

TASK FORCE 2

DATA-POWERED BUSINESS ECOSYSTEM BULDING

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Area 4: Multilateral DVC Business Continuity Index



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Area 4: Multilateral DVC Business Continuity Index Building on existing knowledge

• Industry agreements in Digital Value Chains (DVC)

Challenges and solutions for greater DVC interoperability;

Templates and framework to develop interoperability, exchangeability and quality of data;

Collaborative effort: CARSA (leader); VDI-VDE, KU Leuven, Ecorys



Available online at: https://op.europa.eu/en/publication-detail/-/publication/8c021023-53ee-11ec-91ac-01aa75ed71a1/language-en





BUSINESS CONTINUITY FRAMEWORK

1. Scenarios and situations for interoperability assessment and gap analysis

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Building scenarios for gap analysis and continuity assessment

Objectives

- ✓ Assessment framework for **multilateral Digital Value Chain comparison**.
- Developing a methodology to assess digital and business proximity for collaboration feasibility.

 \rightarrow New approach with application at both the company and the sectorial level

 \rightarrow Replicability and comparability for different use cases



Building scenarios for gap analysis and continuity assessment

Three multilateral DVC situations for data exchange and interoperability assessment

Concrete situations for m-DVC collaboration

- 1. Value Chain specific Data Exchange
- 2. Multilateral Data Exchange Using a common Data Exchange Framework / Data Space
- 3. Cross Sectorial Interaction Data Exchange between companies in two different Data Exchange Frameworks / Data Spaces



1. Value Chain Specific Data Exchange - Direct Between Several Companies









2. Multilateral Data Exchange in Industries in a common Data Exchange Framework/ Data Space



3. Cross Sectorial Interaction based on Data Frameworks/ Data Spaces

Data Space A e.g. Industry 4.0

Data Space **B** e.g. Logistics



3. Cross Sectorial Interaction (Participation of one company to several DVC and Data Spaces)







BUSINESS CONTINUITY FRAMEWORK

2. Criteria and key dimensions for a business continuity assessment framework

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Dimensions for interoperability and exchangeability in m-DVC



Common Vocabulary Standards (CVS)

Semantic: data quality
Syntactic: data format



Federated Digital Infrastructure (FDI)

- Exchange architecture: infrastructure and hardware
- Platforms and interfaces: software and systems



Relational Contractual Agreement (RCA)

- Ecosystem and business : norms, informal rules and sharing practices in the sector
- Legal and governmental: regulation, policy action and self-regulation



Five levels of maturity ...







... that are not completely excluding each other's ...



Logical succession	on of interoperability sta	iges	
in practice, un	structured efforts		27%
·		47%	Foundational multilateral DVC
	67%	Supply-chain integration	Expansion of sharing alliances and group
070/	Foundational level	Scaling-up of	to external players.

07%

Coexistence of

Mature m-DVC

		47%	multilateral DVC	bilateral ecosystems
	67%	Supply-chain integration	Expansion of sharing alliances and group	with multilateral ecosystems (data spaces).
87%	Foundational level	Scaling-up of interoperability and	to external players.	
Siloed level	Internal interoperability and	collaboration in closed environment.	Dissemination of standards and	Interoperability of multilateral ecosystems
Silos in internal activities and processes	exchanges. Lack of cross- company integration.		expansion of ecosystems.	
Internal Integration	Bilateral/closed Integration	Expansion of closed ecosystem	Multilateral ecosystems	Interoperability of m-ecosystems
Low maturity 1	2	3	4	Fully Mature 5

... to assess concrete situations.



Business proximity pathways: qualitative assessment ...

		Siloed level	Foundational level	Supply-chain integration	Foundational multilateral DVC	Mature m-DVC
S	1. Syntactic	Silos	Proprietary standards	Competing standards	Large uptake but gaps	Standards interoperab.
2 2						
Ą	2. Semantic	No quality standards	Basic certification	Quality framework (SC)	Quality framework (VC)	Certification schemes (Cross-DVC)

FDI	1. Exchange Arch.	Lack of internal connectivity solutions	Exchange protocols	Competing single-access S points and standards	ingle access points repository, standardised protocols	Cross data-space connectivity
ы	2. Interfaces & platforms	Incompatibility of platforms and low use of analytics	Proprietary standards, siloed analytics	Partnerships for closed standards environment	Internal digital continuity	Cross-platforms interoperability

C. RCA	1. Ecosystem and culture	Cultural resistance	Roadmaps and strategies	Best-practice	Institutionalisation of sectorial customs	Sectorial consensus and influence over other sectors
	2. Legal and govern.	Templates and general laws	Soft self-regulation, B2G laws, sectorial codes	Mature B2G, B2B frameworks	Laws for cross-borders exchanges	Institutionalised self- regulation



Transversal Dimension:

Growing SME integration in the ecosystem

... and leads for Business Proximity Index (BPI)

Exploring Possible KPIs (Boolean and normal algebra)

- ທີ 1. Syntactic ຊີ່ 2. Semantic
- 1. Exchange
Arch.СССО2. Interfaces
& platforms
- A 22 1. Ecosystem and culture ن 2. Legal and govern.

 \ldots using existing indicators and data sets

Example of Eurostat:

- Cloud Computing Services Used over the internet per company size ;
- Integration of internal processes;
- Artificial Intelligence use per company size;
- Staff awareness, ICT training, skills, etc..

.... feasibility of new indicators

- Quality Framework adopters (n° per sector, etc)
- Data space, N° participants, scope

... and Boolean indicators

- Self-regulatory acts? (Y/N)
- Industry-specific monitoring body? (Y/N)

To turn into comparability metrics?

Ratios using simple indicators? Synthetic indicators and ratios?



A coherent and comprehensive framework



