How can regions support innovation in high speed rail systems?

High Speed Regions Network

Andy Nash

www.andynash.com
July 5, 2010

Introduction

Our objective is to improve high speed
rail service to our regions.

Why?

High speed rail is a very efficient transport technology that will help our regions improve their economy, livability and sustainability …

… BUT

High speed rail, as a quasi-public and capital intensive infrastructure business, faces significant challenges.

These challenges are mainly social/ institutional:

- **Funding shortages** - governments are reducing capital spending - this will only get worse as national populations age!

- **Labour unrest** - caused by resistance to change - just when change is most needed! Labour problems also impact service quality.

- **Lack of strong leadership** - bureaucratic and political paralysis - especially for complex systems.

Can innovation help?

Yes, but …

The focus must be on social and institutional innovation rather than technical innovation …

In other words:
Transitioning from *engineering to entrepreneurship*.

- This means creating attractive new products tailored for today's transport demands …

- … by combining innovative new ideas with the benefits of traditional rail service:
    - Frequency;
    - Comfort;
    - Flexibility; and
    - Value.

- And, doing it all more efficiently!

S-Curve Theory of Innovation
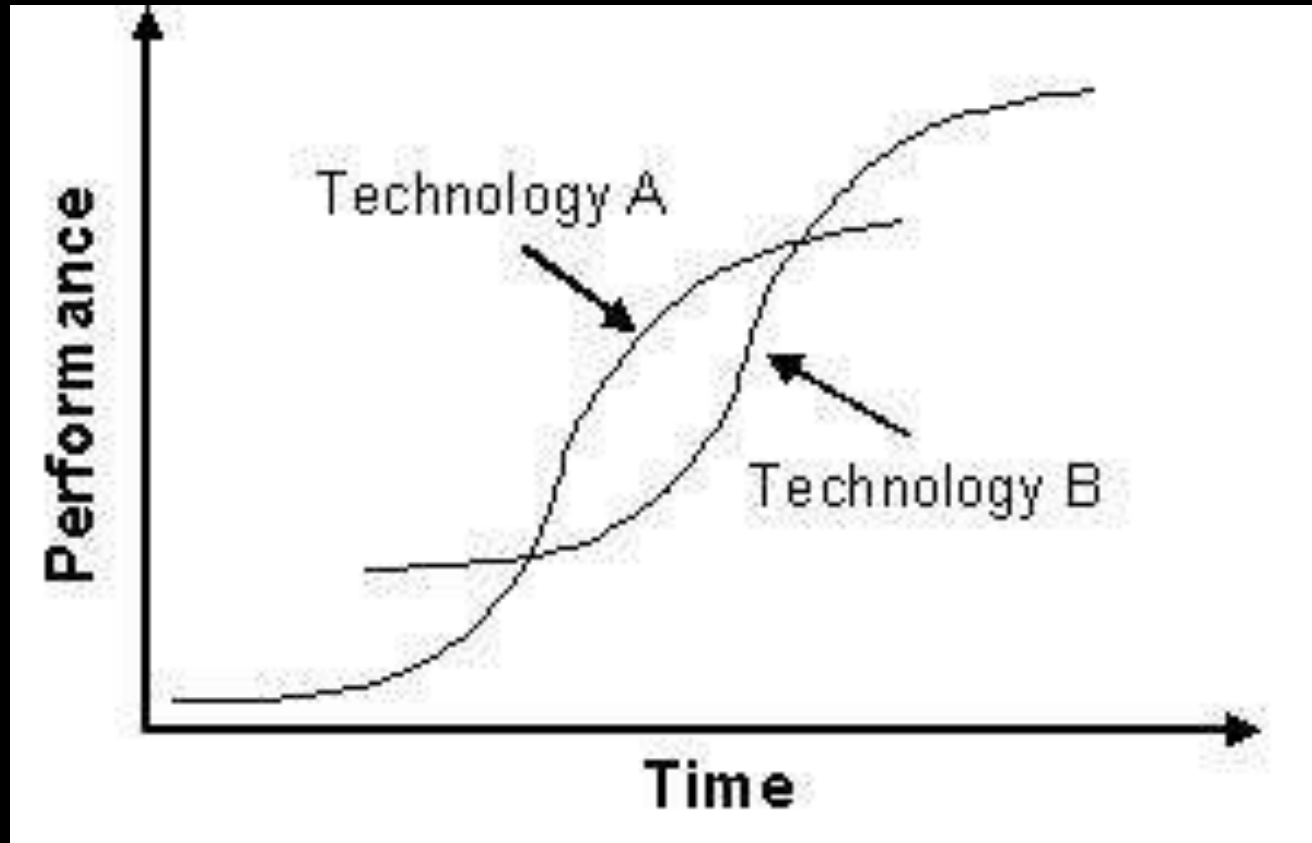
Innovation is hard

- If it's not broke, don't fix it;

- Resistance by those displaced or otherwise affected;

- Institutionalized processes often hinder innovation (e.g. investment analysis based on status quo future);

- "Curse of knowledge" … the inability to see from fresh perspective;

- Creative destruction is needed to encourage innovation and entrepreneurship (Schumpeter).

Innovation is especially hard in the rail sector

Barrier Type	Specific Barrier
Institutional	Monopolistic business model
	Political (internal and external) involvement in making operating decisions
Organizational	Lack of investment capital
	Insufficient professional resources
	Insufficient technical expertise – i.e. reliance on a specific technical path
	Problems caused by European railway re-organization (i.e. vertical competition within companies) that reduce cooperation and increase uncertainty
Socio-cultural	National orientation of railway companies
	Old-fashioned consumer image of railways
Technical	Long innovation cycles
	Misunderstanding of customer needs

Potential railway innovations

- Think network not line;

- Coordinate investment programs;

- Make ticketing simpler;

- Create independent business units;

- Form and enhance partnerships; and,

- Embrace information technologies.

How can regions help?

Think network, not line!

Why?

- It's the total trip that matters, not segments.

What can regions do?

- Improve local connections:
  - Physical;
  - Schedule coordination;
- Provide enhanced local facilities (stations, lounges, information);

Coordinate investment programs

Why?

- Travel demand no longer respects national borders;

What can regions do?

- Work with adjoining national and regional governments.

- Provide political support for improvement programs:
    - TEN Priority corridors;
    - Interoperability/ERTMS; &
    - Increasing capacity efficiently.

Make ticketing simpler!

Why?

- Ticketing is a significant barrier to using public transport.

- Better ticketing enables development of new products.

What can regions do?

- Create easy to use city tickets;

- Create travel packages;

- Direct links to ticketing websites;

- Support better ticketing machines at your stations:
    - Sufficient number of machines;
    - Easy to use; &
    - Information/ language.

Create independent business units

Why?

- Independent business units enable established companies to circumvent institutional barriers and test new ideas and products.

What can regions do?

- Create government-based business units to support high speed rail;

- Support local independent businesses;

- E.g. create business units to operate new train services:

  – Perhaps with partner regions;

  – Consider special services like iDTGV;

Form and enhance partnerships

Why?

- Partnerships enable railways to offer improved products and more efficient operations.

Potential partners for regions:

- Train operating companies;

- Local public transport companies;

- Local businesses;

- Airlines;

- Other regions;

- Local property owners/ developers;

- Railway workers (Southwest Airlines); and

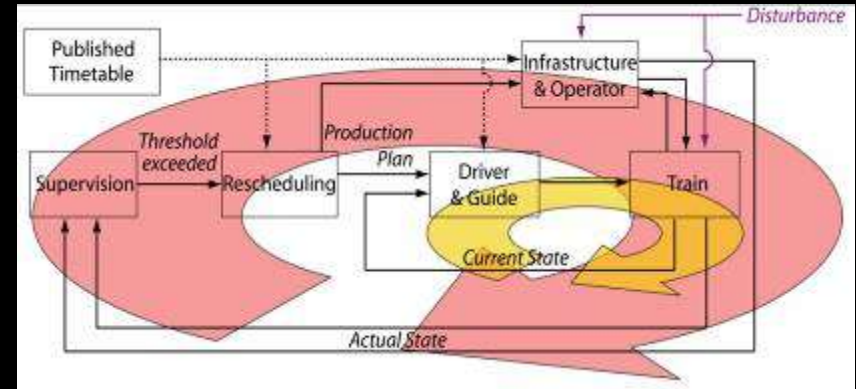- Customers (frequent traveler programs).

Embrace information technology

Why?

- Your customers demand it.

- It provides an opportunity for creating entirely new products.

What can regions do?

- Free wi-fi - better than airports!

- Data feeds for mash-ups;

- Create and support: social networks, information, games;

- Innovation contests.

In summary

Regions must:

- Encourage and support railways as they move from engineering to entrepreneurship:
    - Developing and implementing innovations that combine new ideas with the benefits of traditional rail service;
    - Focusing on overcoming social and institutional barriers to develop and implement these innovations.

- Provide political and financial support for railway-related improvements (capital and operational!);

- Act locally to create coordinated networks, improve facilities, and develop new services and products.

Questions?

andy@andynash.com