Resource Efficiency and Circularity

Benefits for the Public Sector

20 March, 2018
Swalec Stadium, Cardiff

EREN
European Resource Efficiency Knowledge Centre
Croeso

Carl Nichols
Pennaeth WRAP Cymru
Head of WRAP Cymru
The European Resource Efficiency Knowledge Centre: The vision, the road and the actions

Bettina Gilbert, WRAP Cymru
A short story of EREK

• A group of SME agencies across Europe had a common vision: *fostering resource efficiency improvements in SMEs*…

• They wished to create a pan-European network of highly-motivated business support organisations who want to stay tuned, gain knowledge, share their expertise and promote Resource Efficiency in their region and sectors.

• They have been meeting regularly *since 2012*…
The vision behind EREK

Creating an economy that makes a better use of the Earth's limited resources and minimises the impact of businesses on the environment.

To enable and reinforce businesses and especially small and medium sized companies (SMEs) to take action for resource efficiency in Europe and beyond.

Mission: to become a reference point for companies and resource efficiency intermediaries on the latest developments and thus to raise awareness amongst SMEs of the savings potential that lies in switching to more resource efficient business models.
The core EREK products

www.resourceefficient.eu

- **SME support tools:**
  - Office and sectoral SAT

**Measures, Technologies and Good Practices**

- **Database** of Measures and Technologies and real life business cases

- **Support schemes and financial measures available in each country**
The Network Charter

The charter describes the criteria for membership and advantages to be part of the EREK Network.

Who can become a member of the EREK Network?

- Business support organisations, including established and prospective providers of resource efficiency services.

Join our community!
EREK activities co-developed with the members

**Project outputs**
- Co-development of the EREK SME tools;
- Co-development of the project content.

**Network events**
- **Capacity-building workshops** and **webinars** on specific themes;
- **Networking meetings** on topics of common interest.

**Knowledge repository**
- Access to data, studies and discussion papers.
Where do we want to be in 2019?

- A vibrant **pan-European community** of business support organisations promoting resource efficiency, covering whole of Europe
- **Acknowledged among SMEs** as a useful tool and source advising them on their resource efficiency-related investments and measures
- SMEs visiting and using the EREK website actively
- Knowledge and know-how transferred among European business agencies
Take home messages

Our focus is on network expansion with active members which can:

- Shape the development of tools and activities
- Integrate the tools into your own service offers
- Contribute to the database on resource efficiency benefits and have direct access to the information gathered
- Co-organise and attend international workshops
- Promote their own services, activities and events through EREK
- Get recognition at EU and international level as leaders/pioneers in the area of resource efficiency.
Thank you

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Cuno van Geet
Mervyn Jones
Green public procurement practices across the EU

Resource efficiency and circularity: benefits for the public sector

Cuno van Geet
Mervyn Jones

Cardiff, 20th March 2018
Strategic EU context

- UNEP Marakkesh task force SPP 2004
- GPP, communication 2008
- New procurement legislation 2012
- UNEP 10 YFP SCP SPP programme 2012
- E-procurement: 2016-2018
- SDG’s 2015
- NEW CE-Package (including GPP) 2016
- NEW Strategic Procurement (DG Grow): 2018
Policy GPP/SPP

2008
- Excluding
  - Mainstream
  - Copy / paste

2012
- Promoting
  - Available technology
  - Award criteria

2018
- Innovation
  - Advanced procuring
  - Collaboration market
  - New technology (TRL 7+)

Procurement professionalism
Solution / innovation shift
Procurement is a strategic part of organisation.

Space for innovation, and savings.

System, services

Objectives

Product, Product, Product, Product

Procurement Criteria during tender process

Challenging suppliers
- New solutions
- New technology
- New business models

Excluding
- Bad suppliers

Excluding
- Bad products

Level of detail of requirements
Circular Procurement is an approach to greening procurement which recognises the role that public authorities can play in supporting the transition towards a circular economy.

Circular procurement can be defined as the process by which public authorities purchase works, goods or services that seek to contribute to closed energy and material loops within supply chains, whilst minimising, and in the best case avoiding, negative environmental impacts and waste creation across their whole life-cycle.
Multiple policy drivers

Drivers

- Environmental
  - Carbon, conservation, waste, raw materials, emissions, energy efficiency
  - Manufacturing & consumption
    - Process efficiency, consumption patterns
- Economic
  - Cost savings, growth
- Social
  - Employment, skills, civil society
- Health
  - Toxicity, risk, well-being, quality of life

Categories

- Textiles & clothing
- Electrical & ICT
- Furniture
- Food
- Construction
- Transport
- Packaging

Strategies

- Sustainable materials management
  - Waste prevention
  - Design & materials choice
  - Utilisation & lifetime optimisation
  - Repair, reuse & remanufacturing
  - Recycling & end-of-life
- Business
  - Cost reduction
  - Servicisation
  - Value networks
  - Collaborative

Circular business models

disposal -> sourcing
use

Textiles & clothing
Electrical & ICT
Furniture
Food
Construction
Transport
Packaging
Innovation progression

- Innovators
- Early Adopters
- Early Majority
- Late Majority
- Laggards

Strategic circular procurement

GPP comprehensive criteria

GPP core criteria

Point of regulation

individual countries

individual organisations

the 'Chasm'

time
2007

Political Launch 2007

Markets for sustainable products, criteria

€ 8 Million policy spending

- 80 product groups
- 245 Criteria, cut and paste
- 100% target
- Agenda setting, bottom up
2009 market clash

Policy
• 80 → 45 product groups, half of the criteria
• Policy programme 8 million → 0,1 Million
• Room for innovation → No policy actions

Practise
• New innovation tools market / construction
• Transfer of policy to Procurement Ministry
• Implementation focus: what is really needed
2012/2013

Recession

Don’t Call Us, We’ll Call You
Number of unemployed job seekers for every job opening

Source: Economic Policy Institute, based on BLS data

EU Resource Efficiency
GPP very low priority

Society

Circular Economy

ELLEN MACARTHUR FOUNDATION
Rethink the future

Green Deal

Practise

Circular Procurement

REBus

Life
2017

Lessons

Circular procurement

Waste contracts

Supplier

User

Waste manager

Waste

Resources

Products

>80 pilots + > 100 pending

DEMAND is miracle solution CE
Circular procurement opportunities

- Design better products
- Reduce process waste
- Invest in infrastructure
- Encourage recycling
- Encourage reuse
- Improve collections
- Develop markets for recycled materials
- Encourage reuse
- Improve collections
- Develop markets for recycled materials
- Design better products
- Reduce process waste
- Invest in infrastructure
Which revenue models exist?

- Lease
- Rental
- Pay-per-use
- Sell-buy-back
- Product-service combination

+ Risk-benefit sharing

Some EU examples

Mervyn Jones
Food & catering

• Waste prevention
• Storage & preparation
• Plate waste
• Reuse
• Recycling - composting
• Nutritional & healthy diets

• Ghent, Belgium - catering contracts
• Torino, Italy - healthy sourcing
• Copenhagen, Denmark - organic
• UK Public sector catering, waste prevention, HAFS
• Rijkswaterstaat, Netherlands - food waste recycling
Workwear & textiles

• Encourages innovation in design
• Reduces carbon impacts
• Reduces toxicity
• Increases durability
• Increases reuse and recycling at end of life

• Rawicz Hospital, Poland – nurses uniforms
• Herning, Denmark – emergency services uniforms
• Rijkswaterstaat, Netherlands – lock-keepers uniforms
• Nurses uniforms – Wales, UK
Construction

- Design for deconstruction
- Recycled content
- Multiple REBMs
- Public private partnerships
- CO2 reduction
- End of Life - closing material loops
- Refurb & maintenance
- Cost savings

- Brummen, Netherlands - circular Town Hall
- Netherlands – DBFM, Rapid circular contracting
- BAR HQ, Portsmouth, UK – Whole Life Costing & BIM
- Viaduc de Millau, France - BFOT
Transport

- Bremen, Germany - public / private car sharing scheme
- Barcelona, Spain - electric vehicles
- Dutch Government – car sharing & leasing models

- REBM - Mobility as a service
- Lower carbon footprint
- Improved air quality
- Innovation – public-private partnerships
ICT & electricals

- Design for repair
- Recycled content
- Multiple REBMs - e-recovery, take-back, pass/sell on
- Lifetime optimisation
- CO₂ reduction
- End of Life – resource security

- Utrecht, Netherlands – IT take-back; secure reuse
- Schiphol Airport, Netherlands – lighting as a service
- BZK, Netherlands – e-recovery, IT-donations
- UniGreenScheme, UK - Lab equipment re-sale and re-use
Furniture

- Cambridge NHT, UK – hospital beds
- ProRail, Netherlands – furniture and carpeting
- Sweden – furniture servitisation
- London, UK – office mobile asset management
- Public Health Wales, UK – desk reuse & repurposing

- REBM – furniture as a service
- Resource efficient design
- Recycled content
- Lifetime optimisation
- Reuse opportunities
- SME opportunities
Well Being Context

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WFGA - How waste fits into the well-being goals
• **Reduction** in waste disposal **costs**

• **Reduction** in reputational **risk** / increase in CSR

• **Leading by example** in procurement activity and environmental best practice

• Through public sector procurement Welsh business in the supply chain will be encouraged to develop more sustainable products and services using resources more efficiently, including higher recycled content

• The Public Sector making an increased contribution towards the production of high quality recyclate that can be used in a **closed loop** process **contributing** towards a **circular economy** for Wales

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Anticipated outcomes for the public sector
• Realising the benefits in relation to preventing waste and using products for longer, finding an outlet for reusable items that enhance social outcome for the people of Wales

• Good alignment to the achievement of Well-being goals as outlined in the Well-being of Future Generations Act 2015

• Better collaboration between public bodies to explore opportunities for efficiencies in waste and resource efficiency contracts

• Legal compliance with waste legislation

• Comply with EU directive, TZW strategy & WFGA

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Anticipated outcomes for the public sector
The public sector
- is an important cog in the circular economy wheel (one planet living)
- has a major economic, social and financial impact
- uses a lot of resources
- employs a lot of people
- hosts a lot of visitors
- has a significant environmental impact
- will need to comply with the Environment (Wales) Act 2015 provisions
Any questions?
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EREK Workshop

Exercise – High potential product groups

Mervyn Jones
Cuno van Geet

60 minutes
Your views on the circular economy
‘The ‘best’ circular option?

C2C

or

Lifespan
‘The ‘best’ circular option?

Low Energy Asphalt

or

Asphalt with high % recycled materials
‘The ‘best’ circular option?

or

2nd hand luminaires

or

Pay for use: ‘light as a service’
Where’s the biggest impact?

Degree to which specifications are fixed

Sustainability gains

Preparatory stage  Stage 1: Specification  Stage 2: Selection  Stage 3: Contract  Stage 4: Order  Stage 5: Monitor  Stage 6: Aftercare  Utilisation stage
Selecting high-potential product groups

Why?
• Helps to select product groups for circular procurement pilots with high opportunities for success
• A successful pilot helps scaling up to more pilots

Various ways
• How to determine high-potential product group:
  o Based on complexity - lifetime
  o Based on spent - risk
  o Based on risk - scope
  o Based on influence - scope
Product complexity vs technical lifetime

- Well-suited for circular procurement:
  - Average product complexity
  - Average technical lifetime

The higher the product complexity, the harder to re-use existing materials and components.

The longer the technical lifetime, the harder to close the circle after the product lifetime.

Low complexity and low technical lifetime? Re-use on a material level.

Selecting high-potential product groups
Product complexity vs technical lifetime

- Well-suited for circular procurement:
  - Average product complexity
  - Average technical lifetime
What are the high-potential product groups for your organisation?

Spend
• How big is the category spend?

Risk
• What level of risk does this category pose?

Scope
• What scope have you to improve sustainability?

Influence
• What influence have over this market and supply chain?
Benchmarking

Circular procurement is more than just procurement criteria
- 5 themes:
  - Policy, Strategy & Communications
  - Procurement Process
  - People
  - Engaging Suppliers
  - Measurements & Results
- 5 levels:
  - Foundation
  - Embed
  - Practice
  - Enhance
  - Lead

What is your current position?
Collaboration is the key

Why is external collaboration important within circular procurement?

Collaboration is the key.
Discussion session

Cuno van Geet

30 minutes
Lunch
45 minutes
Best Practice
From Wales

EREK
European Resource Efficiency Knowledge Centre
Sophie Howe
Future Generations Commissioner for Wales
Integration  Collaboration  Long term  Involvement  Prevention

Integreiddio  Cydweithio  Hlrdymor  Ymgyfraniad  Atal
Acting today for a better tomorrow
• City and County of Swansea
• Rebecca Jones
• Nerys Williams
• Simon Jones
A sustainable approach to new ways of working.

Presented by-
Rebecca Jones.
Nerys Williams.
Simon Jones.
SAME OLD WAY

SOMETHING NEW

Remploy
Putting ability first

#tearuptheagenda
ADDED BENIFITS

Increased Workforce

Investment in Remanufacturing Equipment

Nearly New Approved
SUSTAINABILITY BENEFITS

135 kg CO₂ SAVING
Equivalent to flying from Cardiff to Frankfurt and BACK!

29.1 tonnes CO₂e saving
486 items of furniture have been re-used or remanufactured
7.8 tonnes saved from landfill
61% reduction in water consumption in manufacturing

City and County of Swansea
Dinas a Sir Abertawe
• Michael McLeod
• UniGreen Scheme
UniGreenScheme
The Asset Resale Service For Universities

1. We collect your items - Quickly, efficiently & safely
2. We store them offsite - Within our facilities
3. We arrange their sale - With reputable buyers
4. We share the revenue with you - Based on a fair pricing structure
5. We give you a report on the metrics - Reducing your carbon footprint
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@UniGreenScheme

Green Gown Awards 2017 Finalist
Roundtable Discussion

Susan Jay
WRAP Cymru
Closing Remarks

Carl Nichols
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