Supply Chain Metrics That Matter
FMI Webinar
Tuesday, June 29, 2021
1:00 p.m. EDT
Before we get started...

- Today’s session is being recorded.
- This presentation is for educational purposes.
- Except for FMI staff, opinions expressed today are not created, sponsored or endorsed by FMI – The Food Industry Association.
- It is FMI policy to comply in all respects with U.S. antitrust laws.
- All participants in FMI meetings and events are expected to comply with applicable antitrust and competition laws. Avoid discussions of sensitive topics that can create antitrust concerns.
- All participants will be muted during the presentation. To ask a question at any time, please use the Chat feature. There will be designated time for Q&A.
Today’s Discussion Leader
Jon Malankar, Principal, BCG
FMI Supply Chain Benchmarking
A look across the end-to-end customer value chain

June 29, 2021
Companies surveyed across Retail, Wholesale, and CPG
Context and methodology

Partnership

The FMI, The Food Industry Association has partnered with the Boston Consulting Group (BCG) for the 2020 Supply Chain benchmarking.

This benchmarking covers the US supply chains of grocery retailers, wholesalers, and associated consumer goods companies.

Overview

This presentation covers the findings on:

1. Performance of supply chains throughout 2020 COVID disruption

2. Expectations for the future and key learnings for supply chain leaders from the 2020 experience

Methodology

The work contains information gathered through:

1. Quantitative analysis of survey submitted by companies

2. Qualitative assessment of in-depth interviews with supply chain leaders

3. BCG work on digital and supply chain
Key challenges faced in 2020

Service took a massive hit across the value chain after COVID and has not fully recovered:
- Service levels declined ~10%+ in all segments of value chain from Q1 to Q2&Q3 2020
- Service rebounded by Q4, but remain below Q1 levels

In response, Retailers and Wholesalers substantially increased inventory to help gain back service; CPGs have built less inventory as they remain capacity constrained:
- Wholesalers and Retailers increased inventory by ~20%+ between Q1 and Q4 2020
- CPGs inventory in Q4 remained below pre-pandemic level

Logistics costs rose across the value chain, with largest increase at CPGs; The increase was driven by increasing transportation costs in a tight trans. market:
- Inbound transportation costs rose ~60% for CPGs and Wholesalers, and ~15% for Retailers
- Warehousing costs fluctuated in 2020, ending higher for CPGs (7%) and flat for Wholesalers & Retailers

Additionally, 3-5% of labor was lost during COVID, with Retailers experiencing the highest turnover and offering the most long-term pay increases

Go-forward considerations

Many see a long road ahead to recovering prior performance and those that move quickest will be rewarded. Only 5% of Retailers expect to fully recover service levels in less than 6 months, and nearly half expecting a year+
- 90% of CPGs & 60% of Wholesalers expecting 1 yr. or less

Most companies see their supply chains as somewhat vulnerable to resilient, with greater confidence in Retailers and CPGs than Wholesalers:
- Roughly 50% of Retailers & 50% of CPGs called their supply chains resilient
- 40% of Wholesalers reported “somewhat vulnerable”

Going forward, companies will need to re-focus their supply chains to better balance service, cost, and working capital and leapfrog the competition
Supply chain performance suffered in 2020 due to myriad of COVID-related disruptions, highlighting urgent need for critical supply chain capabilities

In 2020, performance was disrupted across the value chain ...

- Service levels decreased and did not return to pre-pandemic levels
- Logistics costs increased, especially transportation costs
- Inventory increased, with increases most pronounced near the end-customer

... due to supply disruptions and unprecedented demand

- Demand spiked
- Mfg. was constrained
- Labor was lost
- Transportation market was tight, less efficient truckload utilization
- Retailers and Wholesalers stocked up to drive service

Moving forward, companies need to make bold moves to recover, and leapfrog the competition

- Segment their supply chain
- Manage across the end-to-end system
- Simplify their portfolio and network
- Enhance labor resilience
- Double down on digital capabilities
Service levels dropped across the value chain at the onset of COVID

<table>
<thead>
<tr>
<th></th>
<th>CPG</th>
<th>Wholesaler</th>
<th>Retailer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2020</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Service</strong>&lt;sup&gt;2&lt;/sup&gt; (self-reported)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>85%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>Q2-Q3</td>
<td>77%</td>
<td>72%</td>
<td>85%</td>
</tr>
<tr>
<td><strong>Logistics cost/case ($)</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>$1.89</td>
<td>$1.38</td>
<td>$1.06</td>
</tr>
<tr>
<td>Q2-Q3</td>
<td>$1.97</td>
<td>$1.43</td>
<td>$1.13</td>
</tr>
<tr>
<td><strong>Inventory (days on hand)</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>39.7</td>
<td>19.1</td>
<td>14.2</td>
</tr>
<tr>
<td>Q2-Q3</td>
<td>34.4</td>
<td>23.3</td>
<td>14.7</td>
</tr>
</tbody>
</table>

1. Calculated only for respondents that had provided enough inputs to aggregate.
2. CPG & Wholesale service measured in OTIF, Retailers in On-Shelf %

During initial 6 months of Covid...

Service levels took a major hit across the value chain.

Costs rose dramatically across the value chain, with the largest jump at Retailers.

CPG inventory decreased, Wholesalers stocked, and Retailers increased inventory.
To improve service levels companies had to pay much more for logistics and invest in inventory.

In Q4...

Service levels rebounded for Wholesalers and Retailers, while CPGs did not improve.

Costs continued to rise across the value chain, especially at CPGs and Retailers.

Inventory increased across the value chain, with larger increases at Wholesalers & Retailers than CPGs.

---

1. Calculated only for respondents that had provided enough inputs to aggregate.
2. CPG & Wholesale service measured in OTIF, Retailers in On-Shelf %.
We assessed 2020 supply chain performance through the lens of 5 key questions:

1. How did service evolve over 2020?
2. How has inventory changed during COVID service challenges?
3. How has costs changed throughout 2020?
4. What specific labor challenges have supply chains faced?
5. What’s next for Retailers, Wholesalers, CPGs?
Service levels took a hit at onset of COVID across the value chain, and are still not at pre-COVID levels

Median self-reported service levels

- CPGs
  - Q1: 85%
  - Q2: 78%
  - Q3: 76%
  - Q4: 77%

- Wholesalers
  - Q1: 93%
  - Q2: 67%
  - Q3: 78%
  - Q4: 83%

- Retailers
  - Q1: 92%
  - Q2: 83%
  - Q3: 86%
  - Q4: 90%

Note: 19 Retail, 5 Wholesale, and 6 CPG responses
COVID-driven demand spike was unavoidable, however end-to-end visibility could have improved reactions after initial shock...

Customer-facing Retailers most pain in the demand spike ...

What were the reasons for any on-shelf availability issues?

- Increased consumer demand
- Supplier issues/Transportation
- Labor shortages
- Ordering problems
- Inaccurate forecasting
- Improper planning & mgmt.
- Poor execution and replenishment

What were the reasons for any service level (OTIF) issues?

- Transportation issue
- Manufacturing Capacity
- Order issue
- Order lead time
- Issue prior to shipment
- Package & material shortage

End-to-end integration and visibility across the value chain could have led to faster, more informed responses including better utilization of tight manufacturing and transportation capacity.

1. Reported as Other and defined by respondents
2. Capacity constraints at CPGs (Wholesalers here are noting where CPG capacity was impacting them)

Note: 20 Retail, 4 Wholesale, and 10 CPG responses
Collaboration and digital tools are most utilized among a variety of levers addressing service challenges

What will you do to address service levels?

- CPGs are focused on digital tools
- Retailers and Wholesalers are focused on collaboration across the supply chain
- CPGs continue to have biggest lift and are using many levers

Investment in digital tools: CPGs (80), Retailers (50, N/A), Wholesalers (40)
Improve collaboration with CPGs: CPGs (100), Retailers (80), Wholesalers (40)
Increase staff to improve execution: CPGs (40), Retailers (40), Wholesalers (40)
Other: CPGs (60), Retailers (30), Wholesalers (20)

Note: 20 Retail, 5 Wholesale, and 10 CPG responses

- All: prioritize select products, collaborate across the SC, shift resources to SC, invest in forecasting
- CPG additions: CapEx; increase lead time, use Comans
Service level performance for Retailers and Wholesalers was highly correlated with the performance of their suppliers.

Service vs supplier performance reported by Wholesalers and Retailers (Q4 2020)

Collaboration across the value chain and resulting visibility likely contributed to correlation between performance of companies and their suppliers.

1. As reported by Retailers and Wholesalers
By Q4 some issues had eased but many challenges continued to reverberate across supply chain

In Q4 service, remained below pre-pandemic levels with a rough road ahead ...

### Self-reported service levels

<table>
<thead>
<tr>
<th></th>
<th>CPG</th>
<th>Wholesaler</th>
<th>Retailer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>85%</td>
<td>93%</td>
<td>92%</td>
</tr>
<tr>
<td>Q4</td>
<td>77%</td>
<td>83%</td>
<td>90%</td>
</tr>
</tbody>
</table>

... as supply and transportation issues continue to ripple through the value chain

### Key issues

- Continued inability to build inventory due to mfg. capacity constraints
- Demand spikes and forecasting challenges
- Customer driven delays (e.g., DC appointment availability, replenishment systems over ordering)
- Constrained transportation market

- Upstream manufacturing capacity issues at CPGs
- Ongoing challenges with transportation

- Upstream supplier issues are causing shortages, with some improvement over 2020
- Occasional labor and forecasting disruptions remain, even after considerable improvement by both retailers and suppliers in managing labor disruptions since the onset of the pandemic
Retailers and Wholesalers significantly increased inventory, while CPGs stuck below pre-COVID levels

Median days of inventory on hand

Note: 18 Retail, 4 Wholesale, and 9 CPG responses; Totals calculated as weighted average of all available portfolio segments assuming 50% dry, 40% chilled, 10% frozen inventory

Inventory dramatically increased at Retailers (+22%) and Wholesalers (+61%) during 2020, although service is still below pre-COVID levels

CPGs remain below pre-pandemic inventory levels (-9%)
Most inventory categories increased in 2020, with select exceptions in chilled inventory.

**CPGs**
Median inventory (Days of inventory on Hand-DIOH)

**Wholesalers**
Median inventory (DIOH)

**Retailers**
Median inventory (DIOH)

Wholesalers and Retailers increased inventory across categories, with largest increase in Dry goods.

Chilled and Frozen inventory decreased at CPGs, while Dry goods increased substantially.

Inventory increased in most category/segment combinations over the 2nd half of 2020.

1. Using mean for specific bucket as median was skewed due to small sample size.
Note: Not all respondents provided all categories, provided responses are included in each category.
“Hand-to-mouth” inventory dynamic led to increased inventory targets across the value chain, where coordinating instead could have addressed root challenges.

What were the reasons for any changes in inventory, select one?

Total responses (%)

- Changes in orders
  - Retailers: 15%
  - Wholesalers: 20%
  - CPGs: 50%

- Changes in supply
  - Retailers: 35%
  - Wholesalers: 0%
  - CPGs: 0%

- Changes in product mix
  - Retailers: 10%
  - Wholesalers: 10%
  - CPGs: 0%

- All the above
  - Retailers: 40%
  - Wholesalers: 40%
  - CPGs: 80%

Note: 20 Retail, 5 Wholesale, and 10 CPG responses

- Higher demand volume and throughput challenges kept us from building to desired inventory levels.
  —CPG

- We increased target inventory days to meet Retailer demand.
  —Wholesaler

- We looked to stock fast-moving products from wherever we could get supply, and now have off-brand inventory that will be challenging to move.
  —Retailer
Largest logistics cost increases came from transportation, with inbound transportation costs increasing most in 2020

For all products (food and non-food) \(^1,2\)
Median cost/case ($)

<table>
<thead>
<tr>
<th></th>
<th>CPGs</th>
<th>Wholesalers</th>
<th>Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.48</td>
<td>0.15</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>0.47</td>
<td>0.13</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>0.48</td>
<td>0.15</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>0.76</td>
<td>0.25</td>
<td>0.29</td>
</tr>
<tr>
<td></td>
<td>58%</td>
<td>63%</td>
<td>14%</td>
</tr>
<tr>
<td>Outbound</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.78</td>
<td>0.32</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>0.79</td>
<td>0.30</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>0.86</td>
<td>0.31</td>
<td>0.35</td>
</tr>
<tr>
<td></td>
<td>0.95</td>
<td>0.32</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Warehousing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.47</td>
<td>0.28</td>
<td>0.52</td>
</tr>
<tr>
<td></td>
<td>0.46</td>
<td>0.32</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>0.47</td>
<td>0.32</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>0.51</td>
<td>0.28</td>
<td>0.51</td>
</tr>
<tr>
<td></td>
<td>7%</td>
<td>+2%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

1. Values shown include all reported entries in each cost category whereas previous totals (pages 3-4) were the median of the totals from only respondents that reported all cost categories. 2. Totals were calculated as weighted average of all available portfolio segments assuming 50% dry, 40% chilled, 10% frozen inventory

CPG has largest cost base across the value chain

Transportation drove cost increases, with the largest increases in inbound freight

Cost increases were larger towards the start of value chain (CPGs)
Labor and responding to volatility were challenges across value chain, but CPGs also faced challenges with transportation.

What were the drivers of cost/case challenges?

Retailers faced challenges with labor and responding to volatility.

Wholesalers were most impacted labor.

CPGs were most impacted by various transportation costs.

Note: 17 Retail, 5 Wholesale, and 10 CPG responses.
Rising transportation reported is explained by increasing spot and contract rates as broadly observed during 2020 in the Dry Van (Truck Load) market.

Dry van rates

Year-over-year change (%)

1. Excludes fuel surcharge
Source: DAT Rateview for linehaul industry report
Warehousing costs were flat or decreased slightly across categories, potentially showing improved cost absorption with higher order volumes.

### Dry Median cost/case ($)

<table>
<thead>
<tr>
<th></th>
<th>CPGs</th>
<th>Wholesalers</th>
<th>Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>0.48</td>
<td>0.38</td>
<td>0.44</td>
</tr>
<tr>
<td>Q2</td>
<td>0.49</td>
<td>0.32</td>
<td>0.49</td>
</tr>
<tr>
<td>Q3</td>
<td>0.49</td>
<td>0.35</td>
<td>0.50</td>
</tr>
<tr>
<td>Q4</td>
<td>0.48</td>
<td>0.38</td>
<td>0.46</td>
</tr>
</tbody>
</table>

- 1% increase
- 6% increase
- 11% increase

### Chilled Median cost/case ($)

<table>
<thead>
<tr>
<th></th>
<th>CPGs</th>
<th>Wholesalers</th>
<th>Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>0.17</td>
<td>0.19</td>
<td>0.23</td>
</tr>
<tr>
<td>Q2</td>
<td>0.20</td>
<td>0.24</td>
<td>0.24</td>
</tr>
<tr>
<td>Q3</td>
<td>0.18</td>
<td>0.22</td>
<td>0.23</td>
</tr>
<tr>
<td>Q4</td>
<td>0.19</td>
<td>0.24</td>
<td>0.24</td>
</tr>
</tbody>
</table>

- 8% decrease
- 2% decrease
- 8% increase

### Frozen Median cost/case ($)

<table>
<thead>
<tr>
<th></th>
<th>CPGs</th>
<th>Wholesalers</th>
<th>Retailers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>0.88</td>
<td>0.74</td>
<td>0.74</td>
</tr>
<tr>
<td>Q2</td>
<td>0.91</td>
<td>0.79</td>
<td>0.74</td>
</tr>
<tr>
<td>Q3</td>
<td>0.81</td>
<td>0.74</td>
<td>0.78</td>
</tr>
<tr>
<td>Q4</td>
<td>0.79</td>
<td>0.79</td>
<td>0.78</td>
</tr>
</tbody>
</table>

- 16% decrease
- 4% decrease
- 1% increase

CPGs saw decline in chilled & frozen costs correlated with decline in inventory shown previously in deck.
CPG end-to-end supply chain performance remained unbalanced in Q4 2020

CPG inventory vs. service Q4 2020¹

CPG cost vs. service Q4 2020²

Only two CPGs successfully balanced inventory and service, and none were able to balance across 3 macro KPIs

1. Logistics costs include inbound and outbound transportation and warehousing 2. Only includes respondents that provided enough information to roll up for holistic comparison (including inbound, outbound, and warehousing costs) 3. Median of all respondents that responded for “all products (food + non-food)”, individual points shown are for most comprehensive product grouping respondent provided
One Wholesaler was able to balance end-to-end supply chain performance by Q4 2020

** Wholesale inventory vs. service in Q4^1 **

<table>
<thead>
<tr>
<th>OTIF (%)</th>
<th>100</th>
<th>80</th>
<th>60</th>
<th>40</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory (days)</td>
<td>W4</td>
<td>W1</td>
<td>W2</td>
<td>W3</td>
<td>W5</td>
</tr>
</tbody>
</table>

** Wholesale cost vs. service in Q4^2 **

<table>
<thead>
<tr>
<th>OTIF (%)</th>
<th>100</th>
<th>80</th>
<th>60</th>
<th>40</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistics cost/case ($)</td>
<td>W4</td>
<td>W5</td>
<td>W1</td>
<td>Wholesaler Median = 1.44</td>
<td>W3</td>
</tr>
</tbody>
</table>

---

1. Logistics costs include inbound and outbound transportation and warehousing 2. Only includes respondents that provided enough information to roll up for holistic comparison (including inbound, outbound, and warehousing costs)
By Q4 2020, many Retailers had balanced service and inventory but only one also reported low costs.

**Retailer inventory vs. service in Q4¹**

- **On-shelf availability (%)**
  - Median = 17.3
  - Median = 90%

- **Inventory (days)**
  - 0 to 10
  - 10 to 20
  - 20 to 30
  - 30 to 40

**Retailer cost vs. service in Q4²**

- **On-shelf availability (%)**
  - Median = $1.21
  - Median = 90%

- **Logistics cost/case ($)¹**
  - $0.60 to $0.80
  - $0.80 to $1.00
  - $1.00 to $1.20
  - $1.20 to $2.60

---

1. Logistics costs include inbound and outbound transportation and warehousing.
2. Only includes respondents that provided enough information to roll up for holistic comparison (including inbound, outbound, and warehousing costs).

One Retailer surveyed excelled across service, inventory, and cost while many were able to balance inventory and service.
Additionally, labor has been disrupted across the value chain, with outsized challenges in Retail.

Labor losses due to COVID remained throughout 2020...

- Median % of frontline labor lost due to COVID

<table>
<thead>
<tr>
<th>Quarter</th>
<th>CPG</th>
<th>Wholesaler</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>4.2%</td>
<td>3.5%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Q2</td>
<td>4.0%</td>
<td>2.9%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Q3</td>
<td>3.5%</td>
<td>2.7%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Q4</td>
<td>5.0%</td>
<td>1.3%</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

...with much more turnover near the customer in Retail...

- Median turnover rate %

<table>
<thead>
<tr>
<th>Quarter</th>
<th>CPG</th>
<th>Wholesaler</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>6%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Q2</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Q3</td>
<td>5%</td>
<td>18%</td>
<td>22%</td>
</tr>
<tr>
<td>Q4</td>
<td>22%</td>
<td>22%</td>
<td>23%</td>
</tr>
</tbody>
</table>

...resulting in more long-term pay increases for Retailers vs more short-term for CPGs/Wholesalers

- Duration of pay increases (% of total)

<table>
<thead>
<tr>
<th>Quarter</th>
<th>CPG</th>
<th>Wholesaler</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>56%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Q2</td>
<td>80%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>Q3</td>
<td>22%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Q4</td>
<td>22%</td>
<td>22%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Note: 16-18 Retail, 5 Wholesale, and 8-9 CPG responses.
Most believe it will take at least 6 months to reach pre-COVID service levels, with CPGs seeing a faster recovery and Retailers expecting a long road ahead

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Retailers</th>
<th>Wholesalers</th>
<th>CPGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 6 months (June, July)</td>
<td>5%</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>6-12 mo. (to early 2022)</td>
<td>50%</td>
<td>40%</td>
<td>50%</td>
</tr>
<tr>
<td>More than a year (early 2022+)</td>
<td>45%</td>
<td>40%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Note: 20 Retail, 5 Wholesale, and 10 CPG responses

We’ve made progress but lacked the forward visibility to make sizable capital investments, and are still not close to historical performance

—CPG

We still aren’t getting timely shipments from CPGs; hopefully, food away from home will pick up providing a chance to catch up in the next 6 months

—Wholesaler

We’re converting on what we’re supplied but we aren’t meeting full customer demand, we need suppliers to improve attainment before we can fully serve our customers

—Retailer
Players across the value chain expect changes to last, with those closest to the customer most confident in change.

What, if anything, do you think will be fundamentally changed in stores post-COVID 19?

- SKU consolidation was seen as most likely (2/3+) across the value chain.
- Most expect a permanent shift to pickup/delivery with near consensus among Retailers (~90%).
- Around half expect a permanent portfolio shift.

Note: 20 Retail, 5 Wholesale, and 10 CPG responses.
Path forward: Five themes emerged for effectively managing supply chains in the post-COVID era

<table>
<thead>
<tr>
<th>Supply Chain Segmentation</th>
<th>Differentiation of supply chain strategy and fulfillment tactics across products, customers, and channels to balance service, cost, and cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-to-end value chain management</td>
<td>Trade offs and ramifications across the end-to-end value chain including upstream and downstream partners, through sharing of data and collaborative planning and removing internal silos</td>
</tr>
<tr>
<td>Portfolio and structural simplification</td>
<td>SKU simplification and network restructuring to drive maximum throughput and efficiency, especially during disruption and elevated demand</td>
</tr>
<tr>
<td>Labor resilience</td>
<td>Workforce durability achieved through culture, incentives, and workforce augmentation such as untapped labor sources or automation</td>
</tr>
<tr>
<td>Digital capabilities</td>
<td>Digital capabilities including control tower and demand sensing analytics to assess scenarios and build resiliency in the end-to-end supply chain</td>
</tr>
</tbody>
</table>
Takeaway one-pagers
CPGs: Massive demand shifts create vulnerability, so it is key to de-risk supply and contingency plan for key products

Manufacturing capacity and transportation challenges led to low service levels throughout 2020

<table>
<thead>
<tr>
<th>Service levels (OTIF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: 85%</td>
</tr>
<tr>
<td>Q2: 78%</td>
</tr>
<tr>
<td>Q3: 76%</td>
</tr>
<tr>
<td>Q4: 77%</td>
</tr>
</tbody>
</table>

“Demand volume is still elevated, with some Retailers ordering unrealistic quantities”

Inventory was depleted to meet demand and has not recovered as CPGs have been constrained by mfg. capacity

<table>
<thead>
<tr>
<th>Inventory days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: 39.7</td>
</tr>
<tr>
<td>Q2: 34.3</td>
</tr>
<tr>
<td>Q3: 34.4</td>
</tr>
<tr>
<td>Q4: 36.3</td>
</tr>
</tbody>
</table>

“We are still not able to build inventory due to manufacturing capacity constraints”

Simultaneously, tight transportation markets have increased costs in the second half of 2020

<table>
<thead>
<tr>
<th>Transportation cost/case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: 1.26, 0.48</td>
</tr>
<tr>
<td>Q2: 1.26, 0.78</td>
</tr>
<tr>
<td>Q3: 1.34, 0.86</td>
</tr>
<tr>
<td>Q4: 1.71, 0.95</td>
</tr>
</tbody>
</table>

“Inbound: 0.47, 0.79, 0.86, 0.95
Outbound: 0.76, 0.48, 0.48, 0.76

“Transportation costs have skyrocketed, and we’ve had to give out one-time labor incentives to maintain our workforce over the past year”

Key lessons for future

Integrate with customers and breakdown internal silos to drive service

Plan manufacturing contingencies (internal and/or external)

Maintain portfolio and customer segmentation to quickly make informed decisions on trade-offs

Leverage digital maturity for real-time visibility

Incentivize and support labor to avoid disruption
Wholesale: Demand spikes and supply constraints required tough tradeoffs and highlighted need for collaboration

Upstream supply limitations led to low service levels in Q2, that rose through Q4 as supply returned and Wholesalers managed available supply

<table>
<thead>
<tr>
<th>Service levels (OTIF)</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>93%</td>
<td>67%</td>
<td>78%</td>
<td>83%</td>
<td></td>
</tr>
</tbody>
</table>

“We partnered with Retailers to simplify our product portfolio, selling in what we could move; With time, calls for the full portfolio of products resurfaced”

Inventory rose throughout 2020 as Wholesalers stocked in attempts to mitigate disruptions and capture lost service levels

<table>
<thead>
<tr>
<th>Inventory days</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.1</td>
<td>21.8</td>
<td>24.8</td>
<td>30.8</td>
<td></td>
</tr>
</tbody>
</table>

“We raised inventory targets given supply and demand uncertainly, the question has been whether we’d have access to supply to meet our targets”

Simultaneously, tight transportation markets have increased costs in the second half of 2020

<table>
<thead>
<tr>
<th>Transportation cost/case</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47</td>
<td>0.42</td>
<td>0.46</td>
<td>0.57</td>
<td></td>
</tr>
<tr>
<td>0.15</td>
<td>0.13</td>
<td>0.15</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>0.32</td>
<td>0.30</td>
<td>0.31</td>
<td>0.32</td>
<td></td>
</tr>
</tbody>
</table>

“Inbound | Outbound

“Often the question was whether we could get trucks where we needed them; We would take rate where we could get it, increasing costs”

Key lessons for future

Collaborate across the supply chain to identify upstream issues early and mitigate downstream impacts

Maintain understanding of portfolio and customer segmentation to quickly make informed decisions on difficult trade-offs

Leverage digital maturity for real-time supply chain visibility

Incentivize and support labor to avoid disruption
Retail: Inventory management was critical to enabling service levels in a supply-constrained environment

Service levels dropped in Q2, but have since recovered steadily throughout 2020

Service levels (OTIF)

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>92%</td>
<td>83%</td>
<td>86%</td>
<td>90%</td>
</tr>
</tbody>
</table>

“While we've made progress since COVID’s onset, supply limitations remain, and demand forecasting can still be a significant challenge”

Inventory was depleted initially during COVID, after which Retailers stocked inventory to drive service

Inventory days

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2</td>
<td>13.4</td>
<td>16.1</td>
<td>17.3</td>
</tr>
</tbody>
</table>

“We've increased inventory targets and been able to build throughout the year, supporting our efforts to increase service levels”

Simultaneously, tight transportation markets led to measured cost increase in the second half of 2020

Logistics cost/case

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.11</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
</tr>
</tbody>
</table>

“Transportation shortages, increased logistics capacity (trucking, warehousing), and new vendors for tight supply have increased our cost profile”

Key lessons for future

Collaborate with CPGs and Wholesalers to flag issues early and unlock supply that may not be broadly available

Incentivize and support labor to avoid disruption

Maintain understanding of portfolio segmentation to quickly make informed decisions on difficult trade-offs

Leverage digital maturity for real-time supply chain visibility

Service levels (OTIF)

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>92%</td>
<td>83%</td>
<td>86%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Inventory days

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2</td>
<td>13.4</td>
<td>16.1</td>
<td>17.3</td>
</tr>
</tbody>
</table>

Logistics cost/case

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.11</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
</tr>
</tbody>
</table>