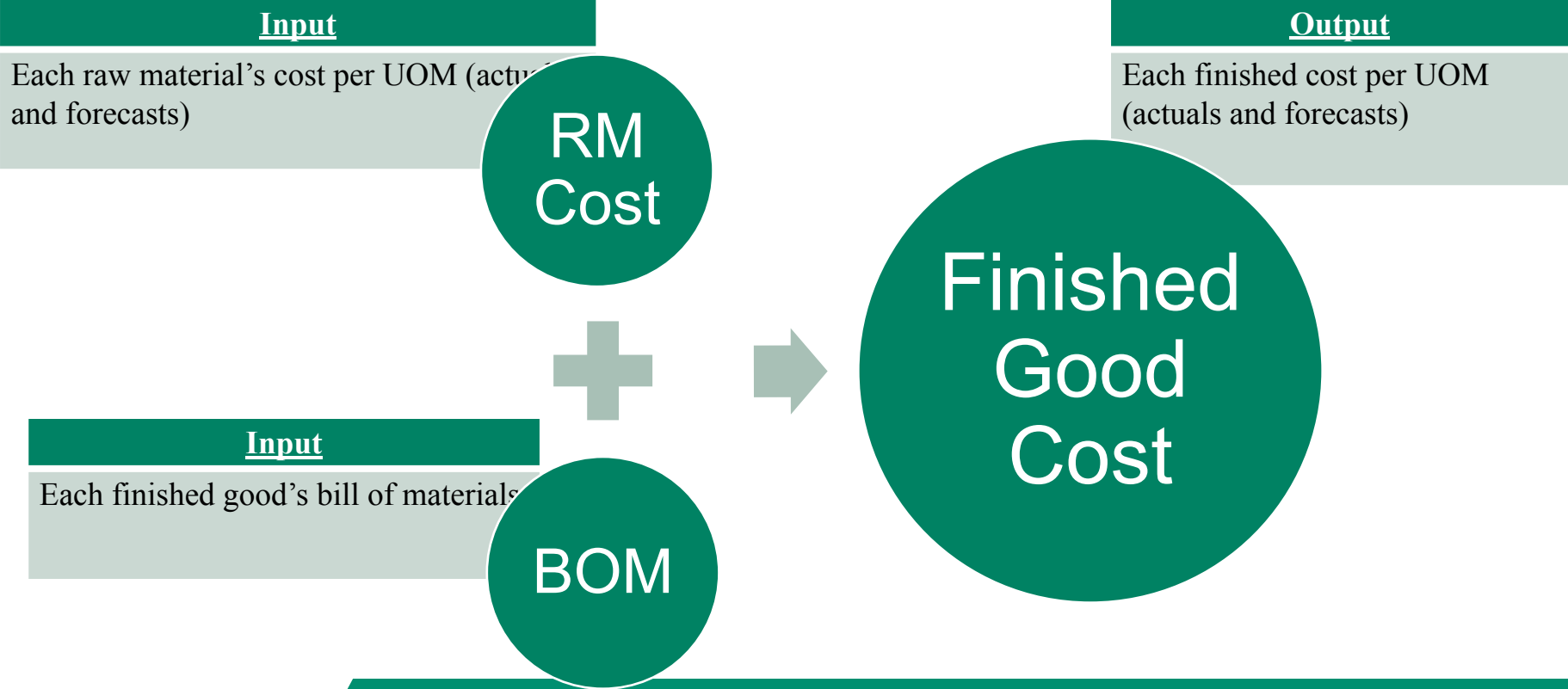
Finished Good Cost

Model Basics – Connects RM Cost to FG Price

Question: If RM 2 oil prices escalated from $0.49 per lb. to $1.01 per lb., what does this mean for our finished good costs?

What is going to happen for the rest of the year?

Aug, $1.01

Jan, $0.49

$1.10
$1.00
$0.90
$0.80
$0.70
$0.60
$0.50
$0.40

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

RM 1   RM 2   RM 3   RM 5
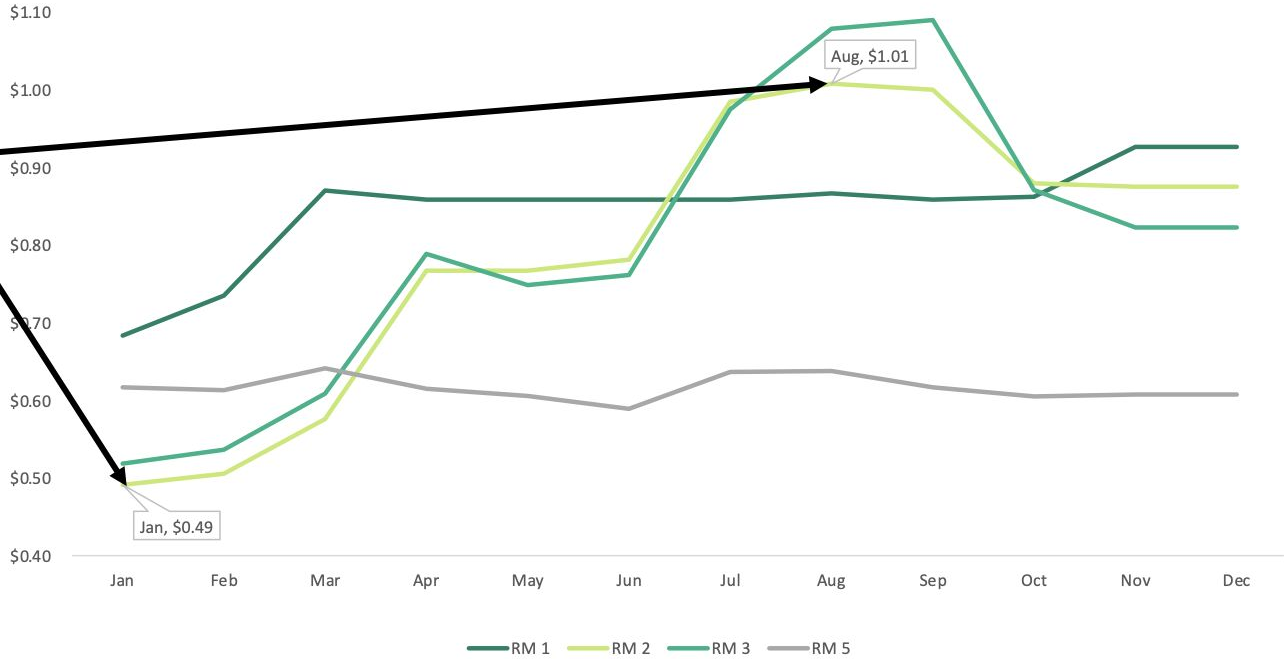
Model Input in Excel – forecasted raw materials

Business Unit

Previous month actuals published based on receipts

3010 - Vantage Specialties, Inc. Default																	
Raw Material Code and Name	UOM	Top RM Flag	Actual PY Jan	Actual PY Feb	Actual PY Mar	Actual PY Apr	Actual PY May	Actual PY Jun	Actual PY Jul	Actual PY Aug	Actual PY Sep	Actual PY Oct	Actual PY Nov	Base Case PY Dec	Base Case CY Jan	Base Case CY Feb	Base Case CY Mar
50000103 - DIETHYLENE GLYCOL, lb	LB	1	0.270	0.343	0.343	0.453	0.498	0.532	0.557	0.584	0.592	0.617	0.672	0.597	0.640	0.640	0.640
5000	LB		0.470	0.470	0.470	0.470	0.470	0.470	0.470	0.720	0.720	0.975	0.975	0.770	0.770	0.770	0.770
5000 b. M	LB	1															13.520
5000 081-l	LB																3.080
5000 ilwe	LB																14.790
5000 L-76	LB																7.450
5000 50 cs	LB																2.670
5000	LB																0.900
5000	LB	1															1.180
5000 D OI	LB																4.030
5000	LB																5.003
5000 188	LB																2.679
5000 gin	LB	1															1.950
5000 128	LB																13.68
5000	LB																1.290
5000 k 64	LB																1.751
5000 b Mc	LB																3.050
5000 tock	LB																4.700
5000 Mobi	LB																6.787
5000 Mobi	LB																0.698
5000	LB																2.244
5000	LB	1															1.070
5000	LB	1															0.728
50000142 – ACIDULATED SOYA SOAPSTOCK, lb	LB		1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120	1.120
50000143 - XOM ETHANOX 4701, lb. Mobil Stock	LB		2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650	2.650

1 = Top 80% of Raw Material Spend

Raw Material Name and Code

Ability to input forecasted cost for outgoing months

Vantage

Model Output in Excel – forecasted FG cost per UOM

Filter by BU, and Product Grouping

3213 - Mallet and Company, Inc. - Ingredients	--> Select "Company Main" to see data for all Companies; to save data select a leaf level Company												
FG Cost/UOM	--> Select "RM Cost" or "RM Cost/UOM"												
Release Agents	--> Select "Product Group" to see data for all Product Groups; to save data select a leaf level Product Group												
LB	--> Select "LB" or "EA"												

Product Code - Product Name	RM Code - RM Name	Actual Jan	Actual Feb	Actual Mar	Actual Apr	Actual May	Actual Jun	Actual Jul	Actual Aug	Actual Sep	Actual Oct	Actual Nov	Base Case Dec
FG331-34 - Vegalube 40, 55 GL Bung SD w/TP Seals	8 VL – Soybean Oil	0.29	0.30	0.34	0.46	0.46	0.47	0.59	0.60	0.60	0.52	0.52	0.52
FG													0
FG													1
FG													0
FG													0
Product Total:		0.52	0.53	0.57	0.72	0.72	0.72	0.89	0.91	0.91	0.83	0.83	0.83

Finished Good Name and Product Code

Raw Material Name and Code

Demonstrates how the total cost of the finished good changes based on the raw material components

Model allows for filtering by – Company, Business Unit, Raw Material and Product Grouping

How Vantage™ Wins with this Model

- Ability to impact price prior to raw material changes

- Improved conversations with customers; can demonstrate details of model and show customers the impact of future raw material changes

- Impact on revenue and cost forecasting for the business; more accurate forecasting improves procurement efficiency

Some Early Feedback

- "The model has created better collaboration between procurement, product management and commercial teams"

- "What used to take hours of excel formula's is now updated almost immediately and more accurate"

- "The RM to FG model has allowed us to pivot from being reactive in nature to a much more proactive view of the business"

Early Feedback: Visibility to Previous Year's Actual Cost Data

- **Ask**: When inputting raw material cost per UOM forecasts, it would be helpful to see the trend from the prior year (2021)
- **Outcome**: Bakerfield adding an additional year to the model showing users trending information

Early Feedback: 'Ranking' Importance of Raw Materials

- **Ask:** Somehow indicate in the model which raw materials the procurement teams should be forecasting/providing inputs and which raw materials should be auto populated
- **Path forward:** Provide a list for each company, each raw material that is within the top 80% of raw material spend
- **Outcome:** Bakerfield to put a "1" next to each raw material that is within this list
  - Unable to sort the data in the cascade report
  - Unable to use conditional formatting in the cascade report

Example: Food BU

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Next Steps with RM to FG Model

Rolling SKU-level forecasts

Scenario Modeling for Future Cost

Integration with Business Intelligence for real-time analysis

RM to FG Model will enable Vantage™ to better Run the Business with several future enhancements

- Expand the SKU level RM forecasts to include customer volumes and prices by products, driving further accuracy in forecasting

- Utilizing additional scenarios for RM forecasting, like Market versus Cost estimates (currently in testing phase)

- Integrating Planful with Business Intelligence (BI) to bring in transaction-level data to help with customer / product forecasts

Future Feedback: Develop an Executive Dashboard

▪ <u>Ask</u>: 1-page dashboard that explains any major fluctuations in raw materials and how that affects our business

Example: Food BU

Trend for Top 5 Raw Materials

Top 5 Raw Materials with the largest MoM Change

Raw Material	RM Cost this Month	RM Cost last Month	Percentage Change
Coconut Oil	$ 0.54	$ 0.60	10.6%
S...			
P...			
M...			
Sunflower Oil	$ 0.52	$ 0.53	2.7%

Top 5 Finished Goods with the largest MoM Change

Raw Material	RM Cost this Month	RM Cost last Month	Percentage Change
Vegetable 40	$ 0.54	$ 0.60	10.6%
E...			
F...			
F...			
Golden canola	$ 0.52	$ 0.53	2.7%

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Questions ?