



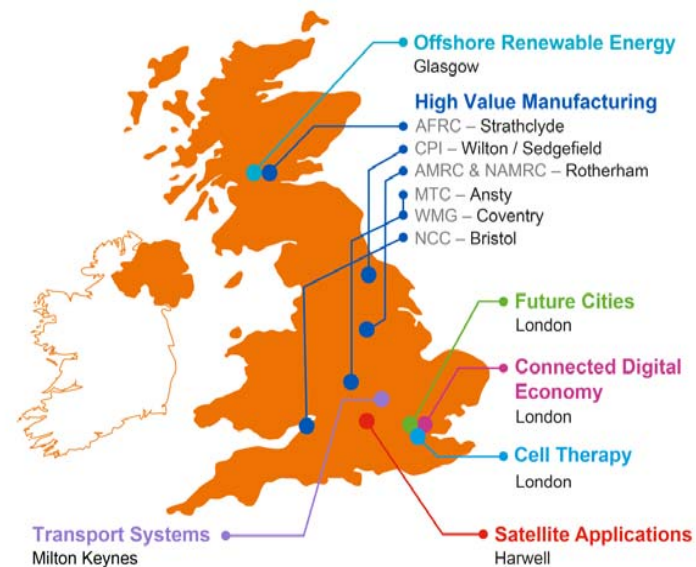
# Transport Systems Catapult and H2020

Presented by Andrew Traill  
**30 October 2015**

| FUTURE  
| RAILWAY

# What is the Transport Systems Catapult?

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Add to this list: Energy Systems Catapult  
and Precision Medicines Catapult

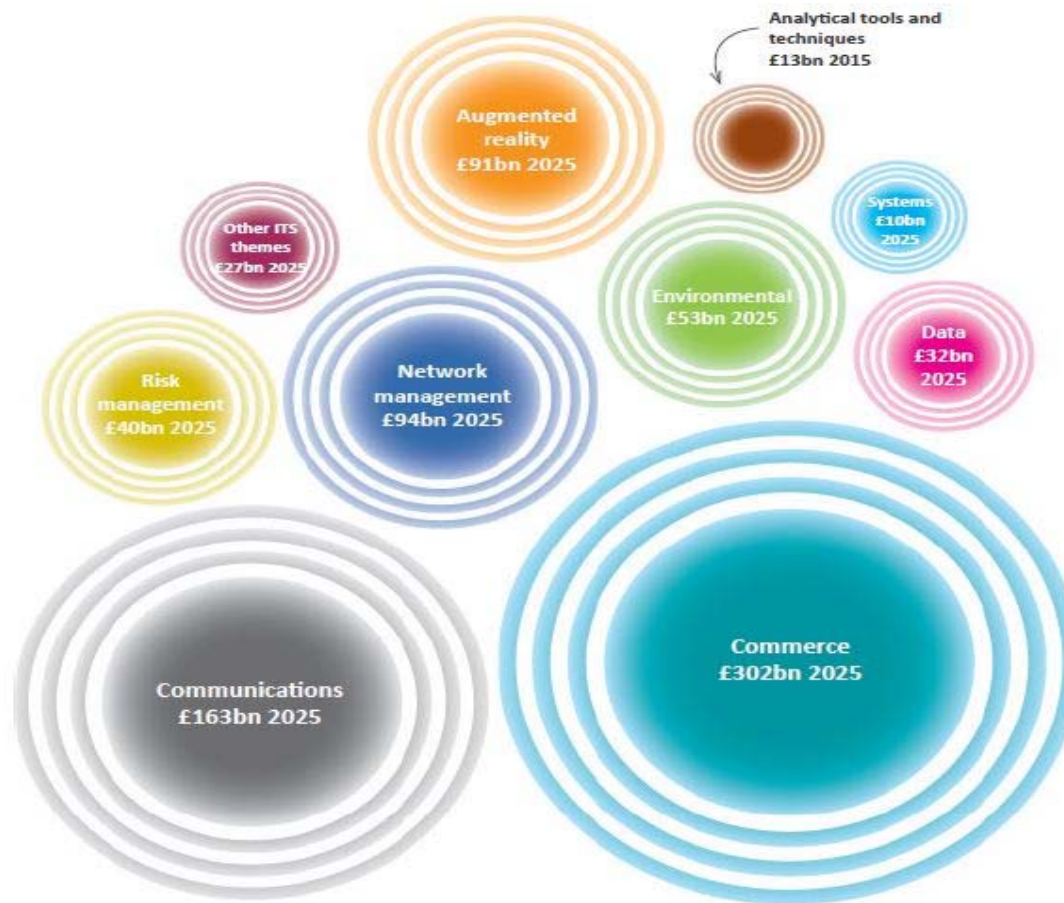
## What is the Transport Systems Catapult?

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Established by Innovate UK

- Catapults were the brainchild of Vince Cable , former Secretary of State, BIS
- Launched June 2014
- Objective to :
  - grow businesses, drive the creation of new products and services, and increase jobs in the UK in the Intelligent Mobility (IM) market place

# Promoting Intelligent Mobility



TSC Target 10% of...

Customer experience - £500bn

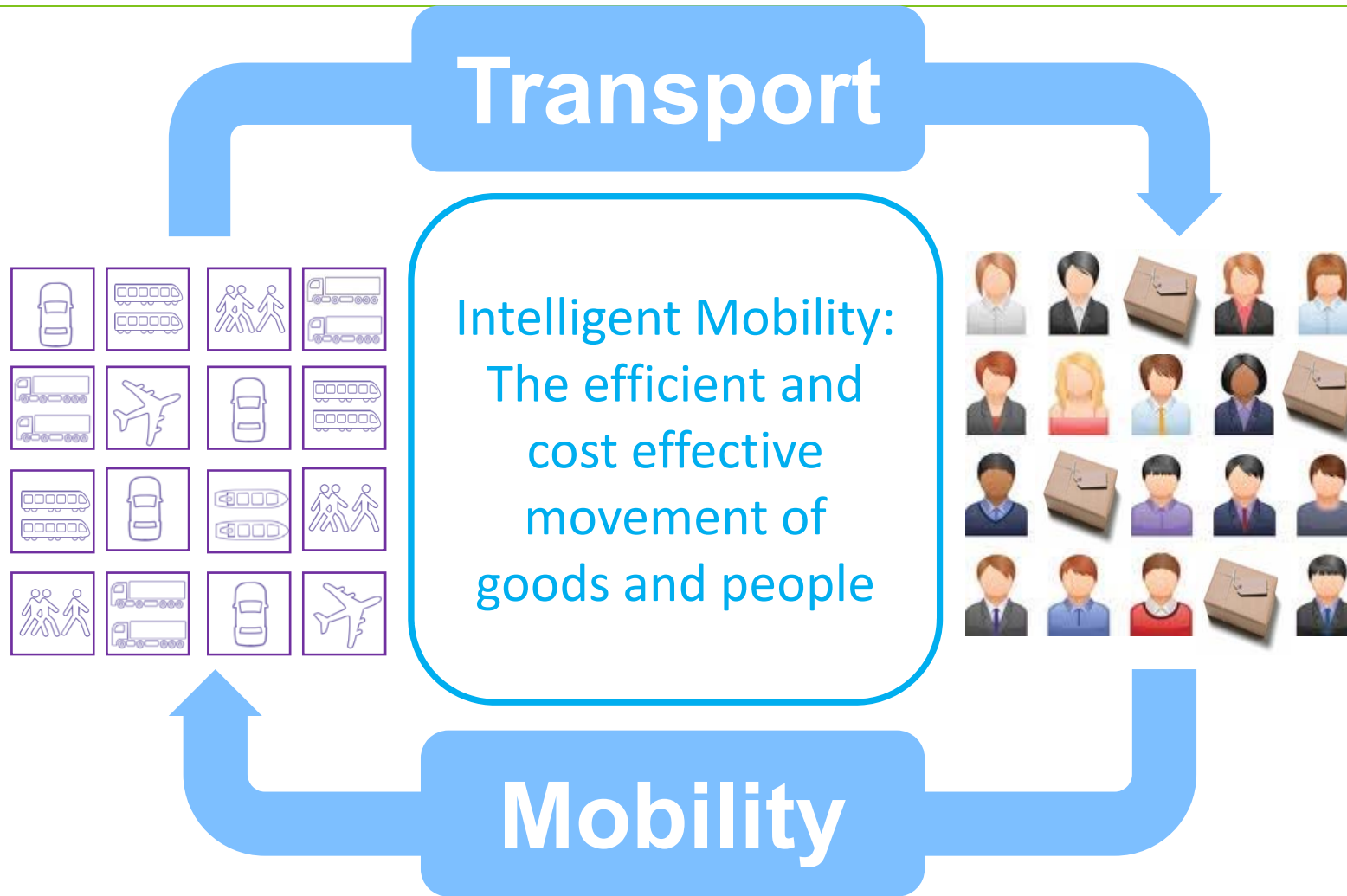
Autonomous systems - £81bn

Environment & resilience - £94bn

Modelling & visualisation - £15bn

Information Exploitation- £98bn

# User driven mobility – NOT transport driven!



## Why is the Transport Systems Catapult interested in H2020?

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- To showcase
  - Research and development into IM Solutions
  - Innovative technologies or application of technologies enabled by IM solutions
- To provide an opportunity for these to develop towards proof of concept and commercialization or
- To demonstrate commercial application through projects such as those offered by H2020

## Opportunities for Rail

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- When Rail works it usually works well!
  - Why is that?
    - The customer experience is good
      - It meets expectations
      - It does what the customer expects and has planned around this expectation
      - It often means there were no hitches and it was straightforward
    - It doesn't necessarily mean...
      - It was cheap/good value for money
      - It was easy to arrange/book
      - It was easy to access at the start and exit at the end
      - It was ideal for what the customer would really like or need
      - It integrated well into the door-to-to door journey

## Opportunities for Rail

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- When it goes wrong, it goes seriously wrong
  - Why is that?
    - Lack of flexibility in re-arranging at short notice
    - How do you 'get off' the train if not at a station/terminal?
    - Lack of information about the problem, the duration of the delay, alternative arrangements, compensation
    - Caught up in a 'crowd' – a lack of personal / individual attention
    - Limited options for diverting around a problem on the network



## Intelligent Mobility solutions

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- TSC believes Intelligent Mobility solutions exist to many of these issues and more...
  - Improving customer experience
    - Making rail part of a seamless journey
    - Making rail agile, flexible, robust and responsive to customer needs
    - Making rail more accessible and easier to arrange
    - Making more information available as to the choices of routes and services available that better match the end-to-end journey characteristics of the customer
    - Making rail services and the network safer, more reliable and resilient

## Examples of IM helping to improve Rail

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- Information to customers
  - Services being driven by customer needs
    - Journey planning tools integrating information systems, decision support tools
    - Enabling collaborative supply chains, enabling industry and logistics clusters to get more services, more economic services (e.g. economies of scale)
    - Enabling multimodal options – integrating rail with road, air and sea
    - Enabling quantification of route choices based on e.g. carbon footprint, cost, journey experience...

## Examples of IM helping to improve Rail

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- Improving safety and efficiency of the rail network
  - Automated detection of damage to track and equipment for rapid deployment of maintenance (which might also be automated)
  - Improving information delivery for drivers and customers to improve their response to out of course events
  - Aiding the safer (and more efficient) design of interchanges through closer analyses of user behavior and patterns
    - Also aiding the optimum locations of terminals and interchanges

## Examples of IM helping to improve Rail

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- Improving visibility for increased capacity
  - Identification of space availability on trains / services linked to space reservation
  - Identification of network “white space” within existing timetables where ad hoc or scheduled service might fit – adjusting for train length, speed, wagon types and other characteristics that will enable the best fit
  - Linked also to demand characteristics (e.g. origin, destination, freight and passenger flows etc.)

## The role of the Transport Systems Catapult

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- To showcase
  - Research and development
  - Innovative technologies or application of technologies
- To provide an opportunity for these to develop towards proof of concept and commercialization or
- To demonstrate commercial application through projects such as those offered by H2020

## Come and speak to us

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- We are interested in
  - What you have to offer
  - The barriers you face
  - The project ideas you have
  - Helping you to develop and commercialise your innovations
  
- Contact
  - [andrew.trail@ts.catapult.org.uk](mailto:andrew.trail@ts.catapult.org.uk)
  - [Nick.jones@ts.catapult.org.uk](mailto:Nick.jones@ts.catapult.org.uk)
  - [Richard.jones@ts.catapult.org.uk](mailto:Richard.jones@ts.catapult.org.uk)

The background consists of several colored rectangular blocks. At the top, there are three blocks: a light green one on the left, a dark teal one in the middle, and a bright green one on the right. Below these is a large, solid blue horizontal band. At the bottom, there are three more blocks: a dark blue one on the left, a very dark blue one in the middle, and a dark green one on the right. The text 'Thank you' is centered within the blue band.

Thank you