



Engineering Management in a Digital Economy: Research and Practice

Friday 3 December, 2010 Institution of Civil Engineers



Engineering and Physical Sciences Research Council







Welcome

- Joint AIM Research & ICE Meeting
- ICE Information Systems Panel
- **CPI** (Construction Production Information) Joint RIBA, RICS, CIBSE, UKCG, CIAT)
- AIM Research





Agenda

- Session 1 Progressive Information Management
- Session 2 Business Strategy and Policy
- Session 3 International Research & Agendas
- Round Table Discussion





Session 1

- 10:00-10:15 Welcome & ICE interest in 'Progressive Information Management', Phil Jackson, Chair of ICE IS Panel
- 10:15-10:30 Management and strategy in digital design and engineering businesses, <u>Professor Andy Neely</u>, Director of AIM, University of Cambridge
- 10:30-11:00 'Progressive Information Management' Research, <u>Dr Jennifer Whyte</u>, AIM Management Research/ ICE IS Panel/University of Reading
- 11:00-11:15 Q&A
- 11:15-11:30 Coffee







BIN LowCarbon





Goals for Today

- Raise the debate to business level
- Deliver the results of ICE Research on data delivery
- How can digital data be best managed to add value across the life-cycle of infrastructure projects?
- What are the strategic challenges that project-based firms face in engineering management the digital economy?
- How can leading practice shape research agendas?
- How can international research inform practice?





Goals for Today







Introducing Progressive Information Management



Asset	Life	Cv	cl	е





Asset Life Cycle is Currently NOT Delivered Continuously







Value is in Outcomes







Deliver me a BIM Model







Business Requirement	Concept	Detail Design	Construct	Operate & Maintain
Business Requirement Information	Concept Information	Detail Design Information	Construct	Operate & Maintain Information





Business Requirement	Concept	Detail Design	Construct	Operate & Maintain
Business Requirement Information	Concept Information	CAD & BIM Software	Construct Information	Operate & Maintain Information













BIM is NOT Software or CAD but is Integrated Intelligent Infrastructure

Data developed throughout the life cycle

Operate

Build

Design







BIM is NOT Software or CAD but is Integrated Intelligent Infrastructure



Building – IM Road - IM Rail – IM Utilities – IM Bridge – IM Sewer – IM Survey – IM Water – IM Land – IM Power – IM Comms – IM GIS – IM Plant – IM

and many more





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Information is Progressive in Content and Value







Historic Clear Deliverables









ICE Responses



- Commissioned Research at Reading DIRC
- Evaluate what data is valuable to clients
- Inform the Lifecycle Data requirements
- Follow up with Progressive Deliverable Templates to CPI & BIS





Progressive Clear Deliverables









Continuing the Debate

