

REMANUFACTURING & THE CIRCULAR ECONOMY

14th January 2014

TOPICS

- What is it?
- Where is it in the circular economy?
- Why is it adopted?
- When is it sensible?
- Who's doing it?
- How is it facilitated?
- What we do now?

RE-WORDS

Reuse

Repair

Recycle

Remanufacture

Refurbish

Rebuild

Recondition

Remarket

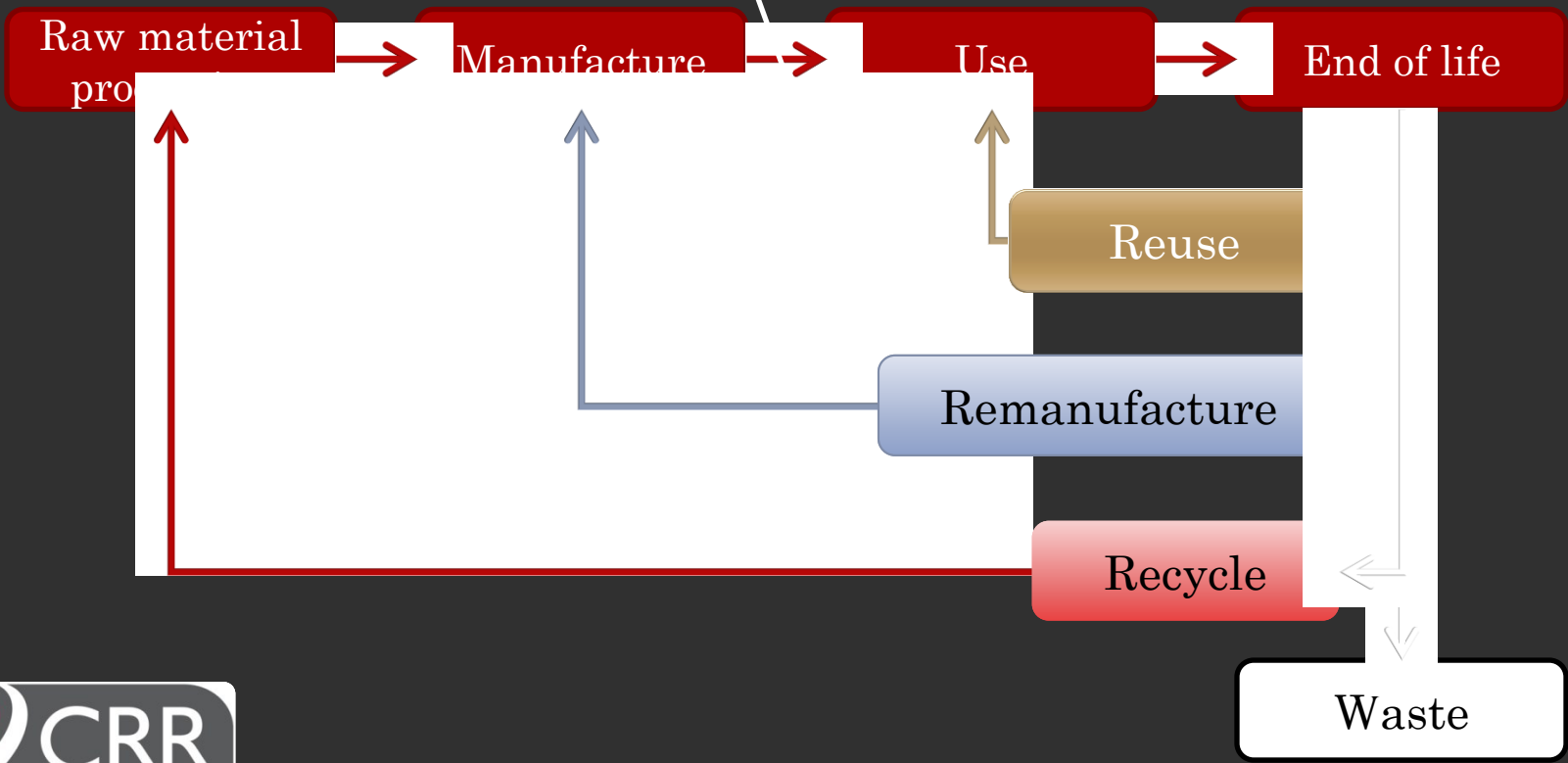
Repurpose

WHAT?

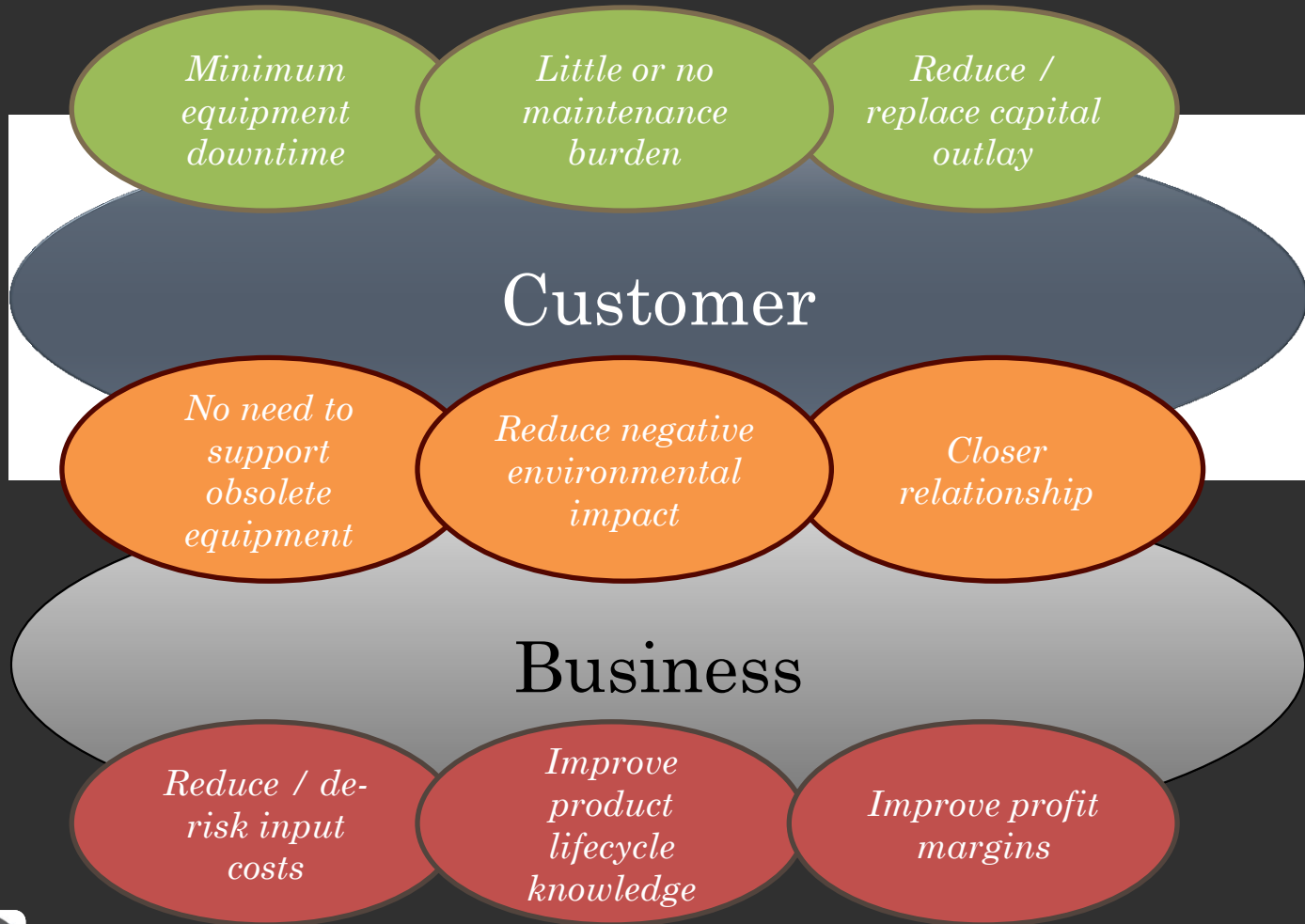
“A series of **manufacturing steps** acting on an **end-of-life part or product** in order to return it to **like-new or better performance**, with **warranty** to match.”

WHERE?

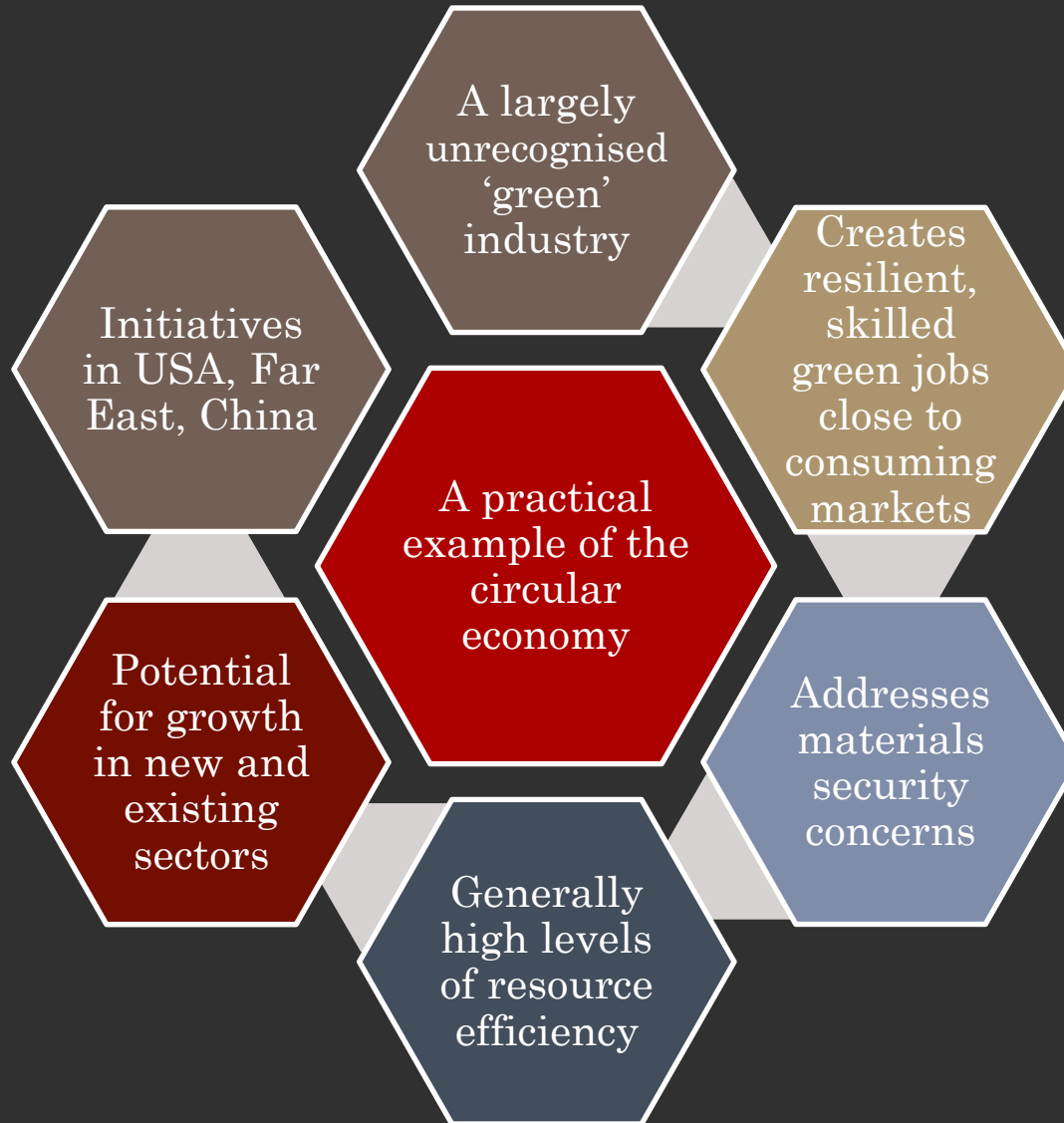
A way of **preserving** embodied energy **and** **reducing** new production waste



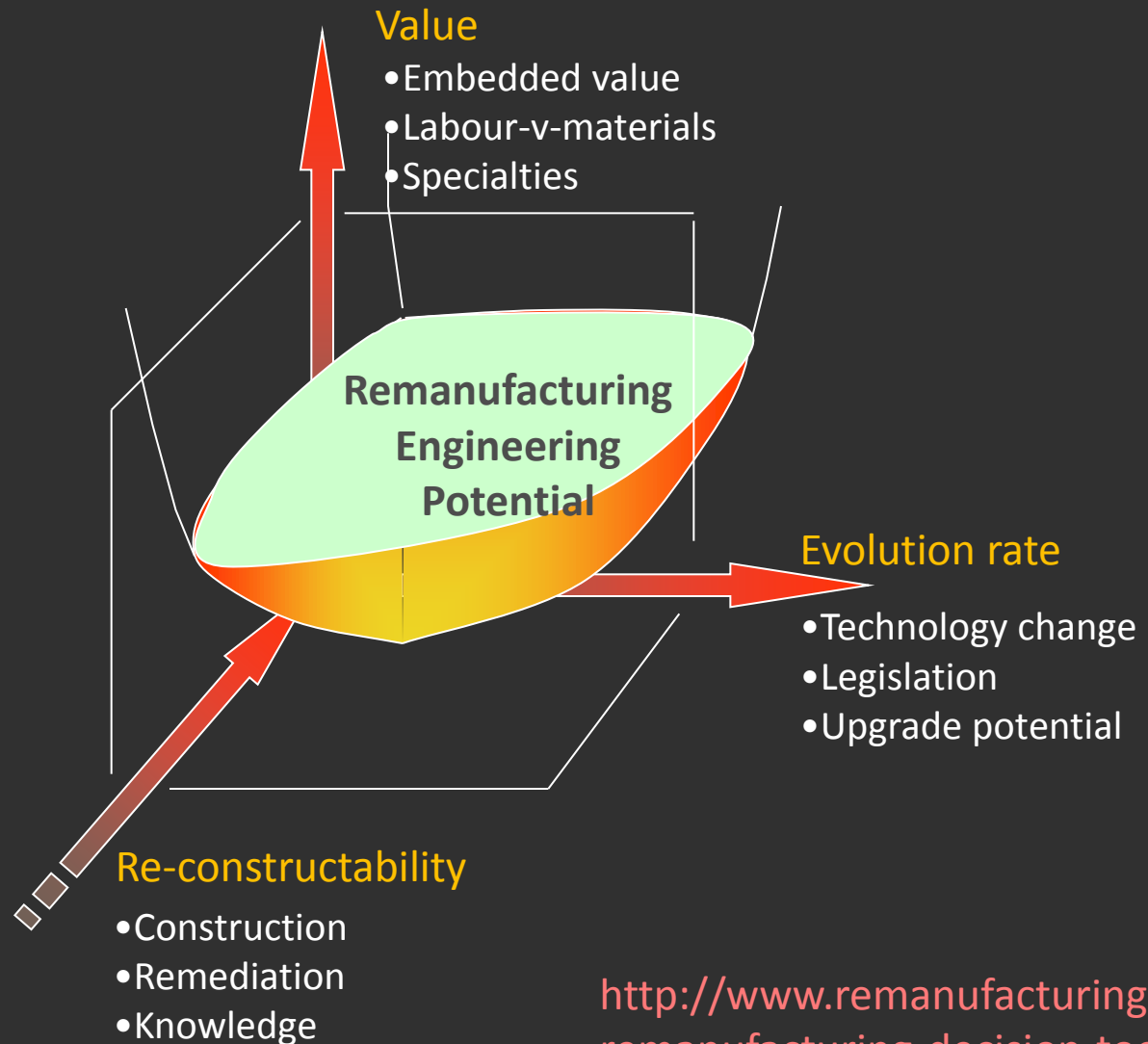
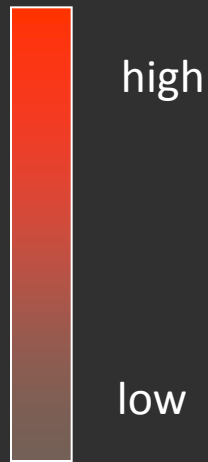
WHY? (FOR BUSINESSES)



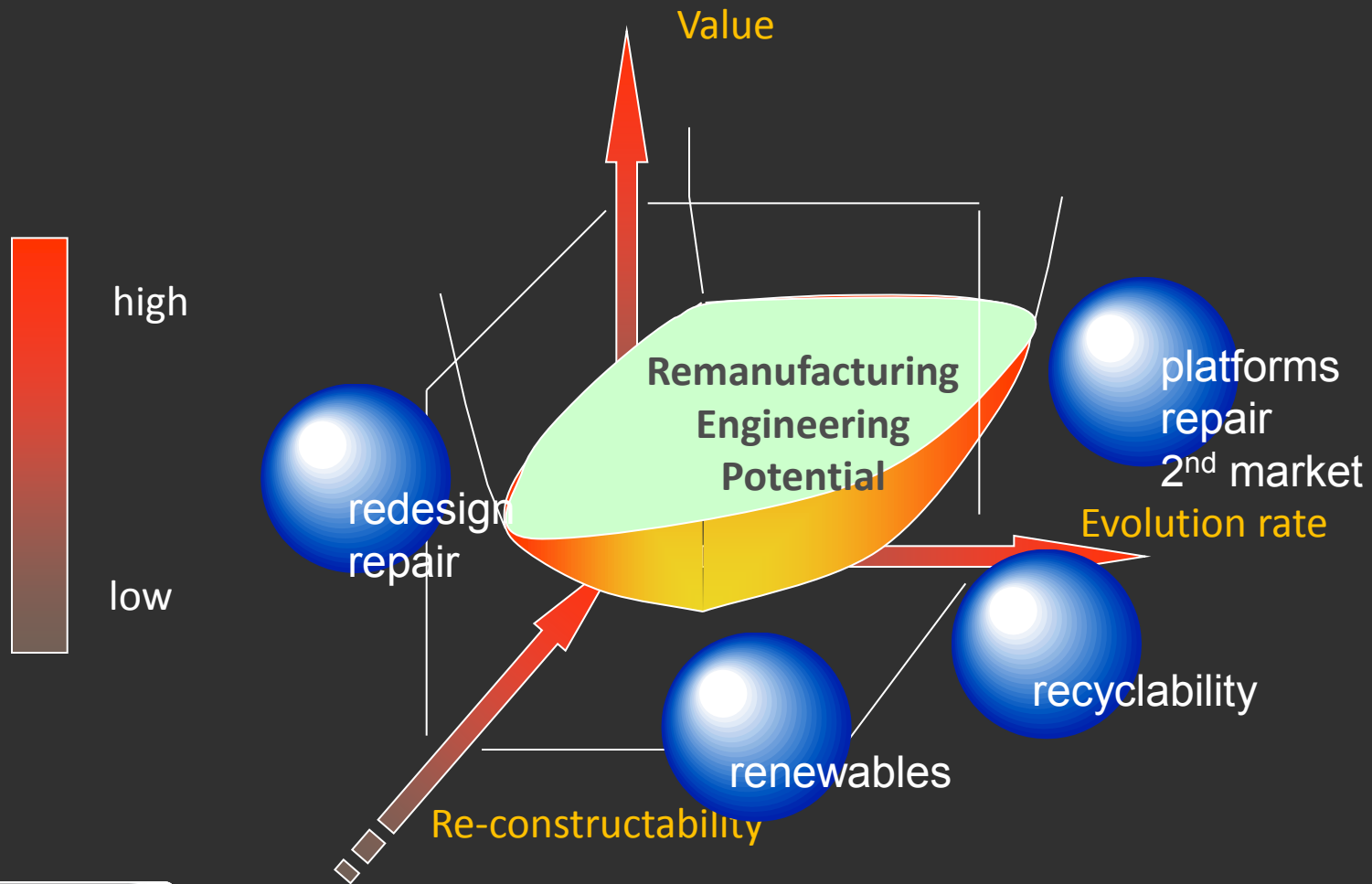
WHY? (FOR POLICY MAKERS)



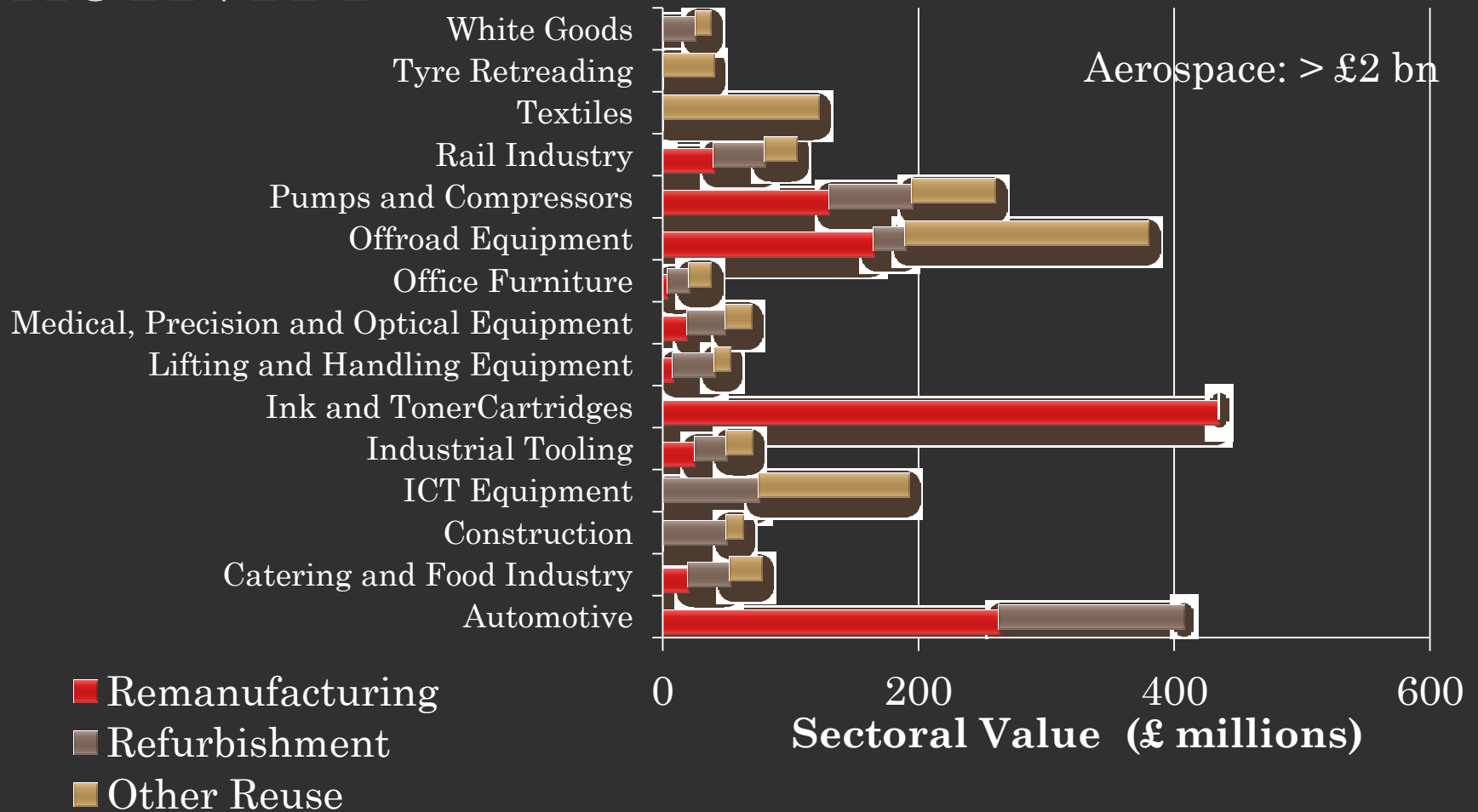
WHEN? (FOR ENGINEERS AND ANALYSTS)



WHEN NOT ALTERNATIVE APPROACHES



REUSE AND REMANUFACTURING ACTIVITY



PHILIPS HEALTHCARE

- Imaging equipment
- Diamond standard
 - Selection
 - De-installation
 - ‘Refurbishment’
 - Installation
 - Warranty and support
- Netherlands
- COCIR best practice



CATERPILLAR

“As Good As New, As Strong As Ever”

WHO?

- Construction and mining equipment manufacturer
- Operations in 40 countries
- <95,000 employees
- Remanufacturing began in 1972
- UK-Based operation for EMEA

BENEFITS

- 43 million tonnes of core material reused
- Up to 90% cost savings over new – feeds through to customer price
- 52 million tonnes of CO2 saved
- Expansion into other sectors - rail



HOW?

- Located assets (or collection channels)
- Modular build
- Reversible assembly
- Stable cores
- Remediate-able materials
- High knowledge content (diagnostic)

INDUSTRY CHALLENGES / ACTIVITIES

- INCREASE MARKET PULL
 - MARKET ANALYSIS
 - PURCHASER ADVICE
 - OVERCOME PERVERSE REGULATIONS
- COMMUNICATE STRATEGIC BENEFITS
 - LIFE CYCLE ASSESSMENT / FOOTPRINTING
- CONVINCING REUSE \neq 2ND RATE
 - STANDARDS
- IMPROVE RETURN CHANNELS
 - BUSINESS MODEL DEVELOPMENT

INFO

david.parker@oakdenehollins.co.uk

ben.walsh@remanufacturing.eu

www.remanufacturing.eu