Technology Strategy Board

Driving Innovation

The Funding Landscape

11th December2009

Ian Meikle

Which leads me to my third point.

Our vision

For the UK to be…

I'm signed up to that. I should be. I wrote it.

Many people have asked us where we think our biggest impact will be. In one sense I'm reluctant to answer that because what I have tried to show is the very broad range of our work – itself a consequence of

-The variety of challenges we face

-The breadth as well as depth of the UK's technology base

But if forced to choose I would like to emphasise 3 aspects of our work where I hope we will make an especially big mark.

One is making a real impact on one or more of the societal challenges I mentioned – an impact that will be seen not just at home but around the world

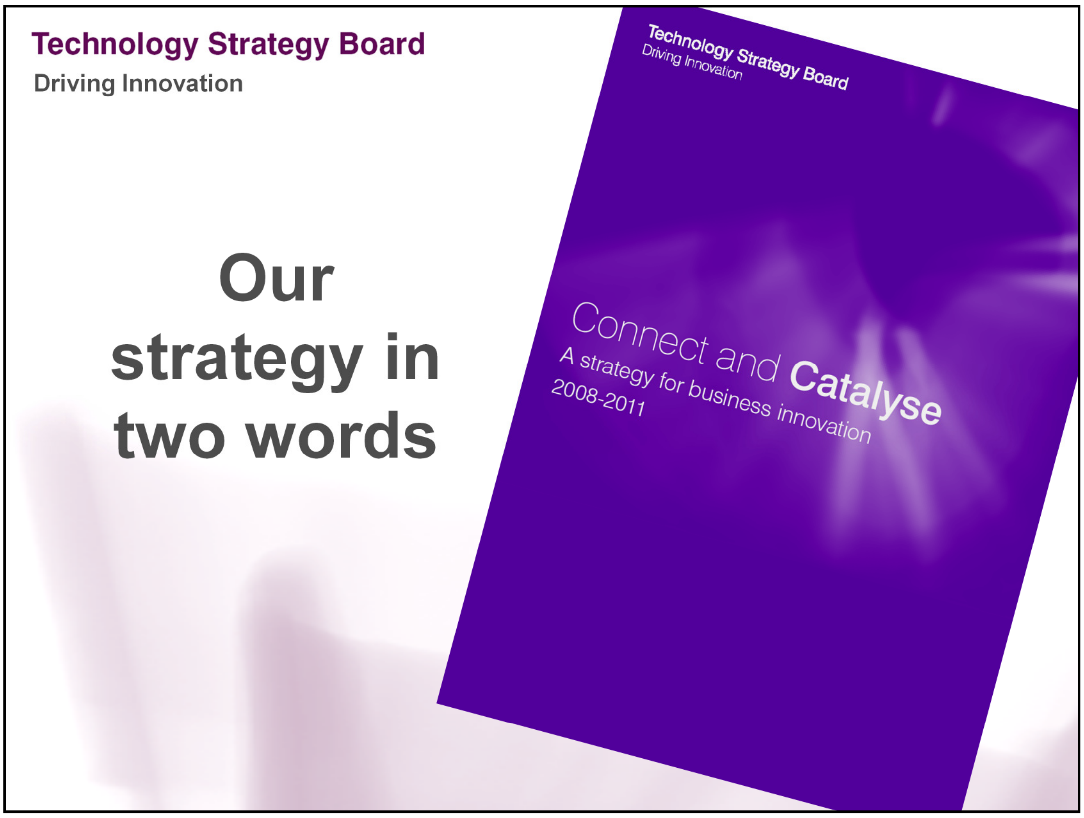
The second is for us to lever the government's procurement to boost innovation. The scale of the procurement budget is so great that the potential impact could dwarf anything that has ever been achieved before

The third would be to make the fullest possible use of our science and research base. Per head of population it is as good as, or better than, any in the world. We in the UK are at least as clever as any of our competitors. Now we need to be cleverer at exploiting our cleverness.

If we do those three, we can make the vision reality and improve the quality of life not just here in this country, but right across the world.

And that, ladies and gentlemen, is our strategy.

Thank you.

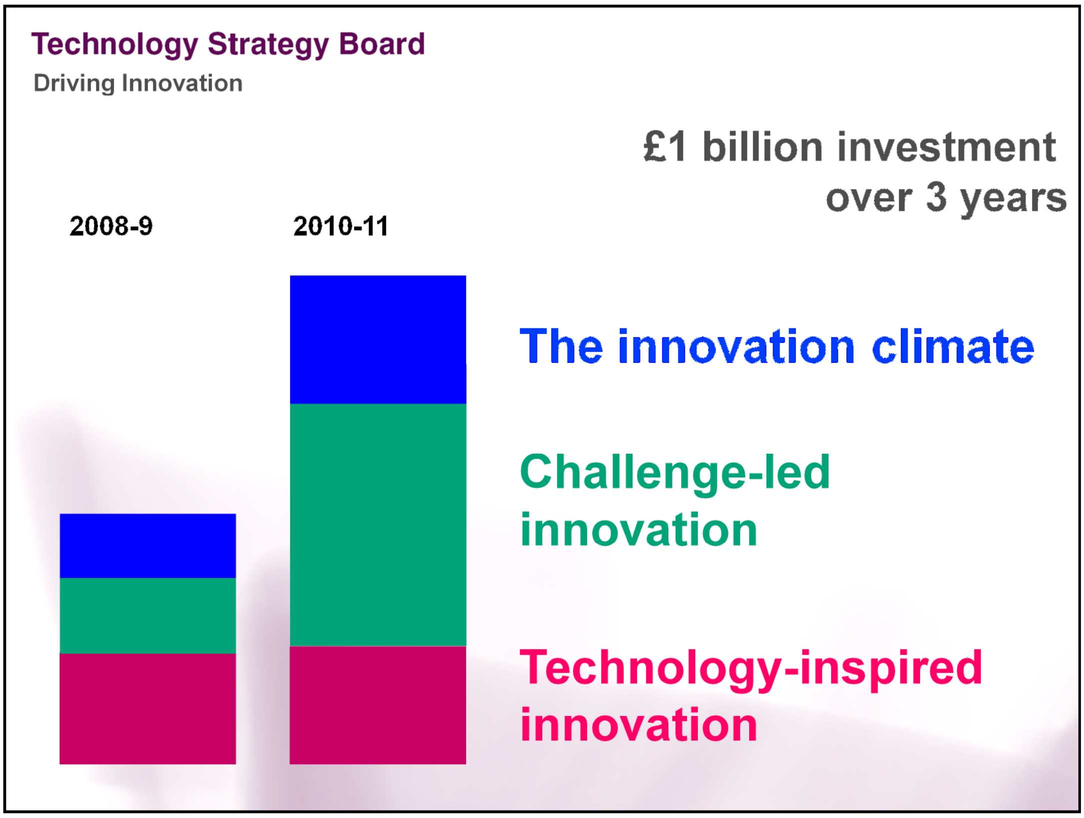


So, what is our strategy?

Two words sum it up

Connect, and catalyse

[make reference to light sticks?]



We intend to use the extra funding available to us over the next 3 years to increase our support for Challenge–Led innovation and driving the Innovation Climate – but that does not mean our support for "Technology–Inspired" innovation will go down

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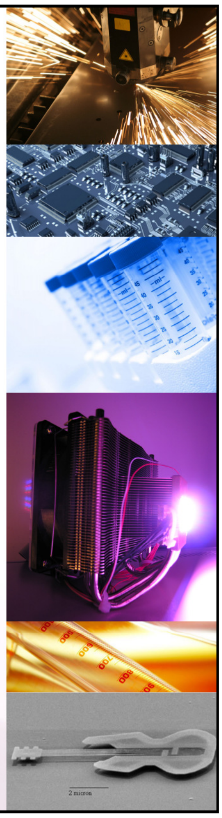
Driving Innovation

Technology Inspired Innovation

- We build capability in the underpinning areas that enable a sure and effective response to market needs
  - Advanced materials
  - Bioscience
  - Electronics, photonics and electrical systems
  - Information and communication technologies
  - High value manufacturing
  - Nanotechnology



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Challenge-led innovation

- We aim to understand the needs of the markets and support the most innovative and competitive responses to societal challenges
  - Energy generation and supply
  - Environmental sustainability
  - Built environment
  - Creative industries
  - High value services
  - Medicines and healthcare
  - Transport

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Innovation Platforms

- We work with Government as they address societal challenges to give business the future market definition they need to be competitive
  - Intelligent Transport Systems and Services
  - Network Security
  - Low Carbon Vehicles
  - Assisted Living
  - Low Impact Buildings
  - Detection and Identification of Infectious Agents
  - Sustainable Agri-food

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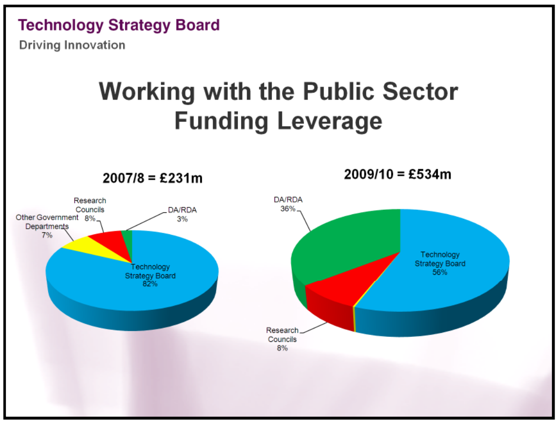
The Innovation Climate

- We inspire and enable people to play their part in the innovation economy
- We celebrate the power of innovation
- We encourage new modes of innovation

www.ktnetworks.co.uk

www.ktponline.org.uk



TSB looking to provide focus

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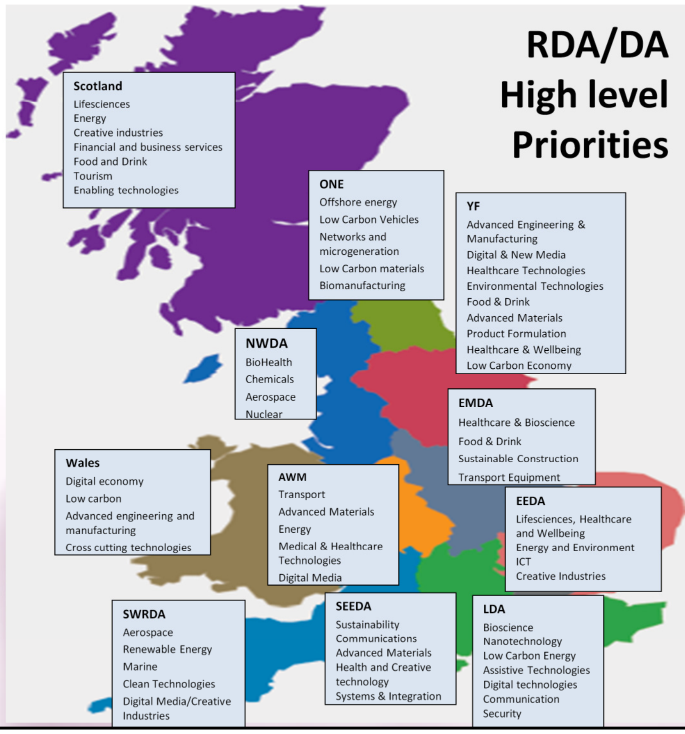
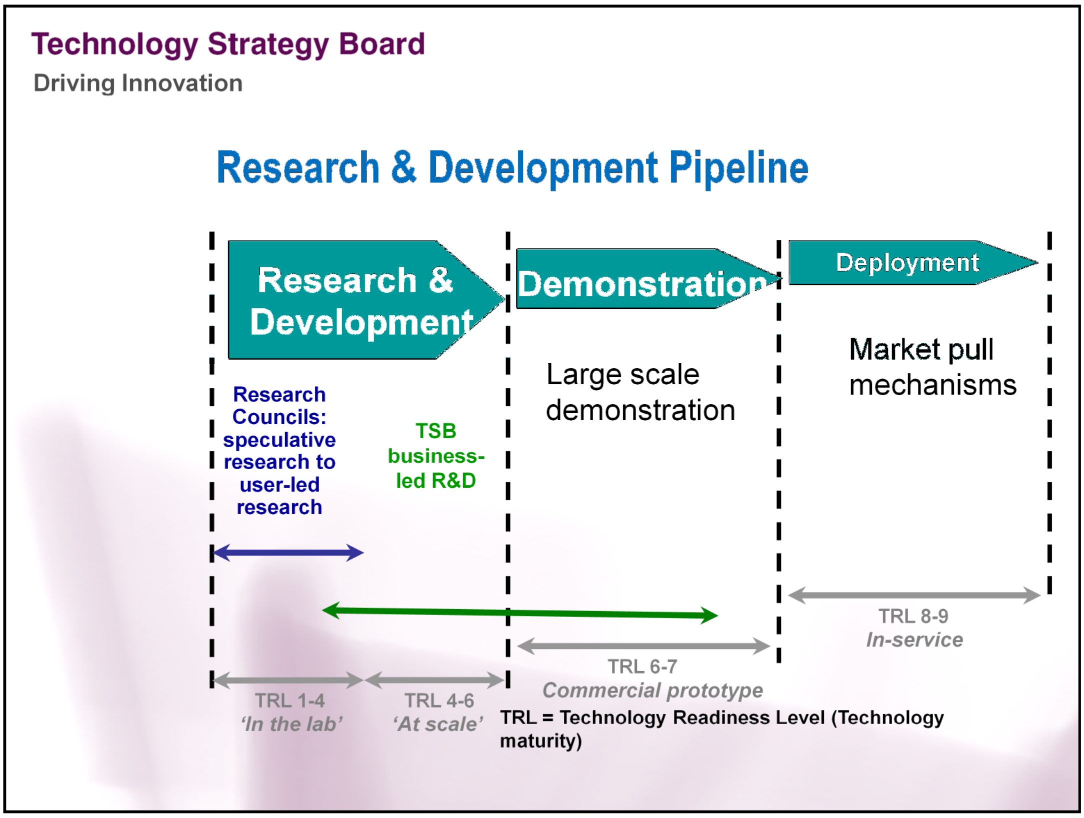
Driving Innovation

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Driving Innovation
Research & Development Pipeline
Research & Development
Demonstration
Deployment
Research Councils: speculative research to user-led research
TSB business-led R&D
Large scale demonstration
Market pull mechanisms
TRL 8-9
In-service
TRL 6-7
Commercial prototype
TRL 1-4
'In the lab'
TRL 4-6
'At scale'
TRL = Technology Readiness Level (Technology maturity)

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RCs and TSB – some comparisons

	Research Councils	Technology Strategy Board
Overall aims	Excellence with impact	Innovation - Exploitation of ideas
Focus	World leading research, next generation researchers and scientific infrastructure	Business benefit, wealth creation
Origin of proposals	Academic-led	Business-led
Eligibility	Academia	Industry and academia
Grant	80% fEC	Contribution towards project costs (75%, 50%, 25%)
Assessment	Peer review (academic bias)	Peer review (industry bias)
Funding opportunities	Responsive mode and strategic programmes	Targeted competitions in strategic priorities

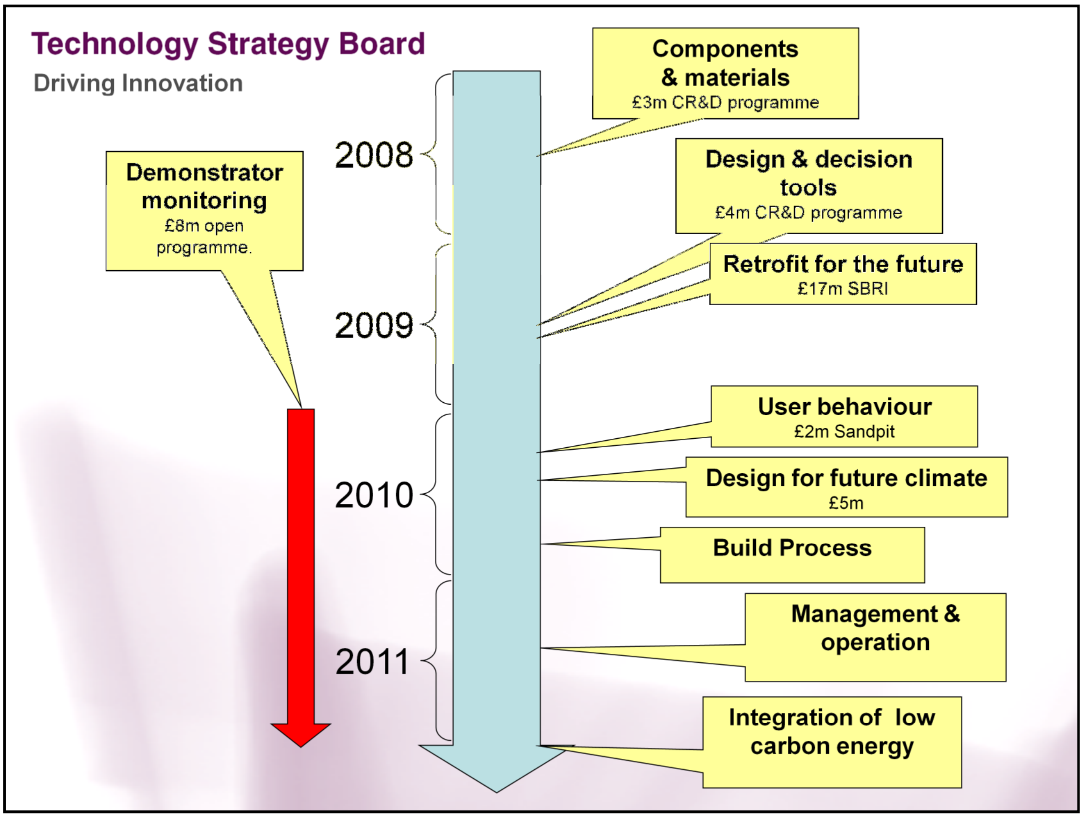
A few comparisons between TSB and RC funding.

In general this is what it looks like for the RCs and TSB but there are always exceptions.


45% of all carbon emissions
in the UK come from buildings


Government is challenging
the industry to provide
‘zero carbon’ homes by 2016


‘Zero carbon’ commercial and public buildings will be required from 2019
ONDON 2012



First Competition

The development of components and materials for low impact buildings (reduced energy and water usage, and reduced waste production) that meet consumer needs.

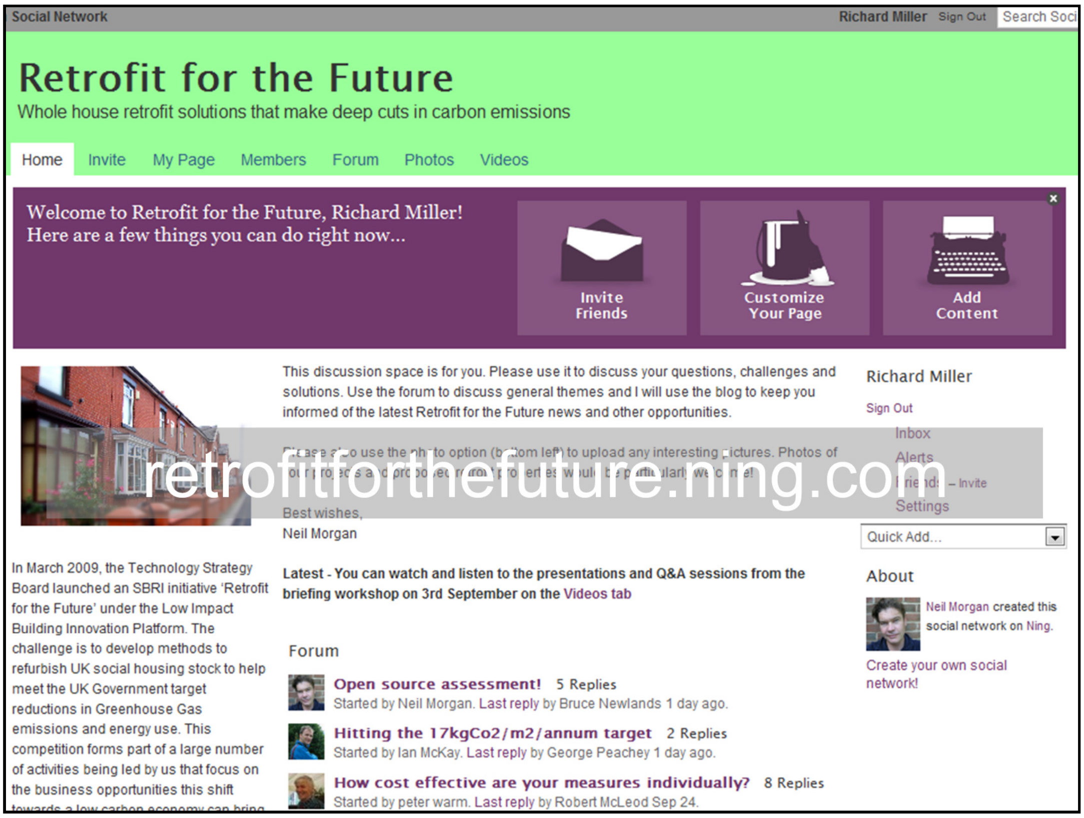
Overcoming the technical barriers and developing new processes for incorporating components and materials into buildings.

Adapting components to improve their buildability, making them compatible with the way buildings are constructed.

Conversion of products already existing in different sectors to address the challenge of lowering the impact of buildings.


Retrofit for the Future


Target
At least 100 demonstrator refurbishments:
• deep cuts in carbon emissions (80%)
• different home types and locations
• good indoor environment
• cost effective


Social Network
Richard Miller Sign Out
Search Soci
Retrofit for the Future
Whole house retrofit solutions that make deep cuts in carbon emissions
Home Invite My Page Members Forum Photos Videos
Welcome to Retrofit for the Future, Richard Miller!
Here are a few things you can do right now...
Invite Friends
Customize Your Page
Add Content
This discussion space is for you. Please use it to discuss your questions, challenges and solutions. Use the forum to discuss general themes and I will use the blog to keep you informed of the latest Retrofit for the Future news and other opportunities.
retrofitforthefuture.ning.com
Best wishes,
Neil Morgan
Richard Miller
Sign Out
Inbox
Alerts
– Invite
Settings
Quick Add...
In March 2009, the Technology Strategy Board launched an SBRI initiative 'Retrofit for the Future' under the Low Impact Building Innovation Platform. The challenge is to develop methods to refurbish UK social housing stock to help meet the UK Government target reductions in Greenhouse Gas emissions and energy use. This competition forms part of a large number of activities being led by us that focus on the business opportunities this shift
Latest - You can watch and listen to the presentations and Q&A sessions from the briefing workshop on 3rd September on the Videos tab
About
Neil Morgan created this social network on Ning.
Create your own social network!
Forum
Open source assessment! 5 Replies
Started by Neil Morgan. Last reply by Bruce Newlands 1 day ago.
Hitting the 17kgCo2/m2/annum target 2 Replies
Started by Ian McKay. Last reply by George Peachey 1 day ago.
How cost effective are your measures individually? 8 Replies
Started by peter warm. Last reply by Robert McLeod Sep 24.


Energy Efficient Whitehall

Energy Generation and Supply
investment to date

Carbon abatement technologies	£5m
Intelligent grid management	£6m
Fuel cells and hydrogen	£13m
Bio-energy	£5m
Microgeneration and photovoltaics	£6m
Wave energy and tidal stream	£20m
Offshore wind	£7m
Oil and Gas technologies	£4m

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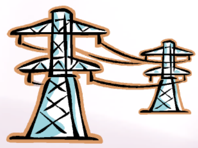
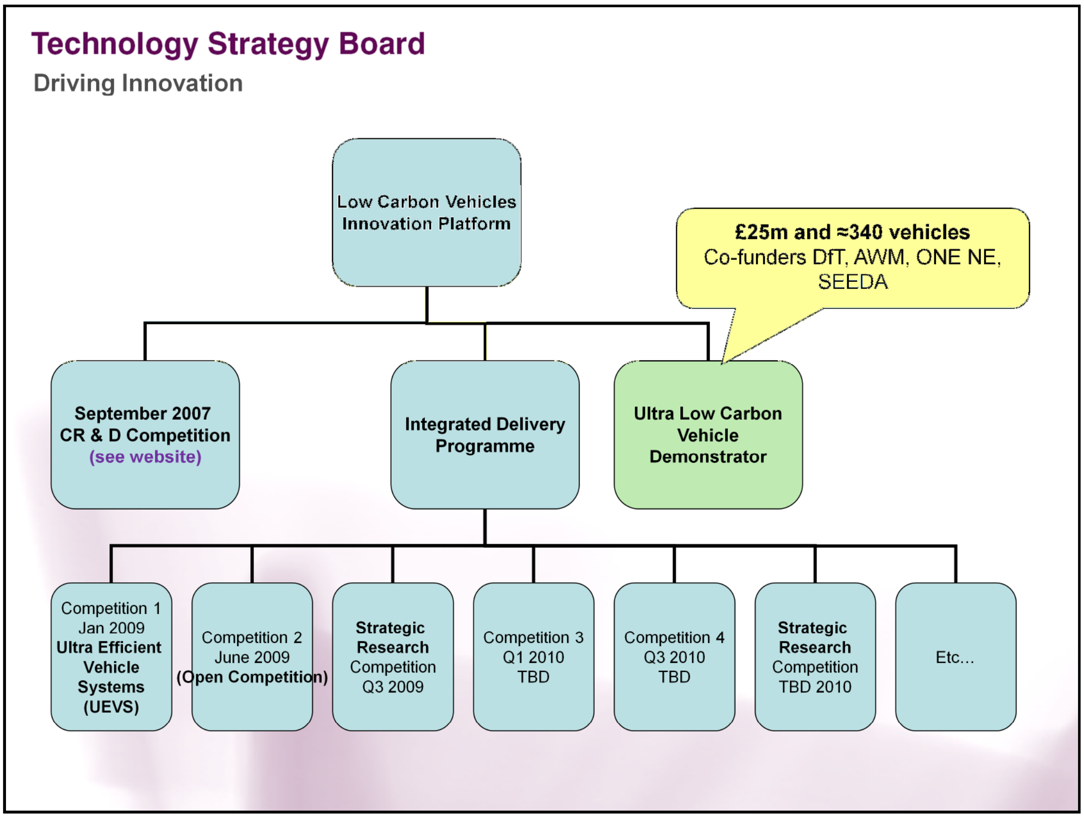
Energy Generation and Supply
upcoming initiatives

Fuel cells and hydrogen	£9m
Maximising UK hydrocarbon recovery	£5m
Carbon abatement (w/ DECC and Northern Way)	£15m

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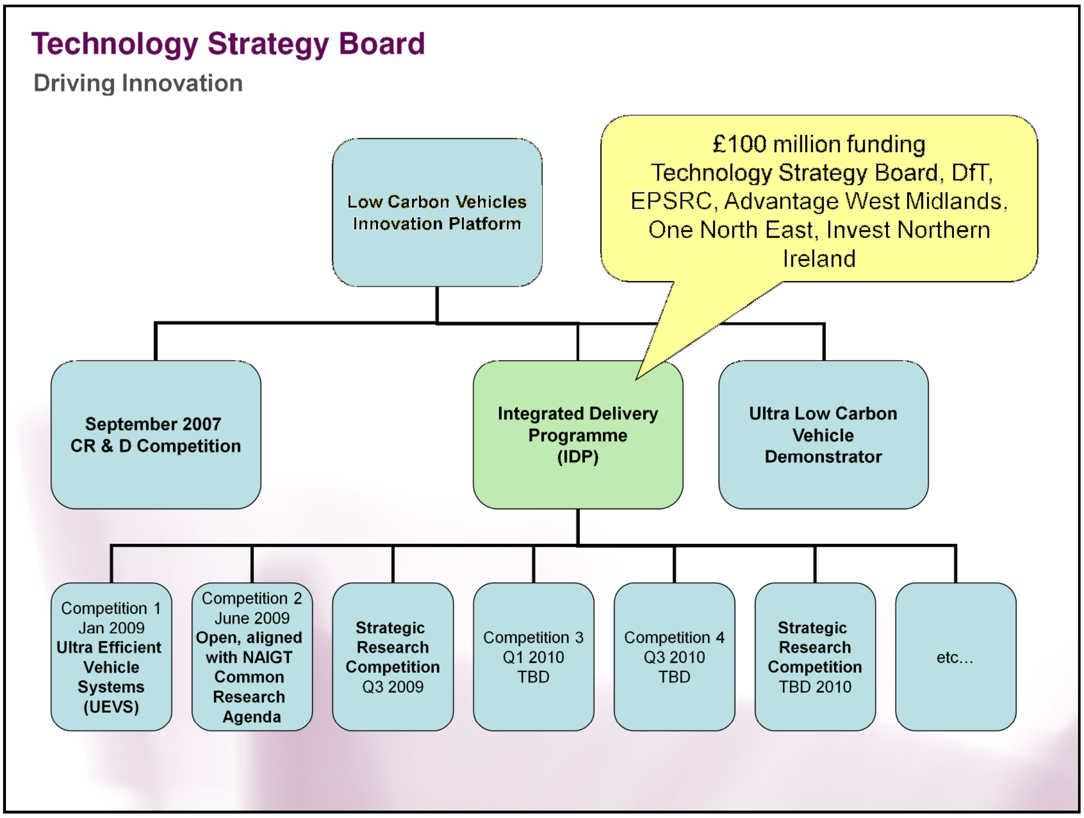
Low Carbon Vehicles Innovation Platform
£25m and ≈340 vehicles
Co-funders DfT, AWM, ONE NE, SEEDA
September 2007 CR & D Competition (see website)
Integrated Delivery Programme
Ultra Low Carbon Vehicle Demonstrator
Competition 1 Jan 2009 Ultra Efficient Vehicle Systems (UEVS)
Competition 2 June 2009 (Open Competition)
Strategic Research Competition Q3 2009
Competition 3 Q1 2010 TBD
Competition 4 Q3 2010 TBD
Strategic Research Competition TBD 2010
Etc...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Low Carbon Vehicles Innovation Platform
£100 million funding Technology Strategy Board, DfT, EPSRC, Advantage West Midlands, One North East, Invest Northern Ireland
September 2007 CR & D Competition
Integrated Delivery Programme (IDP)
Ultra Low Carbon Vehicle Demonstrator
Competition 1 Jan 2009 Ultra Efficient Vehicle Systems (UEVS)
Competition 2 June 2009 Open, aligned with NAIGT Common Research Agenda
Strategic Research Competition Q3 2009
Competition 3 Q1 2010 TBD
Competition 4 Q3 2010 TBD
Strategic Research Competition TBD 2010
etc…

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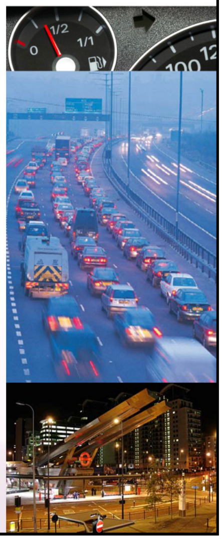
Driving Innovation

Intelligent Transport Systems and Services

- Our strategy focuses on how to address congestion more effectively by "**thinking outside of the vehicle**"
- Asking the broader question:

– **"how can we move people and goods more intelligently?"**

  - A need to **change human behaviour and influence travel decision-making**
  - We believe the key is to integrate existing (and new) technologies to create new, user-centric, attractive products and services



5% reduction in travel time for business on the roads could generate around £2.5bn of cost savings ˆ 0.2 per cent of GDP

Eliminating existing congestion on the road networks would be worth £7-8bn of GDP per annum

If left unchecked, the rising cost of congestion will waste an extra £22bn worth of time in England alone by 2025

Or

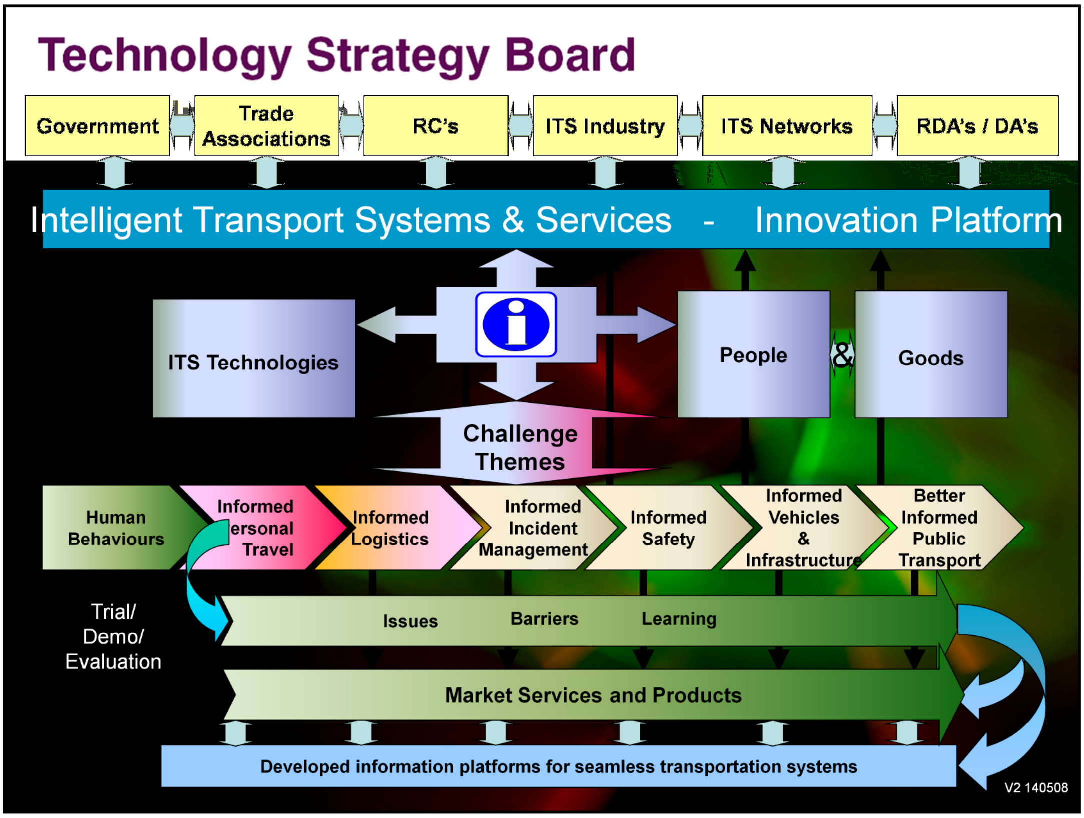
Road accidents account for 25% of congestion

Road works account for 10% of congestion

Or from Stern

The Stern report argues that to stabilise concentration levels at 550ppm of CO_2 equivalent, or a 25% reduction in total emissions is needed by 2025

Also on slide 11, add the May 2008 "How to move people and goods more intelligently".


Technology Strategy Board
Government
Trade Associations
RC's
ITS Industry
ITS Networks
RDA's / DA's
Intelligent Transport Systems & Services - Innovation Platform
ITS Technologies
People
&
Goods
Challenge Themes
Human Behaviours
Informed Personal Travel
Informed Logistics
Informed Incident Management
Informed Safety
Informed Vehicles & Infrastructure
Better Informed Public Transport
Trial/ Demo/ Evaluation
Issues
Barriers
Learning
Market Services and Products
Developed information platforms for seamless transportation systems
V2 140508

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Summary

- *For UK to be a global leader in innovation*
- *Broad array of sectors*
- *Working with govt, agencies, industry, academia*
- *get involved...*

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Driving Innovation

TSB: www.innovateuk.org

KTN: www.ktnetworks.co.uk

KTP: www.ktponline.org.uk