AI Enabled Integrated Business Planning

Fred Baumann, vice president, industry strategy
How do I make all these work for my company?
What is Digital Transformation of Integrated Planning & Operations?

Connecting your customers, channel partners, suppliers, planning processes and business operations with AI and Digital technology powered Management Systems that provide your organization a new set of super powers necessary for high performance in the digital age.

- Super Visibility
  See Risks & Opportunities Earlier

- Super Intelligence
  Knowledge Driven Algorithms

- Super Process
  Collaboration, Decision Making, Execution

- Super Productivity
  Automation, Digital Assistants
Digital Transformation Reality
Happening fast in our personal lives, but **enterprise systems are still lagging behind**. Challenge & opportunity in S&OP/IBP!

<table>
<thead>
<tr>
<th>Consumer Systems</th>
<th>Consumer Systems Experience</th>
<th>Planning &amp; Operations System Reality</th>
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<tbody>
<tr>
<td>Google</td>
<td>Fingertip visibility to all information across the world</td>
<td>Tough time getting access to data within the enterprise</td>
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<tr>
<td>Social</td>
<td>Real-Time Collaboration</td>
<td>Information is stuck in Silos, Meetings galore for alignment</td>
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<td>Maps</td>
<td>Real-Time Visibility &amp; Prescriptive Systems</td>
<td>Plan Misses, Poor early warnings, blame games between silos</td>
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<td>Amazon, Netflix</td>
<td>Learning Systems</td>
<td>Tribal Knowledge, heavy human biases in decision making</td>
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<tr>
<td>Airbnb, Uber</td>
<td>Real-Time Demand-Supply Match, Dynamic Pricing</td>
<td>Slow Demand/Supply Match, Fire fighting vs. Shaping Demand</td>
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<tr>
<td>Digital Assistants</td>
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<td>Spreadsheets, PowerPoints, Email</td>
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**Digital Transformation Reality**

**Happening fast in our personal lives, but enterprise systems are still lagging behind. Challenge & opportunity in S&OP/IBP!**
Amazon’s Digital Operating Model Advantage

Digital customer and supplier engagement connected to a “Knowledge & Analytics” powered planning capability

Real Time, Deep
Supplier Knowledge
- New Product Ideas
- Reliability
- Quality
- Capacities
- Costs
- Alternate suppliers

Real Time, Deep
Customer Knowledge
- Purchase Intent
- Demand Lever Sensitivity
- Product Feedback

Knowledge, Analytics Powered
Integrated Planning

Digital Supplier Engagement
- Volume Commits
- Reliable Forecasts
- Orders
- Inventory visibility
- Supplier Scorecards

Digital Customer Engagement
- Search
- Catalog
- Page Placement
- Reviews
- Pricing
- Promotions
- Cross & Up-Sell,
- Order Lead Times

Real Time, Effective
Supplier Collaboration

Digital Operating Model

Transaction Management
Merchandise & Commercial

Real Time
Demand Shaping Plans

Physical Supply Chain
The core engine of your digital transformation
# High Value Capabilities of the Digital Brain

<table>
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<tr>
<th>1</th>
<th><strong>Real Time Market Knowledge</strong></th>
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<td>Leading Indicators of Demand, External and Internal Data, Connecting the Dots</td>
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<th>2</th>
<th><strong>ML/AI Powered Forecasting</strong></th>
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<tr>
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<td>Leading Indicator Driven, Greater Accuracy, Less Bias, Collaboration around Risks &amp; Opportunities</td>
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<th>3</th>
<th><strong>Synchronized Planning</strong></th>
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<td>Integrated Commercial, Supply Chain &amp; Finance Plans, Real-time Scenario Planning, Simulate Impact of Commercial Initiatives, Analyze Supply Chain Feasibility and Cost</td>
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<th>4</th>
<th><strong>Digital Collaboration</strong></th>
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<td>Customers, Suppliers, Operations, Real-time communication of plans and feedback, Knowledge powered Digital Assistants</td>
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<th>5</th>
<th><strong>Continuous Learning</strong></th>
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<td>Plan vs Execution Post Game Analytics, Self-Tuning Models, Process Improvements</td>
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Reality of Planning

- Plan vs. Forecast Gaps
- Demand Surprises
- Supply Issues

- Why didn’t we know earlier?
- Why didn’t we act faster?

Why were supply chain plans uncoordinated with sales plans?
Reality of planning and operations today
Far from the ideal state

- The majority of planning, collaboration and decision making is actually happening in Excel, PPT, Email.

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Slow, siloed, spreadsheets vs. integrated planning, digital customer and supplier engagement

- Lots of data collected, but remains tribal vs. system knowledge.
- Forecast accuracy and accountability challenges across functions
- Slow, siloed-decisions, P&L impact not understood beforehand
- Time lag and alignment gap between Planning and Operations Execution

Multi-million $ value leakage
$10-$20 Million in Profit Potential per $1 Billion in Sales
(Revenue, COGS, Inventory, People)
### Integrated Business Planning

**A Better Approach**

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<tr>
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<th>On-System Meetings</th>
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<td>Tracking of Risks, Opportunities and Assumption in the System, Process orchestration with task and calendar management, Structured and Unstructured data management, Natural Language Processing based navigation, Email integration with smart tagging, Connected Excel</td>
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<th>Interactive Scenario Planning vs Static Dashboards</th>
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<td>Real time evaluation of scenarios enabling cross functional collaboration and decision making, breaking down silos</td>
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<th>Financial Plan vs Operational Forecasts, Post Game, and Gap Closure Insights</th>
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<td>Profit based decision making Vs units, Integrated Units, Revenue, COGS, Gross Profit measurements</td>
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<th>E-Digests, Alerts and Performance Scoreboards</th>
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<td>Configurable alerts, dashboards and email digests</td>
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From S&OP to True IBP
Transform Commercial Planning with AI powered Insights into 3 Critical Questions

WHAT HAPPENED?
Post Game Insight / Learning
- Root Cause Analytics
- Machine Learning Algorithms
- Human Input
- Post Game Stories

WHAT IS LIKELY TO HAPPEN?
Predictive Insight
- Predictive Algorithms
- Automated Forecasts
- Assumptions Collaboration
- Consensus Forecast

WHAT ACTIONS TO TAKE?
Prescriptive Insight
- Initiative Playbook
- System Recommended Plays
- Scenario Planning
- Initiative & Resource Allocation
- Decisions

Revenue Control Tower
- Commercial Budgets
- Commercial Initiatives
- Demand Drivers

HISTORY
FUTURE

Gap
FORECAST
PLAN
ACTUALS
SCENARIO
IBP Meeting

Douglas
Finance Director

Eric
Marketing Director

Jeff
Supply Chain Director

Andreas
General Manager

Stan
Sales Director
Andreas (Business Leader):

- Team - how's the business doing, do we have any gaps?
Stan (Sales leader)

- Yes, we are tracking below our financial plan but the good news is that Eric and I worked together on various initiatives (at brand and account level) to close the gaps.
Eric (Marketing leader):

- Andreas, based on market intel we want to run a marketing campaign to push eco-friendly products. Estimated lift ~$2.3m.
Stan (Sales Leader):

- Andreas, we learned that Lackly has supply issues and cannot take an important promo slot at Home Depot, suggest we take it and push Acmecide. Estimate lift ~8m.
Stan (Sales Director):

- Andreas, we used the advanced analytics engine of o9 and the ROI and uplift of the selected proposals is outstanding. We recommend going for it!
Jeff (Supply Chain Leader):

- Andreas, we created various supply scenarios from least cost (SC operating according to the standard operating model) to Max Service (SC operating with all flexibility such as the use of contract manufacturers, expedites, etc.) and in Max Service all demand can be supported, but only if we are willing to spend incremental costs and take an inventory risk position.
Andreas (Business Leader) :

- Team, hold for a moment please. Sounds too good to be true, will we make any profit?
Doug (Finance Leader):

- Great question Andreas, we evaluated the scenarios on revenue, gross margin, inventory, and contribution margin. The net drop in GM% is 2.50% but this still gives us a solid profit and allows us to take market share (+ $10m in revenues!)
Andreas (Business Leader):

- Very clear analysis team, thank you. We will decide to move forward with this proposal as I agree that capturing market share is offsetting the decrease in CM%.
Andreas (Business Leader):

- Team, how you work together, use the tools and analytics and provide me with such great insights is a pleasure. I love it. Previously we were always discussing various different numbers and looking at Excel, this is a GREAT improvement.

Now we have some time left, shall we discuss some more growth opportunities?
Thank You

Fred Baumann, vice president, industry strategy