



PACITA Conference 2013
Session: IX Assessing Sustainable Mobility

**Scenario tools for future generations of
high-speed trains: lessons from Europe**

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Paradigm shift in railways

SUSTAINABLE DEVELOPMENT

Technology response shift from policy challenges to societal challenges (ERRAC 2010)
Sustainability: moving target, multi-dimension (Kemp 2007)

Risks

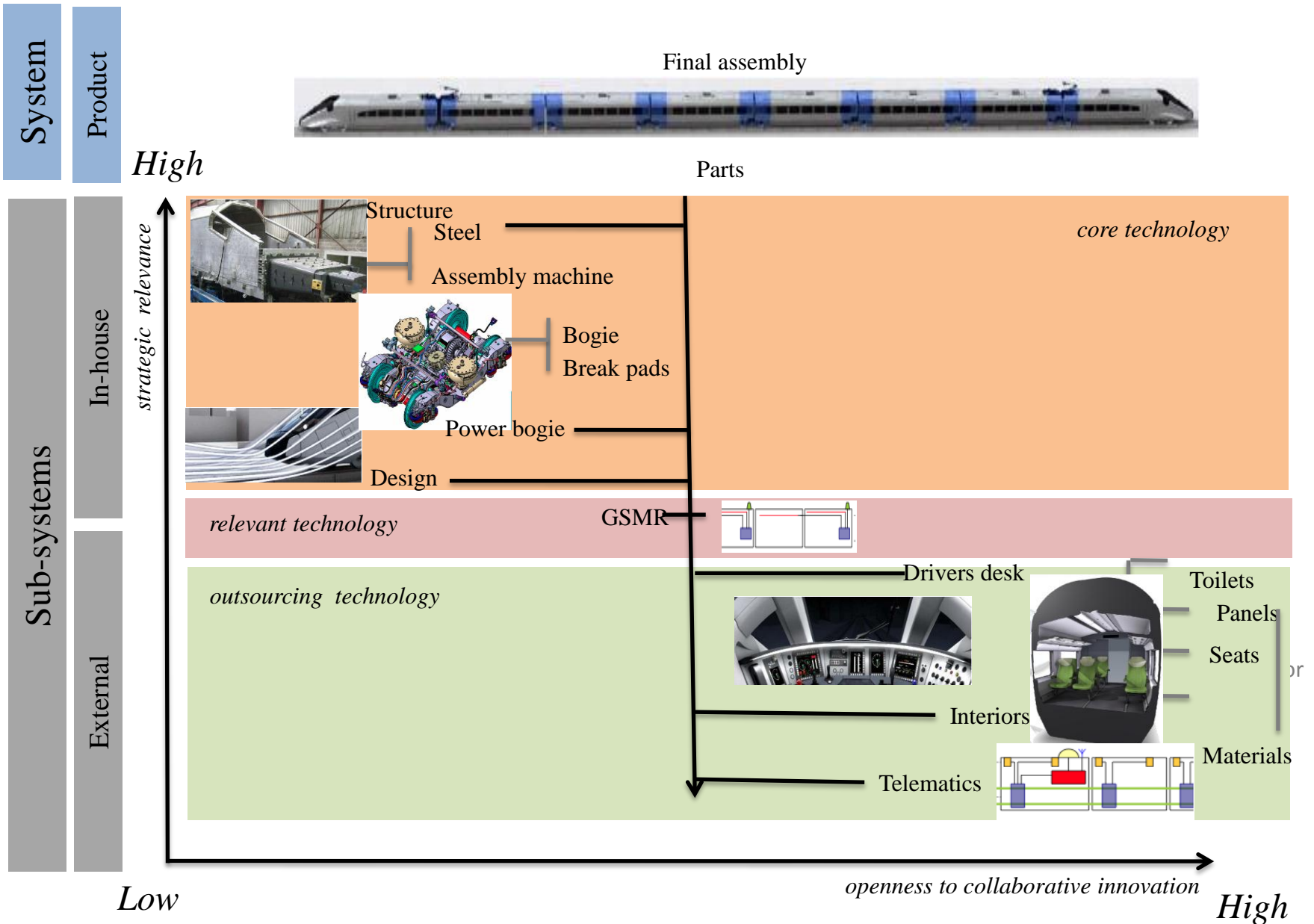
Discontinuities between technocentric visions and societal landscape. Negative impact for future oriented technologies (Robinson et al. 2011)

Mitigation

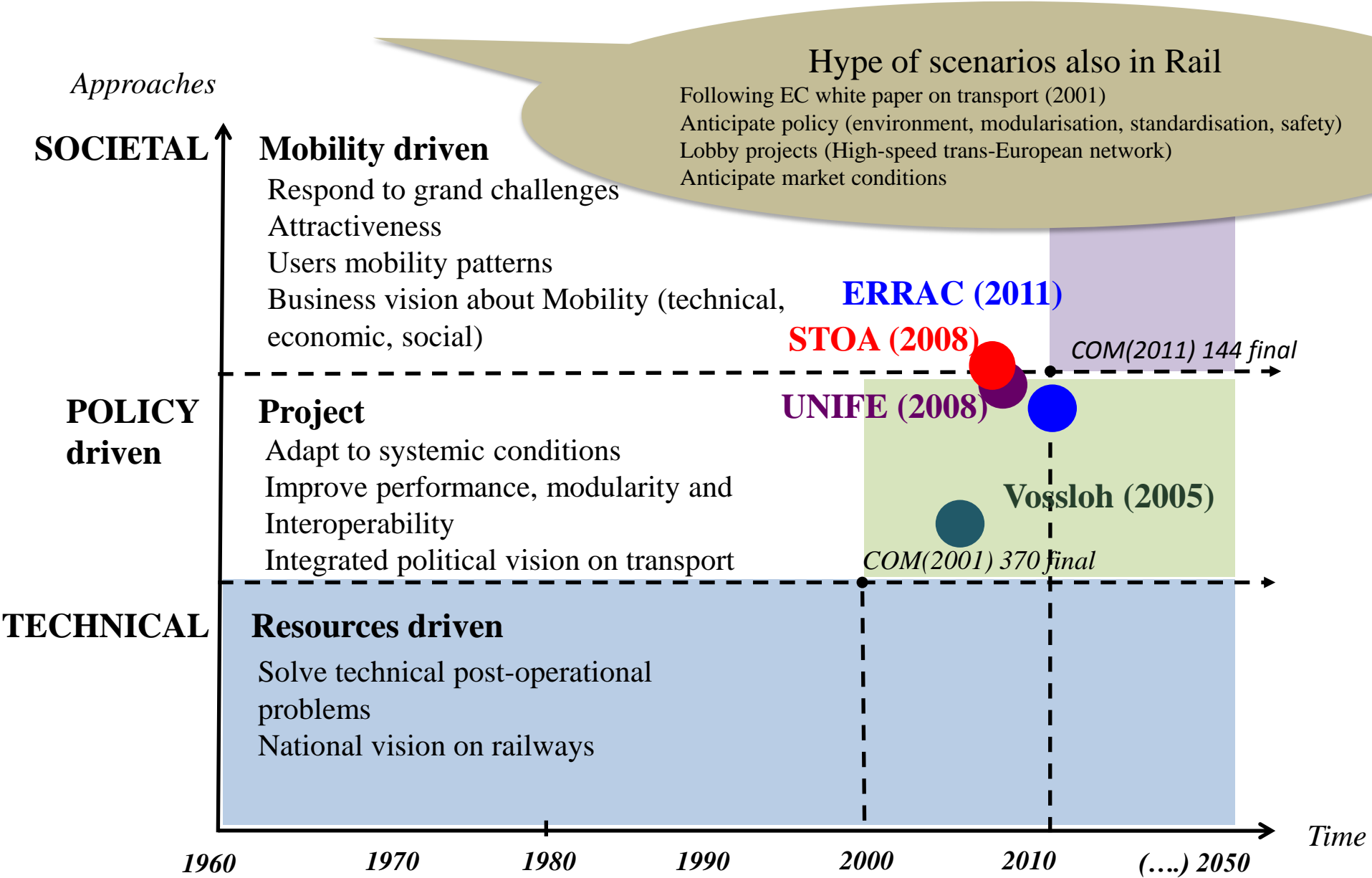
Tailor scenario tool for the future generation of high-speed trains

Sources: Rip et al. 1997 (concepts), Robinson et al. 2011 (mutual dependencies), Geels 2007 (transition) ,
Kemp 2007 (model) , Others?

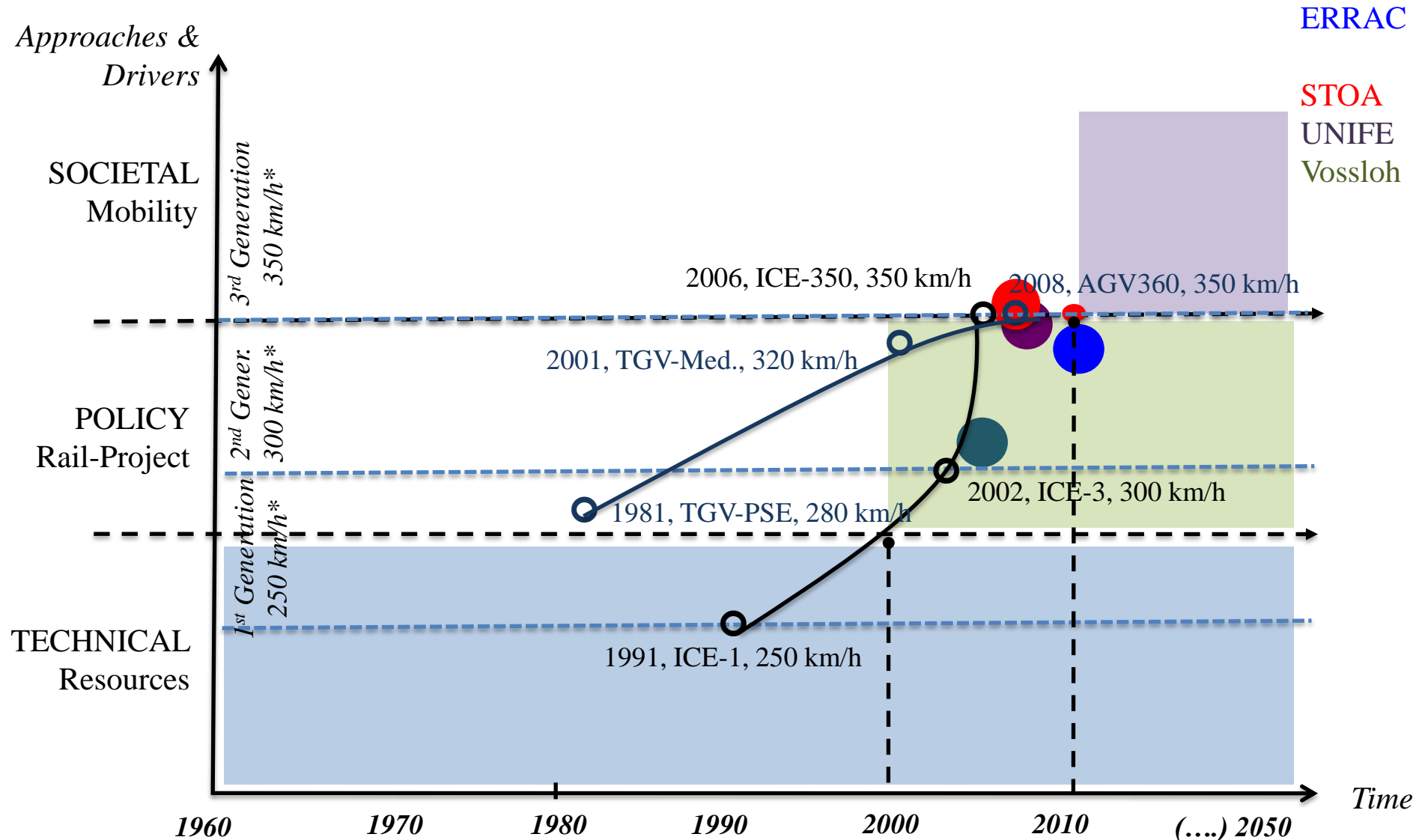
Technology at stake



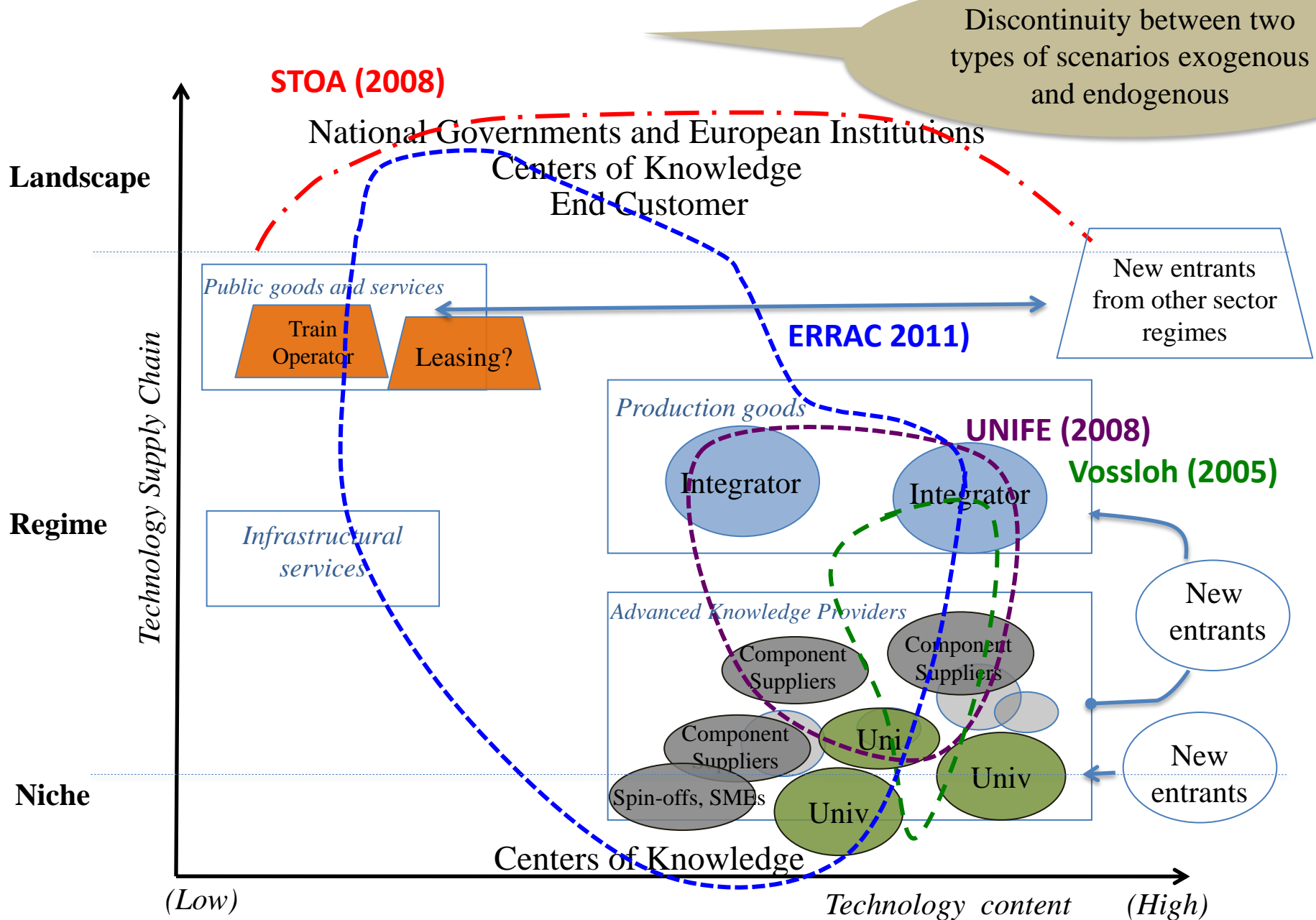
Technological Approaches



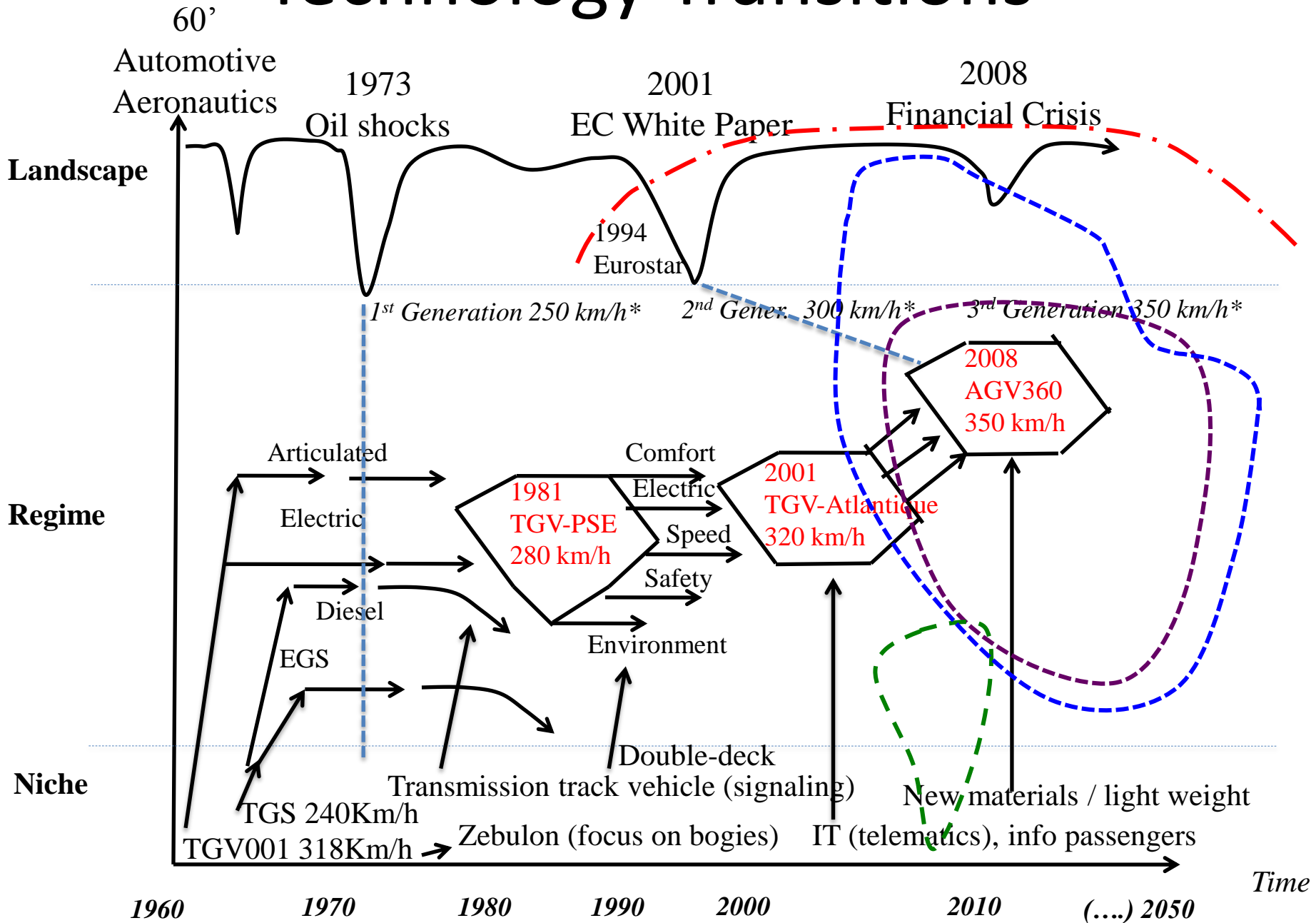
Technology footprints



Technology supply chain



Technology Transitions



Debate

- Assumptions:
 - Sustainable development (Kemp 2008) as new technology driver
 - Need to converge techno-centric with exogenous scenarios models (Robinson 2011)
- Solution for railways:
 - Specificities of the sector justify adapted scenario tools?
 - How to adapt existing scenarios designs (Rip, Robinson, Geels, Kemp)?
 - How to overcome barriers for latter field tests?

Thank you

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