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Ruben Coetsier, RBR Field service





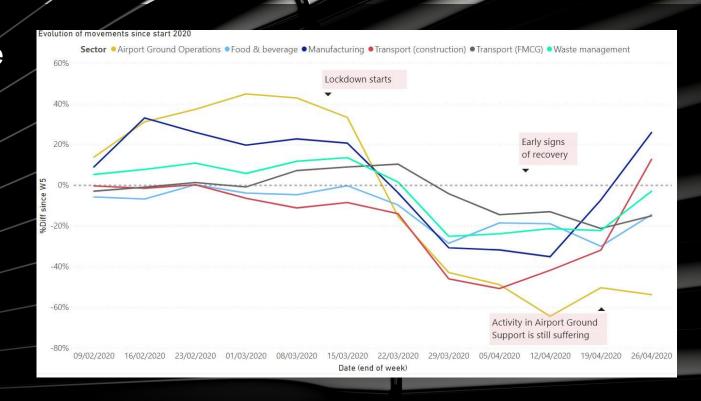
Content Supply chains have been struck by Covid19, especially global ones



Industries have been impacted differently



Mainly global supply chains have been vulnerable





Survival of the fittest?

Foxconn ready to move production out of China if necessary

Phone manufacturer seeks to reassure tech groups worried about US-China trade war



Made in England: why some manufacturing is coming home from China

A refocusing of the 'world's workshop' might be a progressive step all round

JONATHAN MARGOLIS + Add to myFT



US companies reshape supply chains after China ultimatum

Frump's tariffs force businesses to respond rapidly with production shift



Europe Joins U.S. Companies Moving Out Of China



Kenneth Rapoza Senior Contributor @ I write about business and investing in emerging markets.

Make no mistake about it, the trade war is absolutely remapping global supply chains ... to the detriment of Chinese manufacturing.

The percentage of China-leaving businesses surveyed by quality control and supply chain auditor QIMA was 80% for American companies and 67% for those based in the European Union.

Supply chains for different industries are fragmenting in different ways

Clothes, cars and computers are all being affected



OPrint edition | Technology Quarterly







G lobalisation is becoming regionalisation. Analysis by MGI finds that the global value chains (GVCs) in 16 of 17 big industries it studied

Forces pushing towards more regional and fluid supply chains



Geopolitics



Customer expectations



Forces pushing towards more regional and fluid supply chains



Geopolitics



Customer expectations



Sustainability



4IR is the enabler to capture these trends



Geopolitics



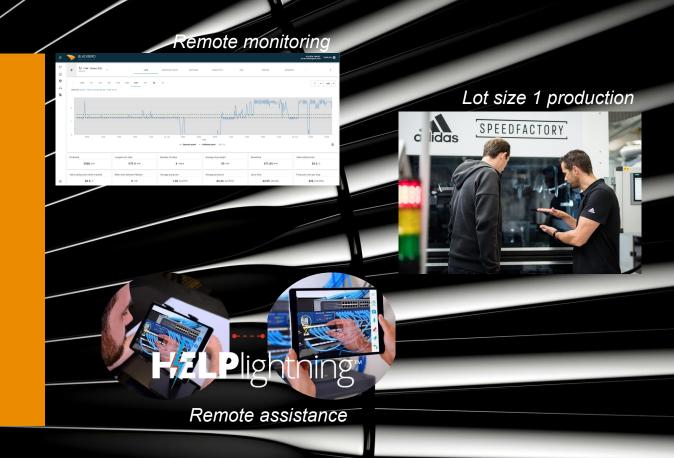
Customer expectations



Sustainability



Technology



Content How does this influence the future of Field Service Logistics



56%

of respondents aim to put services at the core of their business model 85%

will invest heavily to increase their data and analytics capabilities within 3 years 40%

have limited or no visibility on their service activities

77%

of participating companies confirm that the service technician profile is changing

https://www.pwc.be/en/FY20/documents/20191203-pwc-future-of-supply-chain-service-core-report.pdf

100% 75% 50% 25% Africa Asia Europe North Oceania South America

Figure 12. Where does your company offer services?

Figure 13. What was your company's annual revenue in the last year?

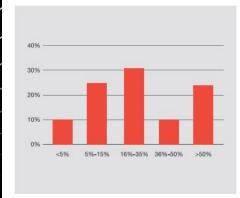


Figure 14. What percentage of your total business revenue is service related?

Figure 15. What is your gross profit margin on your services?

Some background on the respondents

20% We don't offer services an add-on to our product offering the core of our offering of the core of our of our of our of our offering of the core of our offering of th

Figure 1. The role of service in business models within the next 3 years

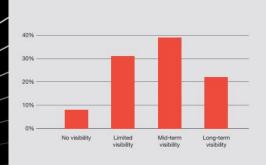
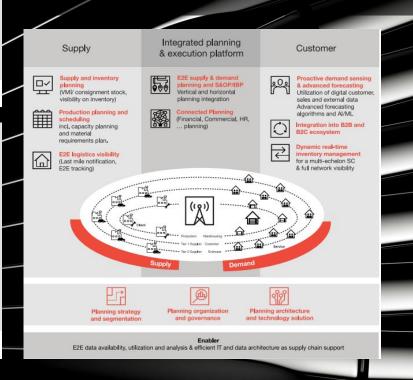
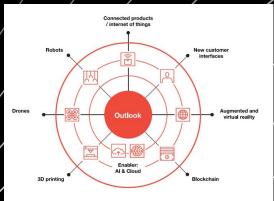


Figure 2. Visibility of service activities in the future

Services become more and more core of businesses but are faced with challenges on transparency





New technology adoption in field service will accelerate

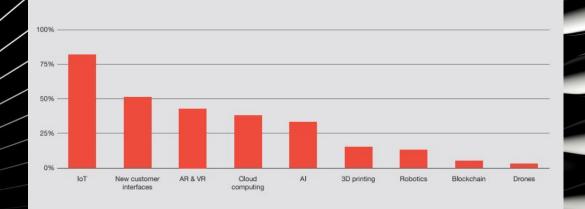


Figure 8. Technologies with the most potential in service supply chain

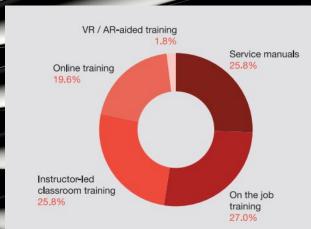


Figure 10. Current forms of field service training



Figure 11. Service@Core maturity stages

Long-term profit

Maturity

A model to go for service leadership

	Maturity level 1 Informal	Maturity level 2 Structured	Maturity level 3 Integrated	Maturity level 4 Holistic	Maturity level 5 Cooperative
usiness nodel	Reactive service based on customer requests High competitive environment Fragmented service organisation	Service as a support for sales Basic service offlerings as add-ons to product offerings Service is often part of other business functions	Service portfolio meets customer's needs throughout the lifecycle Service business unit with own profit and loss statement Basic customer segmentation	Advanced service offerings High customer retention Service as a cross-enterprise process in which all divisions participate Multiple service offering solutions	Service as part of a total value offering Long-term customer relationships Service activities as an independent organisation with its own C-level management Integrated, customised service value offerings
lanning	Reactive planning Manual spreadsheet planning tools Basic/intuitive setting of planning and inventory parameters (min-max, etc.)	Reactive planning Empirical setting of planning and inventory parameters (e.g. reorder points, safety stock, EOQ, etc.) Basic short-term forecasting	Preventive planning Standard medium-term forecasting	Predictive planning Advanced forecasting with basic collaboration between supply chain partners	Prescriptive planning Advanced forecasting with extensive collaborative planning throughout the entire supply chain
&A	Capture historical data (historical parts consumption, historical customer interactions) Describe historical data and events	Capture observed customer behavior (historical parts consumption, historical customer interactions) Describe historical data and events and identify root causes	 Use data to compare multiple scenarios to find the best performance under given constraints 	Use data to predict trends or future events	Use data to recommend one or more courses of action and show the likely outcome of each decision
merging echnologies	No interest in emerging technologies Not part of the strategic agenda	Not implemented No proof of concept (POC) planned Awaiting initial results of other companies' POCs Engineering does not incorporate new technology capabilities in new product releases	POC planned No large-scale projects No collaboration with technological innovators	First implementations with selected technologies based on POC First investments made Clear mission to apply selected technology as a differentiator Limited interest in collaborating with technology niche players	Innovators, market leaders Large budget Top priority Multiple programmes in place Partnerships with innovative technological companies
uman apital	No digital skills No training on new technologies or competencies No recruitment of new skills (digital) Training via service manuals	Regular use of tradisonal training methods Raising awareness of new technologies	Active investment in upskilling current workforce Frequent use of traditional and more innovative training methods	Frequent use of innovative training methods Combination of upskilling programme with search for digital talent	Frequent use of innovative training methods Top performer in the war for talent High employee retention

Field service is moving towards Performance as a Service [PaaS]

Performance as a Service is radically rethinking the way you deliver services to your customer and helping them achieve their goals:

Maintenance as a Service Performance as a Service Product as a Service Uptime as a Service Contracting the service and The supplier takes responsibility outcomes rather then the Analyze the data to optimize for full maintenance and uptime product.. the ownership of the Maintain equipment based on a Break/Fix approach maintenance cost and avoid of the asset, ownership of the asset remains with the preventative plan with fixed Repair when equipment has downtime of the asset asset lays with the client OEM/supplier schedules already broken down

Partnership



Transactional





Locally present, globally connected

COVID-19, a catalyst to glocalisation

Economies of scale thinking is being challenged

Globalisation, as we knew it, is over. While the tariff wars had already pushed companies to reconsider their dependence on China and long, global supply chains, this trend of relocating and regionalisation is being accelerated due to COVID-19.

In the past, decisions on how to organise supply chains have been based on scale effects and lowest cost, supply chain risk wasn't really considered. This has changed. Not only are long supply chains vulnerable to disruption, but geographical disparity in manufacturing costs is slowly disappearing and increased automation has made labour cost even less of an item in the balance. COVID-19 made it clear that supply chain risk also has a cost. Global supply chains, like those in the Technology industry in particular, proved to be very vulnerable. Just think of the Apple store limiting the number of iPhones consumers could purchase in March 2020.

Of course, not all industries will be able to go fully regional, and certainly not in the short term. But better articulated risk-reward claims are bound to be at the forefront of footprint decisions in a wider selection of industries and activities in the future. Automation changes the requirement for talent, focusing less on quantity and more on quality. **The enabling skills base** therefore continues to be a critical location selection factor when deciding where to produce or distribute products from. That means we'll need to **invest in upskilling** to complement already existing advantages in institutional framework, business environment and infrastructure.

75%

of the world's global manufacturing output has been impacted by COVID-19 (WEforum)

Acceleration towards a new industrial fabric

As indicated, the current crisis will only accelerate the pace at which we move towards more regional supply chains, closer to customers. The **underlying forces** will get a boost, but were already having an impact on our industrial fabric:

1. Individualisation and impatience

Industries close to the end consumer, in particular, are shifting to ever-faster delivery (e.g. Amazon Prime) and products specifically designed for you (e.g. Twikit to personalise your Mini Cooper). The only way to make this happen is through more local production and logistics.

1. Sustainability and circularity

A floating farm in Rotterdam houses over 30 cows and delivers yoghurt and milk by electric vehicle to the city centre. It's a perfect example of how production can move closer to the customer base and the positive effect it has on our ecological footprint.

1. Technology maturity and willingness to adopt

COVID-19's massively accelerated the adoption rate of new technology. In the supply chain and manufacturing, we'll see an additional surge to connect digitally and produce tailored products for specific individual customers.

1. Urbanisation

The increased level of urbanisation will create viable business models for direct-to-consumer delivery. Production will also move closer to these hotspots; Oatly (oatmeal drinks), for example, is building its Singapore production facility in an existing skyscraper.

1. Geopolitics

Trade wars and tariffs have reshaped global trade over the last few years. We've already seen many companies relocating because of this, a trend likely to continue or even grow.



Locally present, globally connected

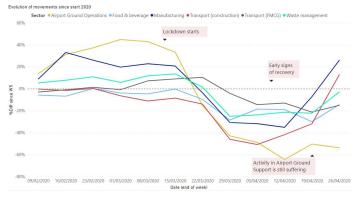
How to start building short value chains

While most companies have been focused on restarting their operations (see graph), very soon we'll see supply chains transform more fundamentally. It's clear that reshaping supply chains takes time. In doing so, make sure to consider the following (in order of short-term feasibility):

- 1. Build in security: duplicate critical supply sources, increase safety stocks on critical resources and products
- Gain real-time transparency: map your supply chains in depth with new track-and-trace technology: critical resources, suppliers, customers, etc.
- 3. Get closer to your customer: evaluate your strategic product portfolio with the new insights you've gained
- Invest in advanced manufacturing technology (Industry 4.0): increased automation in production, logistics and administrative environments, remote assistance app, Industrial IoT applications, etc.
- 5. Adapt your footprint: go for more local production sites, connected via a digital backbone
- 6. Review the tax implications of a change in footprint and related supply chain flows
- Build a connected supply chain using technology: videoconferencing, track-and-trace solutions, integrated business planning tools, etc.
- 8. Investigate the **circularity** of your operations and their ecological impact
- 9. Develop multiple channels to market, especially including direct to customer online
- 10. Use the gig economy in more traditional industrial environments (e.g. to support a new channel to market)

COVID-19 brought down a critical barrier and supply chains will undergo fundamental changes over the coming six to 24 months.

New technology can bring instant transparency and a competitive edge



Sensolus data: activity level of IoT devices in supply chains and operations, indicating a restart's underway

