



**IVS 2019 - Industrial Valve Summit Conference
Bergamo (Italy) - May 22/23, 2019**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Jacopo Guido Luca Micheli
(Professor)
Politecnico di Milano

Matteo Bravi
(Ex Student)
Politecnico di Milano

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

THE COMPETITIVE ADVANTAGE

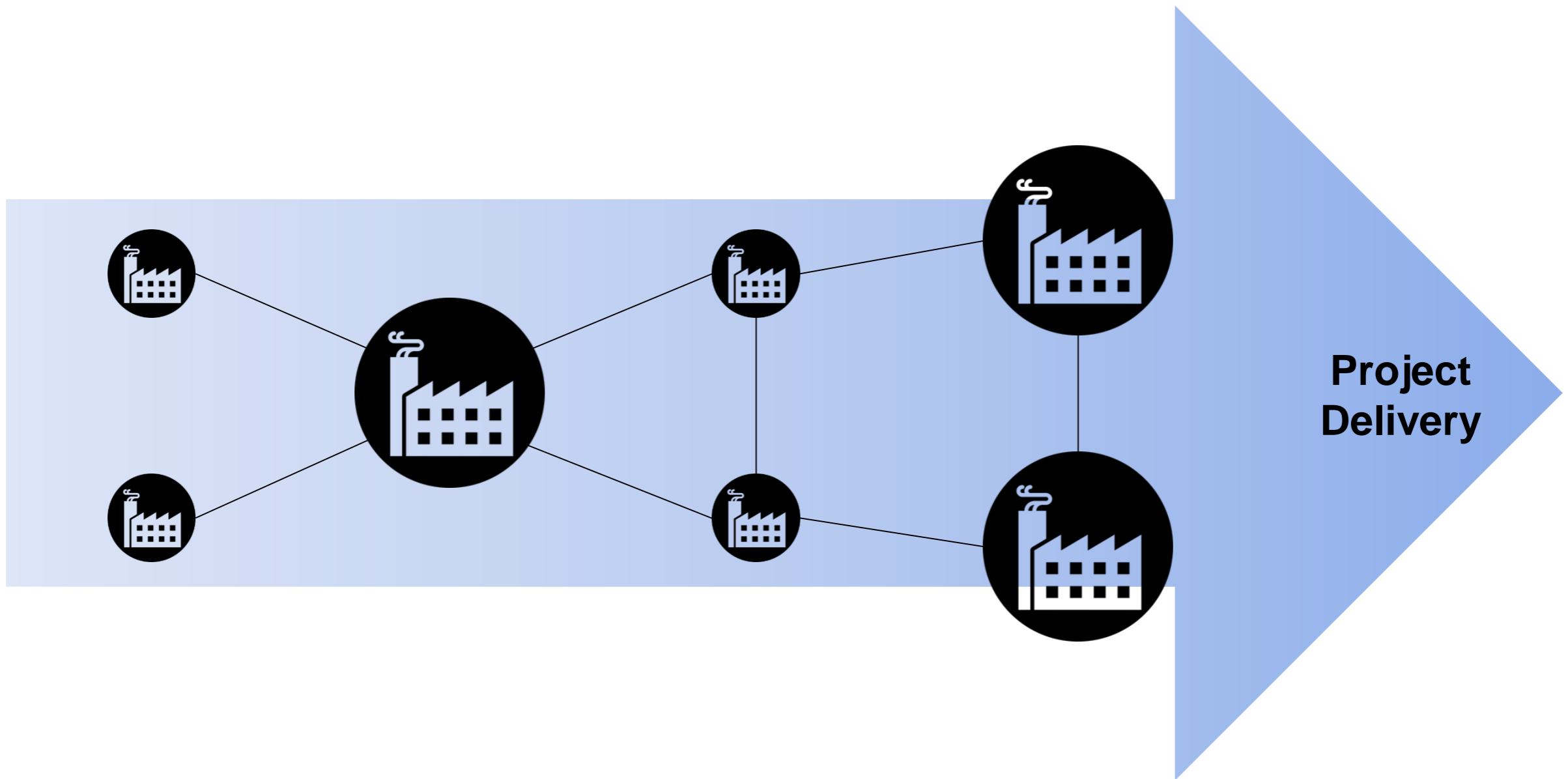
Resource-Based View (RBV)

Managerial framework which focuses on firm's internal strategic resources, in order to identify assets and capabilities that can be leveraged to achieve sustainable competitive advantage.

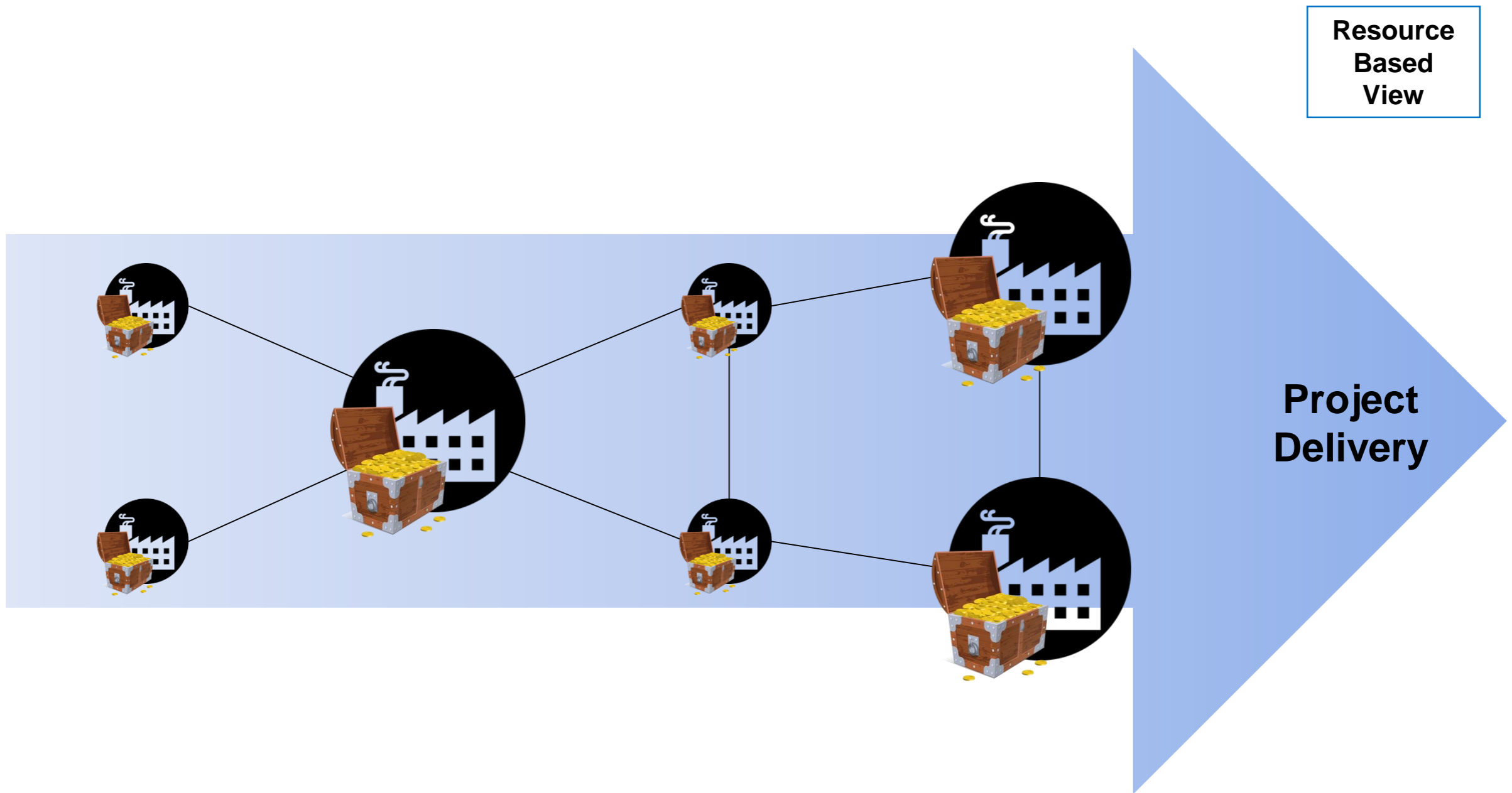
Relational View (RV)

Firms can establish idiosyncratic inter-firm linkages, making relation-specific investments and combining resources in unique ways; co-generating shared competitive advantage through collaboration.

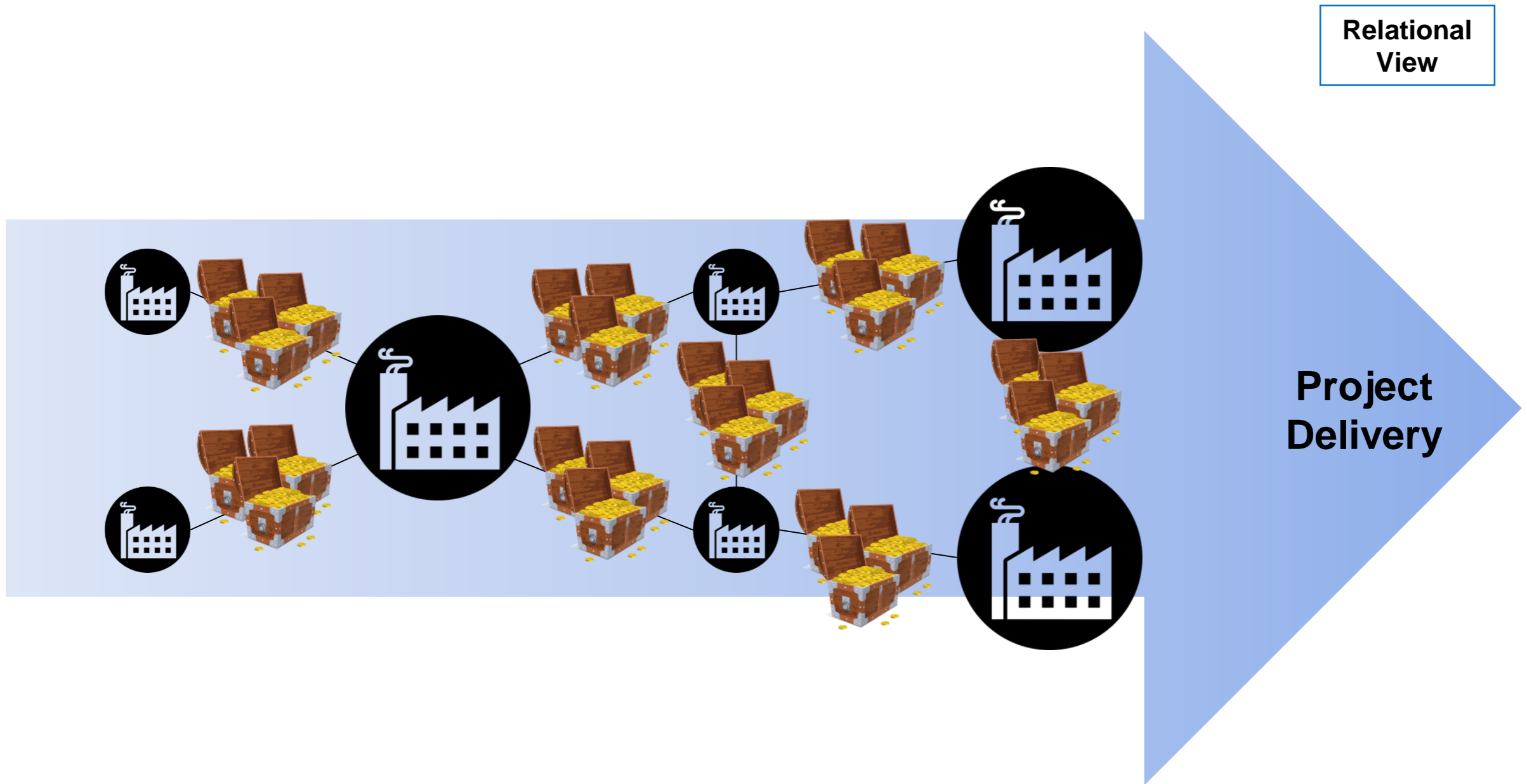
An Actionable Framework for Collaboration in Temporal Supply Chain Contexts



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Supply Chain Collaboration is “the ability to work across organizational boundaries to build and manage unique value-adding processes to better meet customer needs”. (Fawcett et al., 2008)

BUT

How to implement Supply Chain Collaboration in project-based temporal supply chain contexts?



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The objectives of this study are:

Practical Perspective:

- **Contextualize Italian industrial fabric, undersanding the market in which firms compete, as well as SMEs strengths and weaknesses**
- **Investigating industrial project-based supply chain relationships to understand collaboration diffusion**
- **Evaluating feasibility of implementing supply chain collaboration in temporal context**
- **Providing an actionable framework for firms in order to co-develop a competitive advantage**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The analysis followed a multiple case study methodology collecting information through semi-structured interviews, following these steps:

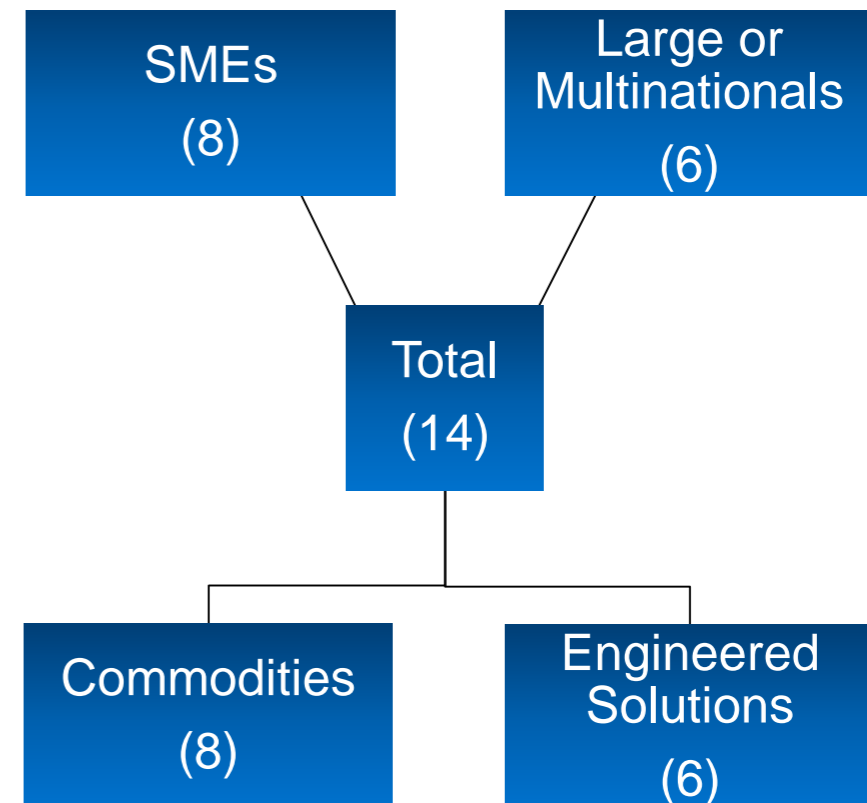
1. Development of a questionnaire for firms
2. Interview of managers of Italian SMEs
3. Presentation of findings according to supply chain collaboration actors
4. Qualitative analysis of findings to identify enablers and barriers
5. Conclusions on applied theory
6. Envision of possible solutions to boost Italian SMEs competitiveness

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The questionnaire was presented to managers/owners during face-to-face semi-structured interviews.

Characteristics of the 14 interviewed firms:

1. Lombard manufacturers operating in industrial project-based supply chains
2. Focused on production of: valves, heat exchangers and similar
3. Mainly SMEs
4. Main output market: O&G sector



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Findings: O&G Market and Italian Industrial Fabric

Understanding the O&G Market:

- O&G market at the moment is downturned
- Product technology is mature, there are few possible innovations
- By products type, the market share is really fragmented
- Business focal point moved abroad (Middle-East, Africa, South America)
- Local Content spread in many countries; the new big challenge for Italian firms; it will be the strategic discriminating factor over next 15-20 years
- Public interest projects, EPC contractors put rivalry among suppliers to guarantee competitiveness
- Qualification is a complex process necessary to participate in tendering
- In tenders, main determinants are price and local content presence

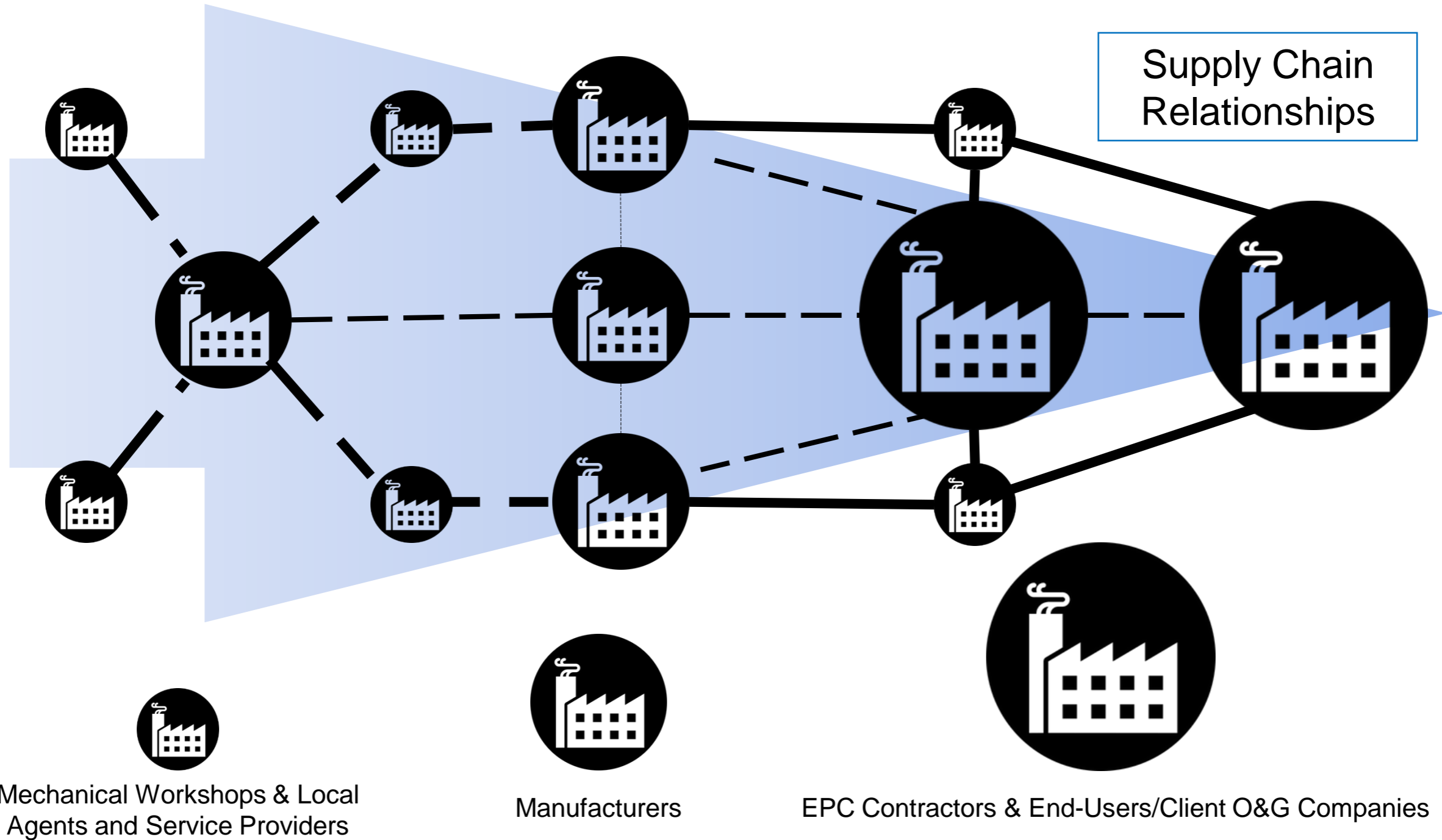
An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Findings: O&G Market and Italian Industrial Fabric

Contextualize Italian Industrial Fabric:

- Italian manufacturers, mainly clustered in Valve Area, are quality leaders at global level
- SMEs haven't enough resources to be present everywhere
- SMEs have narrow product portfolios
- Entrepreneurial spirit and rivalry between Italian manufacturers
- Know-how jealously

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts



An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The Valve Area and its Network of Manufacturers and Mechanical Workshops

During years, the biggest manufacturers helped artisans and mechanical workshops in achieving certifications.

Some firms have gone far beyond investing in equipment and tools for them, in order to increase capacity and reduce costs improving specificity.

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Reasonable or Excessive Jealously?

**Why do I have to collaborate with someone who has the same skills and does the same things I do?
I do it well enough by myself.**

If I've to collaborate with someone, I'll collaborate with someone who does something different and complementary to what I do.

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Complementary Products: Valves and Actuators

This is one of the most diffused couples of products object of horizontal collaboration between complementary product manufacturers.

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Risks of Sharing Know-How

**Story of a firm that has put all itself in a JV,
with the aspiration to carve out a role in the Asian-Pacific market.
Its trust has been betrayed and it found itself with nothing.**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The Importance of Commercial Forces on the Field

According to the importance of the country, product type and customer service strategy of the firm; companies can exploit commercial agents, as well as establish commercial branches and spare parts warehouses.

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Acquisitions and Mergers to Broaden Portfolio

**Experience of a successful expansion of portfolio,
with many facilities and commercial branches.
Story about an attempt to improve capacity and widen portfolio,
obstructed by «antitrust» market dynamics**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

The Local Content in Emerging Countries

From aspirations and ideas, to investment attempts, growing start-ups and successful joint-ventures.

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Valvecampus and IVS

**A beautiful example where the historical competitors
have been able to put aside rivalry,
in order to carry out a great project of common interest for the future.**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

Main Enablers:

- **Investments and Exchange of Partnership-Exclusive Assets (Facilities, Branches, Equipment and Tools)**
- **Know-How Sharing**
- **Trust and Commitment**

Main Barriers:

- **Partner Scarcity**
- **Know-How Jealously**
- **Legal, Political and Organizational Restrictions**

An Actionable Framework for Collaboration in Temporal Supply Chain Contexts

What About Tomorrow?

How to Face the Challenges of the Future?

Thank you!

Do you have questions?

Guido Jacopo Luca Micheli
Politecnico di Milano
guido.micheli@polimi.it

Matteo Bravi
Politecnico di Milano
matteo1.bravi@mail.polimi.it

