

# Making Things Work Engineering for life - developing a strategic vision

EPSRC Centre for Innovative Manufacturing

**Through-life Engineering Services**



# Through-life Engineering Services (TES)

In the future assets will be rented by users to support the services they offer allowing more frequent upgrade and agility in the value in use they provide

To be successful, manufacturers will need to change fundamentally, integrating the very different cultural and technical approaches of manufacture and service, transforming customer and supplier behaviours accordingly

This transformation is enabled by TES



# Why TES?

## Improved productivity and creation of high-value employment

Developing and applying technologies to better assure asset safety and performance:

- With minimum disruption
- At optimum cost
- Over extended life-times





# A Strategy for TES

A cross sector collaboration encouraging customers and suppliers, including SMEs, with government and academia to accelerate innovation for the safety and performance of high-value products, assets and infrastructure whilst minimising investment:

- Sharing knowledge, across sectors, and
- Coordinating investment

## Engineering services:

Over 6,000 firms  
employing over 105,000 people  
Average wages 1.5 times other  
manufacturing



# Opportunity for collaboration

- World leading firms
- Many complex “products”
- ... and infrastructure
- Leading thinking

Significant economic opportunity for the UK if we work together, sharing best practice across-sectors and institutions: many firms recognise this need



# A National, Industry-led Approach

- Delivers productivity, high-value employment and value faster and better to the UK, asset users, owners and firms
- Customers and suppliers sharing knowledge, across sectors, and coordinating investment for increased productivity and value to all, faster
- Industry, government and academia working together to change behaviours and practices rapidly to achieve a common goal for a step change in productivity and market share

## Big opportunity:

World market  $\approx$  £1,000bn and rising  
UK has 5% share and falling



Industry, government and academia working together to develop technology and change behaviours and practices of customers, asset owners and suppliers of TES, including SMEs

Stand-up core team



Define measures of success



Complete strategy



Increasing capacity

12/15



12/16

12/17

Broadening engagement

- To mid / large firms
- To SMEs



# The Journey

Towards a common goal for a rapid step change in productivity and market share

Tangible investment  
in capability

Tangible UK  
competitive advantage

Increasing take-up

12/18

12/19

Sector strategies'  
engagement

- All engaged
- >75% All manufactured SIC

World-beating performance

- >10% global market
- UK productivity up 25%

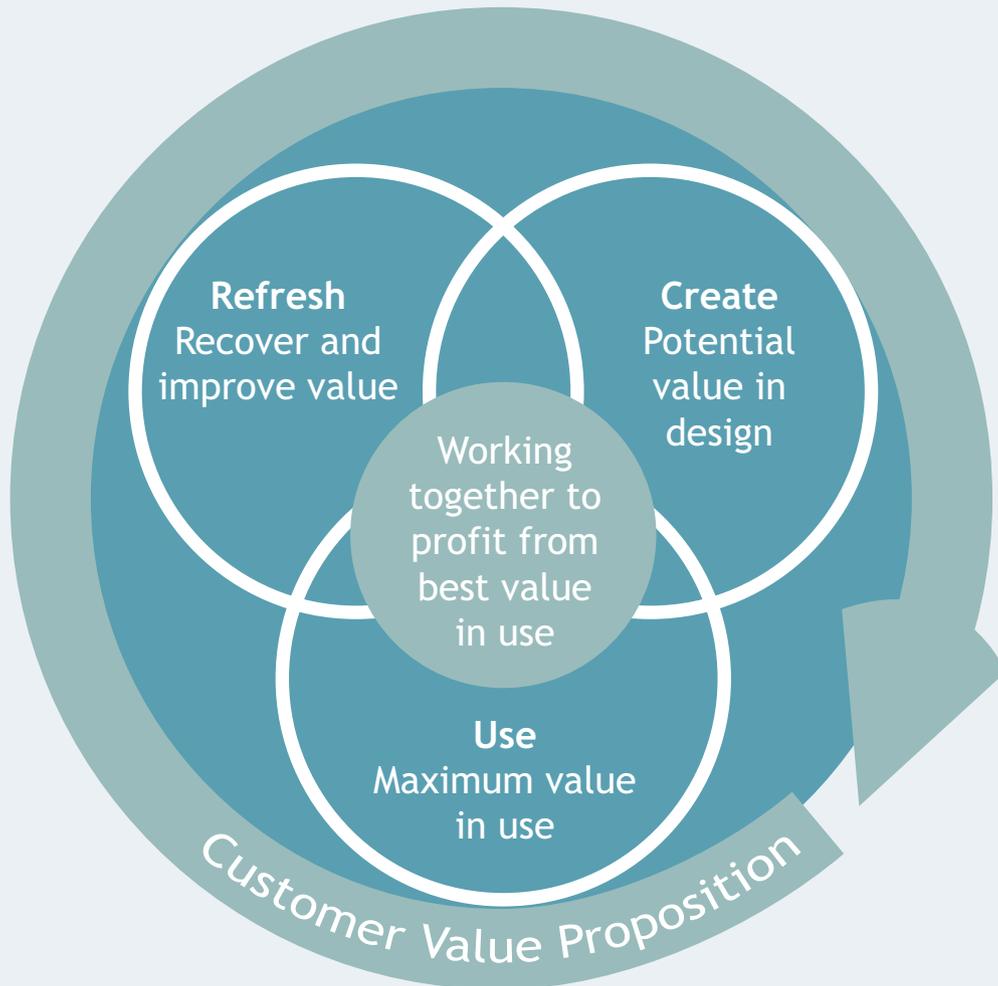


# Where are we now?

- Much leading thinking and practice: but few companies successfully combine manufacture and service
- “Traditional” business models don’t focus on value in use: skills and service supply chains are weak
- Immature technology, with few common standards: mitigating degradation is a particular opportunity



# Developing a model approach for the future



The proposal for a National initiative on TES was agreed at an industry workshop in May 2015 facilitated by the TES Centre: an £11m Centre for Innovative Manufacturing sponsored by the EPSRC and hosted by Cranfield University and Durham University



# TES Centre - an academic industrial collaboration

Working with industry to develop and provide:

- World class expertise
- Thought leadership
- Technology solutions
- R&D capability

To enable UK plc to deliver high value products with outstanding availability, predictability and reliability at the optimum whole-life cost



# Be part of it ...

If you, or your firm want to be part of  
this initiative email:

[contact@through-life-engineering-services.org](mailto:contact@through-life-engineering-services.org)



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