



COPENHAGEN CENTRE  
ON ENERGY EFFICIENCY  
SEforALL EE HUB



ELECTRICIDADE  
DE MOÇAMBIQUE, E.P.

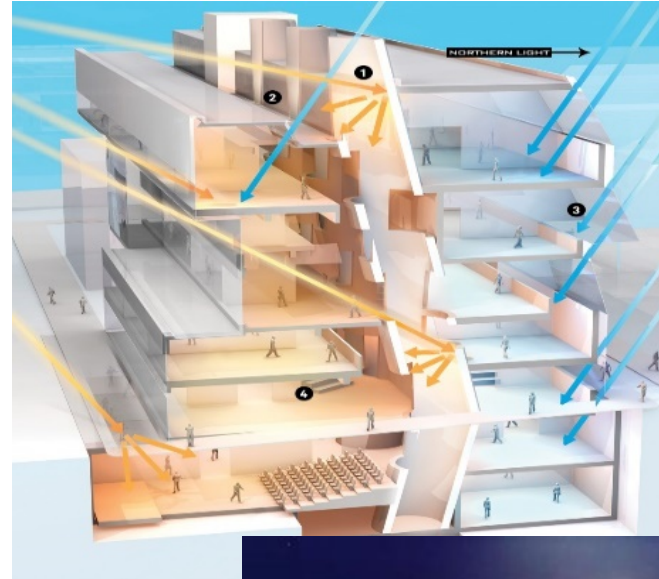
# EE strategic planning: steps 4,5 and 6

## Step 4: Development of an action plan, methods and criteria for strategic area selection

### Prioritisation of the area/areas to be included in the EE strategic plan

- Must be an important area for the users
- Area has a potential to meet the EE target set by the municipality
- Resources (financial and technical capacity) that can enable the implementation of the programme or project must be in place
- Therefore, prioritisation must be done through a systematic and thorough process

# EE strategic planning: steps 4,5 and 6



# EE strategic planning: steps 4

## Methodologies for the prioritisation process

Several methodologies can be used for the prioritisation process, some are more complicated than others. However, 2 of the most used are:

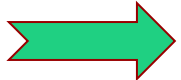
- ✓ Cost Benefit Analysis (CBA) See Oscar A. Preciado-Perez, 2017, D.W. Pearce, 1983
- ✓ Multi Criteria Analysis (MCA) See Dodgson et al. 2009)

Both have advantages and disadvantages

- Accuracy of the results will depend on the reliability of the data collected and used
- Regardless of the methodology used, it is important relevant stakeholders are involved

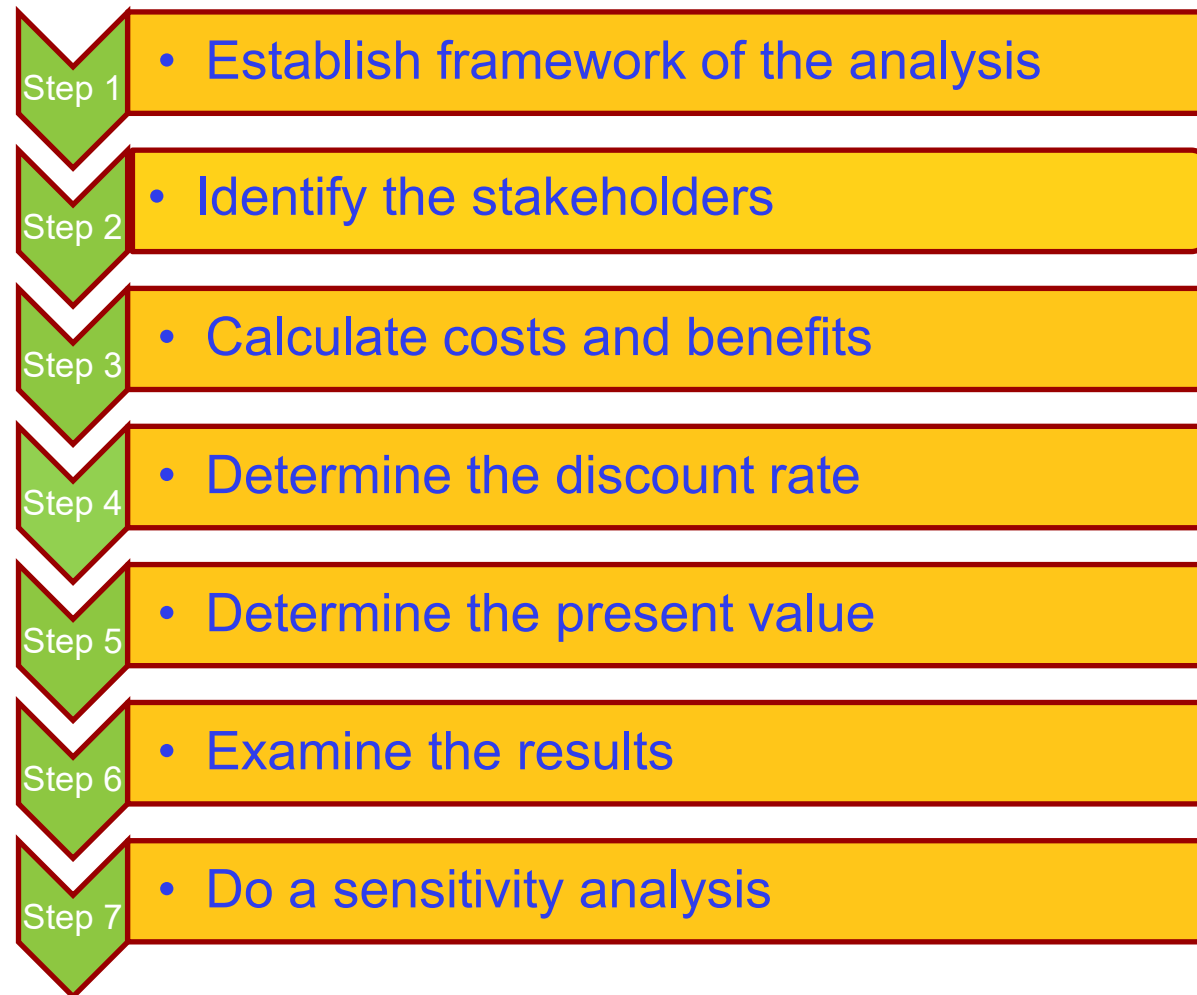
# EE strategic planning: steps 4

## Cost Benefit Analysis (CBA)

- A tool to evaluate (in monetary terms) benefits against the costs of an intervention/project
- Benefits > than costs  project implementation is justified
- Create a list with all costs and benefits of the intervention/project
- From estimated results, calculate ROI (return on investment) and IRR (internal rate of return), NPV (net present value) and PB (pay back) period
- Use the same currency for the estimations (apples to apples)

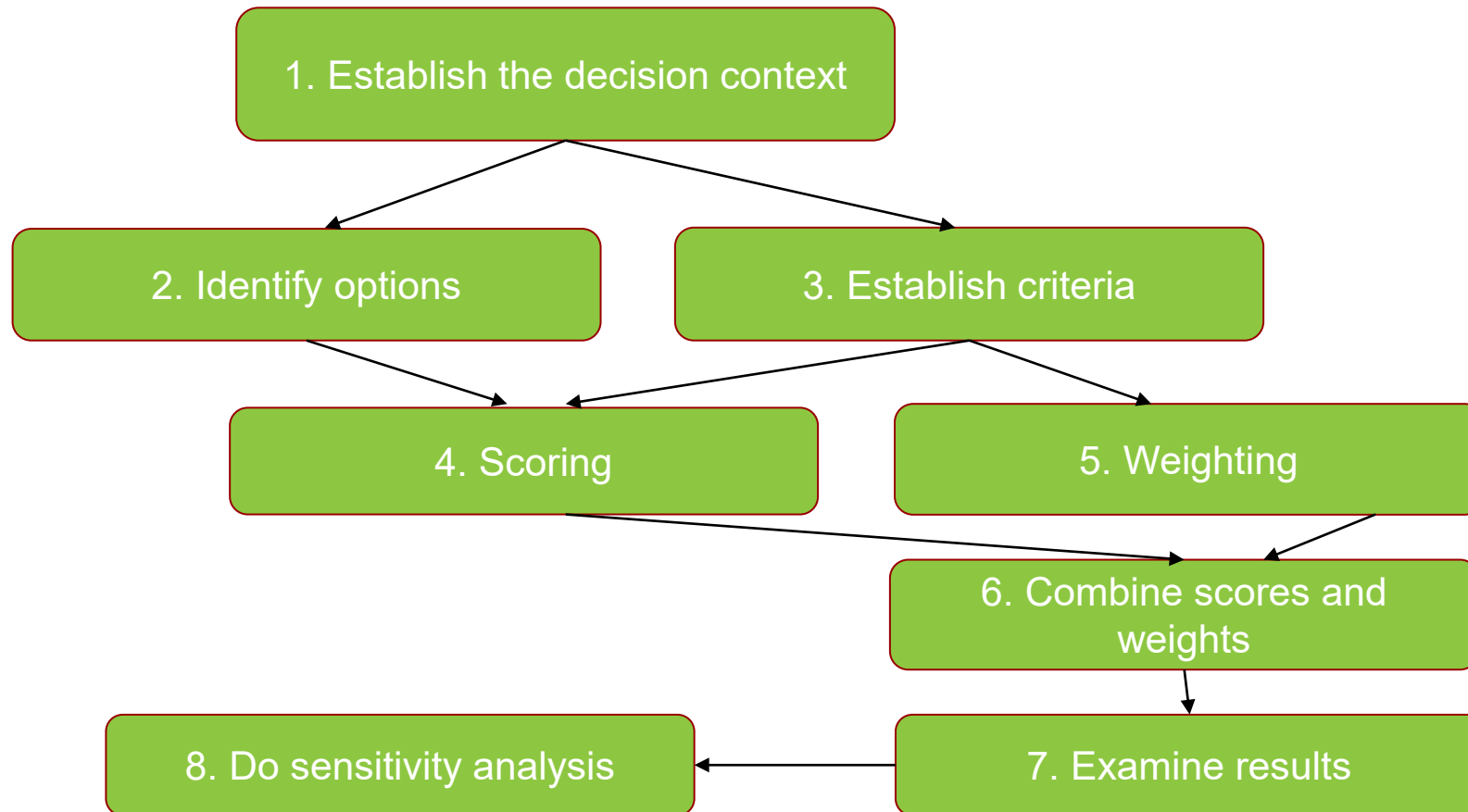
# EE strategic planning: step 4

## Sequential steps in the development of a CBA



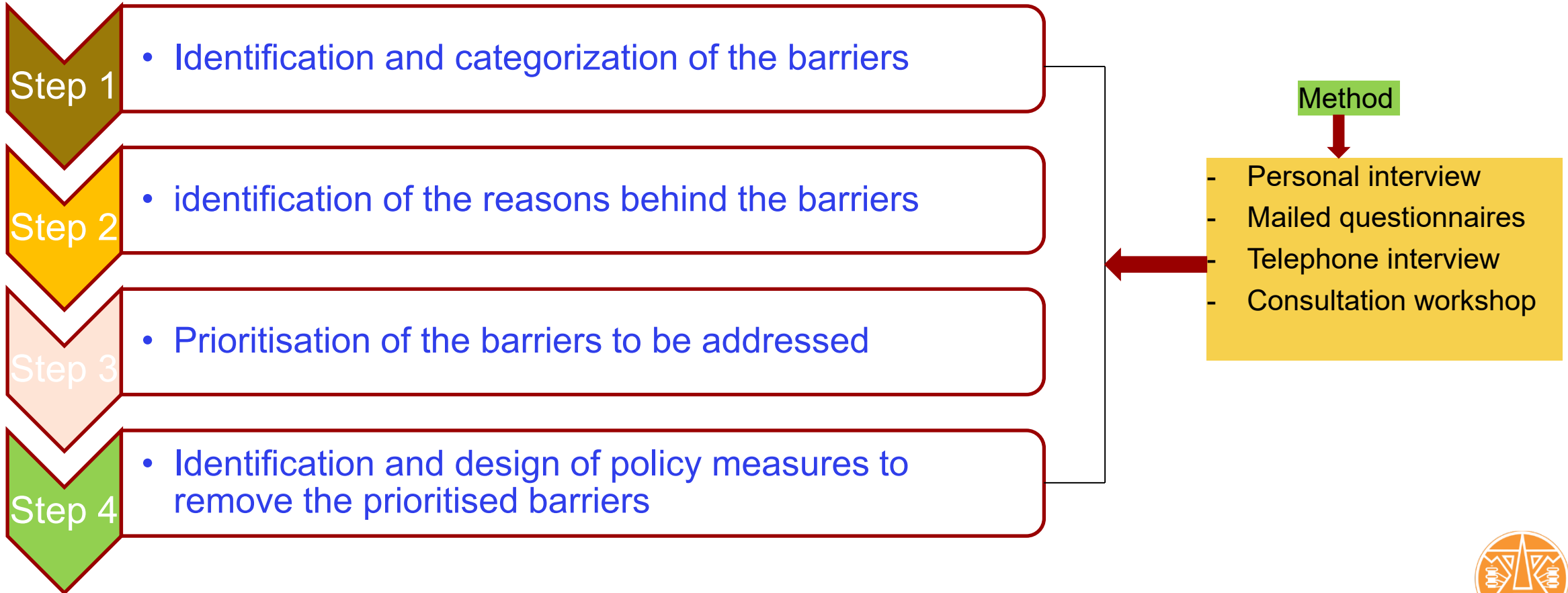
# EE strategic planning: step 4

## 8 steps to conduct a Multi Criteria Analysis (MCA)



# EE strategic planning: step 5 - Barrier analysis

## Four-step process





# EE strategic planning: step 5- categories and sub-categories of barriers

Category	Sub-category
<b>Economic and Financial</b>	<ul style="list-style-type: none"> <li>• Lack of budgetary autonomy on a municipality level</li> <li>• Financing restrictions, e.g. some municipalities might have caps on the amount of debt they can assume</li> <li>• Low global and/or local energy/electricity prices</li> <li>• High upfront capital expenditure (CAPEX)</li> <li>• High cost of capital (high interest rate)</li> <li>• Lack of access to financing</li> <li>• Long payback times (RoI)</li> <li>• Higher transaction costs for public sector projects</li> </ul>
<b>Market structure</b>	<ul style="list-style-type: none"> <li>• Few suppliers (oligopoly) of technologies/services or one single supplier (monopoly)</li> <li>• Limited municipal incentives to save energy and try new approaches</li> </ul>
<b>Legal and Regulatory</b>	<ul style="list-style-type: none"> <li>• Ineffective or lack of energy targets (e.g. energy saving is not a priority)</li> <li>• Ineffective or lack of regulatory frameworks (e.g. Lack of national policy on energy efficiency, law on energy efficiency or a section on energy)</li> <li>• Subsidies to existing technologies/services</li> <li>• Highly controlled/regulated markets</li> <li>• Intricate and/or inefficient bureaucratic processes</li> <li>• Political instability</li> </ul>
<b>Institutional, inter-organizational and administrative</b>	<ul style="list-style-type: none"> <li>• Lack of a designated department, either in line ministries or in branch ministries, (e.g. environmental or energy department)</li> <li>• Lack of collaboration among institutions to bring projects forward (e.g. urban planning and energy department)</li> <li>• Lack of training at all levels; particularly of technical in-house competence to assess and develop EE projects</li> <li>• Lack of managerial skills and resources to develop EE projects</li> <li>• Weak monitoring and enforcement mechanisms</li> </ul>
<b>Awareness, information, and related social barriers</b>	<ul style="list-style-type: none"> <li>• Asymmetric information on energy efficiency potential</li> <li>• Lack or distorted information on the performance of EE technologies</li> <li>• Lack or distorted information on the multiple benefits of EE technologies (e.g. improved energy security and economic benefits)</li> <li>• Lack of environmental awareness</li> <li>• Aversion to new solutions and technologies</li> <li>• Lack of technical capacity to implement, operate and maintain new EE technologies</li> </ul>
<b>Technological barriers</b>	<ul style="list-style-type: none"> <li>• Incompatibility between new and existing technology solutions</li> <li>• Technical/performance risk of the technology</li> <li>• Unpredictability of performance and respective energy savings</li> <li>• Higher maintenance requirements</li> </ul>

# EE strategic planning: step 5 Policy measures to overcome barriers to EE

Category	Policy measure
Financial measures	<ul style="list-style-type: none"> <li>• Investment subsidies</li> <li>• Grants and loans</li> <li>• Loan guaranties</li> <li>• Taxation and other fiscal benefits</li> <li>• Use charges (ex. congestion charges)</li> </ul>
Non-financial measures	<ul style="list-style-type: none"> <li>• Mandate to provide electricity from energy-efficient technologies</li> <li>• Disincentivizing the use of energy from fossil fuels</li> <li>• Information and awareness-raising campaigns</li> <li>• Minimum energy performance standards and labelling technologies</li> <li>• Sustainable public procurement</li> <li>• Promoting research and development</li> <li>• Training and capacity building</li> <li>• Promoting public-private partnership</li> </ul>

# MRV (Measuring, Reporting and Verification)

## MRV system's main advantages

- Allows monitoring of implementation progress and impacts associated with a given mitigation programme or project
- The reporting component makes it possible to provide information to the corresponding authorities and other stakeholders in a transparent way
- It ensures transparency that the results of the programme or project being implemented are properly quantified and reported

# Strategy formulation

- Drafting the strategy by a core expert group
- Reviewing and commenting by stakeholders
- Revision and validation by relevant government agencies
- Endorsement by high-level government official on the issue
- Launch of the strategy
- Detailed action plan to implement the strategy, including a portfolio of projects

# Components of Successful Strategies

- Leadership in Recognizing Energy Efficiency as a Priority Resource
- Legally Binding Energy Saving Targets
  - Energy Efficiency Targets by Utility
  - Energy Efficiency Resource Standards
- Financing and Institutional Structures for Energy Efficiency
  - Long-term Funding
  - Responsible Agency with Well-defined Mandate
  - Specified Input Process and Review Cycles for Regulations
- Comprehensive Set of Efficiency Programs
  - Market Transformation
  - Proactive programme delivery
- Establishing of monitoring and verification protocols

Source: Alison Bailie, Roger Peters Matt Horne, Kristin Zarowny, 2006. Successful Strategies for Energy Efficiency -A Review of Approaches in Other Jurisdictions and Recommendations for Canada.

# Example of national energy efficiency strategy

- The Energy Efficiency Strategy: The Energy Efficiency Opportunity in the UK (2012), issued by the UK Department of Energy and Climate Change

Contents:

- Ministerial Foreword
- Clarification of scope
  - The Energy Efficiency Deployment Office (EEDO) Devolution
- **The Energy Efficiency Opportunity in the UK**
- Understanding energy efficiency
- The energy efficiency opportunity
- Energy efficiency potential in the UK economy
- The benefits of energy efficiency 8Our ambition for improving energy efficiency
- The barriers to deploying energy efficiency
- Maximising the potential of existing schemes
- An energy efficient future



The Energy Efficiency Strategy:  
The Energy Efficiency Opportunity in the UK



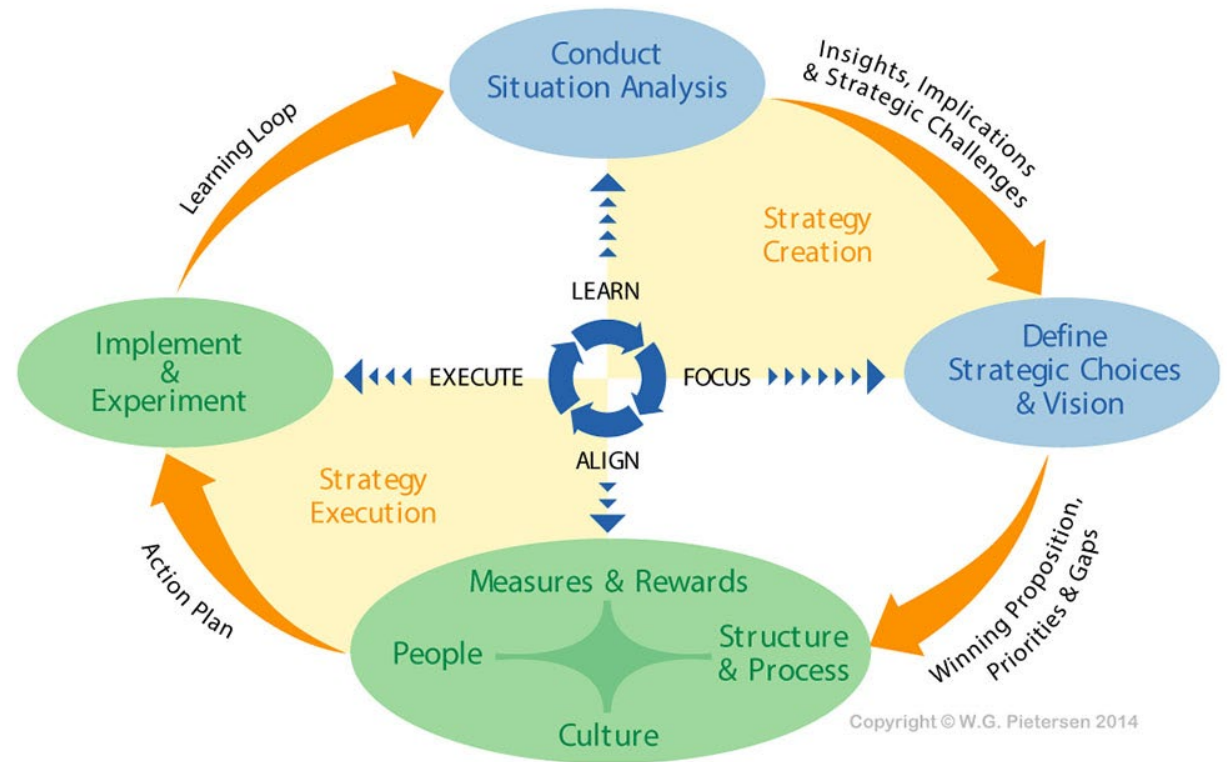
November 2012

# Typical contents in a national strategy

- Objectives
- Background/context
- Strategies for different sectors
- Cross-cutting issues
- Risk analysis
- Process of strategy formulation, especially the stakeholder consultation, the core team prepared the strategy.
- Monitoring and verification, future review process
  
- Unlike a research report, the strategy needs to focus on what to do, be brief

# The cycle of strategy making and implementation

- A steering committee, a technical committee, a coordinator, and the stakeholders
- The consultation process need to engage key stakeholders, including relevant line ministries, the local governments, as well as industrial associations and civil society, as well as donors
- Often the strategies need to be backed up with detailed action plans



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