



Launching the Romanian Building Renovation Strategy

Dan Staniaszek
Buildings Performance Institute Europe

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Overview

- About BPIE
- Importance of Building Energy Performance
- EU legislation
- 5 key steps to develop a Renovation Strategy
- Join our Stakeholder Group!



BPIE's Public Knowledge Bank

ENERGY EFFICIENCY POLICIES IN BUILDINGS – THE USE OF FINANCIAL INSTRUMENTS AT MEMBER STATE LEVEL



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Financing energy efficiency in European buildings: How to boost large-scale retrofit?

Conclusions of the BPIE European Roundtable, 16 November 2010, Concert Noble Brussels

Energy efficiency reports from across Europe in Brussels November 16 for a European Roundtable devoted to financing energy efficiency in buildings. The event was an initiative of the BPIE and covered an important moment when the European Buildings Performance Directive is being 'tested' and a new National Energy Efficiency Plan is being developed for each 2013.

The Roundtable brought together under the Chateau House nine senior representatives from the European Commission (DG Energy, DG Regio, DG Research, the Joint Research Centre), the European Parliament, the European Investment Bank, the European Bank for Reconstruction and Development, the International Energy Agency and many national-level specialists from governmental and related agencies as well as from professional and industry organisations.

The importance of energy savings in buildings is well recognised as a key element in achieving global energy and CO₂ reductions in the European climate framework contributing to the '20-20-20' targets. Residential, public and commercial buildings are tremendous consumers of energy. They account for more than 40 percent of total EU energy consumption and 34 percent of greenhouse gases. Significant savings in the sector could make a substantial contribution to meeting the EU's goal of a 20 percent reduction in energy by 2020.

The key focus of the BPIE Roundtable was financing energy efficiency improvements in the existing buildings. The use of instruments to remedy the lack of financial and regulatory conditions is always deep enough. However the challenges in order to create the financial and regulatory conditions to finance both renovation and quality.


Below are the conclusions of the Roundtable as summarised by the Roundtable Chairman.



2013

IMPLEMENTING THE COST-OPTIMAL METHODOLOGY IN EU COUNTRIES

LESSONS LEARNED FROM THREE CASE STUDIES




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2013

Cost Optimality

Discussing methodology and challenges within the recast Energy Performance of Buildings Directive



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DATA HUB FOR THE ENERGY PERFORMANCE OF BUILDINGS

Comprehensive European data hub for building statistics and policy information

Efficient search tool

Select a topic

All Countries

Data downloads

Interactive data presentation allowing for the location of customized fact sheets

www.buildingsdata.eu

EUROPE'S BUILDINGS UNDER THE MICROSCOPE

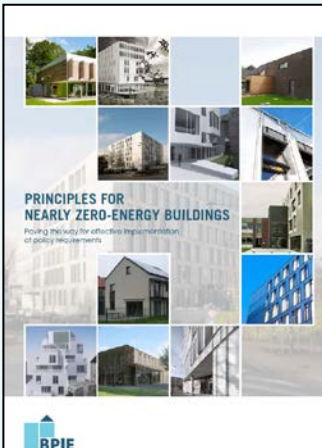
A country-by-country review of the energy performance of buildings



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PRINCIPLES FOR NEARLY ZERO-ENERGY BUILDINGS

Policy implications for the effective implementation of policy requirements



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IMPLEMENTING NEARLY ZERO-ENERGY BUILDINGS (NZEB) IN BULGARIA – TRENDS IN DEFINITION AND DESIGN

EXECUTIVE SUMMARY



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IMPLEMENTAREA CLADIRULUI CU CONSUM DE ENERGIE APROXIMATIV ZERO (NZEB) IN ROMANIA – TRENDS IN DEFINITION AND DESIGN

REZUMAT



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Energy Performance Certificates across Europe

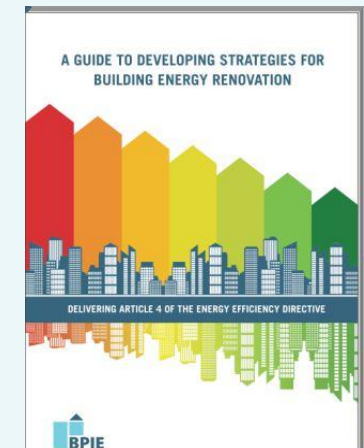
From design to implementation



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A GUIDE TO DEVELOPING STRATEGIES FOR BUILDING ENERGY RENOVATION

DELIVERING ARTICLE 4 OF THE ENERGY EFFICIENCY DIRECTIVE



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Buildings EE ranks 1st in Resource Efficiency Potential

McKinsey Global Institute
McKinsey Sustainability & Resource Productivity Practice

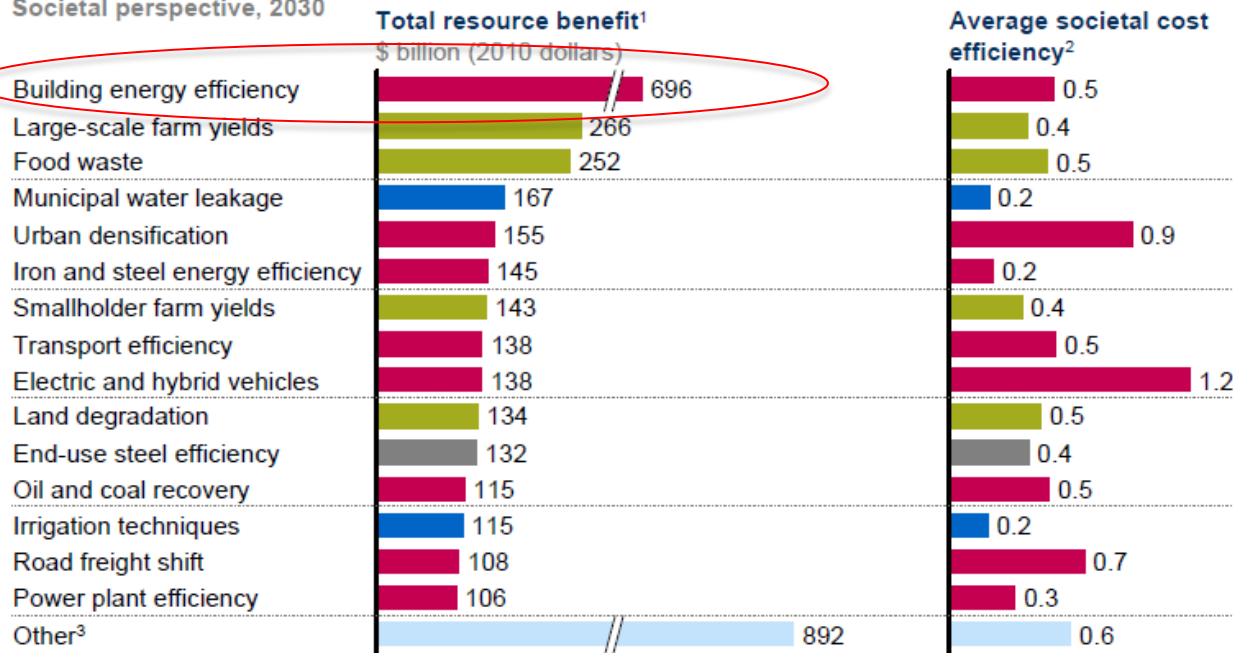


November 2011

Resource Revolution:
Meeting the world's
energy, materials, food,
and water needs

Fifteen groups of opportunities represent 75 percent of the resource savings

Societal perspective, 2030



1 Based on current prices for energy, steel, and food plus unsubsidized water prices and a shadow cost for carbon.

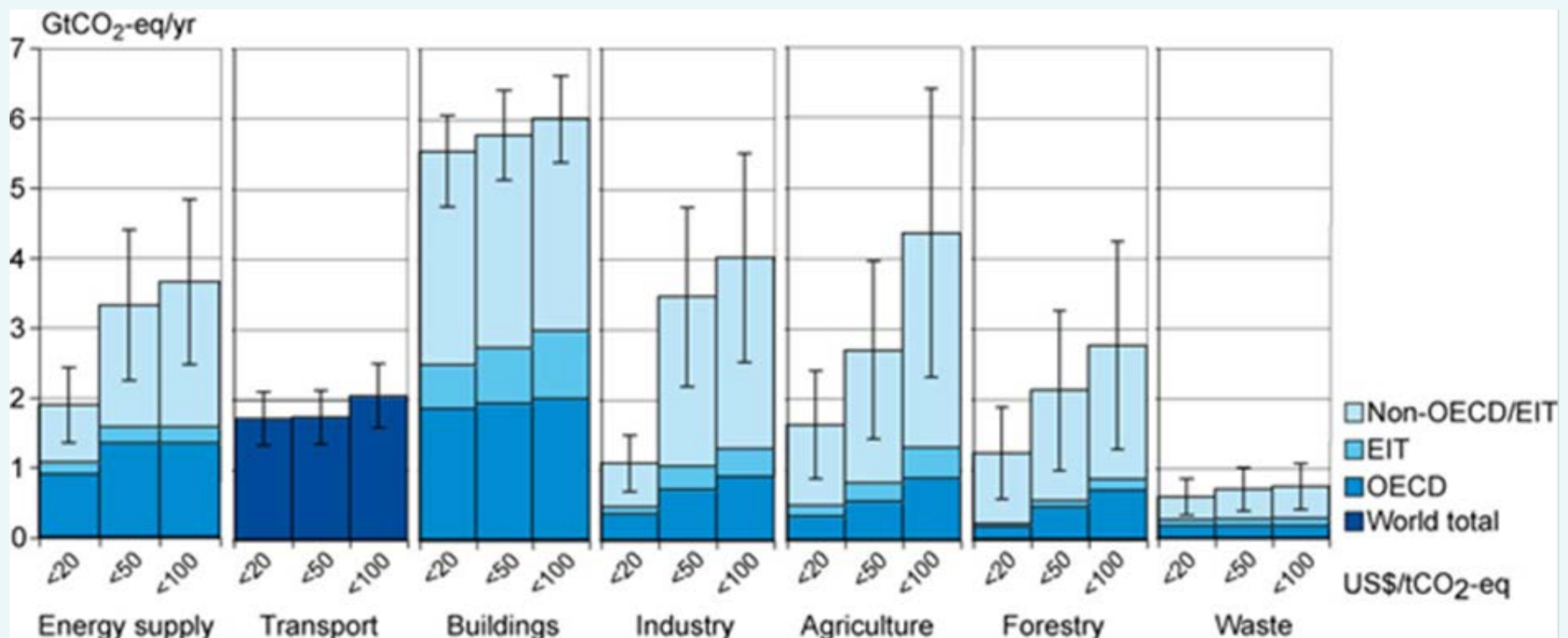
2 Annualized cost of implementation divided by annual total resource benefit.

3 Includes other opportunities such as feed efficiency, industrial water efficiency, air transport, municipal water, steel recycling, wastewater reuse, and other industrial energy efficiency.

SOURCE: McKinsey analysis

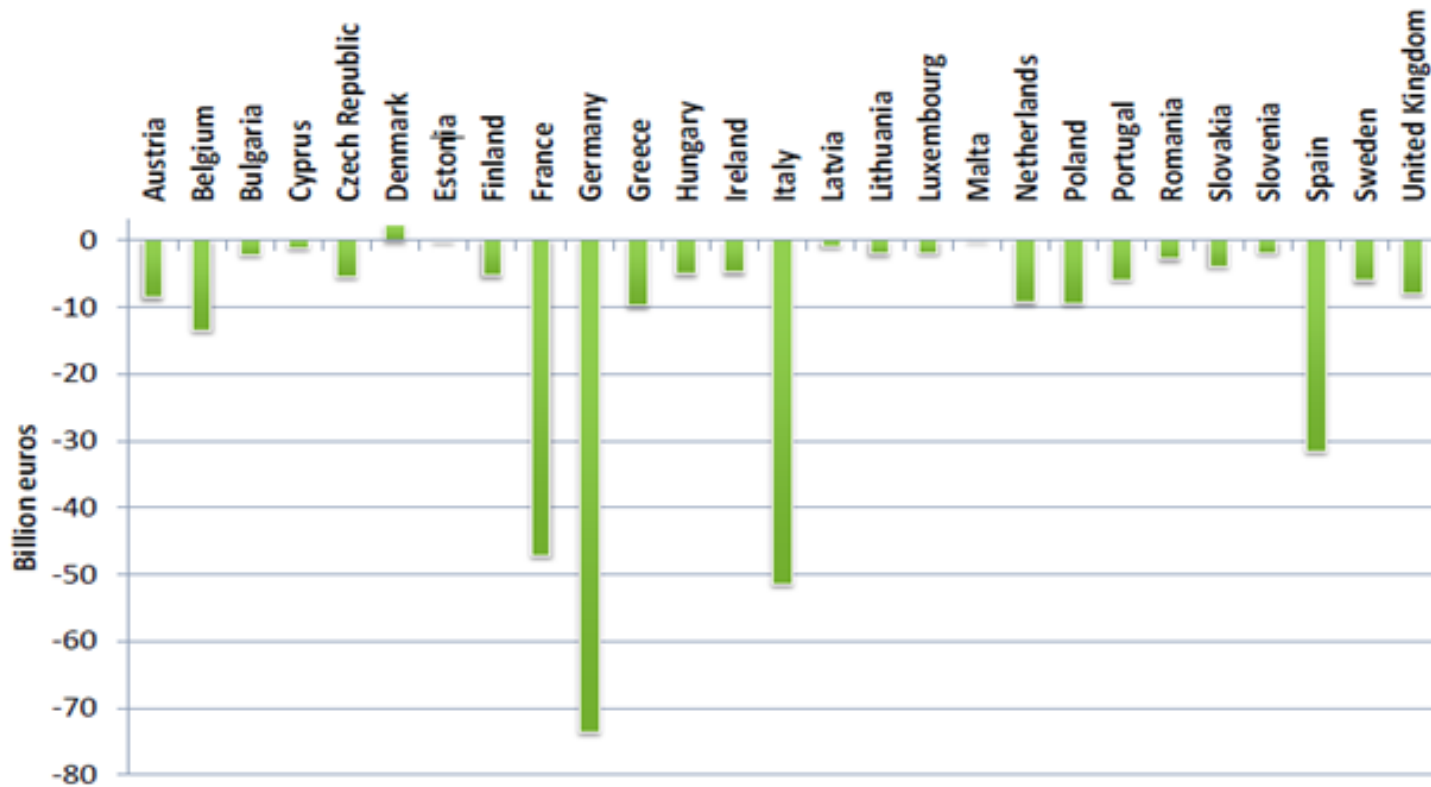


Buildings Represent the Greatest Potential for Low Cost Carbon Savings



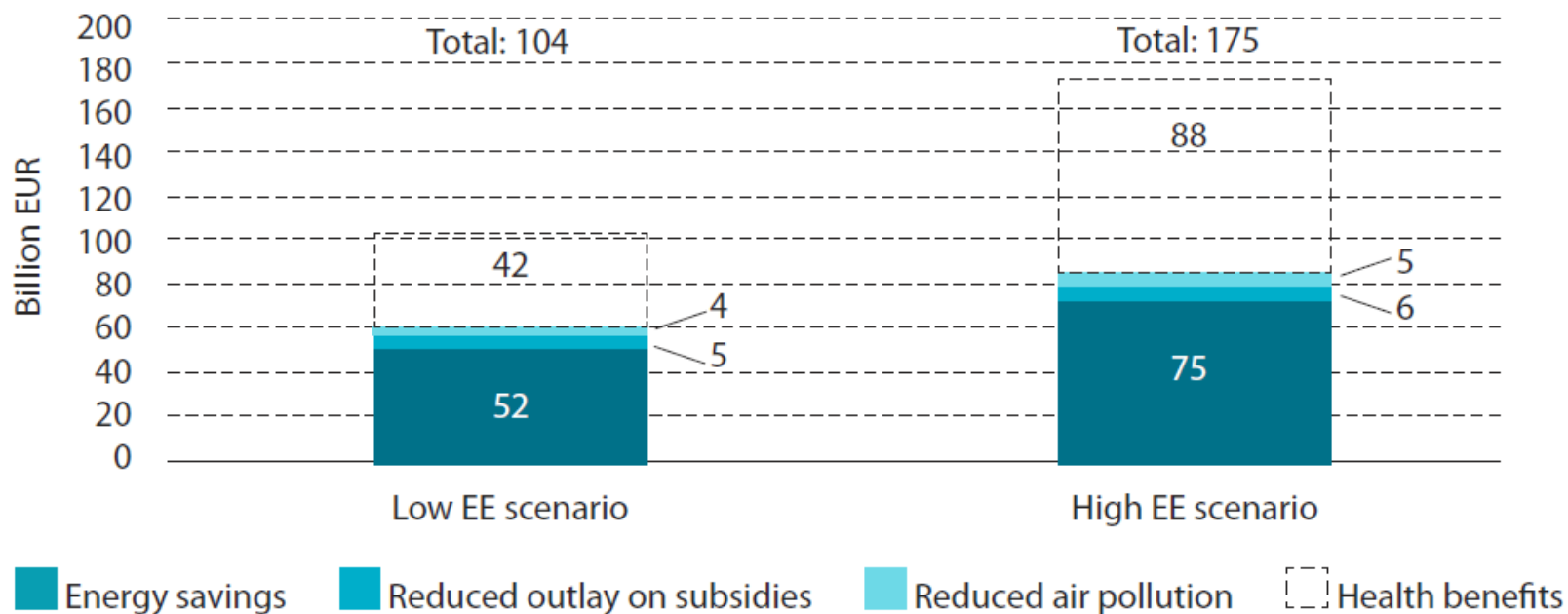
Source – IPCC 2007

Efficient Buildings Reduce Energy Imports & Increase Energy Security



Value of the health benefits could be greater than the energy cost saving

(Source – Copenhagen Economics)



Financial Benefits

for every €1 of public subsidy, as much as €5 is returned to the public purse through reduced unemployment payments, increase tax receipts and other sources
(KfW, Germany)

“...energy savings [will deliver] avoided capacity investments of about \$10.6 billion by 2020”.
(US Southwest Energy Efficiency Project)

“Every \$1 spent on energy efficiency produces \$1.50 of additional disposable income”
(US Environmental Protection Agency)

analysis of 1,100 rental transactions provides evidence that a “non-green” office building achieves a 6.5% lower rent as compared to similar buildings with a “green” energy label
(Kok & Jennen, The Netherlands)

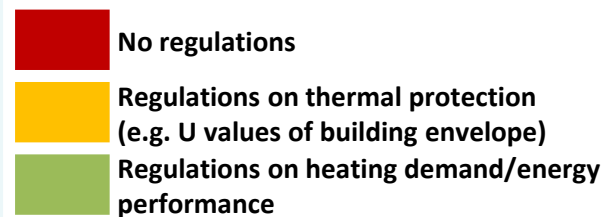
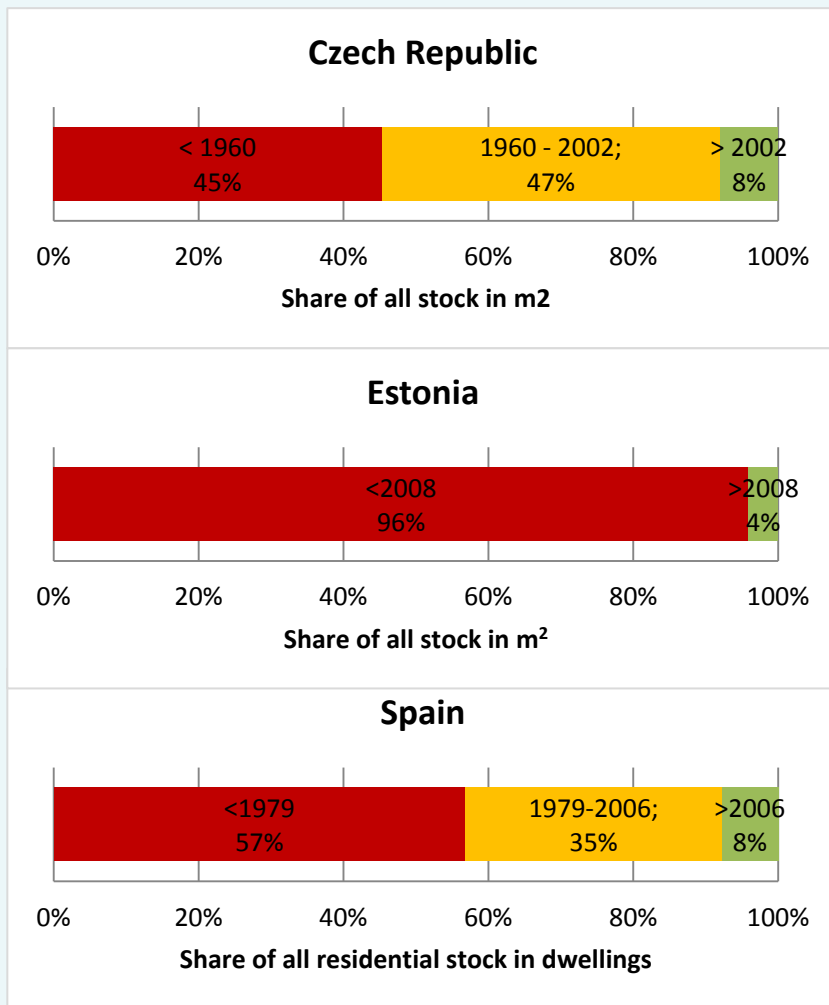


Why does it matter?

- New buildings can be constructed now with virtually no energy requirements
- From 2020, ALL new EU buildings will be Nearly Zero Energy Buildings
- Existing buildings can be renovated to perform BETTER than the performance requirements for new buildings
- BUT...there are ~200 million existing buildings in the EU to be renovated



Why does it matter?



* Figures are approximate numbers; Based on BPIE data

Energy Efficiency Directive

– main provisions

- energy efficiency targets
- **renovation strategies**
- **exemplary role of public bodies' buildings**
- energy efficiency obligation schemes EEOs
- energy audits and energy management systems
- metering & billing
- efficiency in heating and cooling
- energy transformation, transmission and distribution
- qualification, accreditation and certification schemes
- information and training
- energy services
- energy efficiency national fund, financing and technical support

**A GUIDE TO DEVELOPING STRATEGIES FOR
BUILDING ENERGY RENOVATION**



DELIVERING ARTICLE 4 OF THE ENERGY EFFICIENCY DIRECTIVE

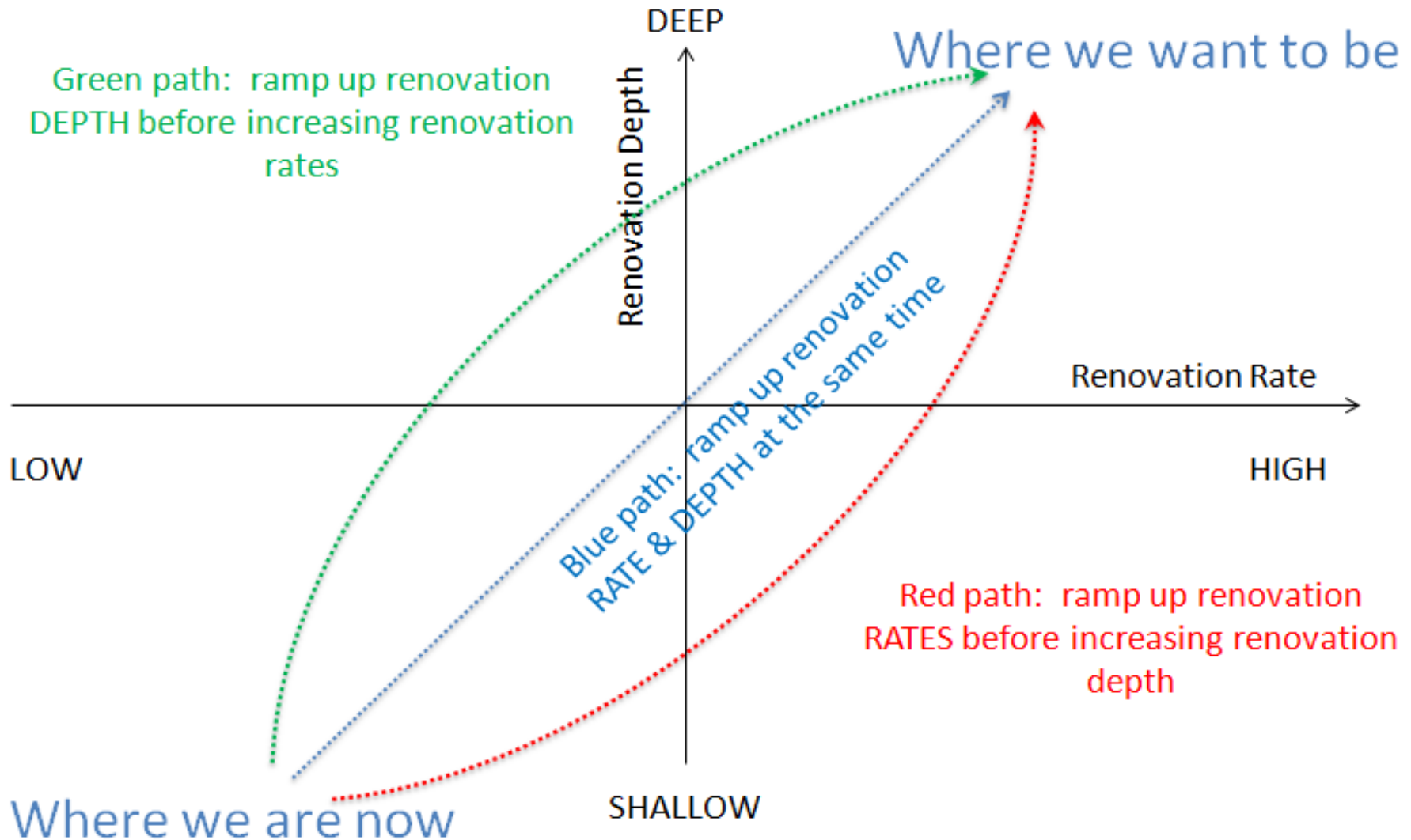


**BPIE Guide,
published
February 2013**

http://bpie.eu/renovation_strategy.html



Renovation Ambition



Strategy Development Process in Outline

PHASE 1 - Stakeholders & Information

- Identify Key Stakeholders
- Identify Information Sources

PHASE 2 - Technical & Economic Appraisal

- Building Stock Characterisation
- Economic Appraisal of Renovation Potential
- Quantification of Investment Requirements

PHASE 3 - Policy Appraisal

- Comprehensive Appraisal of Barriers
- Development of Holistic Policy Package

PHASE 4 - Drafting & Consulting

- Draft Renovation Strategy
- Consultation on Draft Strategy

PHASE 5 - Publish & Deliver

- Publish Final Strategy
- Commence Policy Implementation Process
- Establish Monitoring and Evaluation Process
- Review and Update Strategy every 3 years

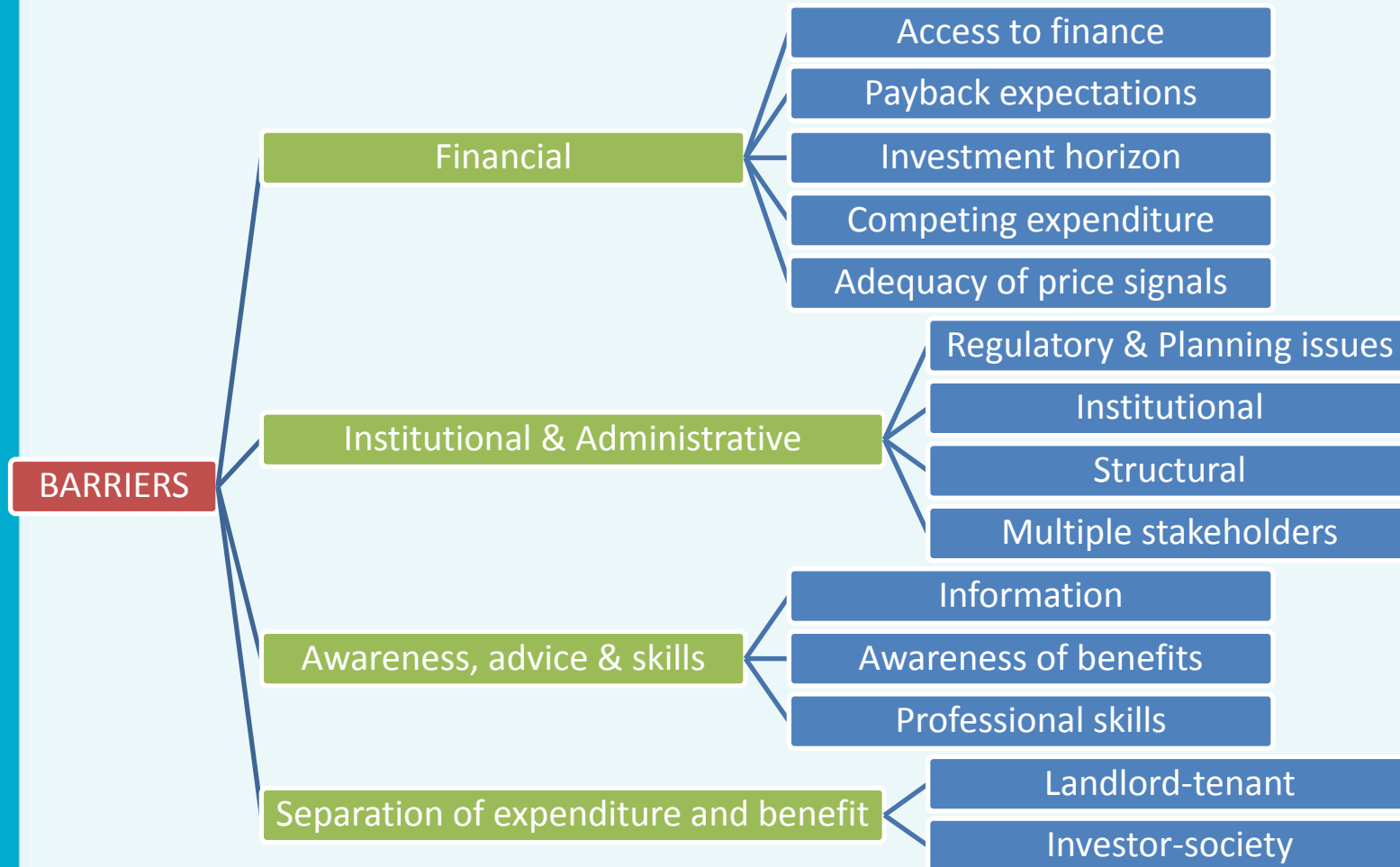
Phase 1 – Identify Key Stakeholders and Information Sources

- Who?
 - Government Ministries
 - Industry Bodies
 - Consumer Groups
 - NGOs
 - ...
- Where is the Necessary Information?
 - National statistics
 - Government Departments
 - Building Research Institutes
 - Energy Agencies
 - BPIE data portal www.buildingsdata.eu
 - ...

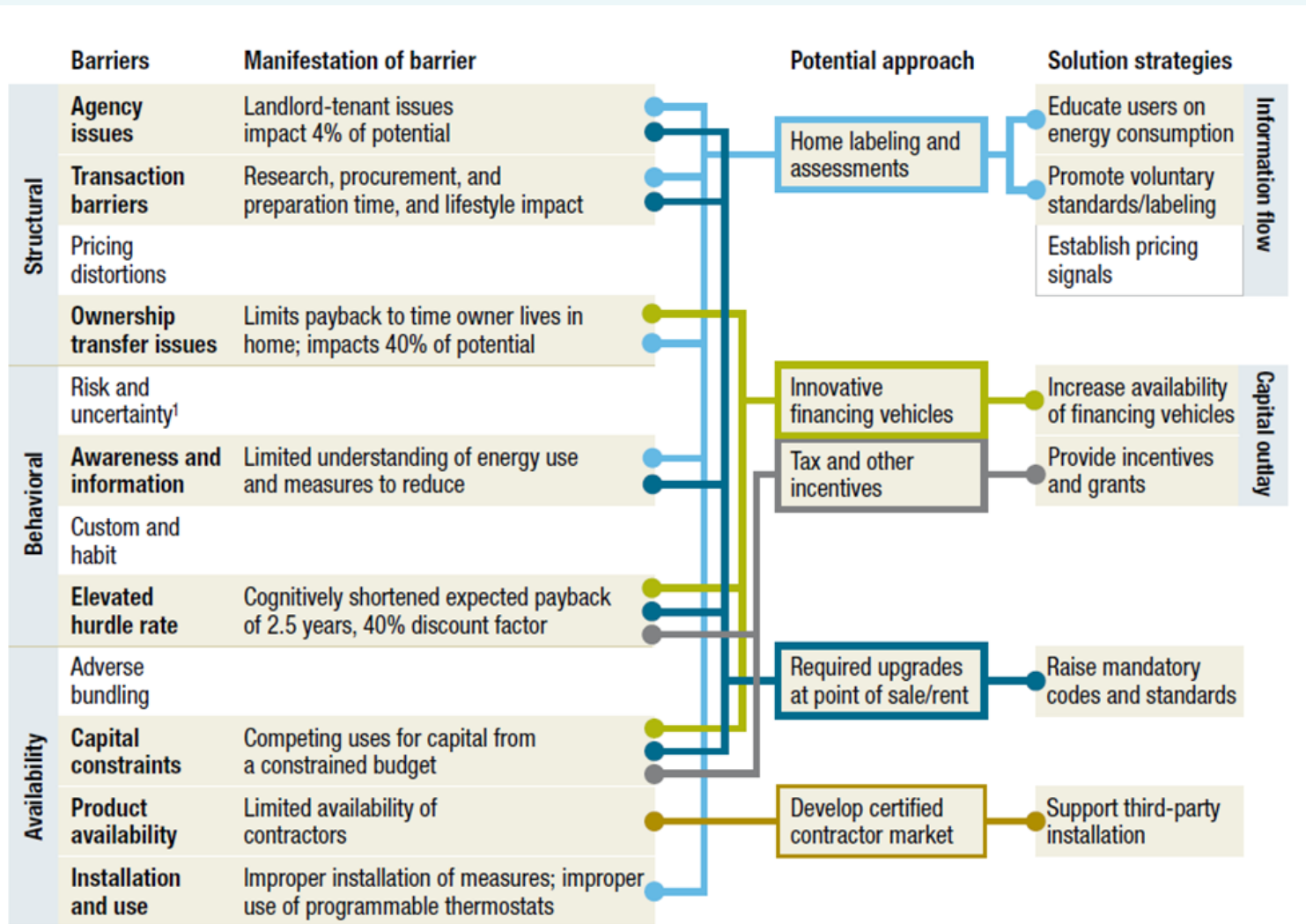
Phase 2 – Technical & Economic Appraisal

- Buildings Stock Typology
 - Type, age location, function, energy performance, number...
- Retrofit Options – EE & RE packages
- Costs
- Economic Appraisal
 - Don't forget to factor in learning curve and scaling up economies of scale
- Develop Investment Horizon
 - Identify sources of finance
 - Develop financing vehicles tailored to markets

Phase 3 – Policy Appraisal - Review the Barriers to Renovation...



...And Develop Holistic Package of Solutions



Source - McKinsey

Develop Ambitious Policy Landscape



- Establish support across political spectrum
 - Establish independent committee
 - Systematic appraisal of barriers
- Establish objective to eradicate fuel poverty
 - Establish a wide stakeholder group
 - Demonstrate leadership through deep renovation of public buildings

- Develop renovation standards
- Analyse potential for district heating
- Ensure compliance with building codes
- Develop packaged replicable solutions
- Quality standards installers & products



- Identify mandatory renovation trigger points
- Design EEOs that encourage deep renovation
- Require upgrade of public buildings and housing
- Establish positive environment for buildings integrated renewables
- Remove restrictive tenancy laws
- Mandate improvement of least efficient stock

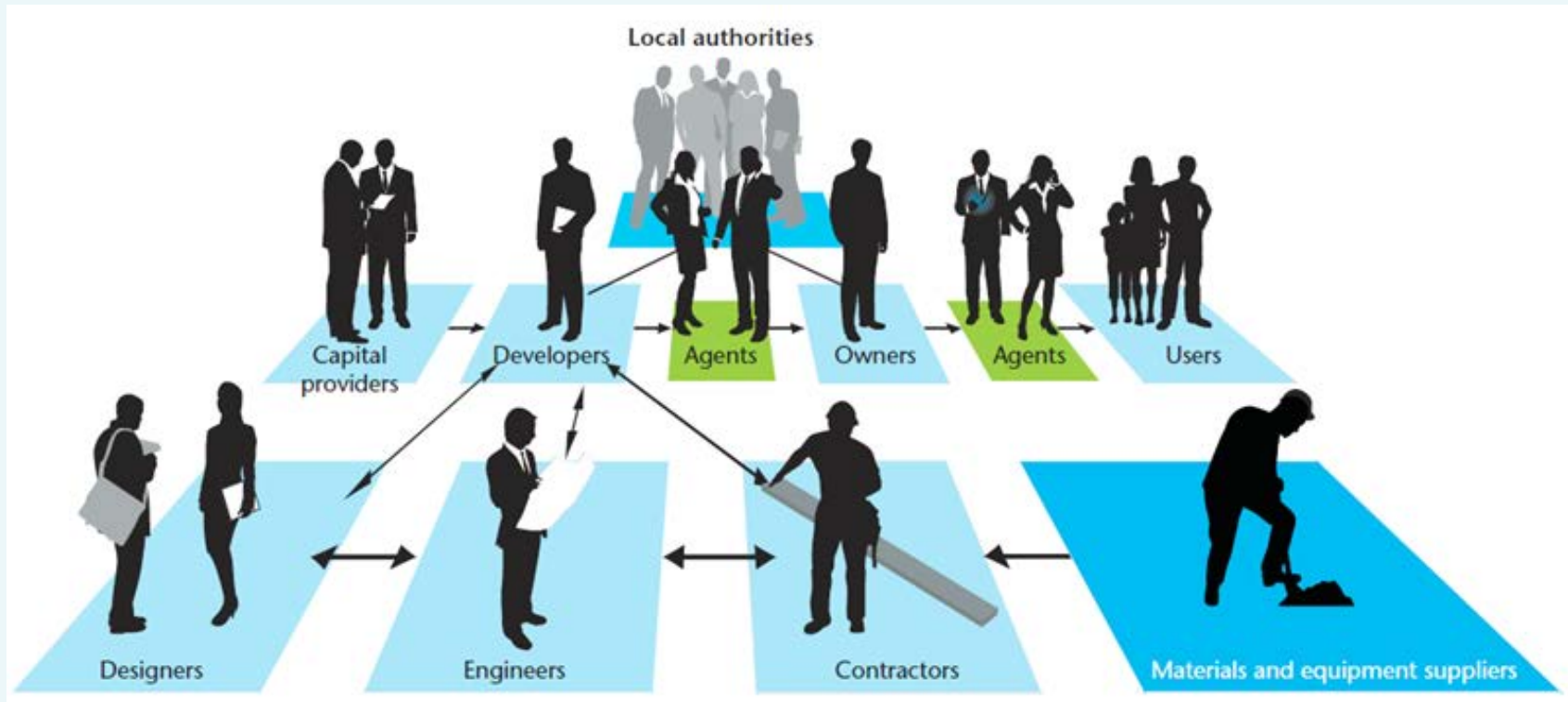


- Identify EU, national & private funding sources
- Factor in value of co-benefits
- Develop special funding vehicles for deep renovation
- Strengthen energy/carbon pricing mechanisms



- Support R, D & D into new energy saving technologies
- Identify ways to scale up best practice
- Establish renovation databases
- Gear up skills & training
- Experience-sharing networks
- Raise Awareness
- Provide stepwise support

Phase 4 – Draft the Strategy & Consult with Stakeholders Across Entire Supply Chain



Source – World Business Council for Sustainable Development

Phase 5 – MOST IMPORTANTLY!

Publish & Deliver !



Existing National/Regional Strategies



Allocate Up To 1 Year for Strategy Development

- note... EED Deadline is April 2014!

Month	1	2	3	4	5	6	7	8	9	10	11	12	year2+
PHASE 1 - Identify key stakeholders & information sources	█	█											
PHASE 2 - Technical and economic appraisal		█	█	█	█	█	█						
PHASE 3 - Policy appraisal		█	█	█	█	█	█						
PHASE 4 - Drafting & consultation						█	█	█	█	█			
PHASE 5a - Finalisation & publication											█	█	
PHASE 5b - Delivery													Ongoing thereafter

Renovation strategies - Ambition Level

- Set long term framework to 2050 for renovation of national building stocks to very high energy performance levels;
- Mobilise ALL building owners to undertake deep renovation;
- Mobilise ENTIRE supply chain to deliver high quality renovations;
- Mobilise banks/investors develop specific financial products;
- Stimulate R&D into techniques and technologies that deliver greater energy savings at lower cost;
- Achieve CO₂ reductions consistent with 2050 goals;
- Quantify the economic, environmental, societal and energy system benefits;
- Be evaluated on an ongoing basis and updated every 3 years;
- Meet the requirements of Article 4 of the EED.

Join Our Stakeholder Group!

Dan Staniaszek

dan.staniaszek@bpie.eu

Tel: +32 2 789 30 08

Serban Danciu

Serban.Danciu@bpie.eu

Tel: +40 73 55 11 267

Buildings Performance Institute Europe

www.bpie.eu

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