



**Asia-Pacific  
Economic Cooperation**

# **Start-Up Guide Building Information Modeling**

**Subcommittee on Standards and Conformance**

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# START-UP GUIDE

## Building Information Modeling (BIM)

*Where is your economy on the BIM adoption timeline?*

STATUS QUO	PILOTING	POLICY	INDUSTRY	INNOVATION
⇒ Minimal BIM adoption, no government policies or support	⇒ Exploring value and implications of implementation for the economy	⇒ Developing support, incentives, and requirements for BIM by Government or Industry Leaders	⇒ Wide adoption of BIM and ready to spread best practices and benefits	⇒ Leading development of new capabilities and extending the value of BIM

### ACTIONS SUPPORTING BIM ADVANCEMENT

#### Performance—Track impact and progress

Action	Benefit
Tie BIM success metrics to broader economic priorities such as Energy and Resource Savings, Sustainability, Productivity, Safety, Environment, and Health.	Measurable, reportable, and relevant indicators of the benefits BIM brings to the economy help motivate investment.
Engage stakeholders to choose and implement metrics	Increases buy-in, applicability, and relevance to goals.
Identify, publish, and use success targets for established BIM goals.	Shared understanding of the value proposition, evaluation criteria, and documented success confirm and inspire accomplishments.
Measure and report progress openly and frequently	Transparent, equitable, and reliable reporting to inform timely and effective management decisions.
Benchmark progress to global achievements	Realistic capability comparison with other economies; evaluate status in relation to possible collaborators and competition.

#### Planning—Establish objectives and protocols

Actions	Benefits
Review effective BIM pathways	Draw benefits of international best practices, consensus standards, and other economies' accomplishments
Connect BIM to economy-specific priorities	Enables integration with regional priorities and desired results such as energy and resource savings, sustainability, productivity, environment, and health outcomes
Set specific goals for BIM development to drive BIM pilot projects, policy making, and metrics.	Publicize rationale behind BIM projects, establish basis for metrics and targets, track and demonstrate progress.
Identify and engage core stakeholders <ul style="list-style-type: none"> <li>Assess current state of BIM awareness and adoption</li> <li>Communicate benefits of BIM</li> <li>Identify requirements for increased BIM uptake</li> </ul>	Engagement increases buy-in, helps establish accurate basis from which to measure improvement, engagement with local industry encourages participation and promotes development of relevant programs and policies.



Conduct case studies and pilots to inform policy-making	Develops knowledge and capabilities appropriate to aspirations. Demonstrates viability of strategies and tactics.
Design stimulus, incentive, support and education to encourage rapid BIM uptake and BIM expansion.	Encourages action, reduces risk to practitioners, leverages knowledge gained from research, case studies, and pilots.

## Adoption—Find the right people and processes

Actions	Benefits
Establish policies promoting breadth and depth of BIM capability development: <ul style="list-style-type: none"> <li>• Define role of government</li> <li>• Identify supporting standards</li> <li>• Identify supporting technologies</li> </ul>	Fosters BIM uptake across all project types and sizes, types of enterprises, and modes of project delivery. Clear supportive action by government can legitimize, influence, and support industry efforts for BIM adoption.
Engage Stakeholder Communities: Green Building, Architecture, Construction, Engineering, Education institutions, Finance.	Ensures key stakeholder awareness of policy measures and educational opportunities. Recognizes celebrates, and further motivates leaders and champions.
Provide BIM education opportunities	Develops capabilities and localized best practice knowledge.
Consider readiness catalyst policies such as encouraging or requiring BIM for public projects	Motivates meaningful capability development. Reveals education and technology requirements. Participating firms are in a position to become BIM champions

## Technology—Provide the right tools

Action	Benefit
Review international consensus standards, adopt and improve as appropriate to economy-specific needs.	Reflects best practices and industry expertise of international BIM community.
Develop comprehensive process guidelines and performance specifications	Supports local economy evaluation of BIM software and hardware.
Leverage mature and proven technology to support economy-specific BIM goals	Allows local customization while realizing expected value gain in short time (vs. developing from scratch).
Improve functionality and interoperability of existing standards and applications (e.g. IFC format, version interoperability); adopt industry-wide attribute standards.	Overcome existing roadblocks and open new opportunities for growth and return on BIM investments.

## TOP ACTIONS AT EACH STAGE OF BIM ADOPTION

STATUS QUO	PILOTING	POLICY	INDUSTRY	INNOVATION
⇨ Benchmark current productivity to other economies ⇨ Compare the cost of BIM enablement to the cost of maintaining status quo	⇨ Invest in case studies and pilot projects ⇨ Align pilot project targets to strategic goals ⇨ Assess each approach and benefit	⇨ Formalize realistic and enforceable policies at agency and economy-wide levels ⇨ Support repeatable and measurable gains	⇨ Harmonize leadership and grassroots efforts ⇨ Encourage with support, rewards, and mandates ⇨ Identify and adopt BIM standards and technologies	⇨ Consider both evolutionary and revolutionary transformation ⇨ Establish global strategic partnerships



This Start-Up Guide was developed in collaboration with the bimSCORE team in support of work on green building by the APEC Subcommittee on Standards and Conformance (SCSC), through the multiyear project on the Role of Standards and Conformity Assessment Measures in Enhancing the Performance and Energy Efficiency of the Commercial Building Sector.

In June 2013, the SCSC held the workshop *How Building Information Modeling Standards Can Improve Building Performance* in Medan, Indonesia. At the workshop a diverse international group of BIM experts and representatives of APEC member economies shared their research and experiences with BIM policy and project planning and implementation. Presentation materials can be accessed at [this link](#)



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