

# Framing markets for emerging science and technology-based products

**Aurelie Delemarle and Philippe Larédo**

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## Rationales

- Starting point : how do radical innovations reach markets?
  - > specificities of radical innovations (technological and market uncertainties) / exploration-exploitation dynamics
  - > role of niches in change (transition literature and MLP)
  - > how to get out of the niche?
  - > how to govern emerging markets?

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## Hypothesis

- Creating / transforming market infrastructures (a set of rules, norms, values that frame markets ; require heavy investments ; long term perspective)
- Need not only to define market infrastructures but also who/how can set them up
- Creating / transforming governance arrangements  
=> markets can be framed

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## Defining “market infrastructures”

- Goffman (1974) : frame, schemata of interpretation, guide action (individual and collective).  
Both tangible and intangible (theatre metaphor)
- Callon (1999) framing and overflowing of markets.  
Frames are constantly changing due to externalities
- Lee (2010): Infrastructure :
  - (1) provide the basic equipment that underlies some system or activity;
  - (2) be critical to support the activity of the system;
  - (3) provide a network;
  - (4) require large investments;
  - (5) provide public goods or services;
  - (6) involve some form of government or public sector involvement.
- Fligstein (2001) : market infrastructure (macro level)  
=> market infrastructures are like institutions, a sum of rules (what we are allowed to do), of norms (what we ought to do) and values (what we should do).

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## Nano S&T : framing new market infrastructures to develop future markets

- Characteristics

- An **emerging field** : 14% rate of growth 98-06
- A **general purpose technology** : all industrial sectors
- A **global phenomenon**
- S&T and social **uncertainties**
- Some products on the market but others were withdrew

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## Creating / transforming market infrastructures

	Purpose	Arena/place	
Basis for rule setting	Defining terms Creating a common understanding	ISO TC 229 WG1 (mandate/liaisons EU/ CEN-OECD)	Existing
Rule setting		REACH	Existing (adaptation?)
Developing new norms	Collecting toxicity repository - reducing scientific uncertainty	ICoN OECD ISO TC 229 WG3	New Existing Existing
Developing new values	Reducing social uncertainties	ISO TC229 CASD TG + SD TG European Code of Conduct  Public debates (ex: France)	Existing but adaptation Existing + adaptation (research) Existing no adaptation <sub>6</sub>

## Market infrastructures to allow markets to emerge (i.e. getting out of the niche)

- Central role of ISO TC 229 :
- coordination within ISO + liaisons + networks;
- issue of legitimacy
- New topics that were not adressed in TCs - also in CEN
- Actors' strategies : actors playing within the structures (existing + new ones)
- Need to ensure links with regulation -> only way to make the infrastructure lasting over time

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Thank you for your attention!

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