Sustainability Driving Innovation

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A path towards sustainable development asks for a need driven multi-stakeholder innovation approach!

Thus, we have to re-invent innovation.
The essence of the challenge

The current **unsustainable** global socio-economical system

Source: WWF Living Planet Report 2006
"I'm afraid you have humans."
The essence of the challenge

The current **unsustainable** global socio-economical system

**Leading innovation question:**
How are we going to increase people’s quality of life while staying within the limits of our ecosystem capacity?

Source: WWF Living Planet Report 2006
Innovation Framework for Sustainable Development (of Health & Well-being)

In the Brundtland report (1987) we find the following definition:

**Sustainable Development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future as well as present needs.**

Dimension: quality of “stakeholder influence” capturing the who, where, how?

Direct Influence

Indirect Influence

Developing & living in a new socio-economic eco-system
A Transformation required?

From

Maximizing the single parameter ECONOMIC VALUE
(created “unsustainable situation”)

Towards

Optimizing a set of parameters for MULTIPLE STAKEHOLDERS
(aims for “1-planet” living)

1950’s → 1960’s → 1970’s → 1980’s → 1990’s

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Gloom & Growth & Anxiety & Prosperity & New Markets

Renewal Liberation Constraints Globalization & Realities

2010’s → 2020’s → 2030’s → 2040’s → 2050

The turbulent twenties Responsible thirties Innovative forties Formidable Close to 1-Planet Living

The Economist: recent decades

WBCSD Vision 2050: future decades?

PHILIPS

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Example: Climate Change

FROM ‘(post-)industrial’ paradigm TO ‘???’ paradigm

<table>
<thead>
<tr>
<th>From…</th>
<th>through</th>
<th>…towards</th>
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<tbody>
<tr>
<td><strong>Individual</strong></td>
<td>CO2 intensive lifestyles</td>
<td>Personal attitude &amp; consumption pattern</td>
</tr>
<tr>
<td><strong>Economy / Business</strong></td>
<td>Structured along production &amp; supply oriented industry sectors (car, railway, oil, …)</td>
<td>Transform supply &amp; value chains in need driven value nets</td>
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<tr>
<td>e.g. Subsidies validating the status quo</td>
<td>Policies &amp; legislation</td>
<td>Incentives / stimuli for system innovation → Towards a new effectiveness</td>
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<tr>
<td><strong>Society / Government</strong></td>
<td>Dependence from fossil fuel based energy &amp; electricity</td>
<td>Redefine energy industry= production &amp; supply</td>
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<tr>
<td>“Locked in” centralized high tech infrastructures</td>
<td>Independency from high quality infrastructures</td>
<td>Autonomy via distributed systems</td>
</tr>
<tr>
<td><strong>Nature / Environment</strong></td>
<td>Peak oil; cheap oil, → increased water consumption; food vs. fuel, etc.</td>
<td>Find a solution to “tragedy of commons”</td>
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What’s happening?

1. Local immersion
2. Identify needs
3. BoP solutions through multi-sector approach
4. Validation
5. Pilot biz model
6. Upscale

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The framework can lead to a solution map:

Example: Philips Lighting

**Beyond efficiency increase**  
(_within existing paradigm)

- From conventional light sources to **energy efficient lighting**
- From component & product to **lighting systems & solutions**
- From technology push to **end user driven**

**To a new effectiveness:**  
_(develop new paradigm)_

- From CO2-efficient to **CO2-neutral closed loop lighting solutions**
- From lighting solutions to **integrated building systems & solutions**
- From end user driven to **Multi-stakeholder co-creation**  
  (enabling sustainable development)

Some transformations in the disruption zone:

- From fossil-fuel based renewable energy
- From products & solutions eco-system design
- From “linear” value chain closed loop value net
- From end-user driven “network” innovation

* http://www.design.philips.com/probes/projects/sustainable_habitat_2020/index.page
What we are learning:

- **PIONEER’S PARADOX**: how do you phrase your new understanding in such a way that it captures the essence of the new yet can be easily understood by others?

- **REDEFINE VALUE**: sustainable development has to become part of business: seeing it as an innovation driver is a powerful perspective; where are the innovation & business opportunities?

- **LOCK-IN & REBOUND EFFECTS**: how do we innovate beyond existing high quality infrastructure, behavioral pattern and KPIs? How to make sure that efficiency increase is not overcompensated by increased consumption?

- **SYSTEM THINKING & ACTING**: how do we ensure that we solve the real problem rather than optimize sub-solutions?

- And: … **OPEN INNOVATION** for sustainable development is easier said than done …

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A new innovation paradigm is emerging asking for Creativity, Courage and Confidence in our common better future..
Congratulations, you have humans!