From evolution to revolution

Systemic tools for circular economy

Seminar for EU environmental attachés

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BlindSpot Think Tank

- 4 decades of unsolved problems. We're missing something?!

Circular economy

- A systemic problem; use system management or system change?
- 48 years warming-up; the race starts now!

Tools for system change to circular economy "4 real"

1. Decision tool: precycling
2. Market-based tool: precycling premiums
3. Political tool: new growth pathway

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NATO Science for Peace and Security Series - C:
Environmental Security

SEVEN POLICY SWITCHES FOR GLOBAL SECURITY
JAMES GREYSON
BlindSpot, Lewes, UK
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Designing solutions to match the problems

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System management or system change?

Large complex problem set
Large complex solution set

Small simple goal set
Small simple tool set

We can manage the complexity by change **of** the system not just change **in** the system.

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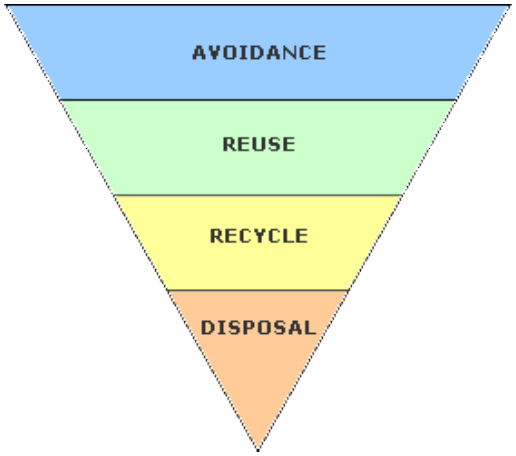
48 years warming-up; the race starts now!

- 1966 Kenneth Boulding: Cowboy economy vs spaceman economy
- 1976 Walter Stahel: *Jobs for Tomorrow* report to European Commission
- 1989 Maureen O'Rorke: "Precycle – act now to stop waste"
- 2006 China National Plan: "It is an urgent strategic task for China to vigorously develop the circular economy."
- 2006 BlindSpot: first economic tool to implement circular economy at scale
- 2014 European Commission Green Week, EU representatives: systemic approach advanced

#1: what guides decisions?

How the waste hierarchy was envisaged in the 1975 EU Waste Framework Directive



How the waste hierarchy is mostly used in practice

#1: to guide decisions and actions

Precycling is:

- Taking action now to ensure that resources remain as resources, for the economy or for nature, rather than adding to wastes in ecosystems
- Planning for non-waste; all products can be precycled
- Circular economy translated into practice
- Building capacity for circular economy
- Attending to the non-disposal options of the waste hierarchy
- A new perspective for dialogue, collaboration and innovation

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2: insurance can help prevent risks

Third party car insurance
- Obligatory
- Cheaper with lower risk

Recycling Insurance
- In EU WEEE Directive
- Premiums fund recycling
- Cheaper when more recyclable
- Works for recyclable items
- Can be extended…

#2: to design waste out of economics

- Circular economy '4 real' starts when built into markets
- A market-based tool can lead to every type of product being precycled
- Producers are responsible for checking what will happen with their product after use
- Their incentive is an obligatory premium 'insuring' against the risk of products becoming waste in ecosystems
- Low waste-risk means paying low or no 'precycling premium'
- High waste-risk means paying a premium that's spent by insurers to cut waste-risk everywhere
- This extends existing WEEE Directive 'recycling insurance'

#2: precycling insurance example

Kettle A

- Low effort by producer
- High waste-risk
- Pays premium (eg €4)
- Insurer spends premium (eg on open repair info)
- Producer rethinks

Kettle B

- High effort by producer
- Low waste-risk
- Pays no premium
- Public sees circular plan
- Producer continues to rethink; “how could we do more with less?”

In both cases

- Producers choose what to do
- Public sees open process
- Government oversees
- Shoppers and investors choose freely

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#2: advantages

1. Non-prescriptive; more innovation with less regulation
2. Small premiums can create large shifts
3. Simpler; works for all products, all resources, all sectors and many issues
4. Detached from Member State budgets
5. Compatible with most other economic and regulatory tools; eg a tax or deposit scheme can reduce waste-risk
6. GDP growth friendly; gain in new activity > loss of old activity
7. Decouples GDP from resource impacts – finally!

#3: examples of self-limiting

- Default growth pathway: get growth by destroying what's needed for future growth
- Default alternative: get lower impacts by looking 'beyond GDP'
- Default green economy: more investment in selected sectors
- Default regulation: more circular economy requires more rules

#3: to unlock circular mindsets in politics

- Policy framework is key to wider change
- Simple choice of 2 growth pathways
- Choice of economic tool determines outcomes with GDP, prices, and other goals
- Get highest possible GDP and lowest prices by preventing (rather than paying) externalities

The race is on!

- Race against time to stop ‘branch-cutting’
- Race to capture opportunities
- Europe could and should lead the world

  …by developing and using these new tools
- Let us help you
- Thanks – questions welcome!

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Will our product add to levels of wastes in ecosystems?

Waste-risk is quantifiable.

- What proportion is recyclable or biodegradable?
- What proportion is handled by producer's addition to processing capacity of nature or industry?

Waste-risk is a proxy for impacts.

- Measurement and prediction of all impacts for all products is impossible (due to complexity)
- Can apply to raw materials,chemicals, components, fuels and infrastructure (not air, water and earth)
- Sustainable development = economic, societal and ecological actions to cut waste risk.

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Precycling = building capacity for circular economy

1. Cut dependence on substances from the Earth's crust that accumulate as ecosystem waste
2. Give products (any part of the 'technosphere') a future as a resource for nature or people
3. Expand the diversity and extent of ecological habitats
4. Meet more people's material and non-material needs

TNS 'system conditions' for sustainable development

Ref: Greyson 2007, Systemic economic instruments for energy, climate and global security. NATO Science Programme. Link

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Principles for investing premiums

- Transparent; public are crowdsourced watchdogs
- Work preventively; solutions at source, not clean up
- Aim high; net positive impacts
- Add to people's options for living and working
- Support people's engagement and collaboration
- Fit together into staged plans for the future

Ref: Greyson 2007, Systemic economic instruments for energy, climate and global security. NATO Science Programme. Link

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What about prices and costs?

- Circular economy with precycling premiums allows future prices and costs to be minimised
- Continuing linear economy is a pathway to continuing rising and volatile prices and costs
- The price premiums of precycling can paradoxically lead to lower prices and costs than today's 'designed-to-fail' products
- In today's mindset, activities that don't fit linear economy are 'costs'.
- Precycling activity in a future circular economy will be just 'activity', that provides jobs and adds to profits and GDP

A future for GDP

- Circular economy is a success strategy for future GDP
- The historical linear growth strategy is branch-cutting
- A less-linear, more-circular growth strategy is branch-cutting
- Systemic tools can cut most impacts without lower limit; aim for 'net-positive' growth strategy
- Added premiums add to GDP; spending of premiums adds to GDP
- Spending of premiums can leverage massive extra activity
- Clear signals to business and investors adds to GDP