The Business Intelligence Journey: How Technology and Customer Needs are Evolving Supply Chain Strategies

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When Data Creates Competitive Advantage

by Andrei Hagiu and Julian Wright

From the January-February 2020 Issue

Harvard Business Review
Overview

- Background
- Project Genesis (Previous State)
- Transition Process (Current State)
- Concept to Reality (Future State)
- Key Learnings
- Q&A
<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Code</td>
<td>I</td>
</tr>
<tr>
<td>Product No.</td>
<td>AMPS80</td>
</tr>
<tr>
<td>Catalog No.</td>
<td>AMPS80</td>
</tr>
<tr>
<td>Stocking Type</td>
<td></td>
</tr>
<tr>
<td>G/L Class.</td>
<td></td>
</tr>
<tr>
<td>Unit of Measure</td>
<td></td>
</tr>
<tr>
<td>Item Price Group</td>
<td></td>
</tr>
<tr>
<td>Basket Reprice Group</td>
<td></td>
</tr>
<tr>
<td>Shelf Life Days</td>
<td></td>
</tr>
<tr>
<td>ABC Codes.</td>
<td></td>
</tr>
<tr>
<td>Supplier</td>
<td></td>
</tr>
<tr>
<td>Product Manager</td>
<td></td>
</tr>
<tr>
<td>Buyer Number</td>
<td></td>
</tr>
<tr>
<td>Print Message</td>
<td></td>
</tr>
</tbody>
</table>

F5=Codes  FB=Measure
### Original State

<table>
<thead>
<tr>
<th>Item Price Group</th>
<th>Basket Reprice Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shelf Life Days.</td>
<td>ABC Codes.</td>
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<tr>
<td>Supplier.</td>
<td>Product Manager.</td>
</tr>
<tr>
<td>Buyer Number.</td>
<td>Print Message.</td>
</tr>
</tbody>
</table>

### Previous State

<table>
<thead>
<tr>
<th>Month to Date</th>
<th>Year to</th>
</tr>
</thead>
<tbody>
<tr>
<td>$6.92</td>
<td>$6.31</td>
</tr>
</tbody>
</table>

### OTR Definitions

<table>
<thead>
<tr>
<th>Service Definitions</th>
<th>OTR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;= 93%</td>
</tr>
<tr>
<td></td>
<td>88% - 92.9%</td>
</tr>
<tr>
<td></td>
<td>&lt; 88%</td>
</tr>
</tbody>
</table>
Original State

Previous State

Current State

Future State
<table>
<thead>
<tr>
<th>Data Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Method</td>
</tr>
<tr>
<td>Data Latency</td>
</tr>
<tr>
<td>Analytics Turn Time</td>
</tr>
</tbody>
</table>

### ORIGINAL STATE

- **Data Access**
- **Report Method**
- **Data Latency**
- **Analytics Turn Time**

### PREVIOUS STATE

- **Data Access**
- **Report Method**
- **Data Latency**
- **Analytics Turn Time**

### CURRENT STATE

- **Data Access**
- **Report Method**
- **Data Latency**
- **Analytics Turn Time**

### FUTURE STATE

- **Data Access**
- **Report Method**
- **Data Latency**
- **Analytics Turn Time**

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**POWERED BY POSSIBILITIES.**
Data Access

Report Method

Data Latency

Analytics Turn Time

Source System Queries

De-Normalized Databases

Cloud Based Data Warehouse

Cloud Based Data Warehouse & Raw Data Access

POWERED BY POSSIBILITIES.
<table>
<thead>
<tr>
<th>Data Access</th>
<th>Source System Queries</th>
<th>De-Normalized Databases</th>
<th>Cloud Based Data Warehouse</th>
<th>Cloud Based Data Warehouse &amp; Raw Data Access</th>
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**CURRENT STATE**

- De-Normalized Databases
- Cloud Based Data Warehouse
- Self Service Dashboard / Subscriptions

**FUTURE STATE**

- Cloud Based Data Warehouse & Raw Data Access
**Data Access**

**Report Method**

**Data Latency**

**Analytics Turn Time**

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**Source System Queries**

**De-Normalized Databases**

**Cloud Based Data Warehouse**

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**Source System Reports**

**Scheduled Push Reporting**

**Self Service Dashboard / Subscriptions**

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2+ days

1 day

<=15 min data refresh (Near real time)

Real Time

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**Cloud Based Data Warehouse & Raw Data Access**

**Tableau Alerts / Dashboards – Corrective action suggestions (Machine learning/AI)**
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<tbody>
<tr>
<td>Data Latency</td>
<td>2+ days</td>
<td>1 day</td>
<td>&lt;=15 min data refresh (Near real time)</td>
<td>Real Time</td>
</tr>
<tr>
<td>Analytics Turn Time</td>
<td>2+ Days (Analytics Team)</td>
<td>1+ day (Analytics Team)</td>
<td>Instantaneous</td>
<td>Real Time Directed Actions</td>
</tr>
</tbody>
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**CURRENT STATE**

- Source System Queries
- De-Normalized Databases
- Cloud Based Data Warehouse

**FUTURE STATE**

- Source System Reports
- Scheduled Push Reporting
- Self Service Dashboard / Subscriptions
- Cloud Based Data Warehouse & Raw Data Access
- Tableau Alerts / Dashboards – Corrective action suggestions (Machine learning/AI)
- Real Time Directed Actions

**PRESENTATION INFORMATION**

- **Analytics Turn Time**: 2+ Days (Analytics Team)
- **Real Time Directed Actions**
What does this achieve?

- **Transformation of Data to Actionable Intelligence**
- **End to End Supply Chain Visibility**
- **Real Time Directed Actions**
- **Data Transparency with Customers**
- **Control Tower Monitoring of Operations**
- **Integration of Outside Data Sources**
Key Learnings

Involve and partner with stakeholders early on and throughout
Key Learnings

Customer driven
  - Internal
  - External
Key Learnings

Build out roadmap ahead of time for prioritization
Key Learnings

Clearly communicate timelines and adjustments to stakeholders
Key Learnings

Explore total cost impact – savings when expected an increase
“When data creates competitive advantage”

- Reduce Total System Cost
- Improve Service to Customers
- Transform Business Processes
- Facilitate Growth and Change
Q&A
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Or visit MODEX Booth #6471
Demos of our Foresight BI tool are on display