



Transforming the world
to sustainability

IEMA Webinar: A practical approach to integrating The Circular Economy – Consultation webinar on BS8001 draft for public comment

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Speakers



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Transforming the world
to sustainability

A practical approach to integrating The Circular Economy – Consultation webinar on BS8001 draft for public comment

The Circular Economy is developing into a multi-million pound industry. In order to maximise this opportunity we need to utilise enabling technologies such as; sensors, wireless communication, and machine to machine learning, to develop the new products and services necessary for business growth.

Webinar slides and recording

IEMA records all webinars and publishes them alongside the slides at <http://www.iema.net/event-reports>





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IEMA's BS8001 Activities

November

8th Employer Forum

21st Birmingham, afternoon workshop

December

1st Webinar (PC, SM & JF)

2nd Edinburgh, afternoon workshop

13th London, afternoon workshop

19th SRM Network SG Meeting

January

15th IEMA response to consultation

February – May

Contribute to finalisation of BS8001
via drafting panel discussions





BS8001 – DPC Presentations



IEEMA Webinar
1st December 2016

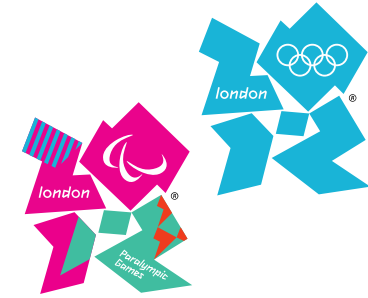
A practical approach to integrating the Circular Economy – Consultation webinar on BS8001 draft for public comment – PART 1

Phil Cumming
Chair, SDS/1/10 Sustainable Resource Management
Director, Koru Sustainability Ltd



About me

- 18+ years professional experience in sustainability
 - 8 years international consultancy
 - 10+ years in-house (London 2012, Kingfisher plc, M&S plc)
- Multi-sector international experience including in retail, mega events and construction
- Non-Executive Director for Julie's Bicycle (Charity) and Resource Futures Ltd (Certified B Corp)
- Associate Lecturer with Birkbeck College, University of London
- Chair of BSI's Sustainable Resource Management Committee
- IEMA Strategic Advisory Council
- GACSO Advisory Group
- Chartered Waste Manager



Kingfisher

M&S

EST. 1884



resourcefutures 

JULIE'S BICYCLE 
SUSTAINING CREATIVITY

Background

Rationale

- The move to a 'circular economy' identified as a significant opportunity for UK business
- Government Waste Policy Review for England 2011 recommended that the government "work with standard setting organisations to encourage inclusion of more **waste prevention** requirements in ... product standards"

Project goal

- UK Government department (BEIS & Defra) supported project to map the existing standards landscape and identify gaps/priority areas

Project outputs

- Due diligence research into standards and external initiatives that support waste prevention and closed loop approaches during 2013 – March 2014 report circulated to stakeholders
- Stakeholder forum to validate and prioritise results from the research and agree future action held in April 2014

Key research outcomes

- 200+ standards – varying relevance
- Recycling, materials and waste – key areas supported by existing standards
- Many standards address waste prevention, none focus on the concept of the circular economy in its entirety
- Work encouraging remanufacturing and 'designing out' waste is on-going (e.g. BS 8887 series)
- www.bsigroup.com/circulareconomy

Key Standards

OVERVIEW

Our searches identified over 200 published standards that are relevant to the waste prevention and circular economy topics. The key areas that were supported by standards were recycling, materials and waste.

There are many standards that address waste prevention. However, there are no formal standards that focus on the concept of the circular economy in its entirety.

KEY INTERNATIONAL, EUROPEAN, BRITISH STANDARDS and PASs

BS 8903 Principles and framework for procuring sustainably – guide

Provides recommendations and guidance on how to adopt and embed sustainable procurement principles and practices across an organization and its supply chains. This standard is being used to inform the development of a new international standard on sustainable procurement.

BS 8895-1 Designing for material efficiency in building projects - code of practice for strategic definition and preparation and brief

The first in a projected suite of codes of practice that address specific and interrelated issues and processes of material efficiency in building projects. Gives recommendations for the process by which design and project teams seek to maximize material efficiency through design.

BS 8895 Designing for material efficiency in building projects, will eventually comprise the following additional parts: Code of practice for Concept and Developed Design (Part 2); Code of practice for Technical Design (Part 3); Code of practice for operation, refurbishment and end of life (Part 4).

BS 8887 Series - Design for manufacture, assembly, disassembly and end-of-life processing (MADE)

Provides context for the preparation of technical product specifications in accordance with Geometrical Product Specifications (GPS) principles. Subsequent parts of this standard will address specific requirements for various types of engineering manufacture. The series comprises the following parts:

BS 8887 - 1 General concepts, process and requirements

BS 8887 - 2 Terms and definitions

BS 8887-220 The process of remanufacture. Specification. Specifies requirements for the process of remanufacture and the steps required to change a used product into an as-new product, with at least equivalent performance and warranty of a comparable new replacement product.

BS 8887 - 240 Reconditioning. Specifies requirements for the process of reconditioning, i.e. returning a used product to a satisfactory working condition by rebuilding or repairing major components that are close to failure, even where there are no reported or apparent faults in those components.

BS 8887 - 211 Specification for reworking and remarketing of computing hardware. Provides IT sector remarketers with a vocabulary and procedures needed to accurately define their products.

Draft BS 8887- 210 Specification for reworking and remarketing. Gives remarketers the vocabulary and procedures needed to accurately define their products.

PAS 141 Reuse of used and waste electrical and electronic equipment (UEEE and WEEE). Process management. Specification.

Sets out the requirements to successfully manage the process of preparing used and waste electrical and electronic equipment (WEEE) for reuse.

Environment and packaging standards

ISO 18600 series - specifies requirements for reuse and recovery of packaging materials:

ISO 18603 specifies the requirements for a packaging to be classified as reusable and sets out procedures for assessment of meeting the requirements, including the associated systems.

ISO 18604 specifies the requirements for packaging to be classified as recoverable in the form of material recycling and sets out procedures for assessment of meeting its requirements.

ISO 18605 specifies the requirements for packaging to be classified as recoverable in the form of energy recovery and sets out assessment procedures for fulfilling the requirements.

ISO 18606 specifies procedures and requirements for packaging that are suitable for organic recycling.

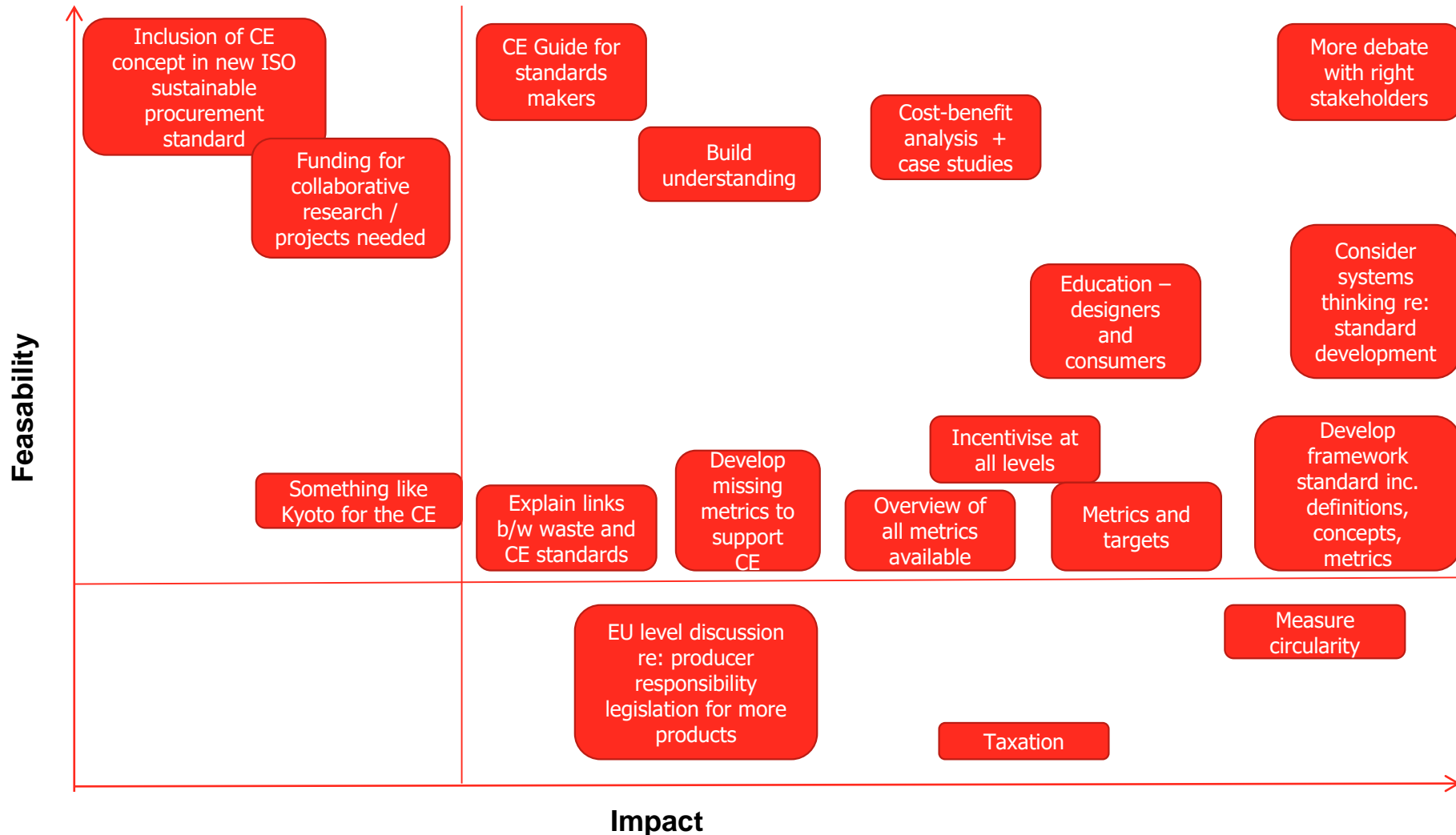
Draft ISO 18616-1 Returnable transport system - Reusable, rigid plastics distribution boxes Part 1: General purpose application

Draft ISO 18616-2 Returnable transport system - Reusable, rigid plastics distribution boxes Part 2: General specifications for testing

Draft PD ISO/TS 18614-1 Packaging - Label Material Part 1: Questions for Material Determination

Draft PD ISO/TS 18614-2 Packaging - Label Material Part 2: Specification of Material

Stakeholder engagement outputs



Source: BSI Stakeholder Forum: key outcomes, April 2014

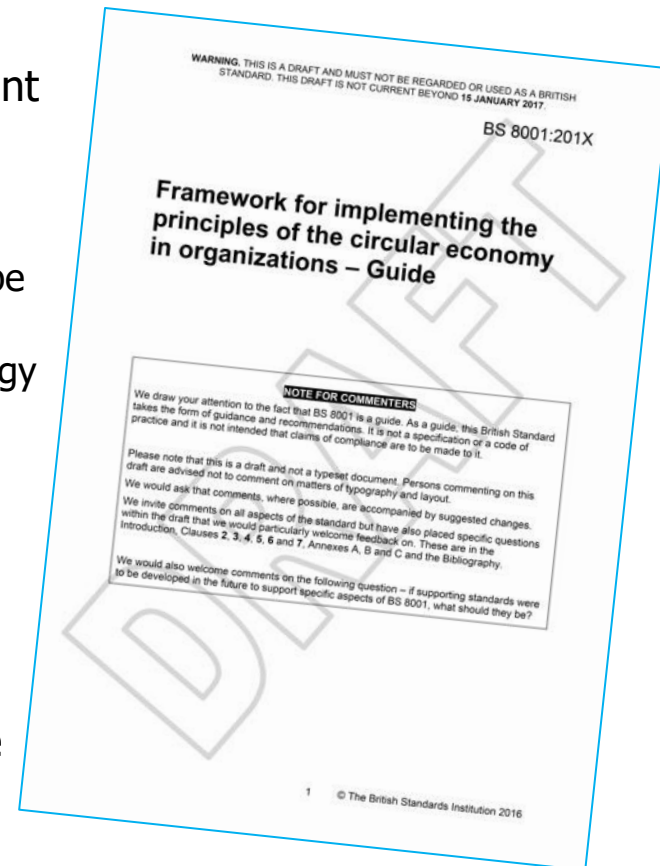
Some specific feedback from business

- How do we determine resource management risks and opportunities and identify key materials of concern?
- How is the circular economy relevant? What is our role? What are the implications for [manufacturers, retailers, service-based organisations...] however small or large?
- What is the meaning behind the use of certain terms within the context of the circular economy, for example 'closed loop' and 'open loop'?
- Circular economy requires collaboration and thinking outside immediate sphere of influence – this isn't easy but differing levels of understanding – conceptually and on specifics – makes it hard for us to collaborate...
- Lots of guidance on different business models – but it's all a bit confusing and conflicting and often multiple terms seem to be used for what is essentially the same thing?
- What key factors will we need to consider (e.g. provenance and use of secondary materials, chemicals transparency, competition law, liability and insurance, etc)?
- ...

In summary, no shortage of circular economy publications and online resources – few though are specifically directed towards helping organisations take practical action!

Framing circularity

- Organisations want help in turning 'macro' concept of the circular economy into practical action
- Committee formed in Dec 2014 with responsibility for standardisation in field of sustainable resource management
- Well represented with around 60 members
- Current focus is on developing a framework standard to:
 - Help organisations identify how the circular economy might be relevant & what role might be
 - Provide clarity & direction on key areas – including terminology
 - Explore if other supporting standards might be needed
- Secured Dept. of Business (BEIS) funding to accelerate development of standard
- Scope & outline concept agreed summer 2015
- Applicable to all organisations wherever they are based
- Drafting Panel formed in November 2015 to take write the standard
- Testing / pilots with a number of organisations (small and large, UK and overseas) during August & September 2016



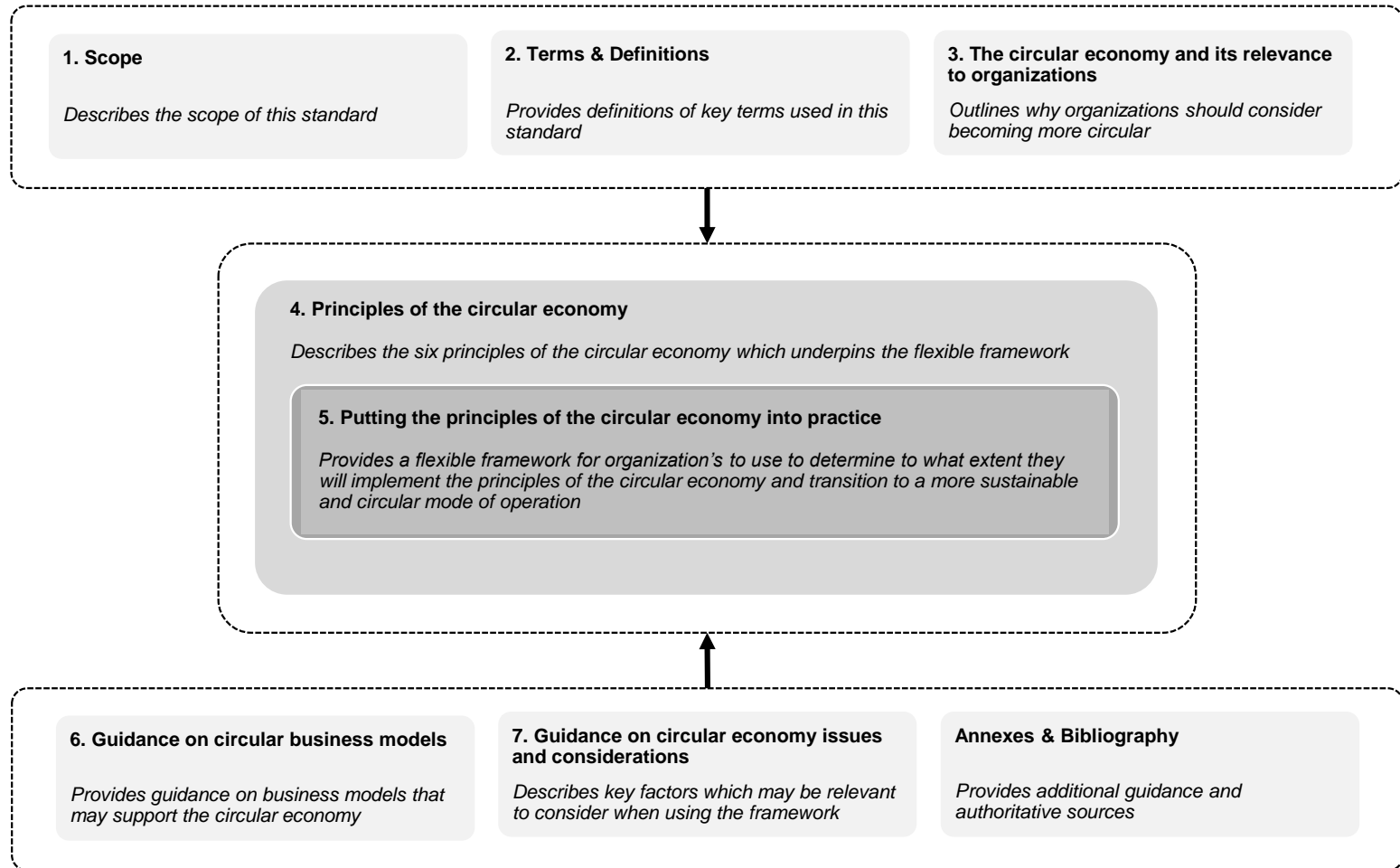
Piloting BS 8001

- Objective was to help ensure Clause 4 and 5 in particular was sufficiently enough to seek wider public comment and feedback
- A focus on recruiting a range of organisations – sector, size, geography, maturity – to road test key clauses and inform revisions
- Engagement sessions took place during August and September – telephone interviews and individual and group workshops
- Positive feedback and felt the timing was right for the standard

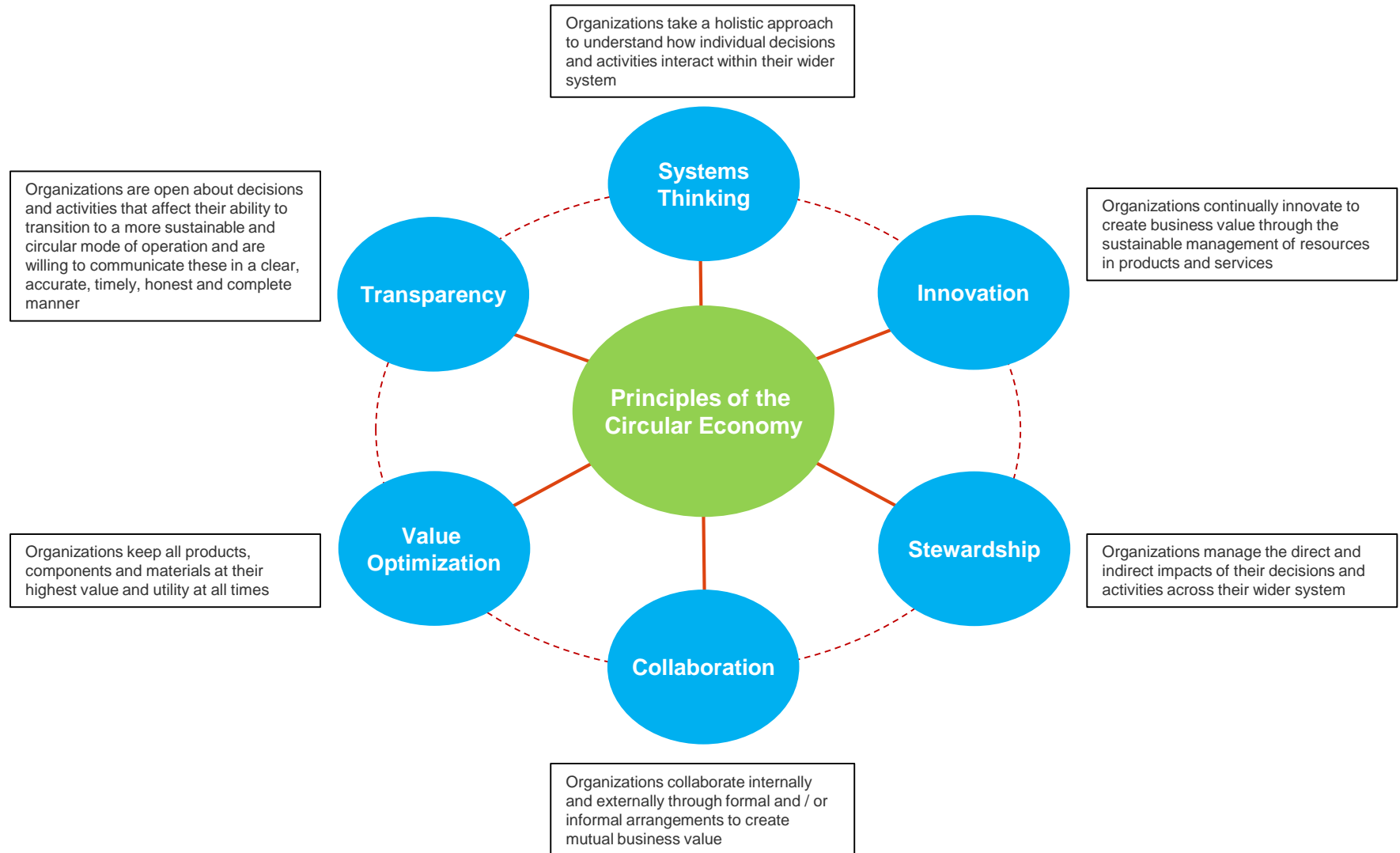


BS 8001 structure overview

Framework for implementing the principles of the circular economy in organizations



Clause 4 - Principles of the circular economy





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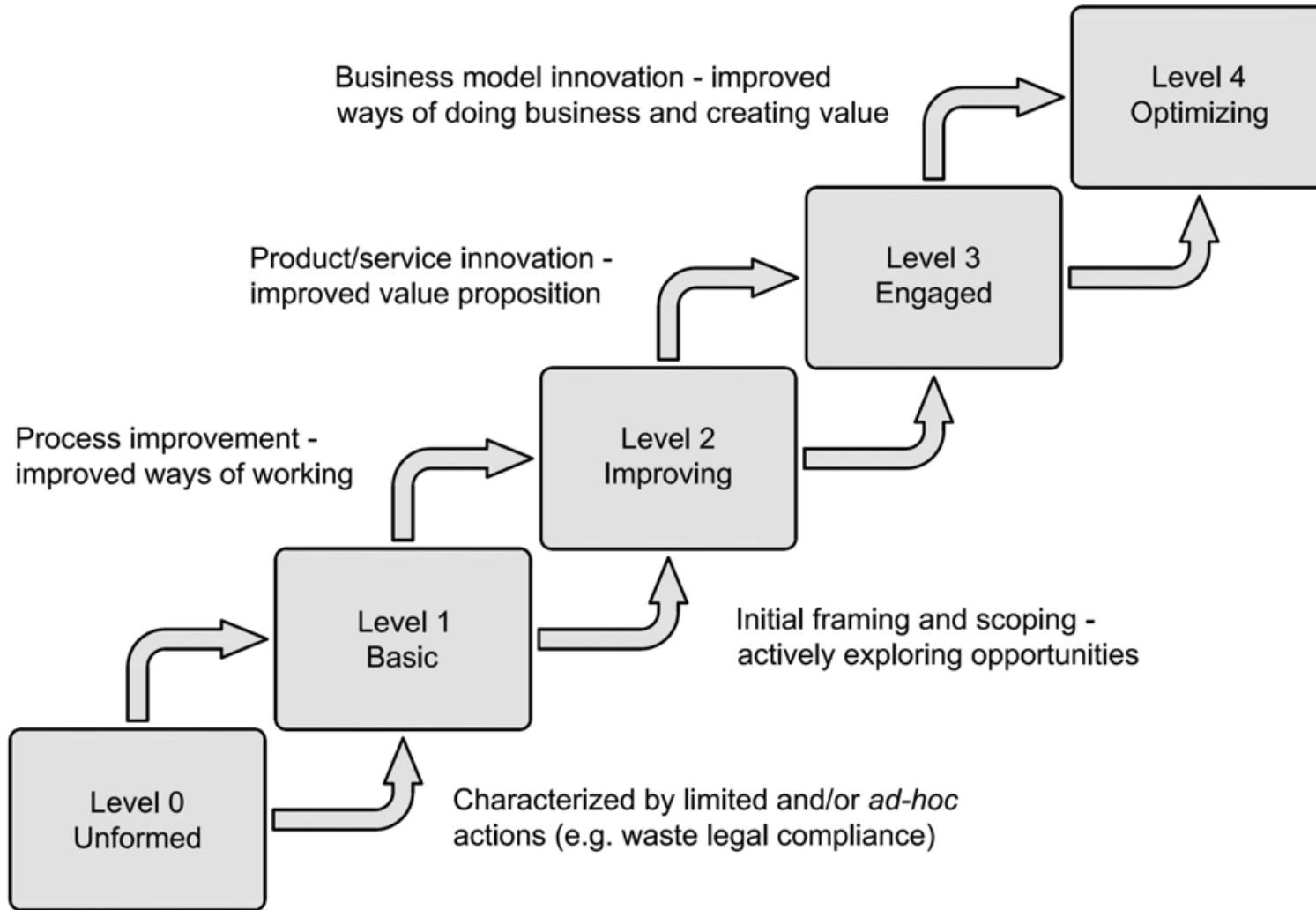
Clause 5: The framework for putting the principles of the CE into practice

Consultation webinar on BS8001
draft for public comment

Josh Fothergill
Policy Lead, IEMA



Clause 5 – Putting the principles of the circular economy into practice



Annex provides guidance to help organisations evaluate their level of maturity and the extent to which the principles of the circular economy are being realised

Clause 5 – Evaluating Organisational Maturity to CE Principles

Annex provides guidance to help organisations evaluate their level of maturity and the extent to which the principles of the circular economy are being realised

WARNING. THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 15 JANUARY 2017.

Table A.2 – Questions to help organizations consider how the principles of the circular economy are being realized through their decisions and activities (non-exhaustive)

Principles	Questions
Systems thinking	<ul style="list-style-type: none">• Has a vision of the future for a more sustainable and circular mode of operation been determined?• What existing system(s) and parts of relate to your circular economy vision and objectives?• What are the relationships among system components? How do they affect one another?• Where does circular causality/feedback emerge? Is one feedback loop more influential than another? If so, how?• How does the vision you are attempting to achieve reveal issues in the system?• How are you a part of the system(s)? How do your decisions and activities affect the system and how does the system affect your decisions and activities?• How do you want to influence the system(s) and parts of the system(s)? What are the assumptions you are making?• What experience, skills, relationships and resources are necessary for this to happen?• Could there be unintended consequences of any proposed action? Are there possible short and long-term consequences?• Over what timeframe are changes expected to yield results? How will you know if the change has been successful?

Clause 5 – Putting the principles of the circular economy into practice

Annex provides guidance to help organisations evaluate their level of maturity and the extent to which the principles of the circular economy are being realised

WARNING. THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 15 JANUARY 2017.

Table A.1 – Example maturity model for organizational circularity

Principle	Level of maturity				
	Unformed ($>2/3$ of responses = not considered)	Basic ($\geq 1/3$ to $1/2$ of responses = Partly considered)	Improving ($>1/2$ of responses = Partly considered)	Engaged ($\geq 1/2$ to $2/3$ of responses = Fully considered)	Optimizing ($>2/3$ of responses = Fully considered)
Systems thinking	No systems thinking evident within the organization.	Organization has begun to apply systems thinking techniques in relation to resource management.	Organizational vision for circular economy activity is at least part developed, with top-level management buy-in and thought given to how resource management relates to the value chain or wider system.	Systems thinking recognized as being key to exploring different perspectives, causality linkages and feedback related to progressing circular economy vision, strategy and objectives.	Organization can demonstrate it routinely applies systems thinking to circular economy decision making and activities and is investing in this area for the longer-term (e.g. staff training, clear outcomes-based measures)
Innovation	Innovation within the organization is limited and sporadic with little interaction beyond the organization itself.	The organization has begun to recognize the innovation opportunity of the circular economy and created some linkages to customer needs and future business strategy.	Top-level management is committed to innovation and the organization has begun to recognize the need to integrate stakeholder needs and feedback in developing circular economy activities.	Circular economy innovation is established in the organization and structures exist to ensure that value-chain input is fed into the system with active governance in place related to innovation (e.g. IP/legal implications, sharing ideas, etc.)	Organization can demonstrate it has fostered a culture of innovation to create business value through the sustainable management of resources in products and services and has at least begun to innovate its business model.

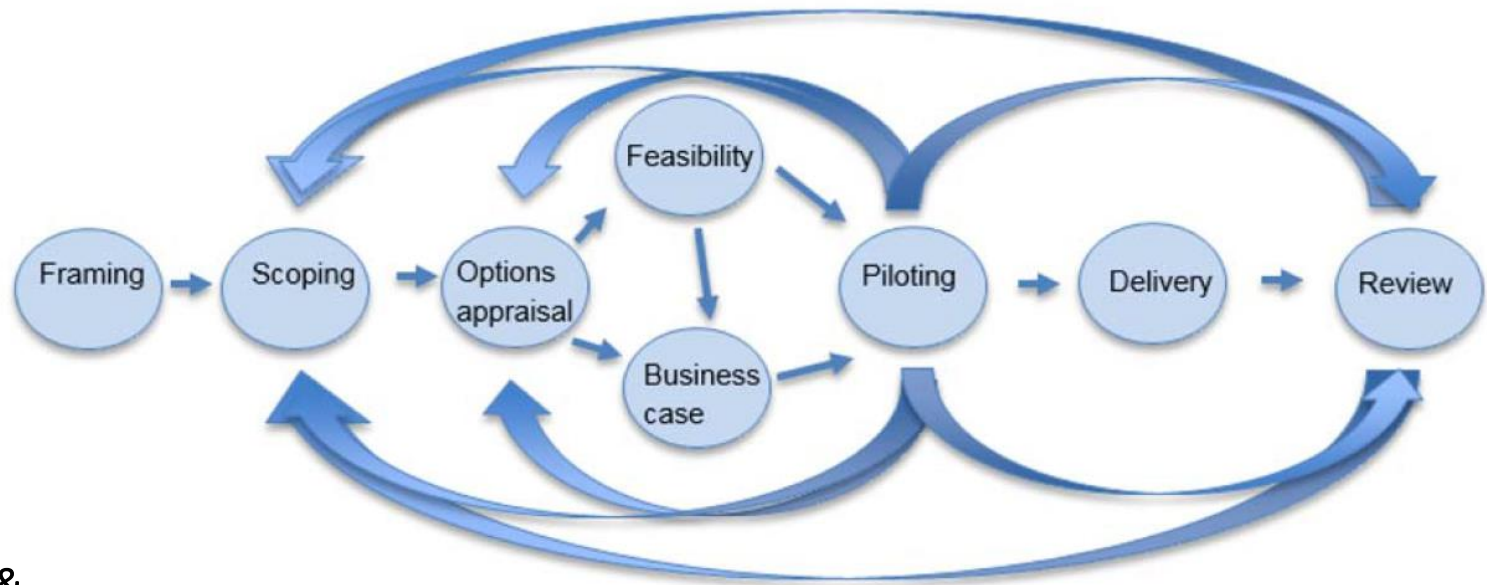
Clause 5: Eight Stage Flexible Framework

1. Framing
2. Scoping
3. Idea generation
4. Feasibility
5. Business case
6. Piloting and prototyping
7. Delivery and implementation
8. Monitor, review & report

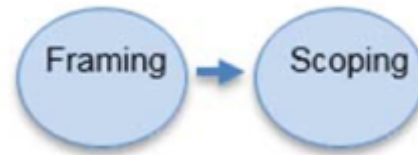
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Clause 5: Eight Stage Flexible Framework

1. Framing
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Clause 5: Getting Started



1. Framing

- Assess current state of play and relevance of the circular economy
- Stakeholder mapping
- Generate internal awareness and excitement

2. Scoping

- Diagnose the system the organization is looking to explore and influence
- Understand the organization's current direction and how the circular economy could support or undermine its long-term ambition and value proposition
- Agree vision and high-level strategy

Clause 5: Generating Feasible Initiatives

3. Idea Generation

- Define goals and clear briefs/topics for exploration
- Identify long-list of ideas/options and prioritize accordingly

4. Feasibility

- Assess and undertake feasibility assessment
- Review and/or confirm ideas/options

5. Business Case

- Develop business case



Clause 5: Pilot, Scale-up and Monitor

6. Piloting & Prototyping

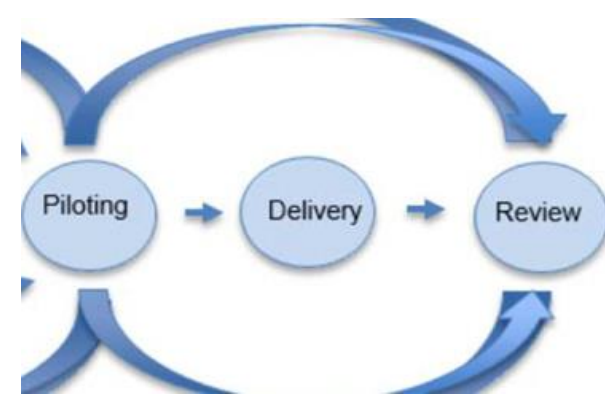
- Establish ownership and governance
- Develop plan for piloting, prototyping or development
- Conduct and review pilot/prototype

7. Delivery & Implementation

- Develop and execute plan for delivery and implementation
- Mechanisms to measure progress over time

8. Monitor, Review & Report

- Monitoring and measurement
- Reporting progress
- Continual and transformational improvement

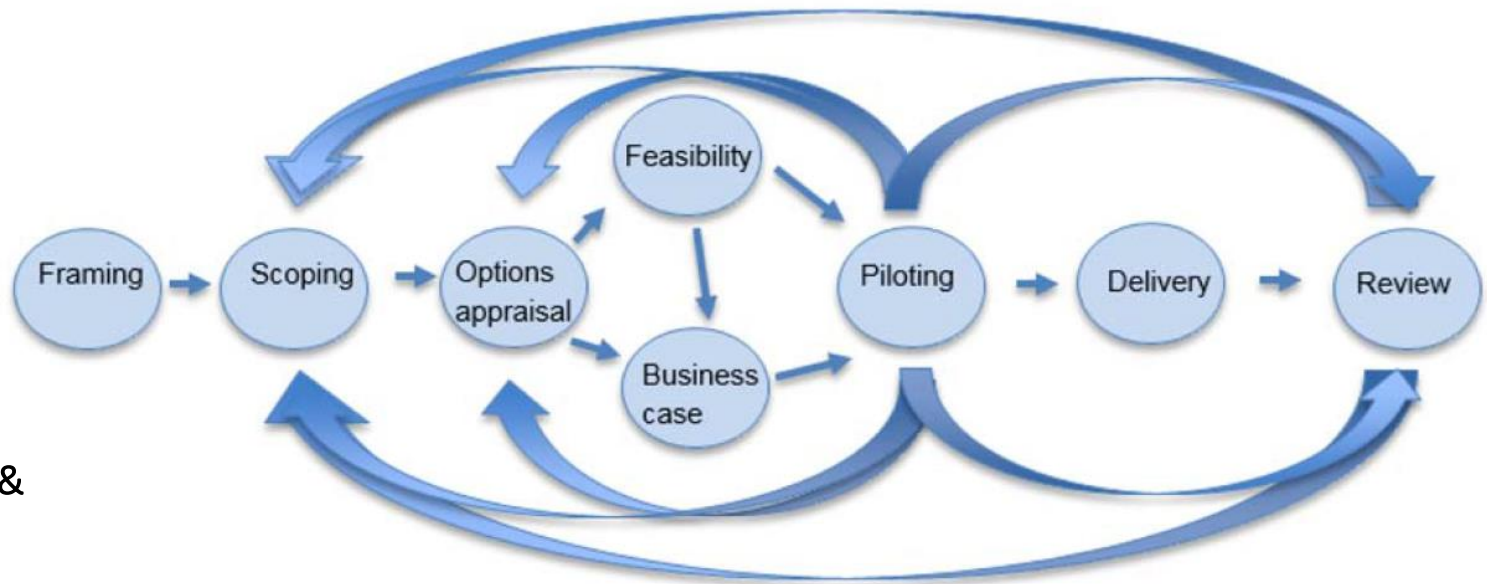


Clause 5: Consultation Questions

- Have the right stages been identified and are these correctly ordered?
 - If not, why?
- For Stages 1-8, are there specific tools and resources that would support organizations in implementing this stage of the framework which it might be helpful to highlight?

Clause 5: 8-stage Flexible Framework

1. Framing
2. Scoping
3. Idea generation
4. Feasibility
5. Business case
6. Piloting and prototyping
7. Delivery and implementation
8. Monitor, review & report





IEMA Webinar - 1st December 2016

Introduction to circular business models – consultation webinar on BS 8001 draft for public comment

Stuart McLanaghan
Director, Eden21 Ltd



Stuart - Background



- 20 years in recycling/recovery & sustainable resource management
 - senior/exec roles in environmental services and food
 - Director Eden21 – business consultancy
- Committee & Drafting Panel Member - Sustainable Resource Management
- Advisor to UK Prime Minister's Cabinet Office / government departments
- BBC Food Hero – operationally directed award winning wild food business
 - 'fells to plate' traceability into Waitrose
- Chartered Waste Manager
- Founding Board Member, NW England Sustainable Development Group
- Technical assessor to UK government programmes (e.g. Innovate UK)

Clause 6 – Aims

To comprehensively:

- overview key organisational considerations in selecting a circular business model
- identify key circular business model types (+ practical guidance, examples and supporting info)

Categories

Two circular business model categories emerging:

- new disruptive - aimed specifically at circular economy
- hybrid - embracing elements of both traditional and new disruptive

BS 8001 – circular business model scene setters

- Diverse national and academic approaches and terminology
- Not all new disruptive models embrace CE principles*
- Business models and 'enabling mechanisms'**
- No hierarchy or 'one-size fits all'
- Embrace reuse, repair, refurbish, remanufacture and recycling
- Generic to products / services, location and size / maturity
- Focus on tangible examples

* *e.g. Freemium in digital space*

** *e.g. financing mechanisms such as crowd-funding*

Organisational considerations

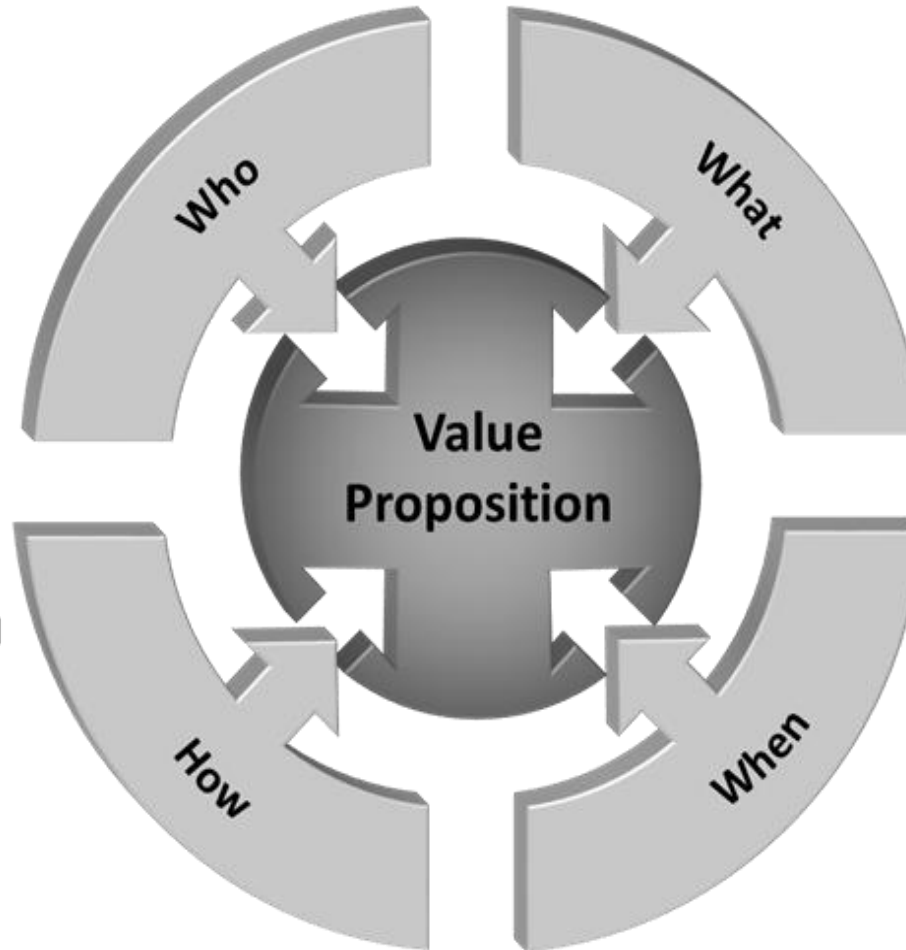
- Identify existing / projected business risks and opportunities associated with natural resource use (clause 4 and 5)
- Understand your existing business model
- Business model innovation goes beyond advances in processes, products and services
- Q. Can the current model deliver CE objectives?
- Q. Which business model offers best delivers CE objectives?
 - New disruptive easier to implement in start-ups
 - Hybrid more likely in mature organisations (re-engineered for circular functionality)
- Journey perhaps as important as the end-point!

Circular business model – construction

- Value proposition central - defines products/services offered
- Methodology - Who, What, How and When
- Viability
 - traditionally solely financial
 - increasingly also reflects wider social benefits
- Defines markets, customers, value proposition, activities, processes, infrastructure and value created

Who – What - How - When

Identifies the market and the target customer group(s) for the product or service being offered



Identifies the product(s) or service(s) being offered to the target customer group(s)

Defines the processes and activities, along with the necessary resources to build and distribute the product(s) or service(s) being offered

Addresses the timing associated with transitioning to the new business model

Circular business models - groupings

- On-demand (1)
- Dematerialization (1)
- Product life-cycle extension/reuse (3)
- Remanufacture / manufacture from secondary materials (3)
- Product as a service / Product Service System (2)
- Sharing economy/collaborative consumption (2)

DPC questions – have your say

1. Are the six circular business model groupings correct? If not, why not?
2. Have any individual circular business models been missed?
3. For the individual circular business models listed, have any key real-life applications been missed?
4. Do you agree the examples highlighted are all enabling mechanisms and not circular business models ? If not, why not?

THANK YOU

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IEEMA Webinar
1st December 2016

A practical approach to integrating the Circular Economy – Consultation webinar on BS8001 draft for public comment – PART 2

Phil Cumming
Chair, SDS/1/10 Sustainable Resource Management
Director, Koru Sustainability Ltd



Clause 7 Issues and considerations

- Accounting and finance
- Anti-trust and competition law
- Change management
- Chemicals
- Energy and fuels
- Information management
- Liability and insurance
- Logistics and reverse logistics
- Materials markets
- Materials selection
- Monitoring and measurement
- Procurement and contract management
- Product design and development
- Sales and marketing
- Waste regulation

Annexes

- Annex A – Evaluating implementation of the principles
- Annex B – Potential circular design strategies and checklist
- Annex C – Case studies
- Bibliography

Next steps

Draft for Public Comment (DPC) stage

- DPC period underway will run through until the 15th January 2017
- Open to anyone including interested parties outside of the UK
- Responses will be reviewed by the Drafting Panel through to the end of March 2017

First publication

- Aiming to publish BS 8001 in May 2017
- Monitor take up in the UK and overseas

Other supporting or 'daughter' standards

- Committee will review need for developing supporting standards covering specific areas in more detail

We want your feedback!

Draft standard available at: <http://drafts.bsigroup.com/Home/Details/59265/>



BS8001 – DPC Consultation Questions



Questions and Answers

Questions and Answers



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Thanks for joining us

You'll be sent a link to a feedback survey and access to the slides & recording from today's session shortly

