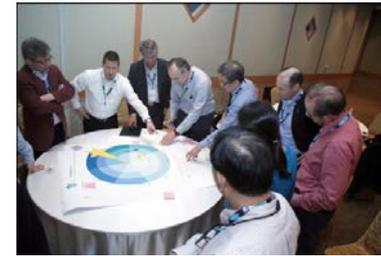


# Industrial Sustainability



EPSRC Centre  
for Innovative  
Manufacturing in  
**INDUSTRIAL  
SUSTAINABILITY**

# Transforming business models to create and deliver sustainable value



PRESENTED TO  
**IfM Open Day**

PRESENTED BY  
**Steve Evans**

12/05/2016

## AGENDA

- Introduction
- Hands on Value Workshop
  - Forms of Value
  - Value Captured
  - Value Missed and Value Absence
  - Opportunities
- Best / Craziest Ideas
- Advert

# Introduction

# Centre for Industrial Sustainability - Overview

By 2017:

300 Person  
Years Research

30+ Tools for  
Industry

200+ Companies

7+ Universities

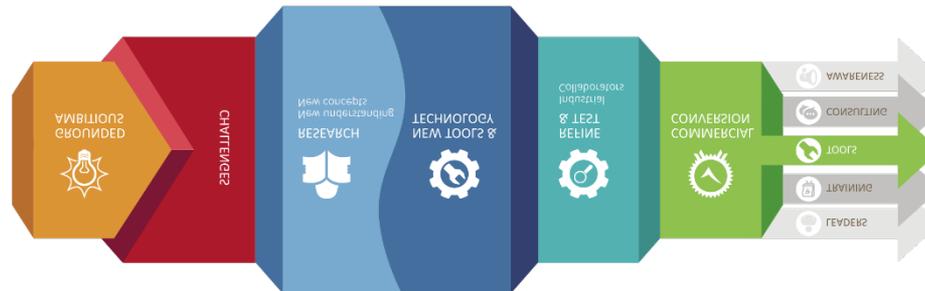
Impact delivered  
by 3<sup>rd</sup> parties

## Global Challenge – by 2050:

- To quadruple output
- To emit 80% less GHG
- To halve resource use
- Fair and Equitable

## Research Delivers:

- Knowledge
- Tools & methods
- Leaders
- Policy support & influence
- Visions for a successful future



# Why have Business Models become so important?

- There is increasing disruption in the business world
  - Internet of Things and Big Data
  - Social Media driven customer power
  - Geopolitical and Geographic instability
  - Demographic changes
  - Speed of technology development
  - Increasing levels of new entrants to markets
- These disruptions imply fundamental changes to offerings, production systems & value chains
- Businesses are exploring new ways to deliver best value

# Effective business models are critical to long term success

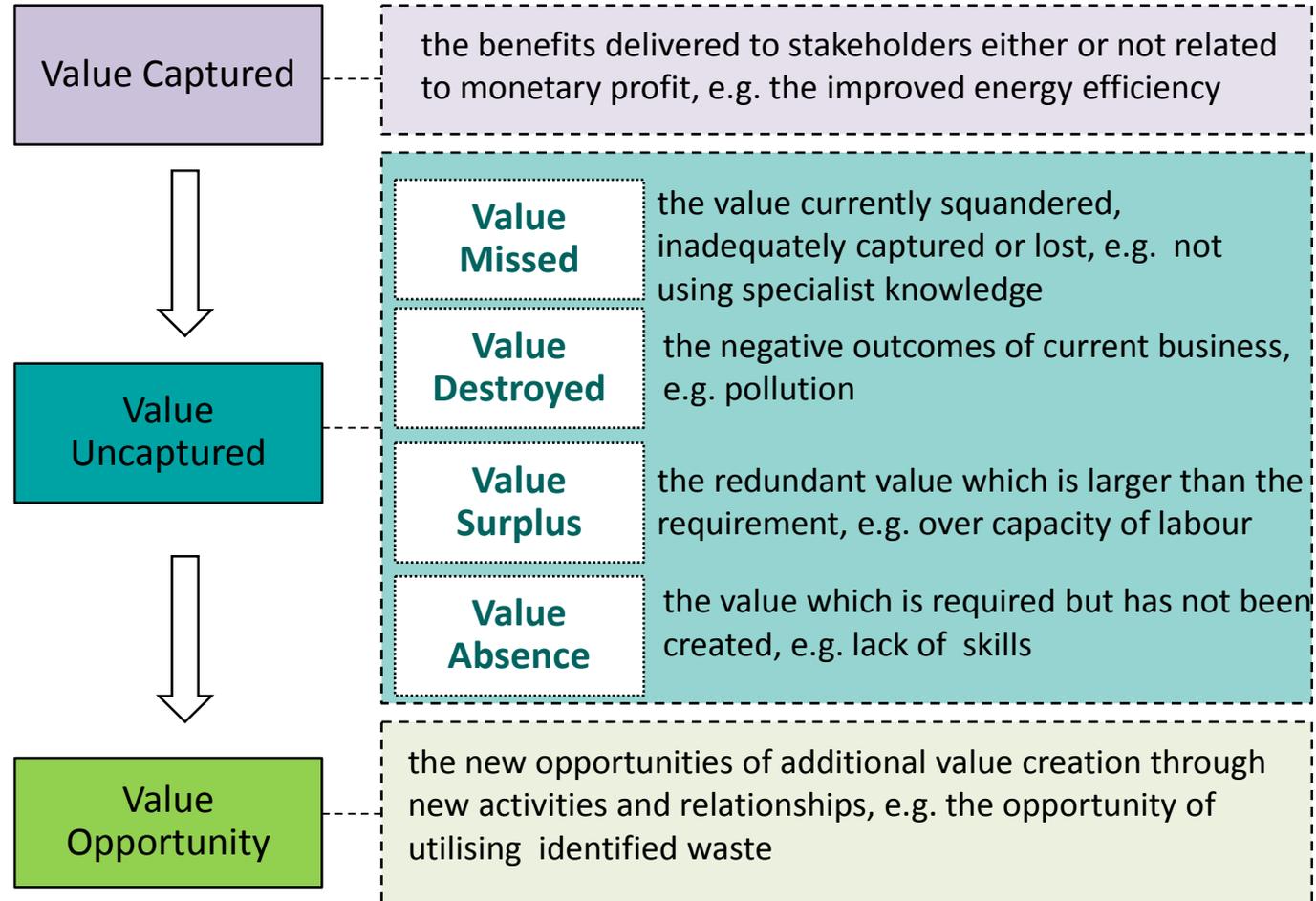
## What are the challenges?

- Understanding how value is created, delivered and captured in a company is **not easy**
- Companies may not be **fully aware** of the range of value outcomes of their business
- There is no **structured** approach to think about value
- There is a lack of **useful processes or tools** for helping design business models which would deliver sustainable value

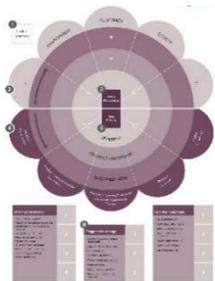
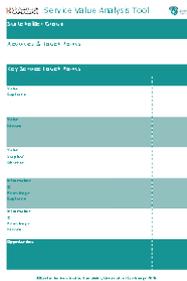
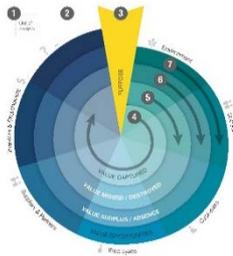
# Structured Approach to Value

*Value refers to a broad set of benefits derived by a stakeholder from an exchange, which, in the context of sustainability, do not only include monetary profit, but also include social and environmental aspects.*

*Yang, M., Vladimirova, D., Rana, P. & Evans, S. (2014). Sustainable value analysis tool for value creation. Asian Journal of Management Science and Applications, 1(4), 312–332.*



# Four Main Tools



## 1. Value Mapping

- Identifies Business Network of Stakeholders
- Maps Current Value
- Reveals Value Missed, Destroyed, Absent or Surplus
- Shows opportunities for new value exchanges

## 2. Product Value Analysis

- Maps value states across a product life cycle
- Shows opportunities for new value exchanges

## 3. Service Value Analysis

- Maps out the service process and identifies key touch-points
- Reveals value states at key touch-points
- Shows opportunities for new value exchanges

## 4. Business Transformation

- Creates of Value propositions for stakeholders
- Evaluates new business models and forms
- Tests preparation for change
- Evaluates key areas for risk and identifies remedies
- Produces a detailed change plan for the business and critical actors

# Value mapping process

*Value refers to a broad set of benefits derived by a stakeholder from an exchange*

*Sustainable Value refers to economic, social and environmental value.*

*Evans et al. (2015)  
Yang et al. (2015)*

## Value uncaptured perspective for business model innovation

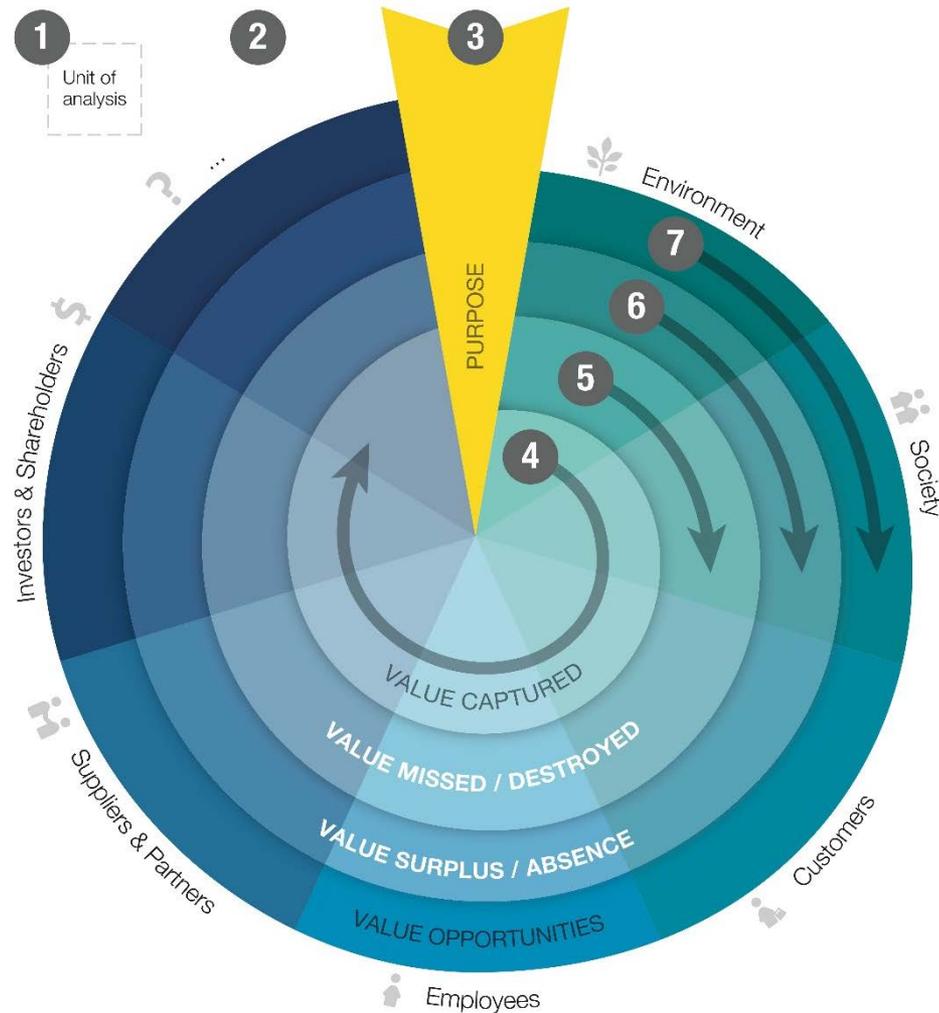
Elicits **failed value exchanges** and thereby uncovers new value opportunities.

- Structured approach to think about value:
- **Value Captured**      **I give and get a return**
- **Value missed**      **I give but don't get a return**
- **Value destroyed**      **I give but you don't want**
- **Value absence**      **You want but I don't give**
- **Value surplus**      **I give or have too much**
- **Value opportunity**      **We discover new value**

# The Cambridge Value Mapping Tool

**Workshops** – More than 40 workshops, 70 companies:

- Firm level - start-ups, SMEs, MNCs
- Multiple stakeholders – Riversimple custodian workshop, Finnish Furniture Industry
- Teaching material – Cambridge and Genoa



<http://www.ifm.eng.cam.ac.uk/news/the-cambridge-value-mapping-tool/#.Vzlw22NlnVo>

## Organisation

- Groups of 6
- Washing Machine Manufacturer
- 6 Stakeholder Roles
  - Select one each
- Quick Fire process
  - Be open minded in thinking of ideas
  - Be fast
  - Write them on post it notes

# Prompt questions for each step

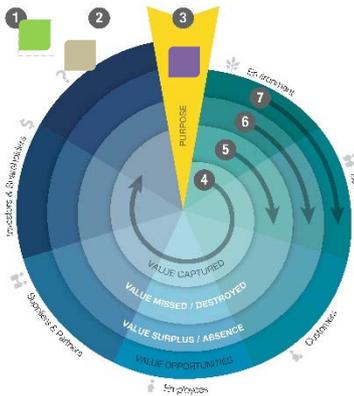
- **Step 1 - Define the unit of analysis** (■) (Company, business unit, or product/service)
  - **Washing Machine**
- **Step 2 - Add or modify any missing stakeholders** (■)
 

*Prompt question:*

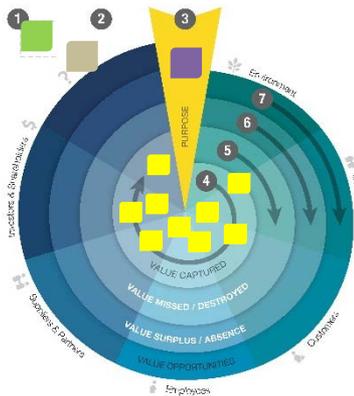
  - **Use the 6 on the chart**
- **Step 3 - Identify the business purpose of the unit of analysis** (■)

*Prompt questions:*

- What is the primary reason(s) for the existence of your business?
- Consider why should any of your stakeholders, particularly the customer, care about the existence or continuation of the business?



**5 Minutes**



○ **Step 4 - Map current value captured (■) for each stakeholder**

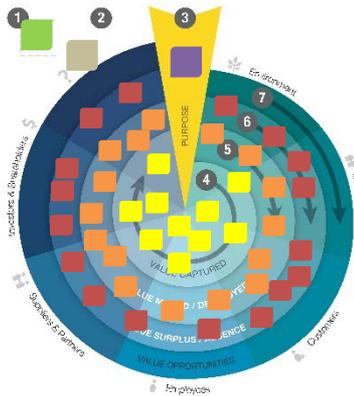
*Prompt questions:*

- What positive tangible and intangible value is created for each of your stakeholders? For example, why does your customer buy from you?
- Does the business network mitigate or offset some negative outcomes in full or in part (such as carbon emissions)?

*Examples:*

- Customers > Functionality, health benefit, well-being, prestige, feel-good
- Employees > wealth distribution, livelihood security, meaning and purpose, learning and development
- Society > Poverty alleviation, community development
- Environment > Resource use within regeneration rates; bio-diversity protection
- Shareholders/ investors > Profit, ROI, growth, financial resilience, long-term viability
- Suppliers/ partners > Profit, ROI, growth, long-term beneficial relationships, relationship stability and predictability

15 Minutes



○ **Step 5 - Map value missed (■) for each stakeholder**  
(I give but don't get a return)

Prompt questions:

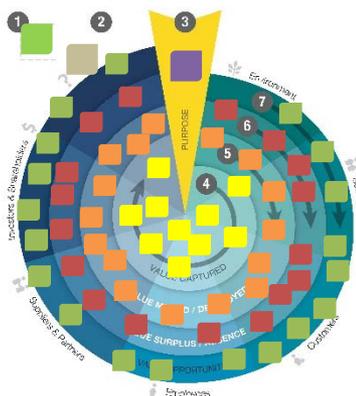
- What are the negative outcomes of the business for any of your stakeholders? *E.g., environmental impacts such as pollution*
- Is the business creating value in some form, but failing to capture value from the customer or society for this? *E.g., better use of data for enhancing equipment use*
- Are there any excessive benefits that we are giving away or are larger than the requirements? *E.g., over production, excessive products functionality*

○ **Step 6 - Map value absence (■) for each stakeholder**  
(You want but I don't give)

Prompt questions:

- Out-of-stock items, performance specification, service or knowledge with the product?

**5 Minutes**



## ○ Step 7 – Identify value opportunities (■)

*Prompt questions:*

### ○ Eliminate value absence

- Where is their conflict of interests between stakeholders? (i.e. where does positive value for one stakeholder destroy value for another stakeholder/s)? how can it be resolved?
- Relevant stakeholders should try to seek alignment (win-win), rather than compromise or trade-offs.

### ○ Utilise value missed

- Identify opportunities there might be to capitalise on currently missed value to create new forms of positive value.

### ○ Look for generating solutions to enhance sustainability

- What further innovations might be possible to extend the value proposition in new and radical ways?
- How can greater value be captured from the existing business (increase the value-added content)?

**5 Minutes**

## What are your teams best /craziest ideas

- Discussion of 2 minutes
  - Best
  - Craziest
- Quick fire – around the room
- We will select
  - Best – Prize
  - Craziest - Prize

# Advertisement

IF YOU WANT TO FIND OUT MORE

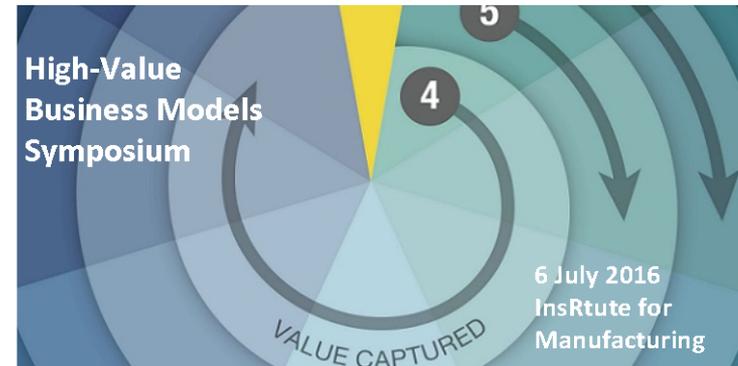


## Capturing Sustainable Value

Hear business views on implementing circularity  
Learn about tools to capture new value in your business network  
Demystify disruptive business models

Connect, discuss and debate with future collaborators at  
**Toolkit Showcase | Taster Workshops | Pop-up Talks**

Meet thought leaders, radical researchers, and industry gurus from:  
Siemens | M&S | Adnams | Altro | Extremis | Tata | KTN | iema  
Business.Cubed | Imperial College | Loughborough University Cranfield  
University | University of Cambridge  
DeMontfort University



A dynamic platform for social start-ups and entrepreneurs to explore future directions.

*Find new business opportunities*

*Apply new analytical lenses to capture sustainable value*

*Meet with leading researchers in this field*

Featuring tools for High-Value Business Models developed at the University of Cambridge

12.30 – 18.00 on 6 July 2016

Symposium: £80 (excl VAT)

Dinner at Madingley Hall: £40 (excl VAT)