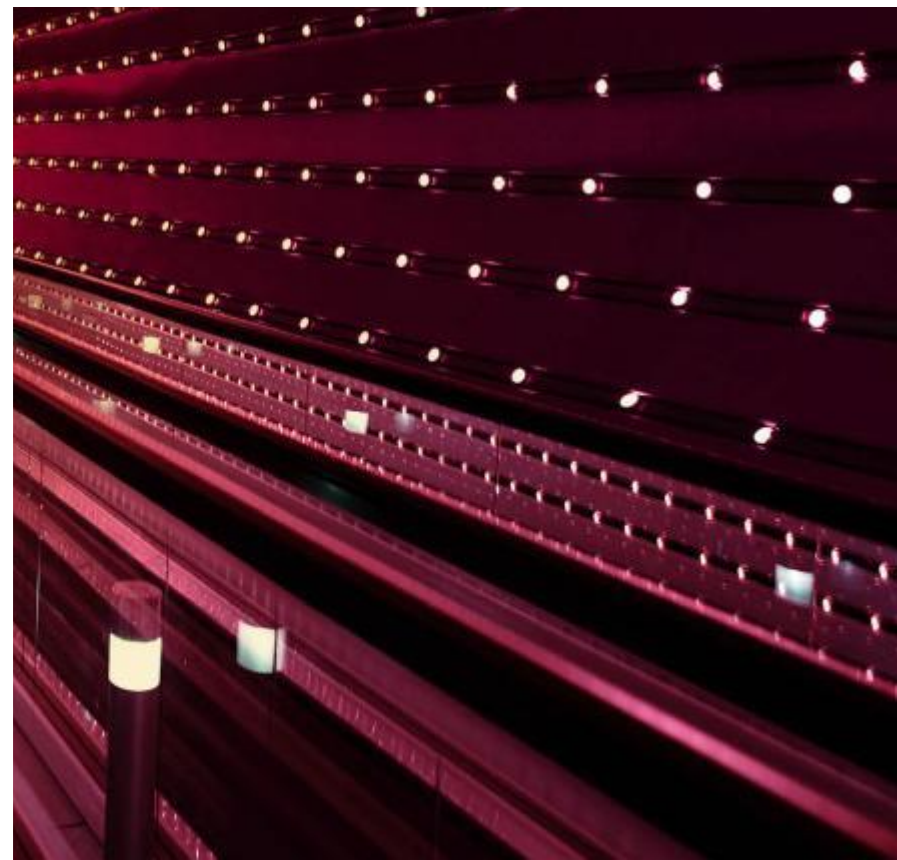


COVID-19 Supply Chain Impact and Next Steps



COVID-19 & Supply Chains: what happened?



- The coronavirus (COVID-19) outbreak is causing widespread concern and economic hardship for consumers, businesses and communities across the globe.
- As the pandemic disrupts business as usual and throws the economic outlook into uncertainty, most industries showed the following symptoms:
 - ⇒ Initial symptoms in Europe: **Supply Gap** due to quarantine measures
 - ⇒ Followed by **Drop in Demand**, although there are also industries that benefit from the crisis with peaks in Demand

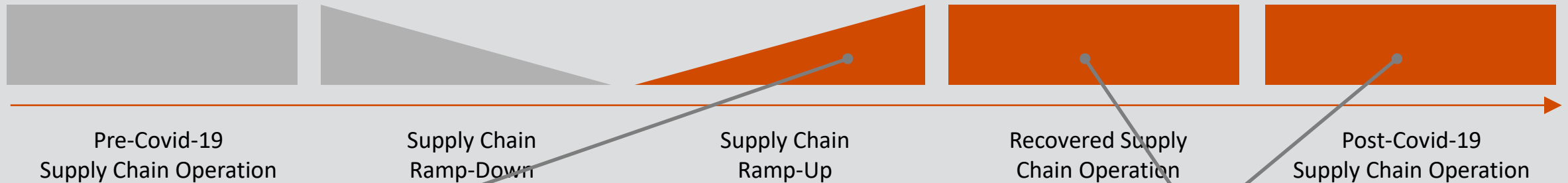
Implications for many companies in the Netherlands follow the same pattern:

- **Delays in supply:** raw materials or semi finished products delivery lags behind, slowing down production, especially where there are dependencies with early shut-down regions like China
- **Demand drop:** especially demand for automotive, high tech and industrial products decreased, impacting also the suppliers in these industries
- **Production minimized or stopped, no alternatives available:** idle capacity that cannot be used alternatively, no “working from home” options

This is no news
Many companies have
negative experiences with
the COVID-19 crisis
Valid question is:
“what’s next”

COVID-19 & Impacted Supply Chains: what is next?

Many Companies went through an operational ramp-down. In case social restrictions will be released, companies have to **prepare for ramp-up** and understand what the current situation implies for the **future setup of the supply chain**



Ramp-up of Supply Chain depends on:

- Pace at which **Consumer Confidence** is restored
- Who is **orchestrating the network**
- **(Permanent) impact on supply network**; still areas in lock-down, bankruptcy of suppliers/competitors
- Ramp-up approach: **defensive or offensive?**

Prepare for the future:

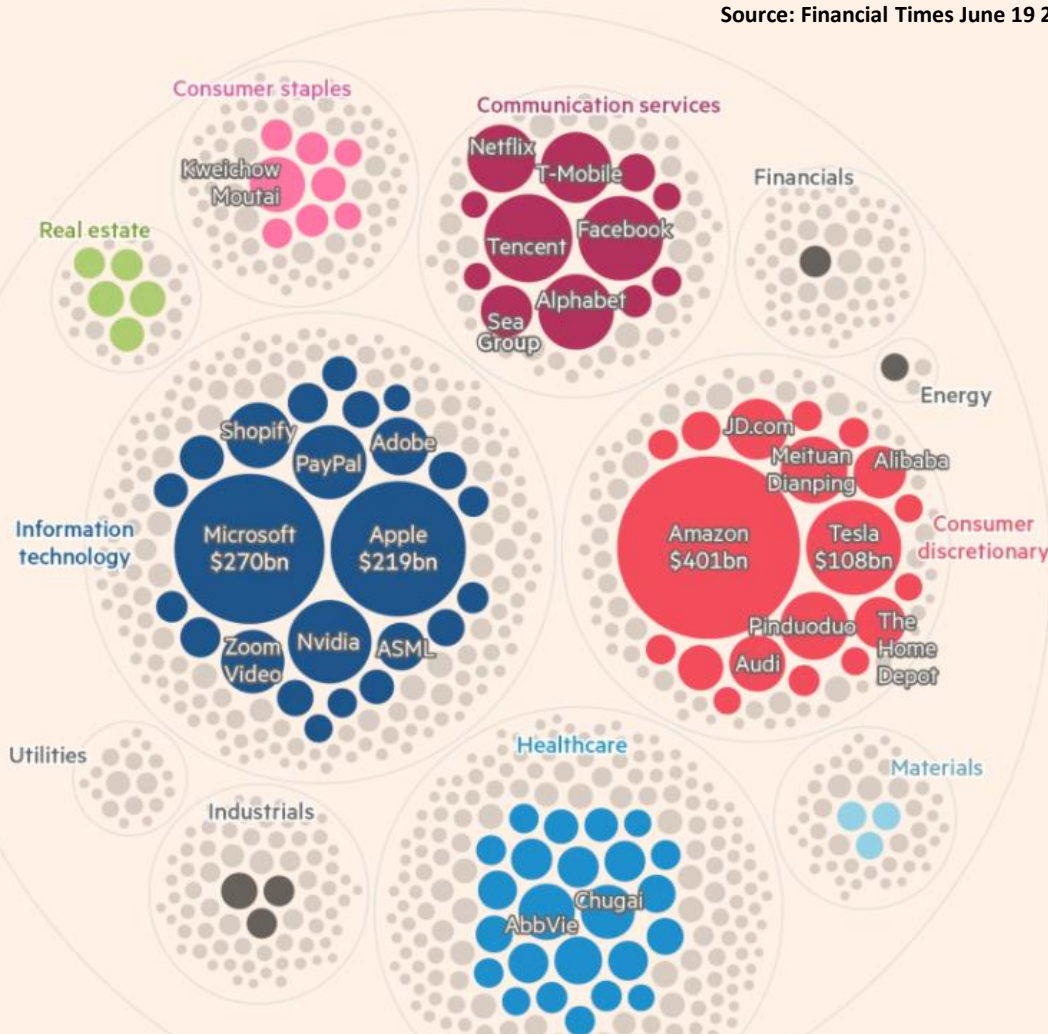
- **Permanent changes** in customer behavior?
- What will my **future market** look like?
- What **lessons** did we learn?
- How do we want to deal with **similar situations** in the future?

COVID-19 & Supply Chain: Obviously there are also winners

Source: Financial Times June 19 2020

In a dismal year for most companies, a minority have shone: pharmaceutical groups boosted by their hunt for a Covid-19 vaccine; technology giants buoyed by the trend for working from home; and retailers offering lockdown necessities online.

Public companies had the tailwind of a surprisingly robust stock market — which many believe is a bubble. To rank companies that prospered in the pandemic, we have chosen to look at equity value added. Later in the series, we will look at an alternative gauge of success, as well as the big corporate losers and four thematic winners: pharma, cloud computing, ecommerce and gaming.



PHILIPS

Philips announces Q3 2020 results

Frans van Houten, CEO

"It is clear that the COVID-19 pandemic is far from over, and our teams remain fully focused on delivering against our triple duty of care: meeting critical customer needs, safeguarding the health and safety of our employees, and ensuring business continuity.

I am pleased that, under challenging circumstances, we have been able to execute our plans and return to growth and improved profitability for the Group in the third quarter. Driven by the successful conversion of the Connected Care order book for patient monitors and ventilators, and a robust rebound of demand for our Personal Health portfolio, Philips recorded a strong 10% comparable sales growth and delivered an Adjusted EBITA margin improvement of 300 basis points to 15.4%.

"Are the winners just lucky to be in the right market place? ... "

COVID-19 & Supply Chain: who are the true winners?

“... or are the true winners the ones that were able to adapt themselves to the new circumstances”



Masters in Innovation



Press release

Amsterdam, 4 August 2020

JDE Peet's reports strong half-year 2020 results

Strong performance reflects resilience of business and brands

- Record in-home (CPG) sales growth driven by developed markets
- CPG performance largely offsets away-from-home
- Good recovery in away-from-home starting in June
- Adjusted EBIT organic growth of 10.5% to EUR 642 million
- Underlying profit increased by 12.0%; underlying EPS of EUR 0.79¹
- Leverage improved to 3.4x, from 4.2x at end of FY 19
- Successful completion of IPO

Masters in Redirecting Supply Chain

Zelfbedieningsgroothandels Sligro, Makro en Zegro openen de deuren voor particulieren

19 maart 2020 – Vandaag heeft het CBL, de koepelorganisatie van supermarkten en foodservicebedrijven, bekend gemaakt dat de zelfbedieningsgroothandels van Sligro, Makro en Zegro per direct toegankelijk zijn voor particulieren. Dit betekent dat alle klanten welkom zijn, dus ook als zij geen ondernemer zijn of klantenkaart hebben. Deze maatregel is een noodzakelijke stap om de voedselvoorziening op peil te houden gedurende de Corona crisis. Het betreft een tijdelijke openstelling.

Noodzakelijke maatregel

Eerder deze week verzocht het CBL, de koepelorganisatie van supermarkten en foodservicebedrijven, premier Rutte om gemeenten te adviseren toe te staan dat zelfbedieningsgroothandels tijdelijk opengesteld worden voor consumenten. Het doel hiervan is om de druk op supermarkten te verminderen en bovendien te voorkomen dat goede producten die in de zelfbedieningsgroothandels liggen te moeten weggooien. Het CBL kondigde vandaag aan dat de tijdelijke maatregel per direct ingaat.

Win-win?

COVID-19 & Supply Chains: future considerations

We know for sure ...

.. that we do not know how long pandemic disruptions will last

.. that it will happen again

And how are we going to respond?

Adapt

to deal with Crisis Situations

Invest in supply chain to increase robustness and/or flexibility to decrease consequences of a crisis situation

Robustness/Flexibility

vs.

Cost

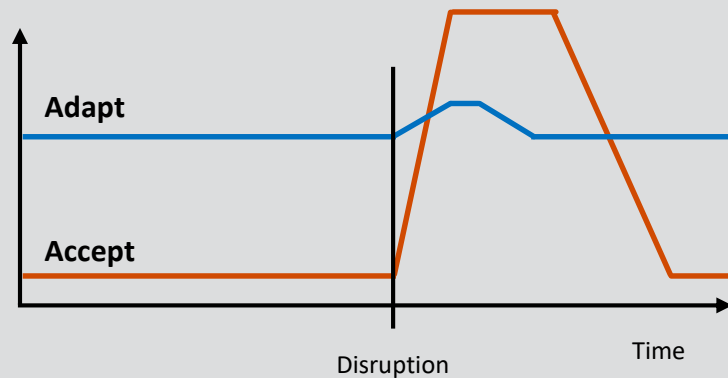
Accept

the consequences of Crisis Situations

Accept the consequences of supply chain shut-down and manage the crisis at the moment of occurrence

COVID-19 & Supply Chains: adapt

Indicative supply chain cost and lost revenue



There is theoretical benefit case for the **fundamental choice** between cost leadership and flexibility within the supply chain

or ...

... can we find **more flexibility in a cost efficient Supply Chain?**



Traditionally, **flexibility in supply chain** can be increased by having a closer and different look at the **entire supply network**:

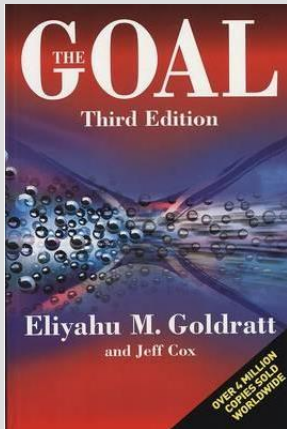
Can we ...

- ... increase the number of suppliers to decrease dependency (dual sourcing) and assess their robustness?
- ... diversify the geographical spread of our suppliers
- ... make our own production more flexible: multiple locations (and where?), enablement of quick production switches
- ... diversify our customer base (more customers, different types of customers)

A more recent element is that also with **digital solutions** flexibility in supply chain can be increased

Understand your role in the supply network that you are part of.
What flexibility/robustness can you offer your Customer?

COVID-19 & Supply Chains: what is flexibility about



Understanding the Supply Network you are in

Theory of constraints: a chain is as strong as the weakest link?

What is the weakest link in your supply network?
Suppliers, customers, production, transportation, storage, innovation?

Airbus cuts aircraft production by a third

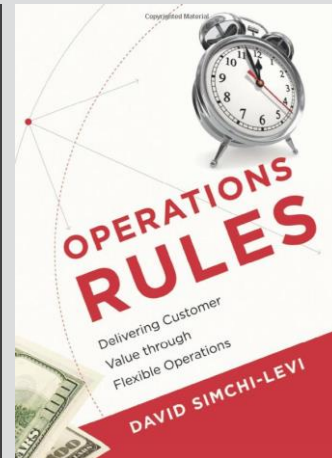
European aerospace group confirms it will slash output of popular A320 single-aisle jet



The aircraft makers are concerned to keep production flowing through the supply chain to **support many of the small but critical manufacturers** who have invested for growth and will be under extreme pressure from the collapse in demand.

How to “flexibilize”?

- Process Flexibility
- Product Design Flexibility
- System Flexibility

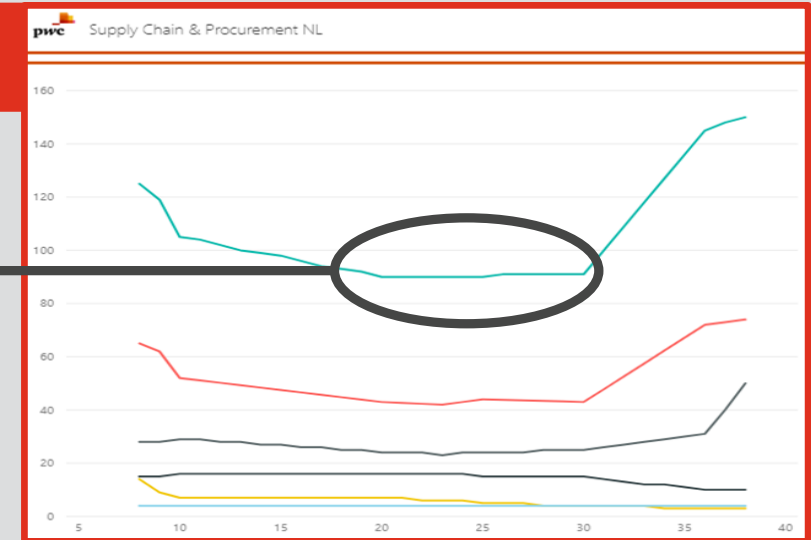


COVID-19 & Supply Chains: flexibility at limited cost



“Flat around the optimum”

This network assessment at the client showed that the total supply chain cost in the network was relatively constant for a range of factories; adding more factories within the range 20-30 increased flexibility at limited cost

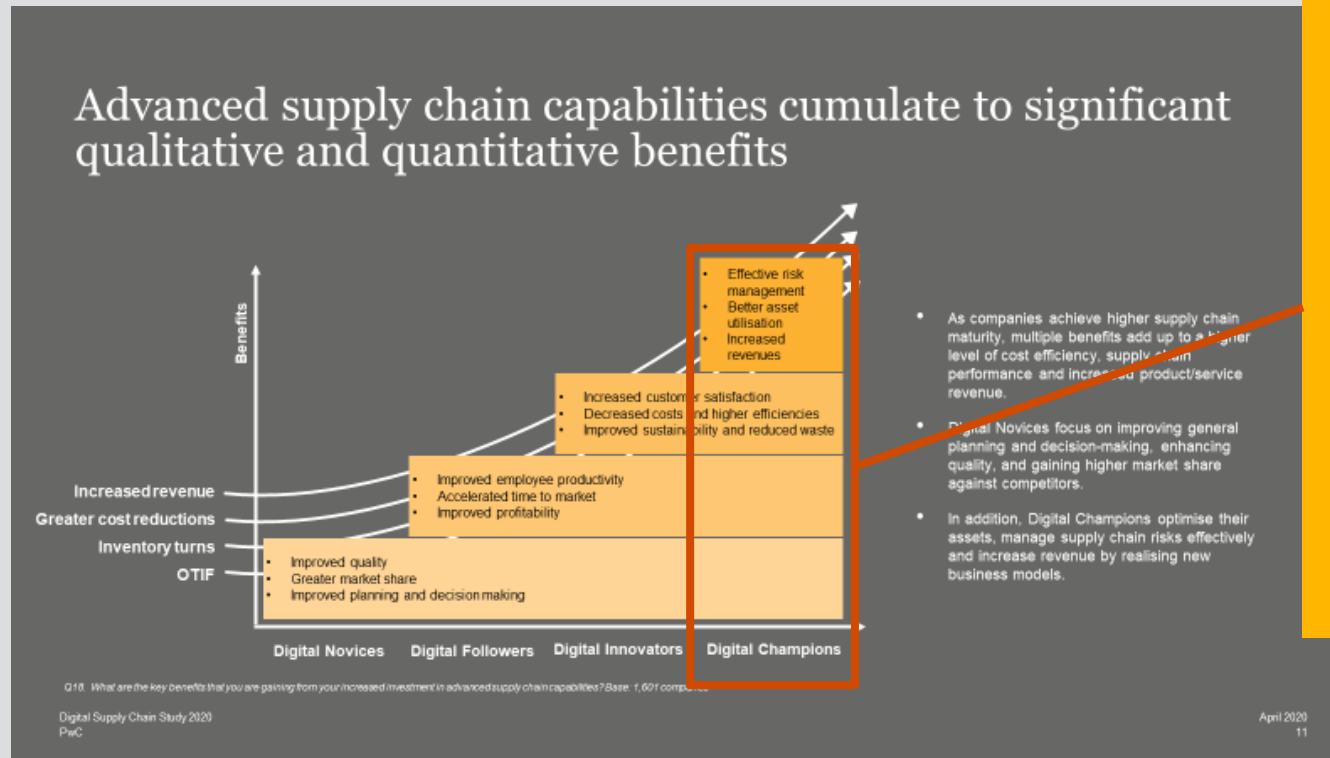


What does this tell us?

- The **optimum around the total cost can be flattened out**, while increasing flexibility when assessing the network in detail
- This specific case is a global player, but this example is also applicable to **any company within a supply network** to make the total network more robust

COVID-19 & Supply Chains: enhancing digital capabilities

PwC recent study under 1600 companies worldwide shows that digital capabilities help to increase robustness



Besides lower cost base and additional revenue potential, **Digital Champions** have higher supply chain visibility and more effective risk management capabilities

Leading companies go beyond functional efficiency towards an **end-to-end orchestrated supply chain ecosystem**

~8%

Additional revenue from SC investments reached 7,7% during the last financial year

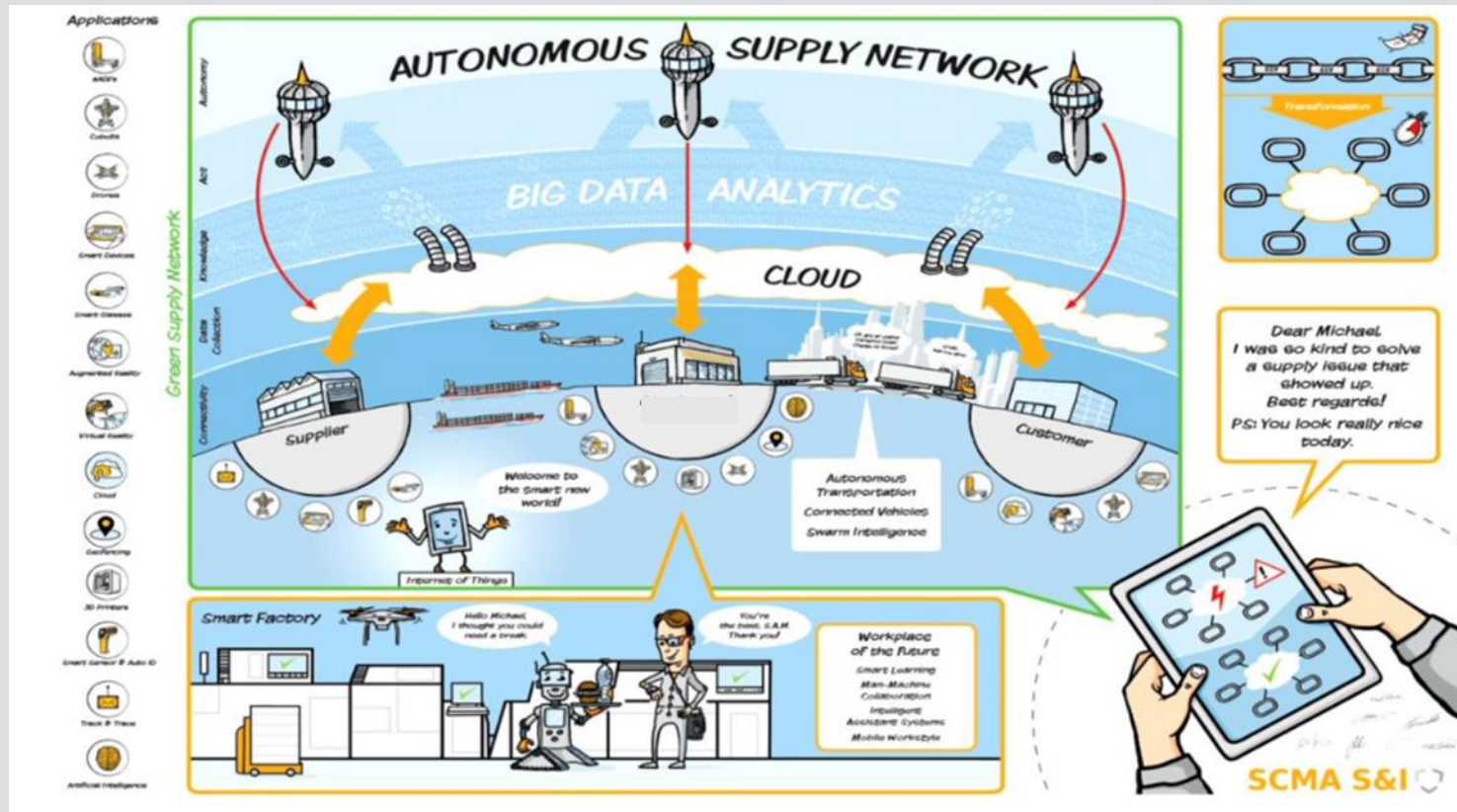
~7%

Digital Champions achieved significant savings of 6.8% on supply chain costs in the last financial year

<https://www.pwc.com/digitalsupplychain>

COVID-19 & Supply Chains: examples digital capabilities

Example of implementing a digital vision of a global automotive supplier



The digital solutions the client implemented that were beneficial during first stage of COVID-19 period:

- More than 200 autonomous **AGV** and 2000 **cobots**
- Automated line replenishment based on **AI algorithms**
- **Dock and yard management system** which allows social distancing to truck driver
- Large project to **harmonize SAP**
- **Digital twins** to model ramp-up phase after shut down

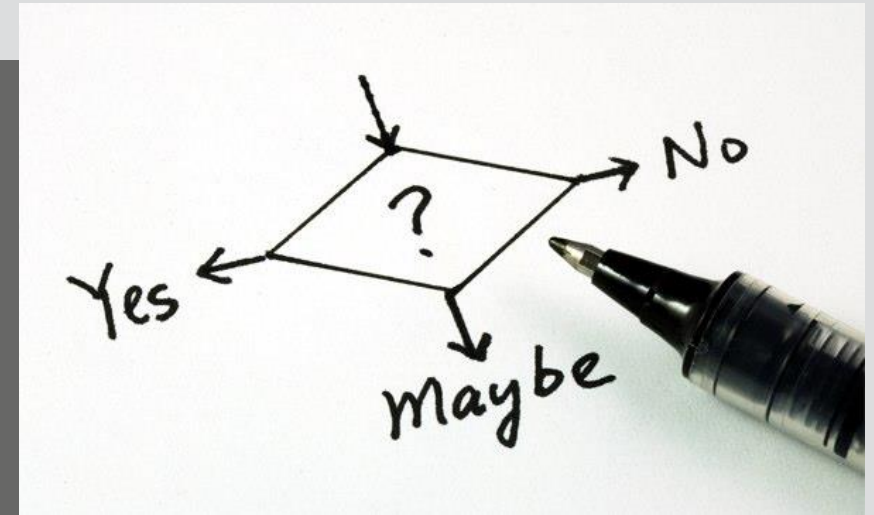
What the client learned from COVID-19 and will implement:

- **Geolocation** to ensure social distancing
- More **transparent supply network**

COVID-19 & Supply Chains: what we conclude

What we conclude and recommend for any company that is part of a supply network:

- First think of **immediate actions** to keep your business moving: survival measures, proper ramp-up scenarios and choose for either defensive or offensive approach. **Understand the supply network** that you are part of and **play a pro-active role**
- Take your lessons learned and realize that **disruptions will occur for sure**
- Consider **the future setup of your supply chain** and realize there is a **fundamental strategic choice to be made between cost and flexibility**, which will also be done by any of the dominant parties in the supply network that you are part of
- But also realize that there are options to **increase flexibility without significant cost** increase, like assessing network flexibility or investing in digital capabilities. This flexibility leverages the network that you are part of and **will add value to your customers**



Or make the conscious decision to not invest in flexibility accept any consequences in case of future disruptions

COVID-19 & Supply Chains: “Leaders have a plan”

