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Digital Supply Chain Transformation – Part 1

"Supply Chain has the biggest potential to increase customer and shareholder value through Digital Transformation."

Realtime, End-to-End Visibility is crucial for this breakthrough.

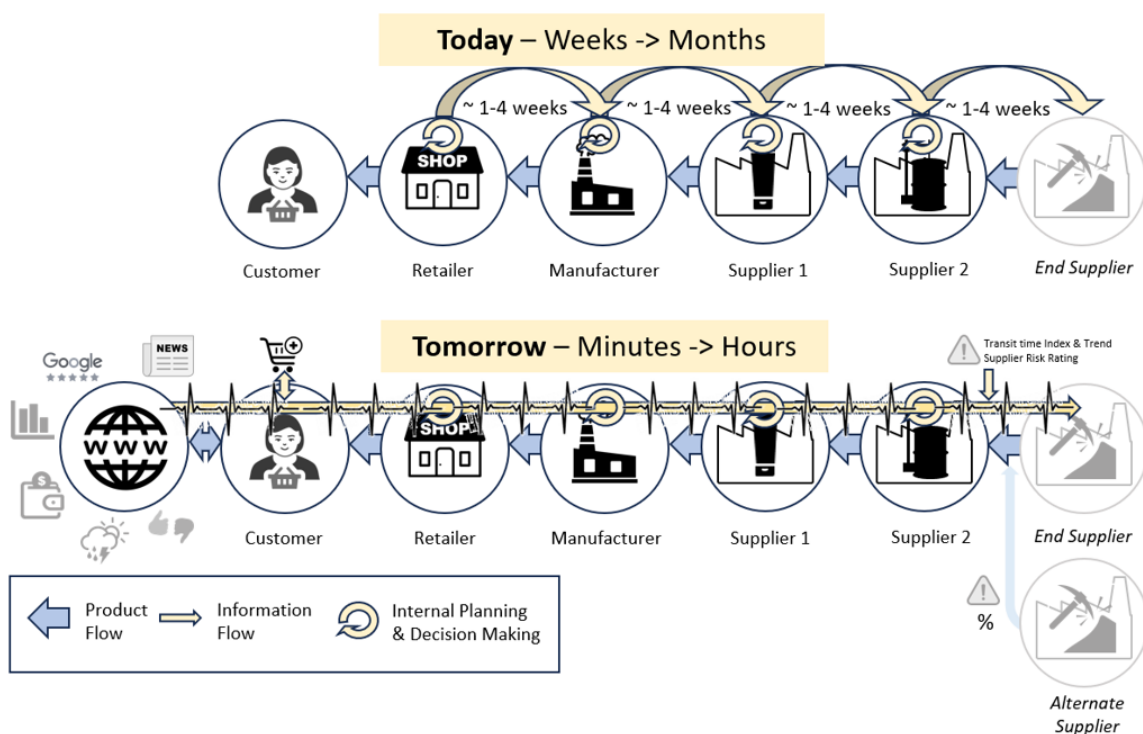
Here is a futuristic story....

One of the biggest constraints today in delighting our customers with exceptional service is the speed that our complex supplier network can react to the customer ***purchase intention***.

The data and internal planning cycles connecting customers, distribution, manufacturing and suppliers often take **weeks or months**.

This results in lower service, higher cost, higher inventory, obsolescence, inefficiency and environmental impact, all of which hinder organizational resilience.

Imagine a future where insights, indices, trends, on-line shopping carts, point-of-sale data transmit instantly through supply chain nodes. Real-time autonomous planning and executional adjustments alert suppliers immediately about demand changes within **minutes** or **hours**.



How digital E2E hyper connectivity, analytics and autonomous planning transform visibility & agility

The chart above shows how this could look for a simple, illustrative formulated, consumer goods supply chain.

This transformation isn't futuristic; the technology exists now, and there are already some great examples. Key components include:

Artificial Intelligence, Machine Learning, Optimisation & Big Data Analytics:

- **Forecast** insights become faster and more reliable. **Internal & external trends** like market share, ratings, economic indicators, competitor pricing and product demand are already widely used. **NLP** (Natural Language Programming) algorithms target relevant online articles to measure **positive** and **negative sentiment** influencing category and product demand.
- **Pre-Order Intention, Orders & Point of Sale** : Your supply chain is alerted when products are added to an **online cart** and **point of sale** data triggers an immediate plan adjustment.
- **Transportation** routes are optimized based on lead times, weather, disruptions, and costs.
- **Supplier performance**, reliability, and risk are constantly reviewed to optimize sourcing.

Autonomous Planning:

Future planners focus on strategic priorities, leaving the system to handle plan adjustments. The planner translates business and customer requirements into the user defined planning system inputs. If a material delivery is late, the "touchless" system regenerates a new, optimized and feasible plan. The planner works **on the supply chain and not in it**.

Although complex and still evolving, autonomous planning is reducing the need for manual intervention and driving higher **planning productivity** and is **elevating the status of the roles**. It is a long, complex path and is similar to Tesla's autonomous driving technology journey.

Cloud Computing:

Secure cloud computing enables customers, manufacturers, and suppliers to integrate their databases, enhancing E2E supply chain speed and visibility, and allowing partners to share in the value creation.

What is missing from this story is that digital transformation doesn't sit alone. Integrated with your **Digital roadmap** needs to be your **E2E Supply Chain roadmap** of capabilities that need to weave together to delight your customer. When your plan tells your production line to produce, **it can't breakdown** and it needs to produce **what is needed**, so there is capacity to cycle through the daily priorities.....

Having worked in supply chain operations and now at mile20 consulting, I have lead diverse examples of supply chain improvements and transformations, particularly in technological, digitisation, supply network & organisational changes. My career map energy levels have reminded me of my passion in managing such complex, challenging, frightening and exciting changes!

In future articles, I will share what I have learnt in a field that is gaining pace! My goal is to contribute to this important discussion, make more supply chain transformations successful and help further with advancing the profile and presence of our profession.

My sincere gratitude, to all the wonderful friends and colleagues I have learnt so much from and who have supported me on this journey. This article is a presentation of your collective wisdom.

Stay tuned for more articles. In the meantime, don't hesitate to reach out to me or my [mile20](https://www.mile20consulting.co.uk) colleagues to discuss further or for support in navigating your supply chain's transformation journey.

Michael Dewey