



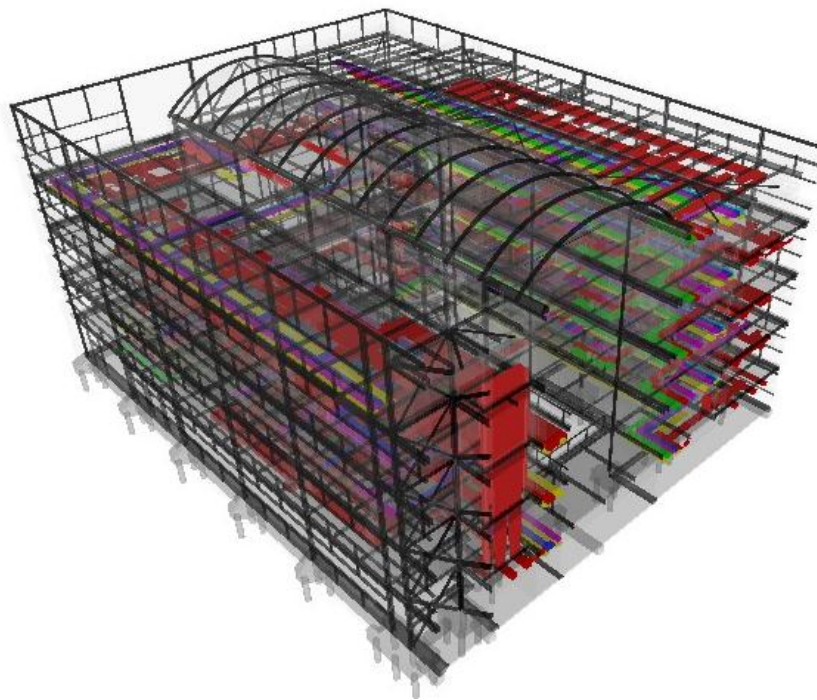
# Constructing Excellence in Wales Building Information Modelling (BIM) Task Group

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**Executive Summary**

**Task Group Working Paper**

**November 2012**



Noddir gan  
**Lywodraeth Cymru**  
Sponsored by  
**Welsh Government**



## 1. Executive Summary

### Background

Building Information Modelling (BIM) promises to change the way we work and the way in which we procure building and infrastructure projects with collaborative, integrated working processes that will transform the construction sector, redefine the relationships between professionals and drive through cost and time savings at every step of the way. BIM is catching the imagination and attention of senior decision makers nationally.

On 31<sup>st</sup> March 2011 the Government's Construction Strategy was published by the Cabinet Office and included The UK's BIM Working Party Strategy and Implementation Plan. The report announced the future requirement of Level 2 collaborative 3D BIM across all projects by 31<sup>st</sup> March 2016, with initial compliance required to deliver building data with non-commercial software COBie 2.

Government departments such as the Ministry of Justice (MoJ) and Ministry of Defence (MoD) are already using pilot projects to test and measure the effectiveness and value of BIM, so far positive results have been recorded. The MoJ has, through its new £2.4 billion frameworks, set its own deadline of 2013 for contractors to demonstrate their ability to use BIM on all projects.

The Strategy has a UK Government focus and is not necessarily applicable to circumstances in Wales; apart from UK Government spend on non-devolved matters. A clear plan for the implementation of BIM needs to be developed to ensure that the industry in Wales maintains commercial and technical competitiveness.

Constructing Excellence in Wales (CEW) BIM Task Group was convened in June 2012 to assist the Value Wales Procurement Steering Group and the Welsh Government with a BIM implementation plan for Wales to provide clear direction to the industry in Wales.

The Task Group which was made up of individuals from the construction industry in Wales who had experience and/or a particular interest in the implementation of BIM would report to the Value Wales Construction Procurement Steering Group and the CEW Board of Directors.

The Chair of the CEW BIM Task Group, Mike Edmonds, has previously chaired the CEW Procurement Task Group and is a member of the Value Wales Construction Procurement Steering Group.

As part of the Task Group three sub-groups were created to consider the appropriateness of the UK strategy to Wales and to view it from three different perspectives: client, experiential and supplier. Each sub-group met in September and using both the information provided and personal experiences offered their perspective of BIM for Wales taking the objectives (as set out in the UK Strategy) and the four questions posed into consideration.



## Recommendations

The following recommendations were generated from the responses of all task group and sub group meetings to provide a single industry response to the utilization of BIM in Wales. This response is intended to assist the Welsh Government in developing a strategy for utilising BIM in Wales.

### 1. What level of maturity should be applied to BIM and over what timescale?

Alignment with UK Government with all Welsh Government funded projects at level 2 by 2016 and all Welsh Government Department Projects to lead at level 2 by 2015.

### 2. What value of project should a BIM Strategy Wales apply to?

A value or threshold for Wales could not be established in the timescales allowed. Collaborative working arrangements and internal business development should still be encouraged until such a value is set.

Pilot projects are expected to inform the thresholds based on value and complexity by 2014/15.

### 3. Are we content with the 'Push-Pull' approach for suppliers and clients?

Consensus was reached on the 'Push-Pull' approach, at this stage, albeit recognising a greater push currently being provided by suppliers.

Greater leadership is needed with a significant pull to be developed from the clients for future progression.

### 4. Do we consider that BIM Strategy Wales should strive to improve project delivery and operational performance particularly in the areas of improvement – Cost; Value; Carbon Performance?

The following improvement areas are proposed:

- i. Added Value
- ii. Cost Predictability
- iii. Carbon Intelligence

From these recommendations and in support of the Value Wales Construction Procurement Steering Group and the Welsh Government the following BIM statement is proposed for the Wales Construction Procurement Strategy. It provides a clearer direction to industry on the future implementation and development of BIM in Wales.

**'BIM is a tool that supports integrated collaborative working on built environment projects. The data and models enable improved delivery, performance and management of assets. In support of the collaborative procurement details in this strategy - BIM will be adopted to level 2 by 2016 on all Welsh Government funded projects, with Welsh Government department projects achieving level 2 by 2015.'**

**Strong leadership from clients and suppliers, coupled with collaborative behaviours, will ensure that robust processes in line with BIM conventions are delivered to these timescales. Annual reviews will assess and measure progress against these timescales. The desired outcomes will encompass added value, cost predictability and carbon intelligence.'**



## Action Plan

In proposing its recommendations and statement the task group recognises that a number of issues remain to be addressed by the industry before a strategy for utilising BIM in Wales can be implemented. As part of the outcomes from the Task Group the following action plan was generated to assist with developing a way forward for BIM in Wales. The suggestions made are based on a general consensus from all task group feedback.

Themes	Action	Completion by
Managing the Strategy	Development of short term (2013 - 2016) and medium term (2016 - 2020) roadmaps to describe a way forward	2013
	Annual progress reviews to monitor and assess the development of BIM in Wales in line with the adopted roadmaps	Annually from 2013
Assessing Current Practice	Undertake an assessment of the maturity of the construction industry in Wales to implement BIM; focusing on sectors, organisation capacities & volume and magnitude	2013
	Examine the issues affecting BIM implementation across the different regions of Wales where geographic factors limit implementation e.g. internet accessibility and speed	2013
	Produce a portfolio of example organisations, projects and individuals already implementing BIM to promote and raise awareness of the benefits of BIM to others	2013
Establishing Pilot Projects	Develop an on-going programme of BIM related exemplar/demo projects showing what BIM is, how it works and the benefits	On-going
	Establish pilot projects to specifically inform future thresholds for the application of different levels of BIM based on value and complexity of the project	On-going
	Include results from case studies and pilot projects in the annual review of BIM implementation across Wales	Annually from 2013
Encouraging Collaboration	Seek clarity of BIM requirements for 21 <sup>st</sup> Century Schools Programme	2012/13
	Establish regional meetings to provide a basis for BIM collaboration and knowledge sharing	2013
	Investigate the possibility of introducing a mentoring scheme whereby early adopters train and teach others to use BIM and pass on their experience from lessons learnt	2014



<b>Establish Protocols</b>	Develop a single BIM Development Protocol Framework for Wales that will encourage consistency and collaboration between the sectors	2014
	Investigate Asset Management principles/requirements which can be integrated within a BIM Development Protocol	2014
<b>Provide Support</b>	Provide support and guidance to help SME's understand and capitalise on the opportunities offered through BIM	2013/14
	Develop a BIM support map for Wales; identifying training & funding opportunities, pilot projects and contacts for knowledge sharing	2014
	Provide workshops for industry covering; procurement & collaboration rates, hardware & software, implementation models for BIM and case studies of BIM	2013
	Investigate the potential for in-house assistance to businesses in self-assessment, strategic development and implementation of BIM	2014
	Develop a flowchart to enable clients and suppliers to make informed business decisions on implementing BIM and setting their own standards	2014
<b>Managing Operation</b>	Investigate the responsibilities for BIM within current roles: <ul style="list-style-type: none"> <li>– BIM Co-ordinator (responsibilities for management of the model throughout the project lifecycle)</li> <li>– BIM Maintenance Manager (responsibilities for management of the model post construction -maintenance and operation)</li> </ul>	2014
<b>Research &amp; Development</b>	Undertake research to improve the application of BIM requirements in asset management and handover (soft landings)	2013/14
	Produce guidance on the implementation of BIM within a whole lifecycle approach while maintaining flexibility for innovation and long term development	2013
	Undertake research to support guidance on retrospective BIM and development of portfolios and benchmarks of existing stock	2014/15
	Undertake research to support guidance on the applicability and implementation of BIM in retrofitting	2014