Annual State of the Industry Lecture 2016

WELCOME
Annual State of the Industry Lecture
2016

Len Bunton  FRICS FCIArb
Chair, SBCC
SBCC 2016 Editions

The Scottish editions will take account of:

- Scottish legal differences in legislation and terminology. There are significant legislative changes to consumer contracts, in health and safety and to procurement
- The default position changing in SBCC contracts from court to arbitration
- The CDM Regulations 2015
- The Procurement Reform (Scotland) Act 2014 and the Public Contracts (Scotland) Regulations 2015
- Arbitration under The Arbitration (Scotland) Act 2010
- Signing made simpler with new style signing provisions
Specific clause changes will include:

- A number of changes in respect of payment, designed to reflect Fair Payment principles and to simplify and consolidate the payment provisions:
  - Establishing, for Fair Payment purposes, Interim Valuation Dates which will operate at main contract, sub-contract and sub-subcontract levels.
Under the interim payment due date provisions, the monthly cycle of due dates applicable to payments up to practical completion now continues to apply after practical completion, up to the due date of Final Payment. This change is consistent with a new Loss and Expense ascertainment procedure and with Fair Payment principles.

Revising and simplifying the payment provisions more generally, including introducing a procedure for prompt assessment of Loss and Expense claims, providing further flexibility in relation to Fluctuations Provisions, and consolidating the provisions containing the notice requirements of the Housing Grants, Construction and Regeneration Act 1996.
• Provisions for the grant of Performance Bonds and Parent Company guarantees and we have extended the optional provisions for the obtaining of Collateral Warranties from sub-contractors to include, as an alternative, the granting of Third Party Rights by sub-contractors.

• An extension of (Works) Insurance Option C to allow alternative solutions to the problems encountered by tenants and domestic homeowners in obtaining Existing Structures cover for Contractors, and consolidation within the main text of the generic provisions that apply to Insurance Options A, B and C (evidence of insurance, insurance claims and reinstatement work).

• Further changes to improve functionality and user-friendliness across the suite, including minor updates and clarification of the intellectual property provisions, and incorporating (where appropriate) the provisions of the SBCC 2012 Named Specialist Update.
2016 Initiatives

- Annual Update Conference
- Website redevelopment
- Scottish Futures Trust: consultation paper on retentions
- Cash flow initiative
Annual State of the Industry Lecture
2016
Richard Saxon CBE
Chair, JCT

Digital Built Britain: the future working of the construction industry
Digital Built Britain: the future working of the construction industry

SBCC Annual State of the Industry Lecture, March 1st 2016
Richard Saxon CBE, Chairman, JCT.
Agenda

- From ‘Construction’ to ‘Built Environment’
- Value and Sustainability via ICT & Automation
- Digital Built Britain, the thesis
- New business models
Built Environment

Three sectors overlap and represent 15-20% of GDP.
Built environment is the great enabler, supporting all other sectors of the economy and contributing to the quality of life.
Built environment industry strategy

Outcomes not outputs

Become value based
Reduce project timescales by 50%
Reduce Capital and Whole-life costs by 33%

Become sustainable
Reduce carbon emissions by 50%

Use ICT and A to achieve both

c. Richard Saxon 2014
After National Platform 2008 & UK Industry Strategy 2013
Understanding Value. Thanks to Constructing Excellence
Six Dimensions of Product Value
Six Dimensions of Product Value

- Environmental
- Social
- Cultural
Sustainability has three dimensions

- Economic: need to be profitable and have rising productivity, to pay well and invest in R&D
- Social: need to provide healthy work and work-life balance for a diverse workforce, attracting a new generation
- Environmental: improving urban quality whilst reducing impact dramatically.
ICT and Automation

- Bew-Richards ramp diagram
Digital Built Britain

- The road to Level 3 BIM;
- The parallel rise of the Internet of Things;
- New Business models as a result of both;
- Need for new forms of contract and insurance;
- Potential for the UK to lead the world.

http://digital-built-britain.com/
DBB Rationale

- That fully interoperable BIM will arrive;
- But that IoT will overlay it and open other doors;
- That digital methods will permeate the industry, redefining its potential;
- That radical new ways to provide and run the built environment will ensue;
- That the UK’s lead in this will be a global opportunity.
From Level 2 to DBB

- Design Apps 2016
- BIM Level 2 2016
- BMS 2016
- HPC & Analytics
- BIM Level 3
- IoT based BMS Smart cities
- New Business Models

Progressive improvement
Built Environment Sector Overlap

Property

- Prop mgt
- Design & Mgt
- RMI
- Facilities management
- Comm dev
- Construction

Urban System
Drivers of Change

New Ways of Doing Things

- New Business Relationships
- The Digital Economy
- New Metrics

New Institutions

- New Business Models
- New Ways of Thinking
Potential Futures

- Smart Construction design/deliver/operate
- DfMA 3DP
- Social Media Materials Science
- Service Focus
- BIM L3 IoT Cloud Robotics
- Totex Outcomes Semantic Transactions Circular Economy
- Performance Contracts
Expected Demand effects

- Improvement in performance lifts demand;
- Retrofit of stock becomes a major factor;
- Skill shortages are offset by automation;
- Service content of offer increases, with FM better integrated.
Stages of Deployment

- 3A: progressive improvements to BIM
- 3B: impact of the Internet of Things
- 3C: rise of new business models enabled
- 3D: global competitiveness resulting
3A: Improvements to BIM

- Move to the Cloud, with re-written platforms
- Workflow support from CDE platforms
- Design optimisation tools
- Sophisticated simulation, including VR and AR
- Scanning and computerised photography for as-built data capture
- Completion of IFC standards for interoperability
3B: Internet of Things, in built environment

- Robotic constructors
- Sensors and actuators control comfort and building performance, supporting FM
- Social physics measurement of human response and building use
- Feedback to management, future briefs and designs
- Each building as part of an urban network, managing utility flows, traffic, security, etc
3C: New business models

- Servitisation: supply of space or building elements as a service;
- Circular economy
- Performance contracting: payment by outcome
- Integrated Project Delivery, via Alliance contracting with Integrated Project Insurance
Integrated Project Insurance concept

- Current insurance model prevents collaboration; fails to protect client;

- IPI cover taken out by client for similar cost;

- Design-Build team, selected for quality of collaboration, forms an alliance to deliver the project below a benchmark cost and with guaranteed profit;

- Due diligence team clears design and process for half the premium;

- Design-Build Team delivers on time and budget with ‘pain-gain’ terms: bonus for beating targets; capped penalty for missing them, after which insurance pays out;

- Defects covered for 12 years without proof of negligence;
IPI Project Outcomes

- Opportunity & Risk
  - Forecast Cost
    - Ring-fence Sum: Agreed Target Cost
  - Actual Cost
    - Ring-fence Sum: +ve Outcome
- Waste Reduction
- Insurers’ cap
- Insured Cost Overrun
  - Painshare up to policy excess
- Alliance Members’ Liability Caps
- Investment Benchmark
- Actual Cost
  - Ring-fence Sum: -ve Outcome
Commercial and Cultural change

- Value-driven, sustainable industry;
- Stable, collaborative supply teams;
- Feedback revealing true performance;
- Onset of 4th industrial revolution.