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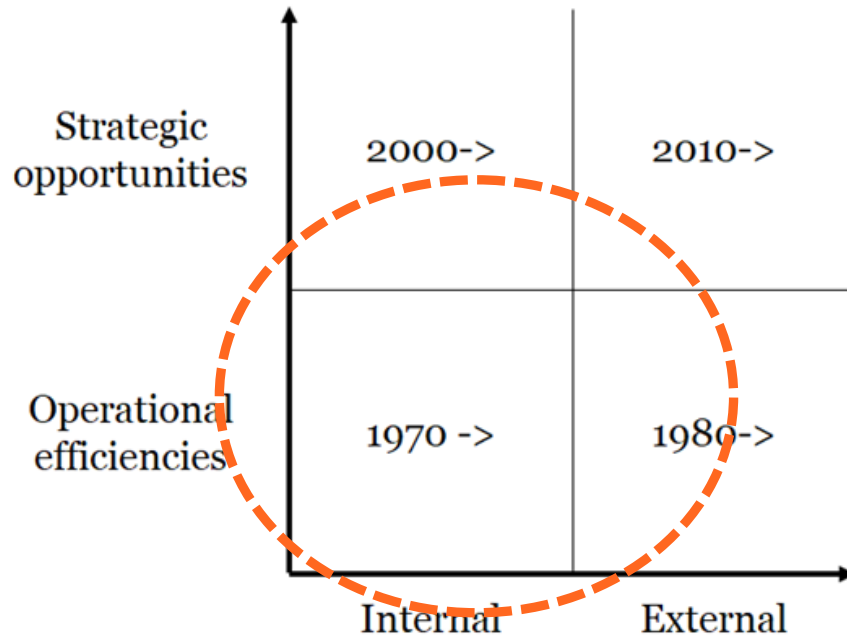
Data Value Chains?
Arvoketjut datan hyödyntämisessä

Timo Seppälä
24.09.2020

ETLA

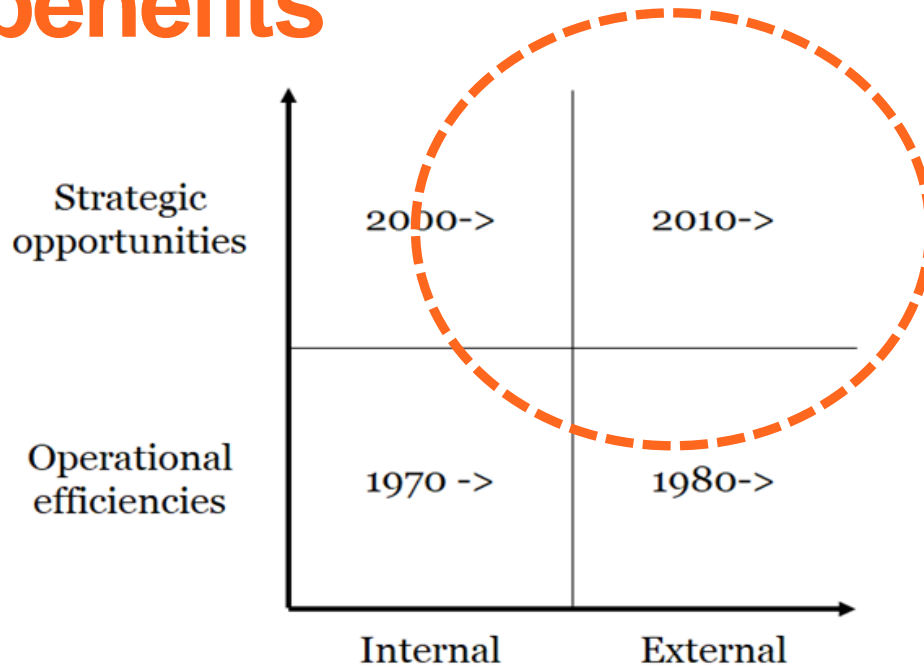# Transformation: Categorization of identified data-related benefits

Operational perspective of data sharing benefits well understood by the companies.

Source: Huttunen, Seppälä, Lähteenmäki & Mattila, (2019), What Are the Benefits of Data Sharing? Uniting Supply Chain and Platform Economy Perspectives, ETLA Report No. 93

Data sharing is a common business practice for 49% of companies

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Transformation: Categorization of identified data-related benefits

Strategic perspective of data sharing opportunities are not understood by the companies.

Source: Huttunen, Seppälä, Lähteenmäki & Mattila, (2019), What Are the Benefits of Data Sharing? Uniting Supply Chain and Platform Economy Perspectives, ETLA Report No. 93

Starting point…

"The ownership of a device (material) is the default situation of data management when no contractual arrangements or the like have been made."

Source: Seppälä, Juhanko & Mattila, (2015), Information and data ownership and management, In Ailisto, Mäntylä & Seppälä (Eds), Finland the Silicon Valley of Industrial Internet, Publications of the Government's analysis, assessment and research activities No. 10, pp. 16-17

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Typology of Data Platforms

- **Propriatory data (Company)**
  - Company internal use only data repository. Access to data maintaned by the company
- **Inner circle data (Platform)**
  - Shared data repositories. Access to data maintained collectively with boundary resources.
- **Distributed data (Industry)**
  - Controlled by a third-party actor. Shared practices and technology to access and share information.
- **Open data (Open)**
  - Distributed, accessible by publicly auditable rules. Programmable interfaces as a key boundary resource.

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Model terms of the technology industries for data sharing

- **Propriatory information**

- **Confidential information**

- **Distributed information**

- **Open information**

Source: Teknologiateollisuus, 2019

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The Risk Levels of individual, device and systems data

- **No risk (e.g. dark web),**

- **Minimal (e.g. non-comercial social media, email),**

- **Low (commercial social media),**

- **Substantial (e.g. banking, finance health),**

- **High (e.g. movement accross borders),**

- **High+ (e.g. aviation, nuclear plants, military)**

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Enablement and control of data sharing through technical boundary resources

Model terms:

- **Propriatory information**
- **Confidential information**
- **Distributed information**
- **Open information**

Risk Levels:

- **No risk (e.g. dark web),**
- **Minimal (e.g. non-comercial social media, email),**
- **Low (commercial social media),**
- **Substantial (e.g. banking, finance health),**
- **High (e.g. movement accross borders),**
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Legal context of data sharing in businesses

- **Contracts**
- **Trade Secrets**
- **Copyrights**
- **Database rights**
- **Privacy Regulation**
- **…?**

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Coordination of data sharing with regulative boundary resources

- **Internal contracts and policies**
- **Negotiated contracts**
- **Standardized terms of exchange**
- **Open licenses and disclaimers**

Source: Vartiainen & Seppälä (forthcoming 2021), Regulating Data Sharing with Boundary Resources

Why companies are not moving forward?

The motivations (revenue &profits) and tools (business case valuation methods) for evaluating the value of strategic data sharing are missing.

Source: Huttunen, Seppälä, Lähteenmäki & Mattila, (2019), What Are the Benefits of Data Sharing? Uniting Supply Chain and Platform Economy Perspectives, ETLA Report No. 93

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