

Professor of Operations & Supply Chain Strategy

WMG, University of Warwick



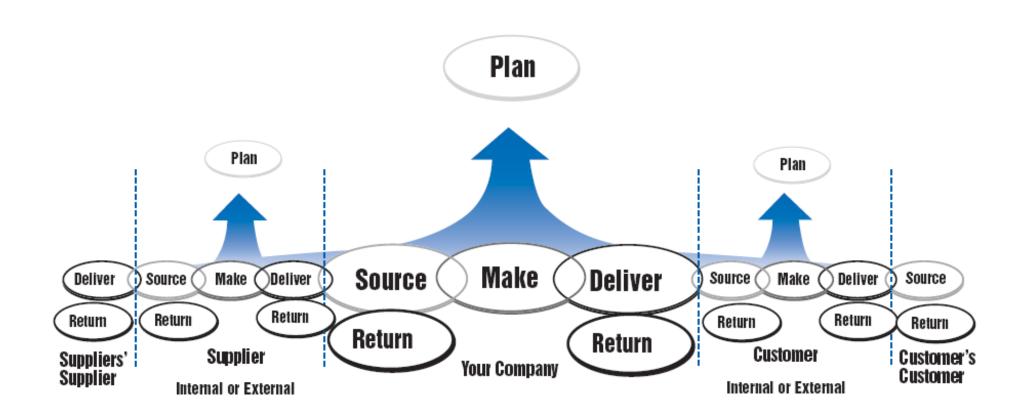




Term supply chain was first used in 1982...

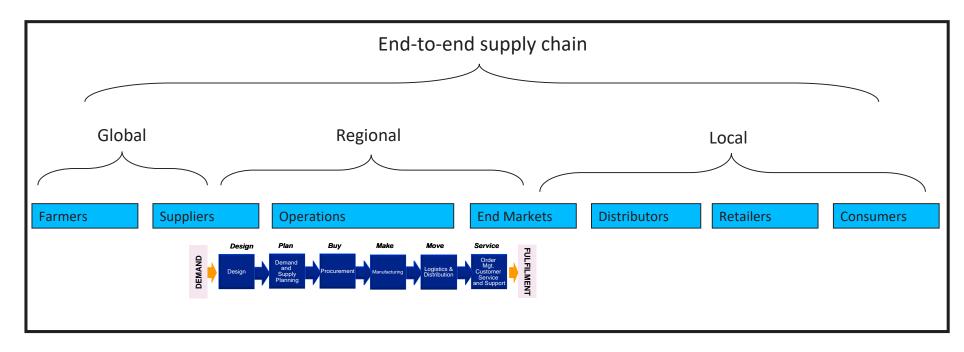
	Supply Chain	Value Chain	
Originator	Oliver and Weber	Porter	
Organisation	Booz Allen Hamilton	Harvard University	
Year	1982	1985	
Focus	Strategic	Strategic	
Internal perspective	Holistic	Holistic	
Internal scope	Brings together under one strategy the functional areas of planning, purchasing, manufacturing, distribution and sales	Activities that are performed to design, market, deliver and support a product	
External perspective		Value chain of an individual firm is part of a broader value system of suppliers, channels and buyers	

Supply chain comprises of 5 core processes...



Supply chain council (www.supply-chain.org)

Reaches beyond the bounds of the firm or country...

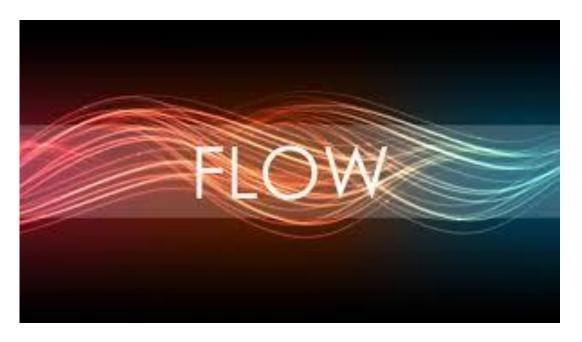


'Competition is no longer company to company, but supply chain'

Martin Christopher (1992)

2 fundamental principles of SCM...





What is the impact of digitisation on these fundamental SC principles?





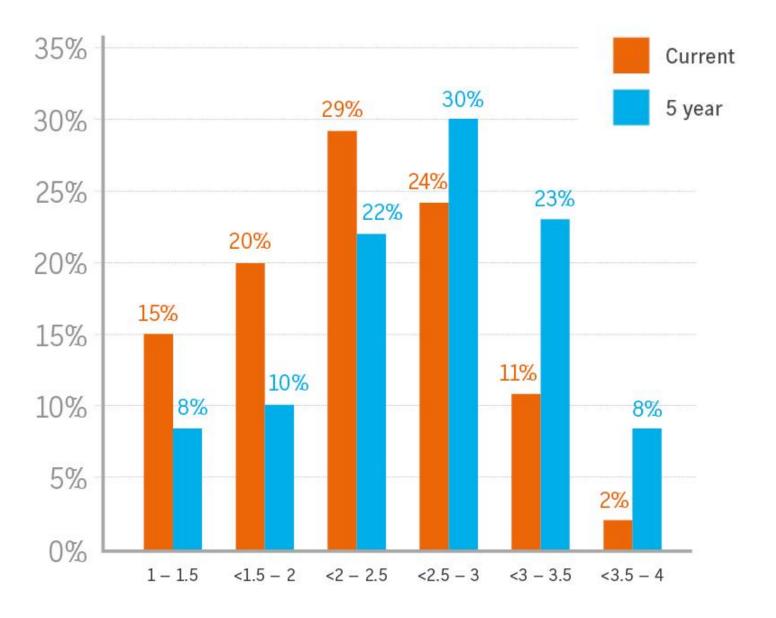


4 sub-dimensions with 4 levels of digital readiness...

	Level 1	Level 2	Level 3	Level 4
	Visibility	Predictive	Prescriptive	Self-learning Autonomous
Planning frequency	Ad-hoc	Regular with some unplanned changes appropriate to planning cycle	Regular and appropriate planning cycle, with alerts if business conditions change	Continuous planning with real-time response to a change in business conditions
Strategic objective	E2E Visibility Departmental Reporting	Efficiency Functional optimisation	Dynamic end-to-end supply chain business optimisation	Pro-active end-to-end business optimisation with total ecosystem visibility
Digital technology adoption	Processes supported by basic ERP systems Manual S&OP and processes supported by general purpose tools	Specialist tools and professional techniques Some process automation with segmented policy profiling	Incorporates some machine learning and AI connected to Digital Control Tower Mature IBP and connected professional SC tools	Fully digital process Extensive use of AI and ML Autonomous where appropriate
Digitally enabled reporting & analysis	Limited analytics Supported by spreadsheets as required	Analytics tools used for reporting on key metrics, to support cost optimisation	Advanced analytics Migration from deterministic to probabilistic analytics Real-time alerts and recommendations that enable dynamic responses	Autonomous adjustment within defined parameters, with real-time escalation where required

Only 13% companies currently at level 3 readiness

> Level 3 digital readiness predicted to more than double to 31% by 2023



4 strategies to digitise supply chains...

SC Business of impact **Process Optimisation** Potential size

New **Business** Models

SC Core Process Optimisation

SC Digital Technology Pilot

Low

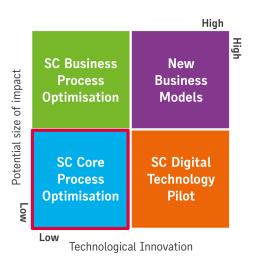
Technological Innovation

Low



1. SC core process optimisation





Competing through process excellence...

YOUNGER FAMILIES



STRIVING FAMILIES

Littlewoods





- >Explosive growth
- > Very largest brand 80.7bn

Littlewoods Ireland

- > Heritage propositions
- >Limited growth online
- > Huge market potential
- > Double digit growth

Shop Direct to stop Littlewoods catalogue after 80 years

Littlewoods to stop printing catalogue and focus on websites due to internet shopping revolution

Catalogue circulation

Peak: 25 million

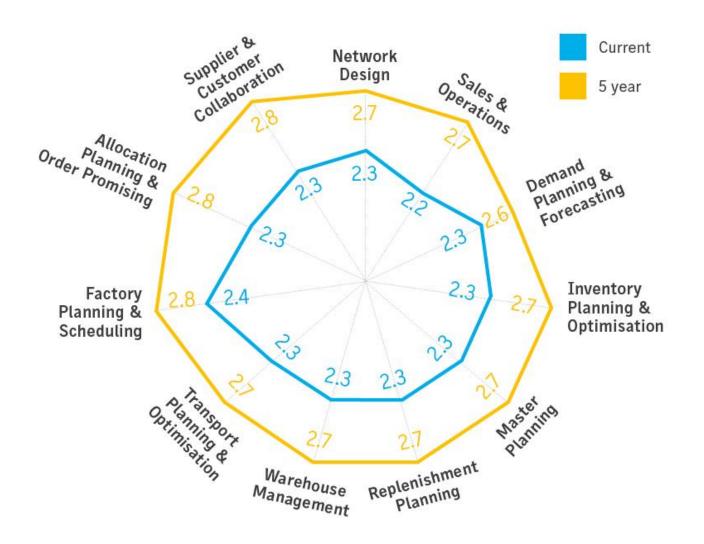
2010: 5 million

2015: 300,000

"This is a big step in Shop Direct's transformation and, importantly, it's one that's been led by our customers. They've embraced online at a phenomenal pace – this is where they're browsing and where they're buying"

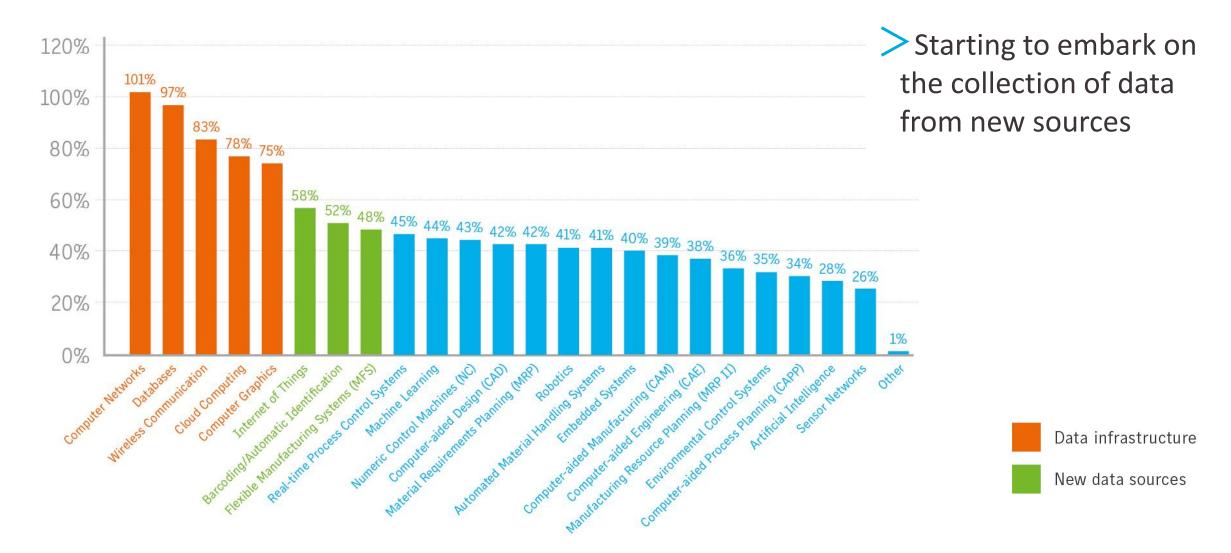
Alex Baldock, CE, Shop Direct (May 2015)

Translates into a series of operational processes...

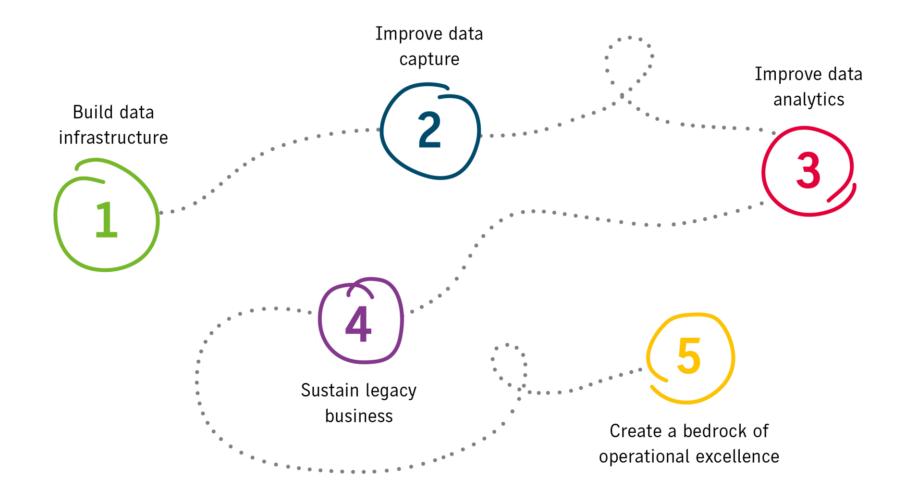




Most companies are currently only leveraging their data infrastructure...



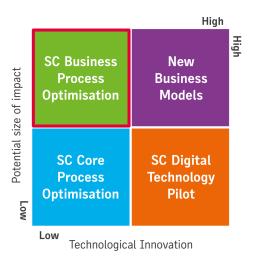
5 steps to SC core process optimisation...





2. SC business process optimisation





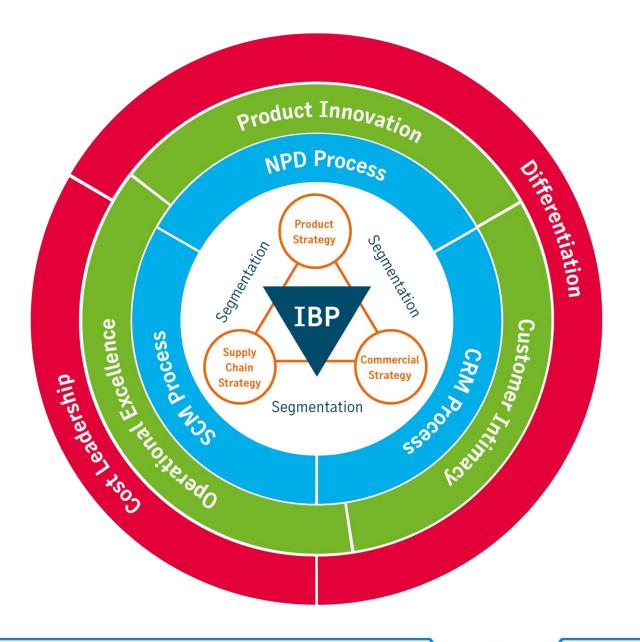
3 core business processes

Product Development Supply Chain Customer Relationship Management Process Management Process Management Process Identifying potential new Selecting and qualifying desired Ascertaining new customer customers needs suppliers Determining the needs of existing Establishing and managing inand potential new customers Designing tentative new product bound logistics Learning about product usage & solutions Designing and managing internal application logistics Developing brand and positioning Developing new solution proto-Establishing and managing outstrategies types bound logistics Developing/executing a & p progs Designing work flow in product/ Developing/executing service Identifying and managing programmes internal functional/departmental solution assembly Developing/executing sales relationships Running batch manufacturing programmes Acquiring, installing and maintain- Acquiring/leveraging information Developing and sustaining ing process technology technology/system for customer networks of linkages with Order processing, pricing, billing, contact external organisations rebates, and terms Managing customer site visit Managing (multiple) channels teams Coordinating product design Managing customer services such Enhancing trust and customer activities to speed up business as installation and maintenance td loyalty processes Cross-selling and upselling of enable product use product service offerings

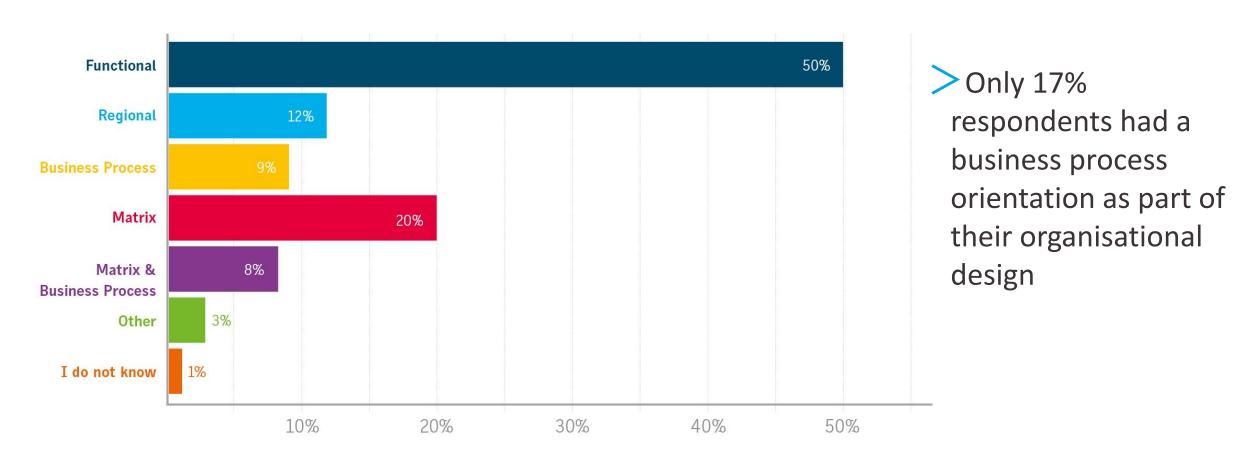
5 characteristics of business processes

- 1. Have customers for whom they create value
- 2. Typically cross functional boundaries
- 3. Draw upon functional resources
- Are team-based
- 5. Have strategic goals

A business process orientation is fundamental to maintaining strategic alignment...



Functional and regional organisational structures inhibit end to end SC thinking...

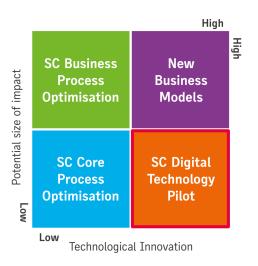


Source: WMG & JDA Study on SC Segmentation (2016)



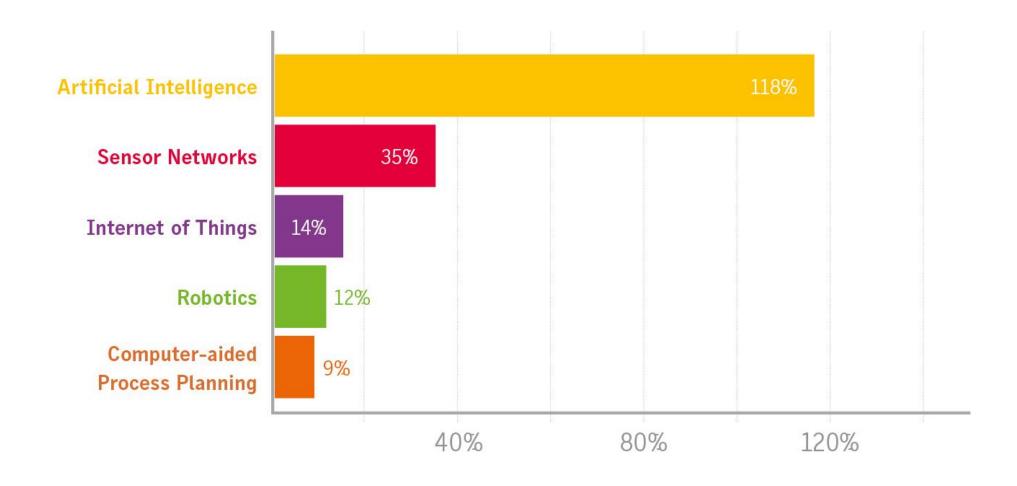
3. SC digital technology pilot



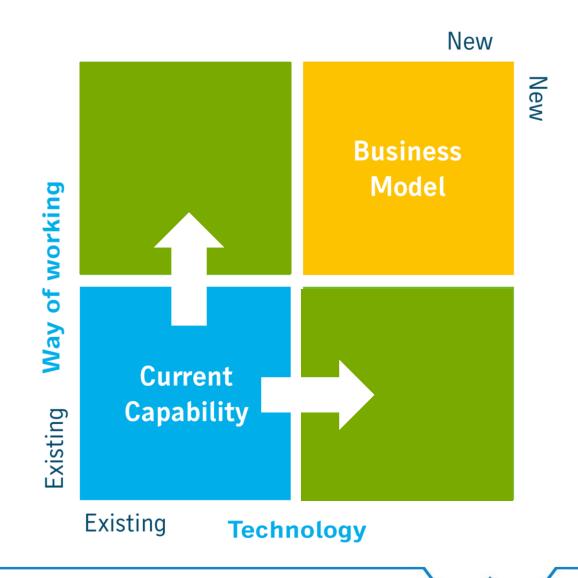




Rate of Al adoption set to double in next 5 years...



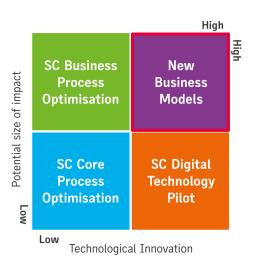
New technology adoption can be de-risked...



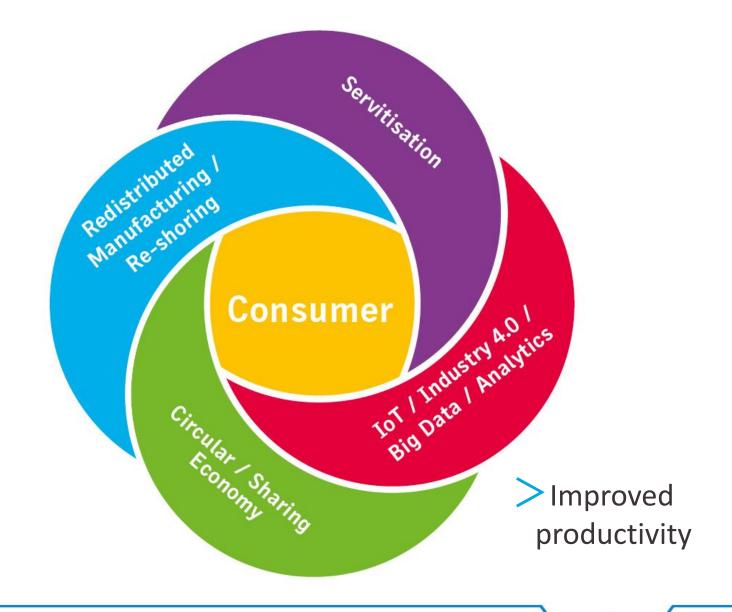


4. New business models





Underpinned by more substantial and inter-connected trends...







4 strategies to digitise the supply chain...

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New **Business** Models

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Potential size

Keep in touch...

Next SCIP networking event: Tuesday 10th September Beyond the hype: Role of Blockchain in supply chains

http://www2.warwick.ac.uk/fac/sci/wmg/research/scip/networking

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@WMGSupplyChain

#SCinPractice

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