RoadMap Your Way to Digital Supply Chain Maturity

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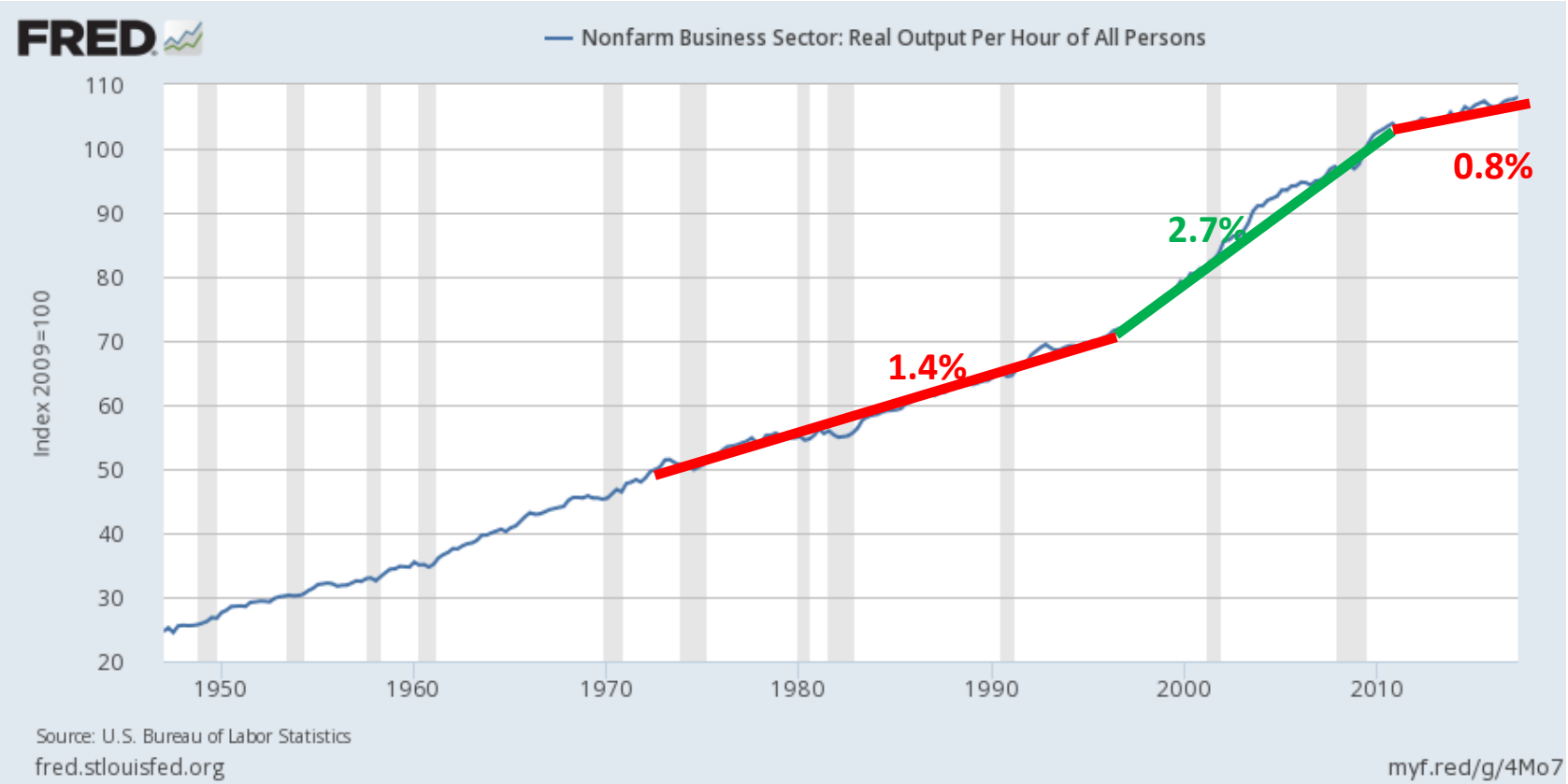
FRED
Nonfarm Business Sector: Real Output Per Hour of All Persons
Index 2009=100
110
100
90
80
70
60
50
40
30
20
1950
1960
1970
1980
1990
2000
2010
1.4%
2.7%
0.8%
Source: U.S. Bureau of Labor Statistics
fred.stlouisfed.org
myf.red/g/4Mo7

Findings From Our Study

- Hype versus Reality
- Solutions versus Capabilities
- Plans versus Strategies

- Deliverables
  - Definition of Digital Transformation
  - Core Attributes of Digital Supply Chain
  - Framework & Maturity Model
  - Agile Roadmap Template

RISK LOGISTICS INTERMODAL BLOCKCHAIN DIGITIZATION

DIGITAL SUPPLY CHAIN TRANSFORMATION:

VISUALIZING THE POSSIBILITIES

Many supply chain leaders view digitization as a mandate for competition, yet the first steps to developing an overall strategy are unclear. We take a deep dive into the questions of the state of digital implementation and try to separate hype from reality.

BY NADA SANDERS AND MORGAN SWINK

Most, if not all, supply chain managers recognize that a digital revolution is overtaking supply chain management. It is fueled by three major trends.

Big Data. Data is being generated up and down the supply chain by transaction-based monitoring and enterprise systems, such as point of sale, RFID and ERP systems, as well as by unstructured data sources, including clickstreams, camera and surveillance footage, imagery, social media postings, blog/wiki entries and forum discussions.

Advances in computing. Enormous advances in computing power and intelligence are automating Big Data processing and analysis. Computing architectures such as cluster computing, Cloud computing and mobile computing have made storage, retrieval, analysis, sharing and distribution of data faster and cheaper.

Advances in robotics. In combination with advances in hardware and software, robotics and robotic process automation are quickly making the automation of manual and transactional processes cheaper and more reliable.

Because of these advances and the hype surrounding them, many supply chain leaders view digitization as a mandate for competition, yet first steps and an overall strategy are unclear. Important questions include:

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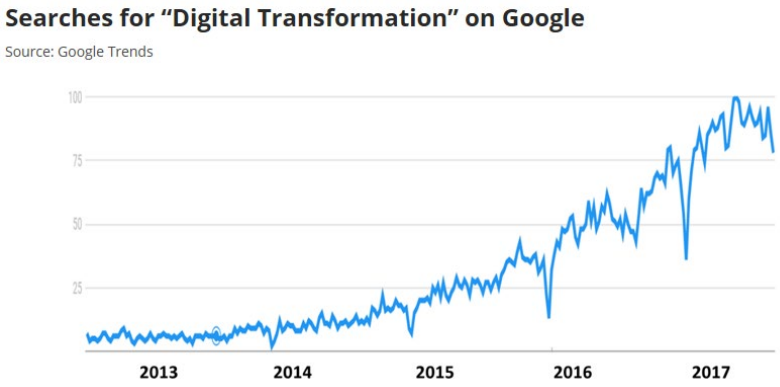
“Digital Transformation”?



What does it mean to you?

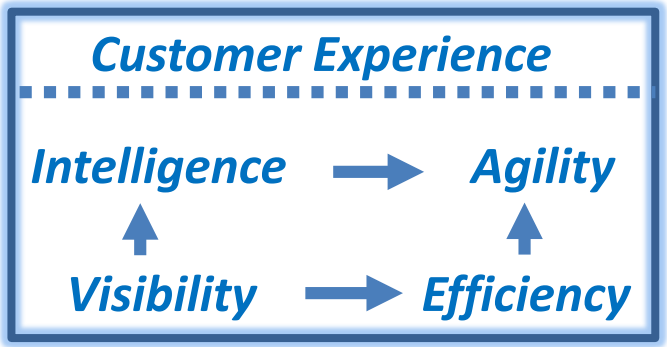
- *“Digitizing all transactions”*
- *“Connecting transactions and sharing plans electronically with partners”*
- *“Replacing people with electronics and computing power”*
- *“Data communications replacing verbal, manual, paper based processes”*
- *“Eliminating info flow gaps and disruptions; adding transparency”*
- *“Better visibility and tracking”*

Where are you in the journey to “maturity”?

- *“In infancy. Don’t have a strategy yet, embarking now to establish best in class.”*
- *“No well-defined roadmap.”*
- *“We don’t have a strategy.”*
- *“Several key initiatives under way; others planned about 2 years out.”*
- *“Don’t really have guiding strategy. No one at the top really pushing the agenda.”*

Digital Supply Chain Transformation is about Capabilities

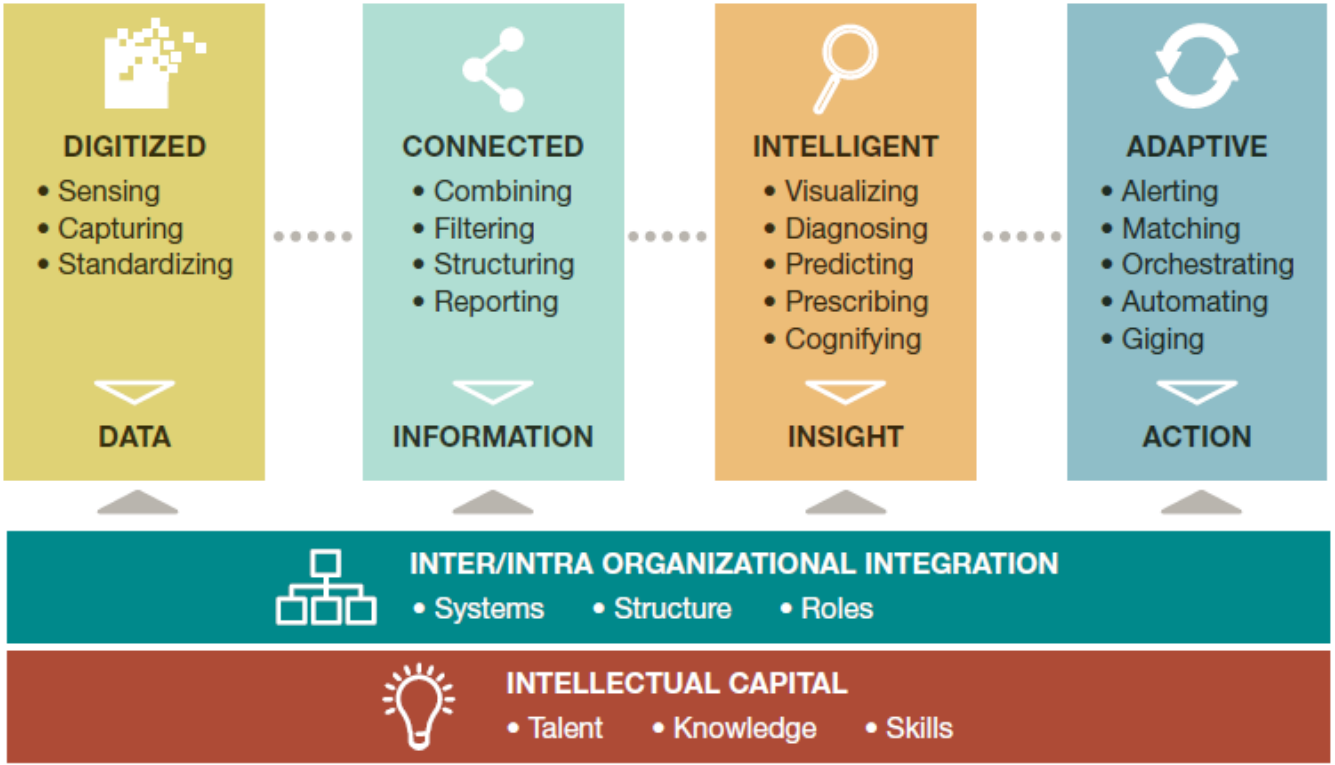
Developing <u>insight</u> + <u>automation</u> to radically advance:



Technologies enabling the digital supply chain

TYPE OF TECHNOLOGY	CAPABILITIES	EXAMPLES
ANALYTICS/ DECISION TECHNOLOGIES	Provide computing power, intelligence, and data management, making higher-quality decisions faster	• Advanced planning systems (APS) • Supply chain network design • Management and execution systems (TMS, WMS, MES, YMS, OMS) • Forecasting and demand management • Advanced analytics and machine learning
PROCESSING TECHNOLOGIES	Automate transactions and material processing to provide 24/7 resource availability, faster processing, improved consistency, and cost	• Programs, software robots • Computer-aided design and machining, 3D printing • Industrial robots, flexible manufacturing systems (FMS) • Drones and autonomous vehicles • Automated storage and retrieval systems (AS/RS)
COMMUNICATIONS TECHNOLOGIES	Create greater accuracy, currency, connectivity and visibility, speeding flows of richer forms of information	• Sensors, scanners and radio frequency identification (RFID) • The Internet: Wi-Fi, narrow band, cellular, microwave, radio, etc. • Satellites, fiber optics, etc. • Electronic data interchange (EDI), global data synch network (GDSN)
INTEGRATIVE/ PLATFORM TECHNOLOGIES	Combine data management, communications, visibility, traceability, decision support, and processing capabilities	• Cloud computing and services/blockchain • Mobile applications and wearables • Augmented and virtual reality, global positioning systems (GPS) • Enterprise resource planning (ERP). product life cycle management (PLM), relationship management (CRM, SRM, CPFR)

Core attributes of digital supply chains



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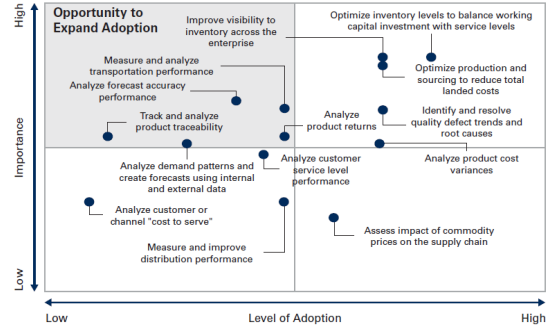
Agile Transformation Roadmap

Existing "selection" frameworks are mostly tactical, opportunistic, and dis-integrated

FIG. 3 Supply chain analytics use cases: adoption vs. importance ratings



Source: Supply Chain Digital Transformation Study, The Hackett Group, 2017

How One Company Prioritized Supply Chain Improvement Opportunities

PROCESSES	Planning		Sourcing	Manufacturing plant logistics	Warehousing		Distribution	Order
SOLUTIONS	Commercial planning	Demand forecasting	Improved supplier evaluation and coordination	Real-time production measurement	Dynamic inventory rebalancing	E2E visibility of materials and products	Optimization of transportation management	Order and delivery transparency for customers
Evaluation criteria								
Business case	Neutral	Very favorable	Favorable	Favorable	Very favorable	Very favorable	Very favorable	Favorable
Time to impact	Medium	Short	Medium	Long	Medium	Long	Medium	Long
Ease of implementation	High	Medium	High	Low	Medium	Low	Medium	Low
Pain points addressed	Many	Many	Some	Many	Many	Many	Many	Few
Technological feasibility	High	High	High	Low	Medium	Medium	High	Low
Overall recommendation	Wave 2 implementation	Wave 1 implementation	Wave 2 implementation	On hold	Wave 2 implementation	Wave 1 implementation	Wave 1 implementation	On hold

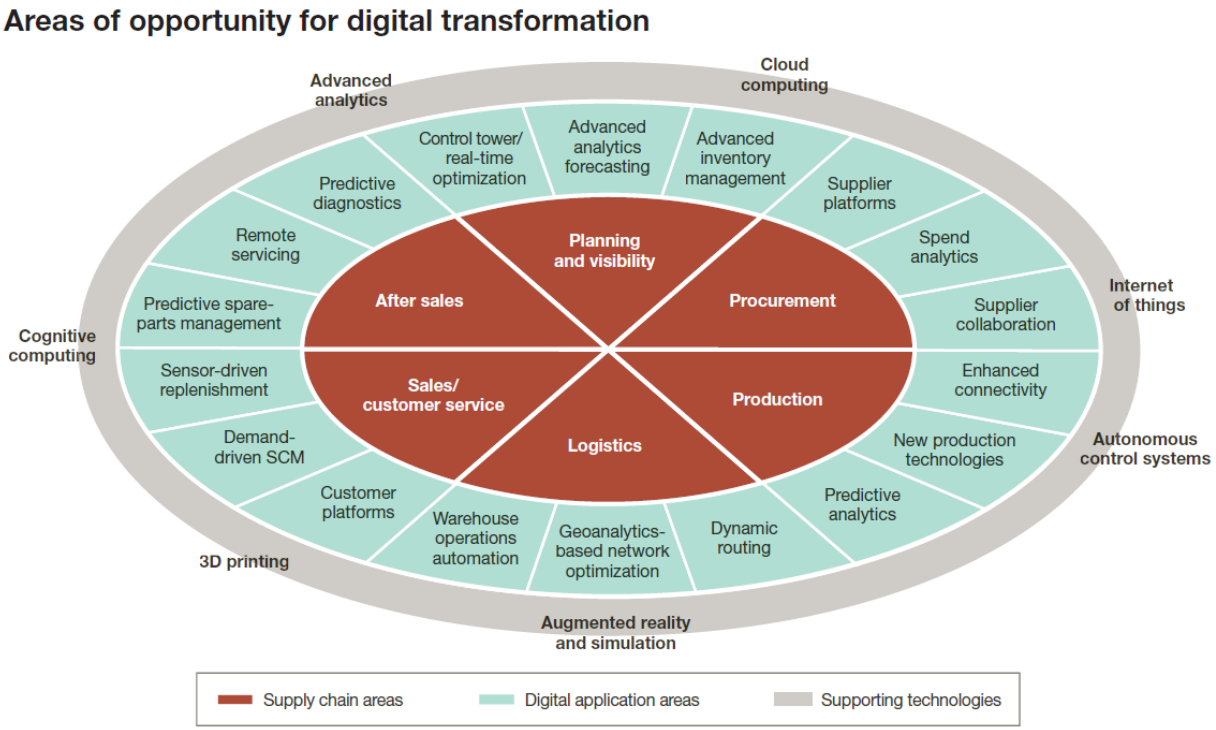
Source: BCG analysis. **Note:** E2E = end to end.

- An effective roadmap integrates:
  - Opportunities/pain points driving near-term process improvements
  - End-to-end business model vision
  - Potential process disruptions
  - Parallel efforts/projects
- Project portfolio development and selection should be driven by:
  - Business strategy/differentiation plans
  - Forecasts of technology evolutions
  - Internal and partner capabilities assessment (current and future)

Roadmap Perspectives

- SCM Functions
- Solutions/partners
- Systems/data
- Capabilities
- Organization/processes
- People
- Strategy

A Functional Perspective



Source: BCG analysis

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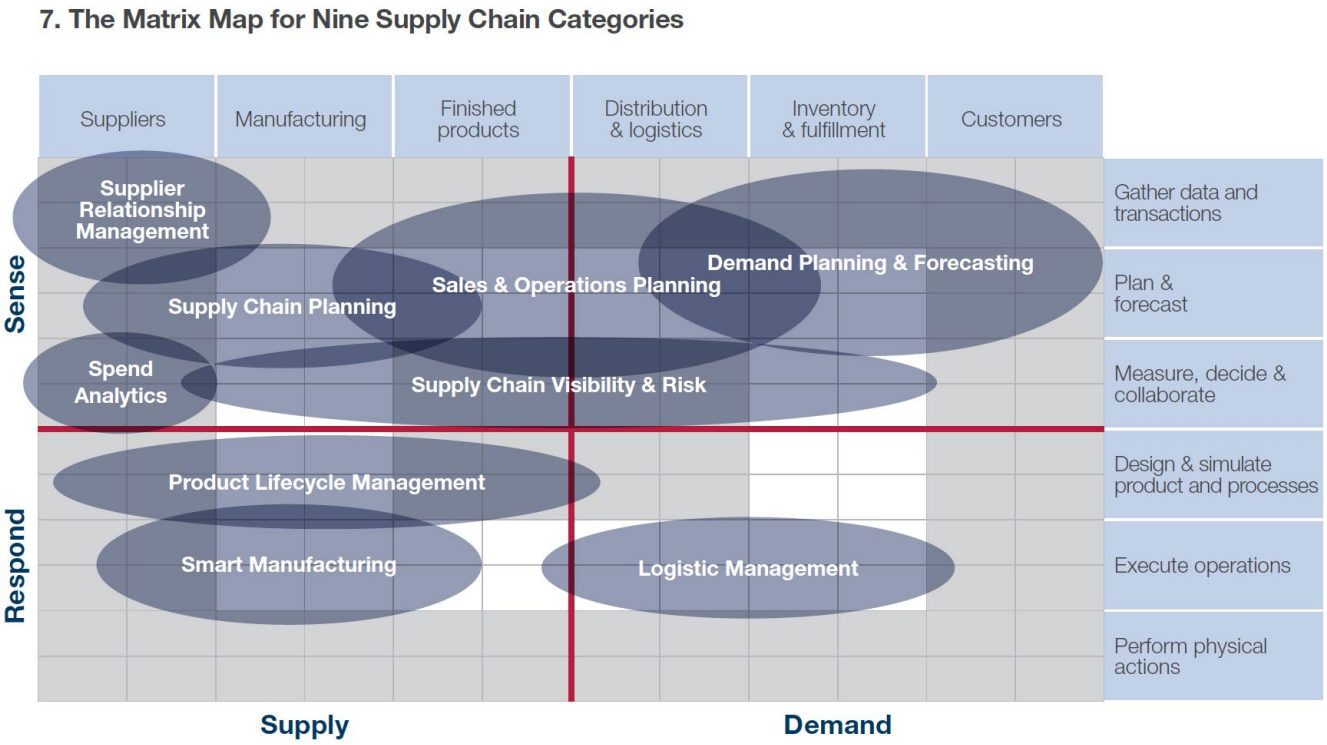
Another Functional Perspective



Source: Gartner/SCM World

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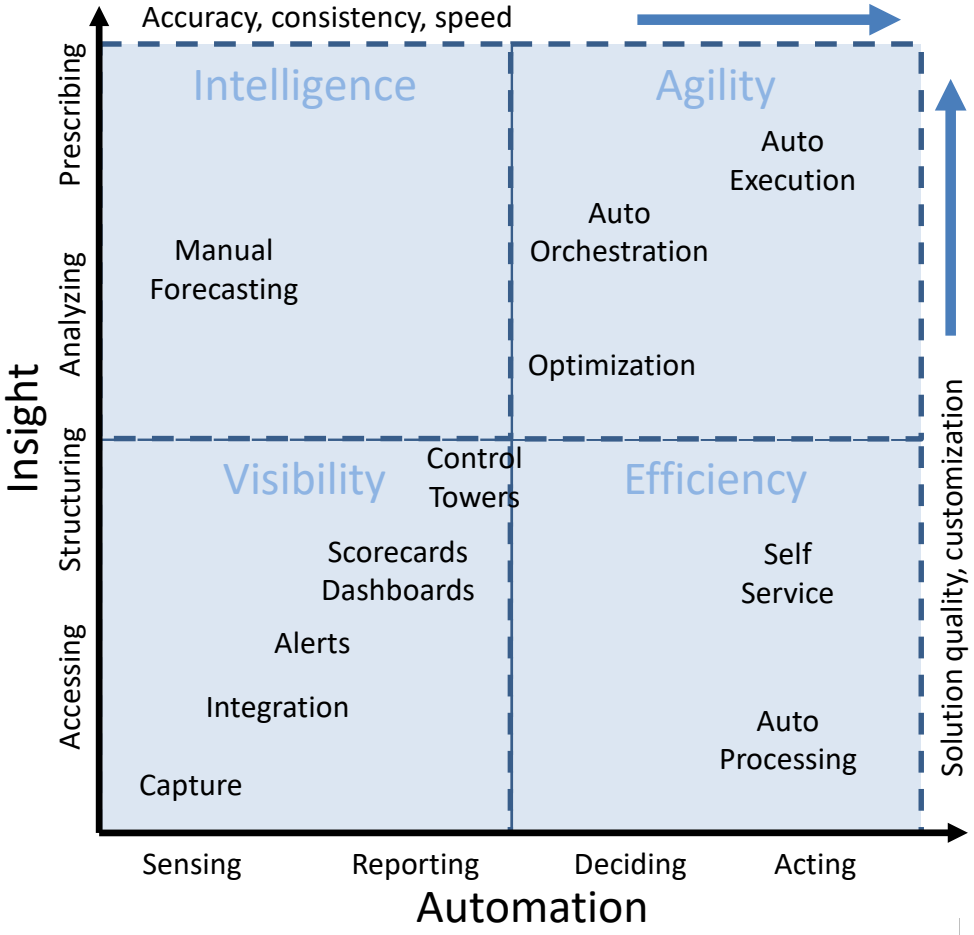
Digital Supply Chain Capabilities Perspective



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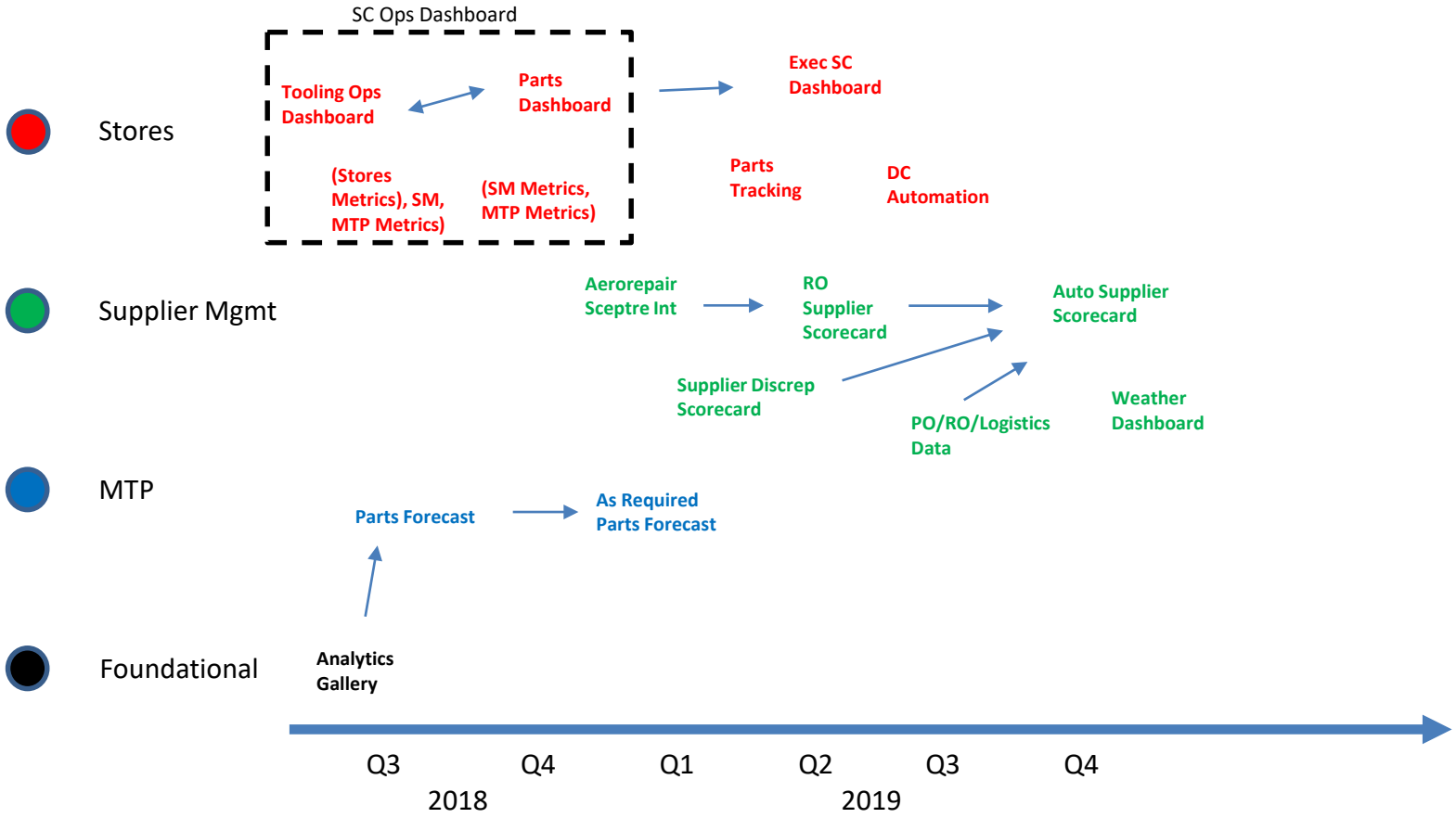
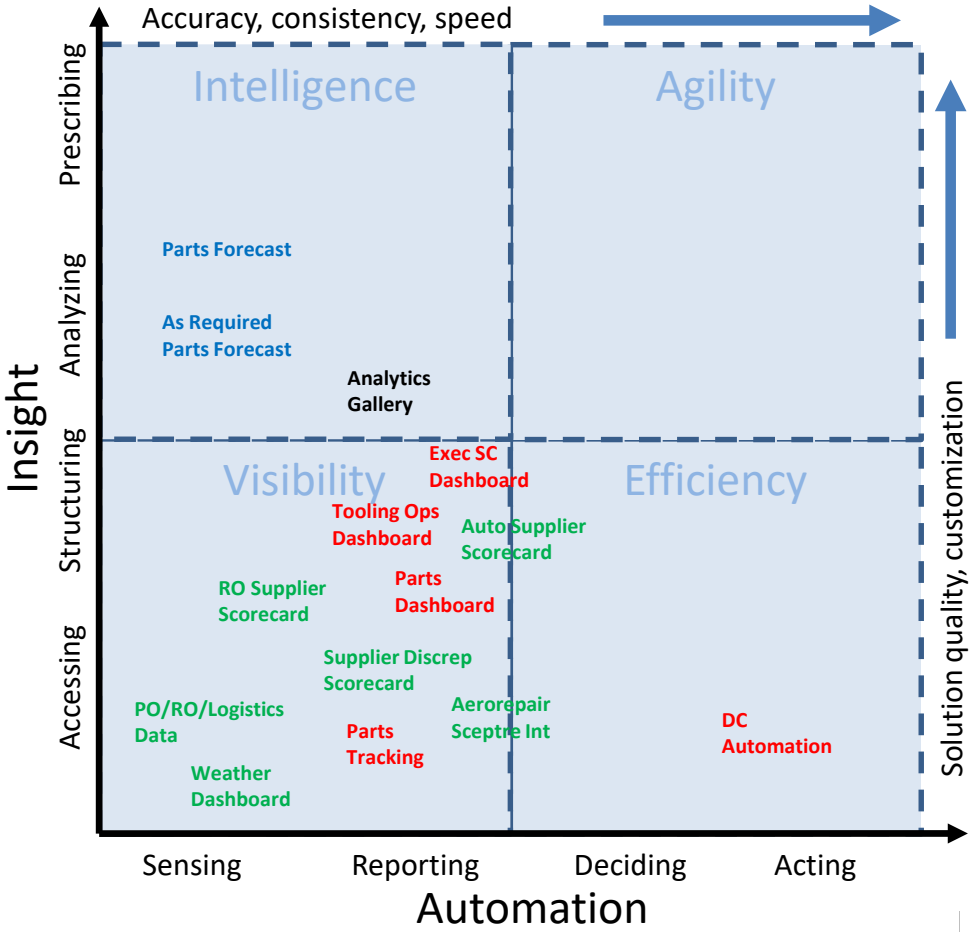

SC Ops Dashboard
Stores
Tooling Ops Dashboard
Parts Dashboard
Exec SC Dashboard
(Stores Metrics), SM, MTP Metrics)
(SM Metrics, MTP Metrics)
Parts Tracking
DC Automation
Supplier Mgmt
Aerorepair Sceptre Int
RO Supplier Scorecard
Auto Supplier Scorecard
Supplier Discrep Scorecard
PO/RO/Logistics Data
Weather Dashboard
MTP
Parts Forecast
As Required Parts Forecast
Foundational
Analytics Gallery
Q3
Q4
Q1
Q2
Q3
Q4
2018
2019

Digital Supply Chain Capabilities Perspective



- Stores
- Supplier Mgmt
- MTP
- Foundational

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Guidelines for Transformation

- Put someone in charge, with guiding coalition
- Customer/mission centricity/guiding vision
- Think “capabilities” rather than “solutions”
- Drive for end-to-end visibility + strategic differentiators
- Prioritize organization (people and process) along with technology
- Capitalize on opportunities created by other org initiatives

Thank You!

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