

Introduction

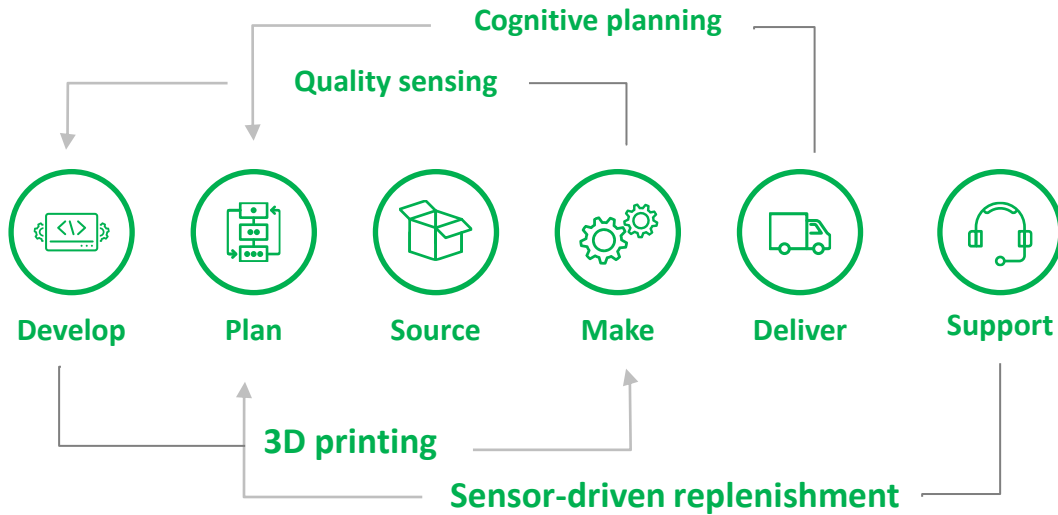
Industry 4.0 – the fourth industrial revolution creating unprecedented & exponential growth in companies' design, manufacture, distribution, and products. New technologies including Sensors, Artificial Intelligence, Cloud Computing, and Predictive Analytics will rapidly change your way of business. In this article, we will discuss what are the benefits of switching your manual supply chain into a digital supply chain in a cost-effective manner with a highly efficient ITC Infotech team. Think of Supply Chain Logistics, product moving from point A to point B, the complexity involved is now handled manually in your business. The dearth of transparency is costing your company time and money.

The customer expects live tracking of their ordered products, and the same feature is being offered by e-commerce giants like Amazon and FedEx. Trust and satisfaction are the paramount pillars of a business. Transparencies, Streamlining, pinpointing the problems, and immediate solutions will enhance your customer satisfaction, thus increasing business.

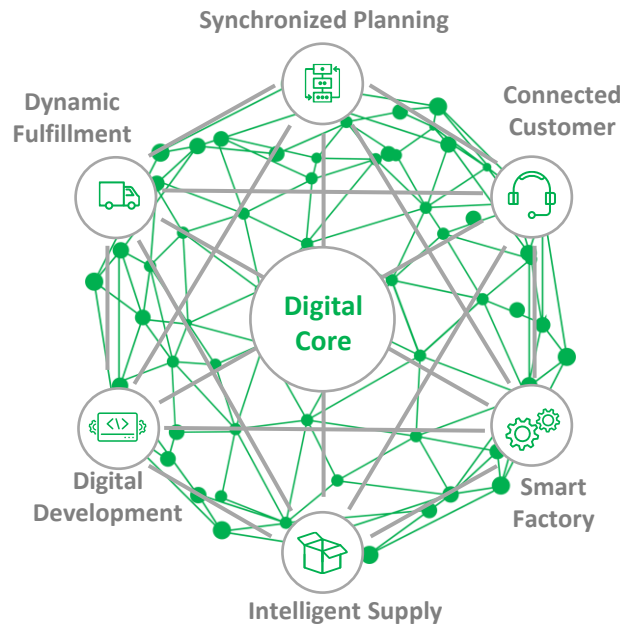
This transformation is only possible by implementing a digital supply chain, now is the time to brainstorm and move ahead with the momentum.



Manual Supply Chain Challenges and future strategies:



In a traditional SCM model, the flow of material starts from development, then comes the planning part followed by sourcing from a supplier, then assembling or making it in-house. Once the product is made, distribution and delivery start playing a pivotal role and the customer support team leverages their aid.



In a Supply Chain Digital Model, a digital core will be connected to all the modules like synchronized planning, dynamic fulfillment, smart factory, intelligent supply, etc.

Now the challenges in traditional models are roadblocks, bad weather, traffic jams, malfunctioning equipment, and other external factors. These complicate the process and sometimes become inoperable. The COVID-19 pandemic has exposed vulnerabilities in traditional supply chains. This demanded organizations move to Digital solutions to build resilience and agility to eradicate unexpected disruptions.

With the progress of Artificial Intelligence (AI), the Internet of things (IoT) & other highly intelligent technologies, companies are finding traditional supply chains becoming difficult to support the interconnected and collaborative environments whereas consumers who are already present in the digital space, demand the digital transformation.

Brief Overview about Digital Transformation:

Three main points to be remembered

Digital transformation is integrating advanced digital solutions in your logistics and supply chain applications to reimagine and optimize internal processes and customer experience

Digital Solutions is to improve how goods are produced, distributed, and delivered

Most importantly, digital transformation is not just converting manual processes to digital one, it also ensures that all solutions work cohesively with each other to provide a more user-friendly and sophisticated management process

Key components of Digital Supply Chain

Data Analytics

Data is the heart of business, bringing out valuable insights from this data requires advanced analytics and big data technologies. Starting from inventory levels to transportation routes to customer preferences to demand patterns, all generate huge data, in this scenario, predictive analytics can help forecast demand more accurately, optimize inventory levels, and identify potential disruptions before they take place

Internet of Things (IoT)

The health and efficiency of a supply chain depends on the real-time data of the location, condition & performance of assets and products. IoT devices like sensors and RFID tags should be deployed throughout the supply chain to collect this real-time data

Automation

For highly complex and multinational supply chains, Robotic Process Automation (RPA) provides automated alerts and intelligent document processing, this will streamline repetitive and routine while reducing human errors

Cloud Computing

Cloud computing is a boon in modern times. Cloud Server provides storing and sharing data and applications facilities where suppliers, manufacturers, logistics providers, and customers can collaborate better and in real-time

Artificial Intelligence

Machine learning Algorithm comes into the picture here. It takes data analytics to the next level, analyzing historical data to make more accurate predictions and dynamically adjust inventory levels. AI-powered chat bots and virtual assistants also help the customer side of operations as well as order management

Blockchain

Time-sensitive goods like foods and pharma, require tracking of the origin and movement of the products. The blockchain database is sequential, keeping an ongoing log of activity as transaction data is collected

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What is Supply Chain Analytics and how does it matter

The flow of material starts from development, then comes the planning part followed by sourcing from a supplier, then assemble or make in house. Once the product is made, distribution and delivery starts playing the pivotal role and customer support team leverages their aid.

- 1 Transparency is data. Supply chain analytics can provide a granular level of data your organization needs to piece together the entire picture of your operation
- 2 By harnessing the power of data, organizations can make better decisions in real time leading to several significant benefits
- 3 The first benefit is that supply chain analytics tools lend transparency where it matters most: between every checkpoint. It's vital to know about inventory levels, supplier delays, and potential bottlenecks at any given time to prevent them from accumulating
- 4 Additionally, supply chain analytics optimize routes, minimize transportation costs, and make warehouse operations more efficient
- 5 More data allows for smarter production planning and procurement, helping companies respond quickly to any change in market demand. And for the customer, this means a highly convenient and seamless experience

What is Big Data Analytics and how does it matter

There are many dynamic parts in the supply chain that must function properly for a product to be manufactured, transported, and delivered to a customer doorstep on time.

Big data analytics helps businesses examine large volumes of data collected along the journey of a product to uncover hidden patterns, correlations, and trends that are simply too unwieldy to do manually.

Integrating big data analytics into your supply chain management strategy involves adopting tools that allow organizations to:

- Improving Forecast accuracy and reducing manual error.
- Helps in deciding inventory modeling, distribution, and replenishment.
- Identifies and minimizes risks and opportunities.
- Reduces delivery times through optimization.
- Maintain product quality controls.
- Customized goods to meet customer expectations.
- Maintain equipment before it breaks down

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Paramount Financial Goal of a Digital Supply Network

- Increase sales efficiency
- Reduce operational costs
- Improves Pricing/margins
- Generate new business development opportunities
- Develop new products to fulfill the required needs
- Magically grow the business

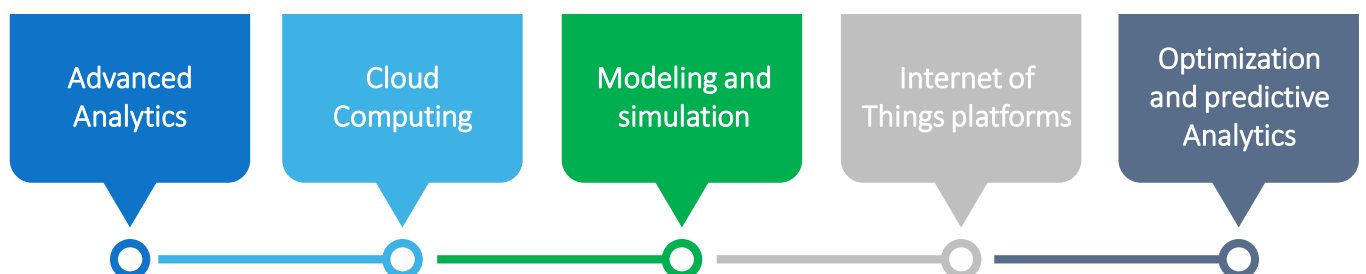
Top Digital Supply Network initiatives companies are making in descending order

- Demand and supply planning and synchronization
- Technology Infrastructure Improvement
- Security or risk assessment
- Product Quality Improvement
- Digital Procurement
- Aligning digital initiatives with business goals
- Applying visualization and predictive analytics.
- Digital supply network strategy and roadmap creation
- Foundational Data Management
- Creating new talent and human capital models
- Data Governance
- Operational Governance
- Predictive Maintenance
- Smart Warehousing and fulfillment
- Ecosystem/Business Partner assessment and strategy
- Building smart factories

Advanced Technologies in which manufacturers are currently investing in descending order

- Advanced Analytics
- Cloud computing
- Modelling and simulation
- Internet of things platform
- Optimization and Predictive Analytics
- Sensors and controls
- Artificial Intelligence
- Digital design and simulation
- Visualization and point-of-use delivery
- Additive manufacturing and 3D printing
- Augmented reality devices
- High-performance Computing
- Advanced Materials
- Cognitive and high-performance computing
- Open-source design
- Autonomous Robotics
- Blockchain
- Quantum Technology
- Wearables

Top 5 Technology Investments in the market



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Key Challenges for Manufacturers and ITC Infotech Solution

Challenges

- Difficulty in finding and training talents with the right skills.
- Inadequate, low-quality data.
- Not knowing where to start, what is needed, and how to prioritize.
- Normal operating systems and processes require upgradation.
- Lack of integration and connectivity with other platforms/network stakeholders and platforms

Solutions

ITC Infotech has a very skilled and expert team of talents who can eradicate all the challenges mentioned above.

Organizational hindrance to enable Digital Supply Chain

- Budget and Funding
- Data Fragmentation
- Lack of strategy
- Ability to scale up initiative at supplier eco system level
- Data Ownership
- Lack of appropriate talent
- Information Sharing
- Ownership of outcomes
- Decision Making
- Executive Sponsorship
- Lack of innovation culture and resistance to change
- Misaligned talent strategy
- Inability to predict/plan what talent will be needed

Customer case study: "From Data to Dollars: How Digital Safety Solutions Saved Millions in FMCG"

Problem Statement

The customer, a major FMCG company in Asia, regularly includes coupon offers in their food packets. However, unsold packets with expired offers pose tracking challenges, financial losses, and product expiry issues. They seek a solution to efficiently identify and recall these packets to the warehouse, mitigating losses and optimizing operations.

Solution

Real-time Data Aggregation: Sensors on the manufacturing line and chips in packets capture real-time data. This data, along with quality, warranty, and safety information, is aggregated in a cloud-based safety lake, providing a comprehensive view of product data.

Advanced Analytical Techniques: Cutting-edge analytical methods such as text clustering, probability analytics, concept extraction, and event history analysis are employed. These techniques help in identifying potential issues or anomalies in the data, enabling proactive decision-making.

Digital User Interfaces: Implementation of user-friendly digital interfaces promotes user adoption and empowers employees to translate insights into actionable steps. This enhances the company's ability to address issues promptly and effectively.

End-to-End Dashboards: A suite of dashboards offers end-to-end visibility into previous issues and ongoing processes. These dashboards provide stakeholders with insights into past occurrences, current trends, and areas needing attention, facilitating informed decision-making and continuous improvement.

Result

Cost Savings: The organization's focus on enhancing product safety and issue identification translates into tangible financial benefits, with savings amounting to \$20 million in the last fiscal year. This significant cost reduction underscores the effectiveness of the implemented strategies and highlights the value of prioritizing safety and proactive problem-solving.

About ITC Infotech

ITC Infotech is a leading global technology services and solutions provider, led by Business and Technology Consulting. ITC Infotech provides business-friendly solutions to help clients succeed and be future-ready, by seamlessly bringing together digital expertise, strong industry specific alliances and the unique ability to leverage deep domain expertise from ITC Group businesses. The company provides technology solutions and services to enterprises across industries such as Banking & Financial Services, Healthcare, Manufacturing, Consumer Goods, Travel and Hospitality, through a combination of traditional and newer business models, as a long-term sustainable partner.

ITC Infotech is a wholly owned subsidiary of ITC Ltd. ITC is one of India's leading private sector companies and a diversified conglomerate with businesses spanning Consumer Goods, Hotels, Paperboards and Packaging, Agri Business and Information Technology.

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