

# Cognitive Radio Platform #13

## Elements of Cognitive Radio



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Ministry of Economic Affairs

# Workshop Program

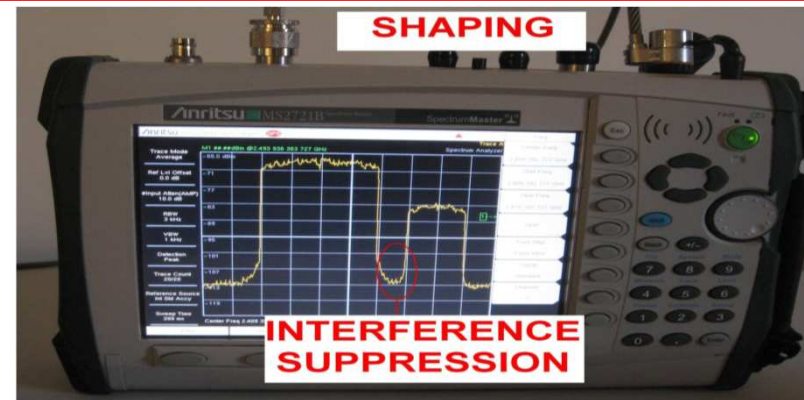
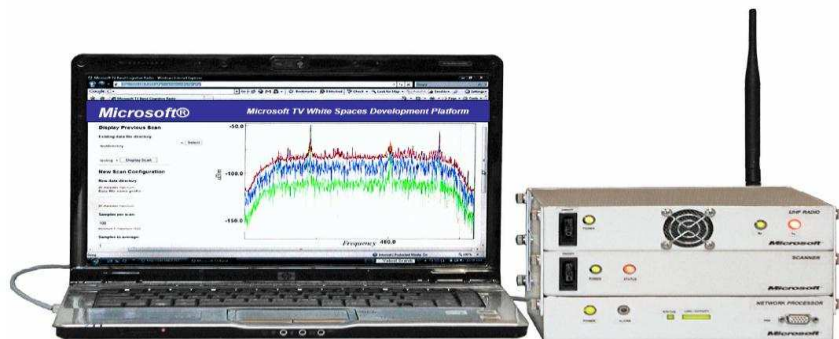
- Opening and Welcome
- Introduction  
Peter Anker, TUDelft / MinEZ
- Elements of Cognitive Radio  
Przemyslaw Pawelczak, TUDelft
- Industry Perspective  
Ruud van Bokhorst, Philips
- InfoShare
- Summary and next steps



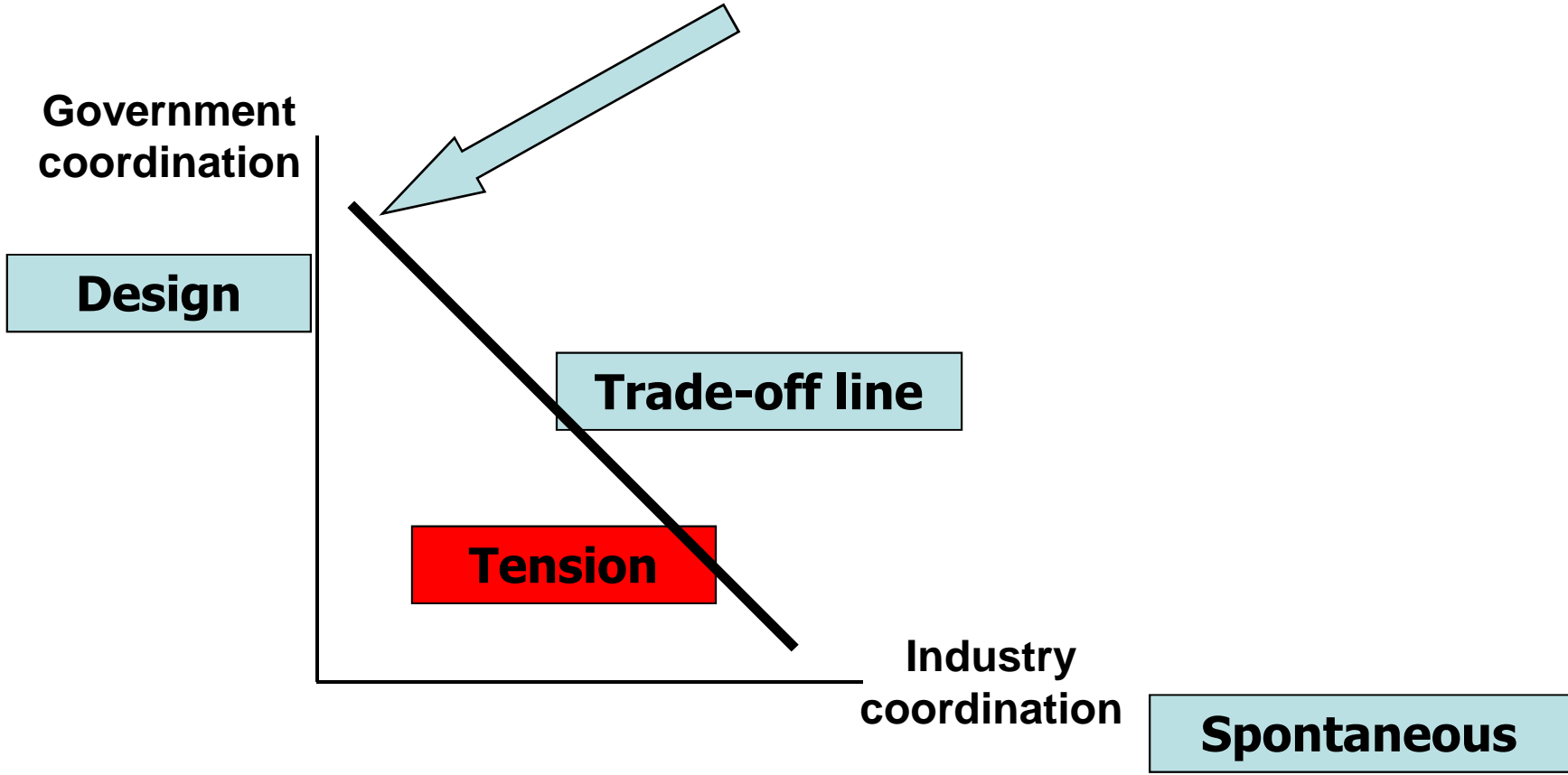
# CR: Current state of affairs

- Numerous papers on the technology
- Demonstrations and testbeds
- FCC Rulings 2008/2010 on TV white spaces

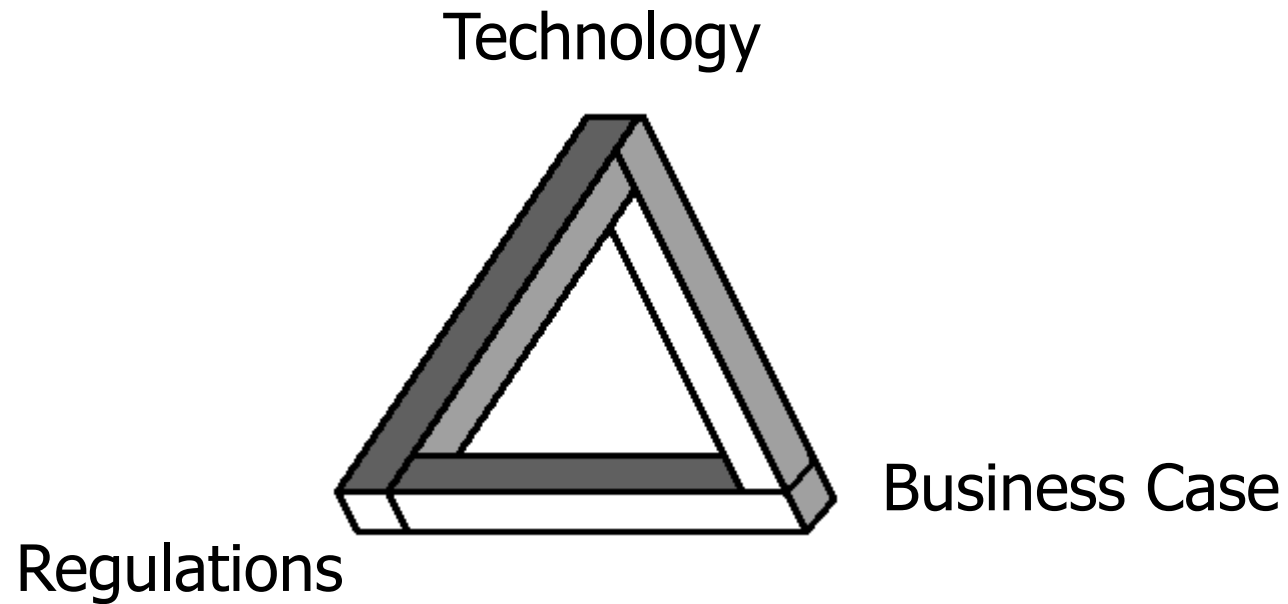
No commercial products / services



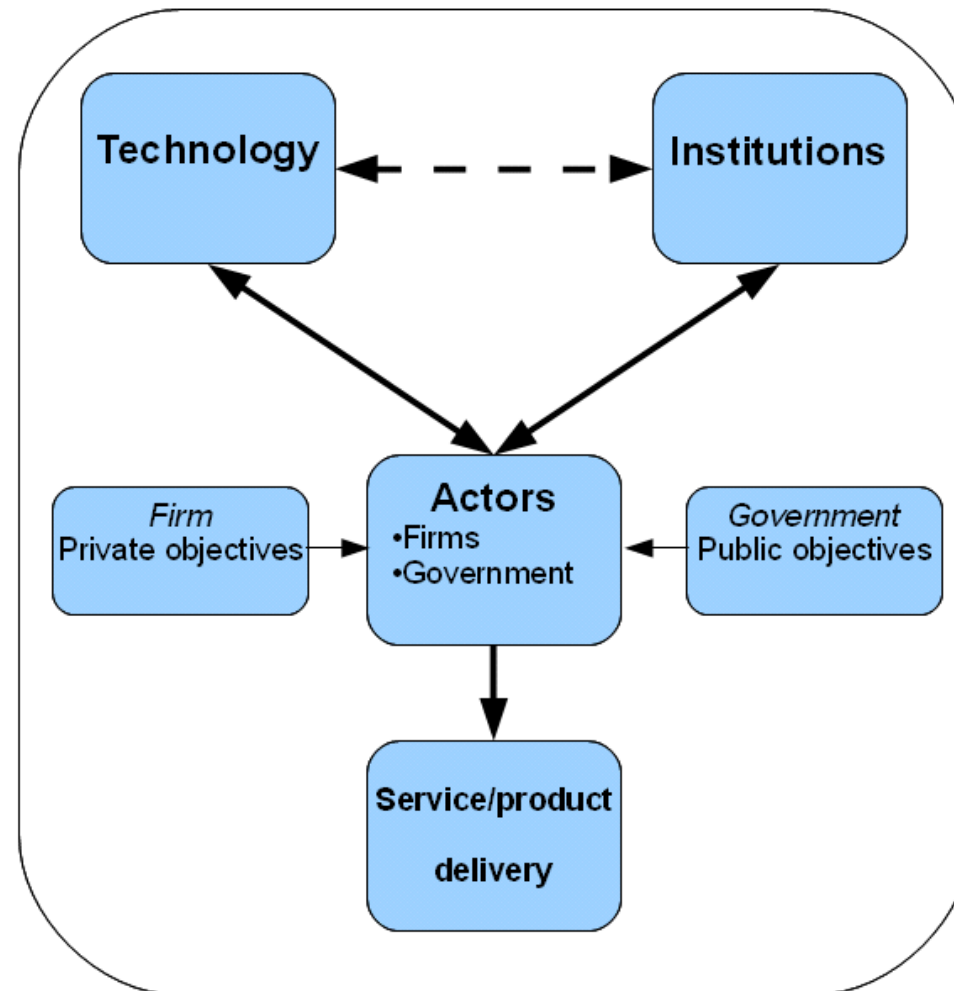
# A certain degree of coordination is required



# Zekere mate van coordinatie vereist

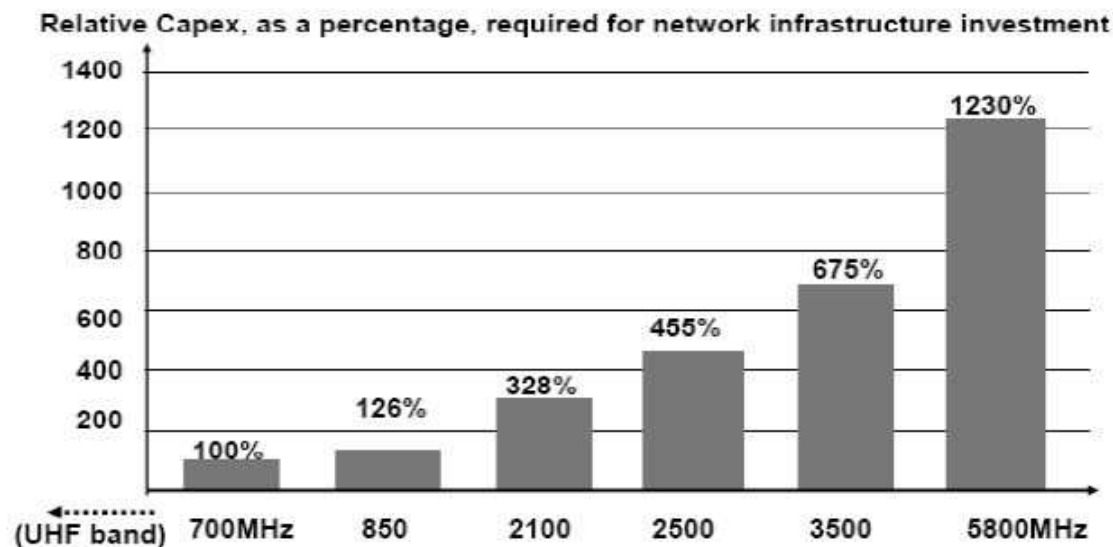


# Aligning regulations with new technology



# Is the TVWS rural business case a sweet spot?

- Why is there no service coverage at the moment?
- Can CR deliver the service at the lower cost price?



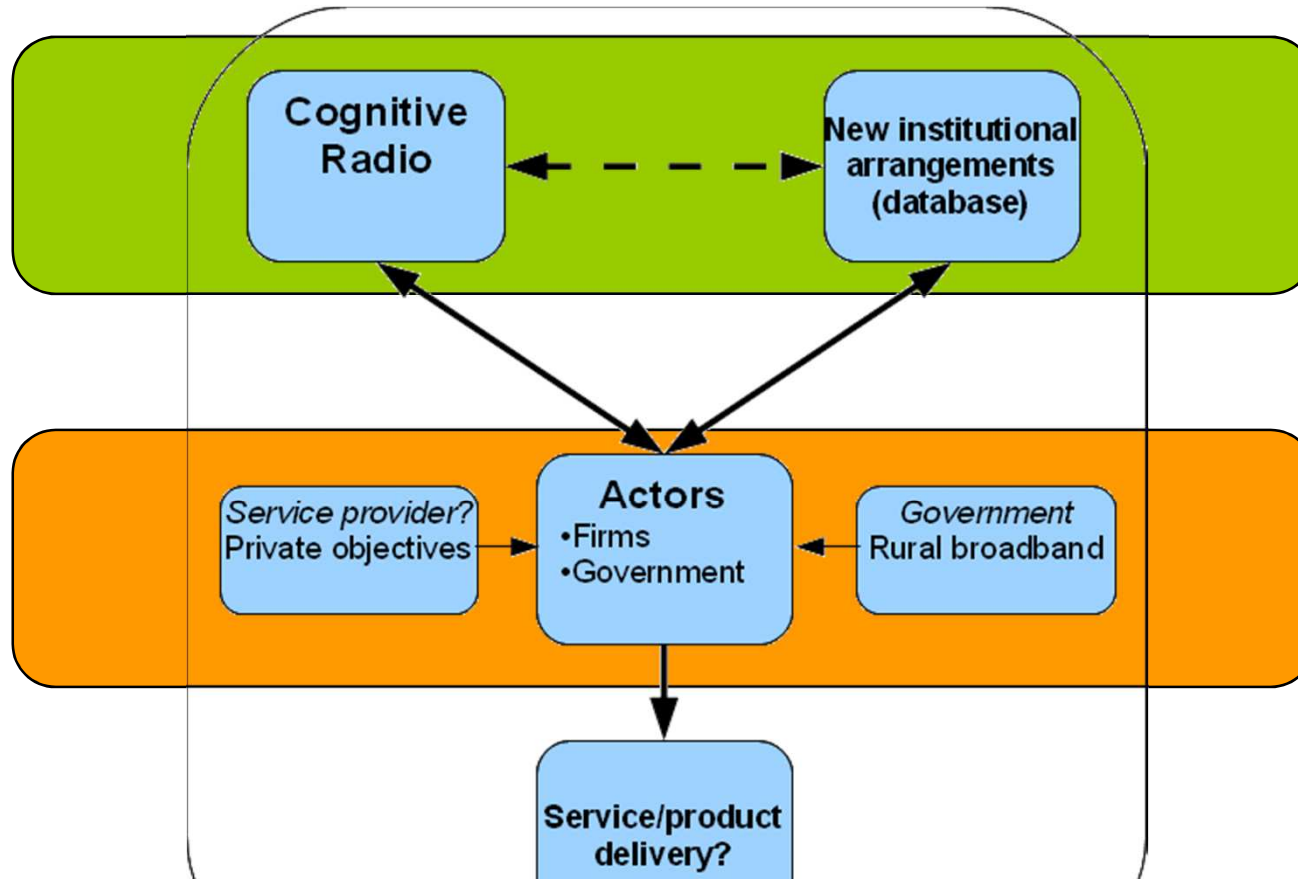
# Is the rural case a sweet spot?



- Cellular like service not likely
- Wi-Fi like service more likely
- How much capacity can be made available?
- Is there enough demand at the places where there is capacity and vice versa?
- Is there alignment on both levels?
  - Is a service offering not a product sale
  - Weak business case, historically avoided by operators
  - Infringes on vested interests in licensed regime

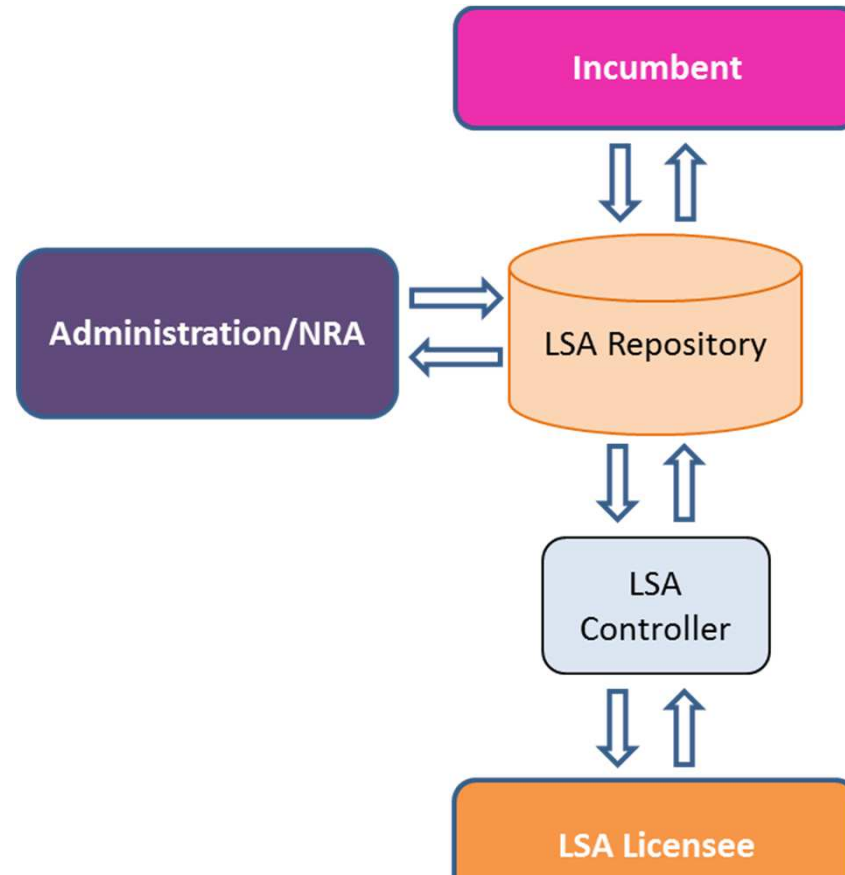


# Is there a fit between the private and public objectives?



Rural broadband in TVWS is a policy and technology driven fit - not necessarily a fit with the private objectives of the service provider

# LSA: The new kid on the block



Is mobile broadband a 'sweet spot' for LSA deployment?  
Or is it the mobile video camera?



# Conclusions

- Business opportunities facilitated and restricted by:
  - Regulatory environment
  - Technical characteristics of the CR technology
  - Incumbent user characteristics
    - Has implications for the regulatory model and CR technology that can be used
    - Have implications for the amount of capacity that can be made available; is this enough to cater for the demand?
- Need for alignment between:
  - Technology and regulations

The main purpose of coordination between governments and the industry is finding and enabling the 'sweet spot' for CR deployment.





# Questions

