







When Data Creates Competitive Advantage

by Andrei Hagiu and Julian Wright

From the January-February 2020 Issue

Harvard Business Review



STRATEGY

When Data Creates Competitive Advantage

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any executives and investors assume that it's possible to use customer-data capabilities to gain an unbeatable competitive edge. The more customers you have, the more data you can gather, and that data, when analyzed with machine-learning tools, allows you to offer a better product that attracts more customers. You can then collect even more data and eventually marginalize your competitors



Overview





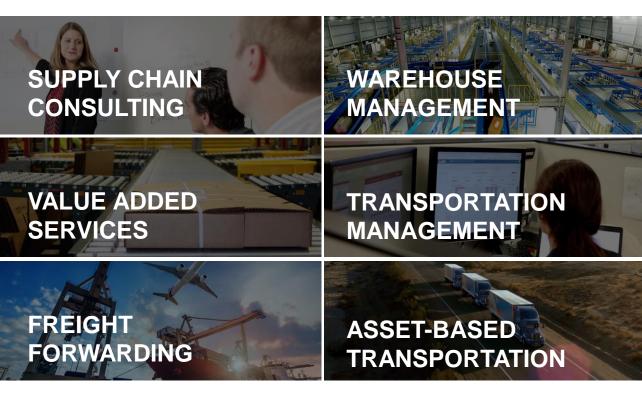
- Background
- Project Genesis (Previous State)
- Transition Process (Current State)
- Concept to Reality (Future State)
- Key Learnings
- Q&A



Background – Who We Are











Reduce Total System Cost



Improve Service to Customers



Transform
Business Processes



Facilitate
Growth and Change



```
Action Code I
Product No AMP580
Catalog No AMP580
Stocking Type
G/L Class
Unit of Measure
Item Price Group
Basket Reprice Group
```

```
Shelf Life Days...

ABC Codes...

Supplier...

Product Manager...

Buyer Number...

Print Message...

F5=Codes F8=Measur
```



| Action Code, . I | Month to Date | Year to |
|----------------------|---------------|---------|
| Product No AMPSBO | 87.68% | 89.04 |
| Catalog No AMP580 | 97.20% | 97.17 |
| Stocking Type | Month to Date | Year to |
| Unit of Measure | 3,174 | 42,97 |
| Item Price Group | 21,128,964 | 264,648 |
| Basket Replice Group | 6 657 | 6 1E |

ABC Codes.

Print Messa

PREVIOUS

STATE

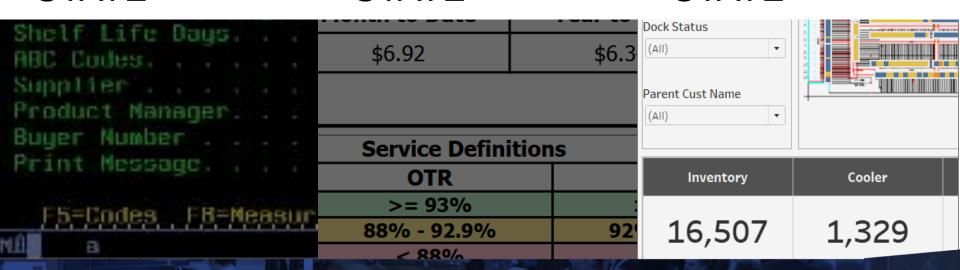
| Distance | | | | | | |
|--|----|----------|---------------------|--------------------|--|--|
| uaus | | | \$6.92 | \$6.3 ⁶ | | |
| | | | | | | |
| ager | | | | | | |
| Γ. | | | Service Definitions | | | |
| ige. | | | OTR | | | |
| CR= | Mo | 2110 | >= 93% | ; | | |
| | 1 | 77 | 88% - 92.9% | 929 | | |
| | 4 | W. 2001 | < 88% | | | |
| A STATE OF THE PARTY OF THE PAR | | | | | | |



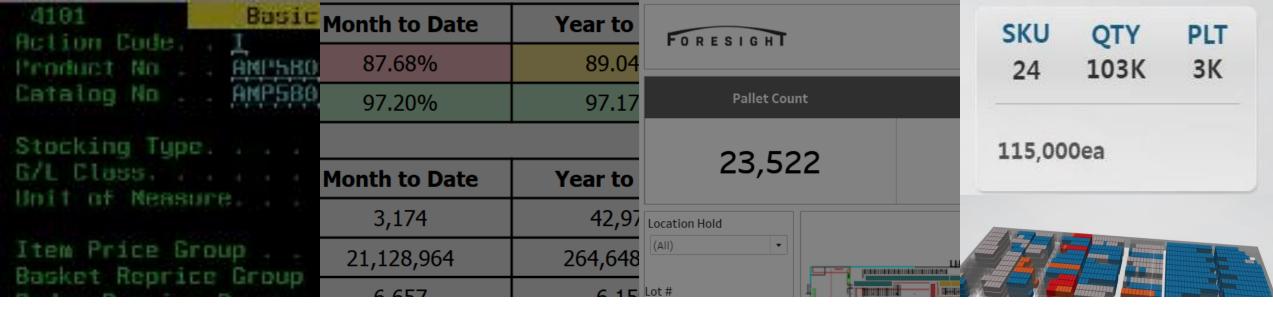


PREVIOUS STATE

CURRENT STATE



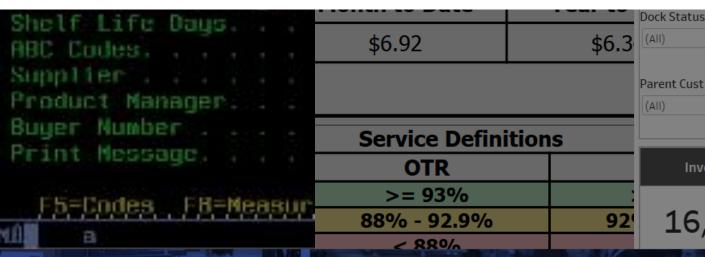


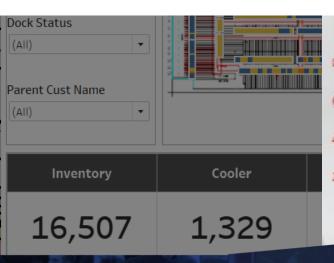


PREVIOUS STATE

CURRENT STATE

FUTURE STATE



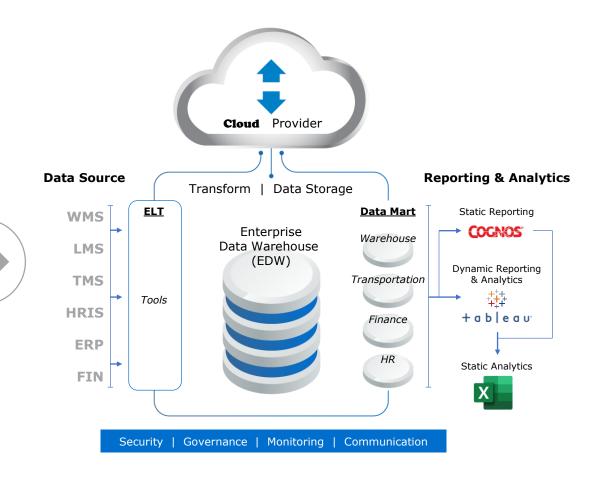




Previous State

Data Storage Reporting & Analytics Data Source ETL (Extract | Transform | Load) Static Reporting **WMS** Data Extract Tools Staged Data {JSON} python ☐ DBMS ☐ LMS **O**API Dynamic Reporting & Analytics **TMS** Data Warehouse +ab|eau **HRIS** Data Transformation Tool WH Outbounds HR Transportation Labor Mgmt **ERP** Static Analytics Live Data FIN - OAPI Web Services

Current State







| | Goal | Yesterday | Week to Date | Month to Date | Year to D | | |
|-----------------|----------------------------|-----------|--------------|---------------|-----------|--|--|
| to RAD | 93% | 83.53% | 87.55% | 87.68% | 89.04% | | |
| to 1st Appt | 97% | 97.37% | 97.28% | 97.20% | 97.179 | | |
| | | | | | | | |
| | Intentionally Left Blank | Yesterday | Week to Date | Month to Date | Year to D | | |
| its | | 1 726 | 2.051 | | 42,971 | | |
| (Lbs) | | 6,7 78 | 19,48, 04 | 2 98,904 | 264,648,5 | | |
| | | 6, 7 | 6,3 | 6,65) | 6,159 | | |
| oments/Day | | 1,02 | | | 1,228 | | |
| | | | | | | | |
| | tii_Len Bli | terday | Week to Date | Month to Date | Year to D | | |
| | $\sim 1 \Delta 1$ |)6.35 | \$6.93 | \$6.92 | \$6.34 | | |
| | \mathbf{O} | | | | | | |
| Legend | Legend Service Definitions | | | | | | |
| | ted delivery date | | | OTR | | | |
| | ailable appointment | | Green | >= 93% | > | | |
| erage weight pe | | | Yellow | 88% - 92.9% | 92% | | |





Data Access

Report Method

Data Latency

Analytics Turn Time











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











Data Access

Report Method

Data Latency

Analytics
Turn Time

Source System Queries

Source System

Reports

Scheduled Push Reporting

De-Normalized Cloud Based
Databases Data Warehouse

Self Service
Dashboard
/ Subscriptions

Cloud Based
Data Warehouse &
Raw Data Access

Tableau Alerts / Dashboards

- Corrective action
suggestions (Machine
learning/AI)











Data Access

Report Method

Data Latency

Analytics Turn Time

Source System
Queries

Source System Reports

2+ days

De-Normalized Databases

Scheduled Push Reporting

1 day

Cloud Based
Data Warehouse

Self Service
Dashboard
/ Subscriptions

<=15 min data refresh (Near real time) Cloud Based
Data Warehouse &
Raw Data Access

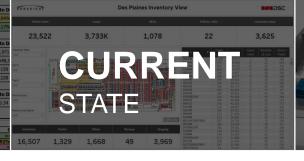
Tableau Alerts / Dashboards
- Corrective action
suggestions (Machine
learning/Al)

Real Time











Data Access

Report Method

Data Latency

Analytics Turn Time

Source System
Queries

Source System Reports

2+ days

2+ Days (Analytics Team)

De-Normalized Databases

Scheduled Push Reporting

1 day

1+ day (Analytics Team)

Cloud Based Data Warehouse

Self Service
Dashboard
/ Subscriptions

<=15 min data refresh (Near real time)

Instantaneous

Cloud Based
Data Warehouse &
Raw Data Access

Tableau Alerts / Dashboards
- Corrective action
suggestions (Machine
learning/AI)

Real Time

Real Time
Directed Actions



What does this achieve?



Transformation of Data to Actionable Intelligence



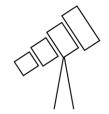
End to End Supply Chain Visibility



Real Time Directed Actions



Data Transparency with Customers



Control Tower Monitoring of Operations



Integration of Outside
Data Sources



Involve and partner with stakeholders early on and throughout



Customer driven

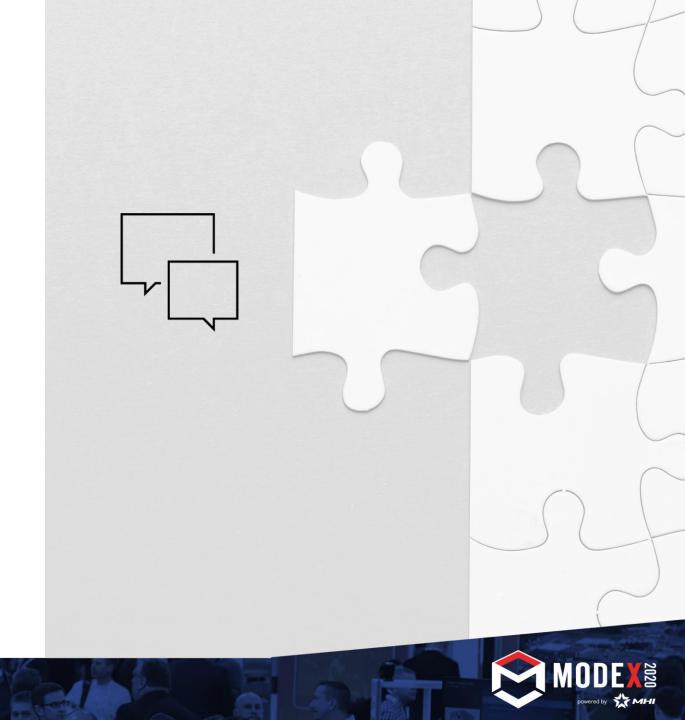
- Internal
- External



Build out roadmap ahead of time for prioritization



Clearly communicate timelines and adjustments to stakeholders



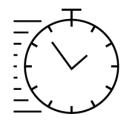
Explore total cost impact – savings when expected an increase



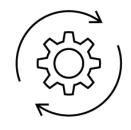
"When data creates competitive advantage"



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

