

**How a permanent link between industry
and scientific community can enhance
innovation:
the case of GNSS downstream markets**

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1^o TREASURE WORKSHOP

Istituto Nazionale di Geofisica e Vulcanologia - INGV



TREASURE
TRAINING RESEARCH AND
APPLICATIONS NETWORK TO
SUPPORT THE ULTIMATE REAL TIME
HIGH ACCURACY EGNSS SOLUTION



Research project overview

Context

- GNSS downstream market trends
- Identification of relevant players for innovation introduction

Methodology: desk research + 14 exploratory interviews

Theoretical framework

Innovation development

- Platform for partners match-making and data marketplace
- Collaboration industry-academia for innovation: conditions for the perfect match

1st article

2nd article

Innovation diffusion

- How to go beyond the niches? Identification of lead users
- Interaction Lead users - industry

3rd article

Market analysis

Market trends and drivers

- Market segmentation and analysis of user requirements
- Strategic impact of Galileo Commercial Services free of charge

Market analysis

Prioritisation of market segments

- Matching user requirements vs. TREASURE prototype value proposition
- Identification of most promising market segments for the TREASURE prototype

Input from other ESRs

Preliminary market plan

Go-to-market strategy for the TREASURE prototype

Final market plan

Introduction: academia-industry collaboration for innovation

Technology

- Increasingly embedded in our everyday life
- Evolving at an ever growing pace
- More complex
- More accessible
- Users becoming active players
- "Global competition, shortened product life cycles, harder for firms to advance knowledge and new technologies through the sole use of in-house resources and capabilities" (Santoro, 2000)



Partnership goals

Leverage synergies and interdependences

Exploit needs and capabilities complementarities

Remain competitive in the current challenging market environment

Literature review

Industry-Academia collaboration advantages

- **Creativity** for companies and **relevant topics** for academics (*Burnside & Witkin, 2008*)
- **Extra equipment/resources**, informal learning, visibility, prestige (*Bozeman and Corely, 2004*)
- Lower (shared) **risks and costs** (*Barnes, 2002*)

Critical success factors

(Barbolla & Corredare, 2009; Boardman & Ponomariov, 2009)

Agreement on knowledge and technology use

Mutual trust

Technical & scientific capabilities

Appropriate communication/coordination

Personal attributes

Obstacles

(Siegel et al., 2003; Guan et al., 2005; Castaner et al., 2013)

Lack of awareness of social networks value

Immature technology

Missed identification of the target user needs

Lack of proactivity in bridging partners' cultural gaps

Governance fit issue

Asymmetric information

Identified gaps and intended contribution

	Literature	Present study
Focus	Collaboration success factors, relationship management	Matching process
Purpose	Identification of best practices for partnership management	Streamlining and optimisation of partner search and identification
Scope	Individual collaboration	Continuous connection of different categories of players

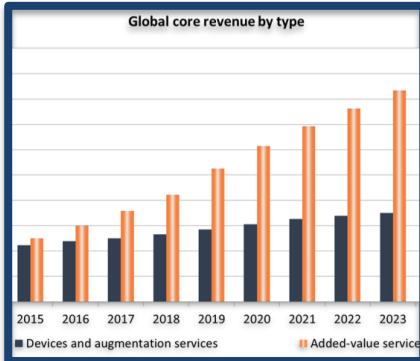
Proposition: **a platform connecting the scientific community and industry permanently**

Roles: 1. **intermediary**, which eases partners' matchmaking (cheaper and quicker)

2. **data marketplace**, data management and processing services

Context: market trends & existing initiatives

Market trends



- Standardisation
- Interoperability
- Democratisation
- Commoditisation

Multidisciplinary



- Complementary technologies for hybrid solutions
- New domains of application

Galileo HAS



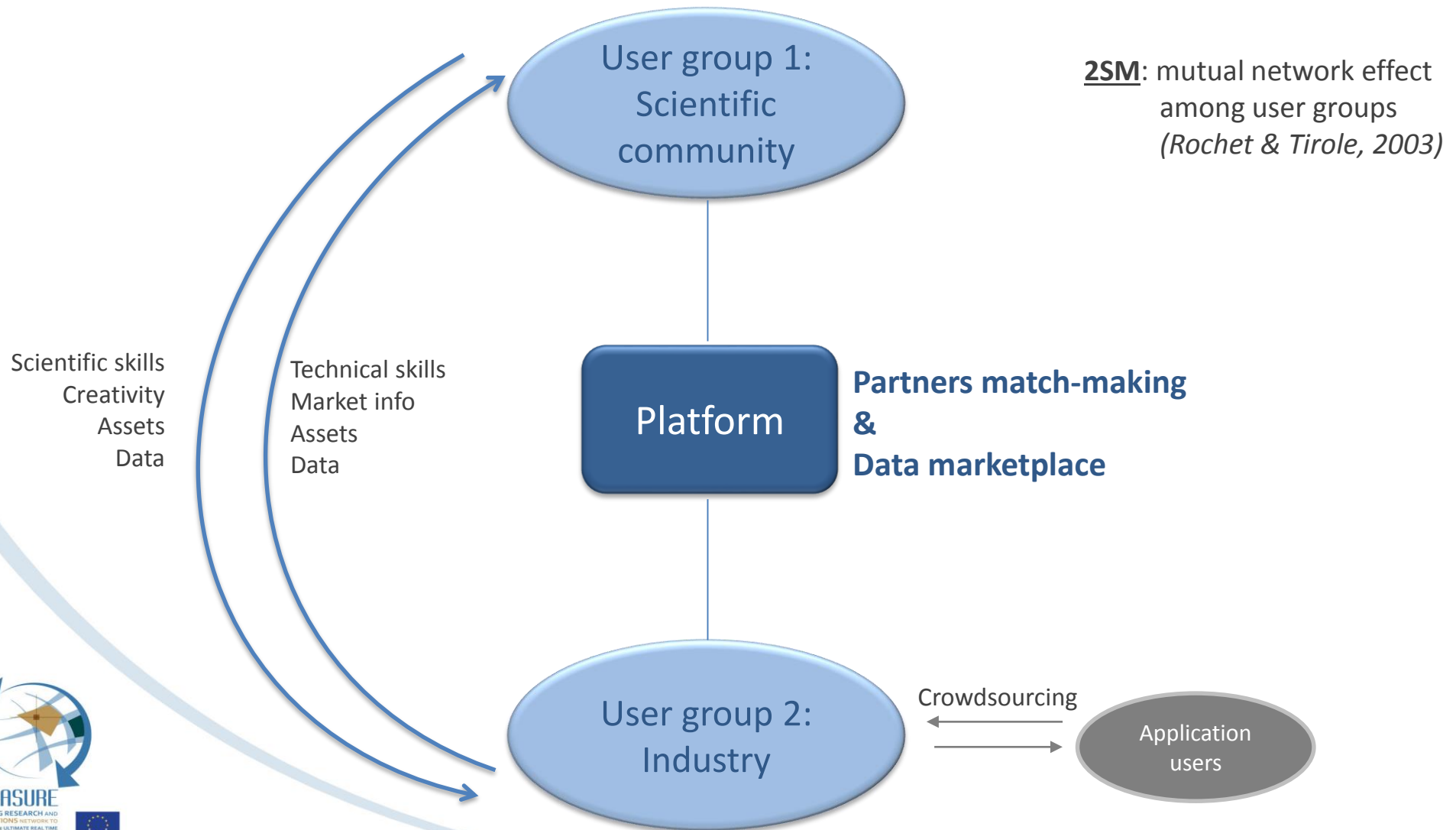
- It is expected to accelerate the market trends already in place
- More relevant for mass market than niches

Existing initiatives

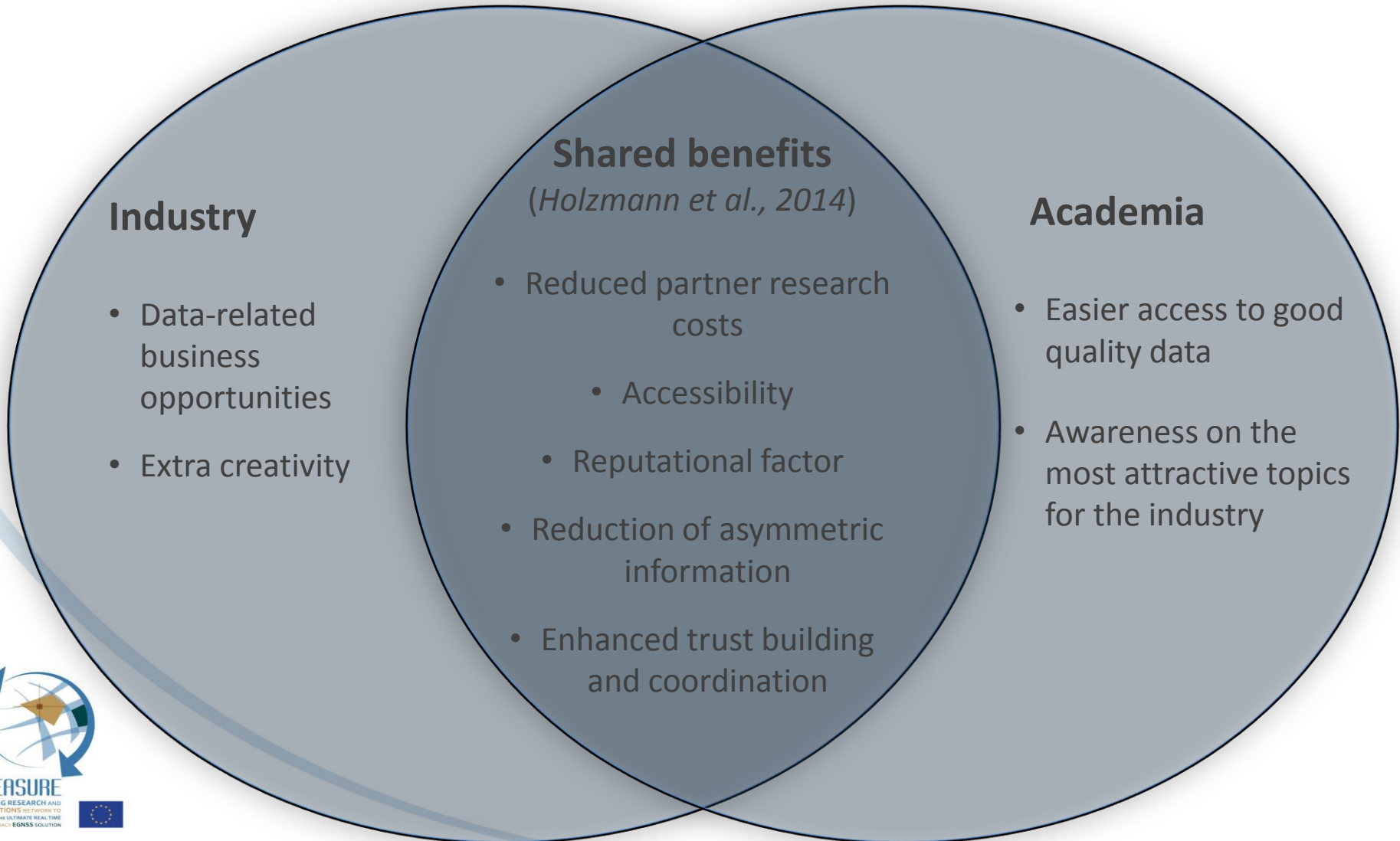


- Fragmentation, very small windows of opportunities to meet new potential partners
- The established matching processes favour incumbents in an environment increasingly made of SMEs and start-ups

The platform: purposes and functioning



The platform: benefits for the users



Conclusions and further research

- A professional **intermediary** could streamline partners match-making for industry-academia collaboration
- A **marketplace** for data could trigger new business opportunities and allow the full exploitation of existing data
- Proposition for GNSS downstream market could be **extended** to the whole PNT community and to high-tech industries in general

Conclusions

Next steps

- Deep dive in the **match-matching** mechanism intended as **endogenous** process
- Investigation of **diffusion** models

Thank you for your attention!