



Is social capital relevant to the Physical Internet?



- *Physical Internet is based on the physical mobility of logistic resources; therefore, we will try to move from an inefficient use of resources to a more efficient use of them. There is and will probably always be a temporal-spatial gap between providers and recipients. The logistics task is to plan and carry out the flow of goods in the supply chain in the most effective manner, which we can achieve by increasing the variables of Social Capital*

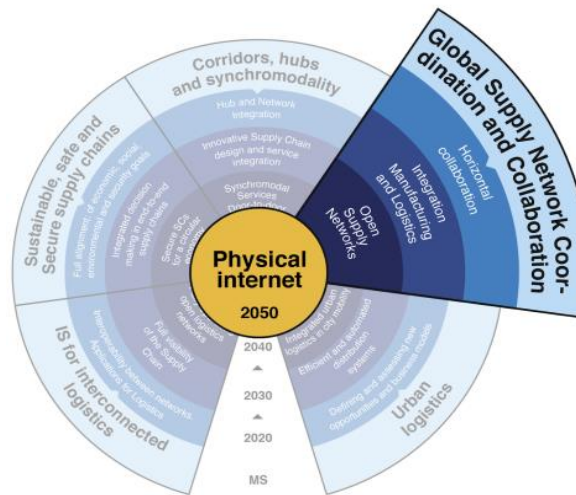


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- *As defined in ALICE (European Technology Platform) we will focus on finding the benefits of social capital as a variable that deals with coordination and collaboration between the parties interested in global supply networks.*



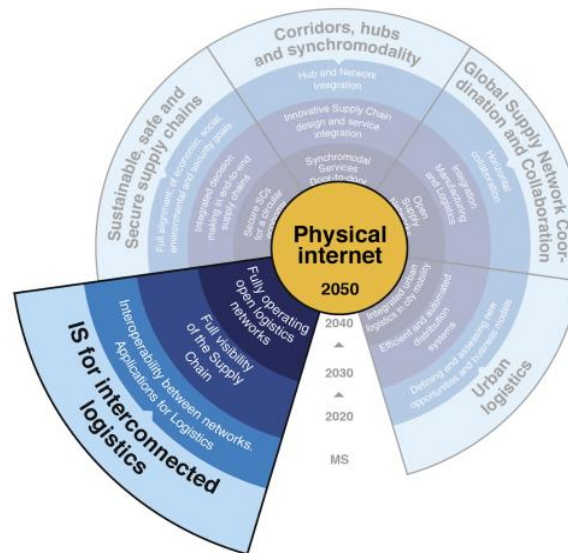
Road Map ALICE – Global Supply Network Coordination and Collaboration



Both coordination and collaboration can yield significant gains in terms of efficiency and sustainability and represent a major step towards the Physical Internet, leading the transition from individually managed supply chains to open supply networks. Therefore, strengthening social capital will generate synergies that will help achieve the ALICE planned objectives



Road Map ALICE – IS for interconnected logistics



Trust, reciprocity and cooperation will form the basis of social capital relationships and social structures, which are foundational for facilitating the sharing of logistical networks.



Structural dimension of Social Capital

The Structural dimension of social capital includes:



- The examination of how individuals are connected within the logistical networks of an organisation.
- Description of the connection patterns among the employees of the logistics networks of an organisation.
- Examination of the utility of these connections between the organisations involved in these logistics networks.



Relational Dimension of Social Capital

The relational term is used to refer to the advantages generated by connections, with the following factors being key:

- Trust and honesty (Fukuyama, 1995, Putnam, 1993)
- Norms and sanctions (Coleman, 1990; Putnam, 1995)
- Obligations and expectations (Burt, 1992; Coleman, 1990; Granovetter, 1985)
- Identity and identification (Hakansson & Snehota, 1995; Merton, 1968)
- Other complex incentives that derive mainly from the company's history and reputation (Gulati et al, 2000).

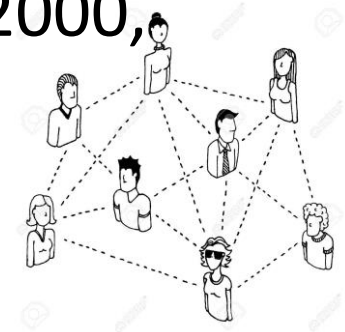




Cognitive dimension of Social Capital

The cognitive dimension of social capital refers to:

- the resources that provide representations, interpretations, and systems of shared meanings (Cicourel, 1973)
- It includes shared codes and languages (Arrow, 1974, Cicourel, 1973, Monteverde, 1995).
- Refers to the degree to which network contacts possess valuable resources (Nahapiet and Ghoshal, 1998, Uphoff, 1999, Uphoff and Wijayarathna, 2000, Puttnam, Krishna and Uphoff 2009).

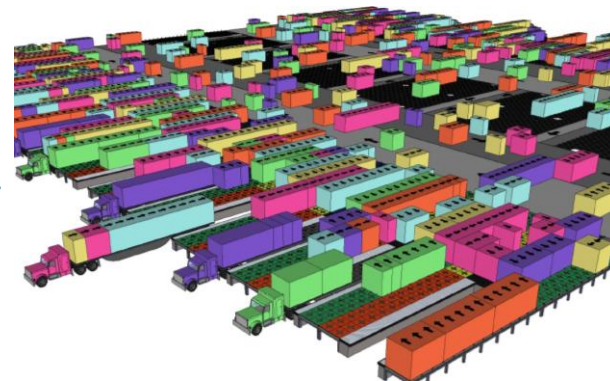




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- When we discuss the relationship between social capital and the Physical Internet, we argue that companies that have greater social networks find more opportunities to establish logistical networks and better conditions to take advantage of these new opportunities. We therefore aim to highlight the importance of social capital and its attributes in the Physical Internet as a way of guaranteeing the physical mobility of objects.





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- The Physical Internet has two areas of interest (Roman Domanski et al, 2017):
 - One is focused on the technical-technological sequence and the problems of unifying and integrating logistics units in the supply chain and the infrastructure required to facilitate the flow of these units.
 - The other focuses on the organisational flow - developing the concept of managing the flow of logistics units, based on the possibility of sharing resources and skills with other participants in the supply chain as a way of guaranteeing the physical mobility of objects.





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We propose to use the indicators of social capital used in the Integrated Questionnaire for the Measurement of Social Capital - Group of Experts in Social Capital - B.M (2002)

- Indicators of cognitive social capital:



- Norms, beliefs and values that indicate a sense of belonging and that tend to facilitate exchanges and reduce transaction costs and commercial information without contracts.
- Orientation towards the collective management of resources

- Indicators of relational social capital: Types and degrees of confidence:

- Trust linked to the establishment of interpersonal relationships of friendship and social networks
- Extended confidence in companies (based on shared expectations, norms and values).
- Trust in government institutions (their official rules and procedures)





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- Indicators of structural social capital: Types and degrees of collective action:
 - Characteristics of formal and informal organisations and networks.
 - Mode of operation of interest groups
 - Participation in decision-making
 - Heterogeneity of interest groups
 - Extension of connections with other groups
 - Results of the case



We will collect the data from companies based in Cádiz using:

- In-depth interviews with companies around Cádiz
- Structured interviews with logistics providers in the Cádiz area.

