



Digital Logistics

As a (source of) competitive advantage

TOC Americas
Panama City

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Topics for today



- On the concept of “competitive advantage”.
- On the supply chain: a conceptual model.
- Some obstacles to overcome.
- Players in a digital platform.
- What should we aim at?
- What lies ahead.



Competitive Advantage

- **Competitive Advantage**
- A conceptual model
- Some obstacles
- A digital logistics platform
- Our aims and purposes
- What lies ahead

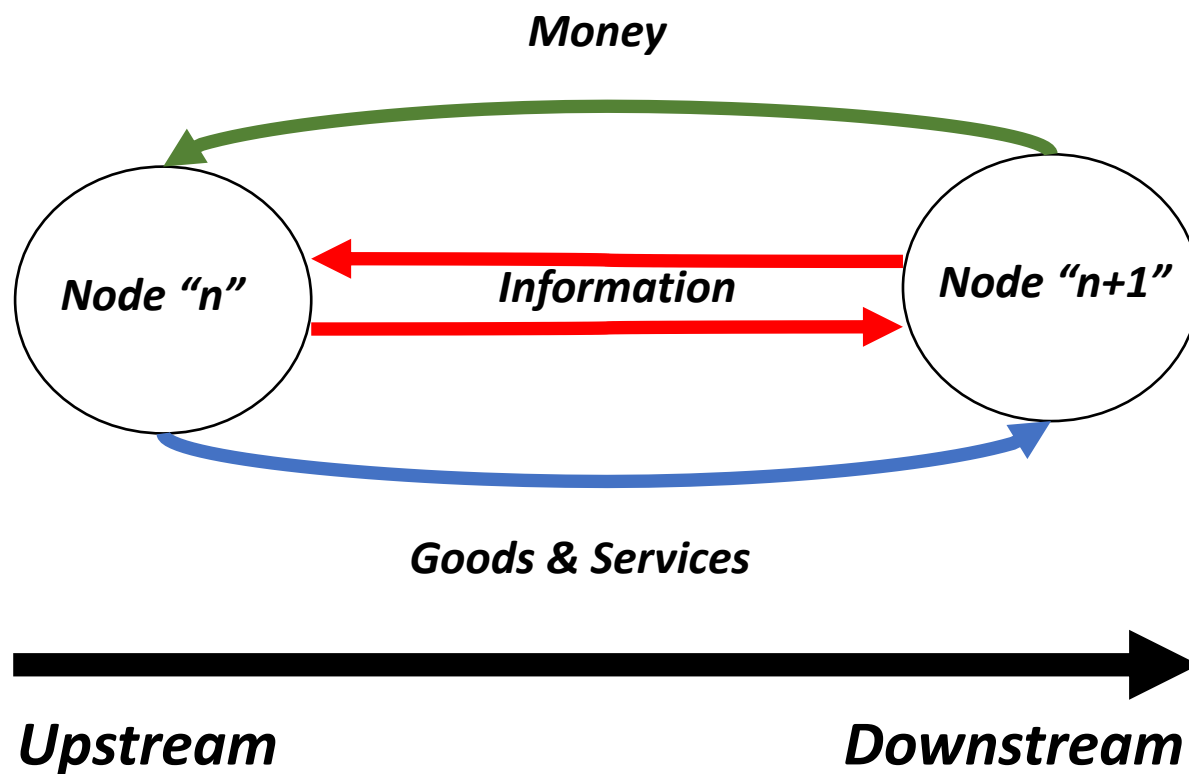
“Competitive advantage grows out of value a firm is able to create for its buyers that exceed the firm’s cost of creating it. Value is what buyers are willing to pay, and superior value stems from offering lower price than competitors for equivalent benefits or providing unique benefits that more than offset a higher Price. There are two basic types of competitive advantage: cost leadership and differentiation”

Michael Porter, 1985



The supply chain

- Competitive Advantage
- *A conceptual model*
- Some obstacles
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- What lies ahead



This is a simple version... one expects **"the nodes to have high degrees"**, i.e. they are highly interconnected. The network becomes a **complex system**.



Some obstacles to overcome

- Competitive Advantage
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If one would like to know the state of the system (my BL, my cargo, etc) at any given instant.

- **Visible:** Real time data acquisition and sharing.

If one would like to take decisions that affect the programme.

- **Actionable:** Interconnectedness, communication and reaction to stimuli.

If one would like to take decisions under uncertainty in order to optimise certain objective function (cost, time, profit, reliability, pollution, etc)

- **Predictable:** Instantaneous state of the system, instantaneous rates of change, dynamic behaviour, statistical characterisation, permanent updating.



Players in a digital (logistic) platform

Suppose you are going to start a platform... *dramatis personae*

- Competitive Advantage
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- *Some obstacles*
- **A digital logistics platform**
- Our aims and purposes
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- **Sponsors:** Leadership and support.
- **Suppliers:** Technical expertise.
- **Complementary service providers:** Completeness.
- **Users:** Engagement, inspiration, feedback.

Certain attitudes or dispositions are required: continuous innovation, collaboration, trust, commitment, shared vision, generosity, long term planning, common protocols, scientific approach, etc.



Our aims and purposes

- **Competitive Advantage**
- **A conceptual model**
- **Some obstacles**
- **A digital logistics platform**
- ***Our aims and purposes***
- **What lies ahead**

Through digitalisations we should:

- Make the status of the cargo visible and allow users to take real time actions to suit their objectives
- Streamline cumbersome processes, thus reducing errors and saving time and money.
- Enhance the users experience and the industry's productivity.
- Reduce the environmental impact of our business.



Our aims and purposes

Just an example:

- We have implemented a digital platform for a container shipping line in Chile (container release).
- Prior to digitalisation, the process took 6 days on average and required at least three people to be involved*.
- After digitalisation, on average the process takes 15 minutes and requires one person*.
- *Not considering customer service.

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What lies ahead

- **Competitive Advantage**
- **A conceptual model**
- **Some obstacles**
- **A digital logistics platform**
- **Our aims and purposes**
- ***What lies ahead***

- The fourth industrial revolution will replace neurons. The potential productivity improvement of the factor of production Labour (L) is evident. The moral implications and the macro implication on unemployment are an issue to be addressed.
- The potential to save time and money and to better suit our service to the needs of our customers, thus creating value, is unprecedented.
- In order to achieve this, industry articulation is required and professional development is a must.



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