



SmarterEPC

D5.3-Roadmap for achieving the mandatory SRI target for buildings with heating capacity of over 290Kw (V2)



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Table of Content

INTRODUCTION.....	6
1. METHODOLOGY	7
1.1 Design of the Advisory Board Feedback Instrument	7
1.2 Advisory Board Presentation Meeting – 29 April 2025	7
1.3 Roadmap Revision Procedure.....	9
2. FEEDBACK OF THE ADVISORY BOARD CONSULTATION.....	10
2.1 Regulatory and Institutional Findings	10
2.2 Digital Tools and EPC Interoperability	10
2.3 Training and Workforce Readiness.....	10
2.4 Monitoring and KPI Framework.....	10
3. UPDATED MAIN ELEMENTS OF THE “FIT FOR 290!” ROADMAP	11
3.1 Updated Initiatives.....	11
3.2 Updated Milestones	11
3.3 Updated Dependencies	12
3.4 Updated KPIs.....	12
4. FINAL UPDATED “FIT FOR 290!” ROADMAP	14
4.1 “Fit for 290!” Roadmap.....	19
4.2 Key Roadmap Milestones	20
4.3 Key Performance Indicators (KPIs)	20
CONCLUSIONS.....	21
APPENDICES	22
Appendix 1: Advisory Board Questioner	22
Appendix 2: Advisory Board Feedback	25

Acronyms

Acronyms	Description
BACS	Building Automation and Control Systems
CINEA	European Climate, Infrastructure and Environment Executive Agency
DG ENER	Directorate-General for Energy (European Commission)
EC	European Commission
EED	Energy Efficiency Directive
EPC	Energy Performance Certificate
EPBD	Energy Performance of Buildings Directive
ESCO	Energy Service Company
EU	European Union
HVAC	Heating, Ventilation, and Air Conditioning
kW	Kilowatt
MS	Member State
REPowerEU	European Plan for Energy Independence and Sustainability
RED	Renewable Energy Directive
SRI	Smart Readiness Indicator

EXECUTIVE SUMMARY

This second version of Deliverable D5.3 presents the updated “Fit for 290!” roadmap, incorporating the structured feedback received from the SmarterEPC Advisory Board following the submission of Version 1. The objective of this update is to enhance regulatory realism, implementation feasibility, and monitoring robustness in view of the forthcoming potential mandatory application of the Smart Readiness Indicator (SRI) for large non-residential buildings under the revised Energy Performance of Buildings Directive.

Between April 2025 and January 2026, a formal stakeholder consultation and validation process was conducted with Advisory Board members representing national authorities, technical organisations, and market actors. Their feedback was systematically analysed and integrated into all core roadmap components, including legislative alignment, institutional dependencies, training frameworks, digital infrastructure requirements, and KPI monitoring mechanisms.

The updated roadmap now constitutes an implementation-oriented policy instrument that directly supports Member States in preparing legal transposition, market deployment, and long-term governance of the potential future mandatory SRI framework. Version 2 also introduces strengthened links with national EPC systems, BACS obligations, Building Stock Observatories, and digital reporting platforms, thereby ensuring improved operational consistency across policy layers.

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INTRODUCTION

Deliverable D5.3 – Version 2 has been developed to consolidate and formally document all activities performed after the submission of Deliverable D5.3 – Version 1 and to present the final validated version of the “Fit for 290!” roadmap. This updated version reflects the transition from strategic roadmap formulation to implementation-oriented refinement, informed by structured stakeholder engagement and technical validation.

The primary objective of Version 2 is to capture the formal consultation process carried out with the SmarterEPC Advisory Board and to integrate their expert input into the roadmap framework. In this context, the deliverable functions both as a record of the post-submission validation phase and as the definitive edition of the roadmap intended to support Member States in preparing for the potential mandatory application of the Smart Readiness Indicator for large non-residential buildings.

More specifically, Version 2 documents the formal presentation of the “Fit for 290!” roadmap to the Advisory Board, describes the methodological approach applied for the collection, processing, and thematic analysis of stakeholder feedback, presents the validated results of the consultation process, and details the targeted revisions introduced into the roadmap as a direct result of the received feedback. It further provides the final updated “Fit for 290!” roadmap as an implementation-ready policy support framework.

This version does not replicate the background analysis on the Smart Readiness Indicator, the Energy Performance of Buildings Directive recast, or the European non-residential building stock that were comprehensively addressed in Deliverable D5.3 – Version 1. Instead, it strictly focuses on new project-generated knowledge produced through stakeholder interaction, consultation analytics, and systematic roadmap refinement. In doing so, Version 2 strengthens the operational relevance of the roadmap and enhances its applicability as a practical instrument for national authorities and market actors in the lead-up to the anticipated EPBD implementation milestones and beyond.

1. METHODOLOGY

Following the submission of Deliverable D5.3 Version 1, a structured validation and refinement process was initiated to ensure that the roadmap reflects real implementation conditions at national level. This process combined a formal Advisory Board presentation, a written consultation phase, and systematic analytical processing of feedback.

1.1 Design of the Advisory Board Feedback Instrument

A dedicated consultation questionnaire was developed to capture national perspectives on:

- Legal and institutional readiness.
- Digital infrastructure and tool interoperability.
- Workforce capacity and training needs.
- KPI feasibility and national reporting mechanisms.

The questionnaire combined closed-response indicators with open qualitative inputs, enabling both harmonised comparison and contextual interpretation. The questioner can be found in Appendix 1.

1.2 Advisory Board Presentation Meeting – 29 April 2025

As a first post-submission validation step following the delivery of Deliverable D5.3 Version 1, a dedicated Advisory Board meeting was held on 29 April 2025 to formally present the “Fit for 290!” roadmap and to initiate the consultation process underpinning the preparation of Version 2 of the deliverable. The meeting served to validate the roadmap’s strategic architecture, assess its feasibility across national contexts, and identify priority areas requiring further refinement ahead of the written feedback phase. The Advisory Board brought together representatives from national energy agencies and EPBD competent authorities, research and academic institutions, standardisation and technical bodies, digital EPC and SRI tool developers, industry and smart building solution providers, as well as experts involved in national SRI test phases and EU policy development. The meeting was conducted by Euphyia Tech.

Objectives of the Meeting

The primary objectives of the session were to:

- Present the strategic structure and implementation logic of the “Fit for 290!” roadmap to the Advisory Board.
- Validate the core assumptions, priorities, and sequencing of milestones proposed in Version 1.
- Identify national adaptation needs, technical support requirements, and policy alignment constraints.

- Collect targeted expert input to inform the preparation of the updated roadmap to be delivered in February 2026.

Policy and Strategic Context

The presentation recalled the regulatory framework established under the revised Energy Performance of Buildings Directive, which foresees the adoption of delegated and implementing acts by June 2027 to support the implementation of its provisions, including those related to the Smart Readiness Indicator under Article 15. It was emphasised that, within this regulatory context, Member States are required to ensure the legal transposition of all EPBD Articles, alongside the preparation of the institutional, digital, and capacity-related conditions necessary for the potential future mandatory application of the Smart Readiness Indicator to non-residential buildings with a heating capacity above 290 kW. The role of SmarterEPC and Deliverable D5.3 was positioned as a support instrument bridging EU-level regulatory developments with national operational readiness.

Presentation of the “Fit for 290!” Roadmap

During the meeting, the roadmap was introduced as a structured framework built around six integrated components: initiatives, milestones, dependencies, metrics, stakeholder engagement mechanisms, and a visual roadmap. The key milestones and performance indicators proposed in Version 1 were presented as a scenario-based implementation pathway, reflecting the possibility that the Smart Readiness Indicator could become mandatory following future regulatory decisions under the EPBD.

Within this logic, the roadmap distinguished sequential implementation phases rather than fixed dates. An initial pre-mandatory phase focused on preparatory actions such as national building stock inventories and pilot deployments. This was followed by a readiness validation phase addressing legal transposition, workforce training, and digital system preparedness. In the event of a mandatory SRI decision, the roadmap envisaged a regulatory activation phase for non-residential buildings above 290 kW, followed by a longer-term consolidation and scaling phase extending the framework to buildings above 70 kW.

Structured Discussion

The Advisory Board discussion was organised around three thematic axes:

1. National readiness and policy integration.
2. Stakeholder capacity and training.
3. Monitoring, KPIs, and reporting.

This structured exchange directly informed the design of the formal post-meeting feedback questionnaire and the subsequent written consultation phase.

The exchanges highlighted a shared recognition of the strategic relevance of the roadmap, alongside recurring concerns regarding national administrative capacity, the realism of

deployment timelines, and the need for strong alignment with existing EPC systems and training frameworks. Advisory Board members emphasised the importance of flexible, phased implementation approaches, robust digital interoperability, and early investment in workforce readiness. These discussion outcomes provided clear orientation for the subsequent written consultation and directly informed the prioritisation of regulatory, technical, and training-related refinements introduced in Version 2.

1.3 Roadmap Revision Procedure

Following the Advisory Board meeting of 29 April 2025, the feedback questionnaire (Appendix 1) was circulated to all SmarterEPC Advisory Board members in early June 2025. Advisory Board members were invited to submit their responses by September 2025. This extended response period was intentionally provided, recognising that this type of input requires internal coordination and technical review, and that the consultation period coincided with the summer holiday season, which typically limits stakeholder availability.

In total, three completed questionnaires were received and reviewed, including two contributions from Italy and one from Portugal. The collected feedback was systematically processed and used to support the refinement and update of the roadmap.

To support a traceable revision process, the extracted findings were mapped against the six core components of the roadmap, namely: initiatives, milestones, dependencies, metrics, stakeholder engagement mechanisms, and the visual roadmap representation. Based on this mapping, updates were introduced through adjustments to milestone sequencing, refinements of key dependencies, targeted improvements to KPI definitions, and the strengthening of stakeholder and market readiness measures.

Following the integration of Advisory Board input, the updated Version 2 roadmap was also circulated internally within the SmarterEPC consortium for partner review, ensuring consistency with parallel project developments and enabling final technical validation prior to consolidation of the roadmap. This approach ensured that the final Version 2 roadmap reflects stakeholder input and internal project expertise in a transparent and verifiable manner.

2. FEEDBACK OF THE ADVISORY BOARD CONSULTATION

All the Advisory Board feedback can be found in Appendix 2.

2.1 Regulatory and Institutional Findings

The consultation confirmed that the primary barriers to timely SRI deployment are: (i) a high national workload linked to parallel EPBD IV provisions, (ii) limited administrative resources in energy and construction authorities, and (iii) insufficient institutional coordination between energy, digitalisation, and construction bodies. As a result, phased transposition scenarios and flexible national implementation windows were introduced in the updated roadmap.

2.2 Digital Tools and EPC Interoperability

Key challenges identified include: (iv) full integration of SRI calculations into national EPC platforms, (v) data quality control and validation, and (vi) cybersecurity and GDPR compliance. The updated roadmap now explicitly includes a common EU SRI–EPC data exchange layer, post-2027 automated data validation systems, and mandatory quality control mechanisms for national SRI tools.

2.3 Training and Workforce Readiness

Stakeholders converged on the view that (vii) embedding SRI in existing EPC expert training is essential, (viii) mandatory certification schemes must progressively replace ad hoc training, and (ix) BACS designers and building managers must be formally integrated into SRI capacity-building frameworks. The workforce deployment timeline has therefore been extended beyond 2026 with transitional certification mechanisms.

2.4 Monitoring and KPI Framework

While the proposed KPIs were validated as relevant, stakeholders recommended introducing (x) aggregated SRI performance indicators, (xi) strengthening linkage with national Building Stock Observatories, and (xii) including KPIs for tool certification and audit frequency.

3. UPDATED MAIN ELEMENTS OF THE “FIT FOR 290!” ROADMAP

This section presents the updated core components of the “Fit for 290!” roadmap as revised following the Advisory Board consultation process. The revisions introduced in Version 2 aim to enhance the regulatory realism, technical feasibility, and monitoring robustness of the roadmap, while ensuring stronger alignment with national implementation capacities and EU-level digital and governance frameworks.

The updates cover:

- the roadmap initiatives,
- milestone sequencing,
- structural dependencies,
- and the key performance indicators used to track progress toward the mandatory deployment of the Smart Readiness Indicator.

In addition, to mitigate the risk of the roadmap becoming obsolete, and considering the high likelihood that the mandatory SRI obligation may be postponed, in order to accommodate the differing deployment paces observed across Member States and to integrate feedback and results from projects such as *SmarterEPC*, the revised version of the roadmap replaces fixed timelines with relative phases linked to the activation of the decision on a mandatory SRI.

3.1 Updated Initiatives

New initiatives introduced in Version 2 include:

- Development of EU-level SRI technical implementation manuals.
- Mandatory certification of national SRI calculation tools.
- Integration of SRI into ESG and green public procurement criteria.
- Alignment of SRI datasets with national digital building logbooks.

3.2 Updated Milestones

- **Preparation:** Initial legal and institutional groundwork, stakeholder mobilisation, baseline KPIs, and pilot readiness for EPC–SRI digital interoperability.
- **Readiness Validation:** Completion of consultation, national legal drafting, pilot digital integrations, transitional training schemes.
- **Activation:** Entry into force of the EU-level regulatory decision enabling SRI activation, supported by validated digital and institutional frameworks.
- **Consolidation:** Progressive extension to >70 kW buildings, automated benchmarking, AI-supported monitoring.

3.3 Updated Dependencies

New dependencies include formal linkage with national Building Stock Observatories, interoperability with smart metering infrastructures, and alignment with EU cybersecurity and data governance frameworks.

3.4 Updated KPIs

Following the Advisory Board consultation, the KPI framework was refined to improve monitoring realism and to align progress tracking with the phased implementation approach adopted in Version 2. The updated KPI framework is structured around core deployment indicators, complemented by additional monitoring indicators supporting interoperability and EU-level reporting.

Core deployment KPIs include:

- **Deployment of a critical mass of qualified and certified SRI assessors across the EU by the end of the Readiness Validation Phase**, ensuring that workforce capacity is available at the point of regulatory activation.
Indicative targets: ≥1,000 assessors enrolled or engaged through formal training pathways by the end of the **Preparation Phase**, **≥3,000 certified assessors** across the EU by the end of the **Readiness Validation Phase**, and **≥5,000 certified assessors** by the end of the **Activation Phase** (subject to national workforce structures and training capacity).
- **Full operation of national digital SRI platforms and EPC–SRI interoperability mechanisms in all Member States by the start of the Activation Phase**, enabling systematic registration, verification, and reporting of SRI assessments.
Indicative targets: ≥8 Member States operating EPC–SRI pilot workflows by the end of the **Preparation Phase**, **≥20 Member States** operating validated end-to-end digital workflows by the end of the **Readiness Validation Phase**, and **100% of Member States** having operational capability by the start of the **Activation Phase**.
- **At least 50% of non-residential buildings with heating and/or cooling capacity above 290 kW assessed by the end of the Activation Phase**, recognising that assessment ramp-up may require an implementation window following the entry into force of the regulatory obligation.
Indicative targets: ≥5% assessed by the end of the **Preparation Phase**, **≥15% assessed** by the end of the **Readiness Validation Phase**, and **≥50% assessed** by the end of the **Activation Phase**.
- **Measurable improvement in average SRI scores within the first three years following regulatory activation**, supported by the uptake of prioritised smart upgrades and continuous monitoring of aggregated SRI performance indicators.
Indicative target: +5 percentage points increase in the average national SRI score

within **three years** following regulatory activation (or **+10% relative improvement** compared to the baseline at activation).

Additional monitoring KPIs introduced in Version 2 include:

- **Average national SRI score by impact category**, based on aggregated assessment results reported at national level.
Indicative reporting target: at least **one aggregated national dataset per year**, with a minimum aggregation coverage of **≥30%** of completed assessments by the end of the **Activation Phase**, increasing to **≥60%** during **Consolidation**.
- **Share of nationally used SRI calculation tools that are officially certified**, calculated as the number of certified tools divided by the total number of SRI tools authorised or in operational use within a Member State.
Indicative targets: **≥30%** by the end of the **Preparation Phase**, **≥70%** by the end of the **Readiness Validation Phase**, and **100%** at the start of the **Activation Phase**.
- **Share of completed SRI assessments digitally integrated into the national EPC registry**, calculated as the number of SRI assessments recorded through interoperable EPC–SRI data exchange divided by the total number of completed SRI assessments.
Indicative targets: **≥20%** by the end of the **Preparation Phase**, **≥60%** by the end of the **Readiness Validation Phase**, **≥90%** by the end of the **Activation Phase**, and **≥95%** during **Consolidation**.
- **Annual KPI reporting compliance to the Building Stock Observatory (BSO)**, measured as the share of required KPI datasets successfully submitted within the annual reporting cycle.
Indicative targets: **≥50%** by the end of the **Preparation Phase**, **≥80%** by the end of the **Readiness Validation Phase**, and **≥95%** during the **Activation Phase and beyond**.

4. FINAL UPDATED “FIT FOR 290!” ROADMAP

The final updated version of the “Fit for 290!” roadmap consolidates the outcomes of the Advisory Board consultation and the subsequent technical refinement process into a coherent, implementation-oriented framework. The roadmap is structured along a progressive temporal sequence spanning from the pre-mandatory phase to the consolidation and scaling phase. It integrates validated regulatory actions, institutional arrangements, digital infrastructure requirements, workforce deployment measures, and a reinforced monitoring architecture.

During the pre-mandatory period, the roadmap prioritises national legal drafting, structured stakeholder engagement, deployment of pilot digital SRI–EPC integrations, and the establishment of transitional training and certification mechanisms for assessors and BACS professionals. This phase is designed to ensure that Member States enter the mandatory regime with validated tools, operational institutions, and an initial trained workforce.

The regulatory activation phase requires full legal compliance, operational digital platforms, functional quality assurance systems, and systematic KPI reporting to national and EU monitoring bodies.

Then the consolidation and scaling phase, which is characterised by the progressive extension of the SRI framework toward buildings above 70 kW, the automation of data validation and benchmarking processes, deeper integration with national Building Stock Observatories and smart metering infrastructures, and the gradual alignment of SRI outputs with sustainable finance, ESG reporting, and public procurement criteria. In this post-implementation horizon, the roadmap functions as a continuous improvement instrument supporting long-term digitalisation, decarbonisation, and smart operation of the European non-residential building stock.

Table 1 Final Updated “Fit for 290!” Roadmap

Time Horizon	Strategic Objective	Key Actions	Responsible Actors	Monitoring Instruments (KPIs)
Preparation	Legal and institutional preparation	Preparation of national legal drafting for SRI transposition. Establishment or reinforcement of national SRI coordination bodies. Formal presentation of the roadmap to national stakeholders.	National Ministries, EPBD Authorities, SRI National Committees	Number of Member States with draft SRI legal texts prepared.
	Digital pilot preparation	Pilot integration of SRI calculation tools with national EPC platforms. Definition of common SRI–EPC data exchange formats.	National EPC Authorities, IT Providers, SRI Platform	Share of pilot platforms achieving functional EPC–SRI interoperability (target: ≥8 Member States operating pilots by end of phase).
	Workforce preparation	Launch of transitional SRI training schemes. Integration of SRI modules into EPC expert training. Initial engagement of BACS professionals.	Training Institutions, Accreditation Bodies, Professional Chambers	Number of professionals enrolled in SRI-related training (target: ≥1,000 EU-wide by end of phase).

Readiness Validation	Operational readiness validation	Certification of national SRI calculation tools. Establishment of national quality assurance and audit procedures.	National Authorities, Accreditation Bodies	Share of nationally used SRI calculation tools that are officially certified (target: $\geq 70\%$ by end of phase).
	Digital system readiness	Validation of cybersecurity, GDPR compliance, and data governance frameworks for SRI platforms.	IT Authorities, Data Protection Bodies	Number of national platforms validated for security and data governance compliance.
	Workforce deployment	Completion of first certification cycles for SRI assessors.	Accreditation Bodies, Training Providers	Number of certified SRI assessors per Member State (indicative EU target: $\geq 3,000$ certified assessors by end of phase).
Activation	Regulatory activation and implementation launch	Entry into force of national legal provisions enabling SRI implementation, following the EU-level regulatory decision. Start of systematic SRI assessments for non-residential buildings above 290 kW.	European Commission, National Governments	Share of Member States with SRI legal provisions in force (target: 100% by start of phase).

	System-wide deployment	Full operation of national SRI registries and EPC integration. Launch of systematic reporting to national Building Stock Observatories.	National EPC Authorities, Statistical Offices	Share of completed SRI assessments digitally integrated into EPC registries (target: $\geq 90\%$ by end of phase).
	Assessment uptake	Scaling-up of assessment activity for buildings above 290 kW to ensure broad coverage and market readiness.	National Authorities, Accredited Assessors, Market Actors	Share of buildings >290 kW assessed (target: $\geq 50\%$ by end of phase).
	Performance monitoring	First aggregation of SRI scores and impact indicators at national and EU level.	European Commission, National Authorities	Average national SRI score by impact category (baseline established; indicative target: +5 percentage points within 3 years after activation).
Consolidation	Framework consolidation	Progressive extension of SRI toward non-residential buildings above 70 kW.	European Commission, Member States	Share of buildings >70 kW covered by SRI (increasing coverage during consolidation).

	Digital automation	Introduction of automated data validation, benchmarking, and reporting systems.	IT Authorities, SRI Platform	Share of KPI reporting automated (target: $\geq 70\%$ in early consolidation; $\geq 85\%$ by end of consolidation).
	Market and policy integration	Integration of SRI into ESG reporting, green finance instruments, and public procurement frameworks.	Financial Authorities, Public Procurement Bodies	Share of public buildings with procurement or ESG criteria linked to SRI.
	Monitoring and reporting continuity	Routine annual reporting and harmonised submission of KPI datasets to national/EU monitoring structures.	National Authorities, Statistical Offices	Annual KPI reporting compliance to the BSO (target: $\geq 95\%$ maintained).
	Continuous improvement	Periodic methodological updates, recalibration of KPIs, and workforce upskilling.	European Commission, National SRI Committees	Frequency of methodological updates and training renewals.

The final updated “Fit for 290!” roadmap establishes a clear and operational transition pathway from preparatory governance to full regulatory enforcement and long-term policy consolidation. Its phased structure enables Member States to progressively build legal certainty, digital capacity, and professional competence ahead of the 2027 mandate, while providing a scalable framework for systematic post-2027 expansion. As implementation advances, the roadmap is expected to evolve into a permanent governance instrument

supporting continuous digital transformation, energy performance enhancement, and smart operation of Europe’s non-residential building stock.

4.1 “Fit for 290!” Roadmap

The figure illustrates the structured and phased implementation pathway proposed under the “Fit for 290!” roadmap, progressing from preparatory actions and system readiness validation to regulatory activation and longer-term consolidation and scaling. The roadmap is designed as a practical implementation support framework for Member States, combining legal, institutional, digital, and capacity-building measures required to enable the future deployment of the Smart Readiness Indicator for non-residential buildings above 290 kW, subject to EU-level regulatory activation.

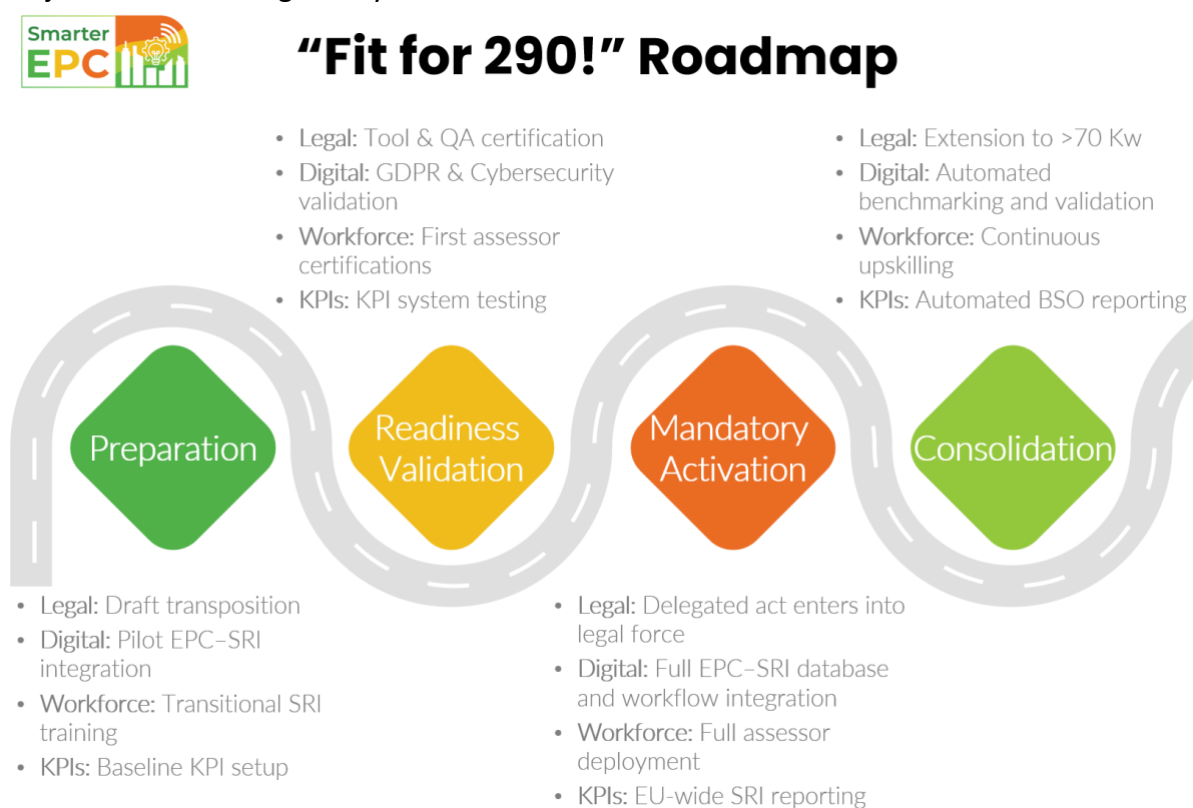


Figure 1 “Fit for 290!” Roadmap

In this context, the roadmap provides a coherent sequencing of actions across key implementation domains, including national governance arrangements, interoperability between SRI and EPC digital ecosystems, quality assurance mechanisms, and workforce readiness for assessors and relevant market actors. Its phased structure enables Member States to adapt implementation planning to national deployment conditions while maintaining alignment with EU monitoring requirements and harmonised reporting structures.

The roadmap is complemented by a reinforced KPI framework and monitoring logic supporting national and EU-level tracking, including the progressive integration of SRI data

into EPC registries and Building Stock Observatory reporting channels. This monitoring approach is intended to support transparency, comparability, and continuous improvement as the regulatory and market context evolves.

4.2 Key Roadmap Milestones

The “Fit for 290!” roadmap is structured around sequential milestones that reflect the progressive maturation of national legal, technical, and operational readiness for Smart Readiness Indicator deployment in large non-residential buildings. To maintain regulatory realism and avoid short-term obsolescence, the milestones are expressed as implementation phases linked to the activation of a potential mandatory SRI decision, rather than fixed calendar deadlines.

- **Preparation:** Establishment of initial enabling conditions, including early legal and institutional groundwork, stakeholder mobilisation, baseline KPI definition, and pilot preparation activities supporting future EPC–SRI interoperability and data exchange.
- **Readiness Validation:** Completion of national preparatory work, including legal drafting activities, establishment or reinforcement of institutional coordination mechanisms, pilot EPC–SRI digital integrations, and implementation of transitional training and certification pathways for assessors and relevant market actors. This phase is intended to validate that national frameworks, tools, and capacities are operationally mature for regulatory activation.
- **Mandatory Activation:** Entry into force of the EU-level regulatory decision enabling SRI activation, supported by validated national digital infrastructures, certified calculation tools, operational quality assurance procedures, and the start of systematic SRI assessments for the targeted building segment above 290 kW.
- **Consolidation:** Progressive stabilisation of SRI deployment through automated benchmarking and reporting mechanisms, strengthened integration with national Building Stock Observatory channels, continuous workforce upskilling, and long-term extension of the framework to additional building segments, including non-residential buildings above 70 kW.

4.3 Key Performance Indicators (KPIs)

The performance of the “Fit for 290!” roadmap is monitored through the KPI framework defined in Section 3.4, which combines core deployment KPIs with additional monitoring KPIs. Monitoring focuses on (i) workforce capacity and assessor certification readiness, (ii) operational availability of interoperable national EPC–SRI digital infrastructures, (iii) uptake of SRI assessments for the targeted building segment above 290 kW, and (iv) aggregated improvement trends in SRI performance following regulatory activation. Complementary indicators support interoperability and reporting consistency by tracking tool certification coverage, digital integration of SRI assessments into EPC registries, and annual compliance of KPI reporting to the Building Stock Observatory.

CONCLUSIONS

Deliverable D5.3 Version 2 supports the transition of the Smart Readiness Indicator from a policy design instrument to an operational regulatory mechanism for large non-residential buildings in the European Union. The integration of Advisory Board feedback has significantly improved legal coherence, technical feasibility, digital interoperability, workforce realism, and monitoring robustness.

This updated roadmap now provides direct actionable guidance to Member States ahead of the eventuality of a mandatory SRI deadline and establishes a scalable structure for further policy expansion. In the forthcoming implementation phase, the roadmap will function as a dynamic governance tool, that will need to be adapted to each member state specificities, refined through structured local feedback, benchmarking, and performance monitoring.

APPENDICES

Appendix 1: Advisory Board Questioner

Dear Advisory Board Members,

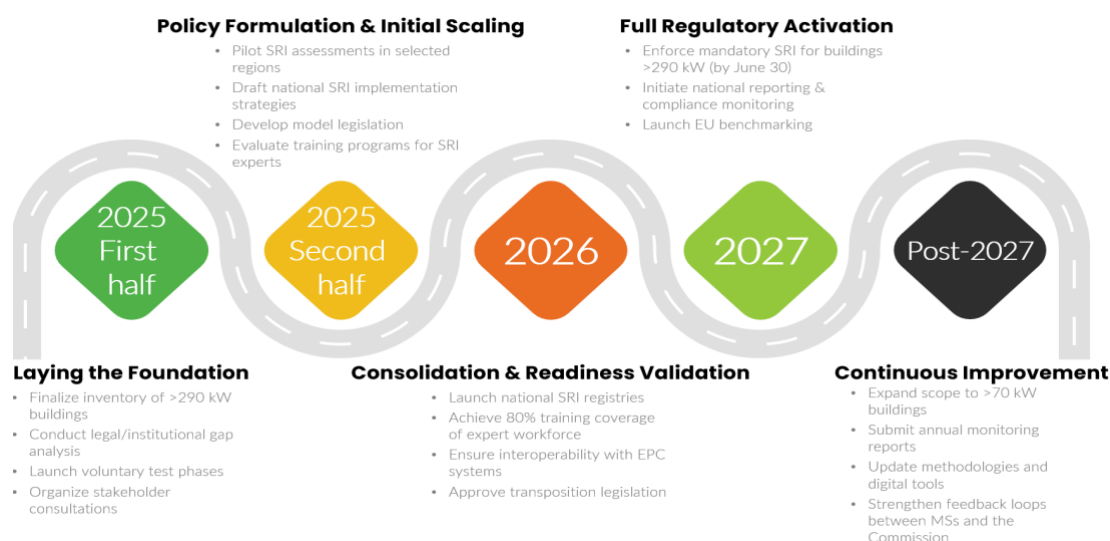
Following our discussion on 29 April 2025, we kindly invite you to review and provide on the draft SmarterEPC Roadmap ‘Fit for 290!’. This roadmap outlines the pathway for Member States to comply with the upcoming Smart Readiness Indicator (SRI) mandate under Article 15 of the revised EPBD.

Your input is vital to ensuring the roadmap’s relevance, feasibility, and added value across national contexts. The finalized roadmap will constitute Deliverable D5.3, to be submitted by February 2026.

Name:	
Organization:	
Country:	

What is the ‘Fit for 290!’ Roadmap?

This roadmap defines the actions, milestones, and key performance indicators (KPIs) necessary to ensure that, by June 2027, all buildings with a heating and/or cooling capacity exceeding 290 kW comply with the mandatory SRI framework.



Key Roadmap Milestones:

- **2025:** Finalisation of national building stock inventories, pilot implementations, and publication of draft implementation strategies.
- **2026:** Completion of legal transposition processes, delivery of training programmes, and operational readiness of national digital platforms.
- **2027:** Entry into force of the delegated act; full compliance across Member States.
- **Post-2027:** Expansion of the framework to include buildings >70 kW and the introduction of iterative updates and enhancements.

Key Performance Indicators (KPIs):

- **3,000** qualified and certified assessors across the EU by 2026
- **100%** of Member States operating digital SRI platforms by Q1 2027
- At least **50%** of buildings >290 kW assessed by end of 2027
- Demonstrated **10%** improvement in SRI scores within 3 years of implementation

Please provide your feedback with particular attention to the feasibility, national policy alignment, and potential for improvement in each of the following domains:

1) National Readiness and Policy Integration:

a) Among the following legislative or institutional gaps, which ones are most likely to affect your country's ability to implement the roadmap effectively?

Please select all that apply and elaborate where relevant.

- Absence of a national legal framework for SRI integration
- Delays in the transposition of EPBD IV provisions
- Lack of institutional coordination between energy, construction, and digitalisation authorities
- Insufficient regulatory guidance for SRI-related digital tools
- Inadequate public funding or support schemes for SRI assessments
- Other (please specify): _____

b) What challenges do you foresee regarding digital tools, legal transposition, or stakeholder coordination?

c) Would the availability of legislative templates, model provisions, or centralized digital tools support national implementation efforts?

2) Stakeholder Capacity and Training:

a) Which training formats or certification schemes are most needed in your context?

(Examples: accredited short courses for energy auditors, online modules for building managers, national certification for HVAC professionals)

b) In the context of building audits, do you have any national examples of successful training or capacity-building efforts?

c) How can we ensure that a trained SRI workforce is in place by 2026?

3) Monitoring, KPIs, and Reporting:

a) Do you think the chosen KPIs sufficiently reflect the priorities of Member State?

b) Could you please suggest additions or refinements to improve the list of indicators?

c) What mechanisms (e.g., national reporting platforms, regular audits, standardized tracking tools) could enhance the effectiveness and robustness of KPI monitoring and reporting?

Thank you!

For any queries, please contact me at:

Email : theoklitos@euphyia-tech.com

Appendix 2: Advisory Board Feedback

1st Feedback

Name:	João Cleto
Organization:	ADENE
Country:	Portugal

1) National Readiness and Policy Integration:

a) Among the following legislative or institutional gaps, which ones are most likely to affect your country's ability to implement the roadmap effectively?

Please select all that apply and elaborate where relevant.

<input type="checkbox"/>	Absence of a national legal framework for SRI integration
<input type="checkbox"/>	Delays in the transposition of EPBD IV provisions
<input type="checkbox"/>	Lack of institutional coordination between energy, construction, and digitalisation authorities
<input type="checkbox"/>	Insufficient regulatory guidance for SRI-related digital tools
<input type="checkbox"/>	Inadequate public funding or support schemes for SRI assessments
<input checked="" type="checkbox"/>	Other (please specify): Lack of resources and prioritization of other EPBD provisions. Investment in several other new provisions is immense and need to be ready by 2025, 2026. Long before 2027 + time to implement new SRI regulation.

b) What challenges do you foresee regarding digital tools, legal transposition, or stakeholder coordination?

<p>No major challenges foreseen but depending on the degree of integration (results import? Embedded calculation? Still to be decided). Current framework in Portugal is already "SRI friendly" as it is foreseen in several legislative frameworks and there are already mandatory minimum requirements for BACS efficiency level in some buildings. One possible challenge is to ensure full compatibility between this requirement and SRI without compromising any of them and without adding additional "burden" to market players. The real challenges would come up if the calculation/digital tools are provided and need to be developed within the EPC ecosystem instead of relying on external calculation tools (but this later option also makes quality control very difficult)</p>

c) Would the availability of legislative templates, model provisions, or centralized digital tools support national implementation efforts?

<p>Yes, this could support implementation, monitoring and ease up quality control. A strong focus should be made on ensuring common data standards and formats for easy data exchange between the different systems (including information on existing control/smart systems in the building for each technical domain and not only on level of functionalities – once again – for quality control purposes). It is critical to have an EU wide basic implementation manual for a proposed technical framework. Even if this can and will be adapted by Member States the basic</p>

knowledge and related assumptions makes it easier not only to provide accurate explanations to students but also to comprehensively support the adaptations needed for each country context.

2) Stakeholder Capacity and Training:

a) Which training formats or certification schemes are most needed in your context?

Accredited short courses for EPC system already qualified experts, inclusion of SRI in overall EPC experts training, integrating and certifying “BACS” professionals and BACS systems “designers” – a need identified for the whole building ecosystem and not only for SRI but these professionals can be critical for implementation, include SRI in other professional training and competencies such as inspections technicians, building managers, etc. From a large survey done in Portugal on current EPC experts specific training on SRI was highlighted as a real need even for those with high knowledge and competencies on BACS and related

b) In the context of building audits, do you have any national examples of successful training or capacity-building efforts?

At ADENE we provide a comprehensive set of training tools to construction professionals based on our Academia ADENE (<https://academia.adene.pt/>). As part of the EPC experts quality control system a strong effort is made on capacity building, improving knowledge, supporting needs, ensuring feedback and support and to the least possible on “repression”. For more info on the quality control mechanisms please check out page 53 of the following document:

https://www.bpie.eu/wp-content/uploads/2024/06/EPBD.wise_Deliverable-5.1_EPCs_Final.pdf

In Portugal, SRI training developed within SRI2MARKET has been included in the overall training portfolio for energy efficiency in buildings: [Eficiência Energética nos Edifícios - Academia ADENE](#)

c) How can we ensure that a trained SRI workforce is in place by 2026?

SRI should be included in the existing training programs and supported by additional short-term courses. Formal accreditation and certification processes would be needed but that will probably take longer. By 2026 a set of basic skills can be available via more soft approaches to lay the ground for future implementation. Gathering interest, taking advantage of existing trainings being developed in EU LIFE projects and highlighting the benefits of being a frontrunner is critical at this stage. But expecting a full, wide, SRI trained workforce by 2026 can be optimistic.

3) Monitoring, KPIs, and Reporting:

a) Do you think the chosen KPIs sufficiently reflect the priorities of Member State?

The KPIs sufficiently reflect priorities but they might be slightly optimistic in terms of timescale. For instance, having 50% of buildings >270 kW assessed when, most likely, the actual mandatory implementation will only start 1 or 2 years after the publication of the new SRI regulations can be overoptimistic.

b) Could you please suggest additions or refinements to improve the list of indicators?

At least some aggregated data on actual SRI results can be useful for this overall monitoring. Minimum and as per the EU BSO / EPBD provisions ([ANNEXES TO COMMISSION IMPLEMENTING REGULATION](#)): (a) number of buildings that received a smart readiness indicator; (b) average smart readiness indicator score of the buildings referred to in point (a); (c) average score for optimising energy efficiency and overall in-use performance of the buildings referred to in point (a); (d) average score for adapting operation to the needs of the occupant of the buildings referred to in point (a); (e) average score for adapting to signals from the grid of the buildings referred to in point (a).

c) What mechanisms (e.g., national reporting platforms, regular audits, standardized tracking tools) could enhance the effectiveness and robustness of KPI monitoring and reporting?

All of these systems can be put in place but they should be strongly connected to ongoing initiatives (for instance inclusion in PT power BI for energy certification if applicable <https://www.sce.pt/estatisticas/>) and obviously the overall indicators defined in the EPBD and related acts under Article 16, 22 and the report to the BSO.

2nd Feedback

Name:	Massimiliano Magri
Organization:	Coster srl
Country:	Italy

1) National Readiness and Policy Integration:

a) Among the following legislative or institutional gaps, which ones are most likely to affect your country's ability to implement the roadmap effectively?

Please select all that apply and elaborate where relevant.

- Absence of a national legal framework for SRI integration
- Delays in the transposition of EPBD IV provisions
- Lack of institutional coordination between energy, construction, and digitalisation authorities
- Insufficient regulatory guidance for SRI-related digital tools
- Inadequate public funding or support schemes for SRI assessments
- Other (please specify): _____

b) What challenges do you foresee regarding digital tools, legal transposition, or stakeholder coordination?

The skills of designers about BACS

c) Would the availability of legislative templates, model provisions, or centralized digital tools support national implementation efforts?

surely

2) Stakeholder Capacity and Training:

a) Which training formats or certification schemes are most needed in your context?

The certification must be mandatory and done in presence.

b) In the context of building audits, do you have any national examples of successful training or capacity-building efforts?

no

c) How can we ensure that a trained SRI workforce is in place by 2026?

We must demonstrate that BACS are the best option to significantly reduce energy bills.

3) Monitoring, KPIs, and Reporting:

a) Do you think the chosen KPIs sufficiently reflect the priorities of Member State?

Yes but these are very challenging in time

b) Could you please suggest additions or refinements to improve the list of indicators?

They are enough and perhaps too many

c) What mechanisms (e.g., national reporting platforms, regular audits, standardized tracking tools) could enhance the effectiveness and robustness of KPI monitoring and reporting?

The obligation to give measured results to the BSO by MS.

3rd Feedback

Name:	Roberto Redaelli
Organization:	Harpaceas srl
Country:	Italy

1) National Readiness and Policy Integration:

a) Among the following legislative or institutional gaps, which ones are most likely to affect your country's ability to implement the roadmap effectively?

Please select all that apply and elaborate where relevant.

<input type="checkbox"/>	Absence of a national legal framework for SRI integration
<input type="checkbox"/>	Delays in the transposition of EPBD IV provisions
<input checked="" type="checkbox"/>	Lack of institutional coordination between energy, construction, and digitalisation authorities
<input checked="" type="checkbox"/>	Insufficient regulatory guidance for SRI-related digital tools
<input type="checkbox"/>	Inadequate public funding or support schemes for SRI assessments
<input type="checkbox"/>	Other (please specify): _____

b) What challenges do you foresee regarding digital tools, legal transposition, or stakeholder coordination?

<p>Digital tools:</p> <ul style="list-style-type: none"> - Integration with existing systems and tools to gather data in the process (especially for method C) - Reliability and accuracy in order to ensure a trusted SRI process - Data security and privacy regarding the collected data <p>Legal Transposition:</p> <ul style="list-style-type: none"> - Alignment with existing legislation - Clarity and Consistency across EU member states - Minimum SRI Levels for different building types and climate zones <p>Stakeholder coordination:</p> <ul style="list-style-type: none"> - Awareness and understanding - Engagement and participation - training and capacity building to ensure quality of the assessment

c) Would the availability of legislative templates, model provisions, or centralized digital tools support national implementation efforts?

For sure, those elements would be helpful.
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2) Stakeholder Capacity and Training:

a) Which training formats or certification schemes are most needed in your context?

<ul style="list-style-type: none"> - Training courses: base and advanced tailored for building managers, auditors... - Accredited short courses for auditors
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b) In the context of building audits, do you have any national examples of successful training or capacity-building efforts?

No

c) How can we ensure that a trained SRI workforce is in place by 2026?

A simple and effective training program could be a good first step.

3) Monitoring, KPIs, and Reporting:

a) Do you think the chosen KPIs sufficiently reflect the priorities of Member State?

Yes

b) Could you please suggest additions or refinements to improve the list of indicators?

Standardized and “certified” tool for SRI assessment

c) What mechanisms (e.g., national reporting platforms, regular audits, standardized tracking tools) could enhance the effectiveness and robustness of KPI monitoring and reporting?

- National reporting platforms with tools integration
- Regular audits
- Testimonials, case studies etc. describing reached KPIs