



Digital
Supply
Networks

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Partner
Supply Chain

Location: Shanghai

Professional background

Jessie is a Partner at Monitor Deloitte based in Shanghai. Jessie specializes in digital supply chain, network planning, new retail and omni-channel related offerings for consumer and retail clients. Prior to joining the Monitor Deloitte, Jessie was a Senior Principal at A.T. Kearney Shanghai office.

Jessie graduated from New York University, Stern School of Business with a degree in MBA. She is fluent in English and Mandarin Chinese.

Project experience

- Global Sportswear Company / Supply Chain Network Planning – Developed logistics network to enable the client’s fast-growing digital business; Established the first global digital satellite DC for the client to enable premium and responsive service for fast-growing digital business; Optimize assortment planning and inventory strategy for brick and motor channel
- Global Retailer / China E-commerce Network Design – Developed supply chain network planning for the client’s e-commerce market entry in China, designed operating model and warehouse operations
- Leading Chinese Apparel Company / Supply Chain Network Planning – Designed supply chain e-commerce and offline network across four different brands; Explored innovative model for client’s supply chain network
- Global Consumer Electronics Manufacturer / Supply Chain Transformation – Developed the supply chain model and process to migrate the client’s production site from Europe to China
- Global Food & Beverage Company / Post Merger Integration – Provided pre-closing integration planning and post merger commercial strategy for a European consumer giant to acquire infant nutrition business unit from a leading US pharmaceutical company
- Global Food & Beverage Company / Strategic Sourcing – Assessed potential savings, developed category sourcing strategy and supported implementation (i.e. RFP, negotiation, etc.)

Professional qualifications, affiliations, accomplishments

- MBA – New York University, (NYU), Stern School of Business

Prior Experiences (*optional*)

- A.T. Kearney, Shanghai

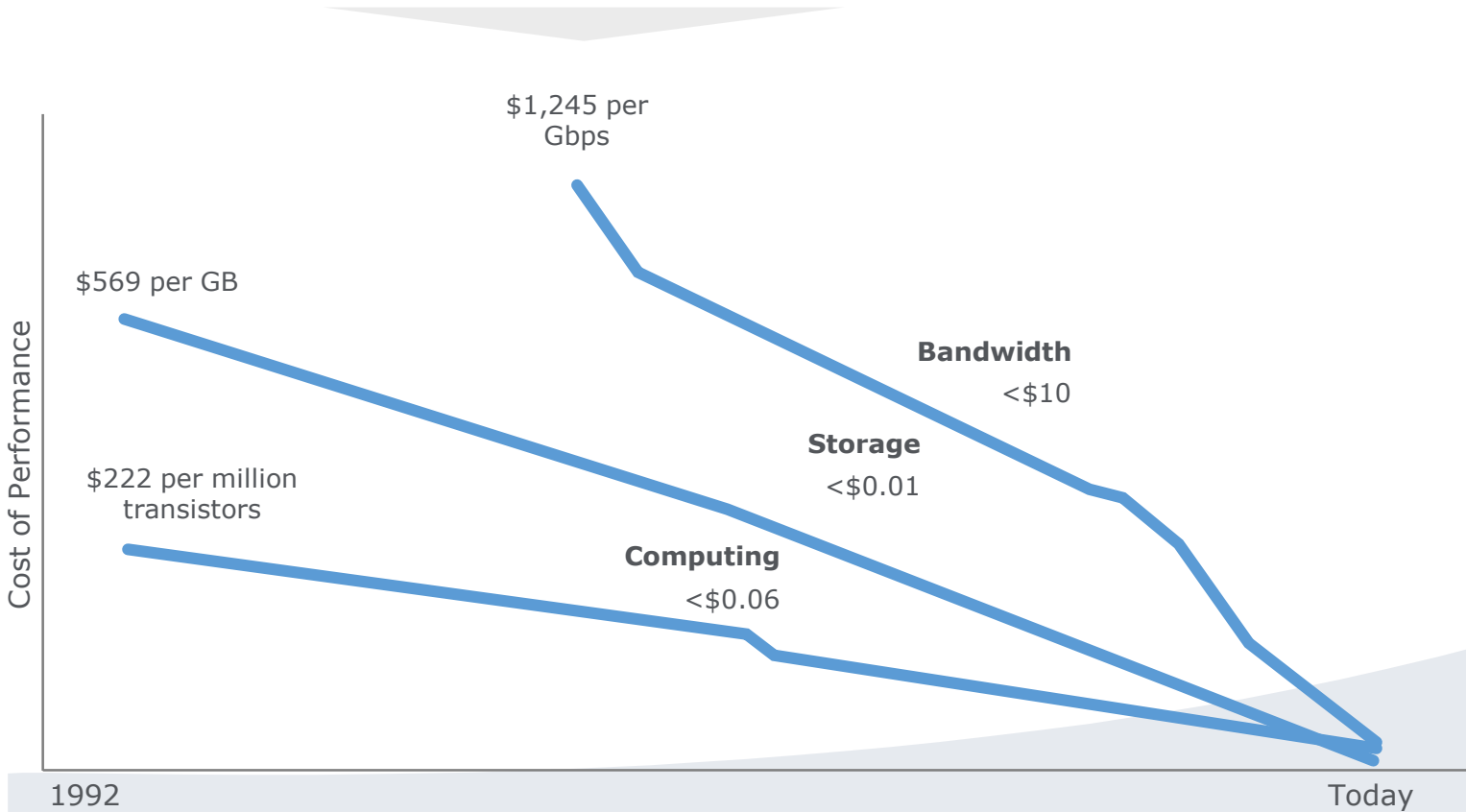
Major clients served

- Nike
- Converse
- VF
- Anta
- Fila
- Nestle
- Mondelez
- Walmart
- Mitsubishi
- PepsiCo
- Haier
- Yili
- SGM
- Motorola
- BHMC
- Siemens
- Stanley Black & Decker
- Etc...

Supply chain disruption

The rise of exponential technologies has created a burning platform: disrupt or be disrupted

Exponential Technology Change...



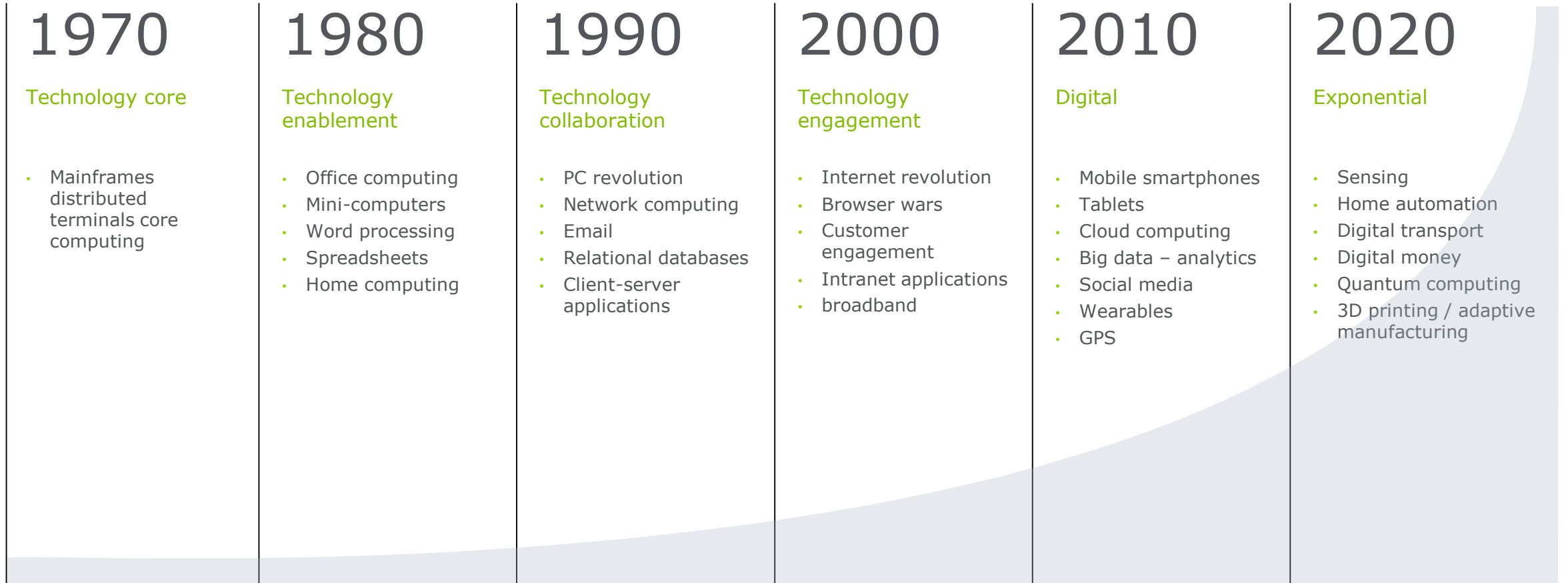
...Disrupting Supply Chains Across All Industries



Source: Deloitte University Press

Technology cycles

Technology eras are characterized by exponential growth and connectivity



4th industrial revolution

Leaders are combining information technology and operations technology to create value in new and different ways – from “machines replacing muscle” to “machines replacing and augmenting human minds”



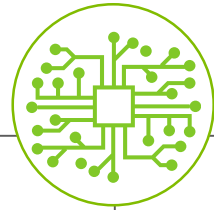
Late 18th century

Power Generation
Steam engines and hydraulic power
=
Productivity and industrialization



Early 20th century

Industrialization
Electricity and assembly lines
=
Mass manufacturing and improved infrastructure



1970s to 2000s

Electronic Automation
Computers and Internet Connectivity
=
Access to information and enhanced decision-making capability



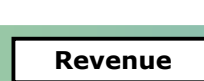
4th Industrial Revolution

Digital Supply Networks
Vast network of cyber-physical systems
=
Connected products, customers and supply chain

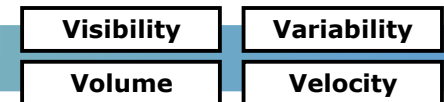
Optimize Traditional Objectives...



...and New Objectives...



...By Better Managing



DSN thinking

Leveraging new technologies to drive better integration across platforms

Develop

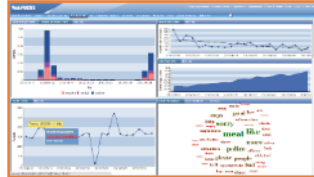
Additive manufacturing



A tire company uses additive manufacturing to rapidly create prototypes with little additional cost, helping to improve their product designs with the support of physical models.

Plan

Social media analytics



A large global retailer analyzes social media chatter to optimize local inventory assortment and enhance inventory planning (e.g., a spike in social media activity about an upcoming phone launch helps buyers improve their purchasing decisions).

Source

Predictive analytics & visualization



A high-tech manufacturer uses a web-based Intelligent Control Tower platform to gain granular insight into supply chain activity across their component suppliers. Predictive analytics and visualizations help pinpoint areas of concern before they become problems.

Make

Robotic automation



A pharmaceutical company is using robots to automate packaging, kit assembly, machine-tending, and R&D testing duties.

Deliver

Augmented reality



A third party logistics company is combining wearables and augmented reality to implement "vision picking" in warehousing operations to enable hands-free order picking. Pilots show up to 25% improvement in labor productivity.

Support

End-to-end supply chain visibility

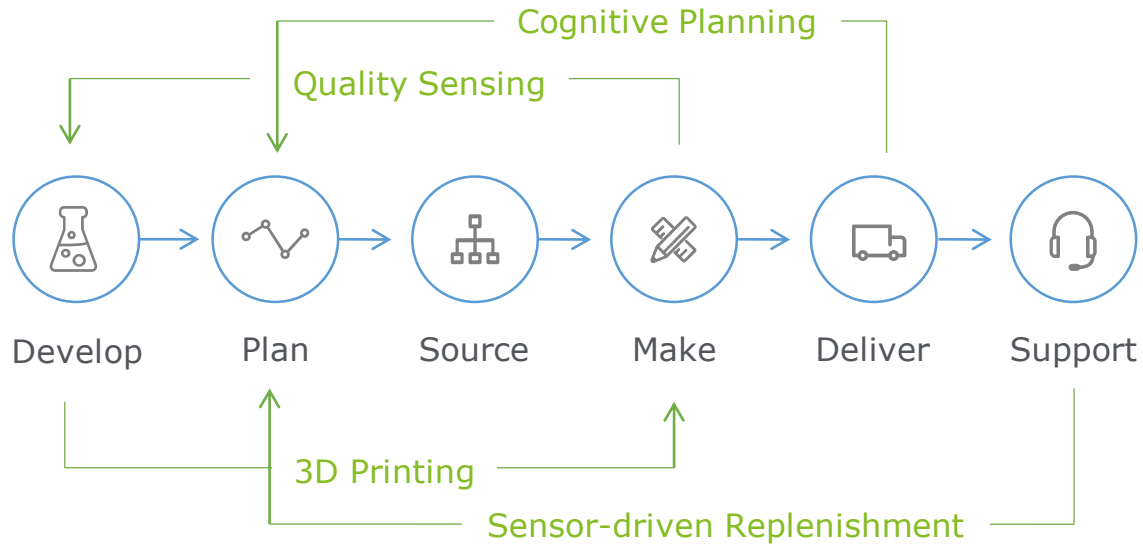


A quick serve restaurant allows the customer to scan a QR code on a burger container to access end-to-end supply chain visibility, based on the customer's location and the date/time. Augmented reality technology shows customers where the ingredients in their meal were sourced, processed, and distributed.

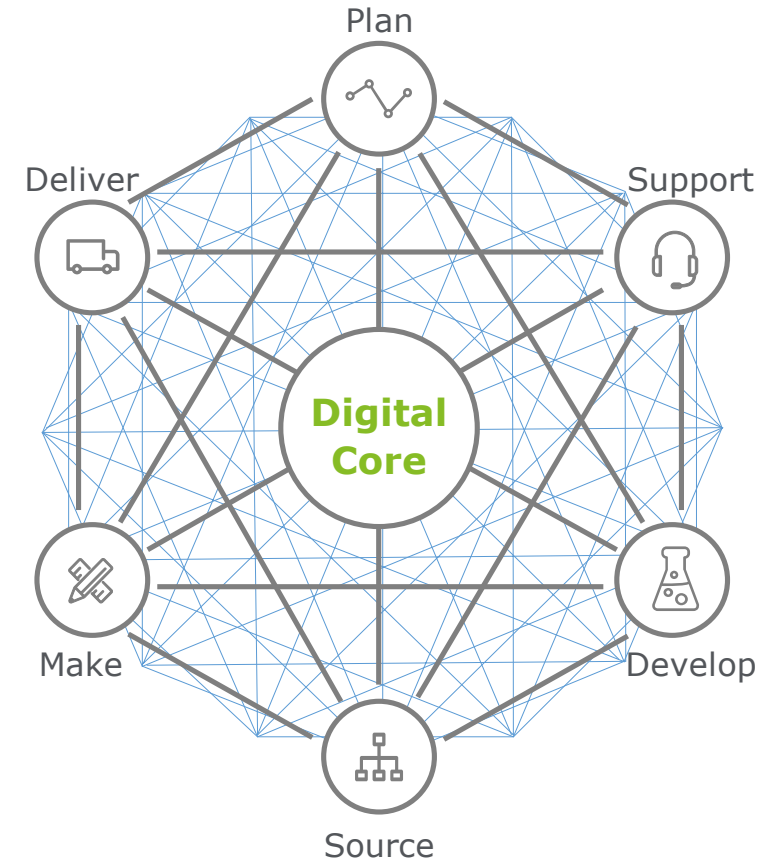
Collapsing the supply chain

Traditional, linear supply chain nodes are collapsing into a set of dynamic networks, allowing dramatically increased differentiation

Traditional Supply Chain



Digital Supply Networks



DSN characteristics

Digital Supply Networks are “Always-On” – dynamic, integrated networks characterized by a continuous flow of information and analytics



“Always-On” Agility

DSN’s continuously pull traditional datasets along with new datasets that are, for example:

- sensor-based
- location-based

Outcome: Integrated views of the supply network and rapid, no-latency responses to changing situations



Connected Community

Real-time, seamless, and multi-modal communication and collaboration with:

- suppliers
- partners
- customers

Outcome: Network-wide insights from centralized, standardized, and synchronized data



Intelligent Optimization

A bi-directional loop of learning is created by combining:

- humans
- machines
- data-driven analytics

Outcome: Optimized human-machine decision making for spot solutions



End-to-End Transparency

Use of sensors and location-based services provide:

- material flow tracking
- schedule synchronization
- balance of supply and demand
- financial benefits

Outcome: Increased visibility into critical aspects of the supply network



Holistic Decision Making

Transparency of information across all functional silos allows for visibility into each area in parallel, such as:

- performance optimization
- financial objectives
- trade-offs

Outcome: Better decision-making for the network as a whole

Implications



Companies can achieve new levels of performance, improve operational efficiency and effectiveness, and **create new revenue opportunities**



As companies leverage their full supply networks, the **traditional barriers of time and space shrink**

Strategic choice cascade

Indeed, "Always On" dynamic networks can now be more effectively tied to the broader business strategy and become a source of competitive advantage



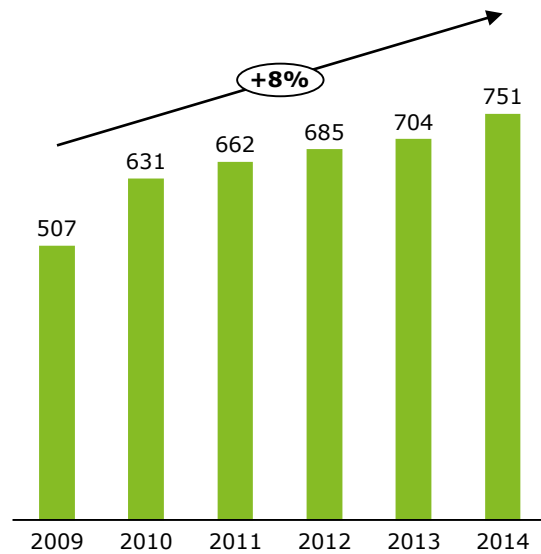
Trend 1: Network planning intensification & sharing of logistics operation

Logistics industry is developing in the direction of increased scale, intensification and refined operation

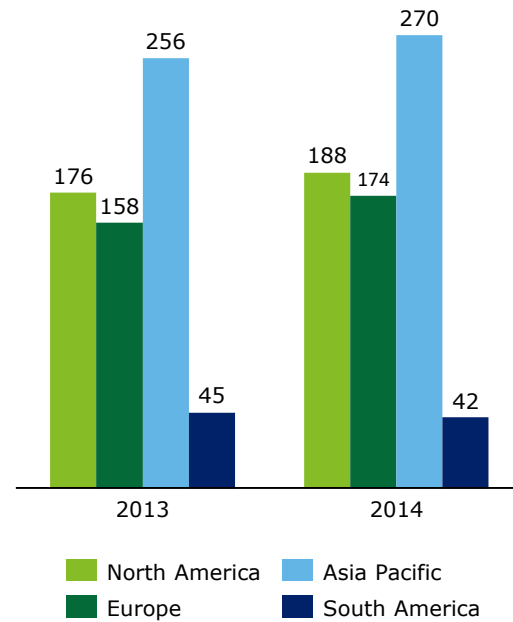
Logistics development trend

3PL increase rapidly

Global 3rd party revenue scale (billion dollars)



Regional 3rd party logistics revenue scale (billion dollars)



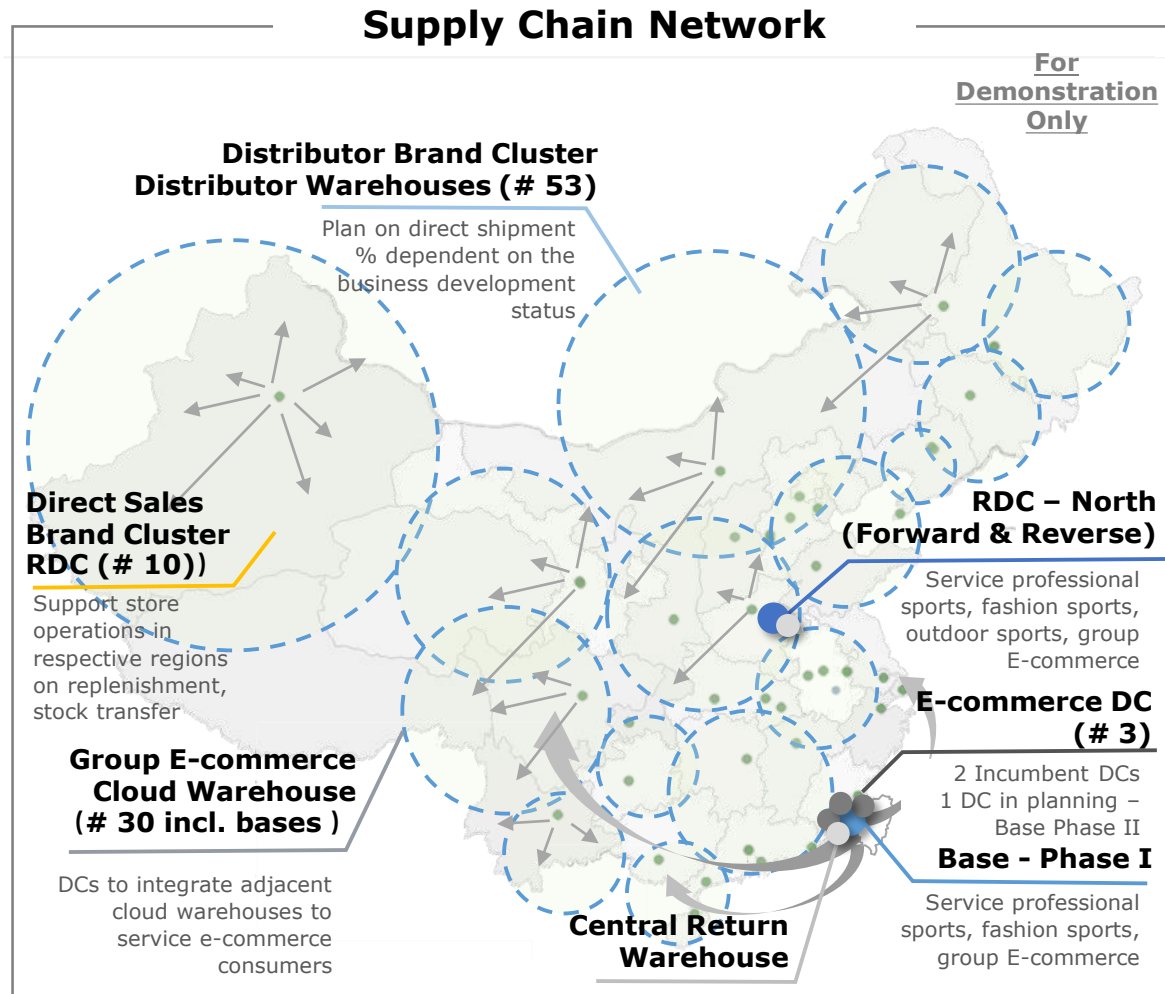
Logistics giants share resources



- As industry leaders opening up ecosystem and platform, they provide service on data, finance, management etc.
- Sharing economy is a revolutionary opportunity to boost more agents and solution providers within the industry

Case 1 – Network design

To design the logistic network, the project team has deep dived around 5 key issues for different brand clusters and generated insights and conclusions



Source: Deloitte Analysis

- 1 Future network design for distributor Brand Cluster**
- 2 Future network design for self-owned retail brand cluster**
- 3 Positioning of e-commerce DCs**
- 4 Future network design for international brand cluster**
- 5 Future network design for central return warehouses**

Trend 2: Omni-channel order delivery connected inventory

Cross-channel delivery requires integration between order and inventory management system

Order delivery management

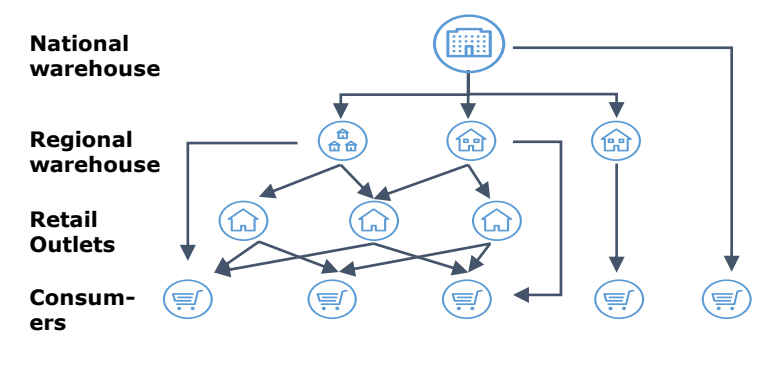


Characteristics of Demand

	Retail	Wholesale
Client	End consumers	Stores, distributors
Order/day	Large volume without plan	Small volume with plan
Order line item	Usually a few	Usually a lot
Ave. order/client	Relatively fewer	Relatively more
Delivery time	Quick response	According to timeline
Order accuracy%	High requirement (100%)	High requirement
Volatile orders	Extremely volatile (promotion)	Relatively stable
Return	Relatively more	Relatively fewer(planned)
Delivery model	Mainly express	Logistics

Supply chain operation needs to adapt front-end business changes

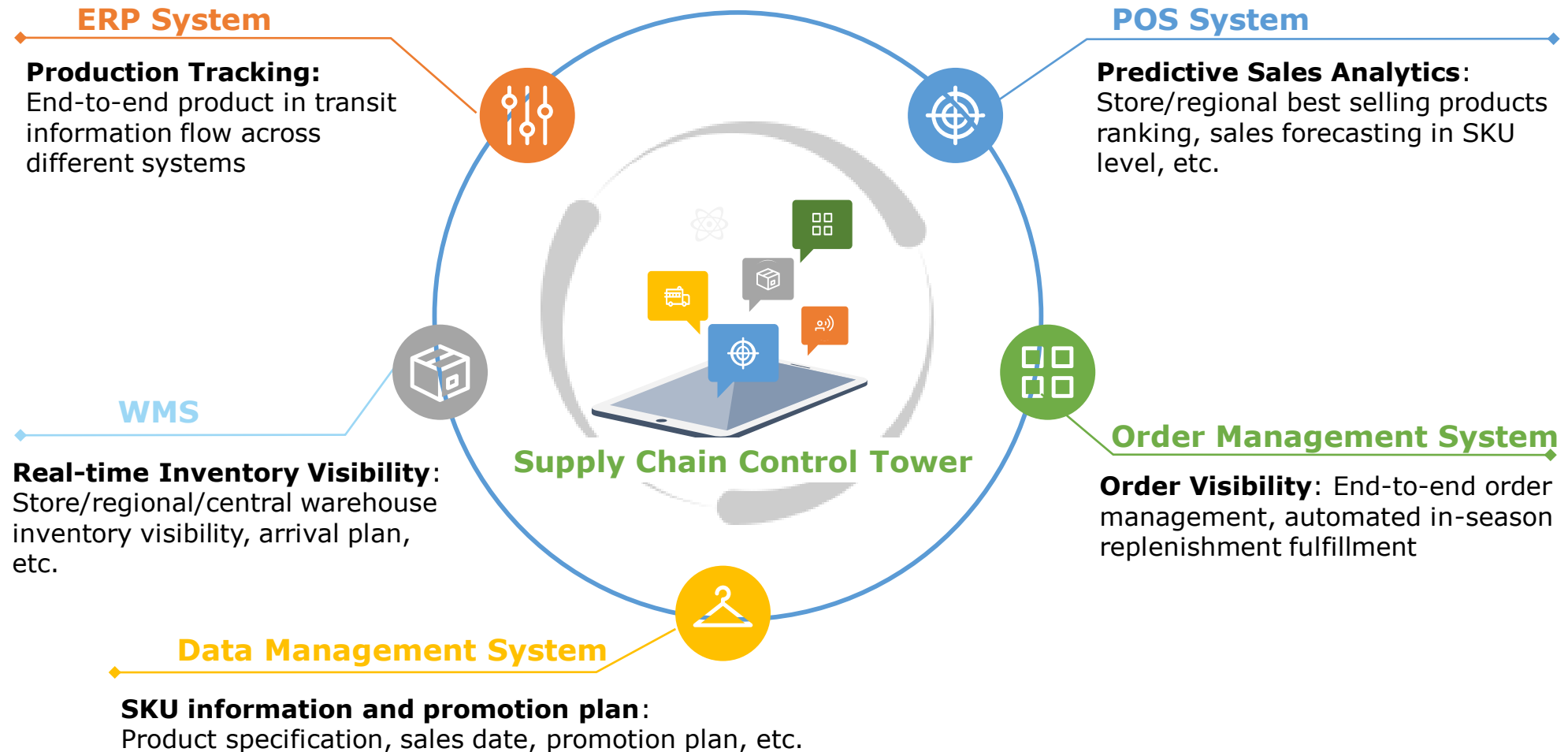
Omni-Channel order delivery networks (example)



Different levels of order delivery points have different capacity and priorities to balance cost

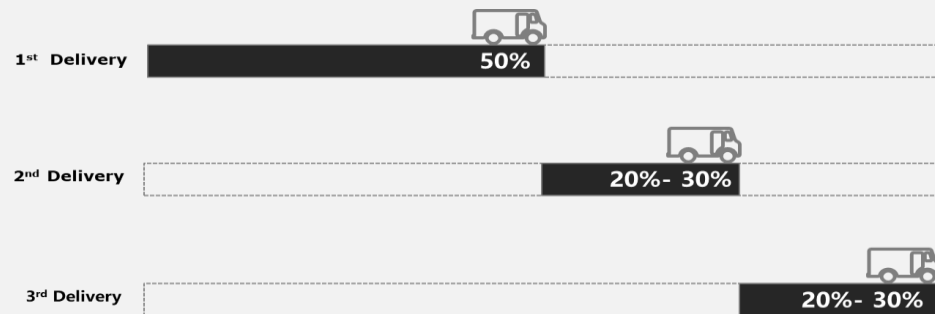
Case 2: End to end inventory visibility

The control tower enables real-time inventory data transparency from store to factory via integration with core systems



Case 2: Agile replenishment flow

End to End visibility guarantees automated and agile replenishment flow from factory to DC or DC to stores



Agile and Flexible Deliver Model:

- 1st Delivery - 50% Vol, based on historical sales volume
- 2nd Delivery – 20%~30% Vol , based on demand forecast, and actual sales volume analysis from POS data
- 3rd Delivery – 20%-30% Vol, based on actual sales feedback from sales terminals, if the product is hot sku, DC can add additional 10% vol to factory



Real time System:

- 15-min real-time end-to-end inventory visibility covering across all channels enabled by store-level RFID
- Real time sales and inventory update with POS synchronizing data with connected inventory system

Fully automated replenishment system:

- By adjusting minimum display parameter in the system for high-heat SKUs, the control tower will automatically trigger replenishment orders to stores without any manual calculation or delay

Intelligent Inventory Management

- System run daily check on inventory, once SKU reaches to safety stock level, system would trigger orders automatically

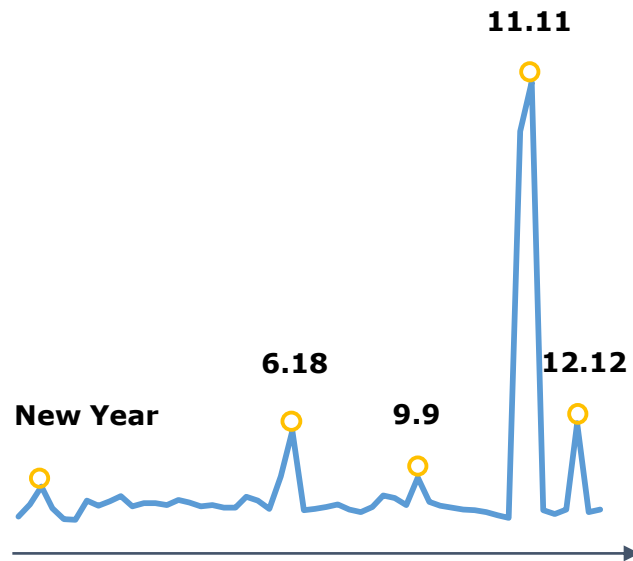
Trend 3: Demand and supply planning high consumer expectation for service

Growing expectation from customers requires brand retailers to respond to market volatility effectively

Constant promotions leads to volatility in demand

Volatility in market demand

2016 sales fluctuation of anonymous brand on TMALL

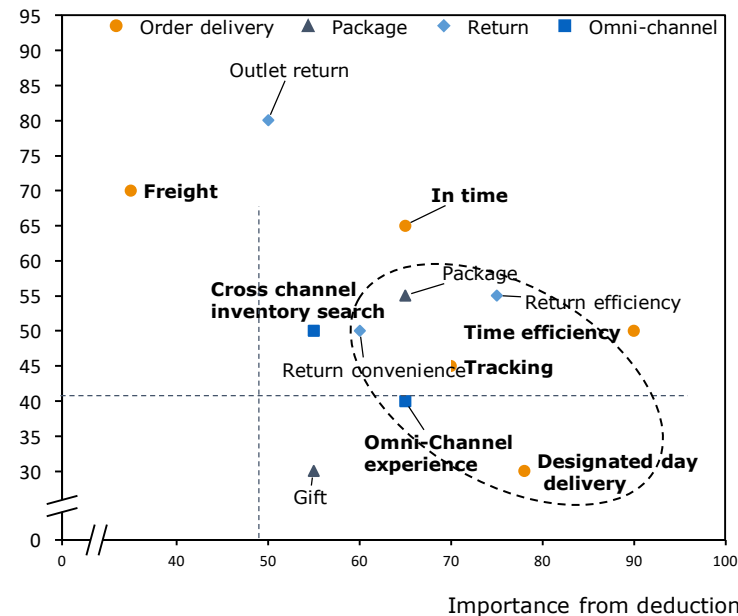


Source: Deloitte Analysis

Expectation of high service quality and time efficiency for order delivery

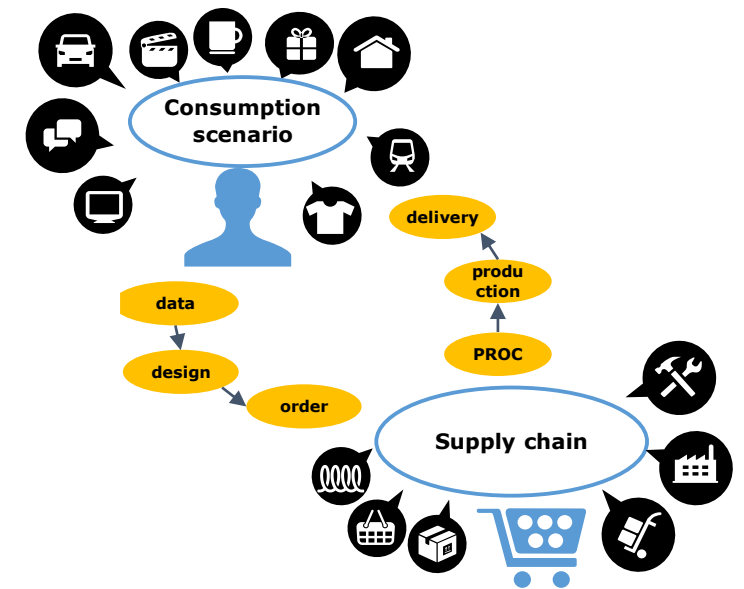
Order delivery is crucial determinants in consumer satisfaction

Importance from expression



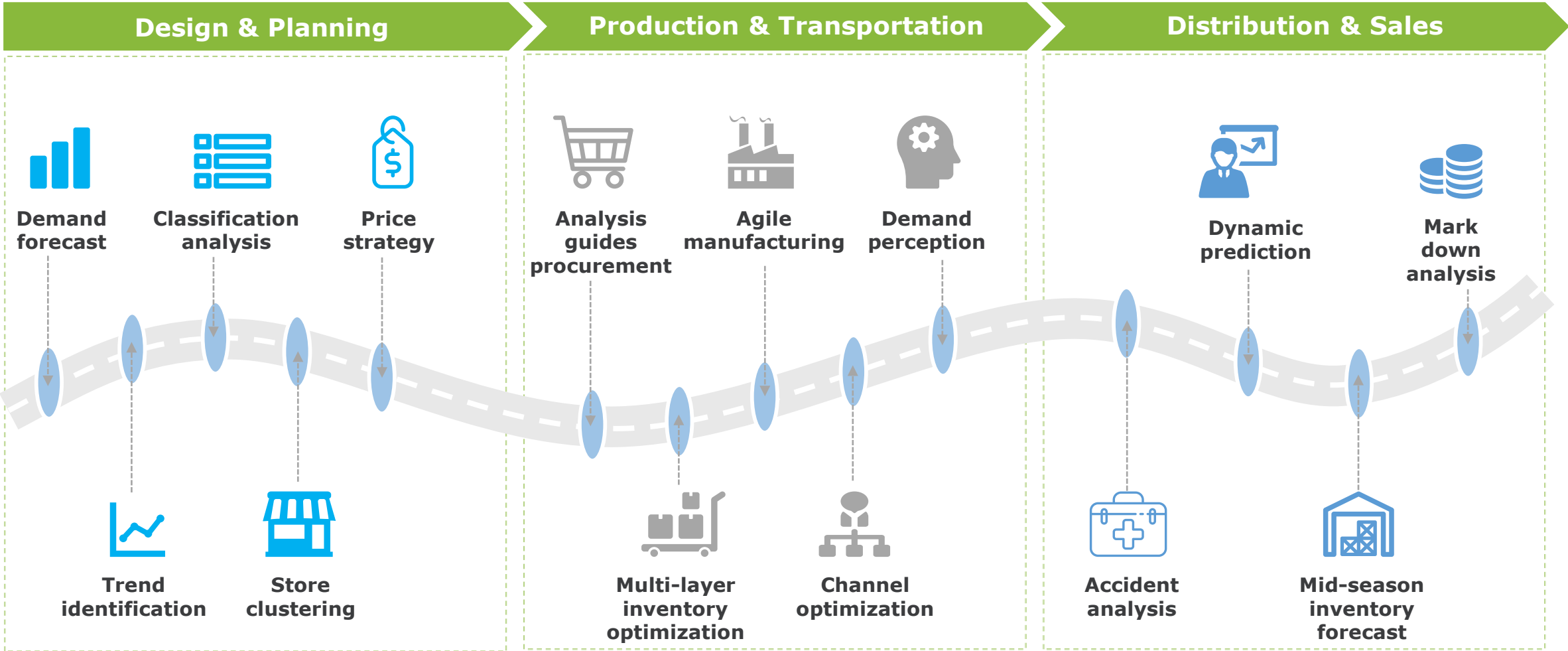
Demand for personalization and customization will remain strong

Personalization-led lifestyle



Case 3: Data enable business optimization

We have helped the client evaluate the entire value chain and selected the key modules to conduct sales forecasting

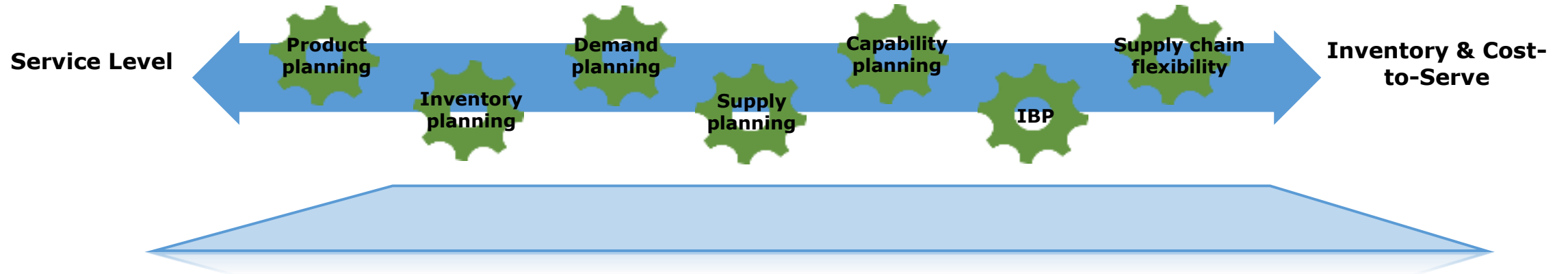


Source: Deloitte Analysis

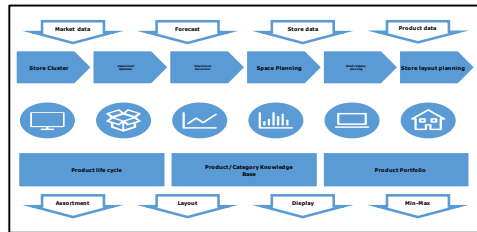
Case 3: AI enabled planning and coordination

Brand retailers should focus on supply chain planning with improvement on cross function coordination, accuracy of forecast and the flexibility to fast responsiveness

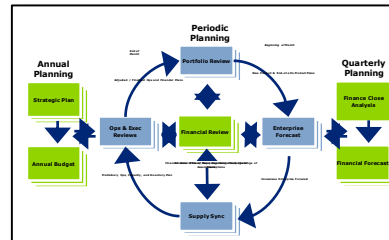
Supply chain management based on planning, achieves a balance between cost and service level



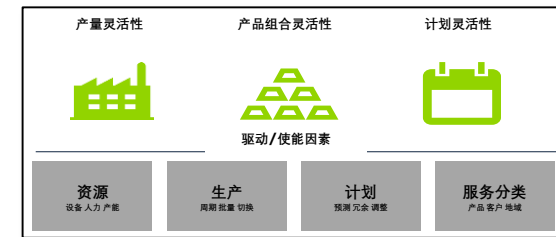
Product & Category Management



Integrated Planning



Supply Chain flexibility



Our clients are all asking the same question: How do we get started?

ESTABLISH A DIGITAL FOUNDRY

Identify a visionary program leader and assemble a team to accelerate your digital goals. Determine a governance model and understand policies that might need to be adapted to execute successful change management and ensure the solution is absorbed into the business fabric

THINK BIG



Immerse Yourself in Innovation

Join an immersive experience (e.g., tour an IoT lab) to explore the “art of the possible”, incite ideas, and cultivate a culture of innovation



Build Your Ecosystem

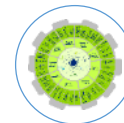
Evolve your supply chain into “value webs” by collaborating with suppliers, engaging with niche players, and sharing and/or offloading assets

START SMALL



Scaling the Edges

Disconnect from the core business and set up a “black ops” team to enable disruption within an established organization



Pick One or Two Plays

Prioritize your desired tactics and pick just one or two to get started in order to establish proof of concept

ACT FAST



Prove it Works (Quickly)

Use an agile, iterative approach to move from strategy to prototyping as quickly as possible – “fail fast” and achieve rapid results



Market Your Own Success

Champion your successes to gain traction and achieve enterprise-wide adoption

Deloitte. Digital

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