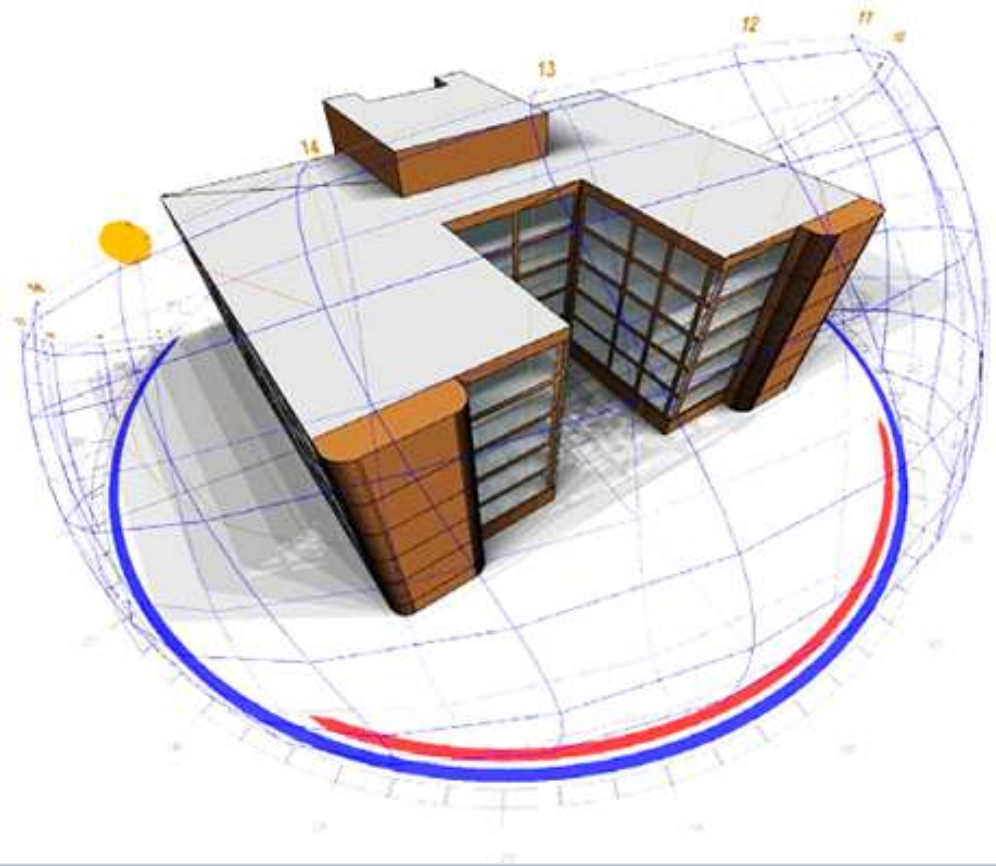




BIM & Soft Landings

Our Global
State of Mind

- Case study Champion Hill, King College
- BIM & Pitfalls of Data
- Soft Landings
- A coordinated approach?
- Should BIM+SL Cost more?









- Scheme developed by UPP to Stage D*
- Planning consent obtained
- KCL then decided to develop scheme themselves
- RLB Team undertook due diligence/gap analysis
- Redefined Client Brief – generic/specific
- Revised Stage D Design



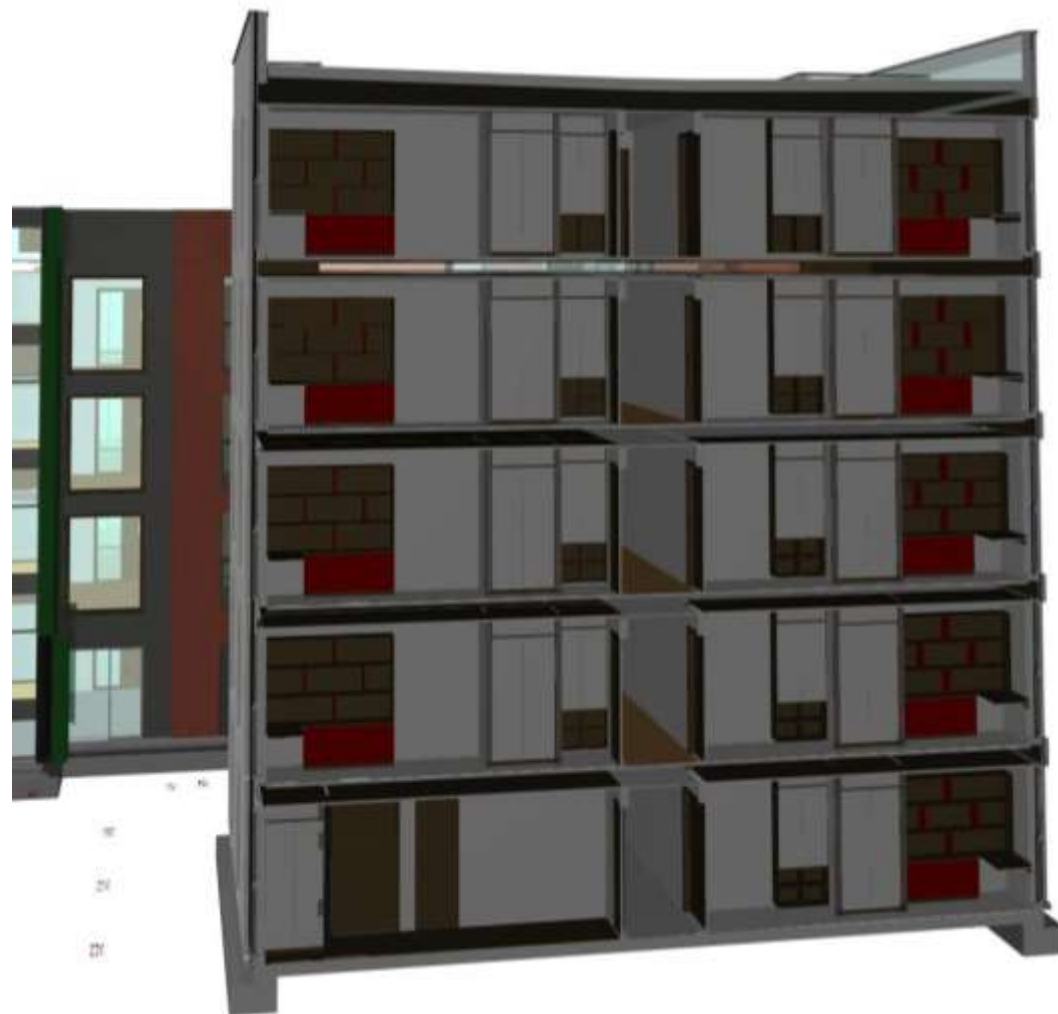
- BIM on the horizon
- Government's Construction Strategy
- BIM level 2 all projects over £5million 2016
- Lots of industry chatter
- Focus on design and Construction
- What does it mean for Clients?
- What should King's College do?



- Simple, repetitive component building type
 - Student residential scheme
 - Stand room configuration
 - Four standard room types



- Off site construction
 - Timber frame
 - Cassette walls and floors
 - Bathroom pod construction
 - High levels of standardisation

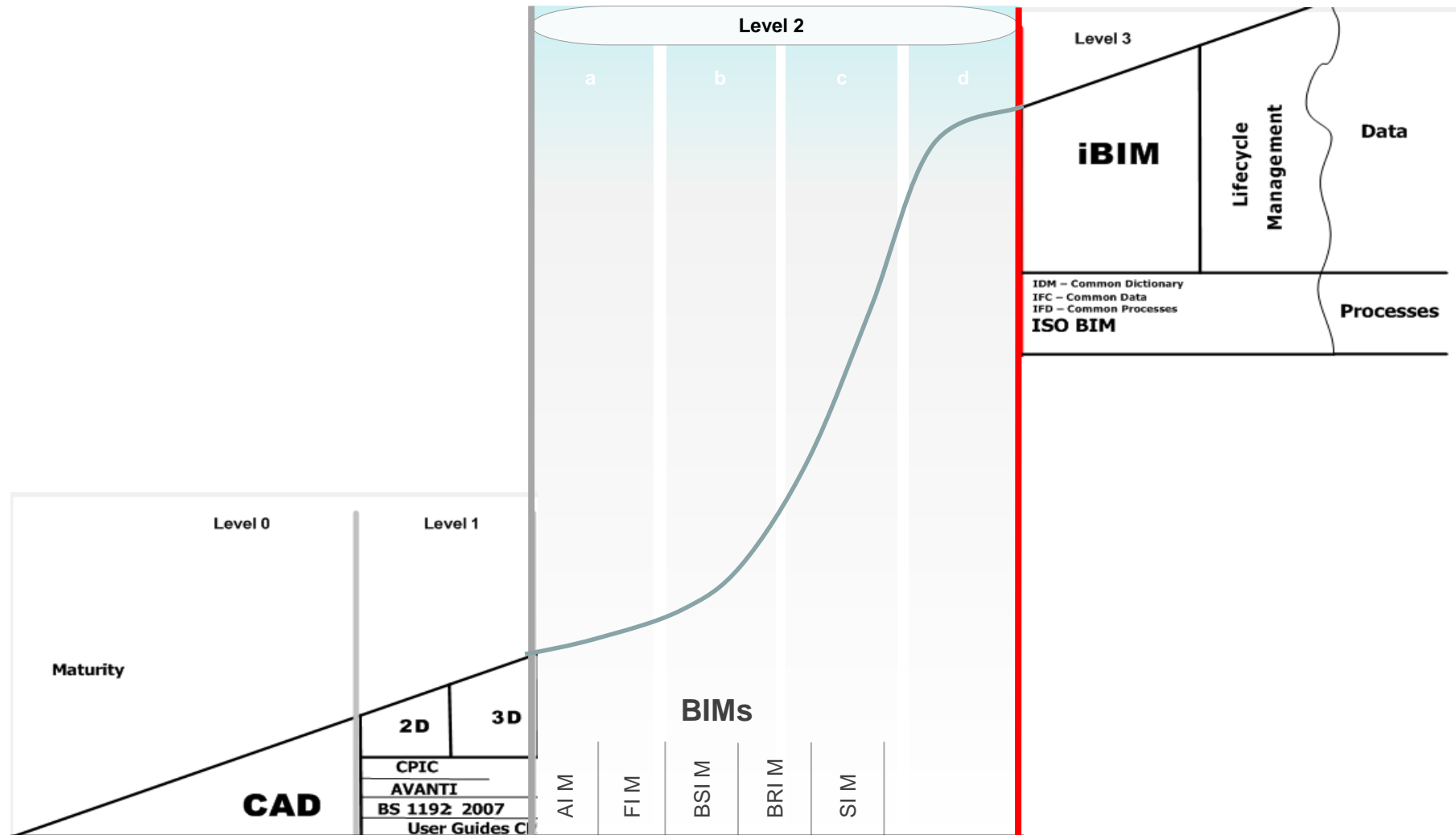


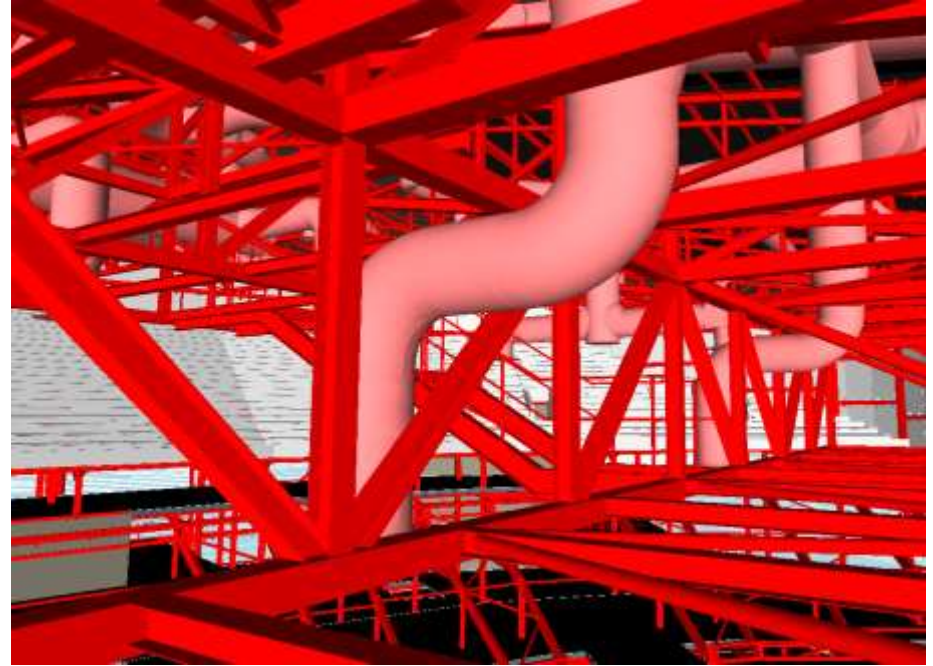
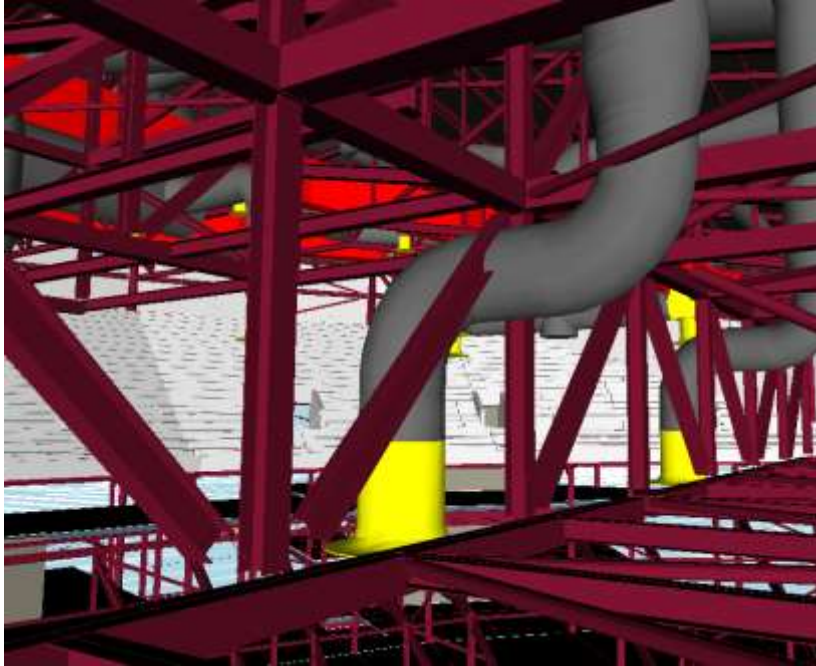
- Buildings generally not fully operational at PC
- Poor commissioning and training
- Levels of unfinished work at handover
- Perception that building users do not know how the building works (passive measures and complex BMS)
- A Client's requirement is an operational building
 - Can we help in making this easier?
 - How can we re-use BIM data?
 - Can we improve/lean the process?

- Option 1:
 - Do nothing until the facility is complete, create model post-PC from data in the O&M Manuals.
- Option 2:
 - Re-scope the project and include more detailed scopes of services for consultants and Client Requirements to produce BIM model
- Option 3:
 - Place obligation on Contractor to produce BIM Model to meet KCL's Standards*
 - This required clear articulation of Client requirements

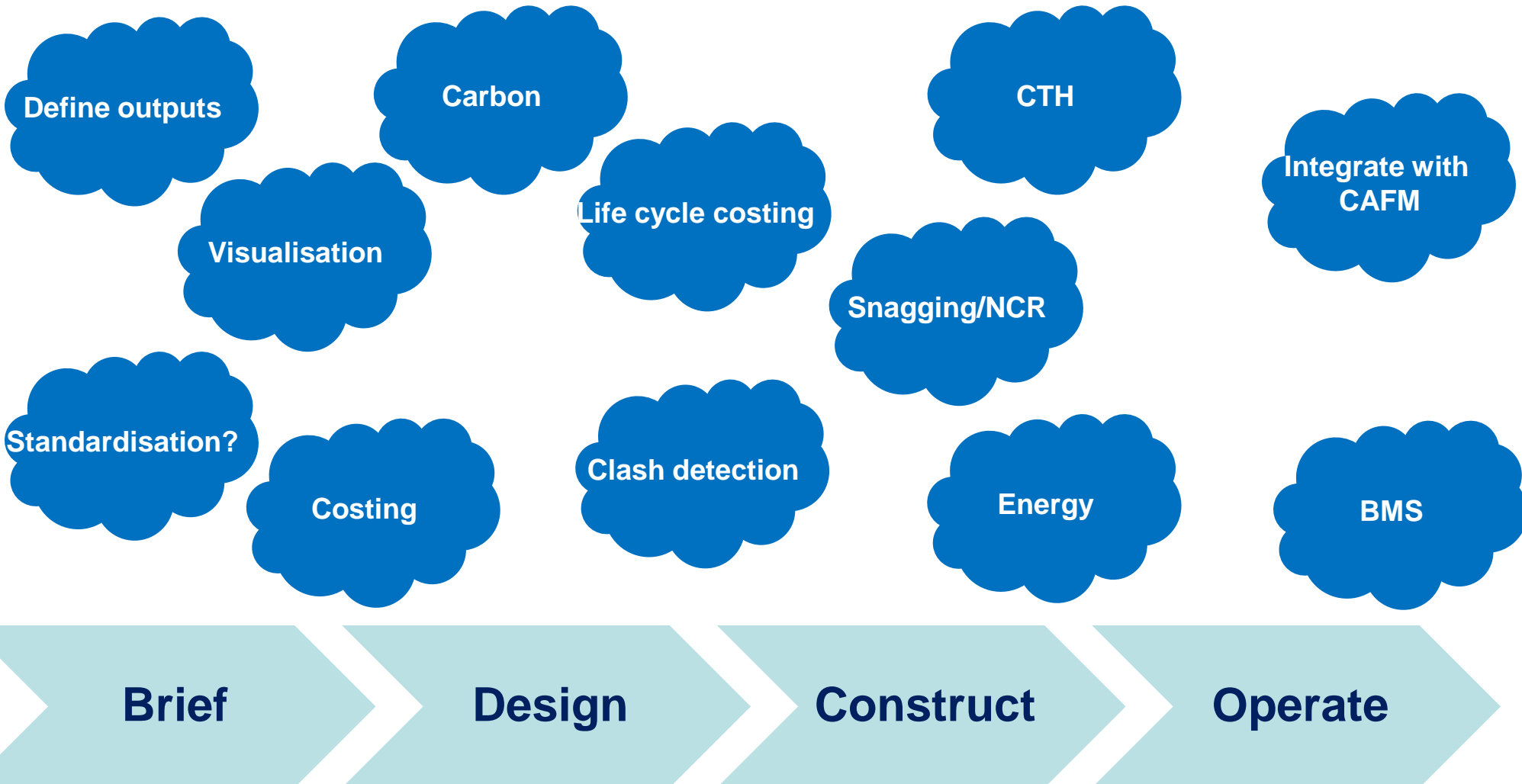
- Set up Task Group: agreed terms of reference, objectives, deliverables, timescales, group membership, RACI, reporting.
- Defined Facilities' Requirements
 - FM Staff were a key stakeholder/client
 - Examined CAFM capability, future upgrades, BIM Readiness
- Determined data Configuration Requirements







What can we do with a BIM model?



- Data exchange between different software
- Different design software and different 'federators' lose different data
- Requires teams to have much higher levels of collaboration and communication
- Manage expectations – vapourware
- Perception/reality – BIM will cost more?

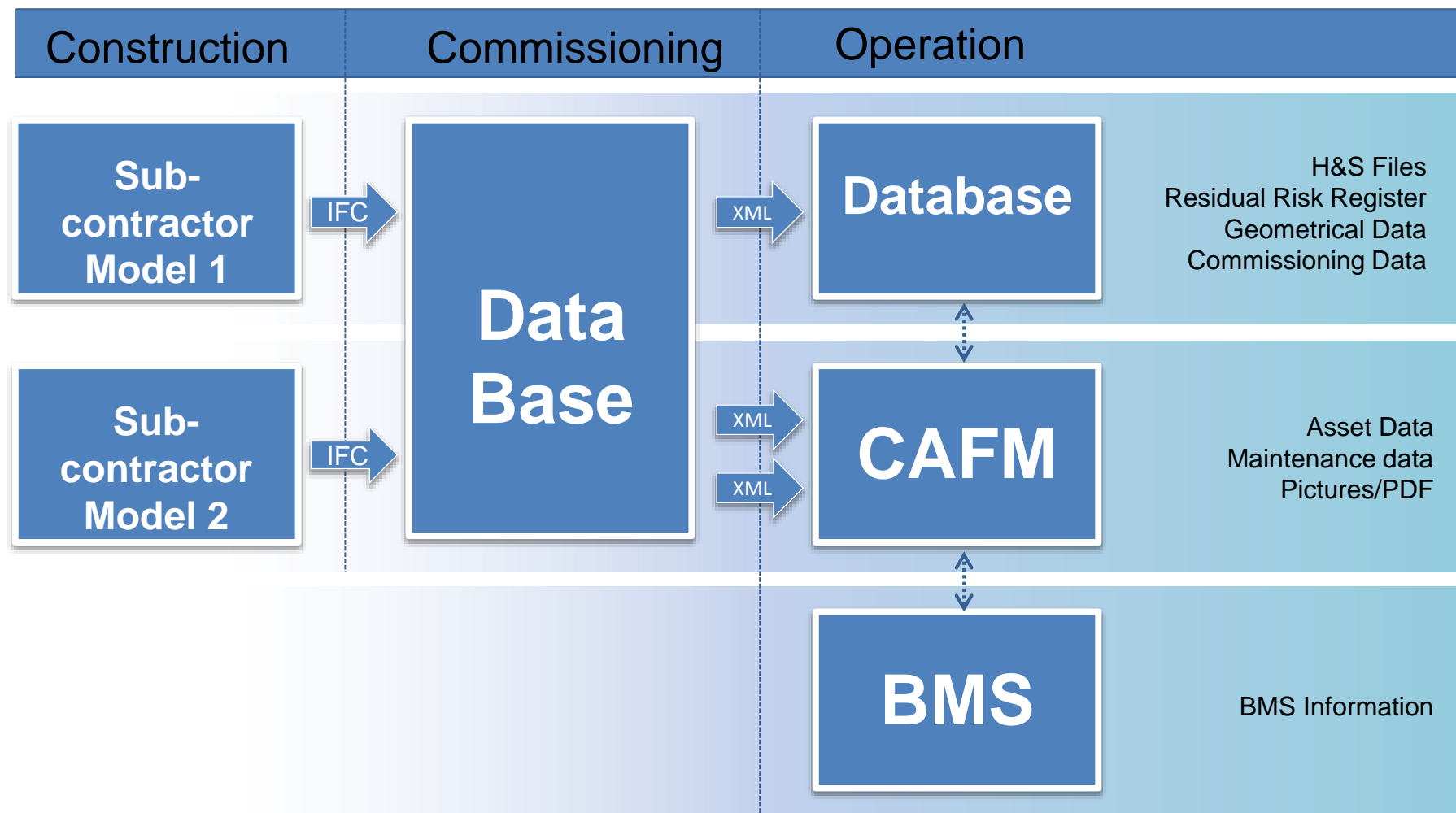
- BISRIA “Soft Landings means designers and constructors staying involved with buildings beyond practical completion...”
- Improved Commissioning, Training and Handover processes
- Post PC maintenance... GSL 3 Years!

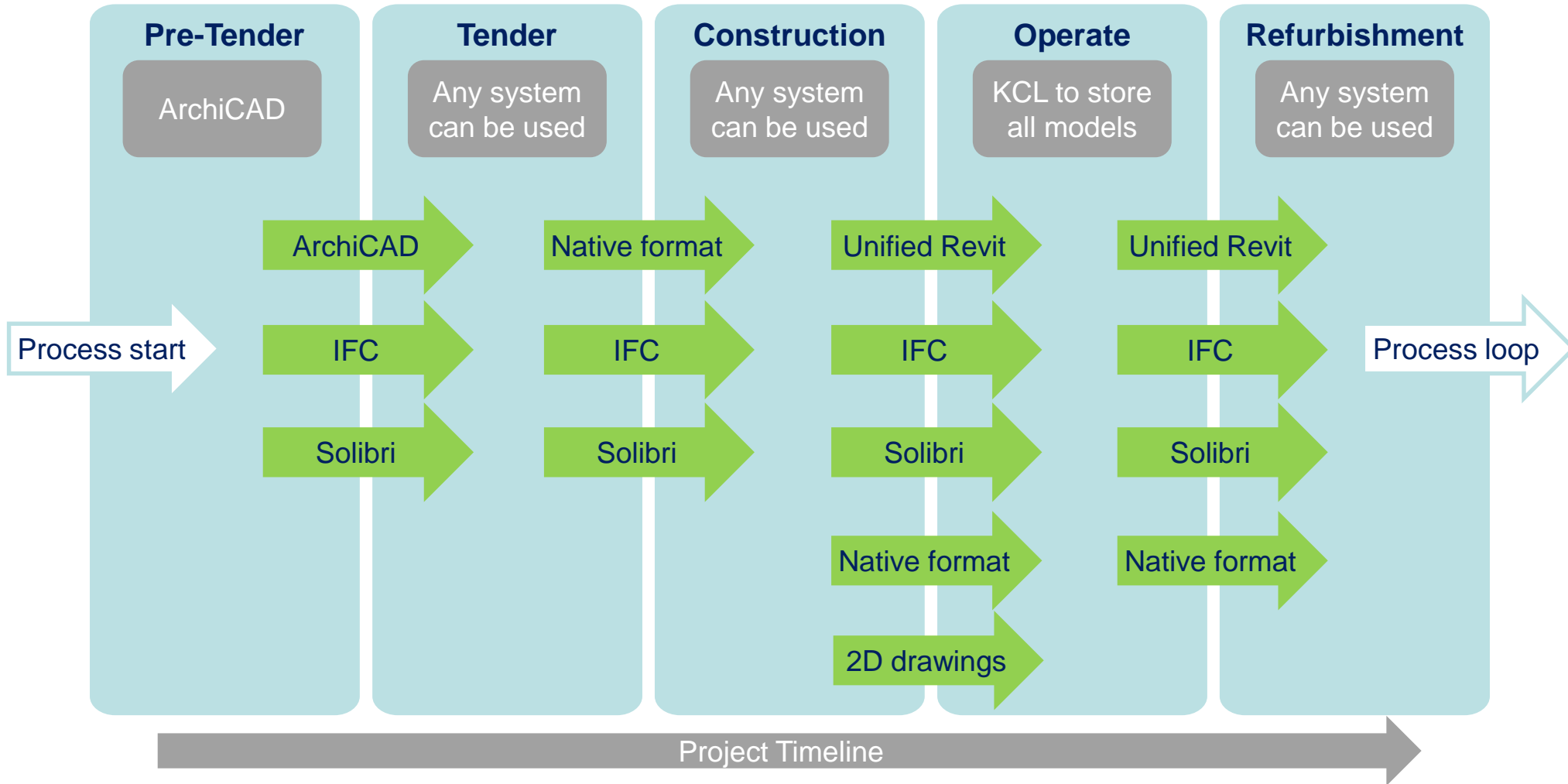
The King's Story

So far...

- What we have delivered (BIM)
 - Developed detailed Employer's Information Requirements
 - Obligated the Contractor to populated BIM, Commissioning and CAFM models with agreed data
 - CAFM Product Development with Planon
 - Detailed commissioning Strategy and Methodology
 - Practical Completion Condition Precedent

- What we have delivered (SL)
 - Developed Soft Landing Strategy
 - Commissioning methodology and plan
 - After care plan
 - User Guides (students, Maintenance, Management staff)
 - Defined regular BMS Reports
 - In use building usage data: energy, water, occupancy levels, etc.
 - BMS alerts raise alarm within CAFM





- Contractor on site 6 months
 - Statutory maintenance and PPM– 2 years
 - Suppliers/manufacturers recommended maintenance - warranty
- 9 months to run on Contract
- Full data transfer trial October 2013
- Commissioning plan/programme drafted
- Contractor starting to understand benefits of what we are doing

- If Tender information is better coordinated, then tender prices should be lower as there is less risk ?
 - Architects traditionally coordinated 2D drawings but not 3D coordination of design

- If buildings are properly finished, commissioned and handed over using Soft Landings, should Tender costs be lower to reflect no post PC snagging

Our Approach

We Started with the end in mind!

*If you don't know where you are going, then
you probably won't end up there.'*

Forrest Gump

King's College London, did not pay
any premium on Champion Hill to
deliver BIM and Soft Landings

RLB Brochures in reception