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BRINGING EUROPEAN BUILDING POLICY TO LIFE

Development of Renovation Passports: Policy Guideline Summary

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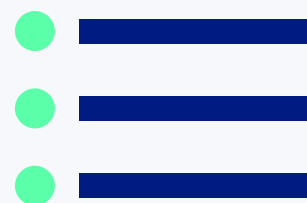
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About EPBD.wise

EPBD.wise aims to kickstart action to bring to life the recast European Energy Performance of Buildings Directive (EPBD) as part of making EU climate goals a reality. Over the course of three years, project partners worked with public authorities (such as municipalities, energy agencies, etc.) in six European countries: Bulgaria, Greece, Hungary, Poland, Romania and Ukraine. The overarching aim was to ensure the design, implementation and evaluation of key provisions to ensure EU buildings align with climate goals. Starting with investigation of needs and good practices in the six focus countries, EPBD.wise builds replicable models to support the widespread implementation of effective measures across Europe.

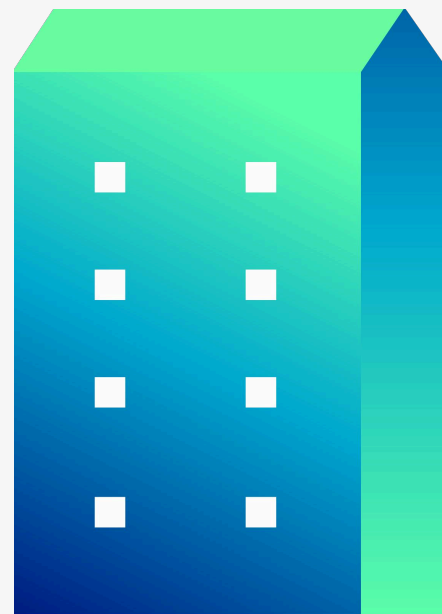
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EXECUTIVE SUMMARY



This policy guideline document assists EU Member States in establishing efficient and effective Renovation Passport (RP) schemes in accordance with the Energy Performance of Buildings Directive 2024/1275 (EPBD). The RP is designed as a low-threshold, step-by-step renovation roadmap that guides owners towards zero-emission building (ZEB) standards by 2050. The RP can be linked to the energy performance certificate (EPC) and, where available, to digital building logbooks (DBLs). The use of the RP remains voluntary unless a Member State decides otherwise, whereby different solutions can be applied for different building types.

A key challenge in the implementation process is to translate the EPBD framework set out in Article 12 and Annex VIII into practical actions, taking into account the interactions and possible synergies with the implementation of other EPBD articles. Annex VIII contains specific requirements divided into mandatory elements and optional/voluntary¹ elements. In practice, this enables a modular approach: a stable mandatory core that keeps renovation plans affordable and scalable, as well as optional extensions for additional details (including information relevant to the property sector, such as considerations regarding lifespan and maintenance).

1. Please note that the terminology was aligned with Commission Notice providing guidance on new or substantially modified provisions of the recast Energy Performance of Buildings Directive (EU) 2024/1275, published in the Official Journal of the European Union on 18/12/2025. In the EPBD.wise report D4.2 on Renovation Passports in focus countries (Geissler and Sticher, 2026) the term “voluntary” instead of “optional” was used.

There are certain initial conditions that influence the RP implementation pathway. Member States may already have (i) experience with early RP-type programmes introduced under Directive 2018/844, (ii) related instruments like energy advice reports, individual renovation roadmaps, and linked support schemes, (iii) a combination of both, or (iv) they have no comparable experience but a well-established and trusted EPC scheme. The guideline takes this into account, to assist Member States in setting the right priorities. It also highlights key interlinkages: the RP should operate consistently within the wider framework of ZEBs and minimum energy performance standards (MEPS), complement the EPC (including the option of joint issuance where the RP substitutes the recommendations of the EPC), and support strategic implementation under the National Building Renovation Plan. The RP feeds into the Article 22 national database, thereby enabling structured monitoring and reporting as well as regular evaluation.

Finally, an implementation timeline is proposed that reflects two interdependent layers: content design and technical delivery, followed by training, evaluation and structured improvement loops. Annex I to this guideline provides a draft RP template, suggested by EPBD.wise.

In summary, the following recommendations are set out for the effective implementation of the Renovation Passport in EU Member States:

- Agree on the core elements that form the RP and which optional and additional elements to include, taking into account the needs of different user groups rather than limiting the RP to mandatory elements only.
- Identify which existing components can be used for the RP, what needs adjusting and what must be developed. Allow for the EPC and RP to be drawn up jointly to benefit from synergies.
- With regard to software and the Article 22 database, the following data fields must be defined to represent the logic of step-by-step renovation: steps, timetable, update records, and proof of implementation. It must also be possible to track the same building seamlessly across different systems and over time.
- Focus on non-residential buildings within the MEPS framework to encourage building owners to carry out deep renovations, rather than merely meeting MEPS requirements. Focus also on public buildings under the alternative approach according to Article 6 of the EED.

LIST OF

ABBREVIATIONS AND ACRONYMS

API	Application programming interface
BIM	Building information modelling
BRP	Building Renovation Passport
BSO	Building Stock Observatory
CO2-eq	Carbon dioxide equivalent
CDE	Common Data Environment
DBL	Digital building logbook
EED	Energy Efficiency Directive 2023/1791 (recast)
EPBD	Energy Performance of Buildings Directive 2024/1275 (recast)
EPC	Energy Performance Certificate
EPD	Environmental Product Declaration
ESCO	Energy service company
EU	European Union
FC	Focus countries
FCCP	Focus country contact point
GHG	Greenhouse gases
GIS	Geographical Information System
IEQ	Indoor environmental quality
MEPS	Minimum Energy Performance Standards
MS	Member State
NBRP	National Building Renovation Plan
nZEB	Nearly zero energy building
OSS	One-stop-shop
RP	Renovation Passport

RP schemes (EPBD.wise)	1	RP scheme in compliance with all mandatory requirements <ol style="list-style-type: none"> a. Regular RP: ReReP b. Simplified RP: SiReP
	2	Extended RP scheme in compliance with all mandatory requirements and extended with all optional features: ExReP
	3	RP scheme in compliance with all mandatory requirements, extended with selected optional features: SEReP
	4	RP scheme according to the above listed option (3) extended with features not listed explicitly in Article 12 and Annex VIII, but in line with the intention of the EPBD: SEReP+
RES III	Renewable Energy Directive 2023/2413 (amending Directive)	
SME	Small and medium-sized enterprise	
SSOT	Single source of truth	
ZEB	Zero-emission building	

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1

INTRODUCTION

This policy guideline document assists EU Member States in setting up efficient and effective Renovation Passport (RP) schemes according to Article 12 of the Energy Performance of Buildings Directive 2024/1275 (EPBD). It highlights key aspects for successful implementation of paragraphs 1 to 8².

The document is based on the following methodology and approach. First, policy needs regarding the implementation of RPs were collected and addressed, in general and specifically for the six focus countries chosen by the EPBD.wise project: Bulgaria, Greece, Hungary, Poland, Romania and Ukraine. Of these six countries, four defined RPs as a priority in the context of the project, namely Greece, Hungary, Romania and Ukraine. The compilation and review of challenges and policy needs was based on the results of other projects, studies, national contacts with stakeholders, and literature review. Discussions and surveys have been carried out, and the list of answers and statements of the focus country contact points have been analysed and further processed [1]. Based on this, a report was provided which aims to assist in kickstarting discussions among stakeholders and policymakers on the development of the RP scheme in the focus countries. Explicitly, it seeks to provide guidance on how to deal with the two components outlined in EPBD Annex VIII – mandatory and optional³ requirements.

2. Only a provision stated in Article 12(6) is not addressed, namely, providing an optional complementary RP tool allowing building owners and building managers to simulate a draft simplified RP and for them to update it once a renovation takes place or a building element is replaced. This isolated building-related and company-internal aspect was not considered further in the context of EPBD.wise because the focus was on legally required actions and the context with other EPBD articles.

3. Please note that the terminology was aligned with Commission Notice providing guidance on new or substantially modified provisions of the recast Energy Performance of Buildings Directive (EU) 2024/1275, published in the Official Journal of the European Union on 18.12.2025. In the EPBD.wise report D4.2 on renovation passports in focus countries (Geissler and Sticher, 2026) the term “voluntary” instead of “optional” was used.

Furthermore, in this report the link between RPs and energy performance certificates (EPCs) is investigated, revealing the need for RP schemes tailored to building types, and the required level of detail to keep the costs of the RP low [2].

This process forms the basis for this policy guideline document, which addresses other EU Member States not represented in the project consortium. In addition to the EPBD.wise reports, the Guidance Notice issued by the European Commission [4] has been considered, as well as information made available by the Concerted Action EPBD [5] and relevant projects such as IEPB on a shared data model for energy performance building assessments [6].

The structure of the report is as follows: an introduction to the RP is provided in Chapter 2, followed by a description of the various options for implementing it, including the rationale for a particular option recommended in Chapter 3. The identification of groups of Member States based on the status quo and the implementation options is intended to assist them in finding the optimal path for implementing the RP by taking key aspects into account while making use of existing structures (see Chapter 4). In addition to these key chapters, the text describes synergies, consistencies and interactions with other policy frameworks (Chapter 5), as well as monitoring, reporting and evaluation (Chapter 6). The report closes with Chapter 7 on synthesis, outlook and timeline for implementation. Annex I to this report contains a draft RP template, suggested by EPBD.wise.

2

OVERVIEW OF THE RENOVATION PASSPORT

Amending Directive 2018/844 introduced the Building Renovation Passport (BRP)⁴ with the stepwise renovation roadmap, based on national frontrunner activities and without any specific requirements. Examples have been compiled in an article⁵ on BUILD UP [3]. With Directive 2024/1275, the name was changed to Renovation Passport (RP) which became a key instrument anchored in Article 12 of the EPBD designed to guide building owners through the process of staged deep renovation towards zero-emission building (ZEB) standards by 2050. It summarises the next stages in a step-by-step roadmap:⁶ what to do first, what can wait, what it will likely cost, how the measures interact, and how progress should be recorded after implementation of each renovation step. Member States are obliged to establish a RP scheme as a supportive instrument that can be linked to EPCs and, where available, to digital building logbooks. However, application of the scheme is voluntary, unless a Member State decides otherwise, which means that the RP must be introduced as a low-threshold offer to ensure widespread adoption. RPs support owners who are not ready for a deep renovation today, but who can commit to a sequence of sensible steps over time. This makes them especially valuable where renovation decisions are fragmented (multi-apartment buildings), where projects are complex (heritage buildings, mixed uses), or where financing requires predictability (public portfolios and lenders). When combined with one-stop-shops and interoperable digital tools, RPs can become the missing link between policy objectives, technical planning and real-world delivery.

4. While the work package title in the Grant Agreement refers to the term Building Renovation Passport (BRP) according to amending Directive 2018/844, the up-to-date term according to Directive 2024/1275 has changed to Renovation Passport (RP), which is adopted in the work of EPBD.wise.

5. <https://build-up.ec.europa.eu/en/news-and-events/news/renovation-passports-across-Europe-examples-projects> [Accessed on 03/03/2026]

6. According to Directive (EU) 2024/1275 Article 2 Definitions, 'Renovation Passport' means a tailored roadmap for the deep renovation of a specific building in an optimum number of steps that will significantly improve its energy performance.

RPs are regulated in Article 12 and Annex VIII, which specify the mandatory and optional requirements. According to the Commission Notice, the common framework comprises four sections [4]:

- 1** a list of the elements that renovation passports must include (mandatory elements), for instance a graphical representation or graphical representations of the renovation roadmap and its steps for a staged deep renovation;
- 2** a list of the elements that renovation passports may include (optional elements), for instance information on how to access a digital version of the renovation passport;
- 3** the requirement to consider the information contained in the energy performance certificate of the building or building unit for which a renovation passport is issued, where possible, in order to assess the status of the building or building unit prior to renovation;
- 4** the requirement to rely on a set of standard conditions for the metrics used for estimating the impact of renovation steps.

The RP complements the EPC, and both can be issued jointly, as defined by Article 12(3) In such cases, where Member States provide for a RP to be drawn up and issued jointly with the EPC, according to Article 9(6), the RP will substitute the EPC recommendations.

The RP's mandatory requirements take the user behaviour and the energy bill into account, and the focus is on the description of renovation steps including energy supply possibilities, and the provision of information on funding options and further advice. A graphical presentation of the renovation roadmap must be included as well as information about energy-related legal obligations (e.g. MEPS), along with general information on available options for improving construction products' circularity, for reducing their whole-life-cycle greenhouse gas emissions, for providing wider benefits related to health and comfort and indoor environmental quality, and for improving the adaptive capacity of the building to climate change. Optional requirements relate to a more detailed description of the renovation steps, as well as information relevant to the implementation of renovation measures. This information is important for the real estate sector, and includes details such as the estimated lifespan of the measures and the estimated maintenance costs.

According to the Commission Notice, RP schemes must cover the entire building stock, must be available at the level of building and building unit, can be specific for certain building types, and can be made mandatory for certain building types and/or trigger points, and/or types of ownership (public/private) [4].

3

MANDATORY, OPTIONAL AND ADDITIONAL RENOVATION PASSPORT ELEMENTS

The RP can take various forms. This is because there are mandatory and optional requirements according to Annex VIII, as well as additional possible elements which are useful for other EPBD instruments such as the National Building Renovation Plan (NBRP), and are supported by Article 12, by the EPBD recitals or by other articles.

3.1. A common language for various forms of Renovation Passports

To provide a common language for what is being discussed and to avoid misunderstandings, RP definitions have been developed by EPBD.wise and described in the respective country reports [2]. In short, these are the definitions:

- 1 RP scheme in compliance with all mandatory requirements, regular or simplified (low-cost variant for single-family houses): Regular RP – ReReP; Simplified RP – SiReP.
- 2 RP scheme in compliance with all mandatory requirements and extended with all optional features of Annex VIII (pre-planning variant for specific cases): ExReP.
- 3 RP scheme in compliance with all mandatory requirements, extended with selected optional features of Annex VIII (variant for specific target groups): SEReP.
- 4 RP scheme in compliance with all mandatory requirements, extended with selected optional features of Annex VIII and extended with voluntary features in line with the intention of the EPBD (variant for multi-unit apartment buildings, non-residential buildings, public buildings; to be customised for building types): SEReP+.

The EPBD-wise project recommends variant 4 (as explained in Table 4, with an example displayed in Annex I for non-residential public buildings) as the common core of the RP for all buildings. The reasons for choosing specific optional and additional elements are explained in the chapters below.

3.2 Choice of optional Renovation Passport elements

The selection of optional elements is based on the benefits they offer to building owners and managers, tenants, and the property sector as a whole. These market players are key to the actual implementation of renovations – and, consequently, to the transformation of the building sector. Other stakeholders like electricity grid operators can also benefit from the RP, if information on the smart readiness of buildings is included. Table 1 shows potential reasons for selecting specific optional elements to be included in the recommended RP template.

Table 1: Reasons for choosing optional elements of Annex VIII

Optional element	Reason for selection as part of the recommended RP template
Indicative timing of the renovation steps	This facilitates long-term financial planning and coordination with spatial planning (e.g. district heating/cooling connection). It should be based on the actual maintenance and repair cycles of the specific building.
More detailed information for each step regarding: <ul style="list-style-type: none"> • detailed description of technologies, techniques, materials; advantages, disadvantages and costs; • estimated costs for the step; • estimated payback period for the step, with and without any available financial support; • estimated lifetime of measures and the estimated maintenance costs 	This information is only requested for the next stage of the renovation, for which it can be reliably provided. This is a workable compromise that, on the one hand, takes account of the uncertainty associated with the roadmap’s long-term timeframe and, on the other, meets the information requirements of financial service providers, including banks as well as property valuers.
Information on how the energy performance of the building would compare to requirements like nZEB and ZEB, after the completion of the renovation step	This provides important information for the property market, as it gives an indication of the building’s legal viability. In this regard, compliance with the EU Taxonomy regulation is also important and is therefore also included.
Information on how the renovation steps and additional measures could improve the smart readiness of a building	Smart readiness according to EPBD Article 15 encompasses key measures in three areas: building automation, renewable energy and storage, and electric mobility. As well as improving energy efficiency during operation through building automation, the focus is on operating the building as a flexible user that can contribute to grid stabilisation (grid flexibility). However, the actual possibilities depend on the condition of the electricity grid (smart grid availability). Nevertheless, this information is important for electricity grid operators.

3.3. Reasons for additional Renovation Passport elements

In addition to the mandatory and selected optional requirements according to Annex VIII, the following four aspects have been identified as essential for inclusion in the RP: updates for the RP after implementation of each renovation step, climate change adaptation, consideration of a healthy indoor environment, and information on the energy bill.

Updating the RP after implementation of a renovation step: This is required for monitoring and reporting purposes and supports the NBRP by contributing to a sound building-specific database. It is also necessary for acceptance by the real estate sector: first, up-to-date information about a building is needed, and second, information on the costs and lifespan of renovation measures is important. Regarding the latter, the long-term nature of the renovation roadmap – until 2050 – compromises the reliability of this information. Therefore, more general long-term information is provided, while only the next renovation step is outlined in detail. In accordance with Annex VIII, the optional requirements chosen for providing more detailed information on renovation steps only ever apply to the next step in the renovation process, as outlined in the renovation roadmap. This aspect is included in the recommended RP template based on the following justification:

Article 12 Renovation Passports (6) stipulates that *“Member States shall strive to provide a dedicated digital tool by means of which to prepare and, where appropriate, update the renovation passport.”*

Given the critical role of financing, compliance with the requirements of the EU Taxonomy Regulation is also included in the recommended RP template.

Climate change adaptation measures: These are essential in making buildings future-proof and are also important for acceptance by the real estate sector, due to the obligations set out by the Taxonomy Regulation (EU) 2020/852⁷. Currently, they are only included in general terms in the mandatory requirements and indirectly in the optional requirements relating to “smart readiness” and “share of renewable energies”: For example, when installing a photovoltaic system, wind speeds must be taken into account, and battery storage systems must not be installed in areas at risk of flooding. It is therefore necessary to explicitly incorporate climate adaptation considerations into the planning of renovation measures. Furthermore, adaptation to climate change must also be taken into account in a broader sense, for example with regard to managing overheating and heavy rainfall in the course of building renovation. These aspects are included in the recommended RP template on the basis of the following passages:

*Recital 11: Measures to improve further the energy performance of buildings should take into account climatic conditions, including **adaptation to climate change**, local conditions as well as the indoor climate and cost-effectiveness. [...]*

*Article 8 Existing buildings [...] 3. [...] Member States shall address, in relation to buildings undergoing major renovation, the issues of indoor environmental quality, **adaptation to climate change**, fire safety, risks related to intense seismic activity, the removal of hazardous substances including asbestos, and accessibility for persons with disabilities.*

7. Please note that the revision process is currently ongoing.

Article 29 Information [...] 3. [...] Such guidance and training may also address structural improvements, **adaptation to climate change**, fire safety, risks related to intense seismic activity, the removal of hazardous substances including asbestos, air pollutant emissions (including fine particulate matter), indoor environmental quality and accessibility for persons with disabilities.

Consideration of health in connection with renovation measures: Based on the EPBD-wise stakeholder roundtable discussions, a third additional requirement was identified, namely the consideration of health in connection with renovation measures that are related to or affect ventilation. This aspect, which is generally considered in the mandatory requirements, is also dealt with in detail in the description of the specific renovation steps. This is supported by EPBD Article 13 on technical building systems, which deals with standards for a healthy indoor climate, among other things, and Annex I Common general framework for calculating the energy performance of buildings, which demands that health-related aspects must also be taken into account when calculating energy performance.

Information on the energy bill: Experience in energy consultancy shows that it is useful to assess a property's energy consumption in relation to that of other properties. It is also helpful to determine the impact of usage patterns. This provides valuable information for evaluating the cost-effectiveness of renovation measures, particularly in buildings with changing users, and it is also informative for residents.

4

POLICY RECOMMENDATIONS FOR EU MEMBER STATES

With regard to the status of RP implementation, the following four groups have been identified in EU Member States:

- RP scheme is available based on Directive 2018/844
- Instruments close to the RP are available (energy advisory, energy auditing)
- Trusted EPC system is available and can be further developed accordingly
- RP scheme to be developed from scratch and linked with the existing EPC system

The matrix displayed in [Table 2](#) starts from the situations identified above and illustrates important legal, digital, and governance and delivery aspects for implementing the RP, to assist Member States in developing their own bespoke implementation strategy. It helps to identify where replication can build on existing structures and where adjustments or additional institutional, technical or organisational efforts are still required.

Table 2: Quick diagnostic tool for Member States to identify existing capacities and support implementation decisions. (The table has been filled in as an example.)

Existing capacities	What do we have	Where do we want to go
1. Legal framework		
Legal basis for RP framework	RP based on Directive (EU) 2018/844	RP core according to EPBD.wise SEReP+
Legal basis for re-using and exchanging data	Legal study published by EPBD.wise	Creating the legal basis accordingly
2. Digital framework		
RP software tool	Prototype, pilot from research projects	Further development of existing EPC tool to also cover the RP
Ownership model of RP software tool	Private (market-based software)	Mixed (public database and private front-end tools/hybrid model)
EPC database in accordance with Article 22	PDF-based; expert is the identifier	API covering input data, calculation results; building is the identifier
3. Governance and delivery		
One-stop-shop	Covers energy advice, funding	In addition, information on general parts of RP (RPs include link to one-stop-shops)
Funding schemes for residential buildings	Available based on EPC	Available based on EPC and RP
Funding schemes for non-residential buildings	Available based on EPC	Available based on EPC and RP
Public buildings according to Article 6 EED	Decision for "Alternative approach"	Apply RP according to EPBD.wise SEReP+ to all public buildings

Detailed explanations on specific aspects are provided in the following chapters.

The recommendations are structured into three parts:

- Chapter 4.1 addresses the current situation in Member States and the aspects driving the implementation of the RP.
- Chapter 4.2 addresses the crucial role of data for setting up an affordable RP scheme.
- Chapter 4.3 highlights important aspects relevant for the RP of public buildings.

In addition, process-oriented and outcome-oriented checklists are provided:

- Chapter 4.4 presents a checklist for implementing the RP scheme successfully.
- Chapter 4.5 shows a checklist for the elements that should be included in a RP in the form of the RP template recommended by EPBD.wise.

4.1 Current situation in Member States: aspects driving the implementation scenarios

In some Member States the necessary foundations are already in place, and the biggest challenge is integration.

In other Member States, the implementation of the RP must begin at a much earlier stage due to a lack of suitable instruments.

The most important cross-cutting questions are: first, whether the basic legal and digital prerequisites are already in place; second, whether a suitable software environment is in place; and third, how the software and data architecture is regulated. This determines how easily the RP can be introduced and integrated and what the main challenges are. These questions are addressed in the form of scenarios a, b, and c below. Two key findings from the EPBD-wise policy forums and related discussions support this approach. Firstly, the RP is most useful when it is understood not only as a compliance-oriented outcome, but as a practical, accessible roadmap that makes renovation decisions clearer, step-by-step progress more achievable and financing more predictable. Secondly, the provisions of Article 12 and Annex VIII of the EPBD (mandatory and optional content) as well as additional requirements (to consider the needs of NBRPs, the EED, and the real estate market) are easier to implement if decisions on possible combinations of these requirements are made clearly from the outset. This allows Member States to avoid lock-in effects at the administrative level and to start with a coordinated and affordable minimum structure to be expanded later depending on capacity and demand.

a. Basic digital/legal basis scenario: This scenario refers to whether the legal and digital foundations introduced by amending Directive 2018/844 are already in place. These include, for example, EPC databases containing an RP-related API, digital building data structures, and a basic legal framework for the storage, exchange and updating of building-related information. If these foundations are in place, Member States are generally better positioned to introduce the RP as an adjustment of existing systems. In such cases, the biggest challenge is not whether the RP can be introduced, but how it can be integrated in a technically and legally clear and cost-efficient manner. If the foundations are poorly developed or fundamentally lacking, the first step should be to create a simple but robust minimum foundation. Overall, the more the existing foundations are in place, the more the RP can be considered as an integration; the weaker the foundations are, the more it must first be approached as a process of building capacity and structures.

b. Tool-availability scenario: This scenario refers to whether a special software environment is available for creating, storing and updating RP-related results; or software covering parts of the process such as tools established under amending Directive 2018/844, provided by EU projects like iBRoad2EPC, or used for energy consulting or energy auditing. Implementation can proceed more quickly, provided that the tool is capable of generating required results, linking to the EPC, and supporting incremental updates over a longer period. In such cases, the main task is to adapt and align it with the overall policy and data architecture. However, the mere existence of a tool does not guarantee successful implementation. If it is difficult to use, costly to maintain, poorly aligned with EPC systems, or unable to exchange data with existing databases, it will result in a parallel system – which must be avoided. The crucial question is therefore not only whether a tool is available, but also whether it is user-friendly, standardised and interoperable. If no tool is available, software development should start with defining the minimum functional requirements.

c. Ownership scenario: This scenario refers to the ownership model behind the software, i.e. whether the RP environment is controlled by a public authority, the private market or a mixed structure. One single government-owned system generally supports greater standardisation and comparability, as results and updates can be managed under a single framework.

However, due to limited public budgets, their adjustment may proceed more slowly. Market-based systems are often more flexible and evolve more quickly but can lead to fragmentation if standards are ambiguously defined, leaving room for discretion. Mixed systems can combine the advantages of both systems, but only if roles, interfaces and responsibilities are clearly defined. The most important recommendation is therefore to define governance at an early stage. Data sovereignty, update obligations, quality assurance, access rights and reporting obligations should be clarified from the outset, as the ownership model has a strong influence on the life-cycle cost and thus on whether the RP remains maintainable, comparable and trustworthy over a longer period.

Table 3: Scenario characteristics and their main implications for RP implementation

Scenario	What drives the scenario?	Typical implementation condition	Main implication for RP implementation
Basic digital/legal basis	Existence or absence of legal and digital basis (amending Directive 2018/844).	Member States with a stronger foundation can introduce the RP as an extension of existing systems. Where the foundation is partial or weak, the RP depends first on building a minimum baseline.	In higher-readiness contexts, priority should be given to integration with existing systems. In lower-readiness contexts, the first step should be to establish a minimum baseline for data, identifiers, update logic and reporting.
Tool availability	Presence or absence of software for creating, storing and updating RP-related outputs.	Where a tool already exists, rollout can move more quickly into implementation, provided the tool is suitable and interoperable, or at least adjustable. Where no tool exists, the minimum functional logic must first be defined.	If a tool exists, standardisation, usability and compatibility become the main priorities. If no tool is available, MS should first define the minimum data fields and update rules and interoperability requirements before selecting or developing software.
Tool ownership	Ownership model behind the software and data architecture: public, private, or mixed.	Public systems tend to support stronger standardisation; market-based systems may be more flexible but risk fragmentation; mixed systems can combine both if responsibilities are clear.	The ownership model should be clarified early, as it directly affects life-cycle costs of tool application, data governance, update obligations, quality assurance and long-term maintainability.

4.2 Building data availability and accessibility

One of the clearest findings from the EPBD.wise policy forums is that RPs can only be operationally useful if their underlying data is credible, updatable and linked to existing systems. At the same time, this raises the question of costs – which must be affordable for building owners, as required by the EPBD. Data collection is expensive and prone to errors which can undermine trust. Therefore, the provision of building data based on existing information is essential. Ideally, the RP will build on this information and then also serve to update the existing building data. To this end, various building-related data sources must be linked, and data quality must be ensured.

In addition to data availability, data access rules must be in place. The difference between data availability and data accessibility is important: availability is about if you can get to the data, while accessibility is about who is allowed to get to the data. Member States are divided into groups according to their status in terms of data availability (“readiness”), and appropriate recommendations are made. Regarding data accessibility, more information is provided by the legal study carried out as part of the EPBD.wise project [7]. For all groups, the following is relevant: building data should be comparable, updatable and usable for monitoring and financing purposes. The solution should be designed to integrate seamlessly within the existing data ecosystem that already supports EPCs. Leveraging this established foundation offers several practical advantages: 1. it ensures that improvements in data quality scale directly with the volume of data processed; 2. it allows for the integration of live data streams, preventing the system from becoming a static dataset; and 3. it directly links enhanced data quality to tangible outcomes, such as more effective monitoring and better-informed financing decisions. If the data is not structured to support these functions, it creates additional administrative overhead without adding value. It is therefore crucial that developments are coordinated with those implemented in establishing the national database on the energy performance of buildings in accordance with Article 22 of the EPBD.

a. Member States with high basic readiness: In contexts where the legal and digital foundations are already established, the main problem is not the lack of data, but the quality of integration. These Member States should focus on strengthening the links between existing systems, namely EPCs and, if applicable, digital building logbooks. The aim should be to ensure that the same building can be tracked seamlessly across different systems and over time. A key step in this process is the introduction of version control. Without this, updates cannot be reliably assigned to the same object after each renovation step. In contexts with high readiness, the key challenge is therefore to improve consistency and user-friendliness.

b. Member States with partial basic readiness: If only part of the required data environment is available as part of the EPC system, the first task is to define a minimum data set that can support the RP logic. Data fields must be defined that represent the logic of step-by-step renovation: steps, timetable, update of records, and proof of implementation. Standardised data exchange procedures are also crucial in this context, as partial readiness often means that different data environments exist but do not yet communicate with each other in a structured manner. In these countries, progress depends on the disciplined structuring of available information.

c. Member States with low basic readiness: If the foundation is weak, e.g. the EPC is stored as a PDF document and no API is available, Member States should draw up the RP scheme in coordination with developing the national database on the energy performance of buildings in accordance with Article 22, where the RP will need to be uploaded.

4.3 Renovation Passports for public buildings – link with Article 6 EED alternative approach

EED Article 6, Exemplary role of public bodies’ buildings, stipulates that public bodies must renovate 3% of their building area each year to be transformed into at least nZEB or ZEB (for buildings with a total useful floor area of over 250 m², that are owned by public bodies and that, on 1 January 2024, were not nZEB).

a. Standard approach: 3% building area renovation is to be carried out as specified by EED Article 6.

b. Alternative approach according to EED Article 6, which Member States could opt for by notifying the Commission by 31 December 2023: To apply this alternative approach, energy savings must be estimated using the standard approach, and Member States then ensure that a RP – where applicable – is introduced each year that accounts for at least 3% of the total floor area of heated and/or cooled buildings owned by public authorities. For these buildings, renovation to nZEB must be achieved by 2040 at the latest.

The RP solves a critical problem: how to renovate a large building to ZEB without shutting it down or breaking the budget? Instead of trying to fully renovate one massive building in a single year, a public body can use the RP to ensure that the work done this year (e.g. installing solar panels and insulation) is compatible with the work planned for next year (e.g. replacing a boiler), and the ZEB standard can be achieved in the longer term. Because Article 6 requires a public inventory of buildings over 250 m², the RP scheme could be integrated with this inventory. The inventory lists the buildings which fall under the renovation obligation (exemptions are possible), and the RP provides the technical roadmap for each one.

If a Member State has opted for the alternative approach, the RP becomes practically mandatory for public buildings.

4.4 Checklist for successful implementation of the Renovation Passport scheme

The following checklist is intended as a minimum set of conditions that can support early decisions and help avoid the most common implementation problems like fragmentation, unnecessary complexity and parallel systems. It also serves as a screening tool to identify the most important risks and priorities before the rollout begins. Further background information on critical aspects of designing RP schemes can be found in the EPBD.wise report on RP guidelines [2].

a. Strategic setup

1 Clarify the purpose and benefit of the Renovation Passport

Ensure that the RP is understood not only as a tool required for compliance with the EPBD, but as a practical, low-threshold roadmap that supports staged decision-making, clearer next renovation steps and better predictability for costs and timing, as well as the opportunity to carry out renovations on a larger scale.

2 Interpret Article 12 and Annex VIII

Distinguish clearly between the mandatory core content and possible optional extensions, so that the RP remains affordable and easy to introduce while still offering additional value where needed.

3 Check the baseline (see Table 1)

Verify whether a minimum legal and digital basis already exists, including the core conditions needed for storing, linking and updating RP-related information.

b. Digital and technical setup

4 Define the data logic first

Establish minimum data fields, identifiers and update rules before selecting, developing or adjusting software.

5 Clarify tool ownership

Decide whether the RP will be delivered through a public, private or mixed software environment.

6 Avoid parallel systems

Link the RP to existing EPC databases while ensuring compliance with Article 22 requirements, and, where available, digital building logbooks from the outset.

7 Plan for updates, not only first issuance

Ensure that the RP functions as a living, versioned instrument that can be updated after each realised renovation step.

c. Governance and delivery

8 Assign responsibilities early

Define who issues, who stores, who updates, who checks and who reports.

9 Keep the entry threshold low

Start with a usable mandatory core and add optional modules only where needed.

10 Enable comparability and trust

Ensure standardised outputs, quality assurance and traceable reporting.

4.5 The recommended Renovation Passport template

The EPBD-wise project recommends the scheme called SEReP+ for non-residential public buildings (as explained in Chapter 3 and displayed in Annex I) as the common core of RPs for all buildings.

The following Table 4 explains the elements of the RP template displayed in Annex I.

Table 4: Renovation Passport template (Annex I) explanation (for legend see bottom of table).

Building address	Street, number, postcode, coordinates; Address-Code (or similar statistical code)	Identification of building; link to other databases
RP specification	Building type: apartment building, single-family house, non-residential building, public building RP: for building or building unit	For activation of customised modules in the RP software
EPC identification	EPC number and building type (apartment building, single-family house, non-residential building, public building)	Access to EPC database and link of specific RP with EPC

Information to allocate data to the correct unit and/or building, EPC, and building type in the Art. 22 database; to link with other databases; to extract data for BSO reporting and NBRP reporting; to activate building-type-specific modules in the software requirements.

Graphical representation of renovation roadmap to ZEB by 2050 (example)

	2030	2035	2040	2045	2050	
Upper ceiling		Renewal electric installation	Façade	Overhaul of district heating connection		Based on predefined catalogue of measures; customised for building types
Roof		BACS PV on the roof	Windows			
A succinct explanation on the optimal sequencing of steps						
Including adaptations to heavy rain, storms, flooding, overheating (climate change adaptation) also in relation to "How the renovation steps and additional measures could improve the smart readiness of a building"						
Contributions to health and comfort, indoor environmental quality						

The chart of the renovation roadmap to 2050 should include climate change adaptation considerations, which are especially relevant for improving the smart readiness of a building, as well as measures relating to health, comfort and indoor environmental quality. Explanation of optimal sequencing is building-specific. Indicative timing of the renovation steps is essential for property management.

Information about each step, including:

- the name and description of the renovation measures for the step, including relevant options for the technologies, techniques and materials to be used;
- the estimated energy savings in primary and final energy consumption, in kWh and in percentage improvement compared to the energy consumption prior to the step;
- the estimated reduction of operational greenhouse gas emissions;
- the estimated savings on the energy bill, clearly indicating the assumptions on energy costs used for the calculation;
- the estimated energy performance class of the energy performance certificate to be achieved following completion of the step;

Due to the long-term horizon, detailed information on the renovation as a whole cannot be expected. However, this could conflict with the information requirements of financing, therefore more detailed information should always be provided regarding the next renovation step. This will require the renovation roadmap to be updated following implementation of each individual step.

Information about next renovation step:

- a detailed description of the technologies, techniques and materials to be used, their advantages, disadvantages and costs;
- the estimated costs for carrying out the step
- the estimated payback period for the step, with and without any available financial support;
- the estimated lifetime of measures and the estimated maintenance costs

[Link to financing](#)

[Link to One-stop-shop](#) (technical advice, advisory services, etc.)

[Link to general information](#) on improving construction products' circularity, reducing whole-life-cycle greenhouse gas emissions, wider benefits related to health and comfort, indoor environmental quality and the improved adaptive capacity of the building to climate change

[Link to assumptions and calculation methods](#)

Information that remains the same for every RP can be accessed via a link to a website maintained, for example, by a one-stop-shop.

Indicators

EPC indicators prior to renovation	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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EPC indicators after full renovation (all renovation steps)	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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The share of individual or collective generation [% of energy use] and self-consumption of renewable energy [% of energy use] estimated to be achieved after the renovation

EPC indicators after implemented renovation step	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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First issuance of renovation passport	Name	Date
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Issuance after implemented renovation step including updated roadmap	Name	Date
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Mandatory indicators should be complemented by an indicator on transmission losses of the building envelope, in line with the Energy Efficiency First principle.

Mandatory indicators should be complemented by indicators updated after the implementation of each renovation step, including the update of the renovation roadmap.

Building specific requirements, updated after implementation of a renovation step

nZEB Standard by 2040	[kWh/m ²]	Achieved yes/no	Date
ZEB Standard	[kWh/m ²]	Achieved yes/no	Date
MEPS	[kWh/m ²]	Achieved yes/no	Date
Fossil fuel phase out	By [year]	Achieved yes/no	Date
EU-Taxonomy (currently under revision)	Chapter x	Achieved yes/no	Date
	Chapter y	Achieved yes/no	Date
	Chapter z	Achieved yes/no	Date

Building-specific requirements differ, depending on the building type. Non-residential public buildings must meet MEPS as stipulated by the EPBD, but also requirements stipulated by Article 6 of the EED. For residential buildings, MEPS do not apply.

Energy bill: Heating, cooling, ventilation, domestic hot water [kWh/year]

Energy consumption (kWh on energy bill) compared to average: Very low, Low, Medium, High, Very high	Influence of user behaviour: Very low, Low, Medium, High, Very high
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Energy bill: Lighting, appliances [kWh/year]

Energy consumption (kWh on energy bill) compared to average: Very low, Low, Medium, High, Very high	Influence of user behaviour: Very low, Low, Medium, High, Very high
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To provide a sound basis for calculating the payback period of energy-saving measures and to assess their cost-effectiveness, energy consumption as shown on the energy bill should be assessed in comparison with the average, taking user behaviour into account. An appropriate breakdown of energy types should be selected and, where available, supplemented or replaced by metered data.

Renovation opportunities and challenges due to the location of the building



Source of exemplary pictures: Sakulin, Christian (2024): Wärmeatlas Steiermark Projekt SEP, Energie Agentur Steiermark SKE Info-Tag 1.2.24

Building relevant information from the municipal energy spatial planning system regarding:

- Connection to district heating/cooling grid (yes, no, when)
- Renewable energy potential (which)
- Smart grid availability (yes, no, when)
- Smart charging infrastructure (yes, no, where, future plans)
- Climate risks (overheating/heat island, heavy rain, storm, flooding)

This section provides information and justification regarding the measures included in the renovation roadmap: key measures for decarbonising a building's energy supply include renewable energy sources and technologies, electricity storage capacity, and connections to district heating and cooling networks. Their practical applicability depends on local conditions, including the capacity and smart capabilities of the electricity grid or plans for its expansion. Climate risks influence the climate adaptation measures that must be taken into account when planning renovation measures.

Predefined measures (example) in the software tool, specific for building types, with explanations regarding sequencing and climate change adaptation, from which selections can be made for the building-specific renovation roadmap

Building elements/trades	Measures with generic explanation of sequence and how the measure relates to adaptation to climate change – key considerations
Building envelope	Measures related to exterior walls, top floor ceiling, basement ceiling, windows, roof (including green roof) (dropdown menu)
Ventilation	Window ventilation, mechanical ventilation, mechanical ventilation with heat and cold recovery (dropdown menu)
Domestic hot water preparation	E.g. combined with space heating, combined with space cooling, separate with heat pump, pipe length, pipe insulation (dropdown menu)
Space heating systems	E.g. centralisation of individual systems; heat pumps, district heating (dropdown menu); heat generation, distribution and emission
Passive cooling solutions	e.g. shading, thermal mass, night cooling, natural ventilation and lighting (dropdown menu)
Active cooling systems	e.g. VRF/VRF-H heat pump systems, multi-split systems (dropdown menu)
Lighting	LEDs, motion detectors (dropdown menu)
Appliances	E.g. stove, other electric cooking appliances, refrigerator, washing machine, dryer (dropdown menu)
Building automation and control systems	E.g. smart thermostats, occupancy sensors, reaction to external signals from the grid (dropdown menu)
Renewable energy integration	E.g. PV installation, solar thermal installation, renewal of electricity installation (dropdown menu)
Smart charging systems	E.g. e-vehicles, e-bikes (dropdown menu)
Blue-green landscaping	Blue (water-related) and green (vegetation-related) measures around the building, such as permeable pavement, rain gardens and greening measures

The renovation roadmap should be based on predefined measures that can be selected from a catalogue. The descriptions of the measures also refer to interactions with other measures and thus to the avoidance of lock-in effects, and to aspects of the correct sequence for implementing measures. The predefined measures will vary according to building type and Member State or region. The national or regional software must therefore contain several catalogues of measures, which are activated upon selection of the building type.

Legend

- Basic information
- Mandatory requirements
- Optional requirements according to Annex VIII or voluntary according to EPBD and/or Guidance Notice
- Specifically for non-residential public buildings
- Explanatory text

5

SYNERGIES, CONSISTENCIES AND INTERACTION WITH OTHER POLICY FRAMEWORKS

In practice, the RP will only be successful if it acts as a connecting instrument between different policy requirements, actual building data, the implementation of step-by-step renovations, and impact monitoring. The increasing level of detail in EPBD provisions has also resulted in greater specialisation in administration. Therefore, this chapter highlights important interactions to draw attention to crucial elements and facilitate discussion among different administrative units. For lawmakers, policymakers and municipalities, the recommendation is that the RP should be assessed not only by its formal fit within the EPBD framework, but by its ability to function consistently within the wider implementation system.

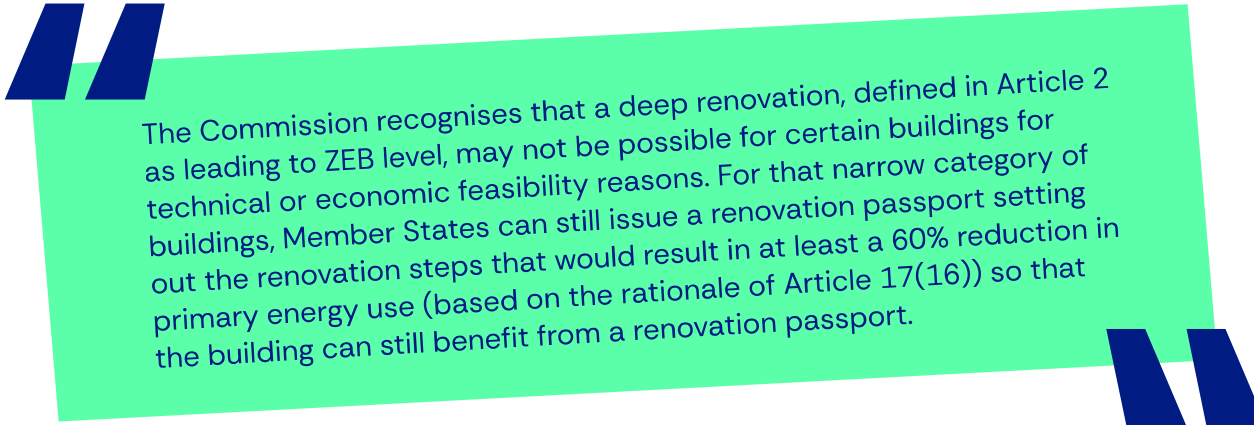
Three different areas have been identified in this regard which are presented in the next chapters, using the structure laid out in [Table 1](#):

- Target compatibility – the RP serves to facilitate the transformation of the building stock towards ZEB.
- Data compatibility – RP information can be integrated into the same data environment as other instruments without creating conflicting data sets.
- Process compatibility – the RP fits into existing procedures for evaluation, updating, financing and reporting.

5.1 Target – Interlinkage with the ZEB definition and MEPS

The RP refers to the ZEB definition according to Article 11 and structures the path to achieving it at building level. Its value lies in translating a long-term ZEB goal into a step-by-step sequence of measures for a specific building. This interaction is strongest where the national ZEB logic is already embedded in a stable legal and digital framework.

Legal framework: There is discussion over differentiating between the ZEB definition for new buildings and for existing buildings. The reason is that for existing buildings it might be more difficult to achieve the ZEB definition which is in place for new buildings, for technical or economic reasons. However, differentiation would create difficulties in terms of effective market communication, and should be avoided. The Commission Notice [4] also refers to this issue:



The Commission recognises that a deep renovation, defined in Article 2 as leading to ZEB level, may not be possible for certain buildings for technical or economic feasibility reasons. For that narrow category of buildings, Member States can still issue a renovation passport setting out the renovation steps that would result in at least a 60% reduction in primary energy use (based on the rationale of Article 17(16)) so that the building can still benefit from a renovation passport.

In case of restrictions, the target of a 60% reduction in primary energy use should be applied. Furthermore, Annex VIII (1)(c) stipulates that RPs must include details of the relevant national requirements, including MEPS for buildings and rules on the phasing-out of fossil fuels for heating and cooling purposes, along with the applicable dates. The Commission Notice recommends a targeted RP programme for buildings within the MEPS framework to encourage building owners to carry out deep renovations rather than merely meeting MEPS requirements. [4]

Digital framework: The RP software tool must be capable of displaying intermediate stages of renovation and assessing progress towards the ZEB target or a 60% reduction in primary energy use. Updates must be possible after the implementation of a specific renovation step.

5.2 Data – Interlinkage with the EPC

The EPC according to Article 19 and the RP according to Article 12 are complementary instruments that share the same building-related data and partly also share methods, because the impact of renovation measures must be presented using standard conditions aligned with the EPC methodology. The RP has the potential to provide a greater level of detail and includes additional information not found in the EPC, such as on user behaviour and energy bills. It also covers wider benefits, including climate change adaptation measures. Thus, the RP can provide valuable information for the EPC, and at the same time extends its scope. This applies in particular to the EPC recommendations: according to Article 19(5), recommendations may be replaced by the RP if, in accordance with Article 12(3), Member States provide for a RP to be drawn up and issued jointly with the EPC.

Legal framework: For data sharing or reuse to be possible, it is necessary to establish the conditions that allow an expert to use existing EPC data to develop the RP, as well as the conditions that oblige the expert to allow others to use the information contained in the RP. More information on this topic is available in the EPBD.wise Legal Study [7]. In this context, the RP can benefit significantly from digital building logbooks, as less time is needed for data collection, making it cheaper. The main challenge in this regard is governance, and the following aspects need to be regulated: who uploads, who validates, who has access and which rules apply.

Digital framework: The EPC database must be set up in a suitable way, with the correct identifiers and data exchange procedures in place. The quality of interaction depends on governance. For example, combining a public EPC database with fragmented, purely market-based RP tools could reduce comparability and quality assurance. However, a well-governed mixed model could generate significant synergies. It is important to ensure that the RP complements the EPC function, and that a combined tool is available instead of separate EPC and RP tools. At a minimum, the RP tool must be closely linked with the EPC tool and capable of exchanging information with the broader digital environment, including the digital building logbook, regarding uploads, downloads and versioned updates in the national database. Versioning in the national database will make it possible to link specific data with the expert who provided them, which will allow for quality control.

5.3 Process – Interlinkage with the NBRP

According to Article 3, the relationship between the RP and the NBRP can be designed with varying degrees of detail, from strategic to practical and operational. The NBRP defines national targets and measures, and the RP can add value by translating these into building-level implementation pathways.

Digital framework: According to Article 22, RPs must be uploaded to the national database. Thus, outputs can support the population of the national database and the improvement of data quality if the RP software is designed to facilitate quality assurance (e.g. automated built-in checks and the selection of predefined options instead of text input). The national database according to Article 22 is the central hub between data entry, e.g. from the RP, and data extraction for specific purposes, e.g. the NBRP. For monitoring purposes, it is necessary to track a building's transformation when renovation steps are implemented. The software tool should facilitate the straightforward updating of both the renovation roadmap and the EPC following the implementation of a renovation step. Both should then be uploaded to the national database. In this regard, it is essential that the building serves as the primary identifier.

6

MONITORING, REPORTING AND EVALUATION

The RP is a data-collecting and data-providing policy instrument that feeds into the national database on the energy performance of buildings according to Article 22 of the EPBD, into the EU Building Stock Observatory (BSO), and, where applicable, into NBRP reporting. According to Commission Implementing Regulation (EU) 2025/1328, the BSO must be given information on how many RPs are issued per building type per year, greenhouse gas emissions savings, and energy cost savings achieved after having implemented all renovation steps, as well as the average estimated investment required for all renovation steps in EUR/m². In addition, overall indicators such as primary and final energy savings, and the energy class achieved after having implemented all renovation steps, can be provided. [8]

In addition to the monitoring and reporting obligations prescribed by law, as described above, a system based on the Plan-Do-Check-Act (PDCA) principle should be implemented: continuous monitoring to identify opportunities for improvement throughout the process, reporting with structured information to track progress from the status quo to the achievement of objectives, and evaluation to determine whether the RP is achieving its objectives or whether corrective action is required.

In practice, this means that it must be determined (a) which data are monitored by whom, (b) how often reports are generated and assessments are carried out, and (c) how the assessment results are fed back for quality assurance purposes.

The exact design may vary depending on the initial situation of the Member State concerned, but the overall goal remains the same: the RP should become a traceable, updatable and policy-relevant source of information that supports the long-term transformation of the building stock.

In this regard, the roles of the one-stop-shop, the expert, and the software and training provider are important. These are explained in more detail below.

The role of one-stop-shops in PDCA – Plan and Check

The one-stop-shop has the potential to be the organisation responsible for collecting, compiling and processing feedback from building owners, experts, software tool providers and training providers, and feeding it back into the policy cycle. Specifically, recommendations for further developing tools and training programmes can be provided based on the collected feedback.

The role of the experts in PDCA – Do

The experts use the software and interpret its output. They validate the data quality and provide advice to the building owner based on the software's data.

The role of the software tool and training providers – Act

The training providers equip the experts with the knowledge to utilise the software tools correctly, both in terms of calculations and the advice they provide to building owners. A feedback loop from the application of the tools is necessary to adapt the software tools and training courses according to the needs of the market.

7

SYNTHESIS, OUTLOOK, TIMELINE FOR IMPLEMENTATION

Synthesis and outlook

The RP offers building owners low-threshold access to a structured and actionable approach for significantly increasing the renovation rate. Even though the use of RPs is voluntary unless it is made mandatory by a Member State, it offers an exceptional opportunity to roll out the renovation of a cluster of buildings more efficiently and rapidly on a large scale. For Member States that have opted for the alternative approach⁸ according to Article 6 of the EED, the RP is quasi-mandatory for public buildings. Compliance with mandatory and selected optional requirements for the RP set out in Annex VIII, complemented with additional specifications justified by the intent of the EPBD, creates a more flexible, innovative and user-friendly instrument. A template for a RP of this kind is suggested in Annex 1 of this report and explained in [Table 5](#).

The cost of renovation must be affordable, and financing instruments should be made available for this purpose. There are various approaches to this, for example to offer cheaper financing for renovation measures simply based on the fact that a RP exists (e.g. Germany), or to provide targeted cheaper financing for the next specific renovation step as outlined in the RP (e.g. Austria).

8. This information is available from the Ministry in charge of transposing the EED. Information on national transposition measures related to the EED is available by country on https://eur-lex.europa.eu/legal-content/EN/NIM/?uri=OJ:JOL_2023_231_R_0001.

The RP itself must also be affordable. Its cost is directly influenced by the framework conditions; key influencing factors are the cost of the software tools and the time required for data collection. Software tools should be freely available, at least for single-family homes as is the case in Portugal. RP tools for multi-storey residential and non-residential buildings managed by property management and facility management companies should not only be compatible with the EPC but should also be linkable to the property/facility management software. There is still a lot to be done in this regard; no good examples are known but they are urgently needed. In terms of data, the expert issuing the RP should find as much predefined data as possible in the Article 22 database and only check building-related data, and update it when necessary. This may be data that has already been collected for the building (such as the EPC, inspection report or SRI report), and if such data is not available, data from other databases (e.g. statistical databases, cadastral registers) and spatial planning information could be used to generate basic information. Geographic information systems and modern satellite and drone-based data collection methods, as well as AI-supported data processing, offer new opportunities. In this regard, rules for ensuring data availability and regulating data access are crucial, and they need to be established. Furthermore, support should be provided to authorities by preparing data in a usable form, such as for the French database IMOPE⁹, and in standardising processes with AI-supported software [9].

In terms of the digital environment, it will also be important to consider the strong collaboration with the one-stop-shop that must be implemented according to Article 18 of the EPBD. There are many requirements related to the provision of information in the RP, and a link to the relevant one-stop-shop that provides this information in a standardised way can reduce the effort for the individual expert. Following the second round of the EPBD.wise roundtable discussions, it has become clear that it is important to focus on the participation of businesses in one-stop-shops, which are currently largely run as public ventures, limiting the support they can provide. It is particularly important to offer support to building owners throughout the renovation process, which is currently lacking. There have been proposals to also include renewable energy communities under the RES III Directive in the one-stop-shop concept.

Furthermore, it will be crucial to consider the link with the digital building logbook, because this will be the central source of information regarding building data in the future. It may be possible to develop the databases referred to in EPBD Article 22 into digital building logbooks, or integrate them with these, so that a constantly updated collection of building data is available. Currently, building data is collected by different people for different purposes, processed using different software, and uploaded via an interface to a common storage location. Conversely, a building information management-oriented approach would manage and maintain building information collaboratively within a common data environment, from which relevant datasets can be extracted for assessments and updates. There is debate as to whether such an approach would reduce errors and costs in building assessment in general.

9. The French IMOPE database (Indice de Modernisation et d'Occupation du Parc Existant Urbain), produced by the Urban Retrofit Business Service and recognised by the Ministry of the Economy, assesses and monitors the building stock in urban areas. IMOPE compiles a variety of data sources, including cadastral information, EPCs and satellite imagery. The approach can also be integrated into GIS and urban digital twins, enhancing visualisation and analysis capabilities. <https://www.urbs.fr/data/> [Accessed on 16/02/2026]

Timeline for implementation

The timetable for implementing the RP should be understood as a sequential process linking two levels: first the content design of the instrument itself, and second the technical and organisational infrastructure required to support it. In practice, this means that decisions about the mandatory and optional elements of the RP, and whether the RP should be designed as a stand-alone instrument or as part of an existing framework, will directly influence how databases, software tools and reporting processes need to be adapted. The timetable below describes a logical sequence of implementation steps that can be adapted to the different circumstances in Member States.

Table 5: Timetable for implementing the renovation passport in a sequential process

Step	Implementation focus	Main questions	Main output
1	Define the RP content model	Will the RP be designed as a stand-alone instrument or as a combined element linked to the EPC? Which optional/additional content? Differentiation of the building type?	Clear RP concept including scope, core content, optional elements and whether different building types require differentiated treatment
2	Define the data requirements	Which additional data fields are needed to support the chosen RP model, including monitoring and future reporting? How does this affect the Article 22 database?	Defined minimum dataset, including any additional RP-related fields needed for updates, monitoring and reporting
3	Adapt the database environment	How can the database be designed so that RP-related information can be stored, linked and updated? How can data support later reporting?	Adapted or expandable database structure, aligned with the RP data model and update logic
4	Align software tools and interfaces	How will RP information be created and updated in practice? What interfaces are required between the database and software tools?	Defined tool architecture, including interfaces, exchange logic and workflow
5	Clarify the ownership/governance model	Will the software environment be government-owned, market-based or mixed? Who controls updates, data access and reporting logic?	Clear governance framework for software, data handling, access rights and affordable long-term operation
6	Training and operational rollout	Which administrative staff need training to generate data extracts for national reporting (e.g. NBRP, BSO where relevant), and who needs training to use the RP software tools?	Operational readiness through staff training for administration, reporting and tool use

7	Evaluation of first implementation phase	Does the system function as intended? Where are the technical, procedural or governance-related weaknesses?	Initial implementation review, including identified weak points and bottlenecks
8	Introduce improvement loops	How can the system be improved based on first implementation experience? Which adjustments are needed in content, data logic, tools or governance?	Continuous improvement mechanism, allowing refinement of the RP model and its technical environment over time

The sequence shown above reflects a basic implementation logic: decisions on what the RP is supposed to contain must come before technical decisions on how it will be stored, updated and operated. Overall, the implementation schedule shows that introducing the RP is not a single technical step, but a gradual process that involves designing content, adapting databases, coordinating software and making governance decisions. The timetable should be understood as a structured implementation path that can be adapted to different national stages of preparation, with the general sequence remaining stable: first, the RP model is defined, then the data and tool environment are adapted, and finally the system is stabilised through training, evaluation and improvement cycles.

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ANNEX I



Annex I contains a draft template for a Renovation Passport.

Renovation Passport (non-residential public building)

Colour code	
●	Necessary basic information
●	Mandatory requirements
●	Optional requirements according to Annex VIII or voluntary according to EPBD and/or Guidance Notice
●	Specifically for non-residential public buildings
●	Explanatory text

Building address	Street, number, postcode, coordinates; Address-Code (or similar statistical code)	Identification of building; link to other databases
RP specification	Building type: apartment building, single-family house, non-residential building, public building RP: for building or building unit	For activation of customised modules in the RP software
EPC identification	EPC number and building type (apartment building, single-family house, non-residential building, public building)	Access to EPC database and link of specific RP with EPC

Renovation roadmap to ZEB by 2050 (example)					
2030	2035	2040	2045	2050	
Upper ceiling Roof	Renewal of electric installation BACS PV on the roof	Façade Windows	Overhaul of district heating connection		Based on predefined catalogue of measures; customised for building types
A succinct explanation on the optimal sequencing of steps					
<p>Including adaptations to heavy rain, storms, flooding, overheating (climate change adaptation); also in relation to “How the renovation steps and additional measures could improve the smart readiness of a building”</p> <p>Contributions to health and comfort, indoor environmental quality</p>					

Information about each step, including:

- (i) the name and description of the renovation measures for the step, including relevant options for the technologies, techniques and materials to be used;
- (ii) the estimated energy savings in primary and final energy consumption, in kWh and in percentage improvement compared to the energy consumption prior to the step;
- (iii) the estimated reduction of operational greenhouse gas emissions;
- (iv) the estimated savings on the energy bill, clearly indicating the assumptions on energy costs used for the calculation; and
- (v) the estimated energy performance class of the EPC to be achieved following completion of the step.

Information about the next renovation step, including:

- a detailed description of the technologies, techniques and materials to be used, their advantages, disadvantages and costs;
- the estimated costs for carrying out the step;
- the estimated payback period for the step, with and without any available financial support; and
- the estimated lifetime of measures and the estimated maintenance costs.

[Link to financing](#)

[Link to one-stop-shop \(technical advice, advisory services, etc.\)](#)

[Link to general information on improving construction products' circularity, reducing whole-life-cycle greenhouse gas emissions, wider benefits related to health and comfort, indoor environmental quality, and the improved adaptive capacity of the building to climate change](#)

[Link to assumptions and calculation methods](#)

EPC indicators prior to renovation	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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EPC indicators after full renovation (all renovation steps)	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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The share of individual or collective generation [% of energy use] and self-consumption of renewable energy [% of energy use] estimated to be achieved after the renovation

EPC indicators after full renovation (all renovation steps)	Class	GHG emissions	Transmission losses	Final energy use	Primary energy use
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First issuance of Renovation Passport	Name	Date
Issuance after implemented renovation step including updated roadmap	Name	Date

Building-specific requirements, updated after implementation of a renovation step

nZEB standard by 2040	[kWh/m ²]	Achieved yes/no	Date
ZEB standard	[kWh/m ²]	Achieved yes/no	Date
MEPS	[kWh/m ²]	Achieved yes/no	Date
Fossil fuel phase-out	By [year]	Achieved yes/no	Date
EU Taxonomy (currently under revision)	Chapter x	Achieved yes/no	Date
	Chapter y	Achieved yes/no	Date
	Chapter z	Achieved yes/no	Date

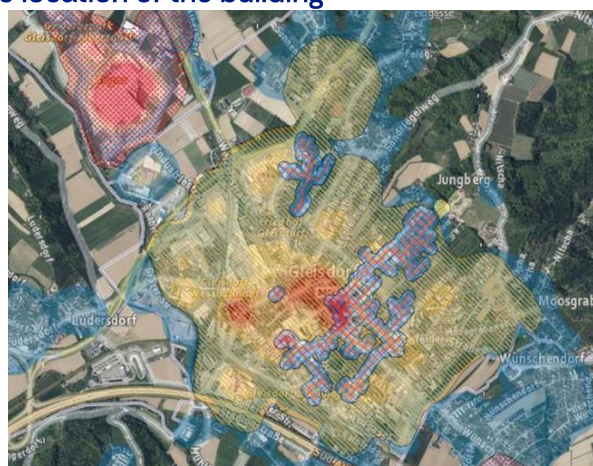
Energy bill: Heating, cooling, ventilation, domestic hot water [kWh/year]

Energy consumption (kWh on energy bill) compared to average: Very low, Low, Medium, High, Very high	Influence of user behaviour: Very low, Low, Medium, High, Very high
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Energy bill: Lighting, appliances [kWh/year]

Energy consumption (kWh on energy bill) compared to average: Very low, Low, Medium, High, Very high	Influence of user behaviour: Very low, Low, Medium, High, Very high
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Renovation opportunities and challenges due to the location of the building



Source of images: Sakulin, C. (2024). Wärmearbeitsatlas Steiermark Projekt SEP, Energie Agentur Steiermark SKE Info-Tag 1.2.24

Building-relevant information from the municipal energy spatial planning system regarding:

Connection to district heating/cooling grid (yes, no, when)

Renewable energy potential (which)

Smart grid availability (yes, no, when)

Smart charging infrastructure (yes, no, where, future plans)

Climate risks (overheating/heat island, heavy rain, storm, flooding)

Predefined measures (example) in the software tool, specific for building types, with explanations regarding sequencing and climate change adaptation, from which selections can be made for the building-specific renovation roadmap

Building elements/trades	Measures with generic explanation of sequence and how the measure relates to adaptation to climate change – key considerations
Building envelope	Measures related to exterior walls, top floor ceiling, basement ceiling, windows, roof (including green roof) (dropdown menu)
Ventilation	Window ventilation, mechanical ventilation, mechanical ventilation with heat and cold recovery (dropdown menu)

Domestic hot water preparation	E.g. combined with space heating, combined with space cooling, separate with heat pump, pipe length, pipe insulation (dropdown menu)
Space heating systems	E.g. centralisation of individual systems; heat pumps, district heating (dropdown menu); heat generation, distribution and emission
Passive cooling solutions	e.g. shading, thermal mass, night cooling, natural ventilation and lighting (dropdown menu)
Active cooling systems	e.g. VRF/VRF-H heat pump systems, multi-split systems (dropdown menu)
Lighting	LEDs, motion detectors (dropdown menu)
Appliances	E.g. stove, other electric cooking appliances, refrigerator, washing machine, dryer (dropdown menu)
Building automation and control systems	E.g. smart thermostats, occupancy sensors, reaction to external signals from the grid (dropdown menu)
Renewable energy integration	E.g. PV installation, solar thermal installation, renewal of electricity installation (dropdown menu)
Smart charging systems	E.g. e-vehicles, e-bikes (dropdown menu)
Blue-green landscaping	Blue (water-related) and green (vegetation-related) measures around the building, such as permeable pavement, rain gardens and greening measures

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