



THE IMPORTANCE OF VALUE NETWORKS FOR DELIVERING ADVANCED SERVICES

**A DHL and Aston Business School Advanced Services Group
perspective on future Engineering & Manufacturing Supply Chains**



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FOREWORD

This is the second in a series of white papers from DHL and Aston Business School's Advanced Services Group on the topic of servitization. This paper discusses servitization in the context of value networks including the respective supply chain and logistics implications.

WHAT IS SERVITIZATION?

Businesses in many industries are increasingly adopting services into their competitive strategies, a transformation which impacts not only on their business model, but may require fundamental changes in their operations, relationships, organizational structures and supply chains. This process of transformation is known as servitization. For a more detailed background on servitization read the first part of this white paper series: [“SERVITIZATION AND SUPPLY CHAINS”](#).



Services come in many forms, from base and intermediate services such as simple repair and maintenance, through to advanced services whereby the provider sells the delivery of 'outcomes', rather than products and their ownership. The provider becomes an integral part of the customer's operations, enabling the customer to focus on its core business and growth.

Pioneering examples of manufacturers that have evolved their offerings beyond a traditional product and support model to encompass advanced services include:

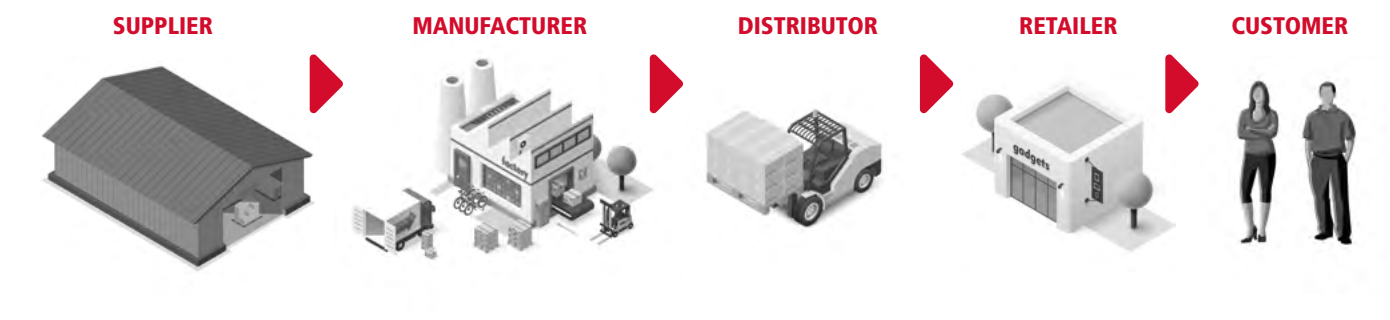
- **Schindler Elevator's Transit Management System** with its destination control system. It interacts with users, restricts access and optimizes peak-time traffic flow. It can even be personalized for tenants and lets you modernize without reducing transport capacity
- **Trane Intelligent Service and Building Advantage** offers a portfolio of energy management solutions that can be tailored to improve building performance, sustainable operations and reduce operating costs in ways building owners had never imagined possible

The development and delivery of this new service offering is increasingly complex, and the risk involved for the provider(s) of the offerings is therefore significant. One way of addressing the risk is to engage in cross-industry collaborations which can be swiftly and flexibly reconfigured. Such innovative structures are known as 'value networks'.

WHAT IS A VALUE NETWORK?

In order to understand a value network as a way of collaborating with suppliers, customers and other parties, it helps to draw a contrast with the more traditional view of such an arrangement – the supply chain. Traditional supply chains are organized around the creation of products. Organizations usually work and collaborate only with their immediate suppliers and customers, and each organization within the supply chain is an independently-working entity, moving resources downstream to generate cash flows for itself.

A TRADITIONAL SUPPLY CHAIN



Value networks by contrast are much broader and do not have the same linear processes of passing resources in a single direction. Rather than focusing on the one-way exchange of resources up and down the supply chain, the focus is on the value that can be created by and for all partners through multiple collaborations and contributions to the broader offering.

Service offerings are developed and delivered by the entire network (e.g. from the raw material extractors to the end-users) exchanging knowledge, expertise and resources there is a strong focus on co-creation, taking into account the perspectives, needs and abilities of all parties. All of this is done with the ultimate goal of transforming the end-user's experience.

“

A value network is comprised of different sets of stakeholders and partners, either from the same industry or different industries, collaborating on key activities and sharing their resources to achieve joint goals, while sharing related costs and risks.¹ ”

¹ Moore, J. F. (1993).



WHY VALUE NETWORKS ARE KEY TO SERVITIZATION



Businesses are increasingly realizing that in order to offer advanced services they need to make use of the expertise of other organizations. In ever-more competitive markets, they are becoming reliant on each other in a range of new and different ways. Engaging with the value network enables all the involved parties to:



Take advantage of other organizations' capabilities:

Being part of a value network allows companies to capture and create

value that no single firm could do single-handedly. Pulling together such a network of specialized stakeholders accelerates the development of products and services and enables the delivery of the more complex and novel solutions demanded by customers and consumers.



Improve (end) customer satisfaction:

Rather than only understanding the immediate customer in the supply chain,

the value network creates the visibility of the (end) customer's requirements; this allows every party to recognize and improve their individual contribution to meet the (end) customer's needs.



Managing risks: In increasingly technology-intensive industries, collaborating through a value network enables the participating companies to manage the risks of adopting

new technology and to develop innovative offerings in complex and uncertain environments, i.e. develop new solutions for existing customers.



Creating new opportunities: Collaborating with the value network brings new opportunities to serve a larger market segment

and address more complex needs, i.e. develop new solutions for new customers. The collaboration allows each participant to focus in a more targeted way on the part of the offering that they can distinctively deliver and creates opportunities that wouldn't otherwise be possible.

In summary, all parties involved in the value network have the chance to develop a more sustainable business model by generating higher and/or additional profits, minimizing operational disruption, managing risks in a more balanced way and building longer-term customer relationships.



TRUCK-AS-A-SERVICE: AN EXAMPLE

The UK road transport industry faces a number of challenges: the cost of fuel, congestion, emissions regulations and driver shortages to name a few. Only 1% of employed drivers are under the age of 25², operator profit margins are just 3%³ and leading manufacturers currently see an average 6% margin.^{4,5}

These operational and legislative factors combine to create difficult market conditions, whereby several key players in the industry are experiencing a serious financial squeeze. However, this is only a part of the story; changing consumer

shopping behaviours are turning the industry on its head. The leading players in retail and haulage now recognize that putting the requirements of the customer at the heart of their operations is the only way to respond to the ever-increasing trend of online shopping.

In the UK in 2014 74% of adults bought goods or services online, compared with 53% in 2008⁶, and that number continues in its ascendancy. In addition expectations around delivery service: for example: 'click and collect', faster delivery times and free delivery⁷ continue to rise.

¹ Moore, J. F. (1993).

² Traffic Commissioners' Annual Reports 2013-14

³ The Logistics Report

⁴ Financial Times 2015

⁵ Volkswagen

⁶ Internet Access in Households 2014

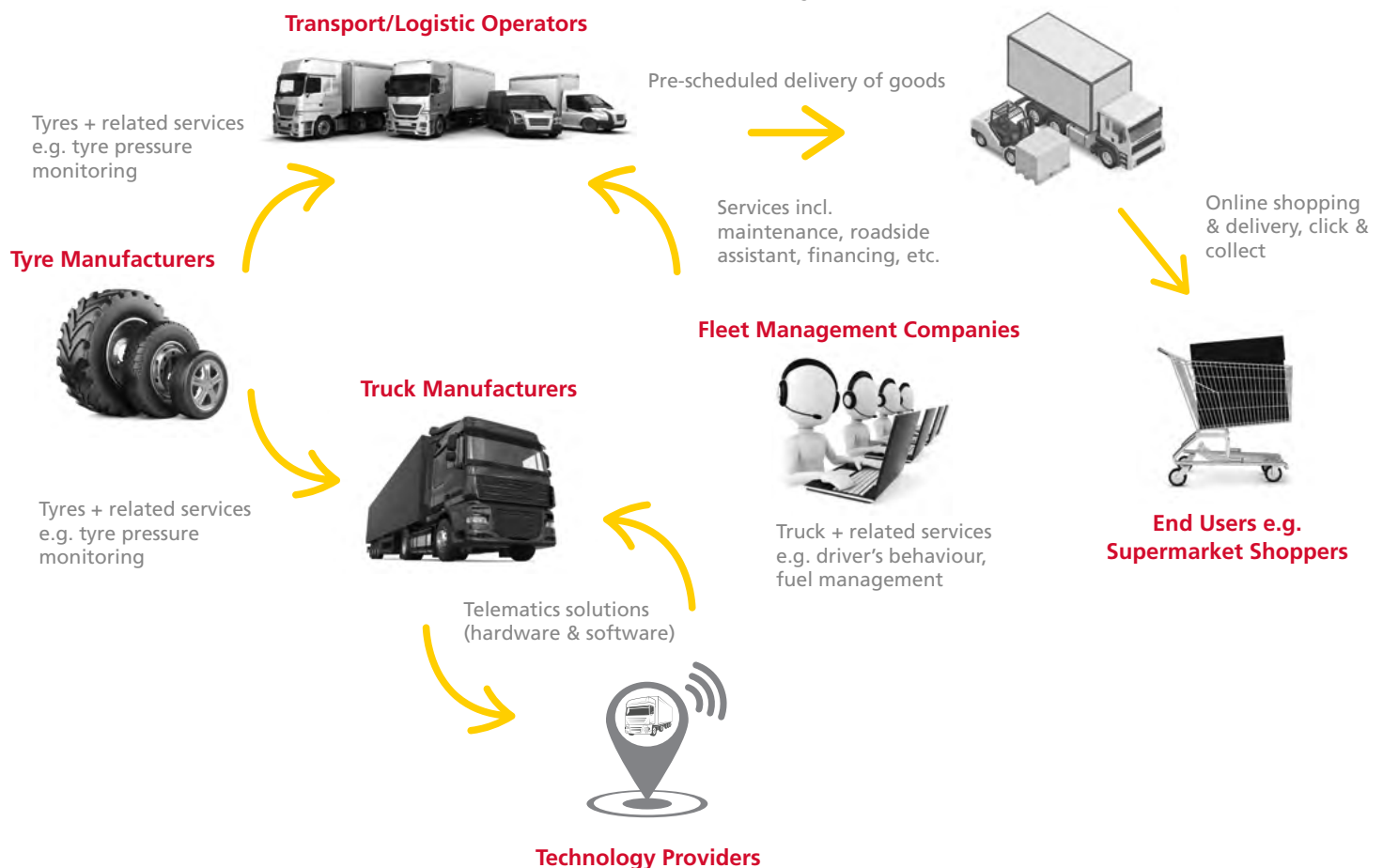
⁷ The Guardian

Companies in this industry have recognized this existential threat and have collaborated to build a value network, with services offerings delivered both to each other and the end user. For example:

- **Tyre manufacturers** are providing services to truck manufacturers, which can then be passed on to the operators, such as reporting on how the tyres are performing, pressure monitoring, pre-warning of tyre failures and roadside assistance often delivered through mileage contracts which charge on a pence per kilometre driven basis for tyres and accompanying services.
- **The truck and trailer manufacturers** provide a package of services including tyre-related packages enabled by the tyre manufacturers. Along with monitoring of driver performance (i.e. their safety and efficiency), fuel consumption, tracking and route planning, all of which is enabled by the technology providers, as well as support to improve performance of these metrics. They have flexible financial options regarding use and ownership of the truck to suit the customer's needs.

- **Transport operators** are the cornerstone of the industry; they are the main users of the trucks and trailers and the services supporting them, and they are expected to operate 24/7, working in close partnership with the retailer.
- **Fleet management companies** provide services to the transport operators and users, including fleet financing and maintenance, tracking and diagnostics, driver and fuel management. These services enable transport operators and end-users to minimize the risks associated with vehicle investment, improve efficiency and productivity and reduce the overall costs of their operations.
- Finally, **the technology providers** offer telematics technology platforms to every player in the network. Telematics technologies enable clients to know where their fleets (or the tyres on them) are, how much they are being used, and how economically and safely they are being driven, and provide journey management tools to enable more effective delivery planning.

This combination of services enables the value network to meet the demands of the end user for delivery flexibility. In addition it helps the operators to be more efficient, helping to address their driver shortages and profitability challenges.



SUPPLY CHAIN IMPLICATIONS



New service offerings being created in a value network opposed to a value chain in general increase the complexity of the underlying supply chain and related processes. At the same time the supply chain literally has to “deliver” the service values to the end-customer, as well as the value network partners. The importance of managing and

delivering spare parts based on maintenance requirements is only one example in this respect. The table below shows the changing (and additional) supply chain implications in value networks. It also provides leaders with recommendations and food for thought to successfully implement and manage these supply chains.

IMPLICATIONS	RECOMMENDATIONS
The importance of the end customer increases significantly	Understanding the end customer <ul style="list-style-type: none"> ■ Analyze the end customer in terms of objectives, strategies and challenges and translate findings into customer supply chain requirements (e.g. service levels/lead time, delivery options, returns) ■ Define and map the new supply chain based on the new requirements with the end customer in mind ■ Outline the differences to the current supply chain setups in terms of flow of good including (new flows e.g. direct flows), information flow (communication with end customers and within the value network) ■ Consider supply chain services needed to meet the requirements (e.g. visibility, supplier management, continuous improvement) ■ Define changing roles and responsibilities along the supply chain ■ Examine existing and required IT landscape
Managing a value network implies managing the supply chain in an holistic way	Orchestrating the supply chain <ul style="list-style-type: none"> ■ Consider holistic supply chain management as a key enabler of the value network success ■ Define clear KPI's that not only measure supply chain efficiency end-to-end, but also steer your partners ■ Decide who should orchestrate the new supply chain and consider options to outsource to a neutral service provider (LLP) to balance interests in the value network ■ Focus on supply chain transparency end-to-end
Value networks create significant potential from a supply chain perspective	Turn challenges into opportunities <ul style="list-style-type: none"> ■ Utilize the holistic supply chain view to eliminate inefficiencies (e.g. reduce the bullwhip effect) ■ Make use of value networks partners to continuously improve supply chain efficiency ■ Leverage the increased supply chain visibility and continuously review the supply chain. For example: in light of changing market and/or customer requirements to improve service levels or even provide additional services for end customers ■ Explore analytics: the use of analytics has the potential to assist in pro actively addressing supply chain challenges across different partners. Analytical data will in the end provide increased value to the consumer or even additional services for end customers

UNDERSTANDING YOUR VALUE NETWORK

There are principal guidelines that are crucial to understand the value network and gain further transparency in how such a concept can benefit the involved organizations. These are summarized below:

1. Don't try to map your whole business, but focus on the network and players within who you most readily associate with future opportunities around advanced services.
2. Place the service offering to the customer, rather than your organization, at the centre of the network and understand the end customer requirements.
3. Identify the immediate players within your value network (e.g. customers, suppliers, distributors, partners) as well as the second level players (e.g. customers/suppliers of your customers)
4. Focus on the 3-5 most influential factors relevant to your offering and shaping the value network.
5. Reflect on the most influential players who you might work with to address these factors
6. Reflect on how your advanced service offering might positively impact the whole value network and your contribution to the (end) customer satisfaction, explore the opportunities for collaborating with the identified players and how to make a case for collaboration.
7. Decide what the optimal set-up for your company look like in order to orchestrate your new value network holistically; Ensure your supply chain management becomes an integral and efficient part of the business to ensure full value creation.



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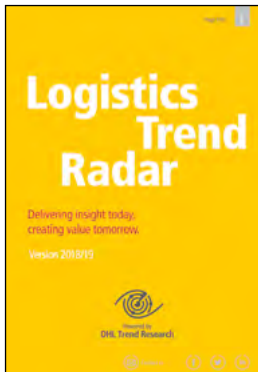
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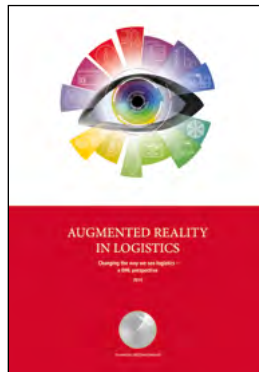
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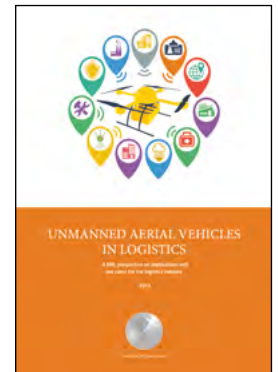
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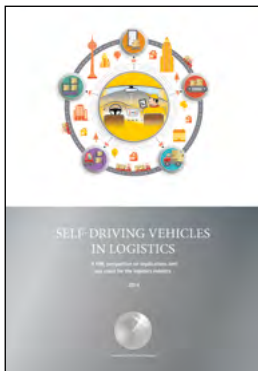
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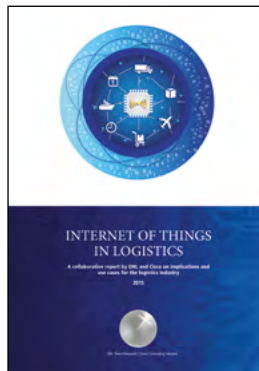
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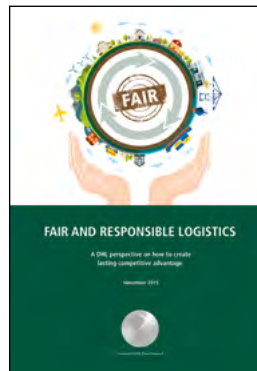
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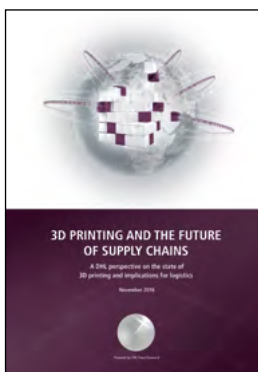
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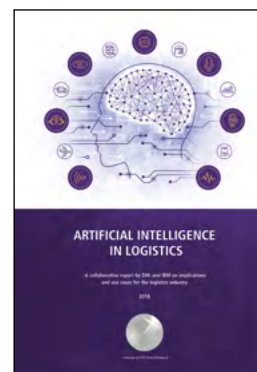
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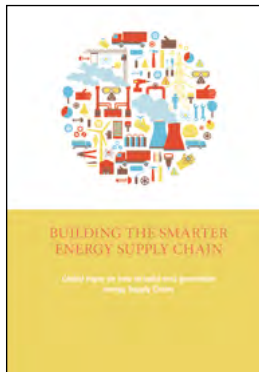
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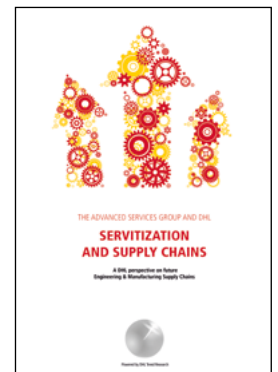
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