

Portfolio Optimization

Automating SKU Rationalization to Continuously Improve CPG Product Portfolios





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In today's fast moving CPG marketplace, companies must carry large numbers of product SKUs to anticipate rapidly changing consumer demand. Yet many SKUs do not earn their keep. In fact, in the typical CPG inventory, the lower 40% of SKUs may represent less than 3% of sales volume and even less in profitability.

Identifying and de-commissioning under-performers presents a clear opportunity to reduce capital and other resource costs, but the rationalization task itself is burdensome. It is usually done on a periodic basis by central staff or, as often, by outside consultants. In this paper we propose a new rationalization process that is based on actual sales and profitability and is deployable by people who are directly involved with or very close to customer and the consumer.



Periodic (annual or semi-annual) SKU performance review done by staffers or third parties who are removed from everyday action "on the ground" (though opinions are sought and provided at a high level or through year-to-year or year-to-date summary reports) is the typical strategy for portfolio optimization. This, along with the following challenges, poses difficulty to continuously improving product portfolios.

Proliferation: Portfolio size has tripled, as rapidly changing consumer demand, product segmentation, and line extension put continuing pressure on limited retail space.

Operational Costs: Capital equipment, inventory space, opportunity cost, tied up cash; operational overhead.

Shrinking Margins: Sales margins, both direct, through rising trade spending, and indirect, as the result of marketing and merchandising expended on calling consumer interest to failing products.

Time and Pace: Examination of higher-level SKU data slows the rationalization process, while time elapsed between rationalization cycles increases the volume of data and summarization (for handling's sake) reduces the value of the underlying data. Candidates for decommissioning must go through a lengthy and ponderous change management process, requiring buy-in from stakeholders at many levels. Cycle time for decommissioning increases waste and decreases cash available for other things. In brief, the business of rationalization is out of sync with the pace of the marketplace.

A Better Solution: Continuous, Automated Analysis

We propose here a continuous approach to portfolio optimization that is embedded in the data of CPG's daily sales and inventory management processes. It is based on financial and volume performance as well as specific rules for retention, such as "must carry", "early stage" and others.

Central to the solution is to see productivity as a corporate-wide responsibility, with appropriate means to influence SKU performance in the hands of decision makers at several levels – most importantly, those closest to the trade who are likely to have the best understanding of both retailer and consumer buying behaviors. The choices they make on a daily basis, after all, ultimately show up in that list of better or worse performing SKUs.

The most important step is to change the corporate conception of how information can be used, from "push" method, where information is pre-canned and pushed out to decision makers, to "pull" where the decision maker draws information ad hoc to suit the decision of the moment. New "in-memory" visual analytics technology can deliver information instantly, thus eliminating the time constraint—and therefore the resistance—to incorporating analysis into everyday decision making.

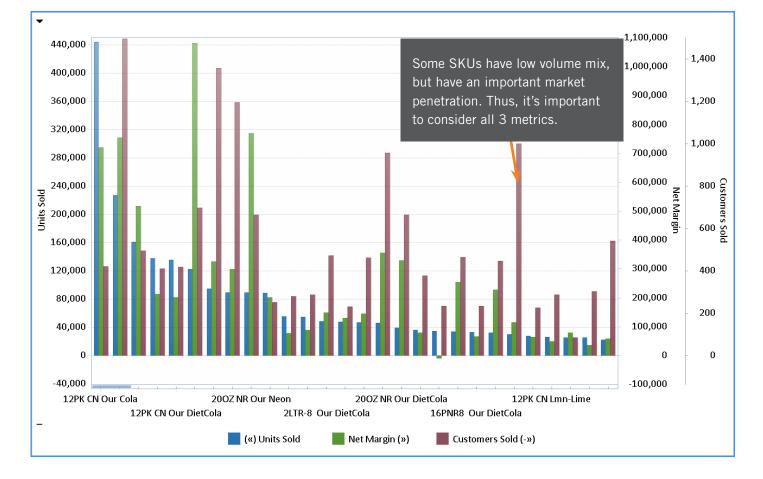
The next pages will present a step-by-step walkthrough of an example analysis that can be used to continuously improve product portfolios.

Below is an illustration of a graphical rationalization process:

Step 1: Identify low performing, high cost SKUs

With all SKUs sorted by volume, it's easy to see that only a few products comprise the total volume. There is typically a large number of SKUs with very low contribution.

The first step is to identify low performing SKUs. Let's start with three metrics: Volume (Units Sold), Net Margin, and Market Penetration (Customers Sold).



Now, let's move to step 2 and look at these same three metrics in another visualization.

Identify lowest contributors

Remove strategic and potential growth

Remove products with seasonal spikes

Distribute final list

Remove strategic and potential growth

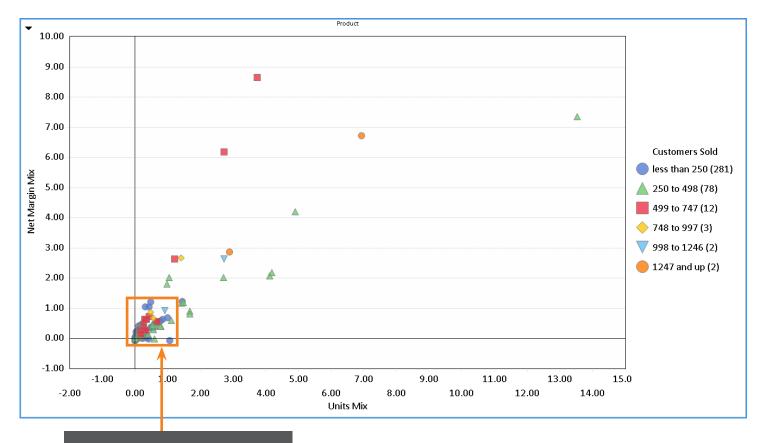
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Distribute final list

Step 2: Identify the lowest contributors

Here, we're scattering the SKUs by the same three metrics (units sold, margin and customers sold). We'll select, or "rubberband," a group to identify the lowest performing products.

Our next steps will verify that these are poor performing products and should be decommissioned.



Select the lowest impact SKUs and move to next step

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Remove products with seasonal spikes

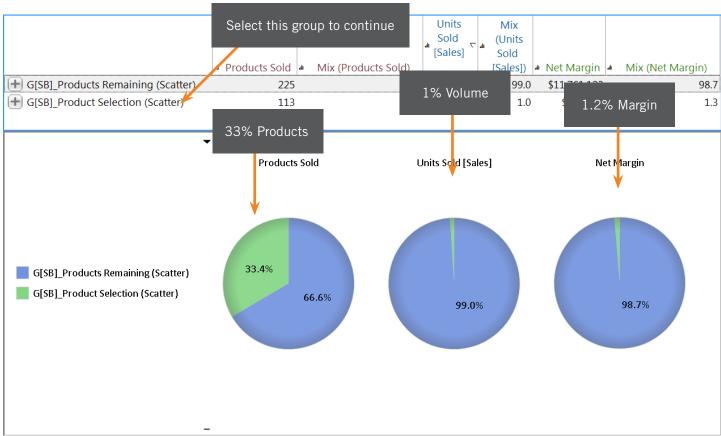
Distribute final list

In this step, we've separated our products into two groups based on the previous analysis; we can compare the group of lowest performing products against all others in the portfolio.

Step 2: Identify the lowest contributors

We can see that 33% of our portfolio is only contributing 1% in volume sold and 1.2% in margin. This confirms that a significant portion of our portfolio is taken up by products that contribute very little in terms of volume and margin.

In the next step, we'll focus on the Selected Products group to investigate further.



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Step 3: Refine the group of low performers

We're now focused on the Selected Products group which consists of the lowest contributors in the portfolio, and we're comparing two time periods to determine performance gains and losses.

In the next step we'll apply a "decommission filter" that eliminates mandatory and strategic products, along with SKUs showing growth potential in any of the three metrics considered.

	Units Sold Met Margin Customers Sold				Sold	•	▼ Mix: Units Sold [Sales]						
	This ∇	Last	Diff	This	Last	Diff	This	Last	Diff		Our DietCola		5.2
🛨 Our DietCola	1,727	1,186	541	\$8,579	\$6,466	\$2,113	100	109	-9				
🛨 Our RootBeer	1,514	868	646	\$5,763	\$4,827	\$936	129	57	72		Our RootBeer		4.6
🛨 Orange	1,498	1,610	-112	\$10,350	\$14,306	(\$3,955)	184	187	-3		Orange		4.5
+ Flavors	1,426	0	1,426	\$1,282	\$0	\$1,282	29	0	29		Flavors		
+ Our Neon	1,398	1,616	-218	\$5,788	\$6,076	(\$288)	57	95	-38		Tiavors		4.3
🛨 Our Lemon-Lime	1,115	4,976	-3,861	\$7,659	\$27,714	(\$20,055)	145	251	-106		Our Neon		4.2
🛨 Our New Diet	894	961	-67	\$3,503	\$3,784	(\$282)	124	165	-41		Our Lemon-Lime		3.4
🛨 Punch Iso	862	570	292	\$2,624	\$1,698	\$926	118	95	23				
🛨 Our Cola	833	1,448	-615	\$4,200	\$5,899	(\$1,698)	42	55	-13		Our New Diet		2.7
🛨 Lemon Ice	784	0	784	\$2,000	\$0	\$2,000	365	0	365		Punch Iso		2.6
🛨 Lemon-Lime	772	2,462	-1,690	\$3,396	\$411	\$2,985	179	474	-295		Our Cola		
🛨 Tutti Frutti	727	0	727	\$1,829	\$0	\$1,829	345	0	345		Our Cola		2.5
🛨 Lmn-Lime Iso	711	558	153	\$2,188	\$1,653	\$535	114	93	21		Lemon Ice		2.4
🛨 Peach Papaya	702	1,642	-940	\$2,303	\$6,033	(\$3,730)	157	206	-49		Lemon-Lime		2.3
H KiwiStrawberry	680	1,691	-1,011	\$2,132	\$6,223	(\$4,091)	143	203	-60		Lemon-Linte		2.5
🛨 Pink Lemonade	661	485	176	\$4,142	\$2,937	\$1,205	63	55	8		Tutti Frutti		2.2
🛨 Concord Grape	659	1,467	-808	\$2,258	\$4,953	(\$2,696)	156	210	-54		Lmn-Lime Iso		2.2
🛨 Cherry Lemon	658	520	138	\$4,563	\$2,967	\$1,597	44	37	7				
🛨 Hires Root Beer	642	584	58	\$1,690	(\$1,423)	\$3,114	37	27	10		Peach Papaya		2.1
+ StrwbrySizle	627	0	627	\$1,732	\$0	\$1,732	308	0	308		KiwiStrawberry		2.1
🛨 Fruit Rage	581	0	581	\$1,501	\$0	\$1,501	301	0	301			-100 -50 0 5	50 100
🛨 5G Water	568	1,189	-621	\$2,594	\$5,419	(\$2,825)	149	232	-83			-100 -50 0 5 % Chg	50 TUU
🛨 Peach Tea	557	1,136	-579	\$3,678	\$7,258	(\$3,579)	174	225	-51	-	+		
Totals	32,993	54,821	-21,828	\$154,255	\$252,581	(\$98,326)	1,063	1,132	-69		Units Sold	Net Margin 📃 Cu	stomers Sold

Some products have growth potential, therefore must be eliminated from the list.

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Distribute final list

Step 3: Refine the group of low performers

Now that our "decommission filter" has been applied, the group has been reduced even further to include only low contributors with negative growth performance.

	 Units Sold 	 Net Margin 	Customers Sol	A VIII: Units Solo	l [Sales]
	This ⊽ Diff	This Diff	This Diff	Our Lemon-Lime	6.2
🛨 Orange	1,104 -231	\$8,753 (\$2,207)	118 -		5.9
🕀 Our Lemon-Lime	874 -3,934	\$6,230 (\$20,523)	113 -10		5.9
🖃 Our Cola	833 -615	\$4,200 (\$1,698)	42 -1	Peach Papaya	5.0
🛨 1 LTR NR	544 -577	\$716 (\$1,097)	12 -		4.9
🛨 6 PK CANS	289 -38	\$3,485 (\$601)	30 -1		4.8
🛨 Peach Papaya	702 -940	\$2,303 (\$3,730)	157 -4		4.0
🛨 Our DietCola	683 -297	\$3,294 (\$1,111)	74 -1		4.7
🛨 KiwiStrawberry	680 -1,011	\$2,132 (\$4,091)	143 -6	5G Water	4.0
🛨 Concord Grape	659 -808	\$2,258 (\$2,696)	156 -5		4.0
🛨 5G Water	568 -621	\$2,594 (\$2,825)	149 -8		
🛨 Peach Tea	557 -579	\$3,678 (\$3,579)	174 -5	Red Grapefruit	3.7
🛨 Red Grapefruit	519 -2,984	\$2,219 (\$12,846)	176 -21	u . d	3.6
🛨 Lemon X	507 -39	\$4,252 (\$337)	96 -		3.6
🛨 Our Cherry Cola	504 -1,794	\$3,252 (\$13,702)	139 -10		
🛨 Orange Mango	483 -514	\$1,614 (\$1,915)	136 -4		3.4
🛨 Enrgy Boostr	467 -605	\$2,188 (\$2,824)	164 -5		3.3
🛨 Tropical Orange	458 -408	\$2,057 (\$1,751)	120 -8	appear here.	3.3
🛨 CranberryMix	441 -2,180	\$1,914 (\$9,189)	158 -15		
🛨 Peach Mango	402 -291	\$1,726 (\$1,243)	116 -8	CranberryMix	3.1
🛨 Plain Tea with Lemon	388 -564	\$1,742 (\$2,435)	133 -7	-120 -80 -40 0 40 80 120)
🛨 CranGrape	374 -2,173	\$1,673 (\$9,385)	152 -19		
🛨 GrpFrt Tangerine	366 -2,328	\$1,580 (\$9,952)	135 -17	- + Units Sold Net Margin Customers Sold	
Totals	14,030 -28,909	\$75,515 (\$135,669)	741 -18		

In the next step, we'll switch our view to look at the "Customers Sold" metric more closely to confirm that these products have all dropped in market penetration.

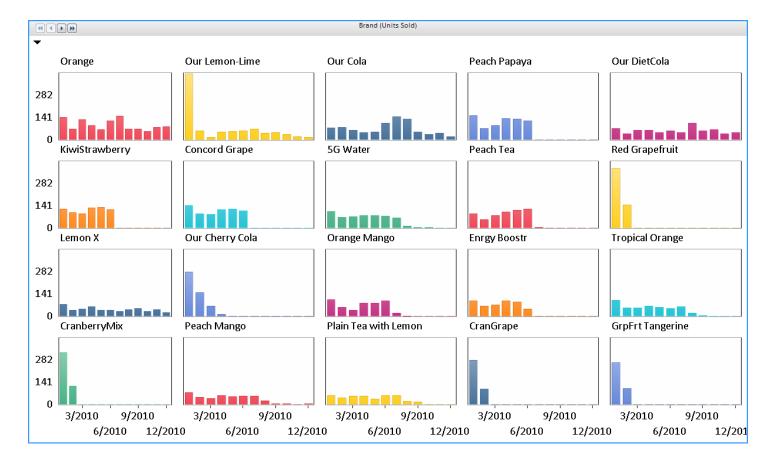
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Step 3: Refine the group of low performers

This step verifies which products are losing popularity and presence in the marketplace by illustrating customer adoption trends over time. In the next step, we'll look at customers to identify any unusual spikes in demand from specific chains or accounts.



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Remove products with seasonal spikes

Distribute final list

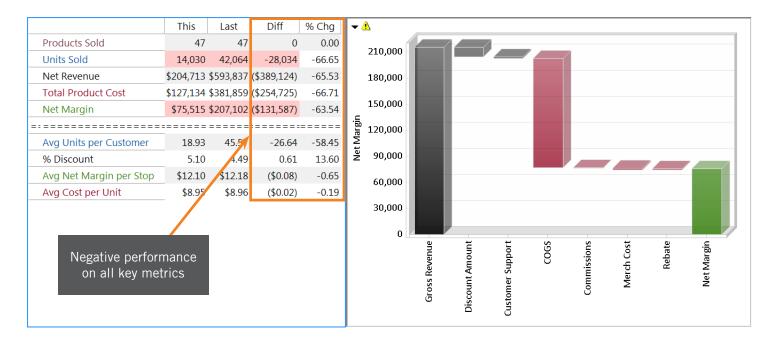
In this step, we'll review possible seasonal or temporary upticks in volume by customer.

Step 4: Review Seasonal Patterns

	Chain (Units Sold) 💌		Unite Cold	0/6/2000 0/1	2/2000	verage	Totals ⊽
-			College Or		1	28	2,852
College One-Regular	Obeck Inc. North	S.Newburg Dist-North		potential sea		25	2,552
		I M JAMIN MAN	+ S.Newburg or periodi	ic accumula ⁻	tion	23	2,351
88			🕣 Village No		_ .	17	1,728
			E N N,IncSouth	55	17	15	1,536
44			🛨 Our Lemon-Lime	6	3	3	270
0			Orange	23	2	2	162
Village North	E N N, IncSouth	D & C Group	🛨 20 OZ NR	23	2	2	162
	S/31/2009 B/15/2010 8/15/2010	C & N Company	🛨 Peach Papaya	1	3	1	112
88			🛨 Concord Grape	2	1	1	103
			🛨 KiwiStrawberry	0	2	1	100
0 Obeck Inc. South			🛨 Red Grapefruit	2	0	1	84
			🛨 Orange Mango	1	0	1	79
			🛨 CranGrape	1	2	1	73
			CranberryMix	3	0	1	68
			GrpFrt Tangerine	3	0	1	63
88			🛨 Enrgy Boostr	1	1	1	59
			(Apple	4	0	1	55
			🛨 5G Water	0	0	1	54
		ab darbbendel	🛨 Peach Tea	2	1	1	52
		000 010 010	+ StrbryColada	3	1	0	44
7/5/2009 1/3/2010 7/4/2010		5/31/2009 0/25/2009 3/21/2010 8/15/2010	🛨 Wtrmln Kiwi	2	1	0	39
	5/3 10/2 3/2 8/1	5/31/2009 10/25/2009 3/21/2010 8/15/2010	Totals	467	379	232	23,702

Step 5: Review Financial Impact

Now the financial impact of the non-performing SKUs is clear. These products are more than double the expense to maintain than the rest of the portfolio and have consistently dropped in performance for all key metrics over time.



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Distribute final list

Step 6: Making it Actionable

By listing the products to be decommissioned according to sales rep, this information can be made actionable immediately.

	Products Sold	 Customers Sold 	Units Sold _V	Avg Units per Week
🛨 Gordon, Pat	33	53	1,772	34.75 🛓
🛨 Saxton, Tom	28	65	1,352	32.19
📄 Stark, Solomon	27	55	1,122	28.77
VILLAGE NORTH # 07	15	1	133	5.12
📄 Peach Tea	1	1	14	1.17
🛨 2 LTR NR	1	1	14	1.17
軠 Peach Mango	1	1	13	1.18
🛨 5G Water	1	1	13	1.08
🛨 Trop'l Berry	1	1	12	1.20
軠 Strwbry Mngo	1	1	11	1.22
軠 Peach Papaya	1	1	10	1.25
軠 Concord Grape	1	1	9	1.13
軠 Tropical Orange	1	1	9	1.13
軠 Enrgy Boostr	1	1		
軠 Plain Tea with Lemon	1	1		
Η KiwiStrawberry	1	1		are this list to ervisor or sales rep
軠 Orange Mango	1	1		nmediate action.
🛨 StrbryColada	1	1		<u> </u>
🛨 Red Grapefruit	1	1		
🕂 Apple	1	1	1	1.00
Η Kiwi Strawberry	0	0	0	0.00 🖵
Totals	47	741	14,030	269.81

Continuous Improvement

As you can see, our approach offers an analytical process that can be used iteratively in order to continuously measure and improve performance of the portfolio over time.

As your portfolios evolve, new products that have been added to the mix will make their own impacts, which will require additional changes that will eventually displace other products or be discontinued themselves.

Altogether, our automated process provides a continuous performance feedback loop that gives your business managers the visibility they'll need in order to make your portfolios as profitable as possible.

About Salient

Salient Management Company offers business and government a new solution for efficient management. Drawing on diverse data from multiple sources, Salient technology measures how business activity creates value, quality, financial efficiency, and productivity, while the user interface eliminates barriers to using this knowledge for continuous process improvement.

Salient is a worldwide provider of advanced performance management and decision support systems for a wide range of industries and the public sector. Founded in 1986, Salient today serves more than 115,000 users in 61 countries.

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