



Success in Logistics – An Asian Perspective

White paper

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AUTHOR: Thomas Martin, CEO, Forward Intelligence Group,
thomas.martin@forward-intelligence.com

Andreas M. Radke, BVL Chapter Singapore Chairperson
amradke.bvl@gmail.com

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Disclaimer

The model represents the viewpoints of the workshop participants at the time of the workshop. Readers will most likely have different views about its factors, their connection and the conclusions of this white paper. This is to be expected and valid.

It is not the purpose of the model to represent universal truth but to provide insights, inspire thinking and discussion to allow everybody to construct their individual preferred model of the future to inform the formulation of company-specific strategies, create urgency to act, and govern execution.

This white paper is public domain. BVL members are encouraged to use it freely to facilitate understanding about how to drive success of their businesses.

Background

The Bundesvereinigung Logistik (BVL) and the association's members are thought leaders in logistics and supply chain management. In 2017, members published a comprehensive report about the future of the industry*. The key insights revolved around four domains:

- The impact of innovative technologies
- Emerging developments in supply chain
- New, and changing traditional business models
- Changes in the competency requirements of the workforce

The report is still an interesting read in 2019. However, in the meantime, Asia has continued to grow in many dimensions. Most notably, the continuing strong growth in economic development has led to increased affluence within Asian economies. Technological development has increased further with many new technologies leaving the research environments for application in industry. In addition, Asian consumers in general have a much greater affinity to try and subscribe to the new technologies, making Asia a fertile environment to introduce new solutions.

Thus, the BVL Chapter Singapore – its members and the chairpersons - wanted to revisit the analysis and findings, and contribute the Asian perspective on the future of logistics We had two objectives:

- 1) Add an Asian perspective to the report's findings
- 2) Revisit the report (and its model) 2 years after its first publication

Led by Thomas Martin, a BVL member and Foresight Consultant from Forward Intelligence Group, and Dr. Andreas M. Radke, chairperson of the BVL Chapter Singapore, the BVL report was first transformed into a trend map to visualize it. The map contains the factors mentioned in the report and deduces their relationships as described therein. The central factor, i.e. the overall goal within the model, was "Success in Logistics". This became Version 1 (V1) of the model.

In the spirit of open collaboration and innovation, the BVL Singapore Chapter and other experts of the industry and region Asia came together on 28 May 2019 at the German Accelerator South East Asia in Singapore to discuss the trend map and work on the refinements. During the insightful

*: Wolfgang Kersten, Mischa Seiter, Birgit von See, Niels Hackius, Timo Maurer, Trends and Strategies in Logistics and Supply Chain Management, 2017, ISBN: 978-3-87154-608-2, available from <https://logistiktrends.bvl.de/en> (last accessed: 16 Jun 2019)

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discussions of the workshop, new factors were introduced to the model, some factors deprioritized, and relationships refined. This model was further refined during the subsequent documentation and became Version 2 (V2) of the model.

This white paper documents V2 of the model, the evolution from V1 to V2, and looks deeper at selected factor groups of particular importance to the “Success in Logistics” to derive insights and recommendations focusing in particular on the Asian perspective added.

Syntax

The trend map visualizes the relationships between the different factors that directly or indirectly drive the central factor “Success in Logistics” coloured in pink. The other factors are colour coded according to the [PESTLE analysis model](#):

Type	Colour
Politics	Red
Economy	Orange
Social	Yellow
Technology	Green
Legal	Cyan
Environment	Blue

Some factors are genuine trends, others serve as connectors to complete the logical flow of the model.

For example, Digitalization is an important trend but it does not directly influence Success in Logistics. Instead, it enables the creation of New Business Model which drive New Customer Acquisition which drives Success in Logistics. The understanding of those connections and ‘how things work’ is critical for operationalizing the model as part of strategy definition and execution.

The connections define the relationship between the factors. They are defined using three different aspects:

Aspect		Tool
Impact	Increase	+
	Decrease	-
Strength	Weak	—
	Medium	—
	Strong	—
Delay	None	—
	Medium	—
	Long	—

Impact describes how the factors influence each other. The impact can either be decreasing or increasing on a factor. The impact is in relation to the exact definition of the factor. Wording is

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important. For example, inflation increases 'labour cost', but it decreases 'labour cost reduction'. Strength quantifies the magnitude of the impact. Delay describes when the impact at the defined strength happens. No delay leads to an immediate change of the influenced factor, a Medium Delay is assumed to be 5 years, A Long Delay 10 years.

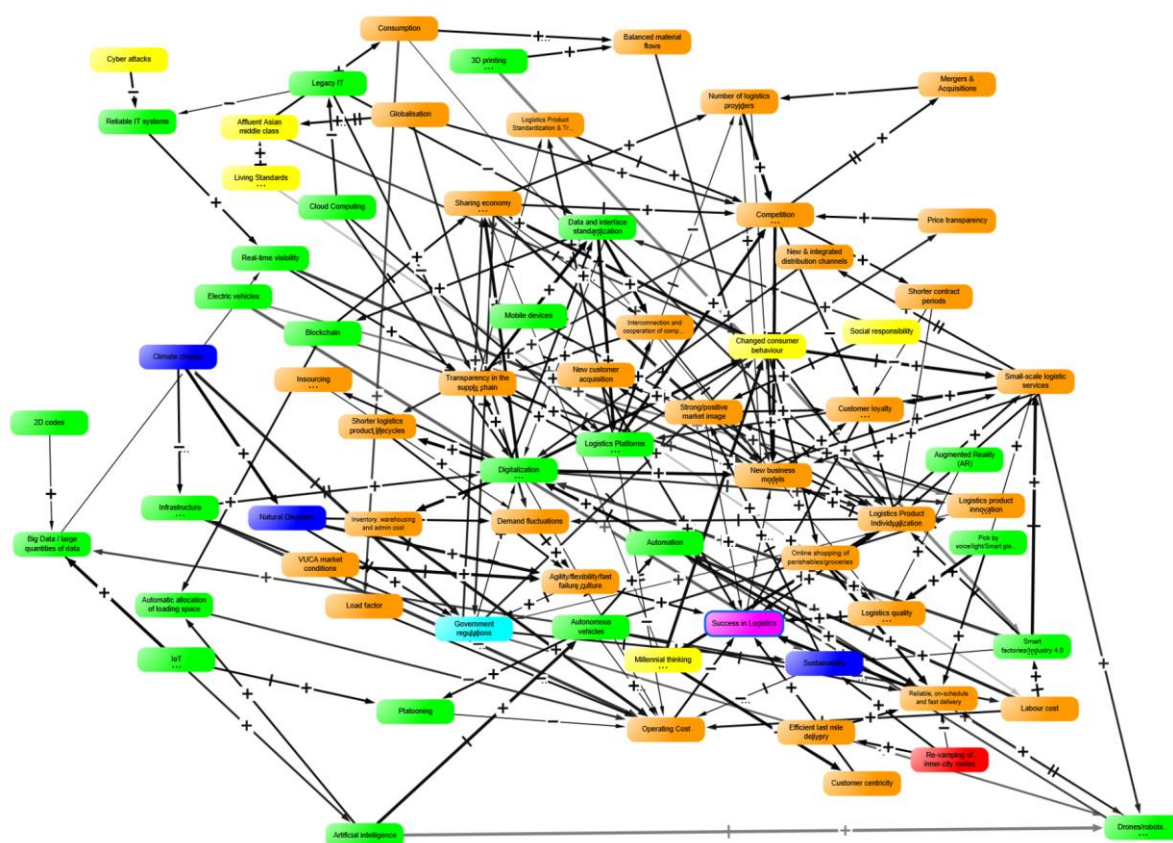
The model was developed using the [Consideo iModeler](#). If you are interested in developing the model further with this tool or have any questions regarding the model, please contact Thomas Martin.

Model Overview

In its entirety the model documents a mental model about how the logistics and supply chain industry operates in its environment.

The model analyses the success of companies in the logistics industry. This is called the central factor shown in pink.

The model identifies the direct and indirect drivers of the central factor and their relationships. It has 76 factors and 192 connections. It consists of primarily economic factors (orange) as direct drivers which are themselves driven primarily by technology factors (green). There are only a few social (yellow), environmental (blue), legal (cyan) and political (red) factors on the boundary of the model. All this is very typical for industry models.



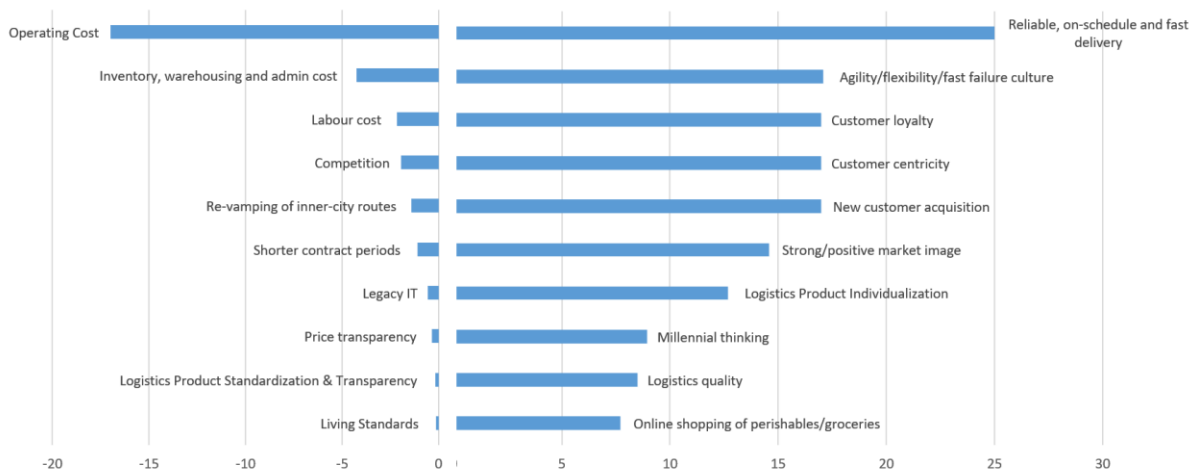
The high number of factors and connections make the model too complex to understand in its entirety. The next sections focus on different aspects to extract the main insights. The aspects were selected either for their significance on the success in logistics overall or their relevance for the success of logistics in Asia.

Top 10 positive and negative drivers of the Success in Logistics

The purpose of this white paper is to analyse the drivers of Success of Logistics in Asia. The impact of the drivers/other factors on the central factor depend on two aspects:

1. Closeness: Factors with a direct, stronger and undelayed relationship to Success in Logistics have, naturally, a stronger influence than weaker factors with an indirect relationship.
2. Loops: Factors can form reinforcing, accelerating (“Virtuous”) and balancing, dampening (“Vicious”) circles that accelerate or inhibit the influence of factors. For example, the emergence of new business models increases the number of logistics providers which increases Competition which leads to the creation of even more new business models.

Considering all direct and indirect connections and the impact of reinforcing and dampening loops these are the Top 10 positive and negative drivers of Success in Logistics.



Success in Logistics is positively impacted mostly by established factors like (i) Reliable, on-schedule and fast delivery, (ii) Customer loyalty, (iii) Customer centricity, (iv) New customer acquisition, a (v) Strong/positive market image and (vi) Logistics quality. More recent trends within the industry include Agility/flexibility/fast failure culture and Logistics Product Individualization. Outside of the industry factors, Millennial thinking and Online shopping of perishables/groceries have emerged.

Factors negatively impacting Success in Logistics are mainly cost.

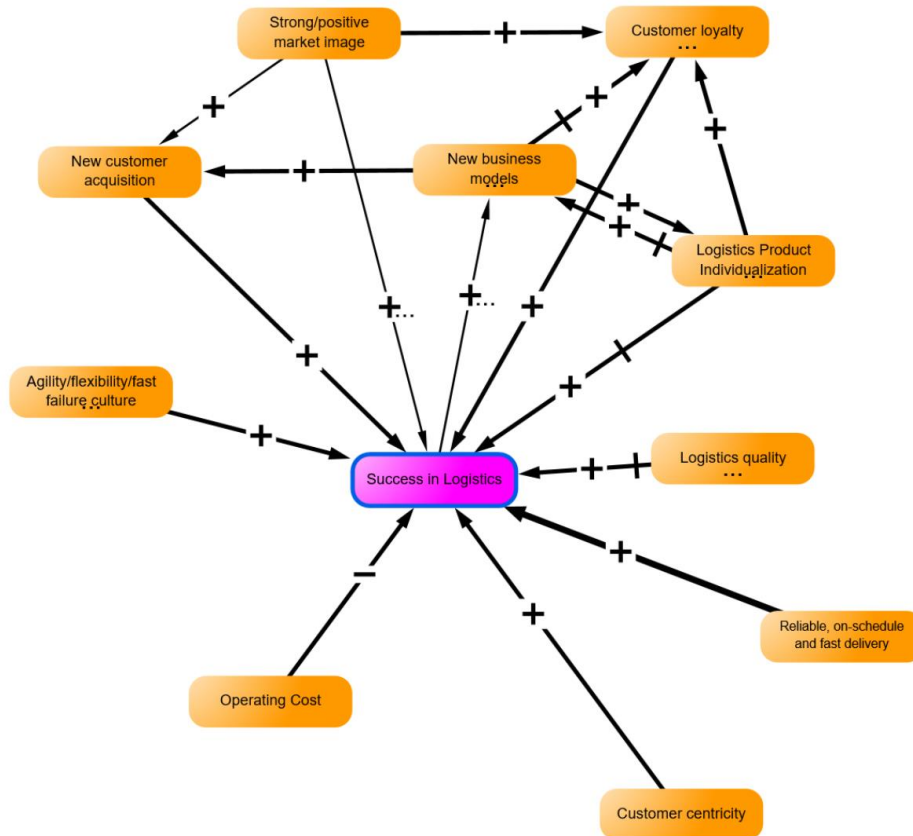
On the positive side, most factors are direct and economic. Millennial thinking (Social) and Online shopping (Economic) are the only indirect factors. This illustrates their strong significance and warrants deeper research into how they can be leveraged to facilitate industry success. It is noteworthy, that no technical factors make it into the positive Top10. The influence of technical factors is through economic factors which dampens their influence. This underlines that technology has value only in its application.

On the negative side, only operating cost is a direct factor. Other cost factors like Labour and Inventory, Warehousing and Admin Cost exert their influence indirectly further strengthening importance of cost overall. Beyond cost, the impact of the other negative factors is insignificant. However, it is noteworthy that non-economic factors like Re-vamping of inner-city routes (Political), Legacy IT (Technology) and Living Standards (Social) come to play here.

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For an individual organization, Success in Logistics depends on understanding how those Top10 factors can be leveraged to improve its position in the market place.

Direct Drivers of Success in Logistics

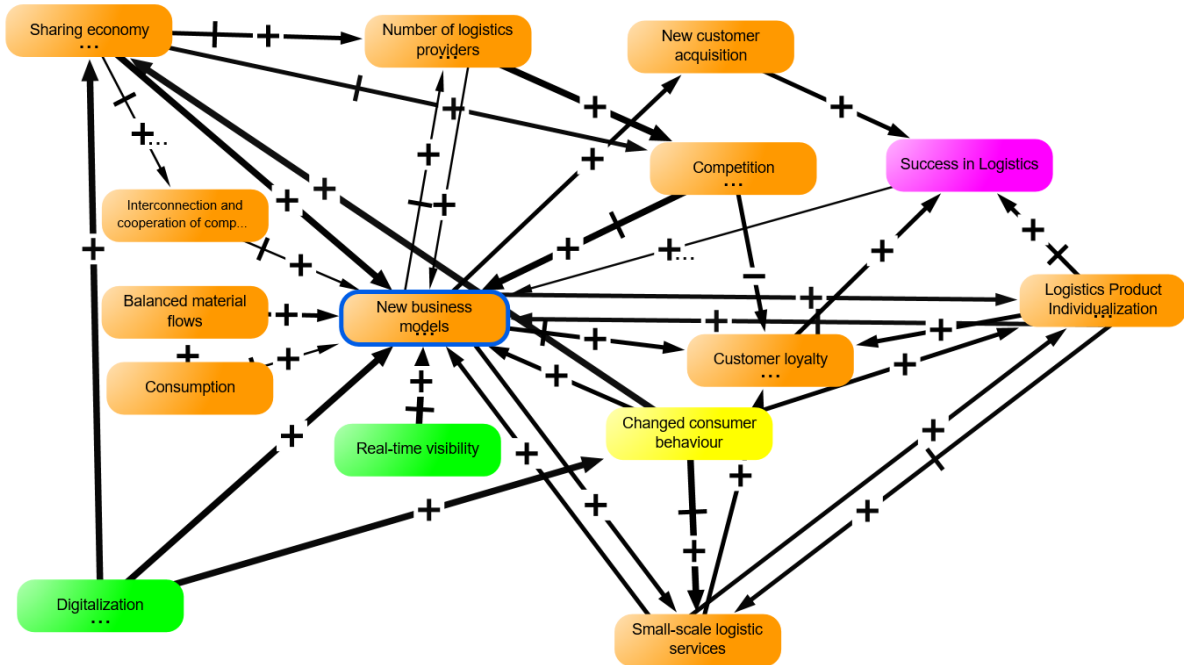


The central factor “Success in Logistics” is assumed to be the economic success of a player in the logistics and supply chain industry. Consequently, all direct drivers are economic.

Unsurprisingly, the strongest driver is Reliable, on-schedule and fast delivery which can be considered the core mission of the industry. New business model and Customer Loyalty form a reinforcing loop that can be leveraged to drive Success in Logistics. All factors, except operating cost have a positive effect on the success in the industry.

Economic Trends

Central Economic Triangle

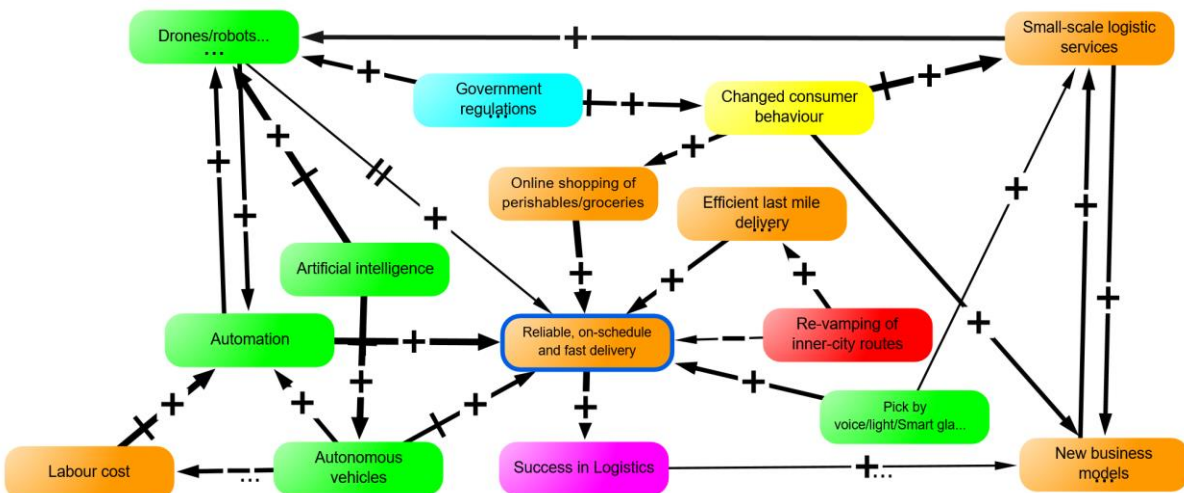


A deeper look into the economic drivers shows three factors that build a strong triangle that drives innovation in the industry: (i) New business models, (ii) Logistics Product Individualization and (iii) Small-scale logistics services. All three are driven by Changed consumer behaviour and themselves drive Customer loyalty.

The Sharing economy stands out as another strong factor driving the creation of new business models.

Digitalization is the technology enabler for the emergence of new business models, changing consumer behaviour and growth of the sharing economy.

Reliable, on-schedule and fast delivery



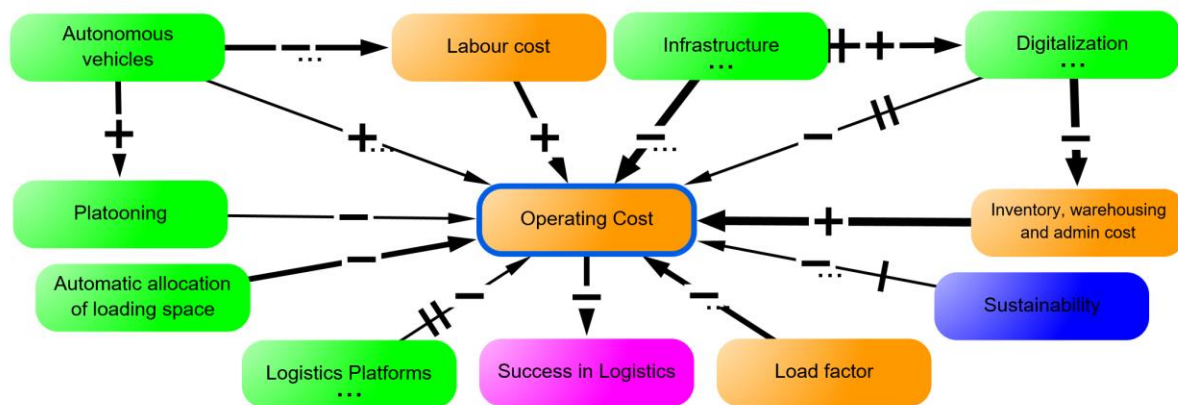
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Reliable, on-schedule and fast delivery is the strongest driver of Success in Logistics. It is itself influenced by a mix of technology, economic and legal/political factors. Its strongest driver is Automation including Autonomous vehicles and Drones/robots.

The biggest economic driver is the Online shopping of perishables/groceries driven by Changed consumer behaviour. This part of the model also demonstrates the importance of government regulation driving the change in consumer behaviour and positively impacting the deployment of drones and robots.

On the bottom left, rising Labour Cost shows as a driver for the adoption of Automation (see below).

Operating Cost



Operating cost is the only negative direct impact factor for the Success in Logistics. The most important cost driver is Inventory, warehousing and admin cost

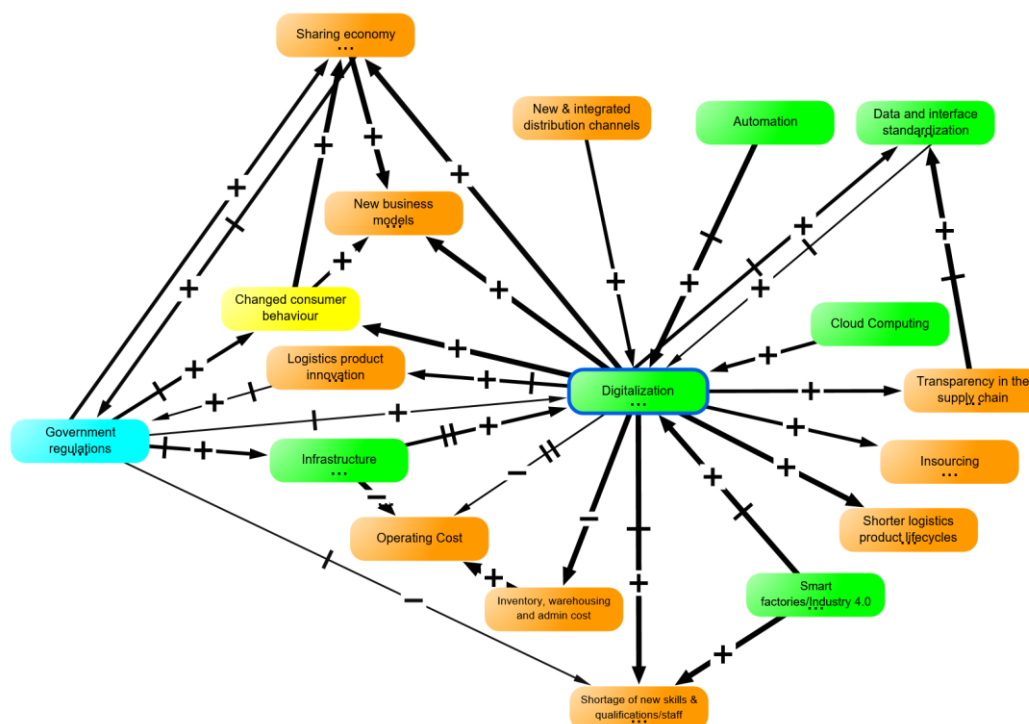
Labour is also still an important cost factor but is expected to be driven down by the adoption of Autonomous vehicles.

Good Infrastructure e.g. roads and communication infrastructure reduce cost. Especially in Asia, the bad road conditions and frequent traffic jams are considerable cost drivers. The increasing investment in broadband and mobile phone systems like 5G (part of the factor Infrastructure) are expected to increase Digitalization long-term and drive down cost.

The adoption of energy-saving technologies in line with Sustainability is also expected to decrease cost.

Technology Trends

Digitalization

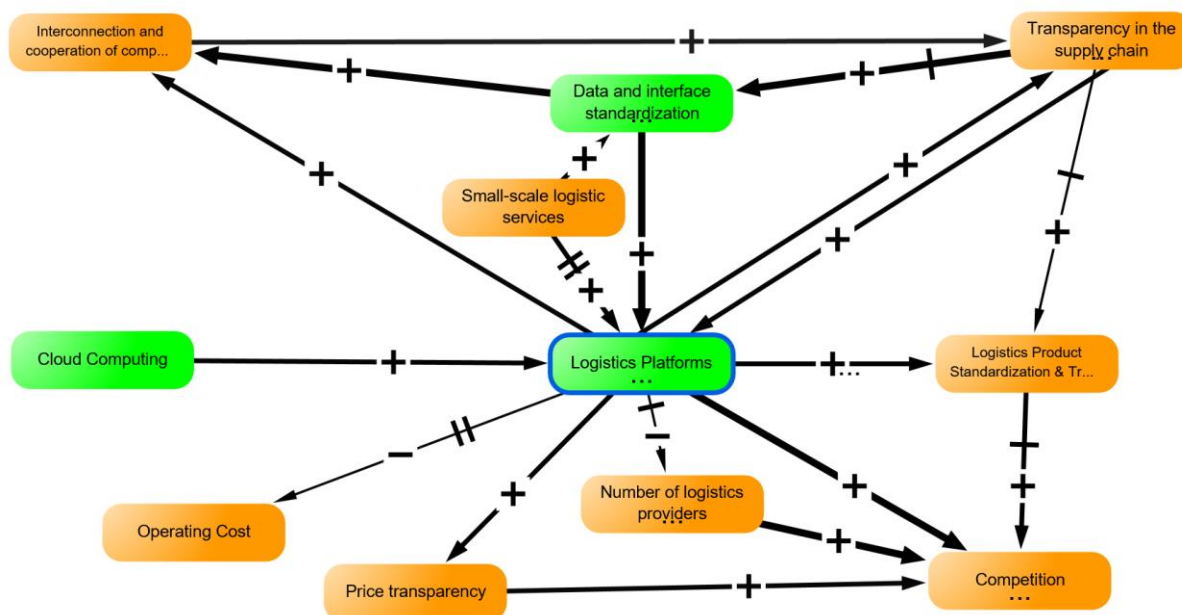


Digitalization is the strongest technology factor with a direct impact on several economic factors enabling Shorter logistics product lifecycles, Logistics product innovation and New business models. It's also a key driver for the evolving Sharing economy. Furthermore, it reduces Cost and increases the Transparency in the supply chain. On the social side, Digitalization changes consumer behaviours.

Enablers of Digitalization itself are primarily other technologies like automation, (ICT) Infrastructure and the adoption of Smart factories/Industry 4.0.

This part of the model is strongly influenced by Government regulations impacting the expansion of ICT infrastructure like 5G networks, the shaping of Consumer behaviour e.g. through data privacy laws and the governance of the Sharing economy.

Logistics Platforms



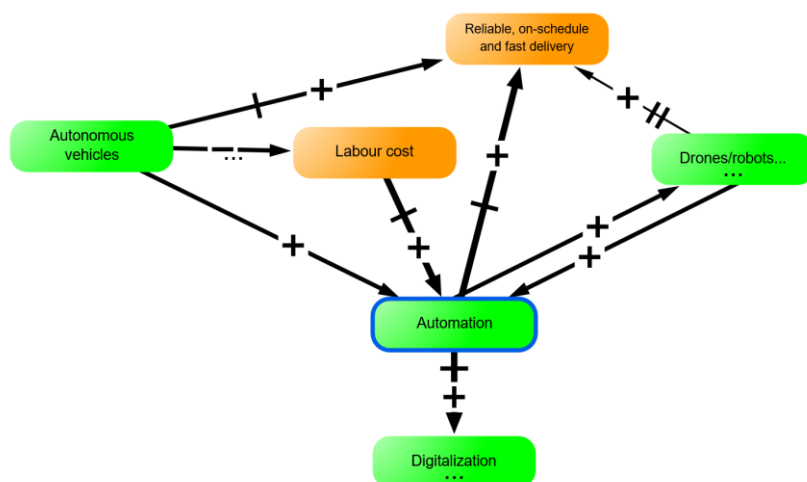
Besides the general trend of Digitalization, the creation of new Logistics platforms is probably the most exciting technology trend in the industry.

Logistics platforms increase the transparency of prices and the supply chain itself and drive the standardization of logistics products and the interconnectedness and cooperation of companies in the industry. Overall, they are expected to facilitate the emergence of new small-scale logistics services and increase the competition in the industry overall, while reducing the Number of logistics providers mid-term.

Logistics platforms are enabled by the increasing adoption of Cloud computing and Data and interface standardization.

In the long-term, the adoption of Logistics platforms will decrease Operating cost.

Automation



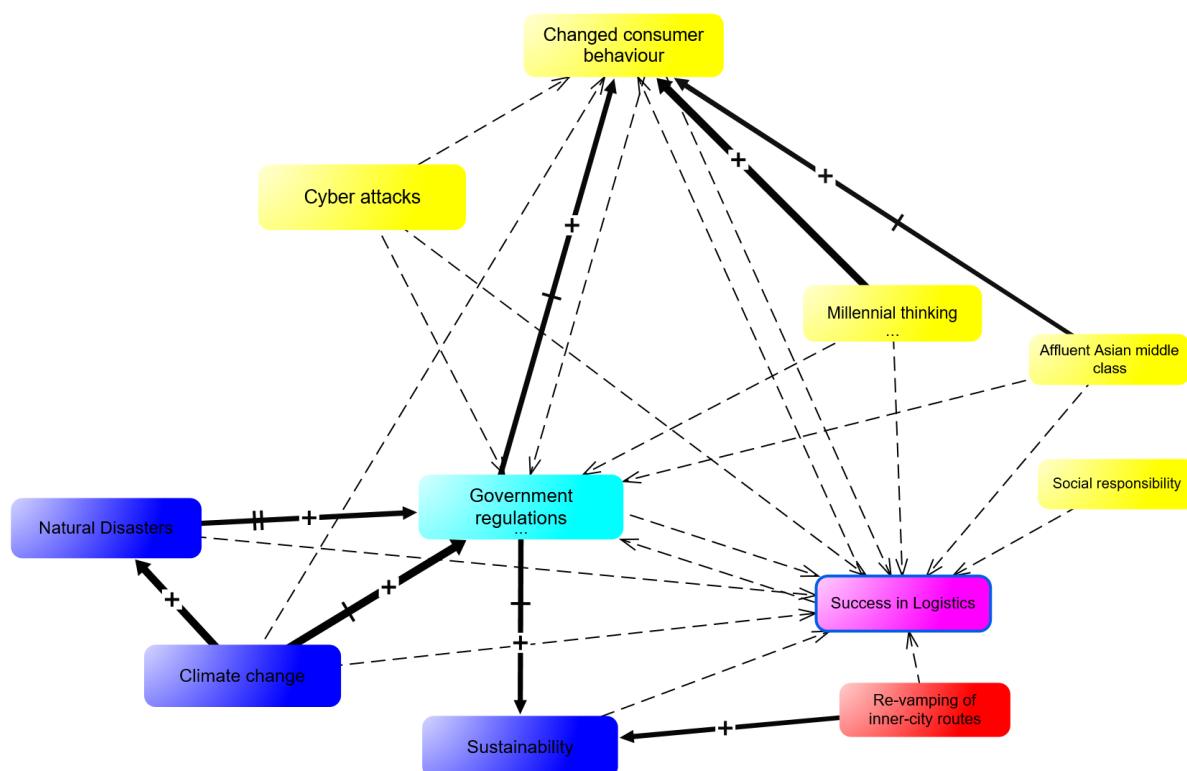
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Automation is the strongest driver of Reliable, on-schedule and fast delivery which is itself the biggest driver of Success in Logistics.

The growing middle class and income levels in Asia, together with stagnating populations and rising living standards in more and more countries in Asia is increasing salary expectations and labour cost. Automation is one way of responding to this change. Staying abreast of the possibilities offered by, for example, drones, robots and autonomous vehicle while embedding them in a comprehensive digitalization strategy is becoming more and more critical for the success in the industry.

Other factors

Economic and Technology factors dominate the logistics industry and are the most important and direct drivers of success. Social, environmental, legal and political factors are indirect drivers on the boundary of the model. Their impact is mostly long-term but is important to understand the direction of the larger market place for logistics services.



Climate change leading to an increase in the frequency and severity of natural disasters may degrade or even destroy critical infrastructure as roads, harbours and communications which will impact the reliability of logistics services causing loss of revenue and increased cost. This will lead to growing government regulations to increase, for example, sustainability.

The trend towards small-scale logistics and shorter delivery times increases traffic in the inner cities. Particularly in Europe, this is already prompting a political discussion about the Re-vamping of inner-city routes to reduce logistics-related traffic. This trend needs to be expected to expand to Asia in light of the increasing urbanization in Asia.

The important social developments to observe include the generational change driving millennial thinking and the growing Asian middle-class which change consumer behaviours. Consumer behaviour is also influenced by government regulations e.g. in the areas of privacy.

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Overall, none of those factors directly impact the success in logistics, but they form the greater context in which the industry operates and need to be observed to spot opportunities and risks.

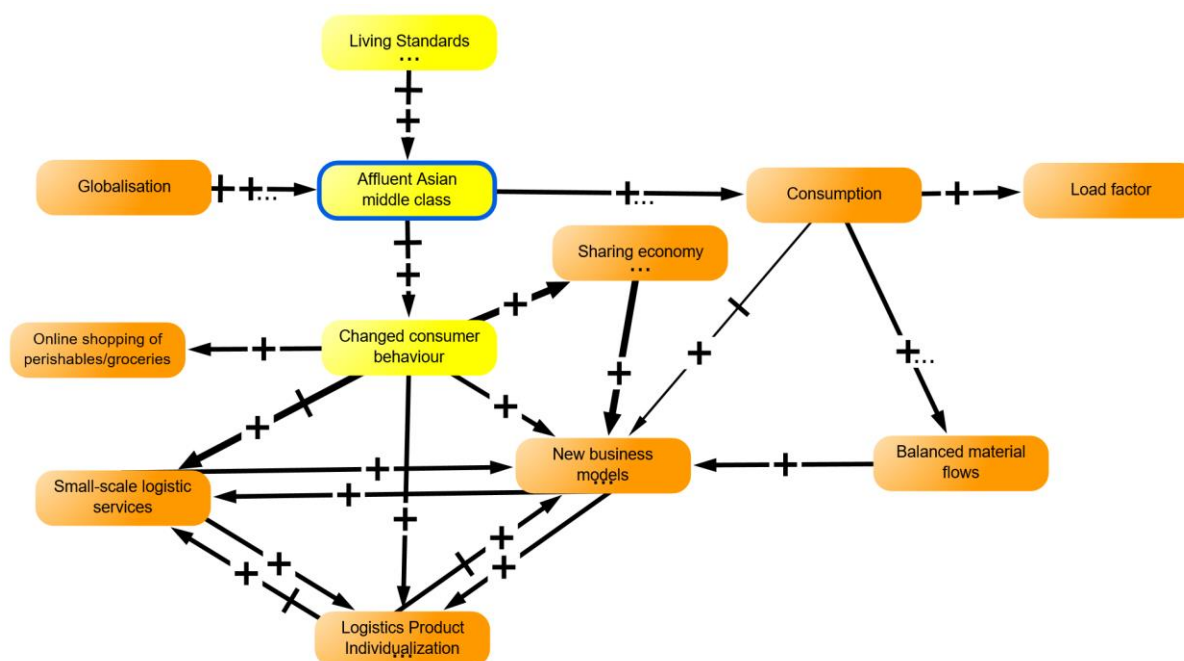
Model Changes

Changes from the first version of the model based on the BVL report from 2017 and the second version based on the workshop in Singapore 2019 reflect the participants introduction of an Asian perspective and the changes in the industry over the last 2 years.

Factor Additions

The following factors were introduced to the model during the workshop. During the post-workshop analysis of the results, the authors of this white paper selectively introduced a few additional factors to increase clarity without impacting the conclusions of the model.

Affluent Asian middle class



The main virtuous circle – “virtuous triangle” – in the model section above is defined by the factors New Business Models, Logistics Product Individualization and Small-scale Logistics Services. These are mutually reinforcing in mostly undelayed relationships.

The key influence on the virtuous triangle is the Changed Consumer Behaviour, positively reinforcing each factor of the triangle.

Specifically, Asian in this respect is that the driver of the changed consumer behaviour is the (increasingly) Affluent Asian Middle Class. The main drivers are Globalization, notable a factor that has become more contentious in Western countries, and (rising) living standards. An observation emerging from the workshop discussions is that affluence is driven by good governance in many countries across the continent independent of the particular political system.

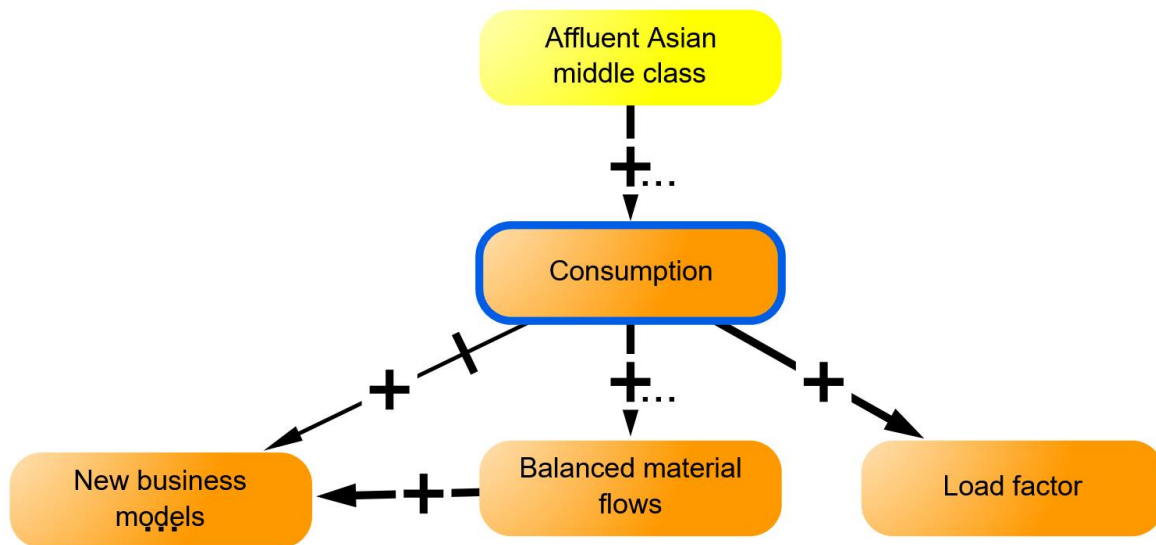
The definition of Logistics Product Individualization relates to the definition of a logistics product which is the set of specifications describing a logistics service offering of an individual LSP. Note,

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that the Logistics Product Individualization as a factor has an apparent contradiction to Logistics Product Standardization which is discussed later. Logistics product individualization is the individualization of services specifications, while product standardization and commercial transparency is the comparability of logistics services.

After discussions, Transparency (not shown in the screenshots) in the supply chain, which was already a factor in model V1, is considered in V2 to include also the commercial transparency, i.e. costing of logistics providers. It increases competition and reduces the number of LSPs via mergers and acquisitions.

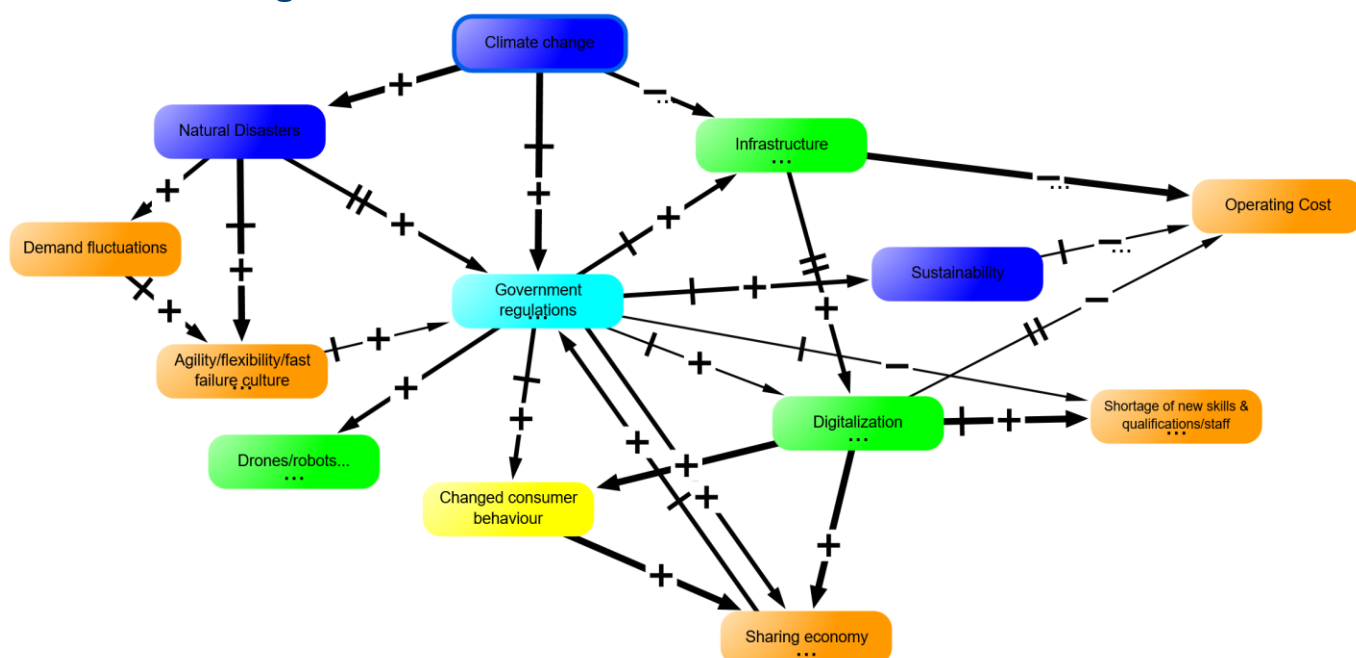
Consumption



Zooming in to the effect of Affluent Asian Middle Class(es) to increase Consumption, this has a follow-on effect on Load Factor, Balanced Material Flows and New Business Models. The increased consumption by the more affluent Asian middle classes changes the physical flow of materials. So that not only goods which until 10 years ago almost exclusively left Asia for Western markets leading to full containers leaving Asian ports and empty containers returning. (Not shown in this screenshot, the more improved Load Factor reduces Operating Cost.) This has now shifted towards considerably more consumption of “Made in Asia” goods being consumed in Asia, but also more goods flowing into Asia beyond mere raw materials and natural resources. For the logistics industry this leads to more balanced load factors and more balanced material flows.

For creative enterprises this change means that there is a business to be made. Opportunities arise not just from the increased consumption which within a few years spawned business models that take advantage of the demand but also from the more Balanced Material Flows that lead to a change in the way freight can be organized and charged for.

Government Regulations



A particularly interesting factor turned out to be Government Regulations. On the one hand, it is considered to be a positive driver through regulations for Infrastructure, Sustainability, Digitalization, Sharing Economy, Changed Consumer Behaviour, (usage of) Drones/ Robots. This is rooted in the government regulations helping to define the rules of the game which reduces the risk in investments. On the other hand, government regulations are driven by the chain of influence of Climate Change, Natural Disasters and the need for Agility/ Flexibility/ Fast Failure Culture.

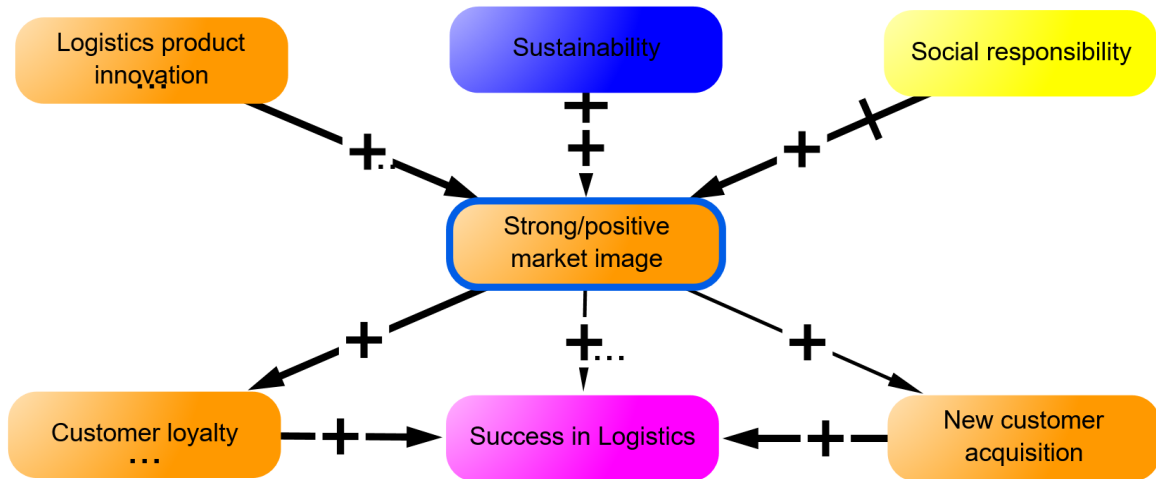
Mid-term, Government regulation is expected to decrease the Shortage of New Skills and Qualifications. There is a particularity of the location of our workshop: Singapore is particularly strong in supporting life-long learning of its citizens. In that respect this is not a particularly Asian aspect but rather a Singaporean one.

Despite government regulations driving sustainability and sustainability's perceived reduction in operating cost, the discussion of industry participants notably focused on coping with natural disasters, not mitigating them through sustainability efforts. Likewise, notably absent was any discussion on potential thought leadership and lobbyism required to drive customer behaviour change. Thus, the missing (decreasing) relationship between Sustainability and Climate Change is sobering.

The workshop added many new positive relationships around Government Regulations. This shifted its impact on Success in logistics from slightly negative (in V1 of the model) to slightly positive (in V2).

However, the workshop didn't touch on any local circumstances to this finding. Among Asian nations, the impact of the Singaporean government on the domestic economy is considered by and large positive (and farsighted). Here, people ask for and expect (positive!) influence by the government. This is a contradiction to the preference for free-market thinking in Western economies.

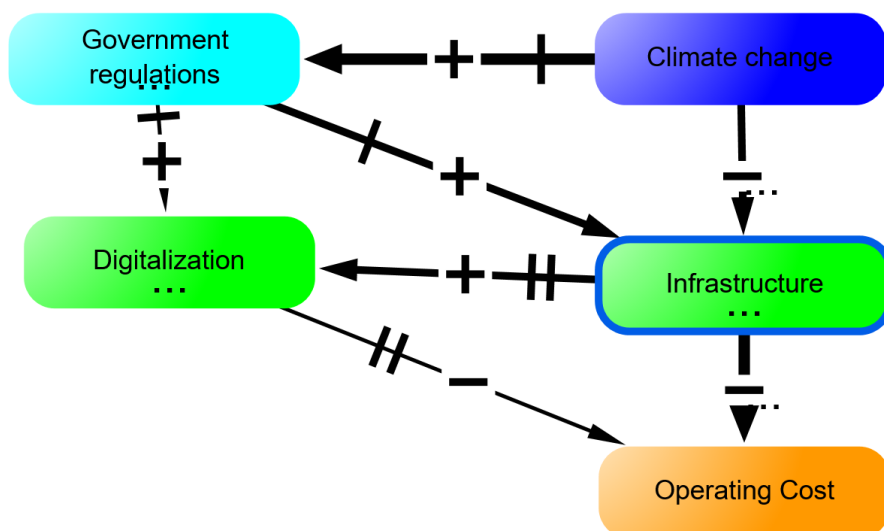
Strong/positive market image



Strong and Positive Market Image of logistics players has, as expected, a positive influence on Customer Loyalty and New Customer Acquisition. Thus, Success in Logistics is driven both directly and indirectly by it. Customer loyalty describes the formal and informal partnerships between logistics service providers (LSP) and their customers.

Interesting, however, were the factors supporting the Positive Market Image. Not just Logistics Product Innovation with its strong PR effect, but also Social Responsibility support a Positive Market Image with some delay. A surprising positive factor for the Market Image was Sustainability. Considering that it was considered a weak factor to decrease operating cost and no factor at all to reduce climate change, it was identified as a rather strong factor to increase the market image. This was noticed only in the post-workshop analysis and it should be raised as a question in future deep-dives, whether the participants actually agree that sustainability activities are foremost done for marketing.

Infrastructure

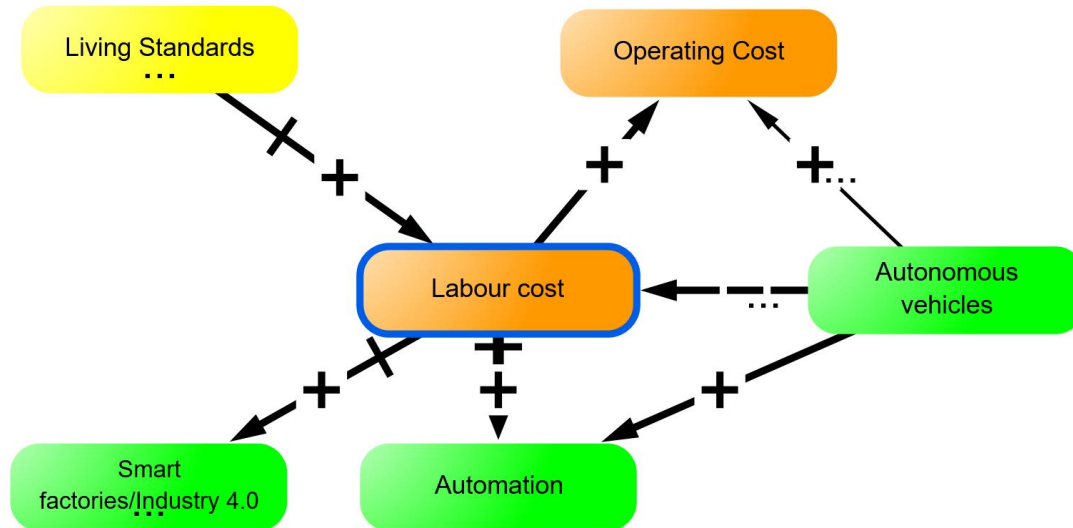


For simplicity, the discussion of the factor Infrastructure combined both information and communication technology (ICT) and physical infrastructure to move and manage good flows. This explains the dual relationship of infrastructure decreasing Operating Cost and increasing Digitalization in the long run. Noteworthy is that the decrease of Operating Cost resulting from

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Digitalization efforts were perceived to be rather weak and only long-term as Digitalization efforts increase cost through investment in the short-term and only yield results in the longer term. The apparent disparity between both, the high profile of Digitalization in all kinds of organizations and the expectations around driving it, and the relationship identified during the workshop wasn't further clarified.

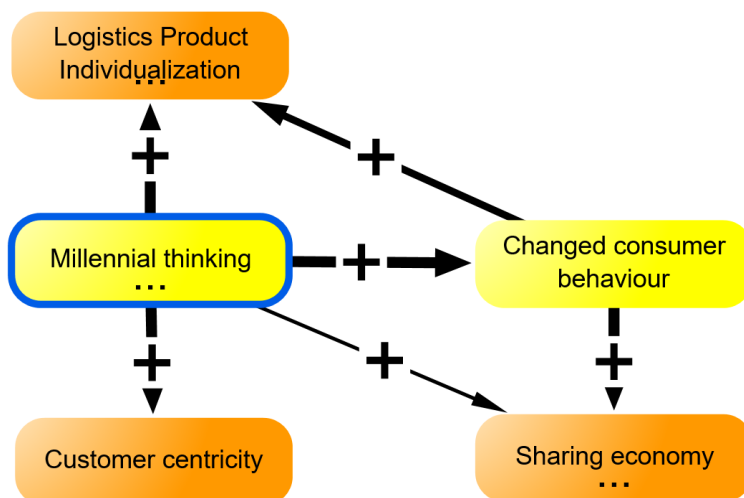
Labour cost



A result of the workshop was to introduce the factor Labour Cost. Once it was added, it supported the general perception (during the workshop discussions also with detailed examples) that rising living standards, particularly in Asia, increase Labour costs. A result of this is initially the increase of Operating Cost, and the efforts to increase Automation and Smart Factories/ Industry 4.0.

Autonomous vehicles had an interesting duality as a factor. While it reduces Labour Cost, it was perceived as an increase in Operating Cost as it requires potentially significant investments into new vehicles. Overall, it was seen as the strongest driver of Automation.

Millennial thinking



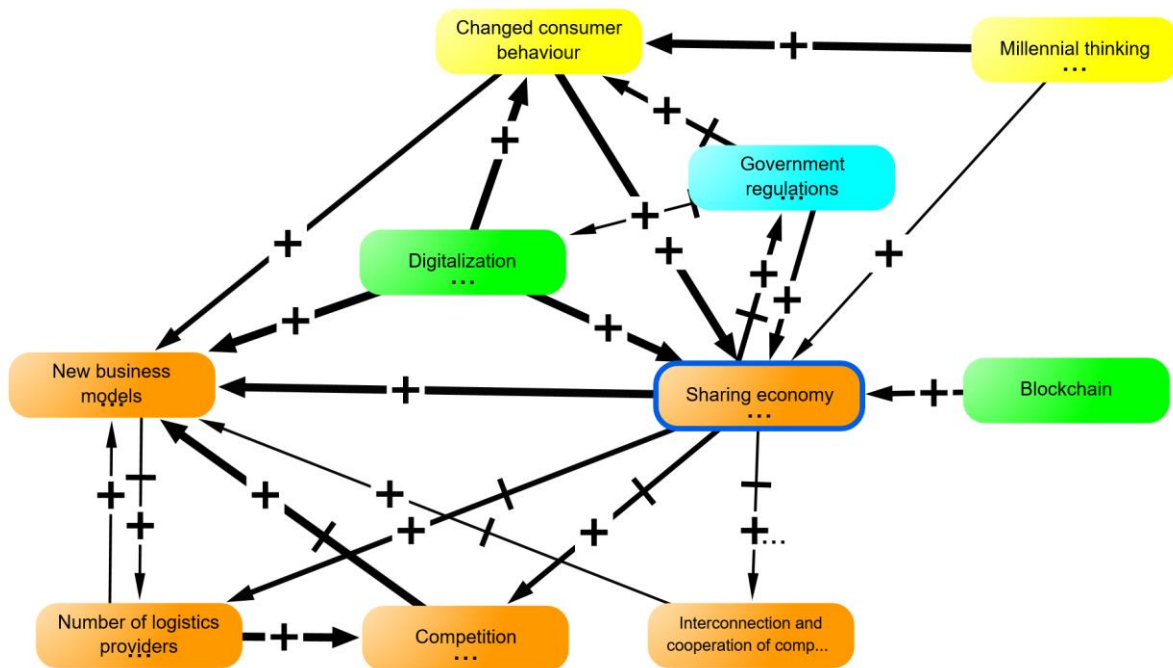
The most noteworthy factor having been added is Millennial Thinking. It was considered an all-round positive factor driving innovation in the industry through Logistics Product Individualization,

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the Sharing Economy (consider for example Uber Freight) and driving Changed consumer behaviour which reinforces the former two factors.

This is a pleasant difference from the occasional criticism launched at millennials in terms of work ethic and customer expectations.

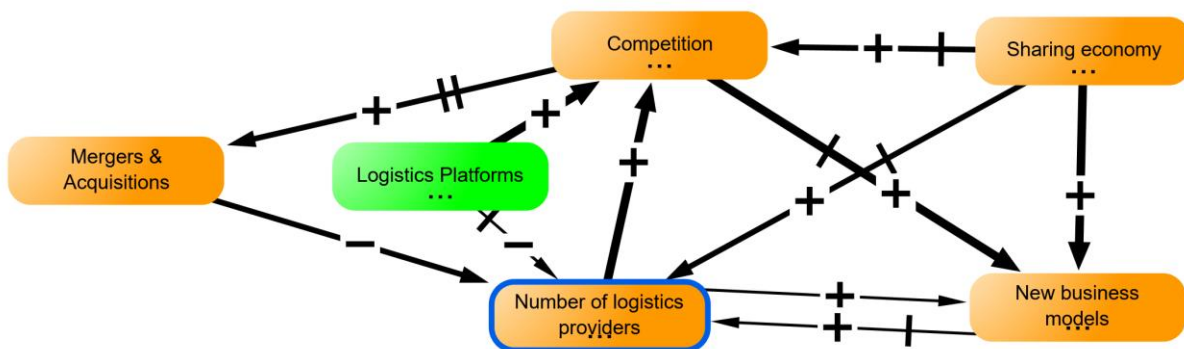
Sharing economy



Looking at the subsequent relationships of Millennial Thinking in terms of Changed Consumer Behaviour and Sharing Economy, two interesting clusters emerge: 1) The triangle of Consumer Behaviour, Sharing Economy and Government regulation and 2) the influence of the Sharing Economy on New Business Models, the Number of Logistics Providers and Competition.

Digitalization is a strong technology driver in this part of the model impacting the formation of the Sharing economy itself, the emergence of New business models while changing consumer behaviour. This highlights the importance of digital mastery as a strong driving force for innovation and as a core capability in the industry

Number of logistics providers



The changes in the Asian societies and the growth of its markets together with the innovation potential of technology is expected to change the number of logistics providers in two ways:

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- Increased competition will lead to more M&As which reduce the number of logistics providers. This forms a dampening cycle on the left side.
- The development of new business models and the emergence of new providers from the Sharing economy will increase the number of logistics providers.

These are three reinforcing loops on the right side. The direct feedback loop between the New Business Models and the Number of Logistics Providers can be explained through the immediate effect of a new logistics providers emerging with a new business model while ideas for new business models require time (here mid-term or 5 years) to lead to the emergence of new providers. Note that additionally, the increase in the number of logistics providers drives Competition, which additionally drives New Business Models. Whether the result is an overall increase in LSPs or stagnation isn't clear from these findings.

However, New Business Models only increases competition if they are manifest in a new LSP (i.e. increasing number of LSPs). If an incumbent's innovation leads to new business models internally, these do not increase the number of LSPs.

Logistics platforms, primarily through the increase of market transparency are expected to accelerate competition and lead to the reduction of logistics providers in the midterm.

Whether logistics platforms reduce cost and increase value was contentious. The reduction of cost in terms of coordination cost is likely, however whether the same is true for a reduction in operation cost is not.

It is notable that competition is currently hardly an inhibiting factor. Given the breadth of the discussion and the depth of the participants analyses, the relative weakness of the factor Competition could be explained by an underlying assumption that companies by default develop their unique value proposition (UVP) to customers. In turn, the identified strengths, support the development of the UVP.

Overall, this part of the model is extremely dynamic with a lot of strong and circular relationships. It demonstrates the importance of competitive and market monitoring for new players, potential disruptors, M&A and forging new partnerships the industry.

Factor Deletions

No factors were deleted

Factor Changes

The following factors were renamed:

From	To	Comment
Drones/Robots	Drones/robots...	Covers all physical automation technologies with "... " standing for material handling systems
Market conditions	VUCA market conditions	Factor needed a qualifier. VUCA stands for volatility, uncertainty, complexity, ambiguity which make market conditions less favourable and require higher agility.
Material flows	Balanced material flows	Factor needed a qualifier.

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Product Individualization	Logistics product individualization	Clarification that we mean specifically logistics products, not general products handled by logistics.
Shorter product lifecycles	Shorter logistics product lifecycles	Same as above
Smart factories/ Lot size 1....	Smart factories/ Industry 4.0	Changed to a more common and broader term

The impact of insourcing on demand fluctuations was reduced to weak as it is considered not a very relevant factor in the Asian market.

Data and interface standardization has taken a more central role as connectivity and the frictionless exchange of information are critical for the industry.

Impact Changes

The changes from V1 to V2 also changed the impacts on the central factor Success in Logistics and how the Top10 drivers above have evolved.

This table only lists the changes to factors present in both versions of the model. Factors with no change are not listed.

The value is the average of the impact change for short-term, mid-term and long-term. Positive values indicate a strengthening of the impact, negative values a weakening.

Factor	Change Average
Reliable, on-schedule and fast delivery	8.01
Natural Disasters	4.27
New business models	3.30
Data and interface standardization	1.44
Pick by voice/light/Smart glasses	1.23
3D Printing	0.44
Artificial Intelligence	0.18
Logistics Platforms	0.12
Cyber attacks	0.04
Legacy IT	0.03
Inventory, warehousing and admin cost	0.00
Logistics Quality	0.00
2D codes	-0.02
Mobile devices	-0.02
IoT	-0.05
Customer centricity	-0.07
Globalization	-0.10
Success in Logistics	-0.14
Big Data / large quantities of data	-0.16
Blockchain	-0.19
Reliable IT systems	-0.22
Changed consumer behaviour	-0.24
Shorter contract periods	-0.28
Insourcing	-0.38
Transparency in the supply chain	-0.44

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Factor	Change Average
Interconnection and cooperation of companies	-0.54
Small-scale logistic services	-0.55
Customer loyalty	-0.71
Competition	-0.72
Demand fluctuations	-1.11
Real-time visibility	-1.16
Autonomous vehicles	-2.78
Price transparency	-2.94
Cloud Computing	-4.24
New & integrated distribution channels	-4.29
Re-vamping of inner-city routes	-4.33
Electric vehicles	-5.04
Agility/flexibility/fast failure culture	-7.53
Social Responsibility	-13.14
Sustainability	-22.11
Digitalization	-23.88

The largest negative changes are due to the change of the factor from a direct to an indirect factor.

Summary

Overall, it is striking that so many positive factors in the industry were identified. This indicates a positive general trajectory for the industry as a whole. Nevertheless, the number and magnitude of the factors may make it difficult for individual companies (incumbents, niche players and start-ups) to navigate successfully.

Overall, digitalization has become a stronger factor but requires more time to analyse in-depth

The discussion refined digitalization (generally) by covering the impact of specific technologies (drones, blockchain) on the four factors logistics product innovation, logistics product standardization and logistics product individualization, as well as product life cycle.

Digitalization may warrant further analysis to break it down further to better understand how it can be leveraged specifically to drive success in the industry.

The impact of legacy IT stayed a factor in the V2 model, however it was noticeably little explored. It could have been expedient to split it into the aspects of IT infrastructure and data.

Agility and flexibility continue to be very strong factors despite the perception that the logistics industry requires careful long-term planning due to its heavy infrastructure investments which is in contrast with the increasing dynamics and competition in the industry.

Government regulation has changed from negative factor in V1 based on a more liberal Western view, towards a slightly positive and long-term strengthening factor due to the importance and trust attributed to government, particularly in Singapore. This coincides with the observation during the discussions that the building of infrastructure will continue to require more effort in Asia, which at least per capita is still low on infrastructure coverage. The Belt and Road Initiative (BRI) was not introduced as a specific factor but discussed by some participants. It was noticeable that from the Asian perspective it is not entirely viewed as a mechanism for debt trap diplomacy. The impact of

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the BRI and the Northern shipping routes across the Arctic on logistics and the economic integration of South East Asia were noticed.

Further expanding on this aspect, the factor sustainability didn't change much. The reason for this can only be speculative. This topic is often talked about but when implemented apparently doesn't have the same impact as other factors. Noticeable was the relatively stronger influence of mitigating the impact of climate change.

We repositioned some factors because the workshop simply yielded a more refined system dynamics model. In the pre-workshop activities, we had to reconstruct the mental model of the authors of the 2017 BVL study from the study itself. For the next step, we would approach them directly for their input. Nevertheless, we introduced genuinely new factors that were not part of the original study.

Some factors that could have an impact on the industry might still be missing in the model. For example, risk factors like trade barriers and populism (you get cheaper products but become unemployed or have a stagnant salary) had not been covered. These will be addressed, e.g. with scenario planning, in follow up workshops.

Recommendations

Ensuring success in logistics depends on a two-pronged approach of both, developing and growing one's company's factors driving success, and at the same time reducing the exposure to factors inhibiting success. The number of factors and the complexity of the relationships determining success requires a marked focus on the key factors.

As discussed in earlier sections of this white paper, the main drivers revolve around service performance and development and customer focus. The single strongest factor is a reliable, on-schedule and fast delivery, closely followed by an agile, flexible, fast failure culture. The former indicating service achievement of the customer expectations and the latter enabling a company to increase its capability to develop and improve the service achievement. Additional, equally strong factors focus on the customer relationships: customer loyalty improvement; customer centricity; and new customer acquisition. Existing customers, i.e. the captured market share, are cared for and the offered services evaluated for catering for the customer. At the same time, new customers are acquired (and developed) to increase the market share.

To improve Customer loyalty, the interaction between New business models, Logistics Product Individualization and Small-scale logistic services in exploitation of Changed consumer behaviours offers potential and needs to be understood. In terms of overcoming inhibiting factors, the single biggest inhibitor to success by far is operating cost. Indeed, further cost factors follow closely. Thus, the efficient delivery of the service that drives success best secures success. Important technology enablers that include Logistics Platforms, Digitalization, Automation and related technologies.

Next Steps

The following areas are potentially interesting for additional deep-dives workshops to extend and improve the model and analysis:

- 1. Review and refinement of individual factors** like:
 - **Efficient last mile delivery:** this is probably a more complex topic than currently represented in the model. The fast-growing urbanization combined with patchy city

planning in Asia will make this more important. China has passed the 50% threshold of people living in cities years ago, South East Asian capitals (with few exceptions like Singapore) are (in)famous for their poor traffic, infrastructure and urban planning.

- **Social Responsibility:** this factor is currently very isolated, yet it is considered by the 2017 BVL report as important. Understanding in more detail how social responsibility influences success in logistics and whether it is regionally considered equally important is critical to leverage the factor successfully.
- **Sustainability** is seen by the BVL as a critical success factor, yet, the model is not very clear about how this influence works in detail. Likewise, the discussion – also among the authors – about environmental changes was focusing more on coping with disaster, not very much on slowing down or reversing the change itself. This may be an indicator of a bi-focal mental model on climate change: one focus is the long-term protection of the environment a private person will subscribe to, while the second focus is the mitigation of the negative effects of climate change in day-to-day business operations.
- **Globalization:** this factor is currently slightly negative short-term and turns only positive mid-term due to the rising Asian middle class. In addition, risk factors like political populism and the building of trade barriers may re-frame the term globalization itself leading to a major change in the effect.
- **New business models:** seeing clearly what type of new business models present themselves to the industry may warrant further effort to generate further insights and verify that these are correctly represented in the model. Currently new business models drive success in logistics only indirectly via customer loyalty, new customer acquisition and new products.
- **Agility/flexibility/fast failure culture:** discuss the impact on success of logistics and explore what this means for the industry and which additional indirect factors might exist.

Scenario Planning. The current model represents the mostly preferred/probable future of the logistics industry. Scenario planning aims at creating alternative futures that broaden the understanding what else “could be”. Creating a scenario entails the envisioning of different situations and the adaptation of factors and connections. Possible scenarios are:

- **Continued rise of nationalism and trade war escalation (worst case scenario):** The persistent trade tensions between the US and China expand towards America’s European trade partners and escalate into a full-blown trade war plunging the economy into a global recession and the continued populism erects trade-barriers that effectively compartmentalizes the flow of goods to spheres of influence.
- **Adoption of smart factories and decentralization of production:** Long-distance trade-flows shift towards raw materials to supply decentralized smart factories using more and more additive manufacturing and local supplies while the shipping of finished products is limited to local to regional distances. Sustainability may be one driver of this development. The likelihood of this scenario may increase in the light of the increasing urgency of addressing global warming.

We will consult with the BVL member about how to take these deep-dive sessions further. They will be announced in advance, and help to continue the discussion to shape the model for Success in Logistics.

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About the authors

Thomas Martin is a consultant and thought leader in strategic foresight, organizational development and execution. During his more than 20 years as a business and innovation manager, strategy and technology consultant he has helped multi-national companies in the US, Europe, Africa and Asia to develop and refine their strategies, decision-making processes and leadership capabilities. As an entrepreneur and manager at A.T. Kearney, Capgemini and Microsoft he started, turned around and managed several companies, business units and functions valued up to USD162m. He focusses on helping organizations and people to make sense of the future, develop strong cases for change, and to become more open, agile, and scalable.

Andreas M. Radke is passionate about supply chain management with 10+ years of experience at the intersection of business and information technology. He held management and consulting roles at inspiring start-ups, agile SMEs and solid 150-year old companies in diverse industries. His achievements are in business process optimization, change management and the upskilling of the organization in the areas of sales and operations planning, business analytics as a service, robotic process automation as well as blockchain. As BVL Chapter Singapore Chairperson, he and his co-chairs are fostering connections among supply chain and logistics professionals, academics and government representatives, and raise awareness of the importance of this industry for the economy. He earned his PhD at the Hong Kong University of Science & Technology in industrial engineering and logistics management.