

VIPA

BUILD2LC
Interreg Europe



European Union
European Regional
Development Fund

Lithuanian Action Plan

Lithuania

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Brief summary - Housing in Lithuania

Lithuania's building stock comprises of around 500 thousand residential buildings.

Residential buildings divided into two main groups:

1. One- and two-apartment buildings (assumed to be individual houses);
2. Three- and more apartment buildings (multi-apartment buildings including residential buildings for social groups).

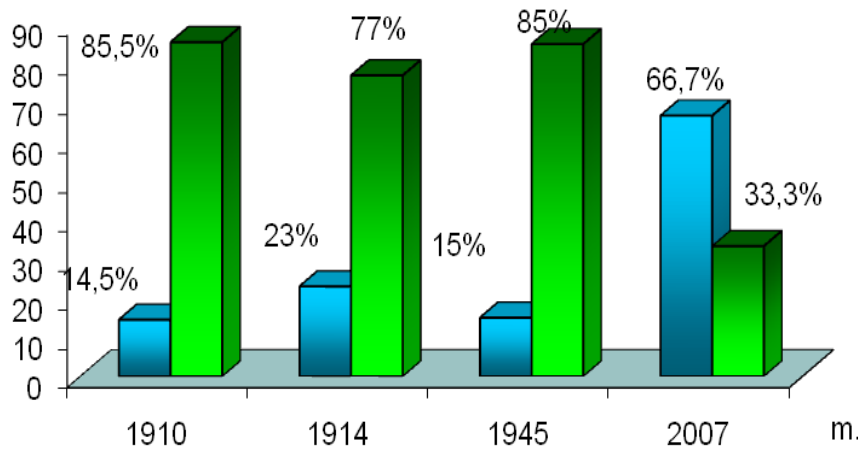


Group of buildings	Number	Total area (thousands m ²)	Average are per building (m ²)
Residential, total	478 889	109 038	
One- and two-apartment	439 769 (92%)	53 482 (9%)	122
Three- and more apartments	39 131 (8%)	55 556 (51%)	1420
Non-residential, total	57 970	36 038	622

Lithuanian residential building sector in 2015

Brief summary - Population

Lithuania is the largest of the three Baltic states, with an area of 65,300 km². It has an estimated population of 2,5 million



Urban inhabitants	Rural inhabitants	Year
14,5%	85,50%	1910
23%	77%	1914
15%	85%	1945
66,7%	33,3%	2007

Department of Statistics to the Government of the Republic of Lithuania (Statistics Lithuania), 2012

- > 66 % of population lives in multi-apartment buildings built by 1993
- 97 % private ownership, 3% social housing
- District heating covers 65% of the total heated area in Lithuanian cities



Lessons learnt from BUILD2LC

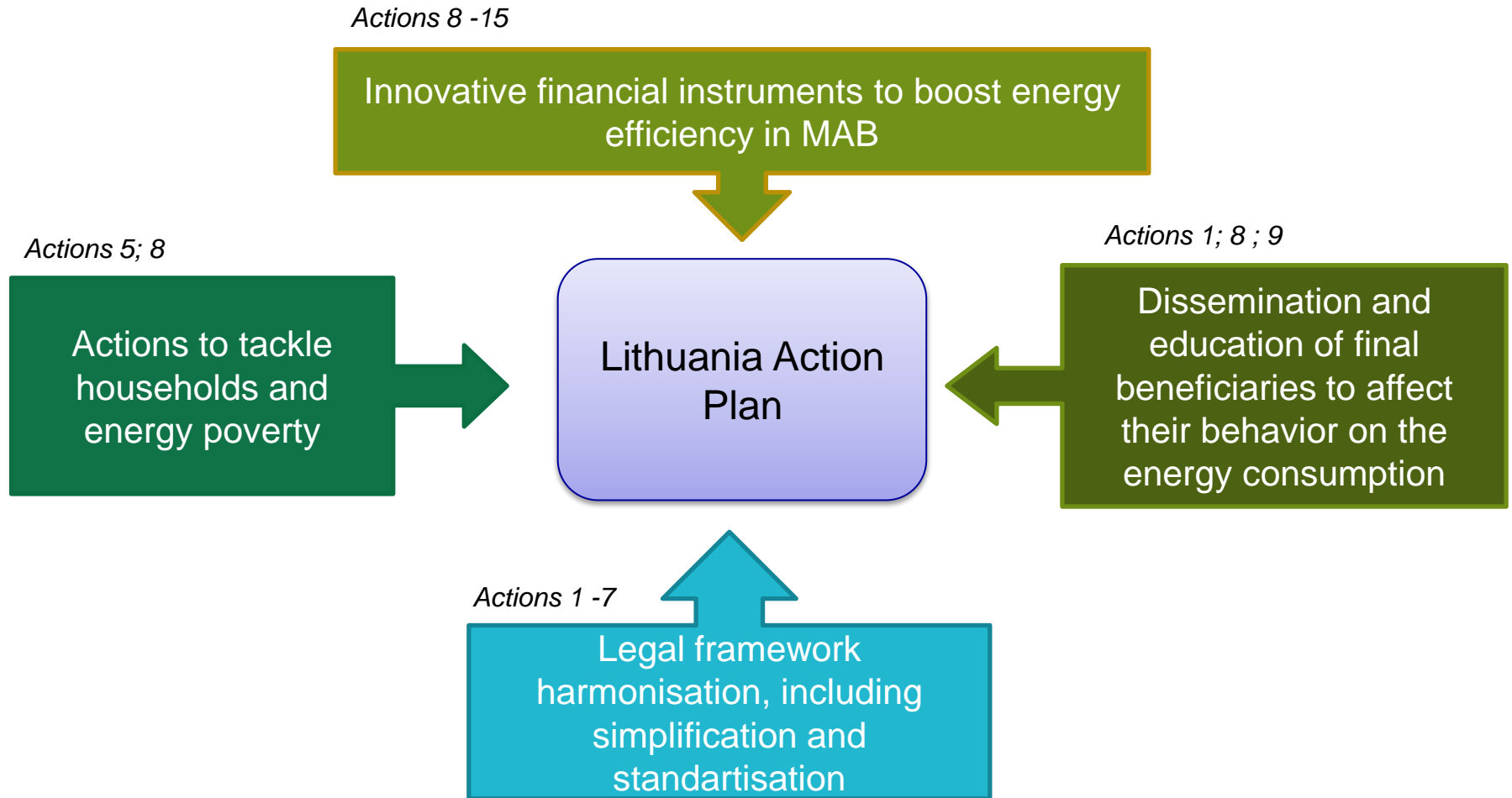
During the project bi-lateral meeting Lithuania learned from **Andalusia Energy Agency (Spain) good practices**. The aim of the Incentives Programme for Sustainable Construction in Andalusia was to facilitate the rehabilitation of existing buildings through energy saving and efficiency and renewable energy measures and to promote a culture based on the sustainable energy rehabilitation of buildings.

VIPA analyzed **Slovenian good practices** and the activity of Eco Fund. Eco Fund is the biggest specialized institution providing financial incentives for environmental investments in Slovenia. The majority of investments eligible for Eco Fund's subsidies are currently in the building sector, which has the biggest potential for delivering significant and cost-effective emissions reductions (proven policies, technologies and knowledge already exist on the market).

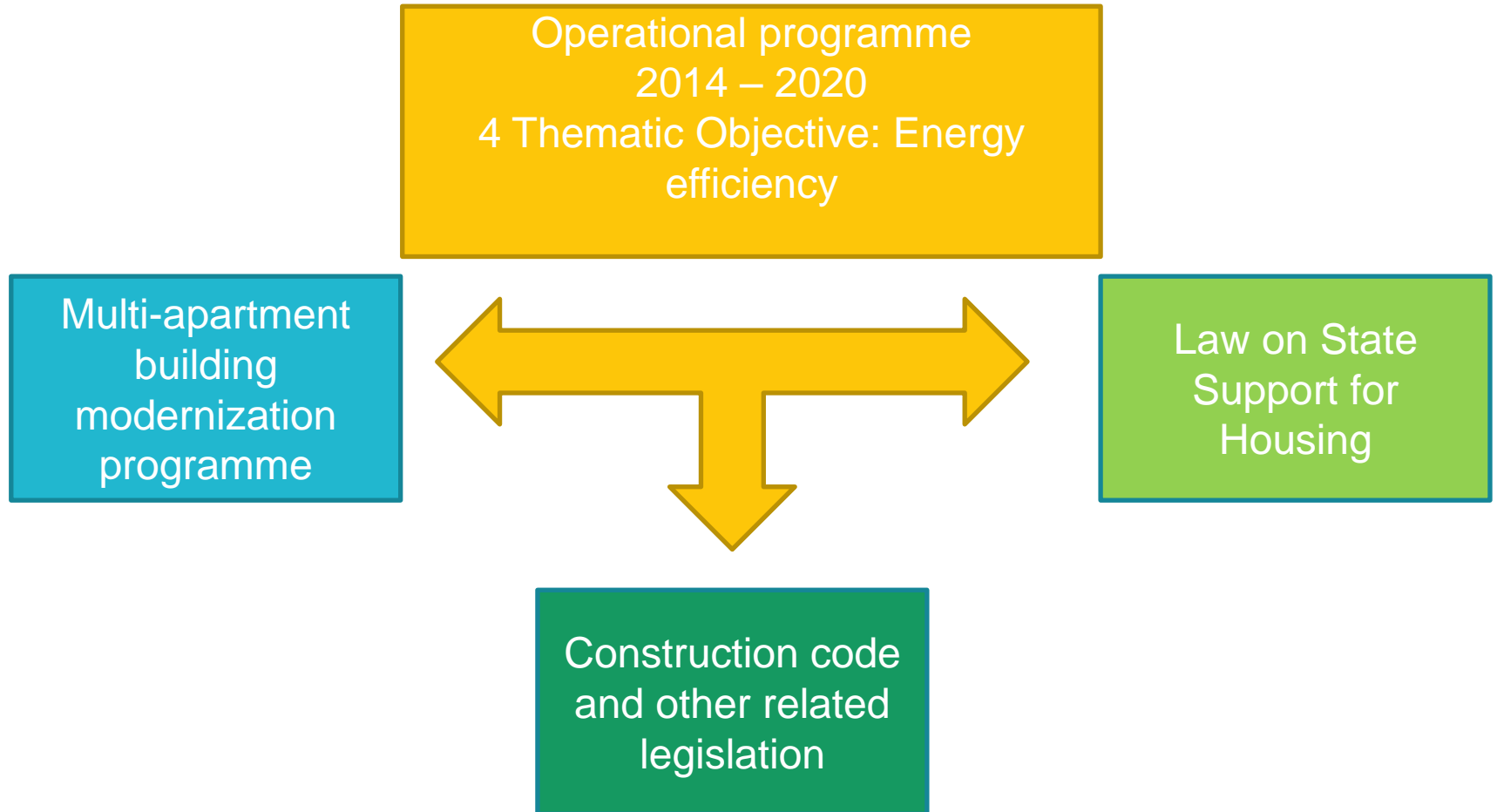
Next steps

- Action 1: Market analysis
- Action 2;3: Proposal and discussions with ministries
- Action 4,5: Submission of proposals to amend the Law on State Support for Housing and approval of the law on State Support for Housing
- Action 6: Amendment of the Government resolution on modernization of multi-apartment building modernisation programme
- Action 7: Designation of the institution for state aid management
- Action 8: Conditions for project preparation and payment of subsidies are announced
- Action 9: Preparation of Investment Strategy
- Action 10: Approval of the investment strategy of the Steering Committee (the limited liability partnership – „Energy Efficiency Investment Platform“.)
- Action 11: Publication of financing conditions for applicants
- Action 12: Internal applications evaluation, decision making, etc. approval of procedures
- Action 13: Development of information systems for project management
- Action 14: Evaluation of applications
- Action 15: Allocation of funding

Action Plan Summary (1)



Action Plan Summary (2): Policy Instruments



Action Plan Summary (3)

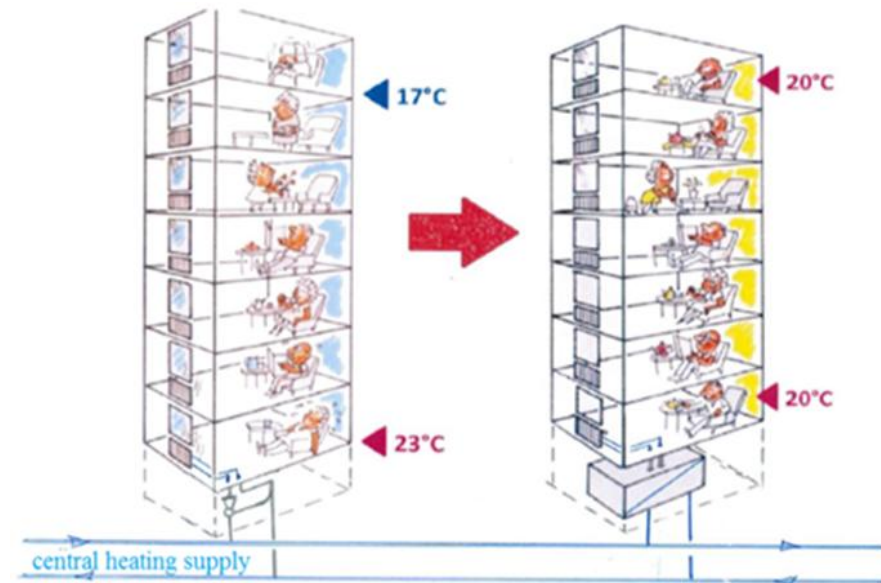
The action will be related with the modifications of the Multi-apartment building modernization programme:

Modernization of heating unit

Smart metering system

Sustainable and efficient development of the economy:

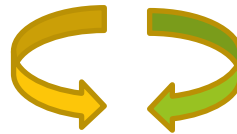
- about 25% of energy may be saved
- pay off within 10 years or shorter time
- improved comfort conditions
- reduced heating bills
- decreased losses of the heating networks
- reduced temperature of the supply pipe to 10-15 °C
- optimisation of the smart systems for energy efficiency



Action Plan Summary

Deep renovation model will be maintained but it will be suggested to apply mandatory measures such as renovation of heating systems and (or) installation of smart metering systems in 2 cases:

1. Multi-apartment buildings are recognized as **cultural heritage** (e.g. are located in old town) and/or it is complicated and sometimes there are too many difficulties to install deep renovation measures (insulation of walls/roofs, replacement of windows etc.).



2. When the **value of multi-apartment buildings is too low:**

2.1. in remote regions

2.2. high ratio of investment to real estate value (e.g. investment required 7K € and the value 10 K€)

2.3. high risk that renovated multi-apartments will be inhabited (due to high emigration rates) during the loan maturity date (up to 20 years).

Energy efficiency of shallow renovation

Renovation (automation) of the heating unit of multi-apartment buildings include works performed only at the heating point and the heating devices (units) of the multi-apartment buildings

Shallow renovation measures	Average investment, EUR	Energy efficiency, %	Average price of centralized heat supply in EUR / MWh	Energy saving after modernization, MWh	The payback period, Years
Heat supply modernization	15000	8	60,6	28,4	8,7
Cold and hot water systems balancing	9500	5	60,6	17,7	8,8
Insulation of cold and hot water pipelines	2300	2	60,6	7,1	5,4
Particulators and / or thermostatic shakers	21000	10	60,6	35,5	9,8
Complexly	47800	25	60,6	88,7	8,9

Payback period of shallow renovation measures with 10 years loan

Shallow renovation measures	Average investment, EUR	Interest rate, %	Interest Amount, EUR	Investments with interest, EUR	The payback period(with loan), Years
Heat supply modernization	15000	3%	2380	17380,0	10,1
Cold and hot water systems balancing	9500	3%	1507	11007,0	10,2
Insulation of cold and hot water pipelines	2300	3%	365	2665,0	6,2
Particulators and / or thermostatic shakers	21000	3%	3333	24333,0	11,3
Complexly	47800	3%	7587	55387,0	10,3

Payback period of shallow renovation measures, subsidy and 7 years loan

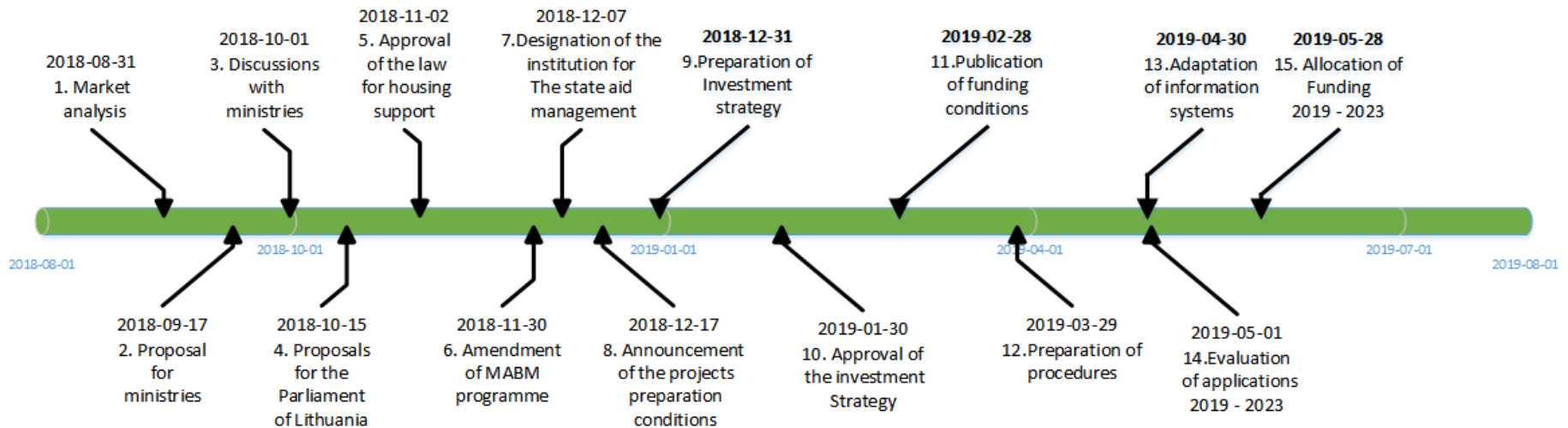
Shallow renovation measures	Average investment excluding subsidy, EUR	Interest rate, %	Interest Amount, EUR	Investments with interest, EUR	The payback period (with subsidy and loan), Years
Heat supply modernization	10500	3%	1150	11650,0	6,8
Cold and hot water systems balancing	6650	3%	730	7380,0	6,9
Insulation of cold and hot water pipelines	1610	3%	176	1786,0	4,2
Particulators and / or thermostatic shakers	14700	3%	1615	16315,0	7,6
Complexly	33460	3%	3678	37138,0	6,9

Costs

Shallow renovation target funding required

Shallow renovation target until 2023	Shallow renovations annual renovation target	Investments, EUR	Subsidy, EUR	Loans, EUR	Energy saving after modernization, MWh
2019	156	7 472 096	2 241 629	5 230 467	13 865
2020	156	7 472 096	2 241 629	5 230 467	13 865
2021	156	7 472 096	2 241 629	5 230 467	13 865
2022	156	7 472 096	2 241 629	5 230 467	13 865
2023	156	7 472 096	2 241 629	5 230 467	13 865
Total	782	37 360 480	11 208 144	26 152 336	69 323

Timeframe

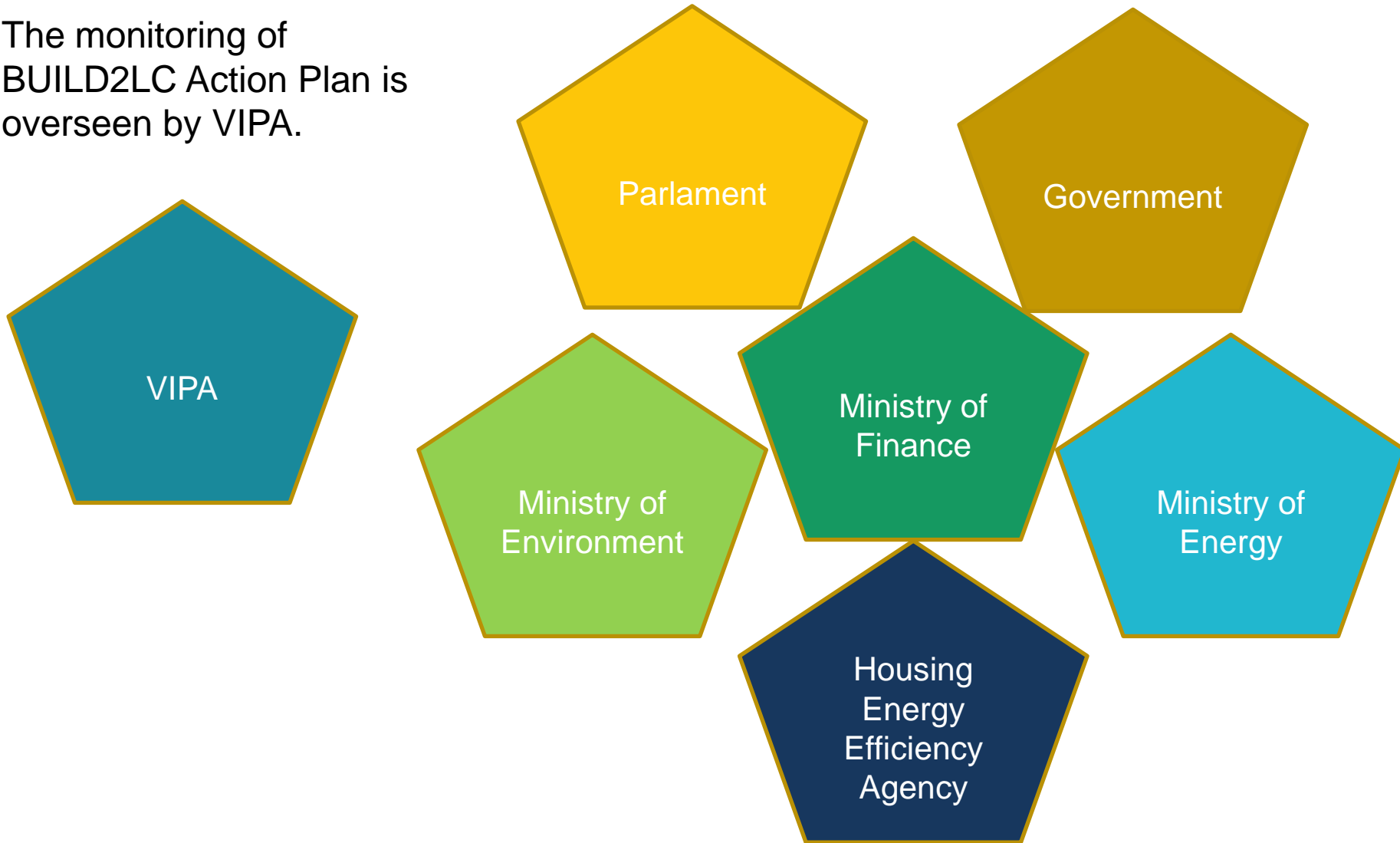


Main identified risks

- Subsidy required
- MoEn, MoE and(or) Parliament may reject the proposal to amend the Multi-apartment building modernization programme
- Requirement to achieve at least C class of multi-apartment building and to save 40 perc. of energy savings
- Requires a large-scale educational programme
- Investments for the other EE measures in the future

Players involved

The monitoring of BUILD2LC Action Plan is overseen by VIPA.



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Thank you!

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