

Position Paper of the EU BIM Task Group on Digital Building Permitting

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Context and Purpose

Digital Building Permitting (DBP) is emerging as a strategic enabler for the European Union's housing, climate and productivity objectives. Evidence from frontrunner countries¹, including Austria, Estonia, Finland, Germany, the Netherlands and Spain, shows that digital, and especially BIM-based, permitting can shorten approval times, improve transparency, increase regulatory consistency and support innovation. At the same time, these implementations also reveal persistent legal, organisational, technical and capacity-related barriers that cannot be solved by individual pilots alone.

Europe is therefore moving from experimentation towards implementation. The next challenge is not only to demonstrate that Digital Building Permitting is possible, but to ensure that it can be scaled across different legal systems, administrative traditions and levels of digital maturity. This requires common principles, interoperable data foundations, reusable technical components and practical guidance that Member States, regions and municipalities can adapt to their own regulatory contexts.

The EU BIM Task Group calls for a coordinated European approach to Digital Building Permitting that promotes common implementation principles, open and interoperable information standards, reusable technical components and practical support for Member States and municipalities. Such an approach should respect national and local regulatory competences while reducing duplicated development efforts and enabling scalable, data-driven permitting across Europe. The Group recommends that the European Commission support this transition through coordinated guidance, standardisation, capacity-building and funding instruments, with the EU BIM Task Group contributing as a practical public-sector expert platform.

Building on its public-sector expertise and the experience of frontrunner Member States, the EU BIM Task Group is well placed to support DG GROW in assessing the practical pathways, impacts and implementation conditions for Digital Building Permitting across the European construction sector. This position paper sets out how the EU BIM Task Group can support the Commission as a practical public-sector expert partner on Digital Building Permitting. Its role should be to coordinate Member State experience, connect policy with standardisation and research, and help ensure that European approaches to Digital Building Permitting are realistic, scalable and aligned with openBIM principles.

¹ [BEST PRACTICES on Digital Building Permits in the EU](#) – EU BIM Task Group 2025



The paper therefore argues for a stronger and more structured European approach to Digital Building Permitting, including common implementation guidance, alignment with buildingSMART International and the research community, and closer integration between permitting, spatial planning digitalisation and future lifecycle data infrastructures.

Digital Building Permitting as a Strategic Enabler

Digital Building Permitting is not an isolated administrative reform. It is a strategic instrument for delivering key European policy objectives, including affordable housing, climate-neutral construction, the Renovation Wave and the Construction 2050 vision of a more resilient, productive and innovative construction sector. By reducing delays, improving predictability and enabling automated or semi-automated compliance checks, DBP can help public authorities move from document-based administration towards data-driven regulation of the built environment.

Frontrunner implementations show that Digital Building Permitting can deliver value in several areas:

- **Efficiency gains** through semi-automated checking, reduced manual interpretation and improved information quality.
- **Improved compliance and transparency** through structured, machine-readable submissions, openBIM-based information exchange and traceable decision-making.
- **Stronger data foundations** for lifecycle management, industrialised construction, standardised housing solutions and type approvals.
- **Better integration** between permitting, geospatial data, regulatory information and future digital public services for the built environment.

Digital Building Permitting should also be understood as an upstream enabler of future building lifecycle data infrastructures, particularly Digital Building Logbooks. DBP creates the opportunity to capture structured, verified and traceable information at the moment when a building is approved, rather than attempting to reconstruct this information later during operation, renovation or asset management. This data can support Digital Building Logbooks, maintenance planning, renovation strategies, energy performance monitoring and progress towards climate-neutral building stock objectives. In this sense, DBP is not only a more efficient permitting process, but a critical data-quality gateway for the entire building lifecycle.

Where appropriate, this lifecycle data perspective can also include structured quantity and cost-related information. While cost data is not yet central in most European Digital Building Permitting implementations, its future integration could support quantity verification, procurement accountability, budget transparency and evidence-based public investment decisions. This would further strengthen DBP as a trusted data gateway between design, permitting, procurement and lifecycle management.

However, the transition from pilots to operational implementation remains challenging. Member States and municipalities face fragmented legal frameworks, uneven digital capacity, different administrative procedures, inconsistent data requirements and uncertainty over how regulatory



text should be translated into machine-interpretable rules. At the same time, similar technical capabilities, such as BIM model validation, regulatory rule checking, geospatial data processing and data extraction, are being developed separately across Europe. Without coordination, this risks duplication of effort, fragmented markets and limited interoperability between national and local solutions.

European progress does not require a single uniform permitting system or one common European rule set. Regulatory requirements will continue to differ between Member States, regions and municipalities. The strategic need is therefore to establish common methodological principles, harmonised information frameworks, open standards and reusable technical components that allow local and national rules to be structured, interpreted and implemented in a consistent way. Such an approach would support scalability and comparability while respecting legal and administrative diversity.

Addressing these issues requires coordinated, practical guidance. The priority is no longer only to prove that Digital Building Permitting is technically possible, but to create the conditions for reliable, interoperable and scalable implementation across Europe.

Furthermore, Digital Building Permitting can be interpreted as a risk mitigation tool within the promotion and management of private, public-private partnership (PPP), or public investments. This is particularly relevant for large real estate developers, public and private banks, insurance companies, and asset management companies, both in terms of predicting the outcome and increasing equity value. A first application within the European Union context could take place during the implementation of the Affordable Housing Initiative.

Proposed Role of the EU BIM Task Group

The EU BIM Task Group is uniquely positioned as a public-sector, practitioner-driven community of Member State authorities, public clients and policy actors. Its added value lies in translating national experience, public-sector implementation needs and standardisation developments into practical European guidance for Digital Building Permitting.

The EU BIM Task Group should therefore be recognised as a practical expert platform supporting DG GROW on Digital Building Permitting, with three main functions:

1. **Advisor on EU-level frameworks and roadmaps**

- Translate the findings from frontrunner countries into pragmatic guidance on legal, organisational and technical pathways for other Member States.
- Support DG GROW in shaping recommendations on harmonised openBIM-based data requirements, common rule libraries and shared digital infrastructures, as well as reusable technical components and reference architectures supporting Digital Building Permitting.

2. **Coordinator of public-sector experience and capacity-building**



- Create a structured community of practice for national and local authorities involved in permitting, including municipalities and regional planning bodies.
- Facilitate peer learning on governance, procurement, standards adoption and organisational change, including training needs for permitting staff.
- Promote within authorities a practical understanding of how model-based submissions can support day-to-day permitting work, including the interpretation of automated checking results, model-based visualisations, and digitally represented dimensions and annotations.

3. Bridge between policy, standardisation, and research

- Act as an interface between DG GROW, buildingSMART International, EUnet4DBP and relevant Horizon Europe projects, ensuring alignment between scientific results, standards and real permitting processes.

To fulfil this role, the EU BIM Task Group should explicitly expand its network to include **more representatives from national and local permitting authorities**, as they are the critical actors for real-world implementation.

Collaboration with Standardisation and Research Communities

Digital Building Permitting depends on close alignment between public-sector implementation, open standards and research-based innovation. Individual Member States and municipalities cannot solve this alone, as the same core challenges appear across Europe: regulatory information requirements, model validation, geospatial integration, automated rule checking, process governance and long-term interoperability.

The EU BIM Task Group should therefore act as a practical public-sector counterpart to standardisation and research communities, ensuring that technical development is informed by real permitting workflows and authority needs.

Within the European standardisation landscape, cooperation with CEN, particularly CEN/TC 442 on Building Information Modelling, should be strengthened to ensure that further development of EN ISO 16739-1, Construction Products Regulations (CPR), Digital Building Logbook and Digital Building Permitting is aligned with European standards and standardisation processes. In parallel, cooperation with buildingSMART International, particularly the Regulatory Domain, is essential for the further development and implementation of openBIM-based technical standards. OpenBIM and IFC already provide the backbone for many permitting pilots and national solutions, but Digital Building Permitting also requires stronger integration with geospatial, regulatory and, where relevant, quantity and cost-related information. IFC-based approaches must therefore be further profiled and extended to support regulatory workflows, including building permits, spatial planning conditions and links to rule sets and Information Delivery Specifications.



The EU BIM Task Group should contribute public-sector use cases, national requirement sets and lessons learned from frontrunner implementations to help shape IFC-based regulatory profiles that are feasible for both authorities and industry. Particular attention should be given to entities, properties, relationships and information structures needed for permitting, including spaces, uses, fire safety, accessibility, areas, heights, distances and zoning-related requirements. The Group should also promote IDS and related buildingSMART standards, such as bSDD, as practical instruments for defining machine-checkable regulatory information requirements.

This work should also address practical authority needs that are sometimes overlooked in standardisation discussions, including the exchange of dimensions, annotations and other review-relevant representations. The aim is not only to create technically correct models, but to ensure that IFC-based submissions can be integrated into operational permitting workflows.

In parallel, the EU BIM Task Group should work closely with EUnet4DBP and relevant Horizon Europe projects. Research on Digital Building Permitting, machine-readable regulation, GeoBIM integration and automated compliance checking provides a strong and evolving knowledge base. However, research results must be assessed from the perspective of practical uptake by authorities.

The EU BIM Task Group can add value by identifying which research outputs are ready for implementation, including rule modelling methods, reference workflows, maturity models and approaches to GeoBIM-based checking. It can also provide structured feedback from practice by clarifying which aspects of regulation are most urgent to automate, where current methods do not fit real permitting processes, and which gaps require further study.

Through this role, the EU BIM Task Group can help DG GROW connect research funding, standardisation activities and Member State implementation needs. This would reduce duplication, support reusable technical components and accelerate the transfer of validated knowledge into operational Digital Building Permitting systems.

Integrating Urban Planning Digitalisation and SPIM

Digital Building Permitting cannot reach its full potential if urban planning remains analogue, fragmented and document-based. A significant information loss occurs between spatial planning and design, where zoning conditions are often expressed in 2D drawings, written regulations and explanatory documents. These formats may support legal interpretation, but they are difficult to reuse directly in BIM-based permitting, automated compliance checking or digital public services.

A fully digital permitting ecosystem therefore requires the upstream digitalisation of spatial planning information. Planning conditions such as buildable envelopes, land use, heights, setbacks, density, green space requirements and other spatial restrictions need to become structured, machine-readable and reusable across the planning-permitting-design continuum.



The Spatial Planning Information Model (SPIM) concept addresses this gap by representing planning conditions as structured model-based information that can connect GIS, planning, BIM and permitting workflows. SPIM-like approaches can support:

- machine-readable planning conditions as input to Digital Building Permitting systems;
- automated or semi-automated checks of zoning compliance at early design stages;
- clearer 3D communication for public participation and political decision-making;
- continuity between planning, land administration, cadastre and building lifecycle data.

The EU BIM Task Group therefore proposes that urban planning digitalisation and SPIM-like approaches are recognised as integral components of European Digital Building Permitting strategies. European guidance should not focus only on the permitting transaction itself, but also on the structured planning information needed to make data-driven permitting reliable, scalable and interoperable.

Recommended Next Steps

To move Digital Building Permitting from fragmented national and local initiatives towards a coherent European implementation pathway, the EU BIM Task Group recommends the following actions:

1. **Recognition of the EU BIM Task Group as a practical public-sector expert platform for Digital Building Permitting**, with a clear role and workplan for supporting DG GROW on implementation pathways, impacts, governance needs and scalable European approaches.
2. **Strengthening of the existing Digital Building Permitting Working Group within the EU BIM Task Group**, ensuring a clear workplan, dedicated outputs and strong representation from national ministries, regional authorities and municipalities responsible for permitting and planning.
3. **A joint work programme with CEN and buildingSMART International**, particularly CEN/TC 442 and the buildingSMART Regulatory Domain, focusing on European standardisation alignment, IFC-based regulatory profiles, IDS for permitting and alignment with SPIM-like planning models.
4. **Structured collaboration with EUnet4DBP and the research community**, including regular exchange of findings, joint workshops and shared prioritisation of research topics based on regulatory practice and public-sector implementation needs.
5. **Development of EU-oriented guidance on phased DBP implementation**, including integration with spatial planning digitalisation, regulatory information requirements and feedback structures to support Member States at different maturity levels.
6. **Exploration and development of a common European reference architecture and modular technical building blocks for Digital Building Permitting**, including rule



engines, validation services, data schemas and APIs that can be adopted and adapted by Member States and municipalities within their own systems.

7. **Alignment of EU funding and innovation instruments to support shared technical components**, including their development, testing, maintenance and scaling, building on existing initiatives in standardisation, digital innovation and artificial intelligence.

Conclusion

Digital Building Permitting has moved beyond experimentation and is becoming a realistic pathway for modernising public regulation of the built environment across Europe. The next challenge is not to prove the concept, but to align legal frameworks, open standards, technical infrastructures, organisational capacity and public-sector governance into a coherent implementation approach.

The EU BIM Task Group is well placed to support this transition as a practical public-sector expert platform. By connecting Member State experience, standardisation activities, research outputs and urban planning digitalisation, it can help establish a shared European pathway for data-driven, openBIM-based Digital Building Permitting.

This pathway should not lead to a single uniform permitting system, but to common principles, interoperable frameworks and reusable technical components that Member States and municipalities can adapt to their own regulatory contexts. In doing so, Digital Building Permitting can become more than a faster approval process: it can become a strategic foundation for lifecycle data, Digital Building Logbooks, climate-neutral renovation and more transparent public decision-making.

