



Railway Industry Association

Non Technical Barriers to Innovation

David Clarke, RIA Technical Director
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Innovation on the Railway

Customer Need

Finding a solution

Delivering the solution

Workshop

Easy isn't it?



Is Innovation in today's rail industry



TLG Definitions

***Research, development and technology** generates an improved capability to deliver better value for businesses and/ or rail customers*

***Innovation** is changing process, behaviours and environment to generate increased value compared to industry best practice which could include but is not limited to opportunities created by using research, development and technology.*

OR



The purpose of Innovation

- Innovation is about creating or maintaining a competitive edge
- Technology is only an enabler
- So how should the rail industry innovate to maintain its competitive edge?

What are the challenges of introducing the next generation of complex safety critical technology?



How to Innovate (more successfully?)

Probably don't start with the technology

I suggest you need to think about the following from the start:

- A clear customer need or challenge (an output specification)
- A way of finding the most suitable solution
- A way of delivering the solution



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Consider both the ultimate customer need and your own business need & don't forget the competition!



Recognised customer needs/ challenges

- Increased Capacity
 - Improved Performance
 - Improved Connectivity
 - Better customer experience
 - Reduced Cost
 - Economic Growth
-
- This can generate an output specification



But



But don't forget the competition! An unrecognised need/ challenge?

- They didn't see it coming..



NOKIA
Connecting People



- Ones we can see coming..



- What else?





When is the best time to innovate?



When is the best time to innovate?



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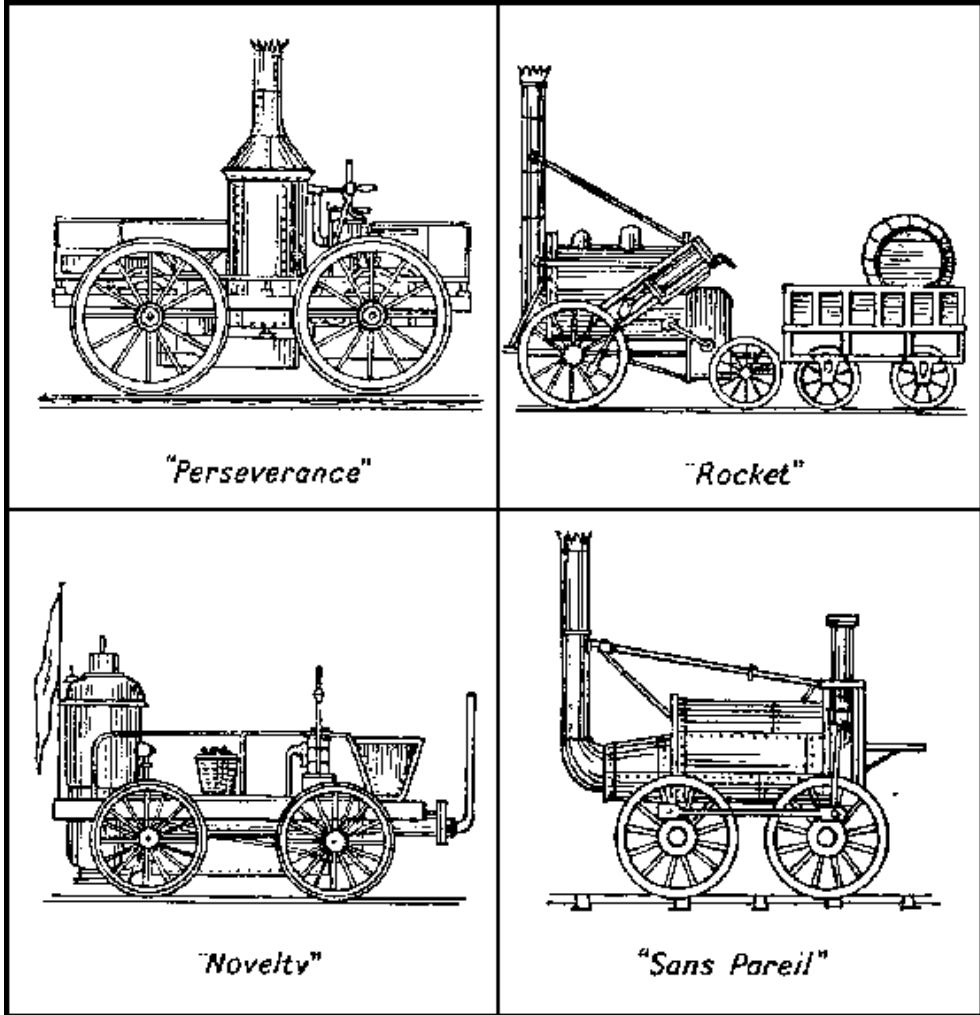
Delivering the solution

Workshop

**Usually means finding a supplier with
a solution or able to develop one**



This is not new - Liverpool to Manchester Railway 1829



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Creating a win-win situation for all parties is likely to lead to success



This is not new – Solid State Interlocking 1980's



Collaboration created a
Win-Win Situation



But it doesn't always work!

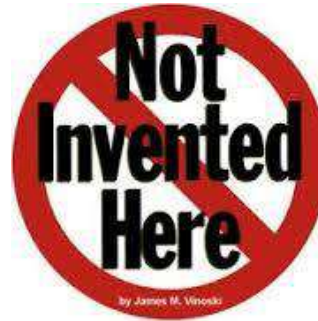
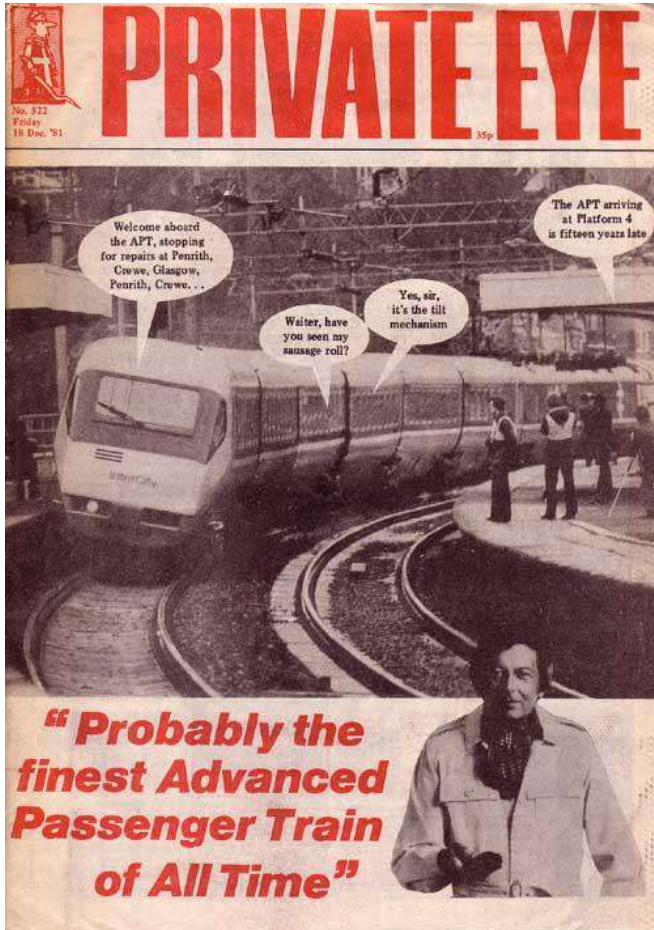
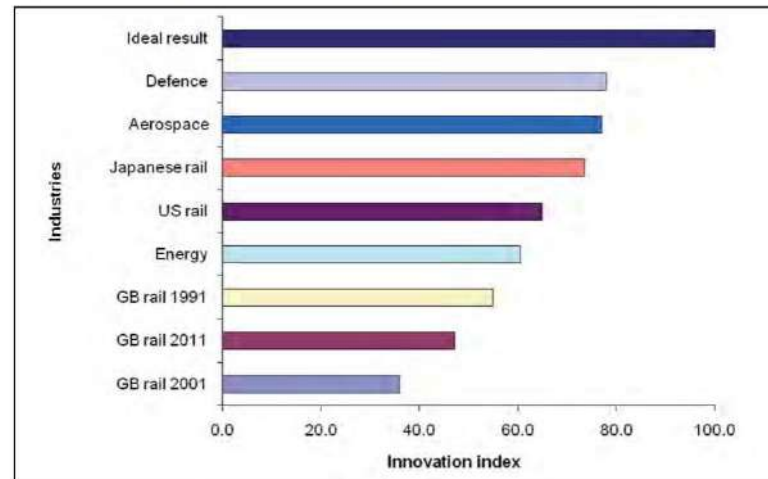


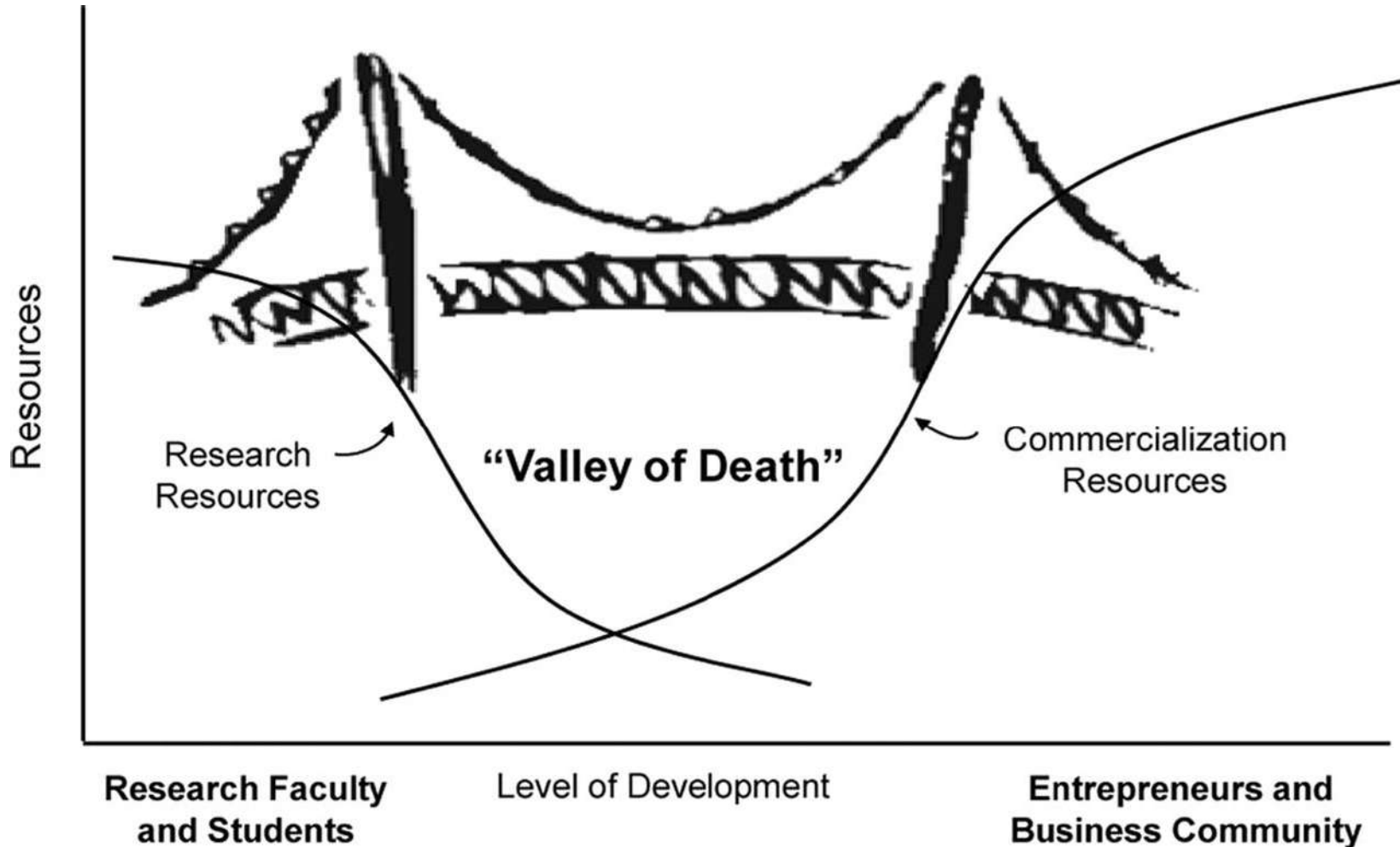
Figure 11.5: Comparative innovation index



McNulty Report 2011



Great idea but why wasn't it implemented?



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So what do you see as the barriers to delivering and innovative solution?

How can we remove them?



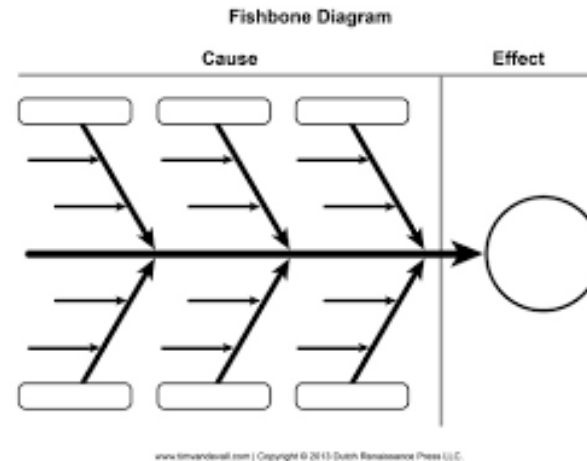
Workshop

- Split into 4 teams
- 25 min Brainstorm
- 15 min Action Plan
- 4 x 5 Min feedback
- Winner!



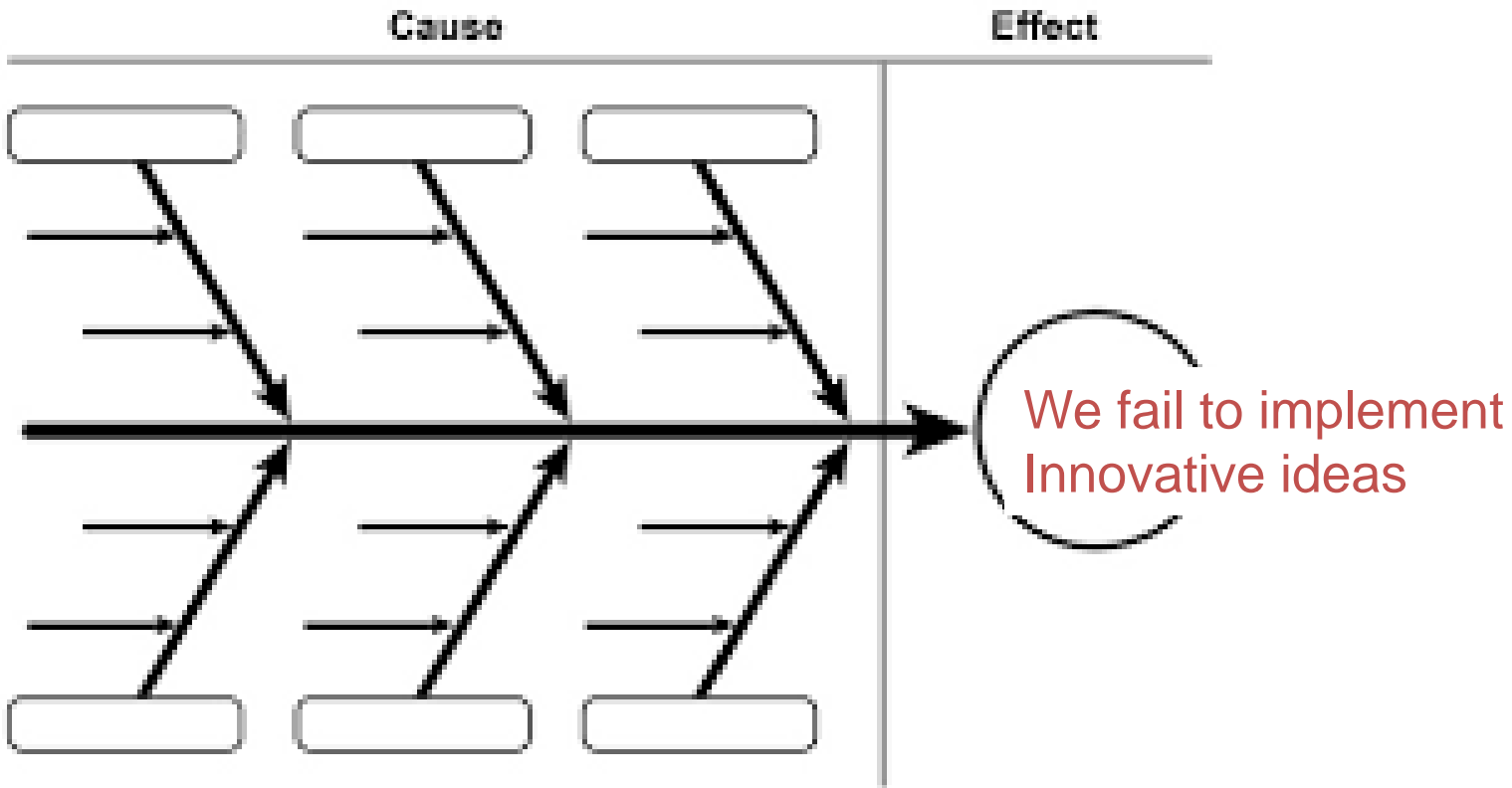
Workshop part 1 – 25 Min Brainstorm

- Decide a team name
- What are the barriers to innovation in the UK rail industry?
- Prioritise the Barriers
- Identify the gatekeepers
- Decide what needs to change to remove these barriers?



Fishbone Diagram

Fishbone Diagram



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Workshop part 2 – 15 min Action Plan

- The top 3 to 6 things we need to change to enable innovation in the UK rail industry?

What	Why	How	Who	When
needs to change?	will it be beneficial?	will you make it happen?	needs to lead?	can it be implemented?



Workshop part 3 – 4 x 5 min pitch

Each team will have 5 minutes to ‘pitch’ their plan to ask a sceptical board for the resources to implement the teams plan





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Thank You

