Halving the time, Doubling the value

Bringing the value of next-generation Digital Engineering into automotive
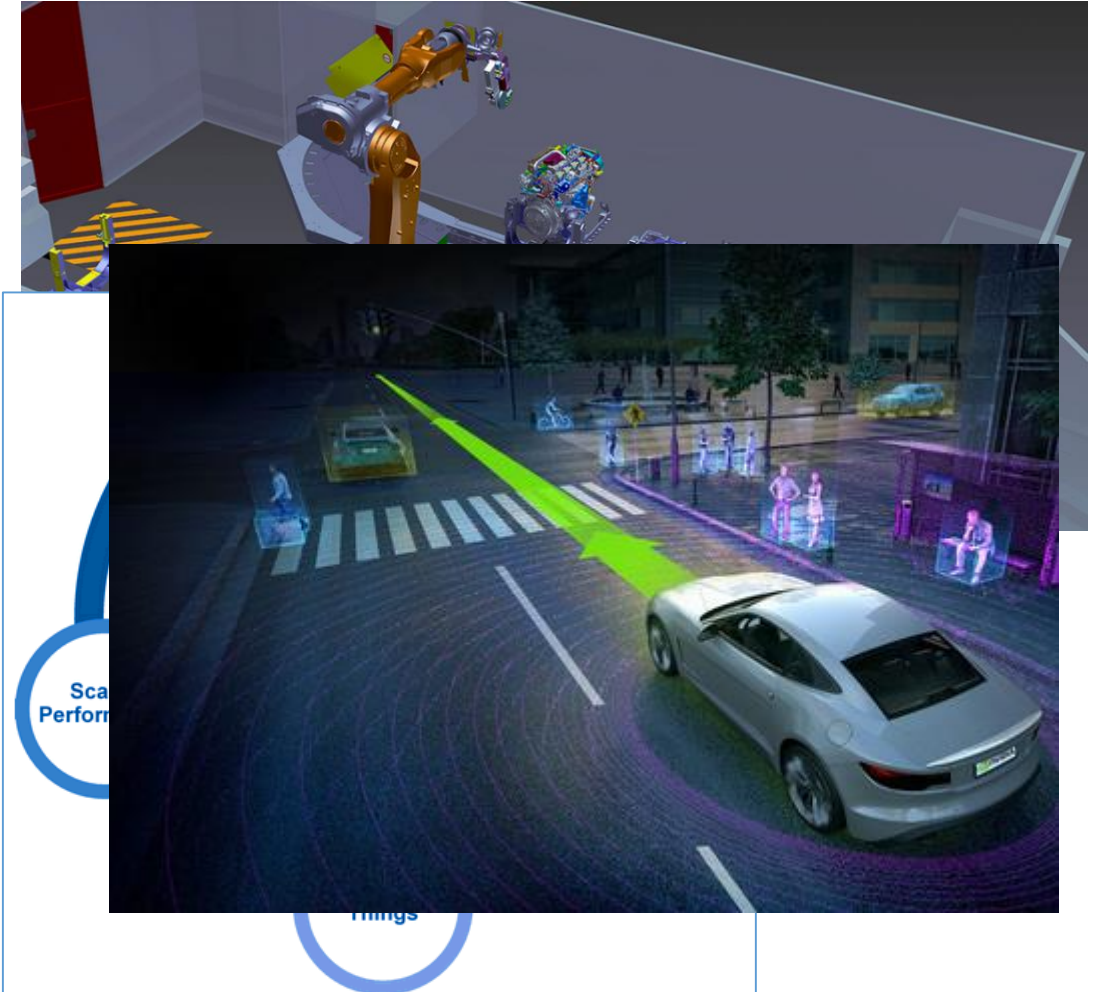
Mr Jon Horsley
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Digital Engineering & Test Centre
Loughborough University London
Queen Elizabeth Olympic Park,
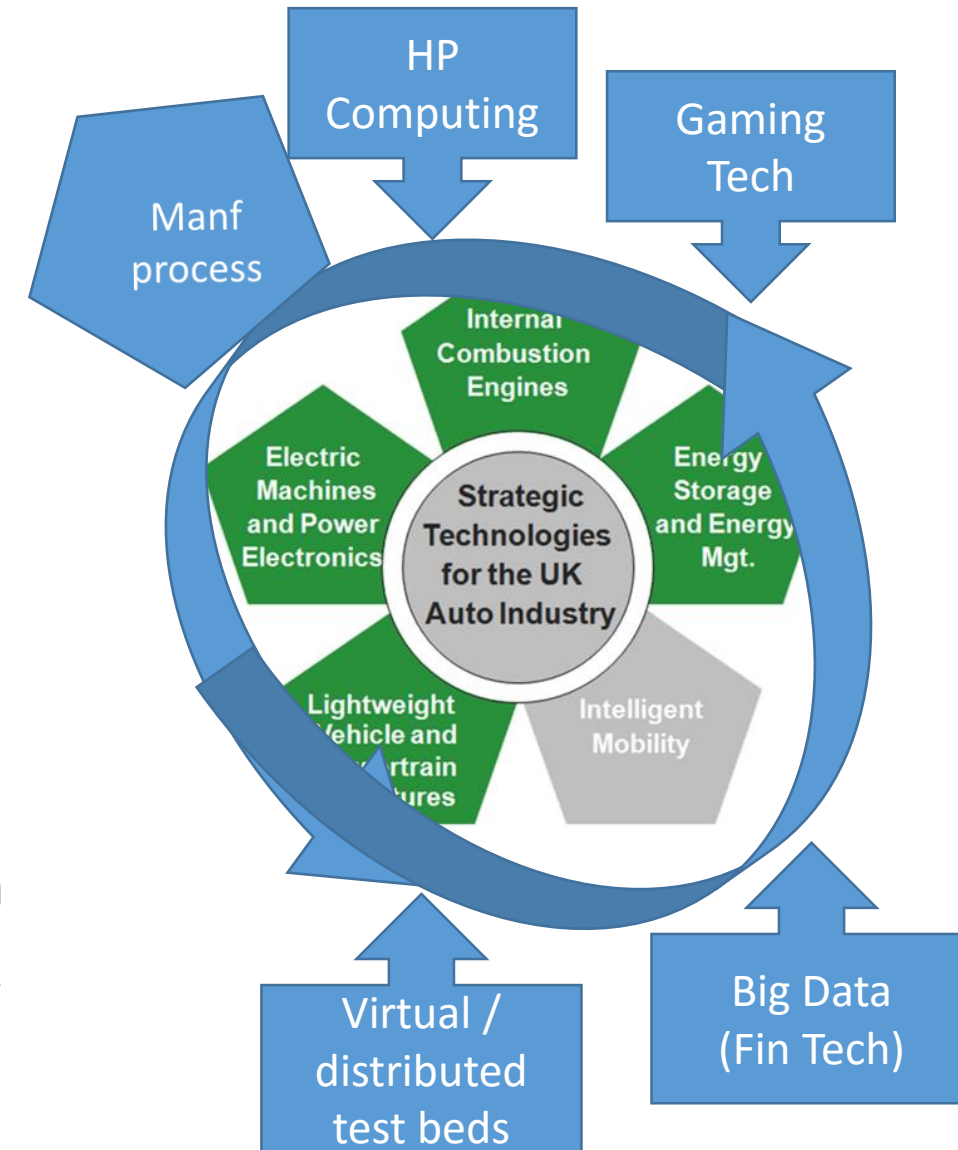London E15 2GZ
UK

DE&TC – The Challenges, and Opportunities, facing Automotive
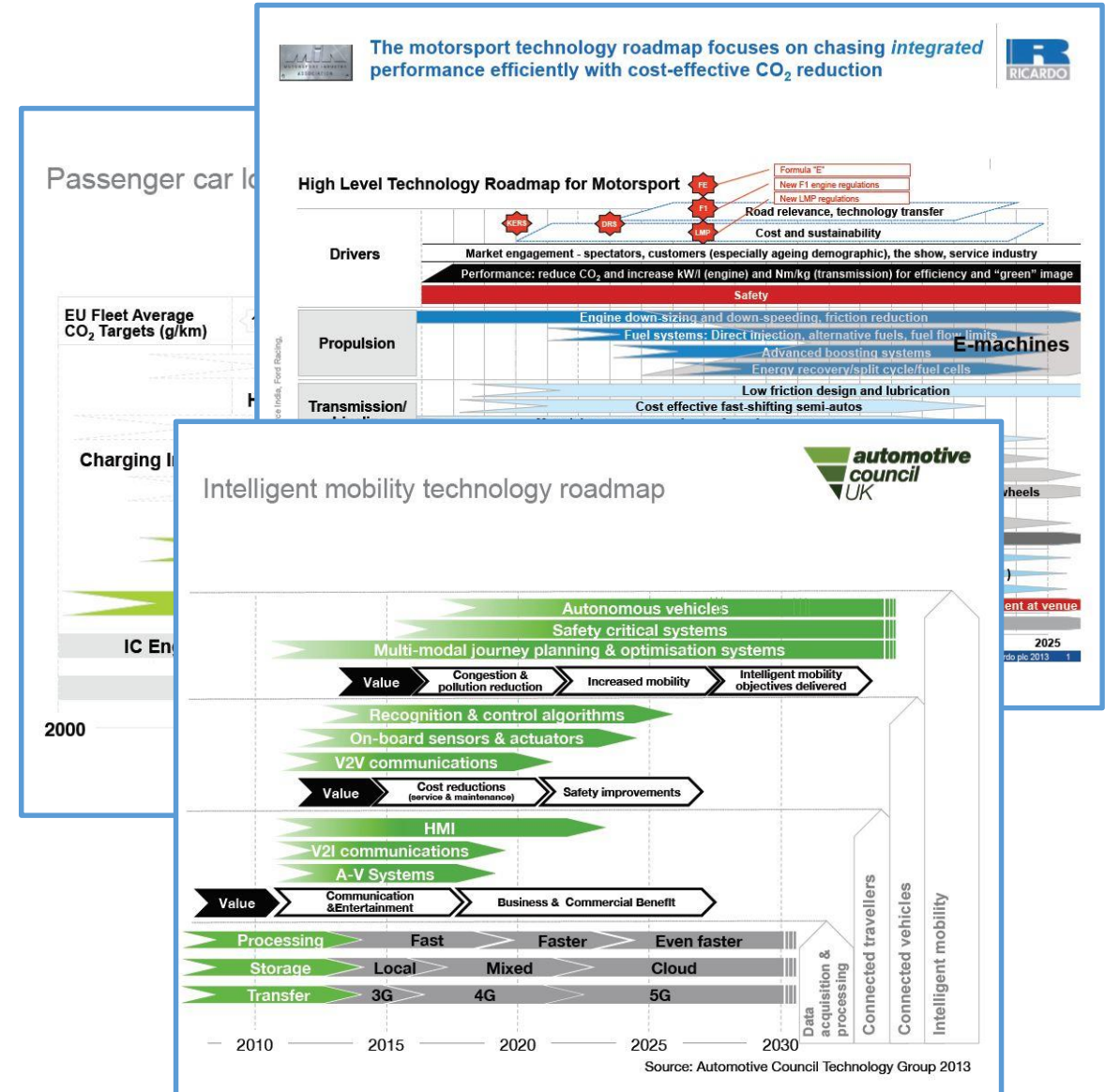
- Flexible manufacturing

- Cheaper, Quicker product design

- AR, VR, CAE => Virtual Engineering

- Industrie 4.0

- Design, Test, validation, and verification of highly integrated, complex, and safety-critical systems

  - Hybrid powertrains

  - CAV

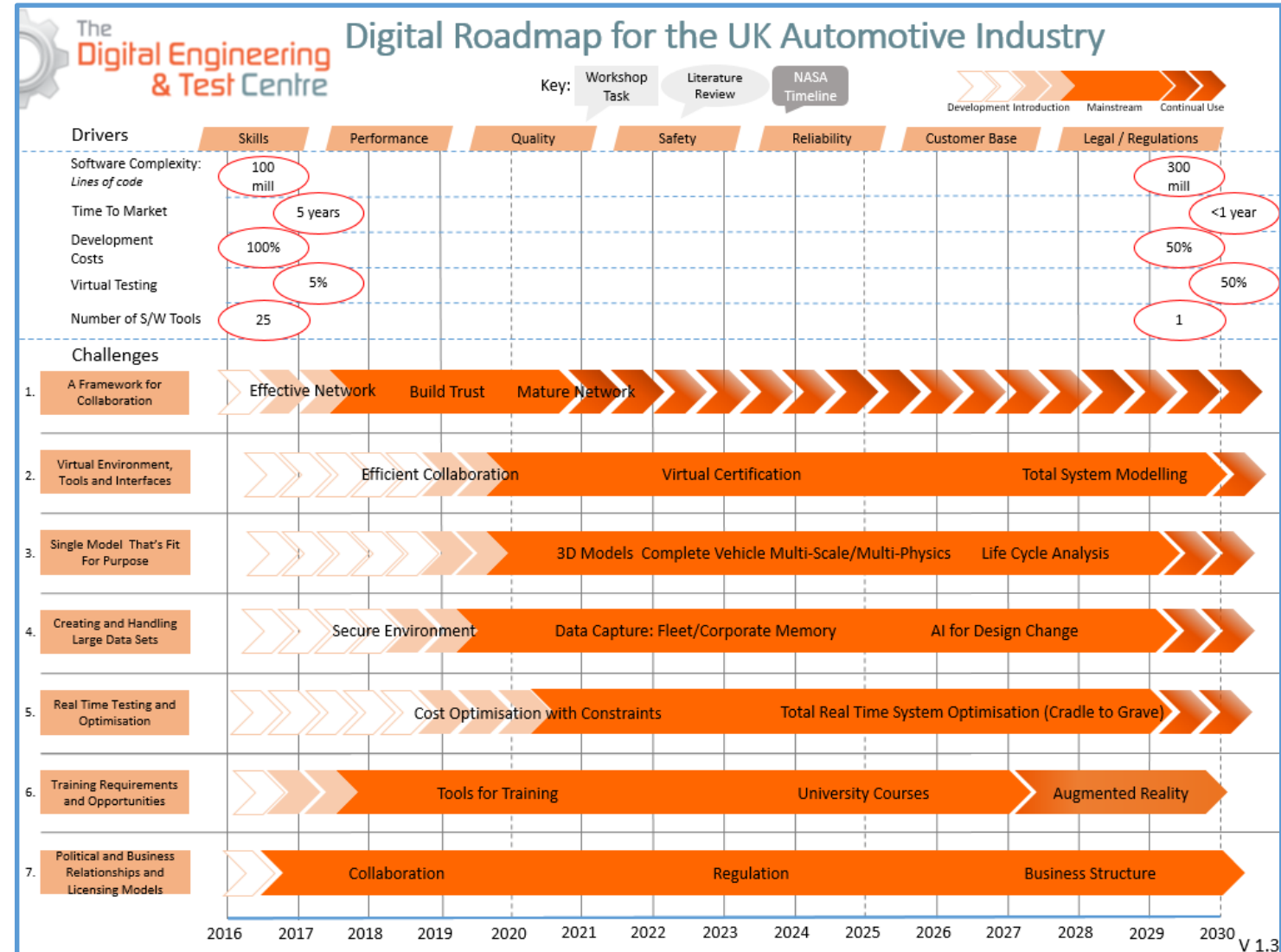# Advanced Propulsion Centre hub and spokes

- APC:

  - Supporting OEMs and supply chains

  - Support near-to-market TRL and MRL development

- DETC:

  - Supports the four Automotive Council Strategic Technologies, and Manufacturing

  - DE in Product and Manufacturing-process design

  - Build a bridge to the Gaming and Digital industry

  - Tools development

Digital Engineering - Roadmapping

- UK's Automotive Council have been roadmapping the technology space for automotive since 2013 http://www.automotivecouncil.co.uk/technology-group-2/automotive-technology-roadmaps/

- Digital engineering and test recognised as a vital part of the automotive industry going forward

- The DETC roadmap set looks to identify the challenges and flight-path out to 2030 for DE of automotive product and manufacturing process design.
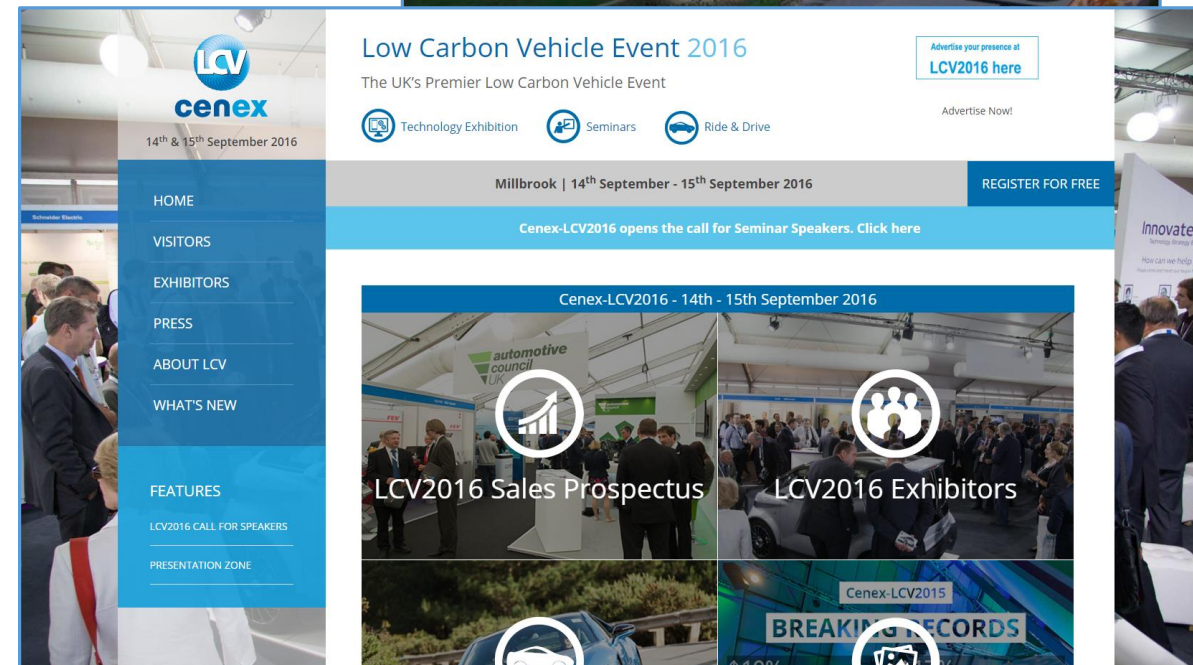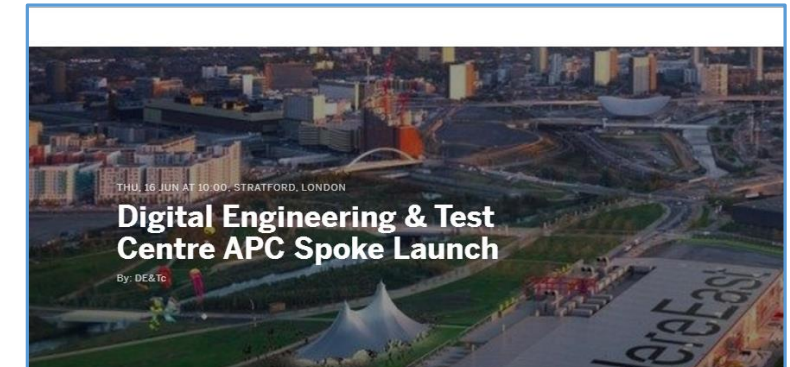
DE Roadmap summary

1. Framework for collaboration
   - Parties and Collaboration models?
   - Common objectives?
2. VE tools and interfaces
   - A VE where knowledge can be shared
   - Solutions can be tested
   - Affordable access to tools for all
3. A single model that is fit for purpose
4. Creating and handling large data sets
   - Sharing of, and secure access to, high quality data
   - Affordable access to HPC.
5. Real time testing and optimisation
6. Training requirements and opportunities
7. Political and Business relationships and licensing models

More detail will be available from the final roadmap reports from mid-June 2016

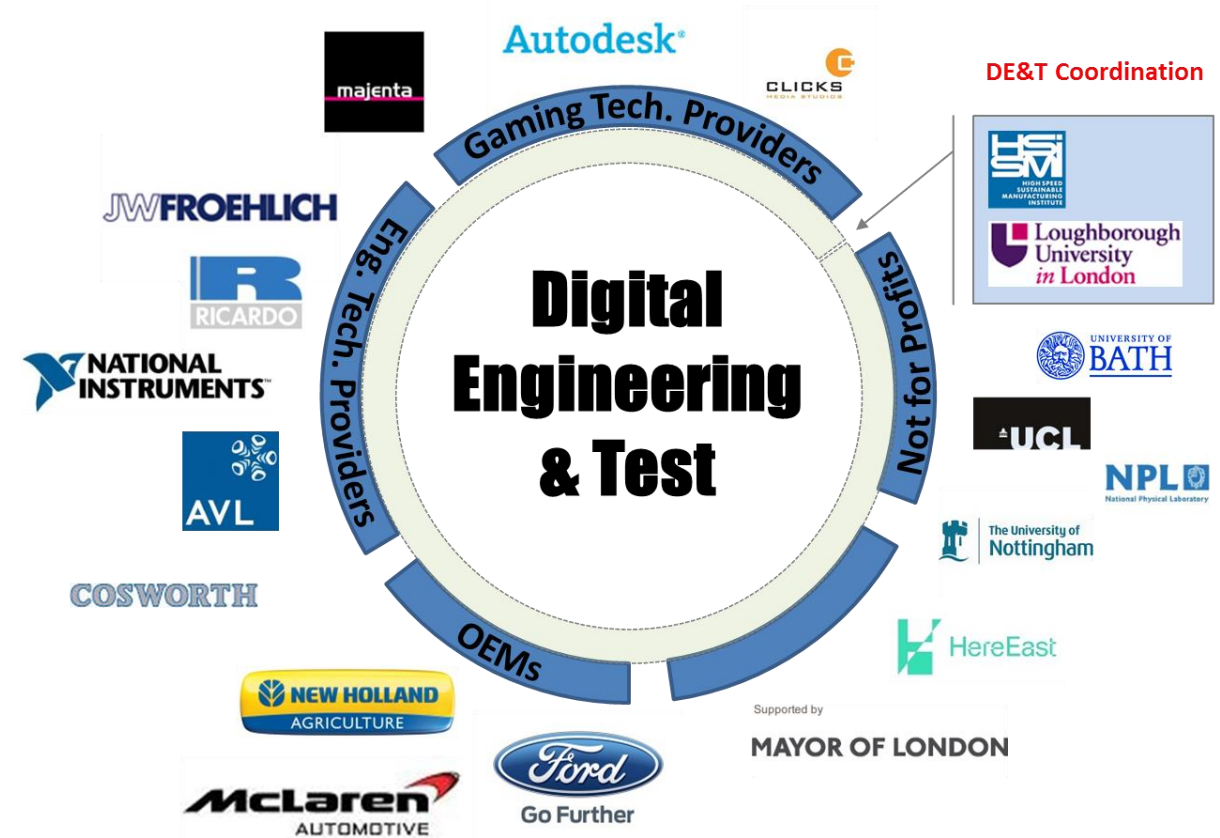# Digital Engineering - Activity and Opportunities

- Tranches of PhDs

  - Virtualisation of product- and manufacturing processes

  - Integration of Gaming technology into manufacturing processes

- Collaborative R&D

- Events and Engagement

  - 16th June – DETC Spoke Launch @LU-London
    http://tinyurl.com/detc-launch

  - 14+15th Sept – CENEX LCV16, Millbrook
    www.cenex-lcv.co.uk

Open To All
Open To New Ideas
Open To New Directions

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Please join us on 16th June - DETC Launch: http://tinyurl.com/detc-launch