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[www.itsligo.ie](http://www.itsligo.ie)

# Agenda

1. Construction Sector Productivity
2. BIM Level 2
3. North West BIM Region
4. Lean Construction Ireland
5. IT Sligo Response

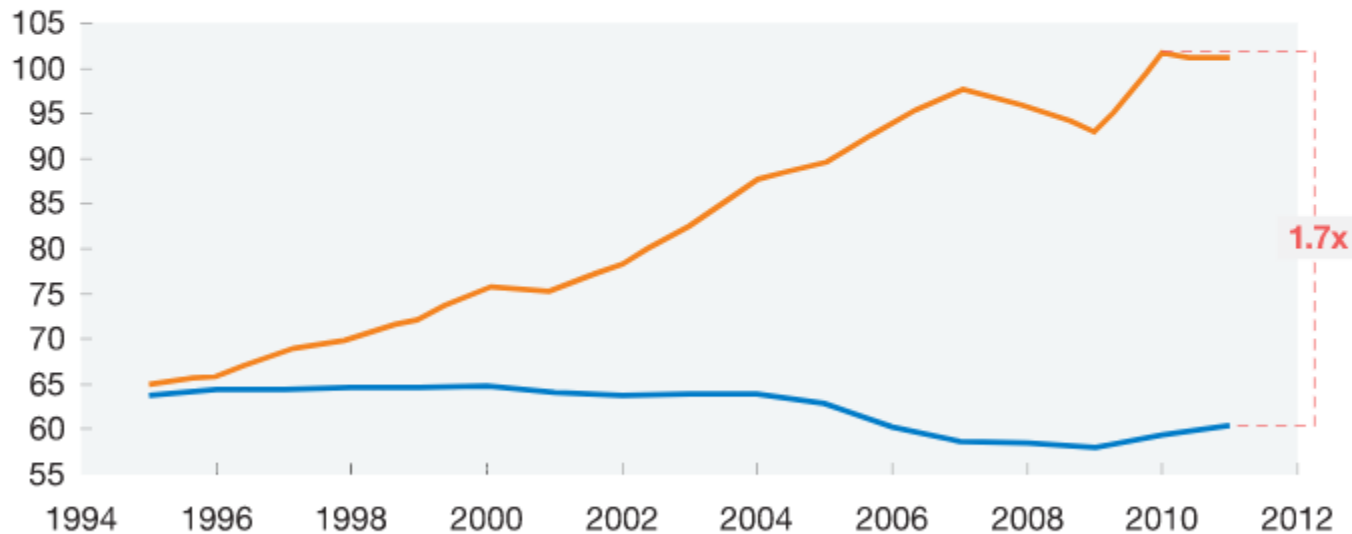
Productivity in manufacturing has nearly doubled, whereas in construction it has remained flat.

## Overview of productivity improvement over time

Productivity (value added per worker), real, \$ 2005

— Manufacturing  
— Construction

\$ thousand per worker



Source: Expert interviews; IHS Global Insight (Belgium, France, Germany, Italy, Spain, United Kingdom, United States); World Input-Output Database

- **Poor organization.** Decision-making and procurement processes do not have the speed and scale required.
- **Inadequate communication.** Inconsistencies in reporting mean that subcontractors, contractors, and owners do not understand project status.
- **Flawed performance management.** Unresolved issues stack up because of lack of communication and accountability.
- **Contractual misunderstandings.** The procurement team typically negotiates the contract, usually complicated. When a problem comes up, project managers may not understand how to proceed.
- **Missed connections.** There are different levels of planning, from high-end preparation to day-by-day programs. Disconnect can exist.
- **Poor short-term planning.** Poor short term planning- next week or two. The result is that necessary equipment may not be in place.
- **Insufficient risk management.** Long-term risks get considerable consideration; the kinds that crop up on the job not nearly as much.
- **Limited talent management.** Companies defer to familiar people and teams rather than asking where they can find the best people for each job.

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# 8 Pillars of BIM (UK L2)

## Significant Guidance Docs

- **PAS1192-2 2013:** Specification for information management for the capital/delivery phase of construction projects using building information modelling.
- **PAS1192-3:2014:** Specification for information management for the operational phase of assets using building information modelling.
- **PAS1192-5: 2015:** Specification for security-minded building information modelling, digital build environments and smart asset management.

## Additional Reference Docs

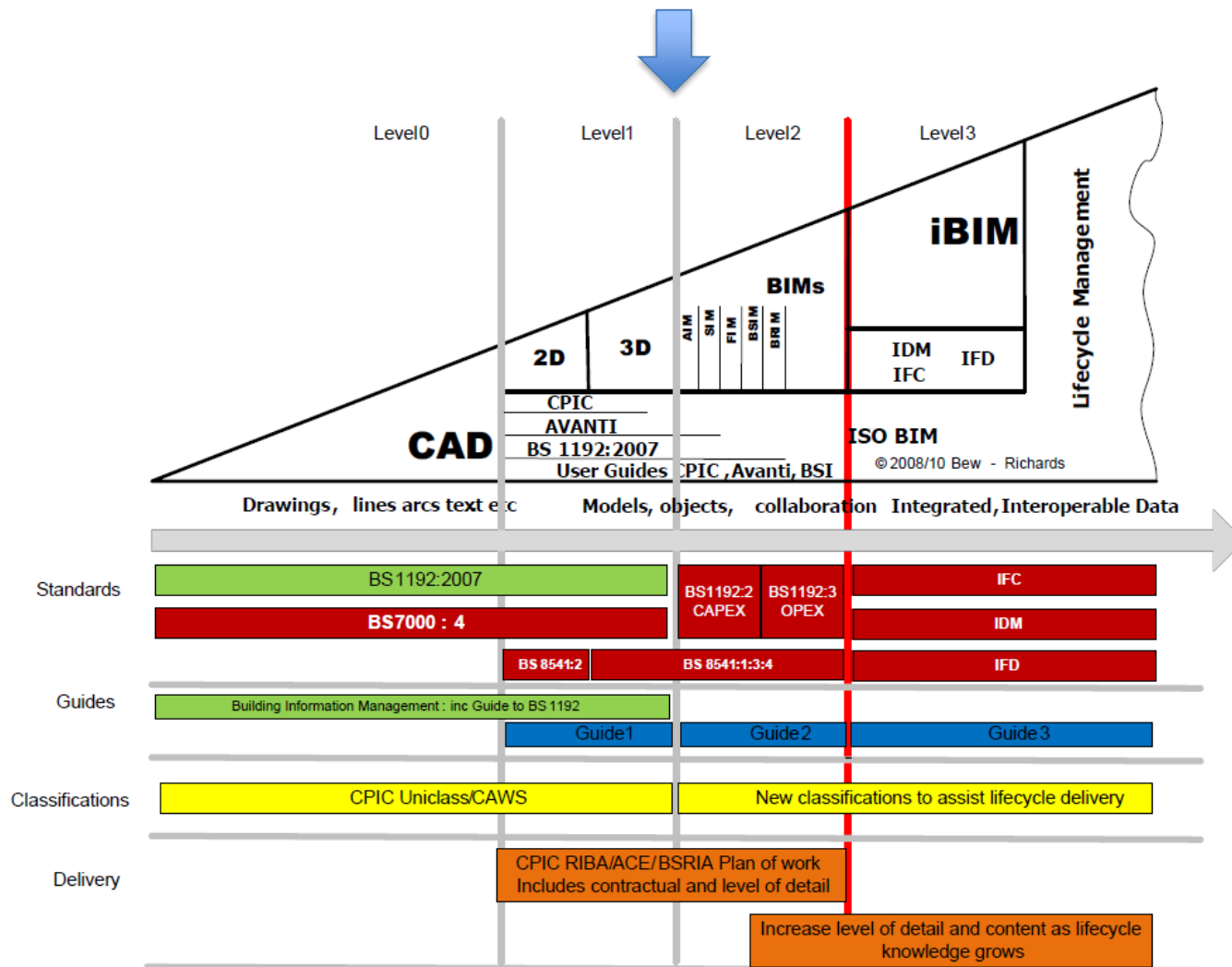
- **BS1192-4: 2014:** Collaborative Production of Information: Fulfilling employers exchange requirements using COBie- Code of Practice:
- **Building Information Model Protocol (CIC, 2013)**
- **Government Soft Landings (Cabinet Office, 2013)**
- **Outline Scope of Services for the Role of Information Management:**
- **Digital Plan of Work/ RIBA Plan of Work (2013)**

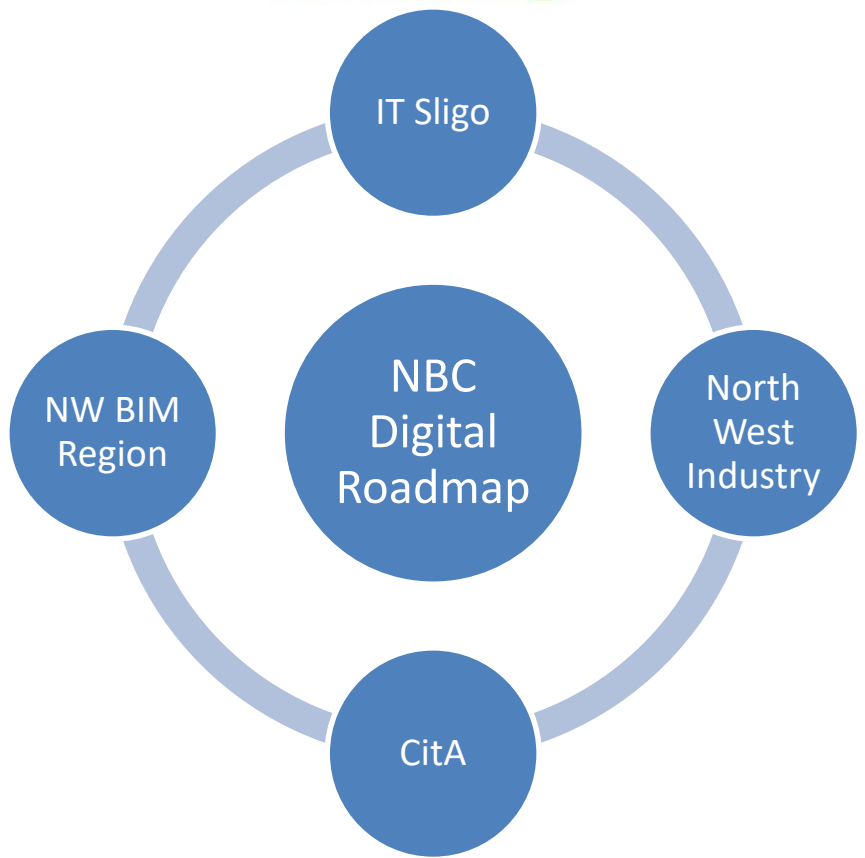
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- Some activity approaching Level 2 BIM





- 2-3 Events per year
  - Hosted at IT Sligo
  - Open to staff, students, industry
  - Case studies of local BIM engagement
  - Best Practices Nationally
- Regular Steering Group Meetings
  - Enhanced communication between academia and industry
  - Cross Sectional Representation
  - Share resources from CPD etc.
  - Supported by CitA



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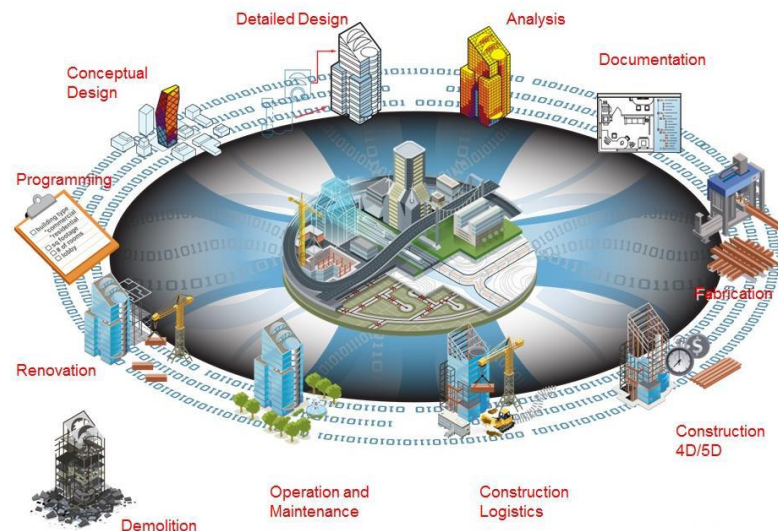
- Lean Construction Ireland (LCi)
  - Incorporated February 2018
  - Promotes lean thinking within construction sector
  - ‘Do projects better, faster, together’
- Supports NBC Digital Roadmap 2021
  - 20% Reduction in project delivery
  - 20% reduction in capital costs
  - 20% increase in construction exports
- First National Lean Construction Conference at Croke Park 20<sup>th</sup> Nov 2018
- [www.leanconstructionireland.ie](http://www.leanconstructionireland.ie)



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5. **IT Sligo Response**

- Department BIM working group formed in 2014
  - QS, PM, Architects, Civil, Structural engineers.
  - Assessed current BIM programme provision
  - Identified proposals to increase integration of BIM
  - Put forward next steps



- Civil & Environmental Engineering:
  - First year 'CAD' includes BIM and 3D surveying introduction.
- Quantity Surveying:
  - 4<sup>th</sup> Year 'BIM for Quantity Surveyors' module includes Buildsoft 3D reader, intro to Revit, Navisworks.
- Architecture:
  - AutoCAD in years 1 and 2
  - Revit in year 3
- Construction Project Management:
  - 'Projects & ICT module' includes Asta Powerproject and BIM (Navis Works)
- Advanced Wood and Sustainable Building Technology:
  - AutoCAD, Solidworks, Revit and BIM overview.



## Programmatic Review 2018

- Create a common 'Introduction to BIM' module.
- Integrate BIM topics within all relevant modules
- Increase utilisation of Revit as 3D drawing package at different levels.
- 3D scanning practicals
- Utilise BIM for Multidisciplinary Project
  - Civil/CPM/QS/Architecture teams.



- Continue Strong membership and participation in:
  - CitA and NW BIM Region
  - BIM National Education Taskforce
  - Lean Construction Ireland
  - Professional Bodies
- Continue Staff Training & CPD
- Staff Research and Innovation
- Revision of all programmes to increase Digital technologies
- Develop new programmes for industry needs.



FIGURE 1. NBC ROADMAP TO 2021

# Certificate in BIM and Lean Construction Management (Online)

## Module

- Project Planning
- BIM
- Lean Construction
- Project Implementation
- Project Management Simulation







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