Master Your Data and Master the Future

AEM Annual Conference

November 2019
Thanks to the AEM team who made this possible...

Al Cervero
SVP, Construction, Mining & Utility

Curt Blades
SVP, Agricultural Services

Brooke Konopacki
Director, Education Programs
... and to AEM members who participated in the survey!

Participation in the AQ assessment does not indicate client relationship

Source: 2019 AQ survey for AEM
Today’s messages

1. $80M on the table everyday
2. Raise ambition
3. Value creation recipe
Today’s messages

1. $80M on the table *everyday*

2. Raise ambition

3. Value creation recipe
Why now?

Increased data availability

10x

in the past 2 years

Decreased storage cost

99+% in the past 19 years

Increased processing power

60x in the past 9 years

Predictive analytics helped us to cut diagnostic times by more than 70% and repair times by more than 20%\(^1\)

Our objective is really to turn data into actionable information… and more importantly, turn it into information that our customers can use

Ability to apply [agronomic data] to significantly decrease operating cost and drive higher profitability through greater yields and a far better use of their resources.\(^2\)

Data driven pricing algorithms enabled us to take scientific pricing decisions for the new launches\(^3\)

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1. Press release
2. Earnings call transcripts
3. 10-k report

Annual and Sustainability report 2018
CBS ZDNet News Article August 2019
Earnings call Q4 2018
Annual Report 2018
What is the Analytics Opportunity?

Innovating and developing products and services

Running the corporation

Making & delivering

Servicing

Selling
Analytics can unlock tremendous value for the Ag and Construction equipment industry

2018 global profit pools: $40B
Analytics-enabled profit pools: $30B

Increase: +75%

Source: McKinsey, Freedonia report, GVVS
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Next Service to Suggest (NSTS): A proprietary McKinsey approach

Natural Language Processing algorithm

Proprietary library of 1,000+ DnA use cases

Enables peer benchmarking

Outside-in view from online sources
NSTS identified 69 applications relevant for Ag and Construction equipment players

Source: McKinsey NSTS research McKinsey & Company
NSTS analysis for an Ag OEM: illustrative

Innovating and developing products and services

• Integrated costing and design
• High performance computing for product design

Making & delivering

• Real time locating system for manufacturing components
• Automated field service parts identification and ordering
• Cost modeling for make vs. buy
• Network optimization
• Remote production optimization
• Demand forecasting

Selling

• Customer based price to value
• Digital marketing & social media
• Pipeline management & forecasting
• Digital frontend processes
• Real time asset performance monitoring
• Master data & cloud infra mgmt.

Servicing

Running the corporation

Source: McKinsey NSTS research
Players have differentiated analytics priorities

Source: McKinsey’s NSTS model, Team analysis
How is the industry doing?
Analytics Quotient (AQ) provides insights...

- Individual company strengths and weaknesses
- Comparison with 400+ global companies
- Recommended actions

...on 6 dimensions that drive impact
AQ results reflect 3 main themes for Ag and Construction Equipment players

1. Early analytics maturity
2. Need for strategic vision and roadmap
3. Technology is a great leveler; size doesn’t matter
1: Ag and Construction equipment players are early in their analytics maturity scoring the lowest across the examined industries
2: AQ scores reflect early stage maturity across all dimensions

AQ scores out of 100

<table>
<thead>
<tr>
<th>Dimension</th>
<th>AEM</th>
<th>Top Quintile AEM</th>
<th>Analytics Leaders</th>
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<td>23</td>
<td>31</td>
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</tr>
<tr>
<td>Culture</td>
<td>32</td>
<td>43</td>
<td>59</td>
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</tbody>
</table>

+39 +29 +25 +49 +24 +27

1 Average of top quintile AEM companies that have taken the AQ survey
2 Average of top quintile scores by question in the AQ database, across industries and geographies

Source: McKinsey Analytics Quotient for AEM 2019 (n=245)
Today’s messages

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Transformation Journey

Maturity

- Building insights
- Capturing value
- Achieving scale
- Analytics-driven organization
### Analytics is not another IT project...

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<tr>
<th>Mindset</th>
<th>Typical IT project</th>
<th>Leading IT Project</th>
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<tr>
<td></td>
<td>Outsource risk</td>
<td>Manage risk and feasibility</td>
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<table>
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<tr>
<th>Leadership/ control</th>
<th>Systems integrator</th>
<th>IT</th>
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<table>
<thead>
<tr>
<th>Sequencing</th>
<th>Typical IT project</th>
<th>Leading IT Project</th>
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<tr>
<td></td>
<td>Long design</td>
<td>Long design</td>
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<td></td>
<td>Long plan</td>
<td>Build platform</td>
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<td></td>
<td>Build platform</td>
<td>Deliver use cases</td>
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<th>Time to impact</th>
<th>Typical IT project</th>
<th>Leading IT Project</th>
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<tr>
<td></td>
<td>Unclear</td>
<td>2-5 years</td>
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<table>
<thead>
<tr>
<th>Overall results</th>
<th>Typical IT project</th>
<th>Leading IT Project</th>
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<tr>
<td>66% over budget²</td>
<td>On budget</td>
<td></td>
</tr>
<tr>
<td>75% over schedule²</td>
<td>On schedule</td>
<td></td>
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6 elements to create value from analytics

Methodology

1. Assess: Building the strategic roadmap
2. Build and implement: Scaling the change

Infrastructure

- Technology & Data: “Backbone”
- Capability & Talent: “Muscles”

Execution

- Performance infrastructure: “Brain”
- Organization & mind-sets: “Heart”
Improving manufacturing efficiency using data analytics and digital manufacturing

Decision making based on experience and data analytics

Reduction by

25% in unplanned downtime

35% in logistics cost

5% in rework

Source: WEF: Fourth Industrial Revolution Beacons of Technology and Innovation in Manufacturing, company website, press
Aston Martin gets a 3X increase in right first time (RFT) parts

24 different data sources combined

1,500 individual car components

Live tracking tool to monitor “RFT”

3X increase in parts that were “RFT”

~$19 M Savings per program

SOURCE: Press releases
Formula One accelerates project development in the technical arms race

Applied machine learning to analyze team characteristics and structure

Analyzed data from 5+ communication sources to map collaboration dynamics

Built predicative performance model to enable early project feedback

18% earlier warning on project performance

40% improvement on investment yield

SOURCE: Press releases
To recap...

1. $80M on the table everyday
2. Raise ambition
3. Value creation recipe
Are you ready to hit an analytics home run?