

Governance and Life-Cycle Analysis. Opportunities for Going Beyond ISO-LCA

CALCAS-workshop Brussels September 27 & 28, 2007

LCA and Governance – a General Overview

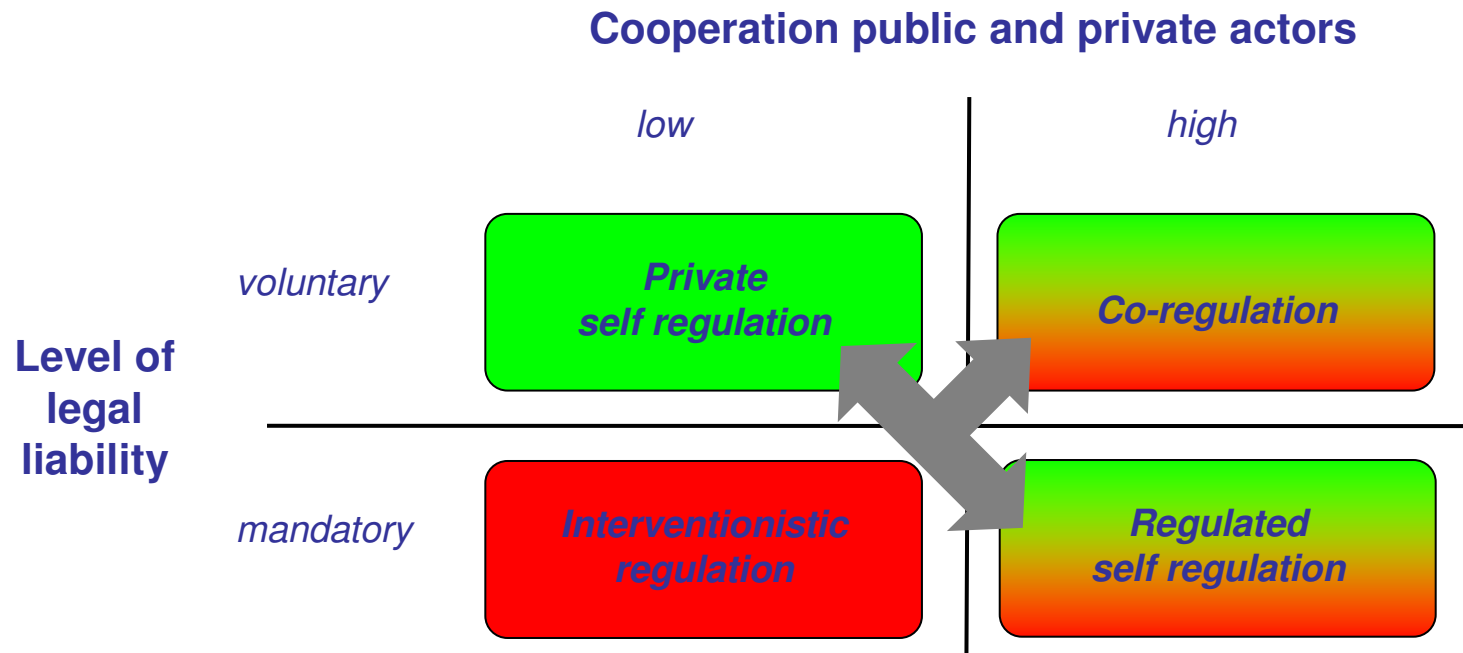
Dr. Frieder Rubik (iöw)

Henrik Vagt (ffu)

Structure

1. Regulation patterns
2. Governance and policy
3. Governance and business
4. Conclusions – and questions...

Types of (environmental) regulation



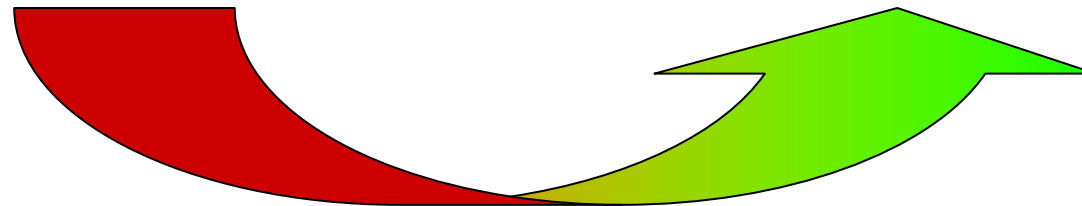
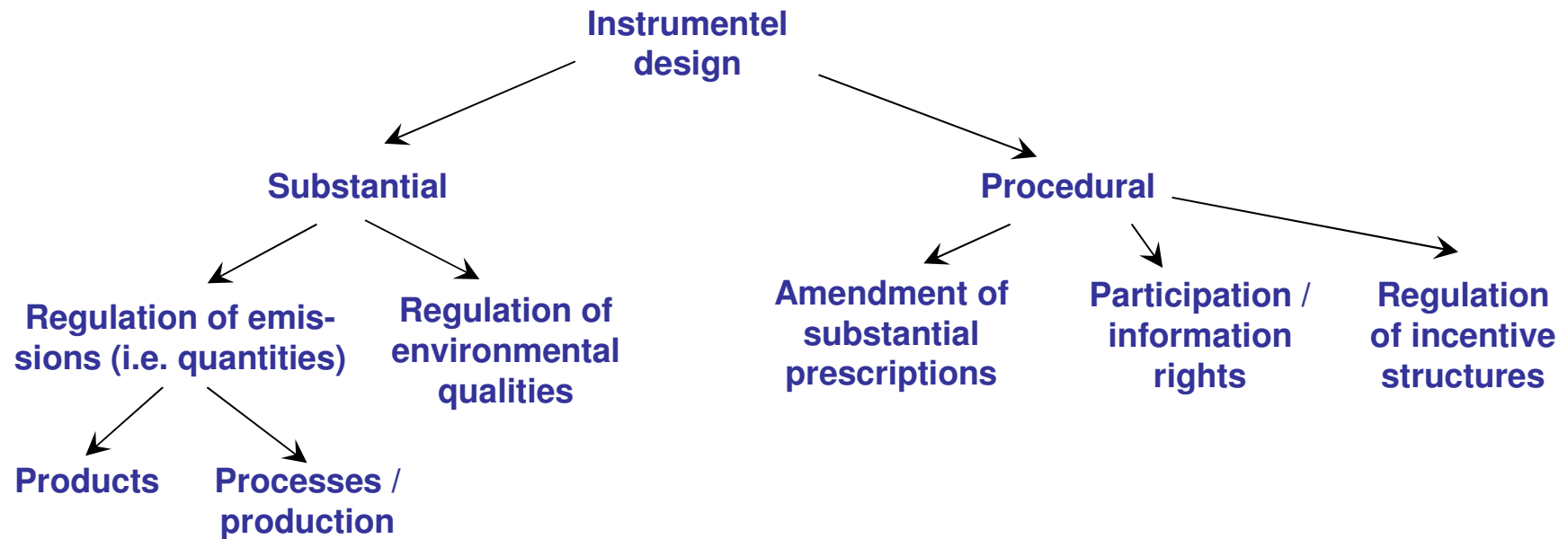
Source: Knill 2003: 65

New governance → Change of roles...

- General tendency:
 - ▶ “Change of policy form“ (Mayntz)
 - ▶ “Co-operative state“ (Ritter)
 - ▶ “New governance“ (Priddat 2000)
 - ▶ “Government-society interactions“ (Kooiman 1993)
 - ▶ Government policy → governance policy (Jordan 2003)
- Governance refers to a basically non-hierarchical mode of governing, where non-state, private corporate actors participate in the formulation and implementation of public policy (Rhodes 1997).
- ➔ Increase importance of non-governmental actors
 - ➔ support of governmental activities
 - ➔ delivery of “own“ contributions

1 Regulation patterns

New governance → Change of instruments...



Source: Knill 2003: 63

Change (at least: supplementation) of instruments:

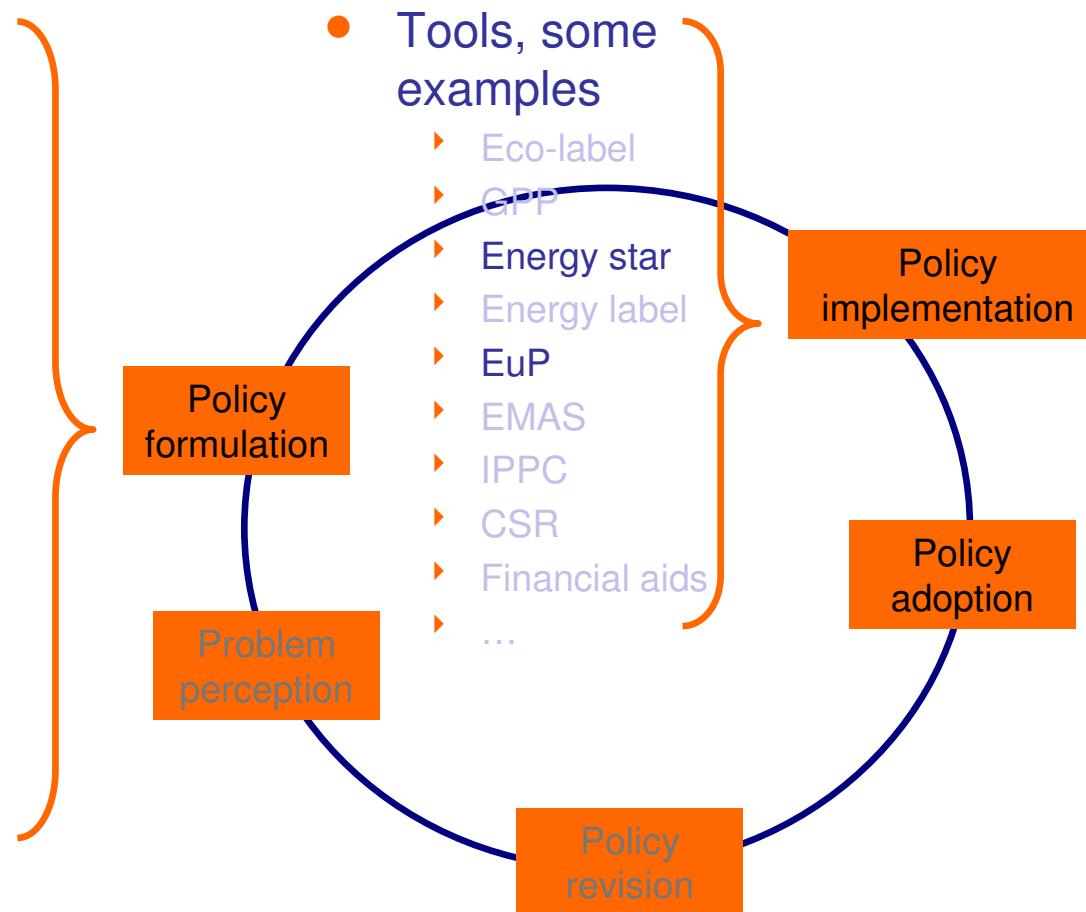
1st generation → 2nd generation

“New” governance & LCA

- Increase of science-based (environmental) policy
- Increase of politicization of science
- (Old) government must justify policy → Legitimation
- (New) governance needs knowledge → Science based policy along the policy-cycle
- ➔ “knowledge for transition”
- ➔ Recursive learning processes on different levels
- ⇒ LCT & LCA-tools as supportive approaches in this context

EU-Policy concepts, programmes & tools

- Concepts, some examples
 - ▶ Lisbon strategy for growth and jobs
 - ▶ Sustainable development strategy
 - ▶ ...
- Programmes, some examples
 - ▶ Innovation Policy
 - ▶ Industrial policy ↪
 - ▶ SCP & IPP policy ↪
 - ▶ ETAP
 - ▶ Strategy for sustainable use of natural resources
 - ▶ Strategy for Prevention and Recycling of Waste
 - ▶ Trade policy
 - ▶ Structure policy
 - ▶ Common agriculture policy
 - ▶ ...



The assessment criteria

- Criteria:
 - ▶ “New” governance:
 - Has the approach / tool supported the shift from government to governance?
 - ▶ Relevance of LCT:
 - Has LCT become (internally) institutionalised within policy?
 - Does LCT provide an (internal) input for policy making?
 - ▶ Relevance of LCA-tools:
 - Does policy ask for and use LCA-tools for policy making?
 - ▶ Diffusion of LCT & LCA-tools:
 - Does policy stimulate the (external) institutionalisation and adoption of LCT & LCA-tools especially within business?

➔ However:

➔ Impacts not assessed! Out of the scope of this “test”!



2 Governance and policy

Example I: IPP & SCP

References: COM (2003) 302 ①; COM (2007) Consultation background document ②





Criterion	Assessment	Remarks
“New” governance	☺	<ul style="list-style-type: none"> Regulation → incentives & informative tools Support of networks ② Pilot projects ① Formal & informal IPP network
Relevance of LCT	☺	<ul style="list-style-type: none"> LCT as core principle, mentioned several times Consideration of consumption phase underdeveloped ②
Relevance of LCA-tools	☹	<ul style="list-style-type: none"> LCA platform
Diffusion of LCT & LCA-tools	☺	<ul style="list-style-type: none"> Promotion of application of LCT ② FP 7, ETAP ② LCA data centre Eco-design of non energy-using products ②

Implications

- *Strengthening of consumption phase*
- *Support of diffusion mechanisms*
- *Institutionalisation and diffusion within COM*

Example II: Innovation Policy

References: COM (2005) 488; COM 2005 (GPP Handbook); COM (2006) 502; COM (2006) 589; COM 2006 (Aho Report)





Criterion	Assessment	Remarks
“New” governance		<ul style="list-style-type: none"> Support of public-private networks, cooperation, clusters Combination of different policy instruments Interlinkages with other policy initiatives (ETAP)
Relevance of LCT		<ul style="list-style-type: none"> No consideration of consumer behaviour Intends to strengthen the role of GPP → a rather superficial commitment to LCT in environmental and economic terms Weak reference to environmental aspects
Relevance of LCA-tools		<ul style="list-style-type: none"> No direct reference to LCA-tools (however, only strategy papers which have to be made more concrete in single initiatives)
Diffusion of LCT & LCA-tools		<ul style="list-style-type: none"> Strong reference to FP7 where core principles of the innovation strategy are taken up Commitment to eco-innovation and eco-efficiency

Implications

- Strengthen the role of (life-cycle based) environmental criteria for innovation
- Strengthen LCT in general and consider consumption phase

Example III: EuP

References: COM (2005) 32; http://ec.europa.eu/enterprise/eco_design/relactiv.htm

Criterion	Assessment	Remarks
“New” governance		<ul style="list-style-type: none">■ Consultation forum of stakeholders■ Equivalence of EU implementing measures and voluntary agreements■ Four types of declarations of conformity
Relevance of LCT		<ul style="list-style-type: none">■ Consideration of the whole life cycle
Relevance of LCA-tools		<ul style="list-style-type: none">■ Embedded in preparatory studies (and methodological study)
Diffusion of LCT & LCA-tools		<ul style="list-style-type: none">■ Business’ LCA → input to preparatory studies■ LCT surely■ Demonstration of conformity → a.o. by eco-profiles

Implications





■ -.-

2 Governance and policy

Example IV: Energy star



















References: COM (2007) Agreement USA-EU; COM 2422/2001

Criterion	Assessment	Remarks
"New" governance		■ Voluntary tool
Relevance of LCT		■ Focus on energy consumption
Relevance of LCA-tools		■ No relevance
Diffusion of LCT & LCA-tools		■ No stimulation due to single-issue criterion

Implications

- *Linkage with energy label (→ LCT)*
- *Supplement requirements based on LCT*

Comparison of examples

	IPP & SCP	Innovation	EuP	Energy star
“New” governance				
Relevance of LCT				
Relevance of LCA-tools				
Diffusion of LCT & LCA-tools				

Policy & LCA – challenges and questions...

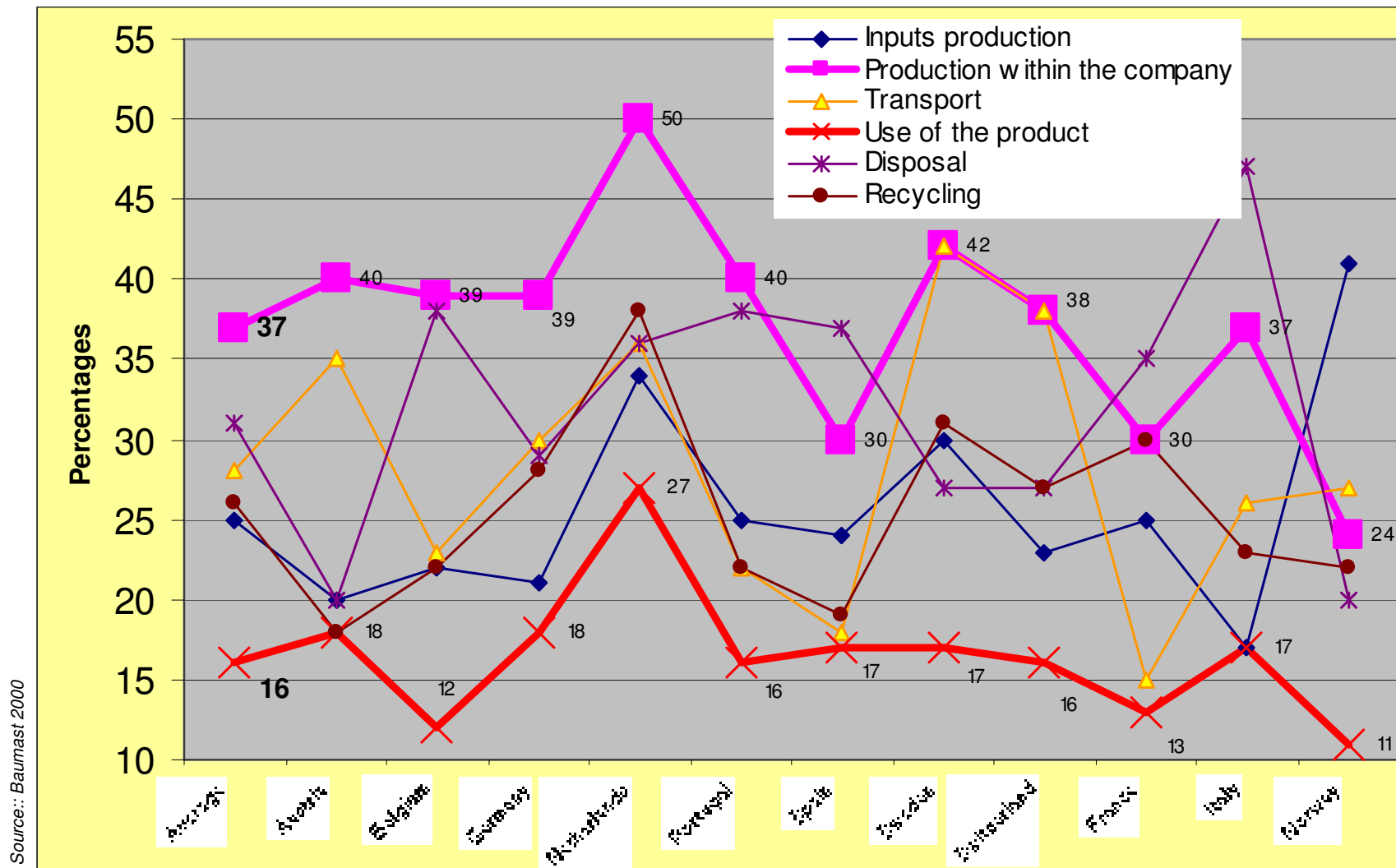
- Application intensity:
 - ▶ LCT so far embedded in border areas → core areas (trade, CAP) “underdeveloped”
 - ▶ LCT and learning → discursive processes?
- Application quality:
 - ▶ LCT not defined → anything goes?
 - ▶ Quality and impacts → (evaluative) assessments necessary
 - ▶ Smartness? Decision-oriented support?
- Governance quality:
 - ▶ Multi-level governance → LCT and subsidiarity?
 - ▶ Participation culture? Discursive-oriented support?
 - ▶ Diffusion intensity, forms and qualities?

Business' roles

- “New“ governance
 - ▶ involvement in policy processes (business as structural policy actor)
 - ▶ formulation, implementation and monitoring of LCT and LCA-tools in companies
 - ▶ co-operation with society & government
- Levels:
 - ▶ Business strategy
 - ▶ Implementation in the core business and departments
 - ▶ Operative application
- Empirical view on operative level:
 - ▶ Different studies
 - ▶ Own small survey in D, IT, NL and SW (56 LCA-active companies, mostly large, response rate 46%) [Neumann 2007]

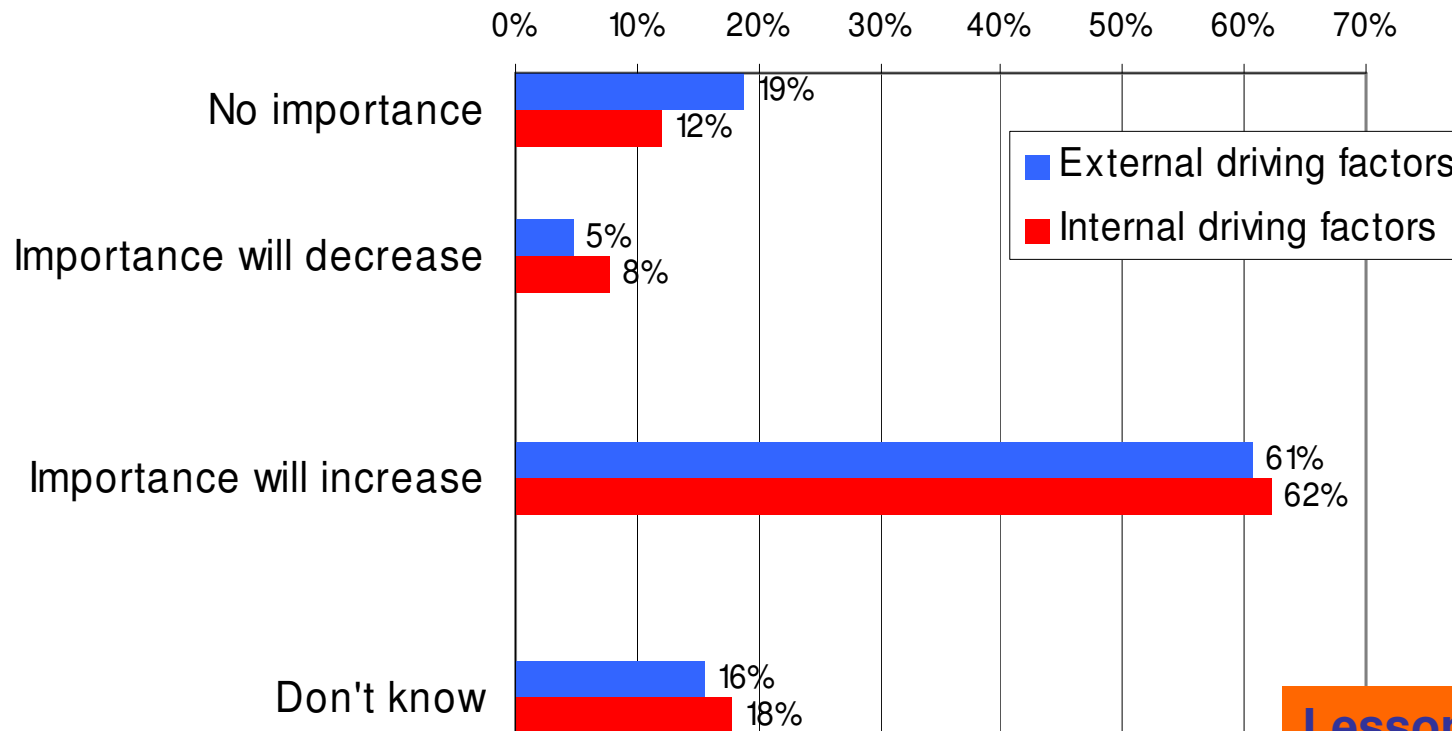
3 Governance and business

Importance of different life cycle stages (IBEB 1997)



3 Governance and business

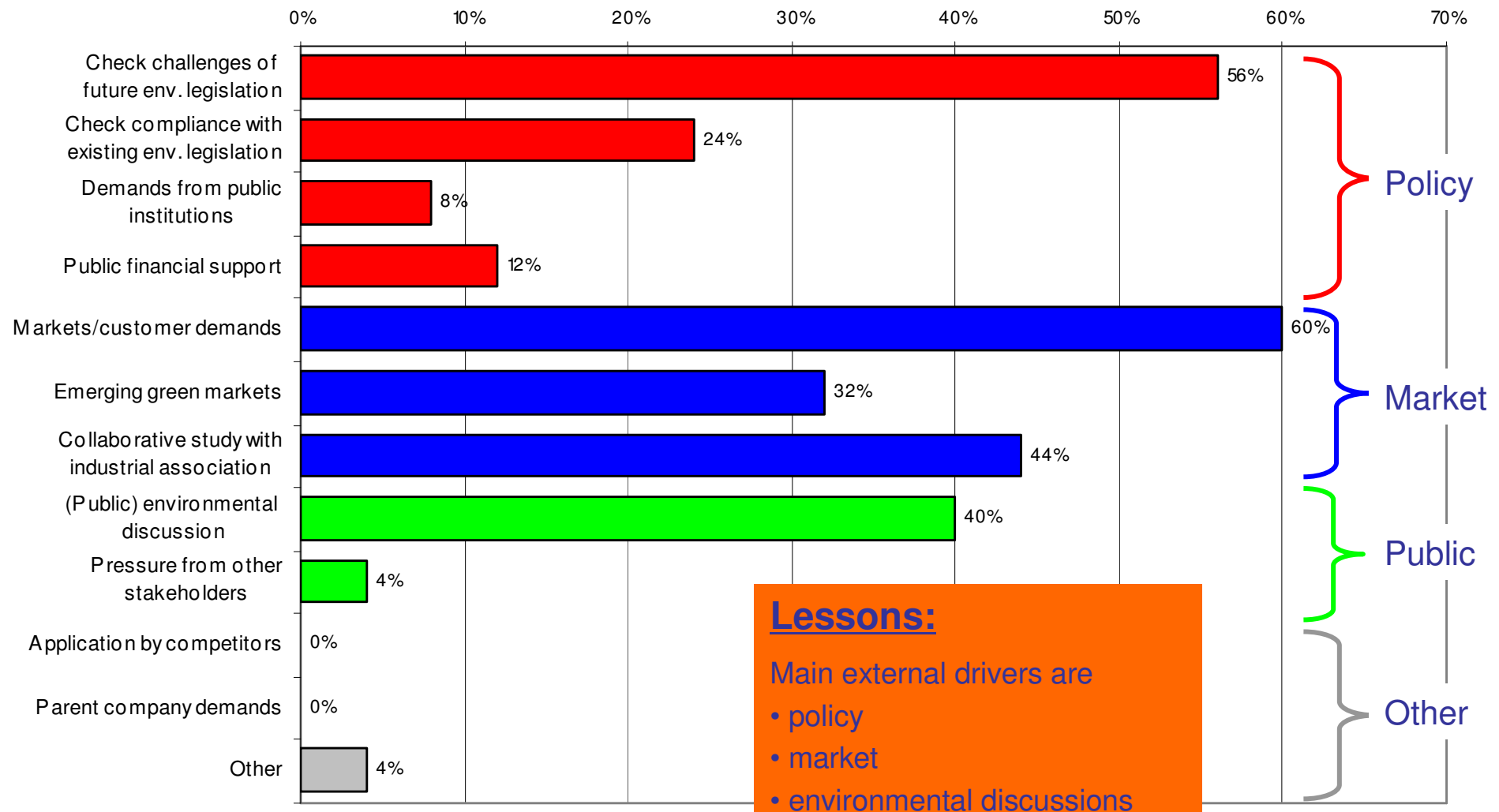
(Aggregated) drivers for application of LCA-tools



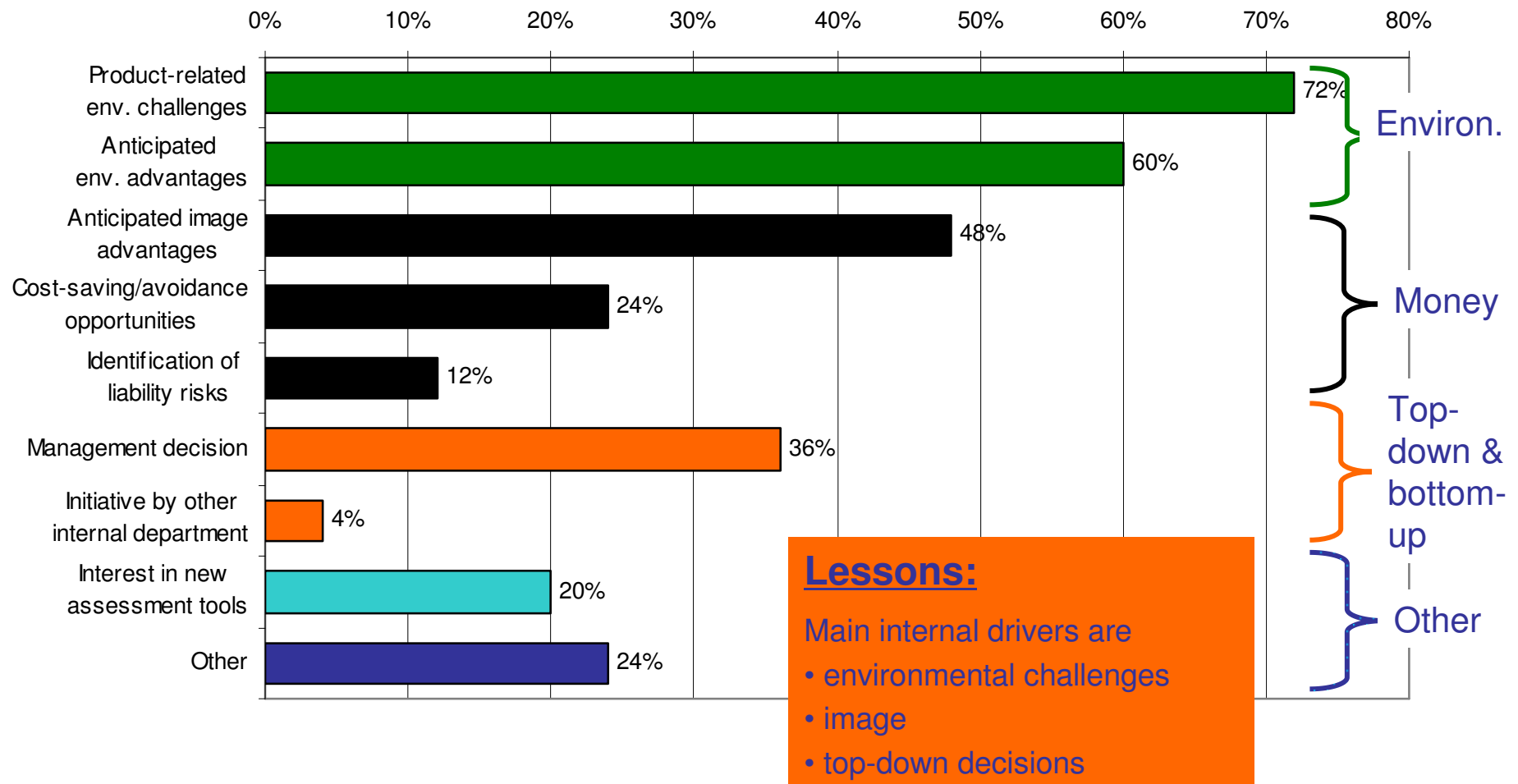
Lessons:

- Increasing importance of external and internal drivers expected

External drivers for application of LCA-tools



Internal drivers for application of LCA-tools



3 Governance and business

Application of LCA within several European countries

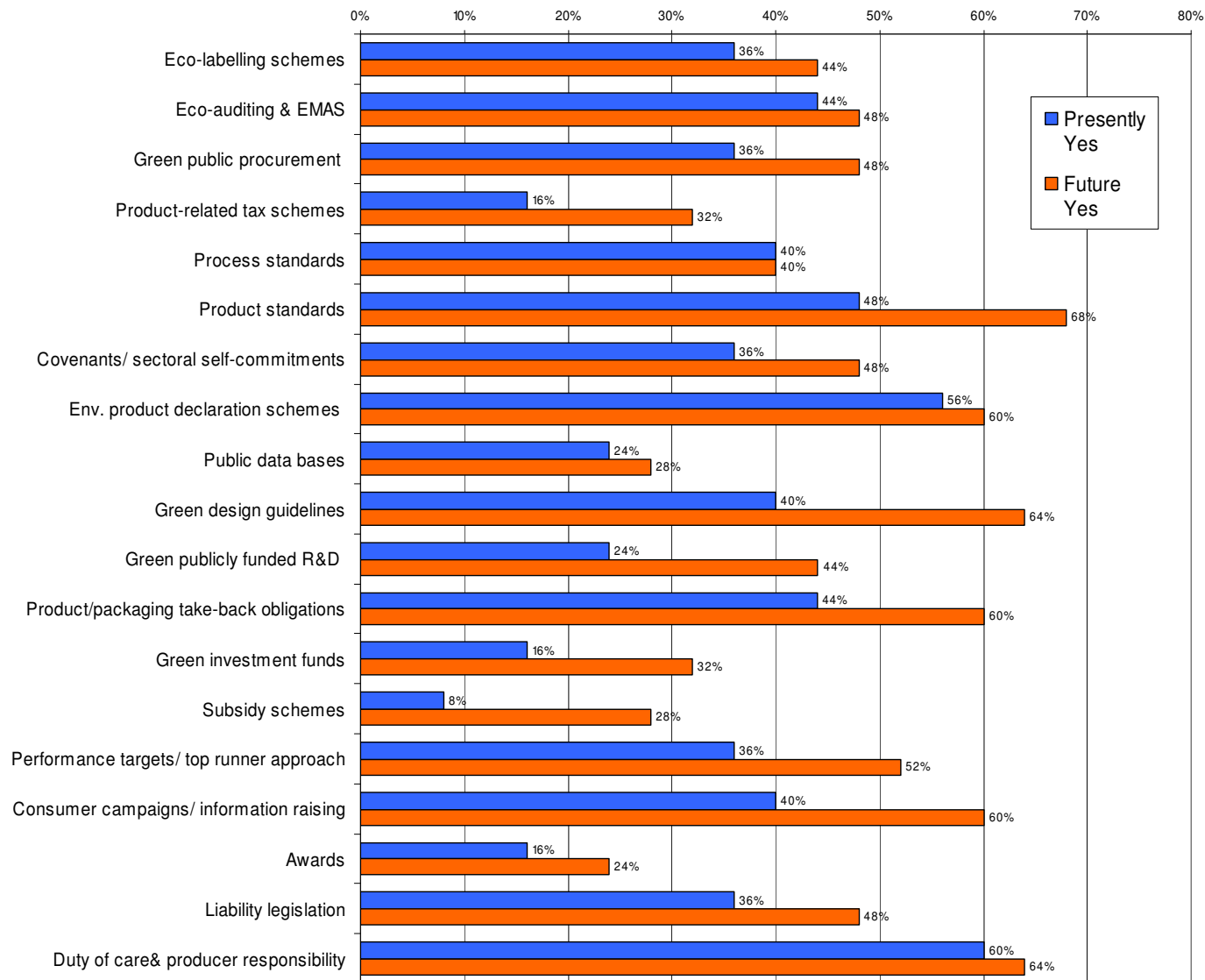
Country	1993/94	1995/96		1997/98	2000/01
Switzerland	-	35 % (n = < 262; > 10 Employees)		27 % (n = 250; > 50 Employees)	25 % (n = 181; > 50 employees)
Germany	-	-		-	16 % (n = 171; > 50 employees)
UK	-	-		-	14 % (n = 214; > 10 employees)
Hungary	-	-		-	8 % (n = 187; > 50 employees)
Austria	-	-		21 % (n = 190)	-
Finland	38 % (n = 37; large-scale companies)	19 % (n = 45; SME)	46 % (n = 31; large- scale companies)	-	-
Norway	40 % (n = 39; large-scale companies)	11 % (n = 100; < 100 employees) ¹		-	-
Sweden	25 % (n = 85; large-scale companies)	18 % (n = < 310; > 10 employees)	37 % (n = 110; joint- stock company)	-	-

Lessons:

- Old studies, ok for LCA.
- But: modest numbers

3 Governance and business

Policy influence on the application of life-cycle approaches



Lessons:

- Business expects increasing influence of policy
- Regulatory & voluntary instruments on the top

Business & LCA – challenges and questions...

- Application intensity:
 - ▶ Implementation: business adopts LCA-tools. But: LCA-tools “sedimented”?
 - ▶ Diffusion: vertical (up- & downstream) and horizontal efforts from key players?
 - ▶ Relationship border areas – core areas?
- Application quality:
 - ▶ Smartness? Decision-oriented support?
 - ▶ LCA & corporate governance?
- Governance quality:
 - ▶ New governance: LCA-tools as support for business?
 - ▶ Instrumental shift → widening of scopes → acceptance of science based responsibilities?
 - ▶ Participation culture? Discursivity?

Some concluding questions...

- New governance is (also) science-based
 - ▶ LCA → learning, legitimation and moderation
 - ▶ role of LCA-tools?
 - ▶ governance by
 - ... policy and ... society?
 - ... rational decisions?
 - ... LCA-tools?
 - ▶ Integration of LCT & LCA-tools in new policy style?
- “Beyond” ISO-LCA
 - ▶ Social and economic dimensions of sustainability
 - ▶ Weighting
 - ▶ Participation
- Border areas → Core areas
- Institutionalisation → rules, scripts and change agents
- Participation culture? How to organise reflexivity, discourses & dialogues?
- How to deal with the sphere of non-knowledge and uncertainties?
- Bridge to consumption phase (“sustainable consumption”)?



hvagt@zedat.fu-berlin.de

frieder.rubik@ioew.de