



Agentschap NL
*Ministerie van Economische Zaken,
Landbouw en Innovatie*

Policies and Measures for Organisational Change and Behaviour Models in Industry in the Netherlands

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21 oktober 2011

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*» Als het gaat om duurzaamheid,
innovatie en internationaal*



This presentation

NL Agency / Dutch goals

The questions

Effective Covenant Energy Policy: trail & error?

History of long-term agreements in the Netherlands

A model for behavioral analyses

The 7 Phases of the model

Outreach

Next steps

“Wrap up”

Q&A





NL Agency

Part of the Implementing Agency of the Dutch Ministry of Economic Affairs, Agriculture & Innovation

Clients: EU, Dutch Ministries & Embassies

Policy area's: Energy, Sustainability, Innovation & patents, Trade promotion.

Ca. 2400 Employees (2015: 1400)

Located in 4 cities (Sittard, Utrecht, The Hague and Zwolle)





Why do *the Dutch* care about energy?

Usual topics:

- Economic growth
- Security of supply

National interest

- Keep your industry competitive
- Realize EU & Kyoto goals
- With the size of the Netherlands, everyone is a multinational: act globally

Combining all these, NL Agency wants to deliver excellent implementation

One of the focal point is an energy efficient industry



The questions

1. What is the role of social science and how best can it feed into technology R&D programmes and policies? What is the realistic timeframe that would enable R&D programmes to synchronise with energy markets?
2. Which social considerations (e.g. health, environmental, lifestyles) can be adequately addressed? Which methods (e.g. impact assessments, stakeholder consultations, and target groups) are found to be the most effective in addressing them? At what point in the R&D planning process should they begin?
3. Which legal and regulatory frameworks are the most conducive to the transition process? What is a manageable scope for these policy frameworks – local, regional or national – and what is the relationship between them?
4. *Which economic considerations (e.g. sectoral shifts, employment, energy markets, infrastructure, or trade) are manageable and which financial instruments (e.g. taxes, subsidies, and investment credits) are found to be the most effective?*
5. Which methodologies and tools provide the greatest insights for planners? Which data sets (quantitative or qualitative) or indicators are the most effective for socio-economic impact assessments?
6. Which strategies integrate energy, economic, social and environmental issues? Which strategies integrate socio-economic impact assessments into energy plans?



Q.: What is the role of social science and how best can it feed into technology R&D programmes and policies?)

The practical approach (instead of modeling)

- Start with an existing method (here: the Long Term Agreements)
- Compare them with existing models
- Explain successes and failures with the model
- (Gather data for statistical analyses)
- Meanwhile accept “better than baseline” as a success, but continue work on monitoring & evaluation.

Three analyses:

- By the ministry (general programme evaluation)
- By National Court of Audit (policy evaluation)
- Annual Programme Evaluation & Monitoring (project level evaluation)



Q.: What is the role of social science and how best can it feed into technology R&D programmes and policies?)

1. ECN in the Netherlands have a policy group that run social/technology projects and feed them into research/technical projects
2. NL Agency runs programmes within mobility and build environment designed on social modelling. *(Q: Which strategies integrate energy, economic, social and environmental issues? Which strategies integrate socio-economic impact assessments into energy plans?)*
3. Other programmes (like industry) use (social) models to extend and improve programmes



History of long-term agreements in the Netherlands

- LTA's were introduced in the Netherlands in the early 90s.
- The agreements were developed and implemented by NL Agency
- The LTA is used in the Netherlands to refund the Green Tax.
- NL Agency reports annually on the savings made by the industry
- Data for this report are derived from the mandatory progress reports of industry itself. An independent program evaluation, commissioned by the Ministry of Economic Affairs underlines findings of the annual reports.



History of long-term agreements in the Netherlands

- LTA programs recently signed the LTA3 covenant for the period 2001-2020.

The main elements of the LTA3 are:

- An overall goal of 30 % energy efficiency improvement in the period 2005-2020;
- Trade branches will produce sector roadmaps aimed at long- term innovation in the field of energy efficiency; and
- The Dutch government supports the private sector with a number of instruments which are developed and maintained by the NL Agency



Q.: Which social considerations (e.g. health, environmental, lifestyles) can be adequately addressed?

Or how we got to the models.....



Effective Energy Policy: trial & error?

Four instrument groups used for Energy Efficiency in Industry:

- Judicial (Covenant with government / Environmental legislation)
- Economic (Tax reduction, innovation subsidies)
- Communicative (Annual report, success stories by peers)
- Structural provisions (Esco framework, ISSO 50001 on Energy management).

Effectiveness instruments hard to define:

- Intertwined
- “Contribution” of autonomous improvement obvious, but impossible to quantify
- Choices on policy (implementation) made on “believe” (*Elbert Dijkgraaf: Effective Covenant Energy Policy?*)

Energy efficiency measure patterns industry sector: development of measures by type over time (EU27, Norway, Croatia)

(AU, BEL, DK, FIN, FRA, GER, GRE, IRL, ITA, LUX, NLD, POR, SPA, SWE, UK, EU, BG, CY, CR, CZ, EST, HUN, LT, LV, MAL, NOR, PL, RO, SK, SLO)

**New market-based Instruments
(EU ETS)**

Co-operative measures (VA/NA)

Coop: Co-operative Measures
 Cros: Cross-cutting with sector-specific characteristics
 Fina: Financial
 Fisc: Fiscal/Tariffs
 Info: Information/Education/Training
 Le/I: Legislative/Informative
 Le/N: Legislative/Normative
 Mark: New Market-based Instruments



Financial measures

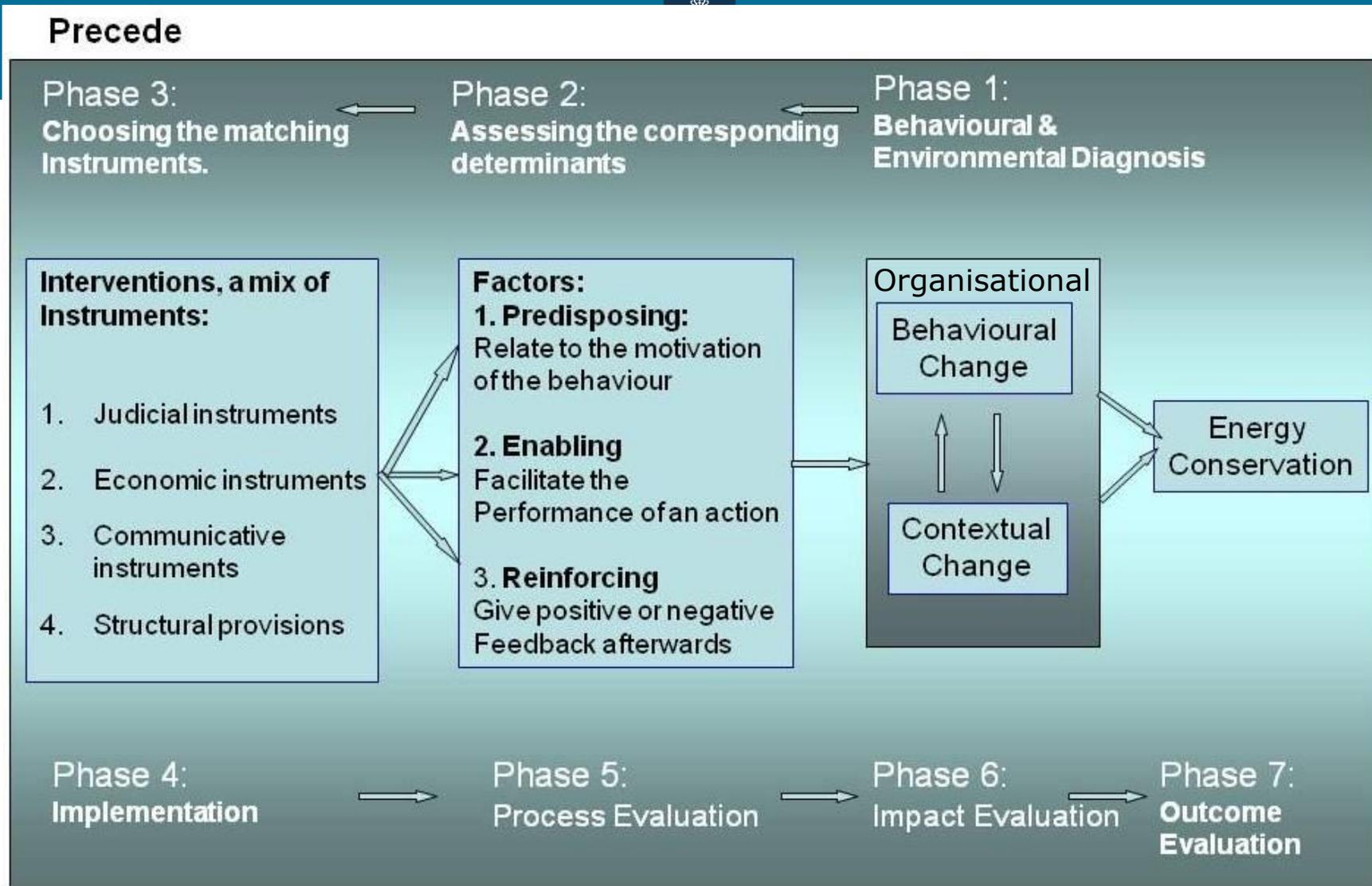
Information/Training

Voluntary/Negotiated agreements loose "market shares"

ADEME



LTA as an energy efficiency instrument for industry



Proceed

Precede–Proceed Model (Modified from Green and Kreuter, 1999)



Phase 1: relevant changes

Decide on energy efficiency:

(Outcome of interview among participants)

- Because it pays
- Because you get a tax refund on top
- Because it makes you look green
- Because you can avoid local regulation
- (Because it's the way to stay in business)





Phase 2: assessing corresponding determinants

Predisposing factors:

- Making money
- Pride on “craftsmanship”
- Minimize public interference



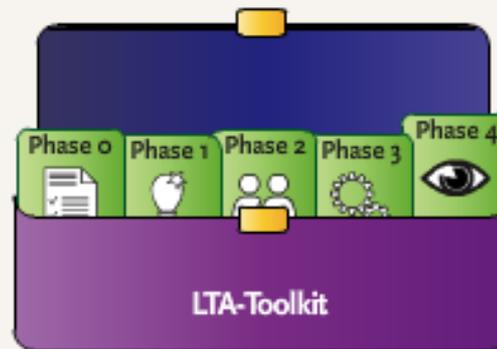
Enabling factors:

- Energy management
- Good examples
- (Internet) Toolkit





Phase 3: Right instruments



The LTA-Toolkit

You can click on each phase in the LTA timeline to learn about the tasks and tools that have been identified for each phase.

The partners that participate in the LTA Uptake project can assist you in building an LTA in your country.

At present the LTA Toolkit is under development. The LTA Toolkit is continuously improved until June 2009, when the EU LTA Uptake project will end. Your suggestions for improvement are very welcome.

Please use the "comment" button on each page for sending your feedback.

phase 0
preparation

phase 1
Initiation

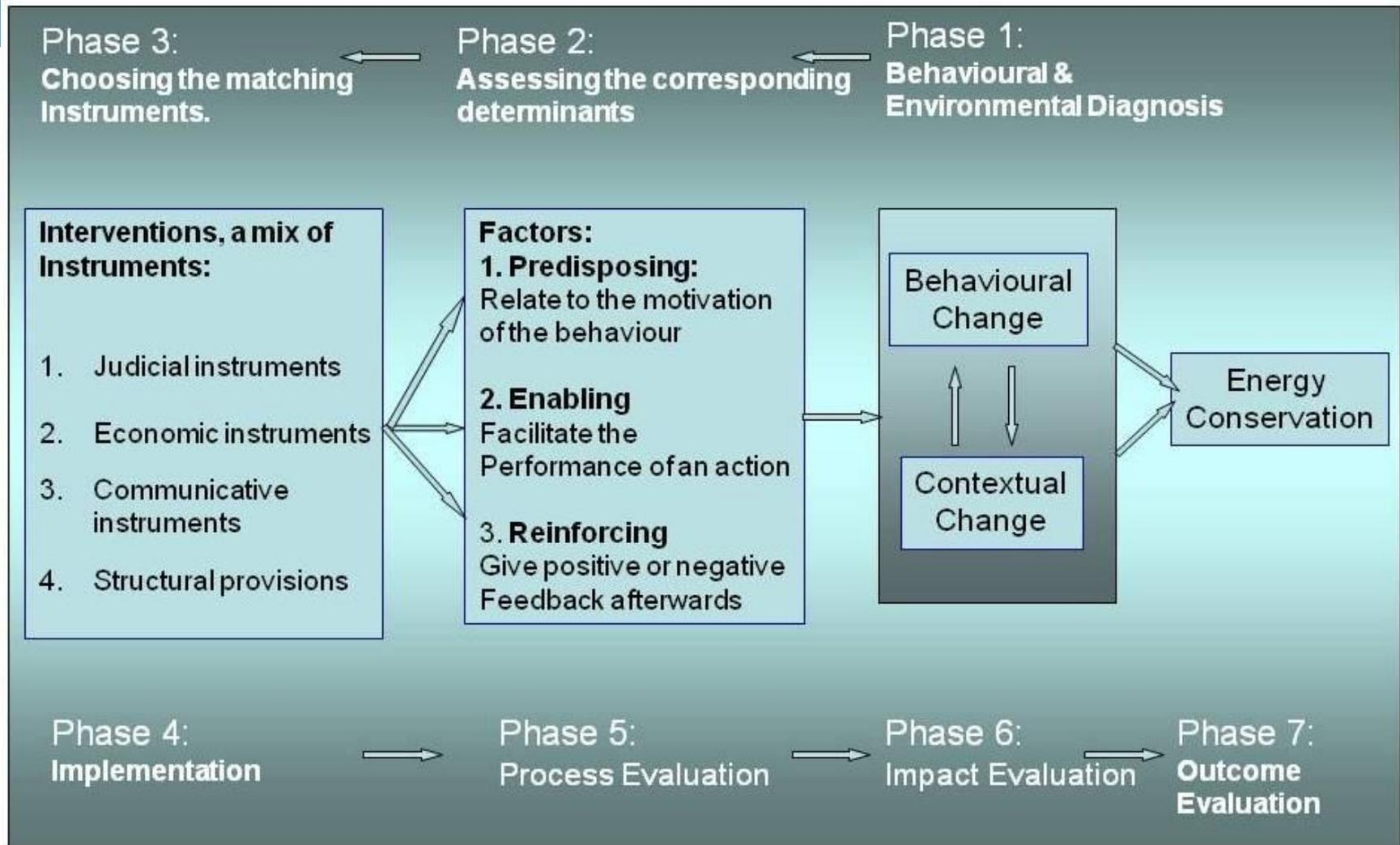
phase 2
Negotiation

phase 3
Implementantion

phase 4
Evaluation

Toolkit overview and
tool summaries

Precede



Proceed

Precede–Proceed Model (Modified from Green and Kreuter, 1999)

Other information

Definitions and Specifications

Package Tools/Information

Review and
Corrective
Actions

Energy
Audits

Best
Practices

act plan

Measure
lists

Getting started

Full Energy
Management
Checklist

Energy Team

check do

Energy Policy
& Regulations

Monitoring and
Targeting

Energy
Management
Model

Support
programmes
and Links

Benchmarking



Q: Influence on research

Influence on technological research:

Material lists have to be used in the planning, they are designed and maintained based on the ALARA principle.

They look at:

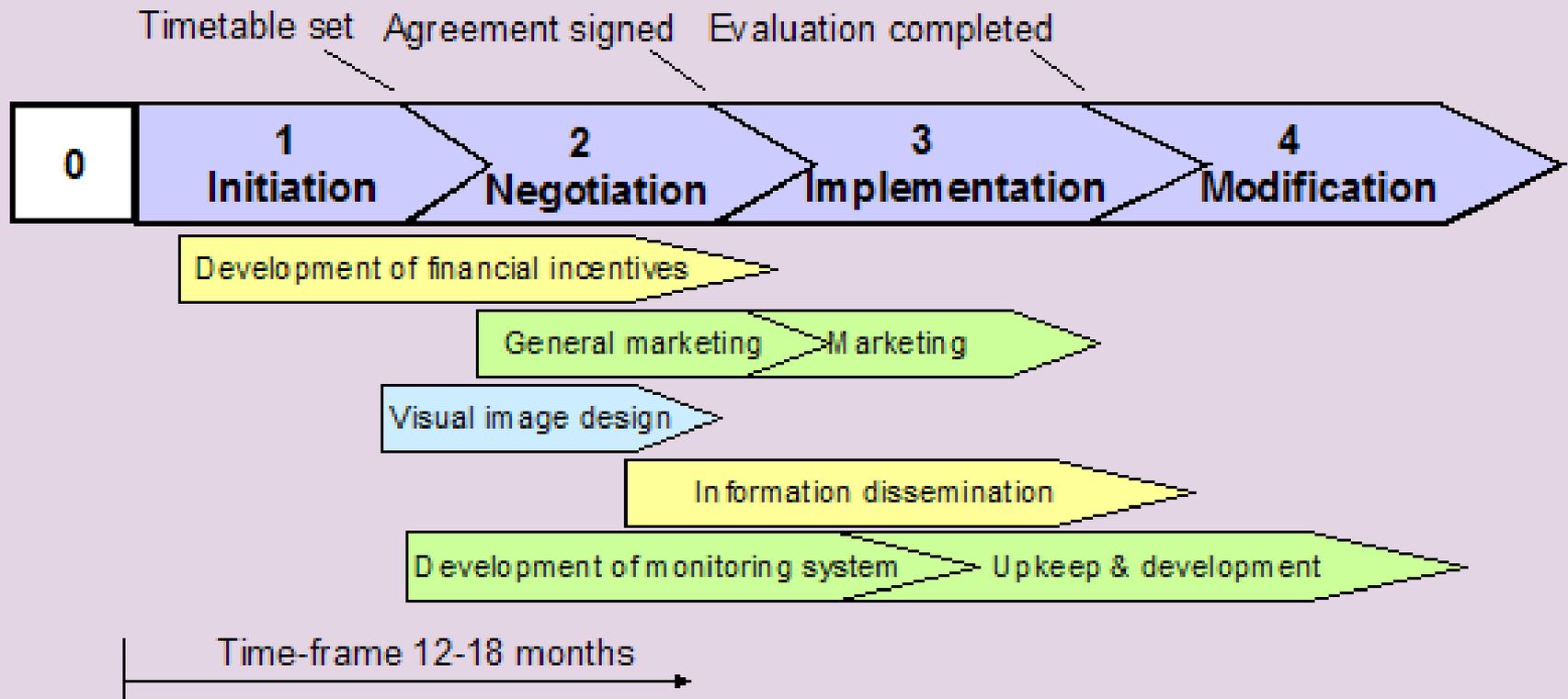
1. Used energy types
2. Chain efficiency

Link with innovative subsidies.



Phase 5: Process Evaluation (www.Itauptake.eu)

LONG TERM AGREEMENT PROCEDURE - the timeline from beginning to modification



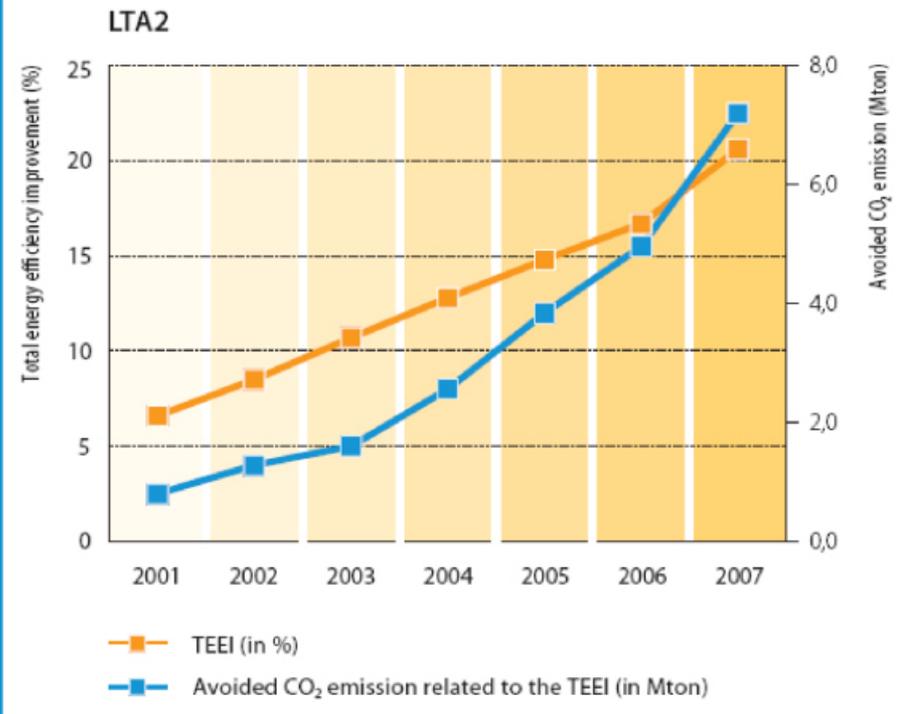
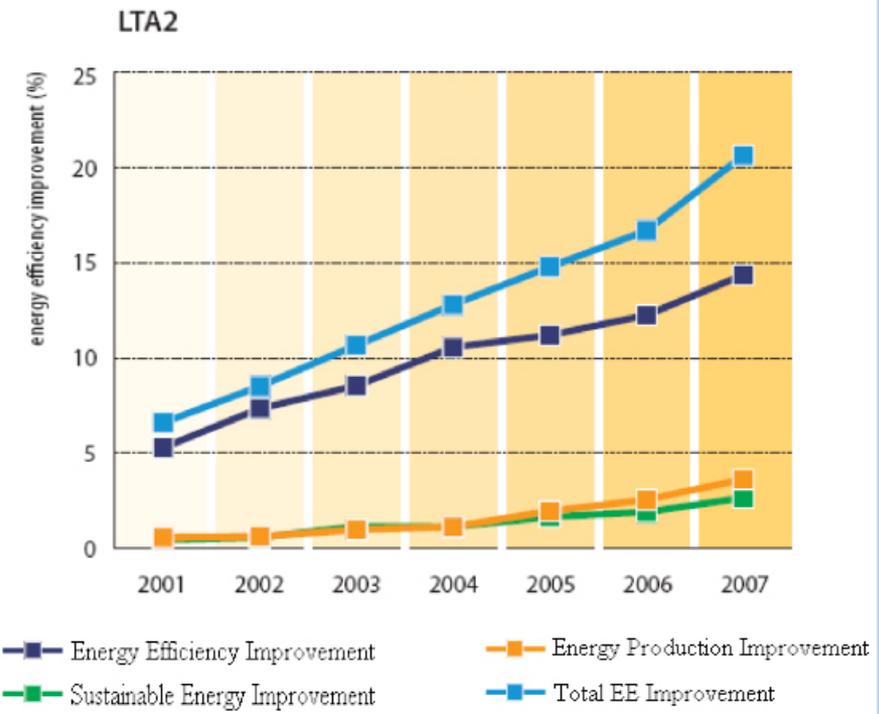


Phase 6/7: Impact Evaluation

Results: 2% EE/Annum

Energy efficiency improvement per index for LTA2 sectors
2001-2007 (in %)

Avoided CO₂ emission related to the TEEI for LTA2
(2001-2007)



Results Court of Audit.....



Does it work outside the Netherlands

Some words on outreach....



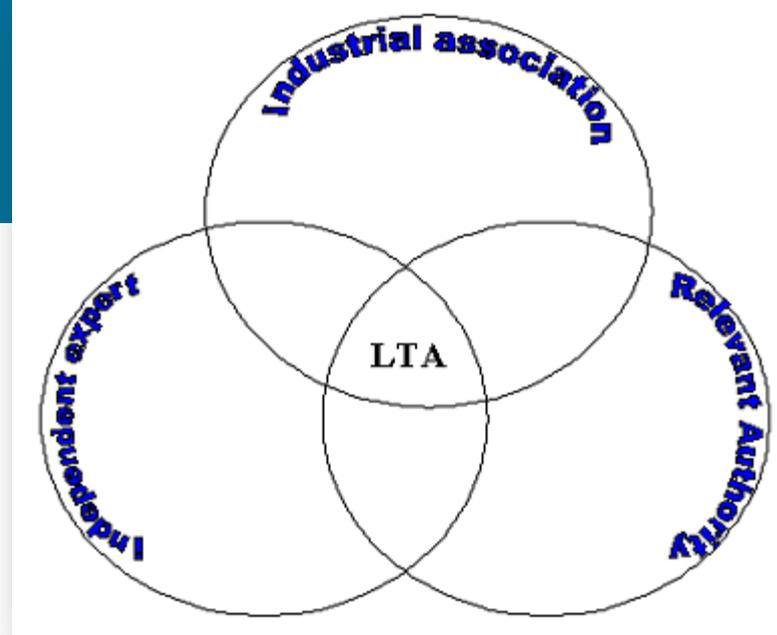
International cooperation on Long-Term Agreements

EU subsidizes projects

- Bess
- LTA-Uptake
- Extended Bess

Projects funded by the Netherlands

- Integrated Approach for Knowledge Transfer of LTA in Central and Eastern Europe (in short, LTA 5+1)
- Bi-lateral: Romania, Bulgaria, Turkey





Dutch - International cooperation on Long-Term Agreements: Participating countries

Participating countries

Program

	Austria	Belgium	Bulgaria	China	Czech Republic	Finland	Greece	Ireland	Italy	Latvia	Lithuania	Netherlands	Norway	Poland	Portugal	Romania	Slovenia	Slovakia	Spain	Sweden	Turkey
BESS	v		v			v	v	v			v	v	v				v		v	v	
ExBess		v			v		v		v	v		v	v	v	v	v		v			
AsiaProEco I & II				v								v									
G2G												v				v					v
LTA-uptake		v	v		v	v	v					v	v	v							v
G2G 5+1			v		v							v		v		v					



EU subsidized projects



Results:

- First steps towards standardization Energy Management (ISSO 50001)
- An interactive tool to support SMEs to a persistent approach to energy management and benchmarking (tested in 52 pilot companies throughout 11 participating countries)

Remaining Problem: Upscaling

- An electronic LTA content toolkit (tested in > 120 SMEs) to implement energy efficiency.
- An electronic LTA process toolkit to define the role of parties involved in the process

Remaining Problems: Acceptance, cultural differences



One more step: 8. Outcome assesment

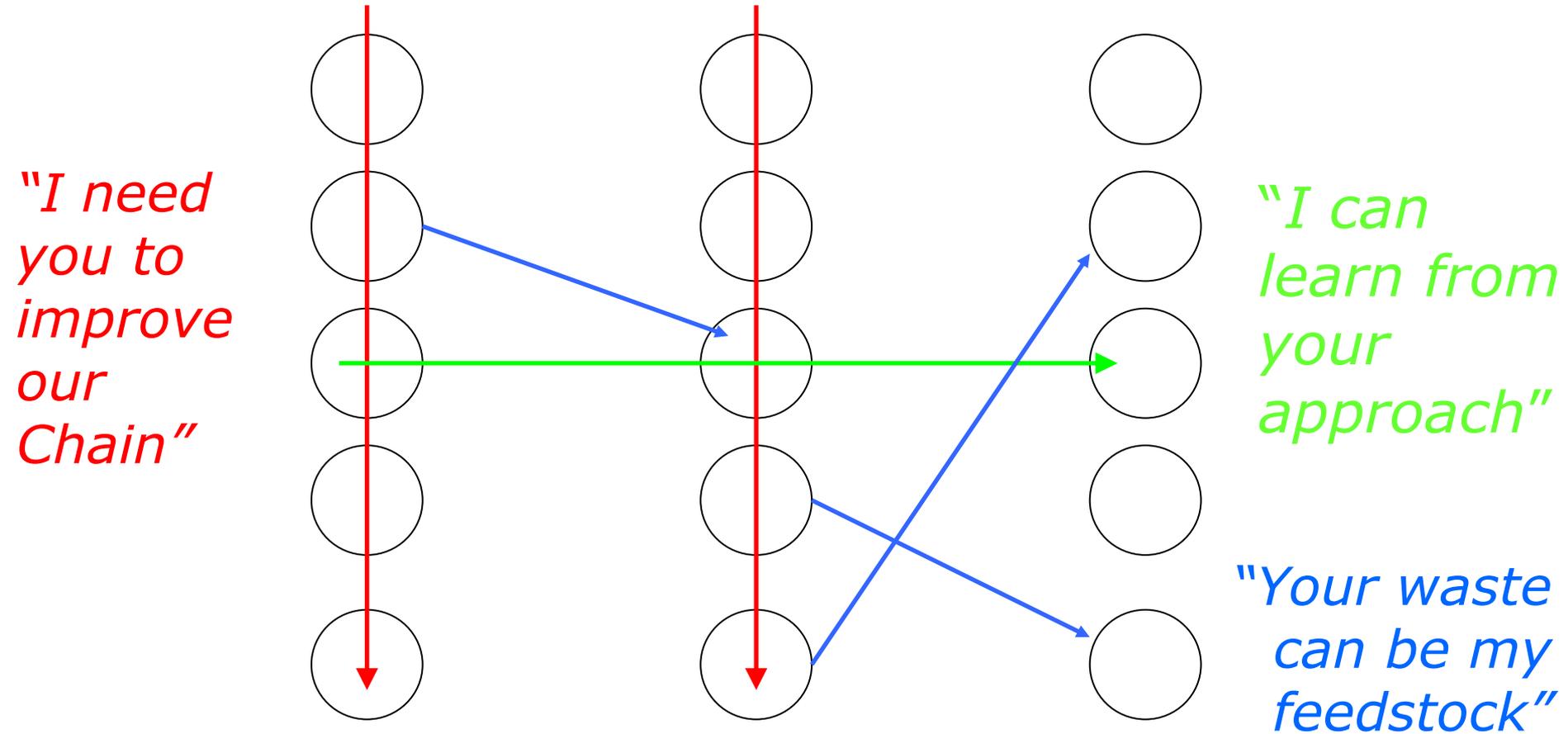
Roadmaps 2030:

Prestudies within the LTA framework

1. Industry as leading party
2. Supported by NL Agency
3. Goal 50% reduction in 2050



Where are the chances





Next steps

- Continuation LTA's in countries with much experience (Denmark, Finland, Sweden, Netherlands)
- First attempt for a EU wide LTA by the plastic industry (not linked to EC)
- Extra attention for the benefits of LTA by (Concerted Action) Energy Services Directive (including ESCO's)
- Unido considers a trainer/trainerprogramme for "global" outreach



Wrap up 1: Which legal and regulatory frameworks are the most conducive to the transition process?

1. National scale: avoid interference of local players (Environmental License). Role of Long Term Agreement is a legal framework
2. Within Europe: Energy Services Directive
 1. National action necessary
 2. Regulated "PPP"
3. Scale:
 1. Only large industries and Branch Organisations with strong member ties.
 2. You need a "national" controlling body (As in Sweden, Finland, Ireland)

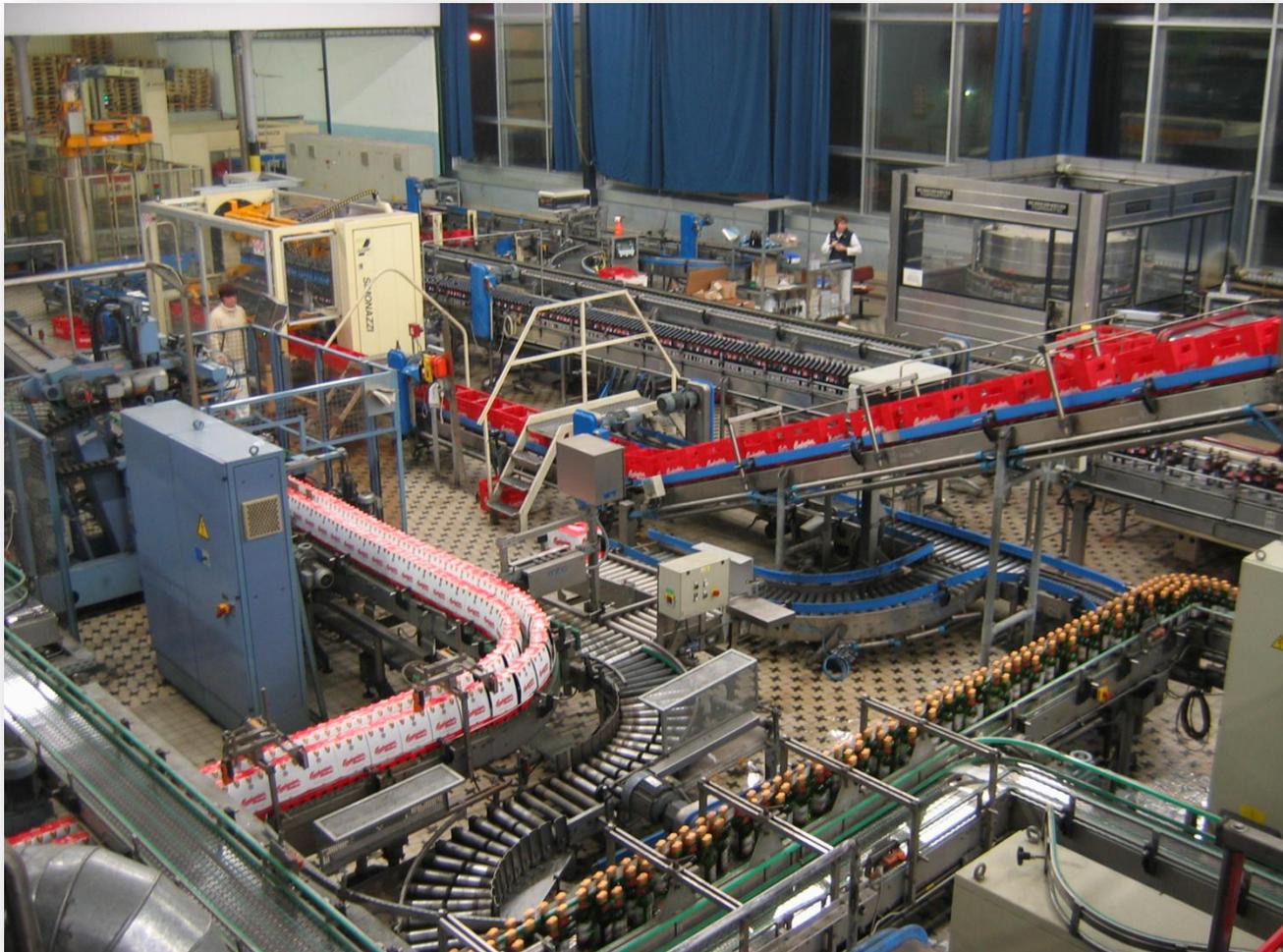


Wrap up 2

- There is evidence to assume the pace of reduction of the use of energy can remain $> 2\%$ until 2030
- Limiting the administrative burden to parties involved is a key factor
- The LTA is not the “natural” instrument for governments
- Speeds up market introduction of efficient technologies
- Benefits beyond energy efficiency (image, relations with government) are very important for the private sector. This is in line with the Green & Kreuter approach.
- The combination of technology, sociology and economy does work.



Q&A





Assumptions

The most effective legislation is the one that's accepted by the public at large

Building acceptance is done on bases of communication (of benefits, good examples, avoided risks etc.

There is now single silver bullet in Climate policy.

We still need a lot of research in the energy field



Projects funded by the Netherlands

Results:

Poland, Czech Republic, Hungary & Romania dropped out

Bulgaria is slowly picking up LTA (8 LTA's were signed)

Turkey very successful first phase. National intention for up scaling.

And once more EU:

Demonstration project China: pilot with 14 energy-intensive companies at Nanjing, Xian en Kelamayı in collaboration with national and local public sector. Results now finalized, energy management implemented

