

● PUBLIC BUYERS COMMUNITY

BIM integration in Public Procurement

Survey Analysis Report

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Introduction

BIM is increasingly recognised as a key enabler of digital, sustainable, and efficient public procurement. Yet, despite its potential, implementation across the EU remains uneven, with varying levels of maturity, support, and policy development. As public administrations face growing demands for transparency, sustainability, and innovation, understanding how BIM is used today — and what barriers remain — is essential for shaping future strategies and regulatory guidance.

This survey was designed to map national legal frameworks and strategies, assess training and funding opportunities, explore practical uses of BIM in tenders, and examine the role of SMEs in digital procurement processes. It also sought to identify challenges encountered by public buyers and suppliers, highlight best practices, and capture expectations regarding EU-level collaboration and support.

The responses collected offer a unique, comprehensive view of BIM practices across the EU. They provide valuable evidence to inform ongoing policy discussions, strengthen capacity-building initiatives, and contribute to a shared European vision for harmonised, effective, and innovation-driven BIM integration in public procurement.

This report presents the main findings of the survey and outlines the opportunities and needs expressed by stakeholders, helping to guide future action toward a more digital, sustainable, and collaborative built environment across Europe.

Sectorial Distribution and Institutional Representation

Overview

The survey collected responses from a diverse range of organisations active in both the building and infrastructure sectors across Europe and neighbouring countries. The data reveal a balanced representation between public sector bodies, private enterprises (including both large companies and SMEs), and non-governmental or academic institutions. Respondents are based primarily in Spain, France, Ireland, the Czech Republic, Austria, Slovenia, Bulgaria, and Portugal, with additional inputs from Türkiye, Tunisia, Greece, Cyprus, Luxembourg, Poland, Denmark, Sweden, and Romania.

This broad geographic spread demonstrates that the adoption and understanding of BIM-enabled public procurement processes are not limited to a single region but rather reflect a pan-European and neighbouring-country engagement.

Sectorial focus: Building vs Infrastructure

Approximately half of the respondents reported operating primarily within the building sector, while the remainder identified the infrastructure sector as their main field of activity. A small proportion indicated involvement in both sectors, reflecting integrated project delivery approaches increasingly common in complex urban or regional development programmes.

Building sector

Respondents involved in building-related activities indicated engagement in a wide range of sub-sectors, notably:

- Administrative buildings, education, residential, and commercial projects — cited by a majority of building-sector participants.
- Other key segments include healthcare, cultural, sports, and transportation facilities.
- Several respondents also listed “other” areas such as logistics centres, data centres, software and cloud services, and industrial/manufacturing buildings, highlighting the growing overlap between traditional construction and digital/industrial infrastructure.

Infrastructure sector

Respondents operating in the infrastructure domain reported activity in:

- Roads, railways, and water infrastructure — identified as the most common fields.

- Energy and sanitation infrastructure follow closely, underscoring the relevance of BIM for sustainable utilities.
- Airports and coastal protection projects were also reported, indicating the use of BIM in large-scale transportation and environmental engineering contexts.
- Several open-text responses noted subterranean works, military or heavy industrial infrastructure, and bridges, pointing to advanced BIM applications in technically demanding environments.

Institutional Representation

The institutional distribution among respondents reflects the cross-sectoral nature of BIM-enabled procurement:

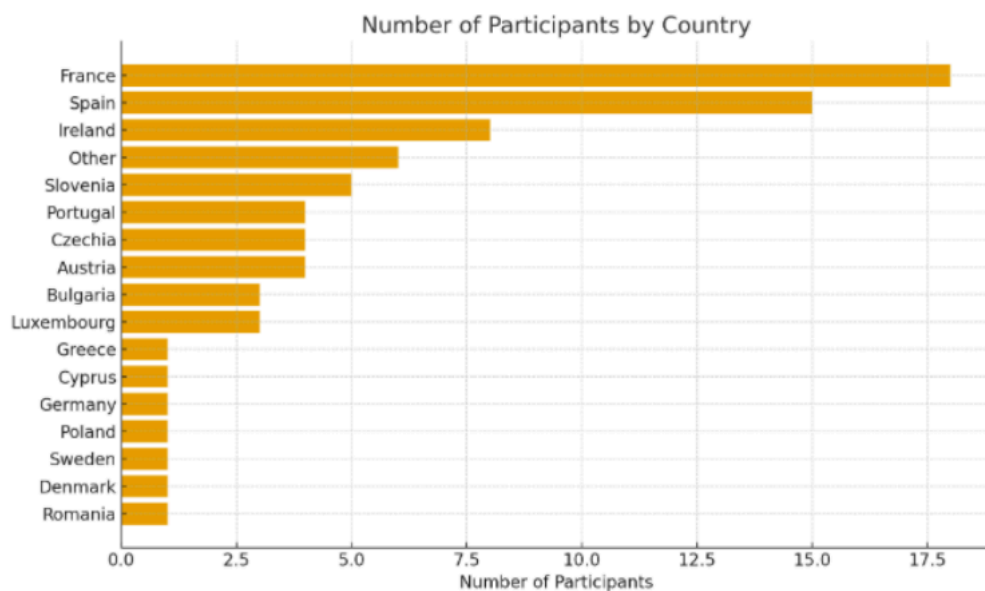
Institutional Type	Typical Role	Notable Countries of Respondents
Public sector authorities	Contracting authorities and procurement bodies involved in planning, tendering, and supervision of public works	Ireland, Czechia, France, Spain, Portugal,
Large companies	Engineering, architecture, construction, and consultancy firms implementing BIM on major projects	Spain, Austria, Bulgaria, France, Slovenia,
Small and Medium-sized Enterprises (SMEs)	Specialist design, digital modelling, or construction service providers	Spain, Austria, Luxembourg, France,
Non-governmental organisations (NGOs)	Sectoral or civil-society groups advocating digital transformation and sustainability in construction	Ireland, Portugal, Germany, Slovenia, Romania
Academic/Research institutions	Providing expertise, training, and innovation in BIM and digital construction	Ireland, France
Trade associations	Representing industry professionals and promoting BIM standardisation	Cyprus

<p>Other categories</p>	<p>Entities specifying “Other (please specify)” include organisations from Türkiye, Tunisia, and Mexico, reflecting participation from beyond the EU with significant experience in digitalisation of procurement.</p>	<p>Türkiye, Mexico Tunisia,</p>
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Geographic Distribution

The respondents are based in more than **15 countries**, with the largest representation from:

- **Spain** and **France**, together accounting for nearly half of all respondents,
- followed by **Ireland**, **Czechia**, **Austria**, **Slovenia**, and **Portugal**.



Non-EU countries such as Türkiye, Tunisia, and Mexico demonstrate international interest in EU BIM practices and interoperability frameworks.

This distribution highlights that BIM implementation in public procurement is gaining traction not only across EU Member States but also among countries seeking alignment with European digital construction standards.

Key Insights

- The building sector remains the dominant field of BIM activity, yet infrastructure projects — especially roads, railways, and utilities — are fast catching up.
- Public sector participation is strong, confirming growing institutional awareness of BIM as a policy instrument.

- The private sector, particularly large companies, exhibits advanced BIM engagement, while SMEs represent an essential innovation driver but may require further support for integration.
- Cross-border representation indicates that BIM adoption transcends national boundaries, aligning with EU priorities for a digital single market in construction.
- The inclusion of academic, NGO, and non-EU participants underscores the collaborative and knowledge-driven nature of this transition.

Part 1: BIM National Strategies and Resource Availability

1. The Importance of a Mandate for Successful BIM Implementation in Public Procurement

Survey question: 7. In your opinion, how important is it to have a mandate for successfully implementing BIM in public procurement?

To assess stakeholders' perceptions of how crucial a formal mandate is for successfully implementing Building Information Modelling (BIM) in public procurement, respondents were asked to rate its importance on a scale from 0 (not important at all) to 10 (extremely important).

Quantitative Overview

The responses show a strong consensus on the importance of having a mandate:

- Average score: 8.5 / 10
- Median score: 9
- Mode (most frequent score): 10
- Range: 0–10, with a clear concentration of responses between 8 and 10

More than 75% of participants rated the importance at 8 or higher, indicating broad recognition that formal policy direction plays a pivotal role in achieving widespread BIM adoption in public procurement. Only a small minority assigned low importance (scores below 5), suggesting these represent exceptional cases where organizations may already have mature internal frameworks or operate in contexts with strong voluntary adoption.

Qualitative Overview

The data highlight that mandates are perceived as a key enabler for consistency, accountability, and long-term strategic uptake of BIM across public sector entities. Respondents view a clear mandate as providing:

- Strategic alignment across contracting authorities and project teams.
- Regulatory certainty that encourages investment in BIM training, tools, and process adaptation.
- Acceleration of adoption, reducing fragmentation and ensuring interoperability.

At the same time, the few low scores suggest that while mandates are seen as important, they are not sufficient on their own. Successful implementation also depends on complementary measures such as:

- Capacity-building and upskilling of public buyers and technical staff.
- Availability of standardized guidelines and open data formats.
- Incentives for voluntary early adopters and pilot projects that demonstrate tangible value.

Overall, the findings indicate that stakeholders strongly favor a top-down policy framework to drive BIM adoption in public procurement. A national or regional mandate—supported by training, shared standards, and digital infrastructure—appears to be viewed as a critical factor for achieving consistent, scalable, and sustainable implementation across public authorities

2. Key Elements of a National Strategy to Support BIM Implementation in Public Procurement

Survey question: 8. In your view, what are the key elements to include in a national strategy to support BIM implementation in public procurement?

Survey participants demonstrated a strong convergence of views on the essential components of an effective national strategy to drive BIM (Building Information Modelling) adoption in public procurement. Across responses, a comprehensive and coordinated framework emerged as the preferred approach, integrating legal, technical, financial, and operational dimensions to ensure consistency and scalability of implementation.

Key Element	% of Mentions / Frequency	Purpose / Impact
Clear legal and regulatory framework	★★★★★	Establishes legal certainty and national alignment with EU directives and digital policies.
Standardised requirements and guidelines	BIM and ★★★★★	Ensures consistency, interoperability, and data quality across all projects.
Defined roles and responsibilities for stakeholders	★★★★☆	Clarifies governance and accountability throughout the BIM value chain.
Capacity-building and training programmes	★★★★☆	Builds skills, supports adoption, and promotes a shared understanding of BIM benefits.
Digital infrastructure and platforms	★★★★☆	Enables secure, interoperable data sharing in line with NIS2 and REC directives.
Scheduled calendar for structured implementation	★★★★☆	Provides a phased roadmap with milestones for progressive adoption.

Monitoring and evaluation mechanisms	★★★★☆	Tracks progress, ensures compliance, and informs continuous improvement.
Dedicated funds and financial incentives	★★★★☆	Reduces entry barriers and supports pilot initiatives, especially for SMEs and public buyers.
Alignment with EU-level initiatives and standards	★★★★☆	Facilitates cross-border interoperability and supports the Digital Single Market.
Data-centric approach (“Beyond BIM”)	★★☆☆☆	Positions BIM as a tool to ensure data reliability, transparency, and lifecycle traceability.

Clear Legal and Regulatory Framework

A foundational element identified by most respondents is the establishment of a clear and coherent legal and regulatory framework. Such a framework should provide public buyers and market actors with legal certainty, define minimum requirements for BIM use in public tenders, and ensure alignment with broader national and EU-level digital and sustainability objectives. Respondents also emphasized the importance of harmonizing contract templates and BIM execution plans with EU-level standards and mandates to foster interoperability and cross-border collaboration.

Defined Roles and Responsibilities

Participants stressed the need for clearly defined roles and responsibilities across the BIM value chain—public authorities, design teams, contractors, suppliers, and technology providers. A structured governance model should delineate ownership of data, decision-making responsibilities, and accountability mechanisms throughout project lifecycles, ensuring transparent and efficient collaboration among all stakeholders.

Standardised BIM Requirements and Guidelines

The most recurrent recommendation was the development of national BIM standards and implementation guidelines. These should specify data formats, modeling levels of detail (LOD), and common classification systems, ensuring data quality, interoperability, and traceability. The standardization effort should be closely aligned with EU-level initiatives and standards, avoiding

fragmentation and supporting the long-term vision of a digital single market for construction and public infrastructure.

Structured Implementation Roadmap

Many respondents underlined the value of a scheduled calendar for BIM implementation, enabling a phased and realistic transition. This roadmap should set clear milestones—starting from pilot projects to full-scale integration—and be complemented by monitoring and evaluation mechanisms to assess progress, identify gaps, and adjust the approach over time.

Capacity-Building and Training Programmes

A key enabling factor for success lies in developing the skills and capacities of public buyers and market actors. Respondents consistently highlighted the need for continuous professional training, knowledge-sharing platforms, and the creation of communities of practice. These should foster a shared understanding of BIM's benefits and challenges and facilitate the dissemination of best practices across sectors and regions.

Financial and Institutional Support

The inclusion of dedicated funds and financial incentives was viewed as essential to encourage adoption, particularly for smaller municipalities and SMEs. Targeted funding programmes could support pilot projects, software acquisition, and staff training, helping overcome initial investment barriers and accelerating uptake across the public sector.

Digital Infrastructure and Data Governance

Respondents agreed that robust digital infrastructure and secure data platforms are critical for effective BIM implementation. These should enable standardized, interoperable, and secure data exchange throughout asset lifecycles, in compliance with EU cybersecurity directives such as NIS2 and REC (SecNumCloud). The emphasis should be placed on ensuring data reliability, traceability, and accessibility, reinforcing BIM's role as a means to achieve trustworthy, high-quality digital information management.

Monitoring, Evaluation, and Continuous Improvement

An effective national strategy should integrate monitoring and evaluation mechanisms to measure performance, assess compliance, and capture lessons learned. These mechanisms would provide valuable feedback loops for policy refinement and continuous improvement of the BIM implementation framework.

Beyond BIM: A Data-Centric Vision

Several respondents reflected a broader vision in which BIM is considered a tool, not an end in itself. The overarching goal should be to ensure the quality, standardization, and legitimacy of data related to the built environment. In this perspective, BIM becomes one of the instruments serving a wider digital transformation agenda focused on data integrity, transparency, sustainability, and efficiency. As one respondent summarized:

“The priority is not to multiply initiatives, but to establish a fundamental principle: we must have a clear and non-negotiable requirement for the quality and traceability of the data relating to what we build, what we inhabit, and what we put on the market.”

3. Main Obstacles Preventing BIM Adoption in Public Procurement

Survey question: 9. In your opinion, what are the main obstacles that prevent the adoption of BIM in public procurement in your country? (Select all that apply)

Obstacle	% of Mentions / Frequency	Description / Implications
Lack of a BIM Mandate	★★★★★	Absence of a national or legal requirement creates uncertainty, leading to inconsistent adoption across public authorities.
Inconsistency between Public and Private Sector	★★★★☆	Divergent practices, standards, and expectations limit interoperability and collaboration between project stakeholders.
Limited Training for Professionals and Administrators	★★★★☆	Lack of practical BIM training hinders competence, confidence, and efficiency in implementation.
Insufficient Integration of BIM in Higher Education	★★★★☆	Few universities and technical schools embed BIM in curricula, creating a persistent skills gap.
Lack of National Framework or Guidance	★★★★☆	Absence of centralized coordination and clear national standards generates fragmentation.
Cultural and Organisational Resistance	★★★★☆	Traditional project management culture and low digital maturity impede transformation.
Insufficient Resources and Budgets	★★★★☆	Financial and human resource limitations prevent investment in technology and upskilling.
Complexity and Interoperability Issues	★★★☆☆	Technical barriers between software platforms and data formats hinder seamless collaboration.
Perceived Lack of Added Value	★★★☆☆	BIM often seen as a cost rather than an efficiency enabler, especially for smaller projects or administrations.

Key Findings

The survey results reveal several interconnected barriers that continue to hinder the widespread adoption of BIM in public procurement. Among these, the absence of a national BIM mandate emerges as the most significant structural obstacle. Without a clear legal or policy driver, BIM adoption remains fragmented and largely optional, discouraging both investment and long-term strategic planning. Respondents highlighted that government directives are often unclear or inconsistent, with some departments advancing faster than others, resulting in a patchwork of practices across the public sector.

A second major challenge is the fragmentation between public and private sectors. Differences in workflows, contractual practices, and technical standards create inefficiencies and limit trust between stakeholders. This misalignment makes it difficult to integrate BIM requirements coherently into public procurement processes, undermining the potential benefits of digital collaboration.

Capacity gaps across the ecosystem were also frequently cited. Many public buyers and private suppliers lack sufficient training and practical experience with BIM tools and processes, which leads to slow or superficial adoption. The need to embed BIM more systematically into university curricula and professional development programmes was stressed as essential to cultivating a new generation of skilled professionals capable of supporting long-term implementation.

The survey further points to a lack of national coordination and guidance. Public authorities often operate without a central reference framework, standardized templates for contracts, or clear instructions on how to incorporate BIM requirements into procurement documents. This absence of guidance contributes to uncertainty and inconsistent application across projects.

Organisational and cultural resistance is another recurring theme. Many respondents noted that the legacy of document-based processes, hierarchical decision-making structures, and risk-averse organisational cultures slows digital transformation. In some cases, BIM is perceived as an additional administrative burden rather than a tool that adds value, limiting willingness to engage with it meaningfully.

Resource and technical constraints compound these challenges. Limited budgets, outdated IT systems, and inadequate technical support—particularly in smaller public entities—restrict the capacity to invest in BIM software, maintain digital models, and ensure interoperability between platforms. The technical complexity of some BIM tools further discourages consistent use.

Finally, perception and communication challenges were frequently mentioned. BIM is sometimes viewed as costly, complex, or unnecessary, particularly when the tangible benefits are not clearly communicated or demonstrated. The absence of visible success stories and quantified return-on-investment data reinforces skepticism among decision-makers and slows the broader cultural shift needed for effective adoption.

Taken together, these findings highlight that BIM adoption is not solely a technical issue but a multifaceted challenge involving regulation, governance, skills, culture, and resources. Addressing these barriers requires a coordinated national strategy that combines legal mandates, standardization, capacity-building, clear guidance, and effective communication of BIM's value across all stakeholders.

Illustrative Stakeholder Perspectives

“We need clear, mandatory, and achievable short-term objectives to create momentum and build confidence.”

— Respondent, France

“There is no clear guidance for public bodies on how to implement BIM in projects, and IT support is lacking.”

— Respondent, Ireland

“BIM is often seen as a nuisance — another expense — when the real challenge lies in changing project management culture.”

— Respondent, Central Europe

“We need more accessible training for both professionals and public administrators, and BIM should be fully integrated into university programmes—alongside initiatives like national competence frameworks and cross-sector learning—to truly build the skills needed for effective implementation.”

— Respondent, Spain

4. Institutions Best Suited to Lead BIM Implementation in Public Procurement

Survey question: 10. Which type of national institution is, in your opinion, best suited to lead BIM implementation in public procurement in your country?

Survey respondents highlighted a range of institutions that could potentially lead BIM implementation in public procurement, reflecting the diversity of national administrative structures and approaches to digital transformation.

The most frequently cited options include:

Institution Type	Frequency / Relative Importance	Role and Rationale
Specific Ministry or Organisation	★★★★★	Seen as essential for policy ownership, coordination of public procurement, and oversight of sector-specific BIM requirements.
BIM Office (Dedicated Agency)	★★★★☆	Provides technical expertise, central guidance, and continuity across departments; ensures standardisation and quality control.
Interministerial Commission	★★★★☆	Enables cross-sector coordination, aligning different ministries and departments around a unified BIM strategy.
Public-Private Commission	★★★☆☆	Facilitates collaboration between public authorities and industry, ensuring that standards and tools are practical and widely adopted.
Technical Chamber / Professional Body	★★★☆☆	Offers domain-specific expertise, guidance on standards, and capacity-building support for professionals.
Private or Other Institutions	★★☆☆☆	Can support implementation through innovation, training, or technical services but typically play a supplementary role.

Key Findings

The survey indicates a strong consensus that no single institution is sufficient to lead BIM implementation in public procurement. Instead, respondents emphasize the need for a coordinated, multi-layered governance approach that combines policy leadership, technical expertise, cross-sector coordination, and stakeholder engagement.

A specific ministry or public organisation is widely regarded as the most suitable entity to provide policy leadership. Ministries responsible for public works, infrastructure, or digitalisation are best placed to own the BIM agenda, integrate requirements into public procurement law, and allocate the necessary resources. Acting as sponsors, they can provide legitimacy, strategic direction, and decision-making authority across sectors.

Complementing this policy role, a dedicated BIM office is essential to ensure technical continuity and expertise. Such an office can develop and maintain standardised guidelines, templates, and reference frameworks, bridging the gap between policy and practice and supporting consistent adoption across departments and projects.

BIM implementation also requires cross-sector coordination, for which an interministerial commission is considered highly effective. Given that BIM adoption spans multiple ministries and

public bodies, this type of commission can align objectives, harmonise policies, and oversee implementation, ensuring a coherent and unified national strategy.

Public-private commissions were highlighted as important mechanisms for industry engagement. By involving contractors, designers, technology providers, and other stakeholders, these commissions help ensure that standards are practical, widely accepted, and responsive to real-world project requirements. They also play a critical role in capacity-building initiatives and piloting BIM projects.

Technical chambers and professional bodies can further support implementation by providing specialised guidance, professional training, and certification schemes, particularly for sector-specific applications such as roads, housing, or public buildings. Several respondents recommended pairing these chambers with a sponsoring ministry to guarantee sectoral standardisation.

Finally, respondents noted that other institutions—including independent authorities, departmental groups, or public infrastructure companies—can play complementary or innovative roles, particularly in driving pilots, promoting operational best practices, or introducing new digital tools. Integration with established industry networks, such as BuildingSmart, was also suggested as a way to leverage international standards and best practices, further strengthening national BIM implementation.

Taken together, these findings underscore that effective leadership of BIM adoption requires a collaborative, multi-institutional structure where responsibilities are clearly defined, expertise is centralised, and coordination mechanisms ensure alignment between policy, technical standards, and industry practice.

Illustrative Governance Models

Model 1: Ministry-Led Model with Dedicated BIM Office and Technical Chamber

Places the Ministry at the core as policy leader and driver of BIM adoption in public procurement. The BIM Office supports implementation through technical expertise, while the Technical Chamber provides professional standards and sector-specific guidance.

Model 2: Interministerial and Public-Private Coordination Model

Emphasizes the leadership of Ministries in coordinating efforts across government departments through an Interministerial Commission, while fostering dialogue with industry via a Public-Private Commission. This model strengthens coherence in national BIM policies and ensures market alignment.

Model 3: Comprehensive Ministry-Driven Ecosystem

Anchors the Ministry as the central orchestrator of a multi-institutional framework involving the BIM Office, Interministerial Commission, Public-Private Commission, Technical Chamber, and selected private partners. This approach integrates policy, technical standards, cross-sector collaboration, and industry engagement under clear ministerial leadership.

5. Current Status of BIM Mandates in Public Procurement

Survey question: 11. In your opinion, what is the current status of BIM mandates in public procurement in your country?

Survey results reveal a highly fragmented landscape regarding the status of BIM mandates across countries. While some respondents report that BIM is compulsory by law, the majority

indicate that its use in public procurement remains voluntary or guided by internal instructions rather than legal obligations. This variation reflects differing stages of policy maturity and implementation across national contexts.

Mandate Status	Relative Frequency Weight	Typical Characteristics
BIM is not compulsory, but used in public procurement	★★★★★ (most frequent)	Adoption occurs on a voluntary basis, driven by specific agencies or projects rather than national regulation.
BIM is compulsory through internal instructions	★★★★☆	Institutions or ministries require BIM for certain projects through internal policies, but there is no legal obligation.
BIM is compulsory by law	★★★☆☆	Legal mandates exist in a limited number of countries, usually focused on specific sectors (e.g. infrastructure, buildings) or project thresholds.
BIM is compulsory, but not for public procurement	★★☆☆☆	Mandates target private sector or design processes, without integration into procurement frameworks.
BIM is neither compulsory nor used in public procurement	★★☆☆☆	Reflects countries at an early stage of digital transformation or where awareness and capacity remain limited.

Key Findings

The survey paints a picture of uneven progress in the institutionalisation of BIM within public procurement frameworks across Europe and beyond.

- Predominance of Voluntary or Partial Adoption**
 Most respondents indicated that BIM use in public procurement is not yet compulsory but is increasingly applied voluntarily. This suggests a growing awareness of BIM's value, even in the absence of regulatory drivers. Adoption is often led by motivated public bodies, large infrastructure agencies, or pilot projects seeking efficiency and transparency gains.
- Internal Instructions as Transitional Mechanisms**
 Several public authorities have introduced internal BIM directives or guidelines, requiring its use for certain project types or above specific contract values. While these initiatives represent progress, they typically lack the legal enforceability and coherence of a national mandate. As a result, implementation remains inconsistent and dependent on institutional leadership.

- **Limited but Expanding Legal Mandates**
A smaller number of respondents reported that BIM is compulsory by law in their countries. These legal frameworks are generally tied to national digitalisation strategies or construction modernisation plans and often focus on major public works. However, respondents also noted that legal mandates do not automatically ensure effective implementation—capacity building and standardisation are equally critical.
- **Disconnect Between BIM Legislation and Public Procurement**
In some countries, BIM requirements exist outside the public procurement framework, targeting planning or design phases rather than procurement processes. This disconnect reduces the potential impact of BIM on transparency, lifecycle management, and innovation in public contracting.
- **Persistent Gaps and Early-Stage Contexts**
A significant share of respondents indicated that BIM is neither compulsory nor widely used in their national context. This reflects persistent barriers such as limited resources, lack of awareness among public buyers, and the absence of national coordination mechanisms.
- **Emerging Trend Toward Gradual Mandates E**
Overall, responses suggest a gradual shift toward more structured mandates, often starting with internal policies, followed by sectoral or regional regulations, and eventually culminating in national legal frameworks. This incremental approach allows governments to build capacity, refine standards, and test implementation mechanisms before enacting binding requirements.

The results indicate that BIM integration in public procurement is progressing, but regulatory frameworks remain fragmented. While a minority of countries have already established legal mandates, most are still navigating early implementation stages through internal policies or voluntary adoption. This pattern underscores a transitional landscape, where experimentation and pilot projects precede formal regulation.

For policymakers, the findings suggest that clear national guidance, institutional coordination, and capacity-building are essential to move from scattered initiatives toward consistent, large-scale adoption. Establishing progressive mandates, coupled with technical support and shared standards, could help accelerate BIM's mainstreaming while ensuring that digital transformation in public procurement is both inclusive and sustainable.

6. Responsibility for Supporting Contracting Authorities in Adopting BIM

Survey question: 12. In your view, who should be primarily responsible for supporting contracting authorities in adopting BIM?

Survey responses show strong consensus that the national government should play the leading role in supporting contracting authorities in the adoption of BIM. Nearly all respondents identified national administrations—particularly ministries responsible for public procurement, infrastructure, or digitalisation—as the main actors capable of setting direction, defining deliverables, and ensuring consistency across sectors.

National Leadership as a Prerequisite

Respondents emphasised that the State must provide the overarching framework—legislative, financial, and procedural—for BIM adoption. National governments are expected to establish mandatory or incentivising policies, define standard deliverables, and set measurable objectives. Without clear national guidance, BIM implementation risks remaining fragmented and voluntary.

Several participants highlighted that, in countries where BIM has been left to voluntary initiatives, progress has stagnated due to the absence of a central mandate. The State's role was therefore seen as both strategic and operational: acting as the policy owner while ensuring follow-through in implementation and compliance.

Supporting Roles for BIM Associations and Networks

Alongside national leadership, BIM associations, professional networks, and technical chambers were viewed as essential partners for translating policy into practice. These organisations possess the technical expertise to develop guidance, training materials, and model documents, and to facilitate peer learning among contracting authorities. Their proximity to practitioners allows them to bridge the gap between high-level strategy and day-to-day application.

Respondents also recognised that these networks are well positioned to foster collaboration between the public and private sectors, ensuring that standards are workable and aligned with market realities.

Regional and Local Governments as Implementers

A significant share of respondents pointed to the role of regional and local administrations in adapting national strategies to local contexts. Sub-national governments often act as contracting authorities themselves and thus play a crucial role in piloting BIM requirements in procurement procedures. Their involvement is also important to ensure consistent capacity-building and to avoid disparities between territories.

The Role of Private Consultants and Expert Advisors

While less frequently cited as primary actors, private consultants and expert advisors were recognised for their practical contribution to implementation. They can offer targeted technical support, conduct training, and accompany public bodies in early deployment phases. Respondents stressed, however, that such support should operate within a coherent national framework to avoid fragmented approaches.

Emerging or Complementary Actors

A few respondents suggested alternative or complementary structures, such as independent public agencies, large public companies with advanced BIM maturity, or technical chambers acting under the supervision of a sponsoring ministry. These entities could help institutionalise expertise and provide long-term support to contracting authorities.

In summary, respondents clearly see BIM adoption as a shared responsibility, but one that must be anchored in strong national leadership. Governments are expected to define the vision, provide the mandate, and coordinate efforts, while specialised networks, regional authorities, and private experts contribute technical know-how and operational support to make that vision a reality.

7. Supporting Contracting Authorities in Introducing BIM in Public Tenders

Survey question: 13. What do you think are the most effective ways to help contracting authorities introduce BIM in public tenders?

Respondents consistently highlighted that the successful adoption of BIM in public procurement depends on a combination of technical guidance, training, institutional support, and practical demonstration projects. Key observations include:

1. Developing Technical Documentation and Guidelines

- Clear, standardised guidelines, templates, and contract provisions are seen as the cornerstone for adoption.
- Ready-to-use templates and proven examples of BIM deliverables help contracting authorities implement requirements with confidence.
- Encouraging open standards (e.g., IFC, ISO 19650) ensures interoperability, long-term usability of data, and reduces vendor lock-in.

2. Offering BIM Training Courses

- Structured training for both public and private actors is critical to close capacity gaps.
- Training should be practical and aligned with the realities of public procurement processes, supporting hands-on use of BIM tools and workflows.

3. Establishing a National BIM Office

- A centralised body can coordinate technical support, maintain standards, and provide a single point of reference for authorities.
- Such an office can also facilitate individual guidance for contracting authorities, act as a hub for knowledge exchange, and promote consistent national strategies.

4. Launching Pilot Projects

- Pilot projects serve as demonstrations of real-world benefits, showing how BIM improves efficiency and data quality.
- They allow authorities and contractors to test standards, contracts, and workflows before broader implementation, reducing risk and resistance.

5. Additional Recommendations from Respondents

- Provide collaborative tools (e.g., Common Data Environments) and information delivery specifications to simplify project execution.
- Ensure sovereignty and security in data storage, avoiding reliance on foreign servers for sensitive project data.
- Focus on outcomes rather than imposing BIM itself—emphasise structured, high-quality, and usable data as the primary deliverable.
- Consider mandatory BIM application for large-scale projects to accelerate adoption while building capacity gradually.

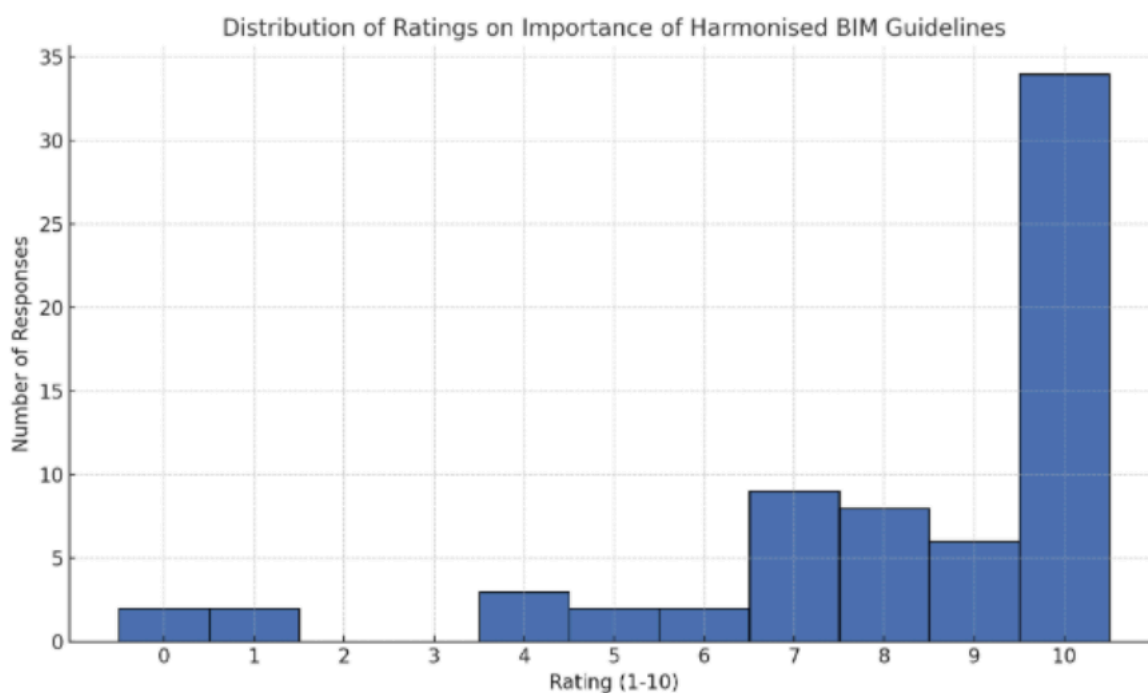
Key Insight:

A coordinated strategy combining technical guidance, capacity building, centralised support, and practical pilots is seen as the most effective way to embed BIM in public procurement. Adoption is most successful when contracting authorities can rely on both clear frameworks and hands-on experience with proven practices.

8. Importance of Developing Harmonised BIM Guidelines in the EU

Survey question: 14. In your opinion, how important is it to develop harmonised guidelines to standardise the use of BIM in public procurement across the European Union? (Scale 1–10)

Survey respondents overwhelmingly highlight the critical need for harmonised guidelines to standardise BIM use in public procurement across the European Union. Scores on a 1–10 scale show a strong consensus: the majority rated the importance as 8 or above, with numerous respondents giving a perfect score of 10.



Key observations:

- **Strong consensus on urgency and necessity** : Most respondents (over 60%) rated the importance as 9 or 10, indicating widespread recognition that harmonised guidelines are essential for effective BIM adoption across EU countries.

- **Support for cross-border consistency** : Harmonisation is seen as a way to reduce fragmentation, align public and private sector practices, and facilitate interoperability of BIM processes and standards across member states.
- **Facilitates capacity building and procurement efficiency** : Standardised guidelines can serve as a reference for public authorities, contractors, and consultants, supporting consistent training, technical documentation, and tender specifications.
- **Addressing current gaps** : Lower scores (1–5) were rare but highlight that some respondents may see local flexibility or national autonomy as equally important, reflecting the need for guidelines that balance standardisation with adaptability to national contexts.

Developing harmonised BIM guidelines is considered highly important by stakeholders, providing a foundation for consistent, interoperable, and effective implementation of BIM in public procurement across the EU.

9. Supporting SMEs in Bidding for BIM-Based Public Tenders

Survey question: 15. What do you think are the most useful ways to support SMEs in bidding for public tenders that include BIM?

Small and medium-sized enterprises (SMEs) represent a critical segment of the construction sector but often face structural and capacity-related barriers when engaging in public tenders involving Building Information Modelling (BIM). Respondents to the survey identified a consistent set of measures needed to support SMEs in overcoming these challenges.

These measures can be grouped under five key themes: (1) training and capacity building, (2) financial support, (3) simplification and standardisation, (4) collaboration and resource sharing, and (5) public sector readiness.

Training and Capacity Building

The most frequently cited need was for accessible and continuous BIM education. Respondents highlighted that training must target not only technical staff but also company directors and project managers who make strategic decisions about digital adoption. Key recommendations include:

- Development of nationally coordinated training programmes and certification schemes on BIM fundamentals and public tendering.
- Subsidised or free training opportunities, including online modules and pilot projects demonstrating BIM implementation.
- Establishment of advisory and mentoring services (e.g. through national BIM offices, chambers of commerce, or regional digital hubs).
- Awareness-raising campaigns on the practical benefits of BIM for projects of all scales.

As one respondent noted, “Making BIM mandatory and hoping for voluntary adoption is unrealistic. SMEs need to understand and experience its value through hands-on training.”

Financial Support and Incentives

Financial constraints were identified as one of the most significant barriers for SMEs in BIM adoption. Respondents called for stronger financial mechanisms to mitigate upfront costs related to software, training, and staff allocation. Suggested measures include:

- Subsidies, grants, or tax incentives for software acquisition, equipment purchase, and training participation.
- Advance or accelerated payment schemes in public contracts (e.g. 10–20% upfront payment for low-risk SMEs).
- Publicly funded digital support centres providing technical assistance and shared access to licensed software.
- Ensuring that BIM-related costs are explicitly recognised and compensated within tender budgets.

Several respondents stressed that BIM should not represent an uncompensated cost for SMEs but should be integrated as a valued element of tender evaluation.

Simplification and Standardisation

SMEs often encounter difficulties with the complexity and inconsistency of BIM tender requirements. Respondents emphasised the need for simplified, standardised, and transparent procurement processes, including:

- Clear, proportionate BIM requirements aligned with project size and complexity.
- Development of national BIM guidelines and standard templates, such as BIM Execution Plans (BEPs) and Common Data Environment (CDE) frameworks.
- Use of openBIM standards (e.g. IFC, ISO 19650) to ensure tool flexibility and reduce vendor dependency.
- Transparent evaluation criteria focused on demonstrated capability and project experience rather than formal certification alone.
- Consistent BIM use cases and deliverables across public entities to promote clarity and fairness.

As one expert observed, “The goal is not to impose BIM tools on SMEs but to demand reliable, structured data through simple, affordable tools and streamlined processes.”

Collaboration and Resource Sharing

A collaborative approach was seen as essential for enabling SMEs to build BIM capacity without duplicating costs. Proposed actions include:

- Encouraging joint ventures, partnerships, or consortiums that allow SMEs to share BIM specialists and digital resources.

- Establishing regional BIM hubs and digital platforms for centralised access to templates, standards, and case studies.
- Promoting mentorship programmes pairing SMEs with larger or more experienced firms.
- Introducing model contracts and best-practice frameworks derived from successful tender experiences.

Pooling expertise in this way can improve SME competitiveness, reduce barriers to entry, and foster innovation within the supply chain.

Public Sector Readiness and Leadership

Respondents also underlined the need for public authorities to strengthen their own capabilities and consistency in applying BIM requirements. Key actions recommended include:

- Training procurement officers and evaluators to assess BIM-based submissions fairly and proportionately.
- Promoting consistent BIM implementation policies across public entities at national and EU levels.
- Clarifying BIM use cases and expected outcomes within tender documentation to support informed SME participation.
- Supporting a phased and inclusive transition towards BIM adoption in public procurement, ensuring SMEs are not disadvantaged.

As noted by one participant, “Complexity is the real barrier, not capability.”

Summary of Key Recommendations

Theme	Main Recommendations
Training and Capacity Building	National training programmes, mentorship schemes, pilot projects, awareness campaigns
Financial Support	Subsidies, grants, tax incentives, advance payments, cost recognition in tenders
Simplification and Standardisation	Clear, proportionate requirements; national guidelines; openBIM standards; transparent evaluation
Collaboration and Shared Resources	Joint ventures, BIM hubs, model contracts, partnerships with larger firms
Public Sector Readiness	Training for evaluators, harmonised BIM requirements, clear use cases, inclusive implementation

Overall, respondents expressed a strong consensus that empowering SMEs through education, financial incentives, simplified processes, and collaborative frameworks is crucial for the successful integration of BIM in public procurement. A consistent, transparent, and supportive policy environment—complemented by active public sector leadership—will enable SMEs to

compete more effectively and contribute to the broader digital transformation of the construction industry.

10. Ensuring SME Access to BIM Training and Effective Participation in BIM-Based Projects

Survey question: 16. What actions or strategies — whether public or private — do you think could help ensure that more SMEs have access to adequate BIM training and can participate effectively in BIM-based projects?

The transition to digital construction through Building Information Modelling (BIM) presents significant opportunities for small and medium-sized enterprises (SMEs). However, the ability of SMEs to participate effectively in BIM-based projects is constrained by limited access to affordable, relevant, and practical training.

Respondents identified a set of priority actions to improve SME access to BIM education, enhance digital skills, and strengthen participation in public and private projects. The recommendations focus on five strategic areas: (1) public–private partnerships and national coordination, (2) accessible and practical training programmes, (3) financial support mechanisms, (4) integration of BIM into formal education and certification, and (5) incentives and inclusion mechanisms.

Public–Private Partnerships and National Coordination

A recurring recommendation was to establish nationally coordinated BIM training strategies supported by both public authorities and private industry actors. Respondents called for an integrated approach that combines public funding with private sector expertise and delivery capabilities.

Key proposed measures include:

- Creation of national BIM offices or regional training hubs to coordinate curricula, monitor quality, and ensure consistent standards across Member States.
- Establishment of public–private partnerships (PPPs) to co-develop training modules, demonstration projects, and mentorship programmes.
- Utilisation of chambers of commerce, professional associations, and industry federations (e.g., FNTP, FFB, CAPEB) to disseminate training offers and organise regular information sessions.
- Clear national BIM roadmaps and implementation plans, accompanied by communication strategies to ensure SMEs understand opportunities, timelines, and expectations.

As one respondent noted, “BIM training should be treated as a strategic industrial priority — pragmatic, results-oriented, and delivered through national BIM academies that combine public support with private expertise.”

Accessible and Practical Training Programmes

Respondents emphasised the need for short, modular, and flexible training options tailored to SME realities. Traditional long-term academic programmes are often inaccessible due to time and cost constraints. Recommendations include:

- Subsidised short courses, webinars, and masterclasses, including part-time and remote options.
- Massive Open Online Courses (MOOCs) and e-learning platforms structured around specific roles or skill levels, aligned to openBIM standards.
- Pilot projects and hands-on workshops allowing SMEs to apply BIM concepts in real-world contexts immediately after training.
- Development of peer-to-peer learning networks and mentorship programmes connecting SMEs with experienced practitioners.
- Training-on-the-job schemes for both white- and blue-collar workers, addressing operational as well as management skills.

Respondents also suggested recognising and compensating small consultancies and experts who deliver local BIM training, to ensure sustainability and equitable access across regions.

Financial Support and Incentives

Financial assistance remains a cornerstone for enabling SME participation in BIM training and projects. Suggested measures include:

- Subsidies or co-funding for training programmes, software licenses, and certification costs.
- Grants for SMEs to upskill employees or participate in pilot BIM projects.
- Tax incentives or public aid schemes supporting investment in digital transformation.
- Inclusion of BIM capacity-building components in public procurement budgets.
- Co-financing of regional training centres and publicly funded BIM support networks.

As one participant summarised, “If we want SMEs to adopt BIM, we must go beyond PowerPoints — we need fully funded, practical, and measurable training programs.”

Integration of BIM into Education and Certification

Several respondents stressed the importance of embedding BIM skills within the formal education and professional qualification systems. This would create a sustainable pipeline of BIM-literate professionals entering the workforce.

Recommendations included:

- Integrating BIM as a core component of curricula in technical colleges, universities, and vocational schools.
- Establishing regulated vocational diplomas and certification schemes in BIM.
- Supporting international certification programmes, such as the buildingSMART Professional Certification Programme.
- Encouraging academic–industry collaboration to align training content with evolving industry needs.

Respondents from France and Spain specifically proposed developing certified BIM qualifications and supervised accreditation systems to guarantee the quality of training providers and avoid opportunistic practices.

Integrating BIM as a core component of curricula in technical colleges, universities, and vocational schools.

Establishing regulated vocational diplomas and certification schemes in BIM.

Supporting international certification programmes, such as the buildingSMART Professional Certification Programme.

Encouraging academic–industry collaboration to align training content with evolving industry needs.

Incentives and Inclusion Mechanisms

To translate training into participation, respondents recommended aligning BIM education initiatives with project-based opportunities. Practical inclusion mechanisms should ensure that SMEs not only gain knowledge but also apply it directly in real projects. Suggested actions include:

- Requiring subcontracting quotas or SME participation thresholds (e.g., 20%) in BIM-based public projects.
- Linking training completion to pilot project participation, ensuring hands-on experience.
- Encouraging openBIM standards and affordable tools to lower entry barriers for small firms.
- Simplifying administrative procedures and scaling BIM requirements according to company size.
- Promoting cross-border collaboration and knowledge exchange to leverage best practices across Member States.

Summary of Key Recommendations

Strategic Area	Key Actions
Public–Private Partnerships	Create national BIM offices, PPPs, and regional training hubs; develop coordinated BIM roadmaps.

Accessible Training	Offer subsidised short courses, MOOCs, webinars, and pilot projects; promote peer-to-peer learning.
Financial Support	Provide grants, subsidies, tax incentives, and co-funded training centres.
Education & Certification	Embed BIM in curricula, establish vocational qualifications, and support international certification.
Incentives & Inclusion	Link training with project participation; require SME quotas in BIM tenders; promote openBIM tools.

Ensuring widespread access to BIM training for SMEs requires a coordinated, well-funded, and inclusive strategy across the European Union. Public authorities, private industry, and educational institutions must collaborate to design practical, affordable, and role-specific learning opportunities.

Embedding BIM in national education systems, supporting SMEs through financial aid and pilot projects, and promoting open, standardised approaches will accelerate digital transformation across the construction ecosystem. By equipping SMEs with the necessary skills and confidence, Europe can foster a more competitive, innovative, and sustainable built environment.

11. Ensuring a Smooth and Gradual BIM Implementation in Public Procurement

Survey question: 17. In your view, what are the most effective ways to ensure a smooth and gradual BIM implementation in public procurement?

A structured and progressive approach to implementing Building Information Modelling (BIM) in public procurement is crucial to avoiding market disruption and ensuring inclusivity across all actors, especially small and medium-sized enterprises (SMEs).

Survey respondents expressed a clear consensus that the transition to BIM should be phased, proportionate, and coordinated at national level, supported by clear thresholds, timelines, and technical guidance. Four core mechanisms emerged as the most effective to guarantee a smooth and gradual rollout:

1. Setting thresholds based on contract value,
2. Defining a national BIM calendar,
3. Establishing BIM maturity levels, and
4. Following the project life cycle.

Additional suggestions included establishing EU-wide standards and guidelines, securing financial resources, conducting pilot projects, and promoting capacity-building measures across administrations and suppliers.

Setting Thresholds Based on Contract Value

The most frequently mentioned strategy was to introduce contract value–based thresholds determining when BIM requirements should apply. Respondents stressed that such thresholds should reflect both project complexity and market readiness:

- Progressive introduction of BIM for larger, more complex projects first, before extending requirements to smaller public contracts.
- Scaling BIM obligations according to project scope, value, and risk to prevent excessive administrative burden.
- Maintaining flexibility for public buyers to adapt thresholds depending on the maturity of the local construction ecosystem.
- Linking thresholds not only to monetary value but also to technical characteristics — such as asset type, functional requirements, or anticipated life cycle management needs.

One respondent summarised:

“BIM implementation should be proportional to contract size and project complexity. Not every project requires the same BIM depth or deliverables.”

This approach allows public authorities to build internal capacity while giving the market time to adjust.

Defining a National BIM Calendar

The second key mechanism identified was the development of a national BIM calendar or roadmap, outlining the timeline, milestones, and objectives for BIM adoption across the public sector.

Respondents underlined that a clearly communicated national plan would provide predictability and allow the industry to prepare. Key components include:

- A phased implementation schedule defining when different types of projects or agencies must apply BIM requirements.
- Public dissemination of the calendar through BIM portals and procurement authorities to promote transparency.
- Periodic review and adjustment based on pilot results, feedback from SMEs, and technological developments.
- Integration of training and funding milestones aligned with the BIM deployment timeline.

A well-defined national BIM calendar ensures a coordinated transition, avoiding the fragmentation observed when BIM adoption is left to individual contracting authorities.

Establishing BIM Levels or Maturity Stages

Respondents widely supported the definition of progressive BIM maturity levels, similar to those used in several EU Member States (e.g., the UK and Denmark). This approach allows gradual compliance, aligning requirements with organisational capacity.

Key elements include:

- Defining BIM Levels 0–3 (or equivalent national tiers), each with specific deliverables, information exchange formats, and collaboration standards.
- Ensuring consistency with European and international standards, including ISO 19650 and openBIM principles.
- Providing guidance and templates for each level to reduce uncertainty in public procurement.
- Allowing incremental progression — from simple digital models and data management to fully integrated life-cycle information systems.

Some respondents noted that BIM levels should be adapted to asset type (e.g. infrastructure vs. building) and linked to national digitalisation strategies.

Following the Project Life Cycle

A substantial number of respondents emphasised that BIM implementation must align with the entire project life cycle, from planning and design through construction and maintenance.

This holistic approach ensures that the benefits of BIM—such as efficiency, cost savings, and sustainability—are realised beyond the design phase.

Key recommendations include:

- Applying BIM processes consistently across all phases, including facility management and decommissioning.
- Ensuring that information requirements evolve logically from one phase to the next (in line with ISO 19650-1 principles).
- Using pilot projects to validate methodologies at each life-cycle stage.
- Providing feedback loops and performance monitoring to continuously improve national BIM practices.

As one participant explained, “Real success in BIM implementation comes from connecting every project phase. BIM should support the full life cycle, not just design documentation.”

Additional Factors and Supporting Measures

While the four main strategies dominated responses, several complementary measures were also proposed under the “Other” category:

- Setting EU standards and guidelines to harmonise national approaches and promote interoperability across borders.
- Ensuring sufficient financial resources for training, software, and technical support to avoid uneven adoption.
- Mandatory designation of BIM Managers within contracting authorities to ensure consistency in project delivery.
- Implementation of pilot projects across administrative levels to build institutional learning.

- Evidence-based communication strategies demonstrating BIM’s benefits compared to traditional workflows.
- Incremental legal frameworks (“BIM Laws”) that provide clarity on responsibilities, data ownership, and information exchange.

Respondents also highlighted that client competence is essential: BIM adoption will only be successful once public clients fully understand its processes and advantages.

Summary of Key Findings

Mechanism	Description	Expected Impact
Thresholds Based on Contract Value	Introduce BIM progressively according to project size and complexity	Ensures proportional obligations and protects SMEs from excessive burden
National BIM Calendar	Define and communicate a phased implementation timeline	Provides predictability and coordination at national level
Establishing BIM Levels	Set clear, progressive maturity levels and deliverable requirements	Enables gradual compliance and harmonisation
Following the Project Life Cycle	Align BIM processes with all project phases	Maximises long-term efficiency and sustainability
Additional Measures	EU guidelines, funding support, BIM managers, pilot projects	Strengthens governance, capacity, and consistency

Respondents across the EU demonstrated broad alignment on the need for a structured, gradual, and well-resourced approach to BIM implementation in public procurement. Setting contract thresholds, establishing a national BIM calendar, and defining progressive maturity levels were the most frequently endorsed mechanisms.

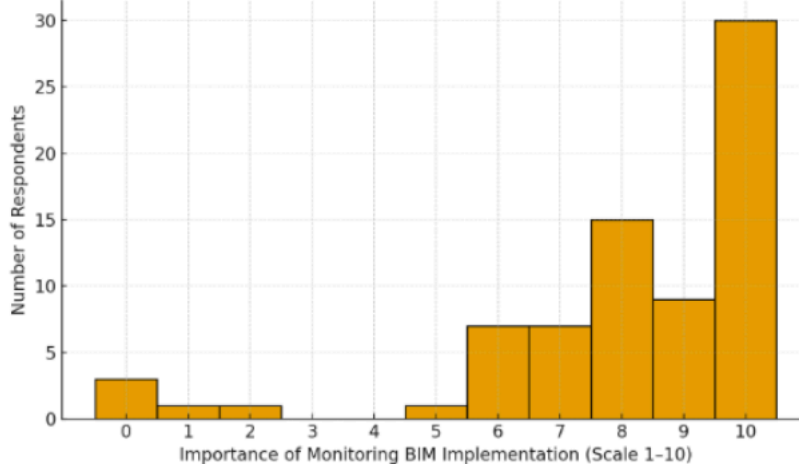
A successful transition depends on predictable timelines, adequate funding, and consistent capacity building across both the public and private sectors. Harmonised European guidance and national coordination will be key to ensuring that BIM implementation strengthens, rather than fragments, the internal market for digital construction services.

12. Monitoring and Evaluation of BIM Implementation in Public Procurement

Survey question: 18. How important do you think it is to monitor BIM implementation in national public procurement? (Scale 1–10) and question 19. What indicators do you think are most useful to monitor BIM implementation in public procurement?

Perceived Importance of Monitoring BIM Implementation

Perceived Importance of Monitoring BIM Implementation in National Public Procurement



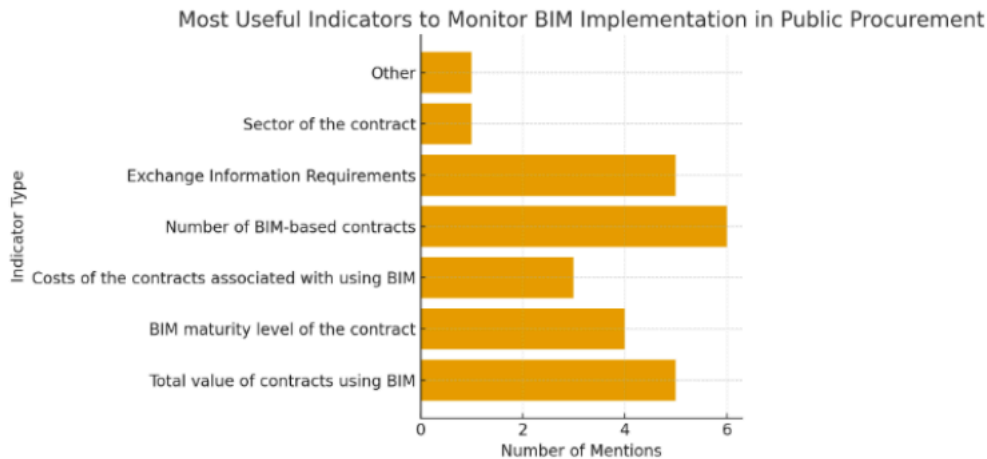
Survey responses reveal a strong consensus among stakeholders on the critical importance of monitoring BIM implementation in national public procurement systems. As illustrated in Figure X, over two-thirds of respondents rated the importance between 8 and 10 on a 10-point scale, with an average score close to 8.7. This clearly indicates that monitoring is viewed not as an administrative task but as a strategic necessity for ensuring effective, transparent, and value-driven digital transformation in the construction sector.

Only a marginal number of respondents rated the importance below 6, suggesting that the construction and procurement community broadly recognises the role of continuous monitoring in aligning national BIM adoption with policy objectives, such as cost efficiency, sustainability, and data-driven asset management.

Respondents also stressed that effective monitoring must go beyond counting the number of projects labelled as “BIM”. Instead, it should measure the depth, consistency, and outcomes of BIM integration throughout the project lifecycle—from planning to facility management.

Key Indicators for Monitoring BIM Implementation

The follow-up question asked participants to identify which indicators are most useful for tracking BIM adoption and effectiveness in public procurement. The responses point to a multi-dimensional approach, combining quantitative and qualitative metrics.



Most frequently cited indicators included:

- Number of BIM-based contracts – the most common indicator, seen as a fundamental baseline to assess market penetration.
- BIM maturity level of the contract – widely endorsed to measure qualitative progress and ensure that BIM use extends beyond nominal compliance.
- Total value of contracts using BIM – considered essential for understanding the economic scale of BIM integration and prioritising sectors with the greatest financial impact.
- Costs of contracts associated with using BIM – viewed as key to measuring efficiency gains, cost predictability, and potential return on investment.
- Exchange Information Requirements (EIR) – repeatedly highlighted as a practical measure of interoperability, data quality, and compliance with openBIM standards.
- Sector of the contract – used to identify variations in BIM adoption across infrastructure, housing, and public building segments.

Several respondents also suggested additional or emerging indicators, such as:

- The extent of data reusability and interoperability across project phases;
- The degree of integration of BIM data into Facility Management (FM) or IoT systems post-construction;
- Reduction in waste and cost overruns; and
- The measurable improvement in productivity, safety, and sustainability outcomes.

Analytical Insights

When the findings from Questions 18 and 19 are considered together, a coherent message emerges: Stakeholders not only consider monitoring BIM implementation to be of paramount importance, but also expect it to be robust, data-driven, and outcome-oriented.

There is a clear preference for evidence-based indicators that can demonstrate tangible results—such as efficiency, transparency, and sustainability—rather than merely tracking adoption

rates. Respondents highlighted that without consistent, standardised national frameworks (e.g., national BIM calendars, thresholds, and maturity models), indicators risk remaining fragmented and incomparable across Member States.

Moreover, qualitative feedback emphasised that monitoring should measure impact, not formality. As one respondent noted, the focus should shift from “how many contracts claim to be BIM” to “how much useful, interoperable, and reusable data these projects actually produce.”

This perspective underlines the need for an EU-level coordination mechanism or observatory, potentially building on existing national initiatives (e.g., Spain’s BIM Observatory), to harmonise indicators and ensure transparency, comparability, and accountability across Europe.

Key Takeaways

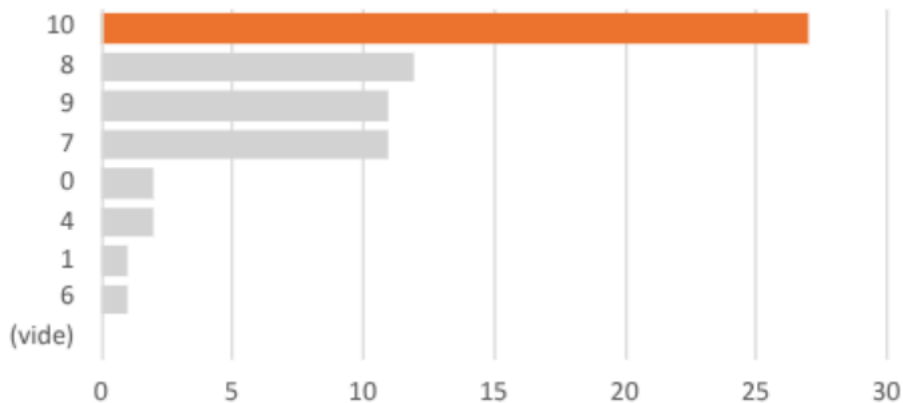
Dimension	Core Indicators Identified	Purpose
Adoption	Number and total value of BIM-based contracts	Quantifies BIM penetration
Maturity	BIM maturity levels, compliance with EIR	Measures qualitative depth of implementation
Efficiency	Costs associated with BIM contracts, cost predictability, and savings	Evaluates return on investment
Data Quality	Data interoperability, reusability, integration into FM systems	Ensures long-term value of BIM data
Sectoral Coverage	Distribution across sectors (infrastructure, housing, etc.)	Identifies adoption disparities

In conclusion, respondents across Europe demonstrate a strong consensus on the need for structured monitoring frameworks for BIM in public procurement. They advocate for standardised indicators that go beyond contract counting and reflect maturity, efficiency, and data quality, ensuring that BIM contributes effectively to the EU’s digital and green transition goals.

13. Importance of Self-Assessments for Contracting Authorities in BIM Use

Survey question: 20. In your opinion, how important is it for contracting authorities to carry out self-assessments regarding their use of BIM? (Scale 1–10)

10 is most often mentioned



Survey respondents overwhelmingly recognize the critical role of self-assessments for contracting authorities in their use of Building Information Modelling (BIM). On a scale of 1–10, responses ranged from 0 to 10, with a clear clustering at the higher end: the majority of participants rated the importance of self-assessments between 7 and 10. The average rating is approximately 8.4, reflecting strong consensus that regular self-evaluation is essential.

Notably, a few low ratings (0 and 1) indicate that some respondents perceive current BIM knowledge and implementation within public organizations as insufficient to warrant formal self-assessments. These outliers suggest potential barriers, including lack of maturity in BIM adoption or limited awareness of its benefits.

Implications:

- High ratings indicate recognition that self-assessments can help contracting authorities understand their current BIM capabilities, identify gaps, and enhance project management and procurement processes.
- Low ratings highlight the need for capacity-building and guidance to ensure self-assessments are meaningful and actionable.

14. BIM's Contribution to Innovation and Sustainability in Public Procurement

Survey question: 21. In your view, how can BIM in public procurement contribute to innovation and sustainability goals?

Survey responses indicate a strong consensus that Building Information Modelling (BIM) is a critical enabler for innovation and sustainability in public procurement. Respondents highlight that BIM's potential extends well beyond technical design—it provides a strategic framework for digital collaboration, data-driven decision-making, and lifecycle management. Proper BIM

implementation is widely seen as essential to achieving environmental and innovation goals in public projects.

Driving Innovation

BIM fosters innovation in public procurement through:

- **Data-Driven Design and Decision-Making:** Structured project data enables informed choices, reduces errors, and supports lifecycle planning.
- **Enhanced Collaboration:** BIM creates a common platform for contracting authorities, designers, contractors, and supervisors, promoting digital workflows and transparency.
- **Testing and Benchmarking:** Standardized and well-structured BIM data allows public authorities to compare alternatives, simulate strategies, and evaluate innovative solutions in design, construction, and operation phases.
- **Efficiency Gains:** By improving coordination and reducing rework on site, BIM accelerates project delivery and encourages adoption of novel approaches in materials, construction techniques, and project management.

Enabling Sustainability

Respondents emphasize BIM's role in supporting sustainability objectives:

- **Resource Optimization:** BIM enables efficient use of materials, energy, and time, reducing construction waste and carbon footprints.
- **Lifecycle and Environmental Analysis:** Integration of BIM with lifecycle assessment tools allows monitoring of energy performance, durability, and environmental impacts throughout the building lifecycle.
- **Alignment with Green Standards:** BIM supports compliance with energy, sustainability, and certification standards (e.g., BREEAM, EU materials library), ensuring that projects meet long-term environmental goals.
- **Transparency and Reporting:** Centralized, structured BIM data facilitates tracking of sustainability indicators, carbon footprint reporting, and evaluation of green criteria.

Strategic Considerations and Challenges

- **Contractual and Organizational Alignment:** Effective BIM implementation requires alignment of procurement contracts and deliverables. Without this, BIM risks being perceived as administrative “noise” by some supply chain actors.
- **Capacity-Building Needs:** A recurring challenge is the limited knowledge and maturity of BIM practices within public authorities, which can hinder its potential to drive innovation and sustainability.
- **Digitalization and Open Standards:** BIM is seen as a stepping-stone toward full digitalization of construction management, supporting future integration with digital twins, AI, and open-source tools to maximize innovation and environmental outcomes.

BIM is widely recognized as a transformational tool in public procurement. Its implementation supports the European Commission's goals for innovation and sustainability by:

- Enabling data-driven project management and design innovation
- Optimizing resource use and reducing environmental impact
- Facilitating transparency, benchmarking, and lifecycle monitoring
- Creating conditions for smarter, greener, and more resilient infrastructure

The data suggest that systematic deployment, contractual alignment, standardized guidelines, and capacity-building are essential to fully realize BIM's potential across the EU.

Part 2: Improving the BIM Community in the EU

1. Support Needs from the European Commission to Advance BIM

Survey question: 22. In your opinion, what type of support from the European Commission would be most helpful in advancing BIM in your country?

Survey responses indicate a strong consensus that multi-faceted support from the European Commission is critical to advancing BIM adoption across Member States. Respondents highlighted five main types of support: technical assistance, training and knowledge-sharing, funding programmes, policy guidance, and EU-wide monitoring, with several also suggesting additional measures such as promoting openBIM standards and supporting collaborative platforms.

Most Requested Types of Support

Based on the frequency of selections:

Type of Support	Key Insights
Funding Programmes	Considered essential for both implementing BIM at scale and facilitating procurement of software, hardware, and pilot projects. Many respondents linked funding directly to adoption success.
Training & Knowledge-Sharing Platforms	Emphasized as vital to develop skills, share best practices, and provide concrete examples of BIM benefits in real projects. Workshops, expert groups, and case studies were frequently cited.
Technical Assistance	Needed to provide guidance on BIM implementation, standards, and integration into procurement processes, particularly for contracting authorities with limited experience.
Policy Guidance	Highlighted as necessary to clarify legal, contractual, and standardization aspects, including alignment with EU sustainability and innovation goals.
Monitoring EU-Wide	Seen as valuable for benchmarking, tracking progress, and ensuring consistent adoption across Member States.

Additional Support Suggestions:

- Promoting openBIM principles in coordination with buildingSMART and European openBIM Forum.
- Establishing EU-level collaborative platforms to enable knowledge exchange and coordinated efforts across Member States.
- Supporting European BIM software offerings to compete with non-EU solutions, ensuring compliance with European construction standards and data sovereignty.
- Demonstrating financial and organizational benefits of BIM through case studies and practical examples.
- Providing incentives or sanctions to encourage timely and correct BIM implementation.

Strategic Implications

- A combination of financial, technical, and knowledge-based support is crucial to overcome barriers to BIM adoption, particularly in Member States with lower maturity levels.
- EU-wide guidance and monitoring can facilitate harmonization, benchmarking, and shared learning across countries.
- Supporting open standards and European software solutions ensures interoperability, competitiveness, and long-term sustainability in the digital construction ecosystem.

The survey confirms that **comprehensive support from the European Commission**—encompassing funding, training, technical guidance, policy frameworks, and EU-level coordination—is critical for accelerating BIM adoption. By providing a structured, multi-pronged approach, the EU can ensure that BIM contributes effectively to innovation, sustainability, and the digital transformation of public procurement in the construction sector.

2. Consideration of DG REFORM Technical Support for BIM Implementation

Survey question: 23. Has your country, in your opinion, ever considered requesting technical support from DG REFORM (European Commission) to implement BIM in public procurement?

Responses indicate that, across Member States, formal requests for technical support from DG REFORM (or the Technical Support Instrument) for BIM implementation in public procurement have been limited and inconsistent. While a few countries have leveraged EU support or considered doing so, most respondents are either unaware of such initiatives or report that no formal request has been made.

Examples of Engagement with DG REFORM

- Czech Republic: A project supported by DG REFORM took place several years ago.
- Spain: BIM implementation is part of a national digital transformation plan for the construction sector, aligned with EU frameworks.
- Ireland: Some initiatives exist, though the connection to EU technical support is unclear; training is reportedly receiving EU funding.
- France: CCAG contracts have been adapted to integrate BIM, enhancing contractual legitimacy in public procurement, though direct DG REFORM support was not specified.

- Other local initiatives: Certain regional authorities (e.g., using FEDER funding) have explored BIM with EU support as a lever for environmental and digital goals.

General Observations

- Limited awareness: Many respondents explicitly stated that they do not know whether technical support has been requested.
- No formal requests: Several countries (e.g., Romania, Sweden, Austria) have not taken concrete steps to request DG REFORM support.
- Perceived barriers: In some cases, respondents noted that countries with advanced BIM practices (e.g., Denmark) may find detailed EU technical guidance counterproductive due to well-established national standards.
- Potential value: Respondents highlighted that DG REFORM support could be useful if clearly defined, aligned with national priorities, and accompanied by guidance on BIM implementation strategies.

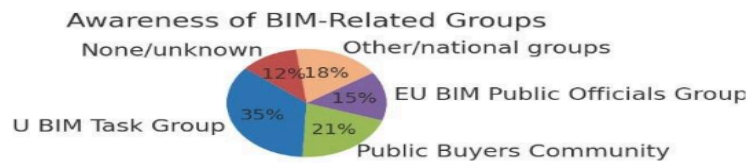
Implications for the European Commission

- There is an opportunity to increase awareness of DG REFORM and the Technical Support Instrument as a tool for BIM adoption in public procurement.
- Clear communication about the scope of technical assistance and concrete support options could encourage Member States to make targeted requests.
- Support could focus on:
 - Capacity-building and guidance for contracting authorities
 - Alignment with EU sustainability and innovation goals
 - Integration with national digitalization strategies and existing BIM frameworks

While formal requests for technical support remain limited, survey responses suggest that DG REFORM could play a more active role in facilitating BIM adoption, particularly if support is practical, clearly defined, and aligned with national priorities. Targeted awareness-raising and guidance could strengthen uptake across the EU, accelerating innovation, sustainability, and digital transformation in public procurement.

3. Awareness of BIM-Related Groups and Communities

Survey question: 24. Which of the following groups or communities related to BIM are best known in your country, in your opinion?



The EU BIM Task Group remains the key reference for BIM in Europe, but fragmented visibility and limited national coordination hinder wider engagement. Strengthening links between EU-level and national BIM communities would enhance knowledge sharing and accelerate implementation.

4. Promoting Collaboration between Member States on BIM Implementation

Survey question: 25. In your opinion, what are the most effective ways to promote collaboration between EU Member States on BIM implementation?

Survey responses reveal strong support for deeper, structured collaboration between EU Member States to accelerate BIM adoption. Contributors emphasise that cooperation should combine technical harmonisation (open standards, shared tools), capacity-building (training, knowledge hubs), and targeted funding and pilot projects — while respecting national specificities.

Key themes from responses

- Single, recognised EU platforms: Strong support for the EU BIM Task Group as the official cooperation platform and for strengthening EU-level knowledge hubs and forums (conferences, workshops, regular expert meetings).
- Open standards & interoperability: Frequent calls to promote openBIM (IFC, ISO 19650) and work closely with buildingSMART and national chapters to ensure technical interoperability and data sovereignty.
- Cross-border pilot projects & joint funding: Respondents want EU-funded, cross-border pilots and collaborative calls (Horizon/TSI-like instruments) to demonstrate ROI, real benefits, and transferable workflows.
- Training, knowledge exchange and case studies: Joint training programmes, expert exchanges, and widely-accessible case studies showing financial, organisational and environmental benefits (including KPI/ROI data) were seen as essential.
- Contractual & procurement alignment: Aligning public procurement templates, EIRs and contract clauses across Member States to reduce fragmentation and ensure that BIM deliverables are enforceable and actionable.

- National champions & structured networks: Nomination of national “BIM champions”, creation of federated networks linking EU, national, regional and sectoral actors, and active engagement with professional institutes and SME representatives.
- Practical tools & mapping: Need for translation/mapping tools, lighter data/interface requirements, and guidance on scalable use cases to avoid excessive data volumes and over-specification that exclude SMEs.
- Monitoring & scheduled deliverables: Calls for structured programmes with scheduled achievements and monitoring to ensure progress and comparability across Member States.

Implications for EU action

1. Use and strengthen existing EU platforms (EU BIM Task Group, Public Buyers Community) as the central coordination mechanism — make roles, outputs and engagement paths clearer to national authorities.
2. Prioritise open standards by coordinating with buildingSMART, ISO/CEN bodies and national chapters to drive interoperable toolchains and a common data model across Member States.
3. Finance demonstrators and joint pilots that are cross-border, sectorally diverse (housing, transport, healthcare) and focused on measurable outcomes (cost savings, carbon reductions, lifecycle benefits).
4. Create an EU BIM knowledge hub offering training curricula, model EIRs, contract clauses, case studies with KPI/ROI data, and translation/mapping tools for national contexts.
5. Support capacity-building via exchange programmes for public procurers and nomination of national BIM champions to act as focal points for bilateral/ multilateral collaboration.
6. Encourage contractual alignment: produce model procurement specifications and EIR templates that are enforceable, SME-friendly, and adaptable to local legal frameworks.
7. Reduce technical barriers for SMEs: promote lightweight BIM use-cases, limit unnecessary data burdens, and support affordable, sovereign EU software/cloud solutions where appropriate.
8. Monitor and report progress with clear milestones and indicators to allow benchmarking and mutual learning across Member States.

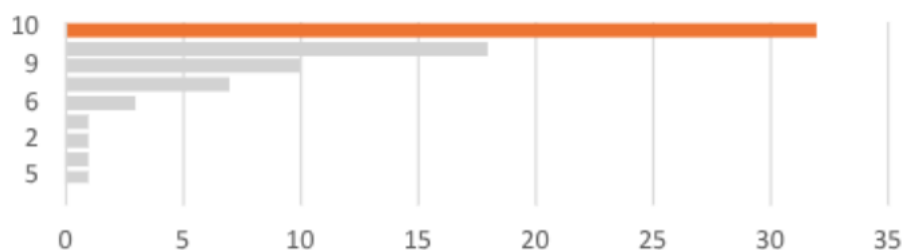
Respondents agree that collaboration must be practical, standards-based, funded and visibly useful. The European Commission can catalyse this by consolidating platforms, funding demonstrators, promoting open standards, and delivering readily usable tools and guidance that respect national contexts while enabling cross-border comparability and learning.

5. Importance of Communication, Knowledge Exchange, and Awareness Activities for Advancing BIM Implementation

Survey question: 26. In your opinion, how important is it to promote communication and knowledge exchange for effective BIM implementation? (Scale 1–10) and survey question: 27. In your view, how effective are the following options for encouraging the use of BIM among contracting authorities and SMEs? (Likert scale)

Survey responses show a clear consensus: communication, knowledge sharing, and awareness activities play a central role in fostering BIM adoption among contracting authorities and SMEs.

Importance of Communication and Knowledge Exchange



26. In your opinion, how important is it to promote communication and knowledge exchange for effective BIM implementation? (Scale 1–10)

Average rating: 8.8 / 10

- Respondents overwhelmingly agree that promoting communication and knowledge exchange is essential for effective BIM implementation.
- A strong majority (over 80%) rated this aspect between 8 and 10, confirming that collaboration, best-practice sharing, and continuous learning are seen as key enablers of BIM maturity across Europe.
- Participants emphasized that EU-level platforms, peer-learning, and joint training programmes are needed to close knowledge gaps and ensure consistent BIM deployment across Member States.

Effectiveness of Awareness and Engagement Tools

Activity	Average Effectiveness (1–10)	Key Takeaway
BIM Events	8.0	Highly valued for networking, visibility, and peer exchange.
BIM Webinars	7.8	Effective for scalable and accessible learning across borders.
Social Media	6.6	Useful for raising awareness, especially among younger professionals, but less impactful for technical capacity-building.
Newsletters	5.9	Moderate effect — good for information updates, less for engagement.

- Respondents view BIM events and webinars as the most effective tools to engage both public buyers and SMEs, offering practical demonstrations and peer exchange opportunities.
- Social media and newsletters play a supporting role, useful for visibility but insufficient on their own to drive behavioural change.
- Several comments stressed that communication activities must be coupled with concrete actions — such as funding, clear guidelines, and measurable objectives — to achieve real impact.

Communication and awareness measures are widely recognized as crucial drivers of BIM adoption. However, their effectiveness increases when embedded in a broader strategy that includes:

- Capacity building and technical assistance,
- Harmonized EU standards and guidelines, and
- Incentives for implementation and monitoring of results.

This suggests that a coordinated EU approach combining knowledge exchange with structured support mechanisms will be most effective in advancing BIM across Member States.

6. Importance of Training for Successful BIM Implementation

Survey question: 28. In your opinion, how important is proper training for successful BIM implementation? (Scale 1–10)

10 represents the majority of the responses : In your opinion, how important is proper training for successful BIM implementation? (Scale 1–10) ».



The survey results show an overwhelming consensus on the critical role of training in ensuring the successful implementation of BIM across EU Member States.

- Average rating: 9.3 / 10
- Nearly all respondents (over 90%) rated training between 9 and 10, confirming that capacity building is viewed as a cornerstone of effective BIM adoption.
- Comments emphasize that without proper training, digital tools and standards cannot be effectively applied, particularly among public buyers and SMEs who often lack in-house expertise.

- Respondents highlight the need for structured, continuous, and practical training programmes, combining theoretical understanding with hands-on application aligned with EU standards (e.g. ISO 19650).

Key takeaway:

Proper training is perceived as the single most decisive factor for BIM success — essential to bridge skills gaps, ensure consistent implementation, and enable public authorities to act as informed, capable clients in digital construction.

7. Workshop Topics for Public Buyers and SMEs on BIM

Survey question: 29. Which workshop topics do you think would be most useful for public buyers and SMEs regarding BIM? (Select all that apply)

Respondents strongly support comprehensive workshops covering both practical implementation and strategic aspects of BIM. There is a clear preference for sessions that combine real-world examples with hands-on guidance for public authorities and SMEs.

Most frequently selected topics:

1. Case studies from contracting authorities – learning from real implementations.
2. Organisational implementation of BIM – adapting processes and responsibilities.
3. BIM processes in public procurement – integrating BIM into tendering and contract management.
4. Training and capacity-building – practical skills development for staff.
5. Roles and responsibilities in BIM – clarifying tasks and accountabilities.
6. BIM tools and software for authorities – technical know-how for implementation.
7. BIM training for clients (contracting authorities and sponsoring agencies) – targeted guidance for decision-makers.

Additional suggestions from respondents:

- Workshops on data quality, structuring, and traceability – defining what data is expected, how it should be delivered, and integrated into public systems.
- Focus on practical, replicable solutions rather than purely theoretical content.
- Some indicated a national programme approach may be sufficient, without mandatory BIM.

Effective BIM workshops should blend practical case studies, organisational guidance, and technical training, ensuring public buyers and SMEs gain actionable skills while understanding strategic implications. Strong emphasis on data management and real-world applicability is crucial for meaningful impact.

8. Monitoring BIM Use in European Public Procurement – Analysis

Survey question: 30. In your opinion, what are the most effective options to monitor BIM use in European public procurement?

Preferred Monitoring Approaches:

- National platforms: Most respondents emphasize gathering data from national BIM or procurement platforms as a key source of information.
- Dedicated EU-level group: Creating a dedicated group to coordinate, validate, and oversee BIM adoption is widely supported.
- TED platform & European Commission resources: Leveraging existing EU procurement data (TED) and Commission resources is considered useful for cross-checking and harmonization.
- Collaboration with BIM networks: Cooperation with EU BIM Task Group, buildingSMART Chapters, and professional networks can provide qualitative insights.

Key Observations:

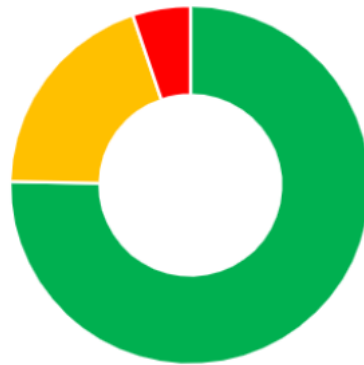
- Effective monitoring should go beyond counting contracts labeled “BIM” and focus on data quality, structure, usability, and integration into public systems.
- Monitoring mechanisms must combine quantitative tracking (TED, national platforms) with qualitative evaluation (dedicated groups, expert networks) to avoid superficial reporting.
- Some respondents highlighted potential measures such as sanctions for non-compliance, though this remains less common.

Takeaway:

A multi-layered approach combining EU coordination, national data collection, and quality assessment is essential to ensure meaningful BIM adoption and interoperability across Member States

9. Should the EU Public Procurement Directives be revised to explicitly include BIM-related requirements?

Survey question: 31. Do you think the EU Public Procurement Directives should be revised to explicitly include BIM-related requirements?



- Yes (73%),
- No (9%),
- I don't know (18%)

The vast majority of respondents (approximately three-quarters) believe that the EU Public Procurement Directives should be revised to explicitly integrate BIM-related requirements. This strong support reflects a growing consensus that harmonised, EU-level policy measures could accelerate BIM adoption, improve consistency in procurement processes, and ensure better value for public investments. A smaller share of respondents expressed uncertainty, highlighting the need for clearer guidance and evidence of benefits before formal legislative changes are made.

10. Elements to Include in a Revised EU Procurement Framework to Support BIM Adoption

Survey question: 32. In your opinion, which elements should be included in the revised EU directives to support BIM adoption?

Overview of Findings

Responses to Question 32 (“Which elements should be included in the revised EU directives to support BIM adoption?”) reveal broad consensus on the need for a structured, multi-dimensional approach. Participants overwhelmingly support the inclusion of mandatory BIM use for certain contract types or thresholds, clear BIM maturity definitions, requirements for open standards, and capacity-building provisions for public authorities.

Key Quantitative Insights

<i>Proposed Element</i>	<i>Frequency Mentioned (%)</i>
<i>Mandatory BIM for certain contract types or thresholds</i>	
<i>BIM maturity level definitions and standards</i>	
<i>Clearly defined BIM roles in procurement</i>	
<i>Requirements for open standards and interoperability</i>	
<i>Capacity-building duties for public authorities</i>	
<i>Use of BIM in award/selection criteria</i>	
<i>Other (qualitative suggestions)</i>	

(Percentages represent the proportion of responses including each item; multiple selections were allowed.)

Qualitative Insights

In addition to quantitative responses, several participants provided in-depth qualitative remarks, highlighting the following themes:

- Data-driven focus: Many respondents cautioned that BIM should not be treated as an end in itself, but as a tool to ensure high-quality, structured, and reusable data in public construction.
- openBIM and interoperability: Respondents emphasised that open standards and information management frameworks are fundamental to enabling cross-border collaboration and preventing vendor lock-in.
- Capacity building: Several comments pointed to the limited competence within public administrations and called for training, guidance, and financial support to ensure effective BIM implementation.
- Risk of overregulation: A minority expressed concern that mandating BIM too rigidly, without adequate support or clarity, could introduce bureaucratic inefficiencies or create barriers for SMEs.
- Complementary measures: Some respondents proposed linking BIM requirements to funding mechanisms, data security obligations, or post-construction data integration into asset management and facility systems.

Interpretation and Policy Implications

The results indicate a strong demand for harmonised BIM integration within EU public procurement law, but with careful balance between obligation and flexibility. Respondents favour:

- Establishing common BIM maturity benchmarks and definitions across Member States;
- Introducing phased mandatory BIM use, starting with large or high-impact contracts;
- Embedding openBIM principles and data interoperability standards in legal text;
- Requiring public authorities to build internal BIM capabilities through targeted training and guidance;

- Allowing sufficient adaptation periods and capacity-building support to prevent administrative overload.




Stakeholders envision a revised EU procurement framework that moves beyond voluntary encouragement to a coordinated, enforceable structure supporting digital transformation through BIM. The emphasis is not solely on mandating technology use, but on ensuring data quality, interoperability, and institutional readiness—conditions essential for sustainable, transparent, and value-driven public investment.





11. Effective Actions to Support BIM Implementation Across EU Member States

Survey question: 33. In your opinion, what are the most effective actions to support BIM implementation in your country?

Responses from stakeholders across Europe underline a strong consensus that effective BIM implementation requires strategic leadership, institutional coordination, and sustained investment. While national contexts vary, common priorities emerged around the need for national BIM strategies, mandatory requirements in public procurement, and capacity-building initiatives to ensure consistent uptake across all levels of the construction sector.

Key Themes Identified

Theme	Summary of Key Points
 Government Leadership and National Strategies	The majority of respondents emphasised the importance of defining government-level leadership and adopting national BIM strategies with clear objectives, implementation roadmaps, and monitoring frameworks. Respondents highlighted the success of national mandates (e.g. Spain, Ireland) as catalysts for cultural and procedural change.
 Mandates and Regulatory Clarity	Many participants advocated for mandatory BIM use in public projects, particularly above defined contract thresholds. Clear BIM requirements within tender documentation and contract clauses—linked to deliverables, compliance checks, and penalties for non-delivery—were seen as essential to ensure accountability and consistent application.
 Standards, Interoperability, and openBIM Principles	Respondents stressed the need to align national approaches with European and international standards (notably ISO 19650) and to promote openBIM principles for interoperability, transparency, and long-term data usability. Several cited the importance of information management frameworks, common data environments, and standardized information exchange formats (IFC, IDS, CoClass).

 Training, Education, and Capacity Building	<p>Across nearly all responses, the education of public authorities, SMEs, and professionals emerged as a critical success factor. Suggested actions include government-funded training programs, integration of BIM into university curricula, and continuous upskilling through professional associations.</p>
 Public-Private Collaboration and Pilot Projects	<p>Respondents called for joint initiatives between government and industry, such as BIM observatories, public-private partnerships (PPPs), and pilot projects to demonstrate tangible benefits. These pilots serve as reference cases for scaling BIM use and for disseminating best practices across sectors.</p>
 Funding, Incentives, and Support Mechanisms	<p>Several respondents proposed dedicated funding schemes to subsidise SMEs' transition to BIM, alongside financial incentives for early adopters. Some countries (e.g. Ireland) were highlighted for successfully linking BIM funding mechanisms to government mandates.</p>
 European-Level Coordination	<p>A recurring point was the call for a European harmonised framework—a “common foundation” built on data deliverables shared across Member States. Respondents proposed creating a European data platform and common indicators for measuring BIM maturity and value generation, strengthening the single market for digital construction.</p>

Illustrative Examples from Respondents

- Spain: Enforcement of BIM mandates in public procurement, complemented by national training programs and a BIM observatory.
- Ireland: BIM funding tied to government mandates and public-private partnerships for developing BIM guidance (e.g. Build Digital Project).
- Luxembourg: Emphasis on SME training, national data-sharing platforms, and progressive BIM tender requirements.
- Sweden: Coordination between agencies (Boverket, Upphandlingsmyndigheten), integration with sustainability and lifecycle data, and alignment with open standards.

Policy Implications

Stakeholders consistently advocate for a top-down but adaptive approach—combining mandatory frameworks with supportive measures to enable industry-wide transformation.

To ensure long-term success, the European Commission and Member States should prioritise:

- Establishing clear national BIM roadmaps aligned with EU digital and sustainability goals.
- Embedding BIM in procurement legislation and contracts with measurable outcomes.

- Ensuring interoperability and open data standards across borders.
- Investing in skills development and digital infrastructure to support SMEs and public authorities.
- Facilitating European coordination mechanisms, such as a BIM Observatory or EU Data Platform, to exchange knowledge and monitor progress.

Across Member States, the message is clear: BIM implementation succeeds when supported by **strong governance, clear standards, sustained capacity-building, and coordinated policy instruments**. The European Union has a critical role to play in fostering **harmonisation, interoperability, and digital competence**—laying the foundation for a more efficient, transparent, and sustainable construction sector.

12. Key Enablers for BIM Implementation in Public Procurement

Survey question: 34. In your view, what are two key enablers that facilitate BIM implementation in public procurement in your country?

The responses collected from Member States reveal broad consensus on the two main enablers facilitating the effective implementation of Building Information Modelling (BIM) in public procurement:

- (1) the establishment of a clear regulatory and strategic framework, and
- (2) systematic investment in capacity building, training, and support mechanisms.

Regulatory and Strategic Frameworks

A recurring theme across the submissions is the central role of government leadership in driving BIM adoption. Respondents highlight the need for:

- National BIM strategies and mandates defining clear roles, responsibilities, and timelines.
- Legal and regulatory provisions that explicitly require or incentivize BIM use in public procurement.
- Standardized guidelines and templates, aligned with openBIM principles and ISO 19650, to ensure consistency and interoperability across contracting authorities.
- Dedicated national bodies or task forces to coordinate implementation, such as BIM offices, observatories, or government–industry partnerships (e.g., Build Digital Project in Ireland, buildingSMART initiatives in several countries).

Some respondents emphasized that mandatory BIM requirements—when clearly defined and supported by adequate tools—create the predictability and accountability needed for systemic adoption.

Capacity Building and Knowledge Development

The second key enabler identified is investment in human and institutional capacity. Respondents consistently underlined that the successful implementation of BIM in public procurement depends on trained and informed public clients, as well as an upskilled supply chain capable of meeting contractual and technical requirements.

Key measures mentioned include:

- Training programmes for public authorities, SMEs, and technical professionals, often government-funded or co-financed.
- Development of pilot projects to demonstrate benefits and build confidence in BIM practices.
- Educational integration of BIM in universities and vocational training, ensuring future workforce readiness.
- Promotion of digital literacy and collaboration culture among stakeholders.

Respondents from countries such as Spain, Ireland, and Luxembourg pointed out that training, combined with practical implementation through pilots and standard templates, yields the most tangible progress.

Supporting Factors

Several respondents also mentioned complementary enablers, such as:

- Public funding mechanisms dedicated to BIM implementation and digitalisation of public works.
- Collaboration platforms bringing together government, academia, and industry.
- Transparency and measurable data requirements to enhance accountability and long-term digital transformation in public procurement.

Effective BIM implementation in public procurement depends on a dual foundation: clear and enforceable regulatory frameworks that set direction and consistency, and sustained investment in training, guidance, and collaboration to build the necessary capacity across all levels of the construction ecosystem.

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