NBRP Assessment

Document 2 - Transversal thematic analysis

Cross-country analysis of 15 National Building Renovation Plans, stream by stream

Austria · Belgium-Wallonia · Bulgaria · Croatia · Denmark · Finland · France · Germany · Netherlands · Poland · Portugal · Romania · Slovenia · Spain · Sweden

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1. Introduction

1.1 Purpose and scope

This document synthesises the patterns that run across the 15 National Building Renovation Plans (NBRPs) assessed, stream by stream. It is the reference document of the assessment: Document 1 gives the country fiches, Document 3 the executive report.

The analysis is based on the content of the NBRPs only. Policies outside the plan (building codes, funds, digital tools) are credited only where the plan references them. Fourteen plans are first drafts submitted to the Commission; Poland's is a pre-consultation draft (December 2024), never submitted and, according to the Polish partners, substantially amended since, assessed on an automated translation.

1.2 How to read

Each plan is scored on 18 topics grouped in five streams. Each topic is scored from 0 to 3 on eight dimensions: explicitness, maturity, quantitative ambition, delivery credibility, social robustness, scalability, integration and evaluability. The scale for each dimension is set out in Document 1. A topic score is the mean of its eight dimensions, a stream score the mean of its topic scores, and a plan's average the equal-weighted mean of its 18 topic scores. Scores reflect what each NBRP contains, not national policy outside the plan.

Section 2 looks across the eight dimensions. Section 3 takes the five streams in turn: a table of topic scores by plan, with averages by topic and by plan; an observation, topic by topic, each opening with an example taken from the flagship features of Document 1; and the transversal priority improvements, retained when they apply to a majority of the plans. Section 4 gives the quantitative snapshot.

Reading notes. Denmark: the plan is deliberately concise and cross-references existing legislation (Building Code BR18, Landsbyggefonden, Sparenergi.dk); low scores often reflect what the plan contains, not Danish policy maturity. Its low scores on rental instruments and social safeguards (stream 4) nonetheless reflect a real absence from the plan, and its stream 5 average combines a binding life-cycle framework in force since 2023 with a score of 0 on climate resilience, which the plan does not address. Portugal: the plan, assessed on its May 2026 draft, marks measures as "not started", "not budgeted" or "to be determined"; its low scores reflect these declared gaps rather than an absence of policy. Sweden: the plan states that its results are not final and that national targets have not been set.

1.3 From planning to implementation

This assessment scores draft NBRPs as they have been submitted. A score reflects the quality and delivery readiness of what is written in the plan. It does not reflect whether the measures described remain in force, are funded as announced, or are actually delivered. A high score therefore indicates a well-constructed plan, not a guarantee of implementation. Policies can be weakened, delayed or reopened after a plan has been submitted, and the scores do not capture such changes.

This section draws on partner feedback for France, Austria, Poland and Romania. The scores are left unchanged, to preserve a common method across the fifteen plans.

In France*, several developments since the draft was prepared affect how its findings should be read. First, on weaker renovation ambition: the third national low-carbon strategy (SNBC 3) lowers renovation objectives compared with SNBC 2. Successive changes to the EPC methodology and to the primary energy factor for electricity (2.3 to 1.9 in 2026, then 1.7 from 2027) would move around 1.3 to 1.4 million dwellings out of classes F and G without any renovation work. The decree setting the 1.9 factor was published in August 2025, before the draft was prepared, yet the draft does not mention it and gives no forward view of primary energy factors. A housing bill under parliamentary debate would again allow F and G dwellings to be let, subject to an owner's commitment to renovate within three years (single-family) or five years (multi-family). Second, on an unstable financing regime: the MaPrimeRénov' budget is maintained in nominal terms, but the scheme has gone through repeated closures and scope changes. The Green Fund, a key co-financing source for public buildings, fell from €2.5bn announced in 2024 to €837m in 2026.

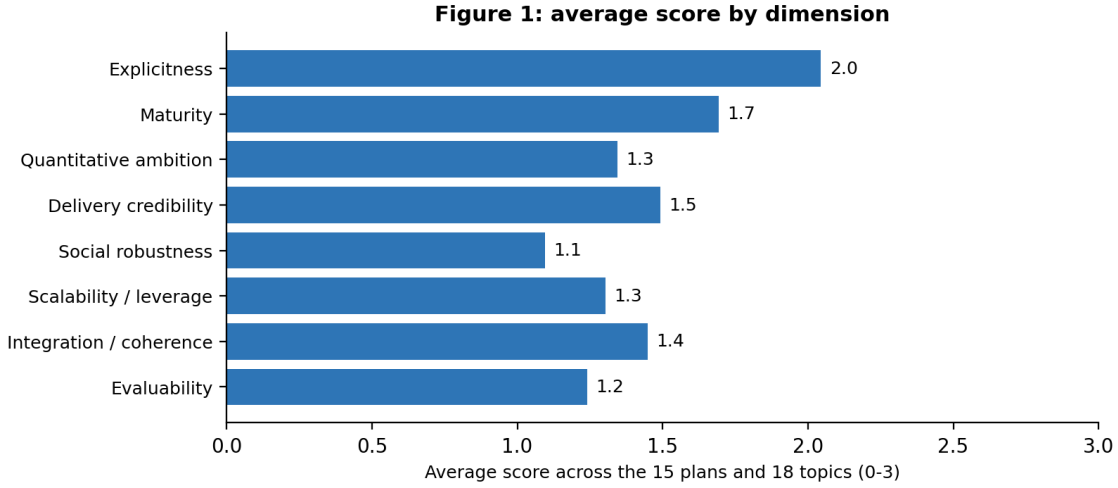
The gap can also run the other way. Romania's plan describes its National Digital Building Register as under development, with a pilot section due by end-2026; according to partner feedback, the register was launched in July 2026. In Austria, OIB Directive 6 (September 2025), not yet transposed into the Länder building codes when the draft was written, has since been made binding in Tyrol (Technical Building Regulations 2026, in force 16 July 2026) and transposed in Vienna (amendment to the Vienna Building Technology Regulation, published 15 July 2026). For Poland, the document assessed is a pre-consultation draft (December 2024). According to the Polish partners, it was substantially amended after consultation but has not been adopted, and no revised version has been published; by October 2026 Poland had not submitted a draft NBRP to the Commission, which sent it a reasoned opinion on 1 October 2026. Its main grant programme for single-family homes, Clean Air (Czyste Powietrze), was suspended from late November 2024 to 31 March 2025 and reformed after irregularities were found; the draft does not mention this.

Plan quality is therefore a necessary but not sufficient condition for delivery.

** Based on a contextual note from the French national association FILMM, shared via EURIMA and not independently verified by Climact.*

2. What the dimensions show

The streams organise the topics; the dimensions run across them. Read across the 15 plans and the 18 topics, they show where the plans are strong and where they are not, independently of the subject.



Explicitness

Explicitness is the strongest dimension: four in five scores reach 2 or 3. The plans say what they intend, on almost every topic. The weakness lies in what follows the statement: the other seven dimensions all score lower.

Maturity and delivery credibility

Maturity scores above delivery credibility (1.7 against 1.5 on average). The plans describe instruments that exist or are being prepared more often than they show the actors, timeline, resources, compliance and monitoring that would deliver them. The gap is widest on ZEB thresholds, multiple benefits and the residential trajectory: topics where a framework is announced without the means to apply it.

Quantitative ambition and evaluability

Quantification is concentrated where the Directive asks for numbers: the residential trajectory and the investment need score highest on quantitative ambition, and the trajectory is also the most monitorable topic. Climate resilience and glazed areas score close to zero on both dimensions. A plan that quantifies its endpoint but not its intermediate steps can be checked in 2050, not before.

Social robustness

Social robustness is the weakest of the eight dimensions, and the weakness is not where it would be expected. The dimension is scored on every topic, not only on the social ones. Inside the three social topics it is close to the delivery-

ready level, with four in five assessments at or above it. Everywhere else it falls by half, with one quarter. On targets and the regulatory backbone it is lower still, at one in ten.

The widest gaps are ZEB thresholds, public buildings, life-cycle requirements and non-residential standards: the topics that set an obligation without examining who will have to meet it. The question on a technical topic is not whether a social measure exists. It is whether the plan knows who bears the cost of the requirement, and whether they can. A threshold nobody can finance is not enforced; it is postponed.

3. Themes by stream

Figures 2 and 3 serve as an entry map. Figure 2 is read in rows, not in columns: a row that varies widely is a topic where some plans have found an answer that others can use. Figure 3 gives, for each stream and plan, the share of the eight dimension scores that reach 2 or 3, the level at which a measure is ready to be delivered.

Figure 2: topic scores by plan (0-3)

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T1.1 National trajectory for residential buildings	1.9	2.3	1.6	1.8	2.1	2.1	2.1	2.0	2.3	2.0	1.8	2.3	2.1	2.4	1.5	**2.0**
T1.2 MEPS for non-residential buildings	1.5	1.1	2.1	2.0	2.1	1.3	0.9	1.0	2.0	1.5	1.0	2.0	1.0	2.0	1.1	**1.5**
T1.3 ZEB thresholds / nZEB conversion	1.4	0.8	1.1	1.5	1.8	1.5	0.9	0.5	1.5	1.5	1.5	1.8	1.1	1.3	1.5	**1.3**
T1.4 Fossil-fuel phase-out and heat decarbonisation	1.6	1.6	2.0	1.1	2.6	2.3	1.9	2.0	2.0	2.0	0.9	1.3	1.6	1.9	1.8	**1.8**
T1.5 TBS and BACS requirements	0.5	1.1	1.0	0.9	1.5	1.4	1.6	0.6	0.8	1.0	0.5	1.0	0.8	1.6	1.4	**1.0**
T1.6 Performance of glazed areas	0.5	0.0	0.4	0.5	0.0	1.3	1.0	1.0	1.3	1.4	0.4	1.4	0.8	0.8	0.8	**0.8**
T2.1 One-stop shops	1.4	2.3	1.8	1.8	1.5	1.3	2.3	1.6	1.9	1.6	1.8	2.4	1.9	2.0	1.8	**1.8**
T2.2 Workforce	1.3	1.8	1.8	1.5	1.3	0.9	1.6	1.4	1.5	1.8	1.0	1.8	1.4	1.6	1.4	**1.5**
T2.3 Area-based / integrated approach	0.9	2.0	1.3	0.9	0.9	0.6	2.0	1.8	2.0	1.5	1.1	2.3	1.1	2.1	0.3	**1.4**
T2.4 Mobilisation of public buildings	1.4	1.9	2.3	2.0	1.8	1.4	1.5	1.6	1.8	1.8	0.3	1.5	2.1	2.0	1.0	**1.6**
T3.1 Financing of investments and delivery costs	1.5	1.9	1.3	1.5	1.9	1.8	1.8	2.0	2.0	2.0	0.1	2.3	2.4	2.5	0.6	**1.7**
T3.2 Diversified and scalable financing	1.6	1.6	1.8	1.5	1.8	1.6	2.3	1.8	2.1	2.0	1.4	1.4	2.1	2.1	0.9	**1.7**
T3.3 Mobilisation of multiple benefits	0.9	1.0	0.3	1.9	0.6	0.8	1.0	0.8	1.5	1.3	1.4	1.3	1.5	1.6	0.9	**1.1**
T4.1 Proactive targeting of vulnerable households	2.3	2.4	1.5	1.8	1.4	1.6	2.0	1.9	2.3	2.1	1.6	2.3	2.4	2.4	1.1	**1.9**
T4.2 Affordability and activation of the rental market	1.4	2.1	0.6	2.0	1.8	1.6	2.6	1.8	2.3	1.4	0.9	1.4	1.6	2.1	0.8	**1.6**
T4.3 Social safeguards	1.6	1.5	0.5	1.4	1.1	1.6	1.6	1.3	1.6	1.5	0.1	1.6	2.4	2.1	0.9	**1.4**
T5.1 Life-cycle climate and environmental impacts	0.8	2.1	0.4	0.6	2.5	2.1	2.3	1.0	1.4	0.9	0.8	1.1	1.3	1.4	1.1	**1.3**
T5.2 Climate resilience	1.0	1.9	0.1	1.1	0.0	0.5	1.4	0.3	1.1	0.8	0.9	0.8	1.0	1.9	0.5	**0.9**
Plan average	**1.29**	**1.63**	**1.20**	**1.42**	**1.47**	**1.42**	**1.70**	**1.34**	**1.73**	**1.55**	**0.96**	**1.64**	**1.58**	**1.88**	**1.06**	

Figure 3: delivery readiness share (share of dimension scores at 2 or 3)

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	**Average of the 15**
S1 Targets & regulatory backbone	35%	33%	46%	35%	60%	54%	44%	35%	56%	54%	21%	52%	35%	62%	48%	**45%**
S2 Delivery architecture & capacity	38%	88%	66%	56%	41%	31%	75%	59%	72%	62%	25%	84%	56%	88%	28%	**58%**
S3 Finance	42%	54%	33%	54%	50%	46%	62%	58%	79%	75%	25%	54%	79%	83%	12%	**54%**
S4 Social robustness	71%	79%	17%	67%	54%	62%	83%	67%	88%	62%	25%	67%	88%	88%	17%	**62%**
S5 Long-term quality	12%	88%	0%	12%	44%	44%	62%	19%	44%	12%	19%	12%	31%	56%	19%	**32%**
All streams	**40%**	**62%**	**38%**	**46%**	**51%**	**48%**	**62%**	**48%**	**67%**	**56%**	**23%**	**58%**	**56%**	**75%**	**29%**	

3.1 Targets, standards & regulatory backbone

Stream 1: topic scores by plan, with the average of the 15 plans by topic and the stream score by plan.

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T1.1 National trajectory for residential buildings	1.9	2.3	1.6	1.8	2.1	2.1	2.1	2.0	2.3	2.0	1.8	2.3	2.1	2.4	1.5	**2.0**
T1.2 MEPS for non-residential buildings	1.5	1.1	2.1	2.0	2.1	1.3	0.9	1.0	2.0	1.5	1.0	2.0	1.0	2.0	1.1	**1.5**
T1.3 ZEB thresholds / nZEB conversion	1.4	0.8	1.1	1.5	1.8	1.5	0.9	0.5	1.5	1.5	1.5	1.8	1.1	1.3	1.5	**1.3**
T1.4 Fossil-fuel phase-out and heat decarbonisation	1.6	1.6	2.0	1.1	2.6	2.3	1.9	2.0	2.0	2.0	0.9	1.3	1.6	1.9	1.8	**1.8**
T1.5 TBS and BACS requirements	0.5	1.1	1.0	0.9	1.5	1.4	1.6	0.6	0.8	1.0	0.5	1.0	0.8	1.6	1.4	**1.0**
T1.6 Performance of glazed areas	0.5	0.0	0.4	0.5	0.0	1.3	1.0	1.0	1.3	1.4	0.4	1.4	0.8	0.8	0.8	**0.8**
Stream score	**1.2**	**1.1**	**1.4**	**1.3**	**1.7**	**1.6**	**1.4**	**1.2**	**1.6**	**1.6**	**1.0**	**1.6**	**1.2**	**1.6**	**1.3**	

Observation

- **National trajectory for residential buildings.** Spain backcasts its residential trajectory to 2050 with deep, medium and light splits: 445,500 dwellings a year by 2030 and 17.8 million dwellings renovated cumulatively. Romania, the Netherlands and Belgium-Wallonia also set quantified paths. France quantifies a declining rate (2.19% a year in 2030 to 1.26% in 2050); Slovenia quantifies rates but leaves its primary-energy milestones to be analysed; Germany gives energy milestones without rates; Denmark defers its rate targets to the final plan; Sweden marks its trajectory as not final.
- **Non-residential MEPS.** Spain sets thresholds by use and climate zone, and Croatia by building type, with renovated floor area per period and mandatory energy-service contracts for large buildings. Numeric thresholds in kWh/m²·yr are what separates the plans: Romania (422 and 340 for the worst 16% and 26%), Denmark (190 by 2030 and 168 by 2033, one set for all uses, which are differentiated through supplements in the certificate calculation) and Bulgaria (by building use). The Netherlands requires label D by 2030 and C by 2033 for utility buildings, and label C for offices since 2023. France has no formal non-residential MEPS (Part VI "being defined"); Germany sets the method but not the values; Austria's thresholds sit in OIB Directive 6, awaiting transposition by the Länder.
- **ZEB thresholds.** Denmark's ZEB thresholds are already in its Building Code (below 27 kWh/m²·yr residential, 33 non-residential, mandatory from 2030). Complete values exist in a minority: Romania (by building type and five climate zones, set at nZEB minus 10%) and Austria (OIB Directive 6, not yet transposed); Bulgaria publishes indicative values. Spain labels its values tentative; Belgium-Wallonia and France leave them undefined; Germany defers them to national votes.
- **Fossil-fuel phase-out and heat decarbonisation.** Germany requires every newly installed heating system to run on at least 65% renewable energy since 2024. The plans that set a dated path back it with stock numbers or instruments: Denmark (oil and gas boilers from about 330,000 in 2023 to 36,000 in 2040, with a CO_2 tax path), Finland (about 1.6 million heat pumps), Poland (individual gas and coal sources eliminated by 2040 in its scenarios), the Netherlands (about 6 million homes gas-free by 2050), Austria and Spain (2040). Romania flags that its heating-stock data are missing.
- **TBS and BACS requirements.** Denmark funds building automation for systems above 290 kW through its business grant scheme (Erhvervspuljen). Elsewhere, BACS and technical building systems are referenced but rarely specified with scope, thresholds, trigger points and verification, even where the national obligation exists.
- **Performance of glazed areas.** Romania sets a window U-value of at most 1.10 W/m²·K in the plan. The low scores elsewhere mean that the plans give no visibility on window requirements, which often sit in building codes the plans do not restate: France names its element-by-element requirement without giving the value; Slovenia's code sets Uw ≤ 1.0 W/m²K but the plan is silent.

Transversal priority improvements

- **Translate endpoints into steps.** Translate every 2050 endpoint into annual renovation rates, floor area and depth splits by segment.
- **Binding ZEB values.** Set binding numeric ZEB values by building type and climate zone, with a timetable (Romania and Denmark as references).
- **Windows and building automation.** Give visibility in the plan on the window requirements already in force and link them to the renovation pathway. Specify how each EPBD Article 13 requirement is implemented and verified: system thresholds and deadlines, room-level controls, hydronic balancing, monitoring, automatic lighting controls.
- **Heating inventories.** Complete heating-device inventories by fuel and technology for each segment where they are missing (Romania, Portugal, Belgium-Wallonia).

3.2 Delivery architecture & implementation capacity

Stream 2: topic scores by plan, with the average of the 15 plans by topic and the stream score by plan.

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T2.1 One-stop shops	1.4	2.3	1.8	1.8	1.5	1.3	2.3	1.6	1.9	1.6	1.8	2.4	1.9	2.0	1.8	**1.8**
T2.2 Workforce	1.3	1.8	1.8	1.5	1.3	0.9	1.6	1.4	1.5	1.8	1.0	1.8	1.4	1.6	1.4	**1.5**
T2.3 Area-based / integrated approach	0.9	2.0	1.3	0.9	0.9	0.6	2.0	1.8	2.0	1.5	1.1	2.3	1.1	2.1	0.3	**1.4**
T2.4 Mobilisation of public buildings	1.4	1.9	2.3	2.0	1.8	1.4	1.5	1.6	1.8	1.8	0.3	1.5	2.1	2.0	1.0	**1.6**
Stream score	**1.2**	**2.0**	**1.8**	**1.5**	**1.3**	**1.0**	**1.8**	**1.6**	**1.8**	**1.7**	**1.0**	**2.0**	**1.6**	**1.9**	**1.1**	

Scores are based on what the plans describe, not on what is actually funded. Several of the delivery architectures scored highest carry no budget or no start date: the Portuguese one-stop-shop network is specified but recorded as unbudgeted and not started, and the German funding for municipal renovation management was interrupted for almost two years before resuming.

Observation

- **One-stop shops.** France Rénov' covers 92% of intercommunal areas, and a certified adviser is mandatory for deep renovations supported by MaPrimeRénov'. The coverage criteria several plans adopt (at least one office per 80,000 inhabitants, per region, within 90 minutes: Spain, Portugal, Bulgaria, Belgium-Wallonia) restate EPBD Article 18. What distinguishes the plans is whether they translate coverage into a number of offices, staff and budget. Romania does: 42 offices in operation, about 100 by 2035, €250,000 to open an office and €250,000 a year to run it. Belgium-Wallonia defines three service levels up to delegated project management; Denmark runs a national digital one-stop shop; Sweden quantifies its municipal advisory base (about 140 advisers, SEK 90m for 2025). Portugal and Bulgaria specify networks without budget or staff; Poland's advisory network is a recommendation only.
- **Workforce.** Romania and Bulgaria attach training targets to their roadmaps (more than 160,000 and 52,368 workers to upskill or reskill by 2030). Most plans quantify the need rather than the means: France 170,000-250,000 additional full-time equivalents by 2030, Poland 380,138 workers a year needed by 2050, Spain about 700,000, Croatia 24,530 workers and 5,800 engineers, Portugal about 80,000. No plan quantifies the training effort (output by profile, region and role, and the resources behind it). Bulgaria's own figures show the distance: 4,500-5,000 people certified a year against 52,368 to reskill.
- **Area-based and integrated approaches.** Germany makes municipal heat planning mandatory, with deadlines in 2026 and 2028 and more than half of municipalities already complete. Romania publishes district-level annual indicators for 2026-2030; Belgium-Wallonia deploys neighbourhood "renovation trains" and condominium roadmaps; Slovenia and Croatia combine energy and seismic renovation. The Netherlands and Germany fund the municipal capacity they devolve (the Dutch capacity grant to municipalities; €500m for German heat planning in 2024-2028).
- **Mobilisation of public buildings.** Croatia renovates public buildings through a mandatory energy-service model. The 3% a year renovation obligation of EED Article 6 appears in most plans, but rarely with the instruments, budget, results or enforcement behind it. Croatia (30,539 buildings, 0.62% renovated in 2023), Sweden (67.9 million m² publicly owned) and Denmark (3.9 million m², energy class B by 2040) quantify the stock; Slovenia reports 2.0% achieved in 2024 against 3%; Germany funds an exemplary-role programme for federal buildings (about €1bn a year). No plan uses public buildings as a market-shaping lever: procurement specifications and investment pipelines are absent.

Transversal priority improvements

- **One-stop shops in numbers.** Translate one-stop-shop coverage into a number of offices, staff, budget and annual throughput (Romania's unit costs as reference).

- **Training output.** Translate workforce needs into annual training output targets by profile, region and role, with the resources to deliver them.
- **District programmes.** Structure area-based programmes with district targets and funded municipal capacity (Romania, Germany, the Netherlands and Belgium-Wallonia as references).
- **Public buildings as a lever.** Back the renovation rate of public buildings with instruments, budget and enforcement, and use procurement specifications and an investment pipeline to shape the market.

3.3 Finance & political attractiveness

Stream 3: topic scores by plan, with the average of the 15 plans by topic and the stream score by plan.

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T3.1 Financing of investments and delivery costs	1.5	1.9	1.3	1.5	1.9	1.8	1.8	2.0	2.0	2.0	0.1	2.3	2.4	2.5	0.6	**1.7**
T3.2 Diversified and scalable financing	1.6	1.6	1.8	1.5	1.8	1.6	2.3	1.8	2.1	2.0	1.4	1.4	2.1	2.1	0.9	**1.7**
T3.3 Mobilisation of multiple benefits	0.9	1.0	0.3	1.9	0.6	0.8	1.0	0.8	1.5	1.3	1.4	1.3	1.5	1.6	0.9	**1.1**
Stream score	**1.3**	**1.5**	**1.1**	**1.6**	**1.4**	**1.4**	**1.7**	**1.5**	**1.9**	**1.8**	**1.0**	**1.6**	**2.0**	**2.1**	**0.8**	

Observation

- **Financing of investments and delivery costs.** Romania budgets the cost of delivery separately from the cost of the works. It carries a dedicated line of €1,807 million for 2026-2030, broken into one-stop shops, vulnerable households, technical assistance, administration and awareness, against €28.57 billion of works over the same period, about six per cent. That separation is what produces a unit cost: €250,000 to open a one-stop shop and €250,000 a year to run it. Romania also states that no legal commitment has been taken on these amounts.
- Investment needs are quantified in most plans, on different bases: Spain (€39.35bn for 2026-2030, €11.31bn public and €28.04bn private), Romania (€122-125bn to 2050), Poland (PLN 1.8-2.0 trillion to 2050, about €418-464bn), Germany and the Netherlands (need tables to 2045 and 2050 with a public and private split), Slovenia (by sector and period, with stated deficits), Denmark (€2.35bn for 2026-2030, private side not disaggregated). Sweden calculates no need because its targets are not set; Portugal gives no figures.
- **Diversified and scalable financing.** The Netherlands reports spending and leverage by scheme: €512m of subsidy under ISDE associated with €1.94bn of private investment. Financing toolboxes vary less in size than in the kind of instrument they contain. Grants are universal. Concessional and guaranteed lending is common (Spanish ICO guarantee lines, the Slovenian SID Bank fund of €280m, the French zero-interest eco-loan, Danish and Dutch national funds). Obligation-based mechanisms are rarer: the French and Spanish energy savings certificate schemes are the two operating examples. Tax instruments appear in France (reduced VAT) and Finland (household tax credit). The novel families (property-linked repayment, on-bill repayment, home equity, energy-savings insurance, co-investment platforms) appear only in Spain and Belgium-Wallonia, as feasibility studies or experiments without allocated investment.
- **Mobilisation of multiple benefits.** Spain quantifies the benefits ex ante: energy poverty down 21.88% by 2030, 2,794 deaths avoided, GDP up 0.54% cumulatively over 2023-2030, €5.55 billion of household savings. There is no ex-post tracking mechanism, and nothing turns those benefits into a design parameter for an instrument.
- Romania does less of it and does it differently: a single ratio of €2 to €5 of combined benefits per euro invested, and 300 to 500 hospital admissions avoided a year by 2050. It is thinner, and it is the form a finance ministry can use. Neither plan connects its benefits to the design of its instruments. Croatia and Slovenia integrate seismic safety and energy poverty with renovation; most plans acknowledge co-benefits without monetising them. Health, social and energy-security effects are described as consequences of renovation, not as reasons to fund it, and so they do not compete for budget in the sectors that would benefit.

Transversal priority improvements

- **Investment envelope.** Quantify a total investment envelope with a public and private split and a breakdown by period (Portugal, Sweden and Bulgaria first).
- **Sequenced toolbox.** Move the financing toolbox from description to at least pilot deployment: which instrument, through which institution, on which timeline.
- **Multiple benefits in the budget.** Use multiple benefits as an explicit criterion to allocate funding, with ex-post measurement (Spain's ex-ante quantification as a starting point).

3.4 Social robustness

Stream 4: topic scores by plan, with the average of the 15 plans by topic and the stream score by plan.

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T4.1 Proactive targeting of vulnerable households	2.3	2.4	1.5	1.8	1.4	1.6	2.0	1.9	2.3	2.1	1.6	2.3	2.4	2.4	1.1	**1.9**
T4.2 Affordability and activation of the rental market	1.4	2.1	0.6	2.0	1.8	1.6	2.6	1.8	2.3	1.4	0.9	1.4	1.6	2.1	0.8	**1.6**
T4.3 Social safeguards	1.6	1.5	0.5	1.4	1.1	1.6	1.6	1.3	1.6	1.5	0.1	1.6	2.4	2.1	0.9	**1.4**
Stream score	**1.8**	**2.0**	**0.9**	**1.7**	**1.4**	**1.6**	**2.1**	**1.6**	**2.0**	**1.7**	**0.9**	**1.8**	**2.1**	**2.2**	**0.9**	

Observation

- **Proactive targeting of vulnerable households.** Belgium-Wallonia combines vulnerability maps feeding local outreach strategies, a single referent who manages the whole project for the most vulnerable, and referral by general practitioners to the one-stop shop. Four kinds of proactive approach appear across the plans. Identification: Belgium-Wallonia's vulnerability maps; Bulgaria's legal definition with annual monitoring of 1.83 million people. Outreach through trusted intermediaries: the Netherlands (local intermediaries and a dedicated energy-poverty grant to municipalities), Germany (an energy-saving check that has reached about 460,000 households, delivered with Caritas), Austria (Wohnschirm Energie with Caritas and the federal kea coordination centre), Slovenia (coordinators and social workers). A single adviser for the project: Belgium-Wallonia, and France, where a certified adviser is mandatory for deep renovations and France Rénov' targets modest households. Removing the pre-financing barrier: Spain pays contractors directly, with aid rising with vulnerability; Slovenia subsidises energy-poor households at 100%. Quantifying energy poverty, which most plans do (Austria under three definitions, Croatia 12.2% of households, Portugal 1.8 to 3 million people), is a diagnosis, not targeting.
- **Affordability and activation of the rental market.** France makes renting the worst classes progressively illegal under its decent-housing standard (minimum class F from 2025, E from 2028, D from 2034); tenants can compel works. Three plans couple rent and energy performance in different ways: the Netherlands ties the legal maximum rent to the energy label; Belgium-Wallonia caps rent plus energy cost ("warm rent"); Sweden's utilities-inclusive rents leave the landlord to bear the cost and capture the saving, although efficiency works give no ground for a rent increase. Germany splits carbon costs between landlord and tenant according to the building's emissions. Most other plans diagnose the split incentive without a binding instrument. Affordable housing is integrated in Croatia (National Housing Policy Plan 2030), Spain (30% of the State Housing Plan for renovation) and Denmark (National Building Fund); Bulgaria has no link, Portugal cites its programmes as context only, and Sweden reports no social housing in the Directive sense.
- **Social safeguards.** Romania prohibits the eviction of vulnerable households and protects their timelines under its energy-poverty ordinance. Slovenia and Spain set out safeguards; they are near absent in Portugal and Bulgaria (no protection against renoviction, no affordability conditions).

Transversal priority improvements

- **Proactive outreach.** Organise proactive outreach to vulnerable households rather than relying on applications: identify them through vulnerability mapping (income, energy poverty, housing type, climate exposure), reach them through local social and health intermediaries, and assign the most vulnerable a single adviser who manages the whole project on their behalf. Belgium-Wallonia provides the reference design (vulnerability maps feeding local outreach strategies, 2027-2029; a referent adviser or social-technical pair under delegated project management, and referral by general practitioners to the one-stop shop, 2028-2032). These are planned measures, not yet in operation.
- **Split incentive.** Introduce binding split-incentive instruments (green-lease templates, caps on cost pass-through, renovation-conditional rent mechanisms), with France and the Netherlands as references.

- **Safeguards.** Introduce binding social safeguards and protection against renoviction (Portugal and Bulgaria first).
- **Affordable housing.** Link the NBRP and affordable-housing policy through shared governance and instruments (Bulgaria and Portugal first).
- **Outcome tracking.** Track the reduction of energy poverty ex post, beyond the number of beneficiaries.

3.5 Long-term quality & future-proofing

Stream 5: topic scores by plan, with the average of the 15 plans by topic and the stream score by plan.

	Austria	Belgium-Wallonia	Bulgaria	Croatia	Denmark	Finland	France	Germany	Netherlands	Poland	Portugal	Romania	Slovenia	Spain	Sweden	Average of the 15
T5.1 Life-cycle climate and environmental impacts	0.8	2.1	0.4	0.6	2.5	2.1	2.3	1.0	1.4	0.9	0.8	1.1	1.3	1.4	1.1	**1.3**
T5.2 Climate resilience	1.0	1.9	0.1	1.1	0.0	0.5	1.4	0.3	1.1	0.8	0.9	0.8	1.0	1.9	0.5	**0.9**
Stream score	**0.9**	**2.0**	**0.3**	**0.9**	**1.3**	**1.3**	**1.8**	**0.6**	**1.3**	**0.8**	**0.8**	**0.9**	**1.1**	**1.6**	**0.8**	

Observation

- **Life-cycle climate and environmental impacts.** Denmark has had binding whole-life-carbon limits in its Building Code since 2023, differentiated by building type and tightened to 2029, including transport and construction-site emissions. France (RE2020) and Finland (Construction Act 2025) regulate the whole-life carbon of new buildings; Belgium-Wallonia runs the TOTEM tool with a roadmap (observatory in 2029, first report in 2030); Sweden has required a climate declaration for new buildings since 2022; Spain plans the calculation from 2028 for large buildings and 2030 for all; Austria prepares harmonised rules (OIB Directive 7, 2027). All these frameworks, Denmark's included, concern new buildings; no plan sets life-cycle requirements for renovation. Bulgaria references the EN 15804 standard without a timetable; Portugal's method is under development (2028-2033).
- **Climate resilience.** Belgium-Wallonia includes an adaptation component in all energy audits from 2030 and resilience criteria in its energy performance certificate tool, covering heat waves, runoff, drought and wind. Spain has a dedicated section linked to its National Adaptation Plan, with climate shelters for vulnerable people; Poland has a dedicated section anchored in its national adaptation plan; the Netherlands defers its built-environment targets to the 2026 revision of its adaptation strategy. Resilience is absent from the Danish and Bulgarian plans and appears in most others only as a co-benefit.

Transversal priority improvements

- **Life-cycle roadmap.** Publish the national roadmap on life-cycle GWP limit values for new buildings due by 1 January 2027 (EPBD Article 7), with Denmark and Belgium-Wallonia as references.
- **Renovation and resilience.** Integrate climate resilience into renovation, at building level and in neighbourhood strategies, with risk mapping (heat, flood, extreme weather). Belgium-Wallonia's measures are a reference, keeping in mind that they are proposals not yet in force.
- **Life-cycle in renovation.** Extend life-cycle assessment to renovation and integrate it into public procurement. The EPBD does not require it; the case rests on overall greenhouse-gas reduction, since the embodied emissions of renovation works count towards it.

4. Quantitative cross-country snapshot

The first message of the quantitative material is that it is hard to compare: each plan presents its figures in its own way (annual or total, 2026-2030 or 2050, floor area, buildings or dwellings, euros or national currency). The snapshot is therefore given as two tables rather than a single cross-country chart, which would imply a comparability the source data do not support.

Table 1. Renovation effort and investment need

Country	Residential renovation rate	Non-residential renovation rate	Residential investment need	Non-residential investment need
Austria	1.58-3.30%/yr m² · o	n/c (MEPS regime)	€4.2bn/yr (thermal, ch.4)	€6.1bn/yr
Belgium-Wallonia	3.00%/yr b · t*	3.78%/yr b · t	€15.93bn (2020-30)	€38-64bn (2020-50)
Bulgaria	0.47%/yr m² · o	n/a	n/a (BGN 6.33bn spent to date)	€48bn (to 2050)
Croatia	0.41% b · o (2023)	0.17% b · o (2023)	€3.44bn (2021-30) + 3 programmes	incl. above
Denmark	n/c (method pending)	n/c (method pending)	€1,889m (2026-30)	€464m (2026-30)
Finland	n/c (energy trajectory)	n/c (energy trajectory)	€19.2bn (2025-50)	€13.8bn (2025-50)
France	2.19%/yr dw · t (2030)	8.70%/yr m² · t	€34bn/yr (level in 2030)	€10bn/yr (level in 2030)
Germany	n/c (no official rate)	n/a	€34.3 → 56.5bn/yr (2026-30)	€9.1 → 16.3bn/yr
Netherlands	0.35 → 0.5 → 0.36 M dw/yr · t	n/c (MEPS regime)	€3.0bn/yr (2026-30)	€2.3bn/yr (2026-30)
Poland	~170,500 b/yr · t (operational scenario)	2.3-3%/yr m² · t (public-utility)	n/c (scenario tables in PLN)	n/a
Portugal	1.77% m² · o (2023)	0.05% m² · o (2023)	n/a	n/a
Romania	2.75%/yr m² · t	3.76%/yr m² · t	€26.25bn (2026-30)	€2.32bn (2026-30)
Slovenia	2.06% SF / 2.58% MF dw · t	3.05% m² · t (public)	€507 → 523m/yr (2026-30)	€108 → 111m/yr (public)
Spain	445,500 dw/yr · t (2030)	0.69% m² · o	€14.74bn (2026-30)	€22.88bn (2026-30)
Sweden	2.15% b · o (2023)	1,401 b · o (2023)	n/a (not computed)	n/a (not computed)

*Rates: o = observed, t = target; denominator: dw dwellings, b buildings, m² floor area. n/c = the plan reports on a basis that is not comparable (energy trajectory, MEPS regime, or no published rate). n/a = not quantified. * Wallonia's 3.00% a year is the rate required to hold the trajectory; the observed rate is below 1%.*

Table 2. Financing, implementation capacity and workforce

Country	Public / private finance	Annex II	One-stop shops	Workforce need
Austria	€3.2bn/yr / €15.6bn/yr	Empty	I · no national network	60,000 jobs (Lower Austria measure only)
Belgium-Wallonia	not split (€/€€/€€€ tiers)	Empty	I+A+F · 3 levels	64,000 required
Bulgaria	BGN 6.33bn / not quantified	Empty	F · planned, pilots	52,368 to reskill
Croatia	regional + national + EU / not quantified	Empty	I · portal + 4 centres	24,530 workers + 5,800 engineers (2030)
Denmark	€1,388m / €966m	Partial	I · digital only	n/a
Finland	€0.5bn/yr / €0.8bn/yr · a	Partial	A · universal advice (Motiva)	n/a
France	Anah €2.1bn (2025) / r	Declared unavailable	A · 1,164 EPCI (92%)	170,000-250,000 FTE shortfall
Germany	BEG €23.7bn (2024) / r	Partial	I · 38+ regional agencies	n/a
Netherlands	€1.42bn (2026) → €0.90bn (2030), none after 2030 / r	Partial	A · near-universal municipal	context only
Poland	Clean Air + PLN 27bn tax relief (about €6.3bn) / r	Partial	I · network recommended only	266,097/yr shortfall
Portugal	n/a	Empty	A · unbudgeted, not started	80,000 shortfall
Romania	€29.77bn / €17.75bn (2026-35)	Partial	A · 42 → ~100 offices	160,000 to reskill
Slovenia	SID €280m fund / leverage 1:4.4	Partial	I · national network planned	context only
Spain	€11.31bn / €28.04bn · a	Filled	F · coverage criteria	700,000 shortfall
Sweden	n/a (annual Budget Bill)	Empty	I · municipal advisory	context only

Public / private: a = the private figure is a modelling assumption, not a commitment; r = private is the residual of the total, not separately reported. Annex II = completion status of the EPBD Annex II investment-needs table, the one strictly comparable indicator across the fifteen. One-stop shops: I information, A accompaniment, F full project takeover. Polish amounts converted at PLN 4.3058 per euro (ECB 2024 average). Per-country detail is in the Document 1 country fiches.

What the quantitative picture tells us

- Residential investment needs are given with a full 2026-2030 envelope in a minority of plans (Spain €14.7bn, Romania €26.3bn, Denmark €1.9bn, Slovenia about €0.5bn a year). Others give a total to 2050 or to 2030 (Austria about €195bn, Belgium-Wallonia €15.93bn to 2030), an annual level to be reached in a target year (France about €34bn a year in 2030, not a cumulative figure), a figure per year (Germany €34-56bn a year, the Netherlands €3.0bn a year for housing), a national aggregate (Poland PLN 1.8-2.0 trillion, about €418-464bn), or nothing (Portugal, Sweden, Bulgaria).
- Only one plan completes the Annex II investment-needs table: Spain, with the public side broken down by level of government and the private side produced by a uniform 75/15/10 allocation rule. Several others publish a public and private figure elsewhere without filling the template, and on different bases: Denmark reports a public and a private total for all buildings but returns the four private sub-lines as unavailable; Austria states €3.2bn a year public and €15.6bn a year private in a chapter it does not reconcile with its chapter 2; Finland derives about €0.5bn a year public and €0.8bn private from an 8% allocation assumption; Romania gives €29.77bn public and €17.75bn private for all buildings over 2026-2035, a wider window than its 2026-2030 need. The Netherlands states public funding falling from €1.42bn in 2026 to €0.90bn in 2030 and none after 2030.
- Only one plan says how the private share is raised, and by assumption: Spain's rule (75% in equal thirds between own funds, mortgages and loans, 15% energy performance contracting, 10% savings certificates) makes its three largest private lines identical. Slovenia alone states a leverage (€357m of grants for €1,585m, about 1:4.4). The novel instruments remain at feasibility stage and unbudgeted.
- Workforce needs are acknowledged more often than quantified (France 597,000 recruitments; Poland 380,138 a year; Spain about 700,000; Romania more than 160,000; Bulgaria 198,000 to 249,000; Croatia 24,530 workers and 5,800 engineers) and almost never tied to a funded training effort.
- The one-stop-shop density several plans quote (one office per 80,000 inhabitants: Spain, Portugal, Bulgaria, Belgium-Wallonia) is the EPBD Article 18 criterion, not a plan choice. Only France (share of territory covered) and Romania (number and cost of offices) translate coverage into delivery figures.

A pattern runs through the quantitative material. Either the need is quantified without the means to meet it, or the means are quantified without being calibrated on the need.

Poland sizes the human need: 380,138 workers a year required by 2050 against 114,041 in post, an annual shortfall of 266,097, with a strategy covering curricula, certification, instructor training and the widening of the recruitment pool. Nothing is costed in euros. Romania sizes the money, breaks it down by period, segment and category of enabling cost, and states that its one-stop-shop network is understaffed and that its scaling assumptions run ahead of operational detail.

One sizes the need without the money, the other the money without the commitment. Neither reaches the budget line.