



Defining BIM for Operation Uses

Atrium, Cardiff University

13th October 2017



**ADEILADU
ARBENIGRWYDD**
Clwb De Ddwyrain Cymru



**CONSTRUCTING
EXCELLENCE**
South East Wales Club

Welcome

Tony Norris

Chair





UNIVERSITY OF
BIRMINGHAM

“BIM” at the University of Birmingham

AN ASSET MANAGEMENT STRATEGIC DEVELOPMENT OVERVIEW





The Long road to Asset Utopia.



Some familiar issues.....



THE BIG QUESTION



WHY
Change?



Poor
Help Desk
Configuration



THE BIG QUESTION



UNIVERSITY OF BIRMINGHAM



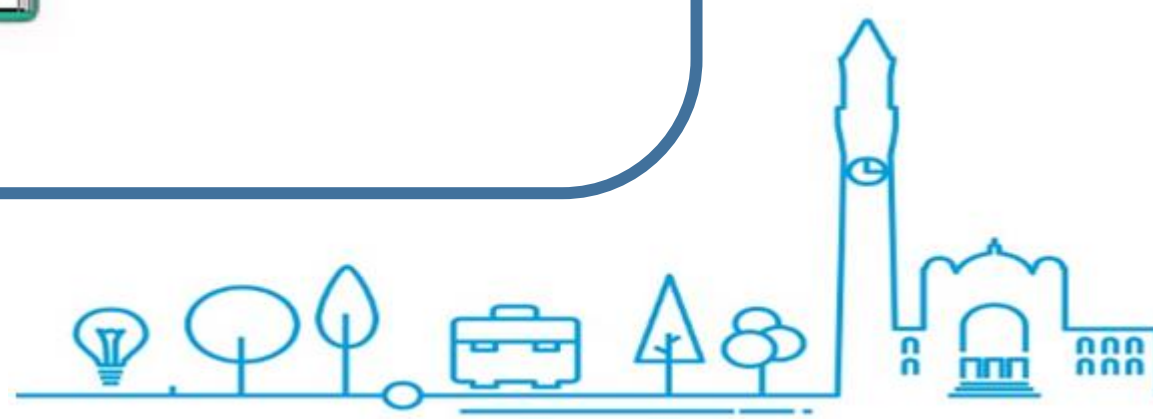
Provision and Use of Work Equipment Regulations 1998



THE BIG QUESTION






No PPM Planner



THE BIG QUESTION



UNIVERSITY OF BIRMINGHAM

-  Poor Help Desk Configuration
-  Multiple Databases
-  No PPM Planner



Only Statutory Assets Maintained



THE BIG QUESTION



Poor Help Desk Configuration



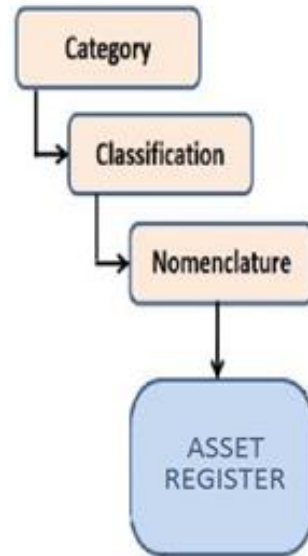
Multiple Databases



No PPM Planner



Only Statutory Assets Maintained



No Asset Register



THE BIG QUESTION



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BIRMINGHAM



Poor
Help Desk
Configuration



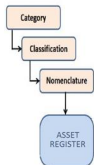
Multiple
Databases



No PPM
Planner



Only Statutory
Assets
Maintained



No Asset
Register



No set
Maintenance
Standards



THE BIG QUESTION



Poor Help Desk Configuration



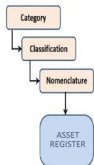
Multiple Databases



No PPM Planner



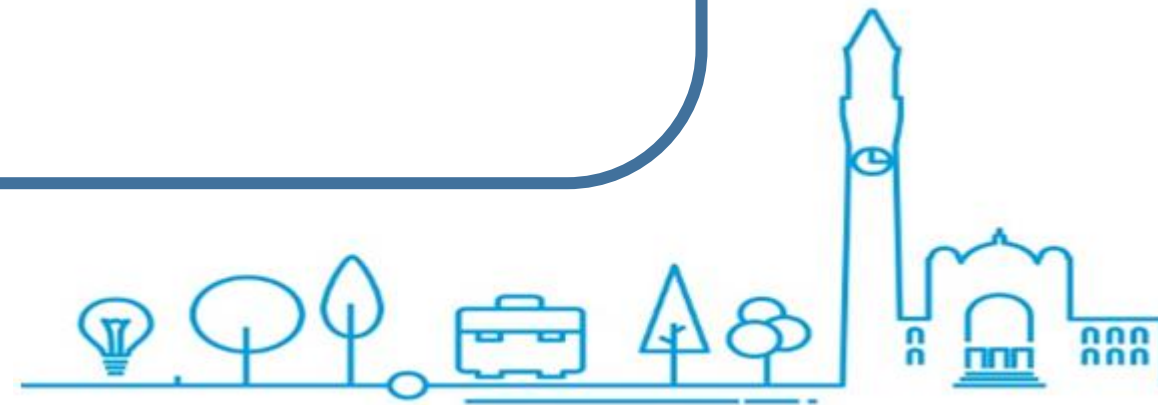
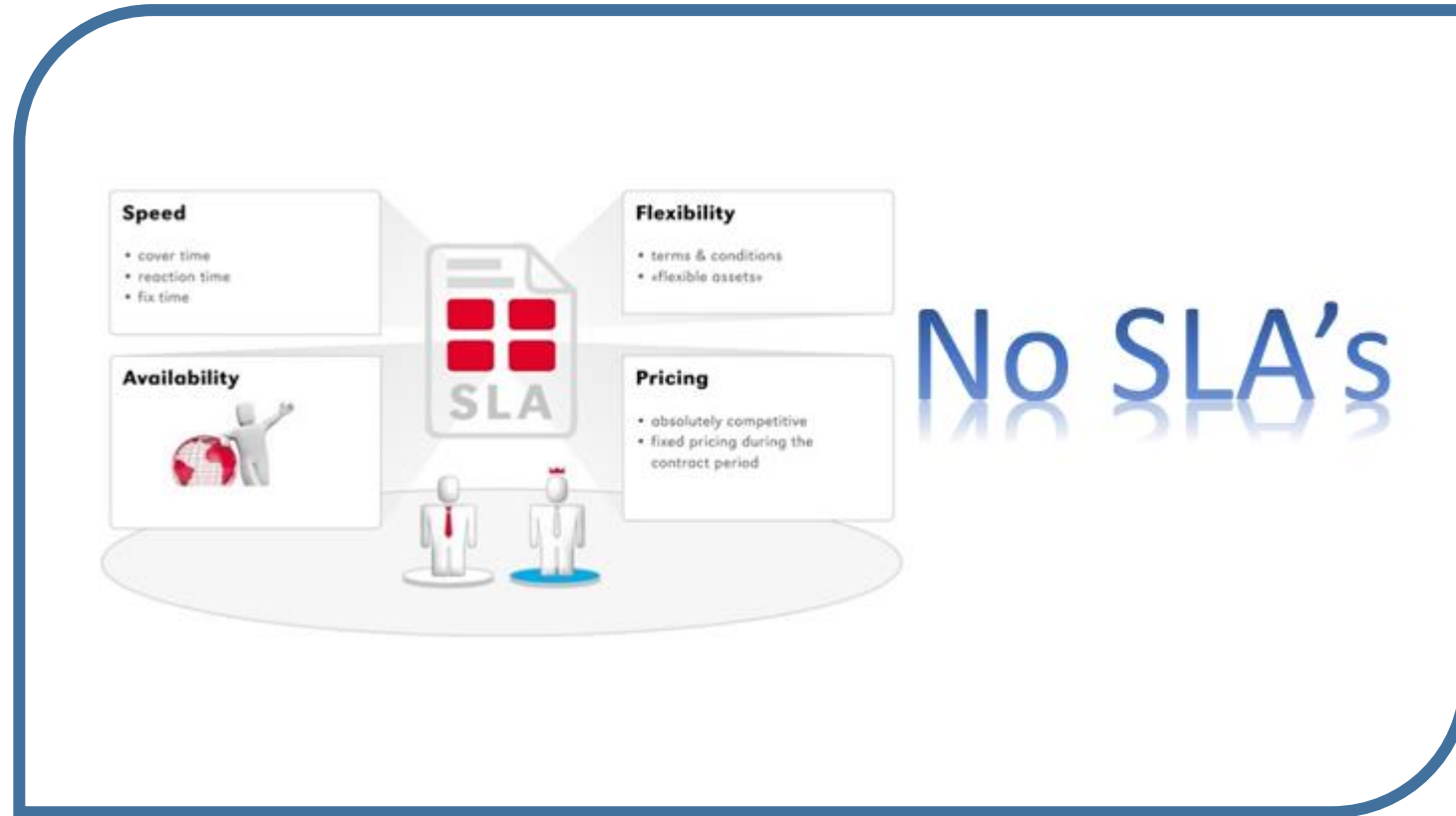
Only Statutory Assets Maintained



No Asset Register



No set Maintenance Standards



THE BIG QUESTION



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Our Sub-Contractors Held all our Data



Poor Help Desk Configuration



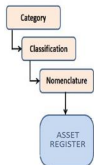
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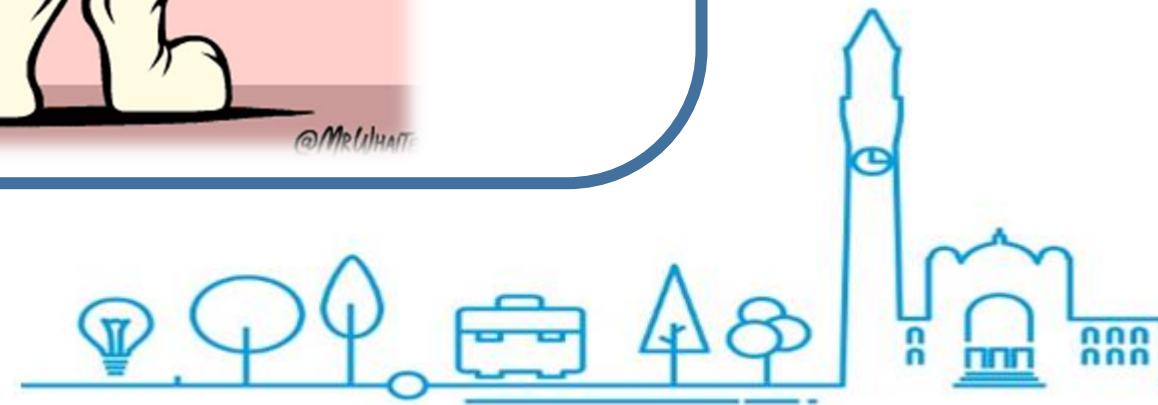
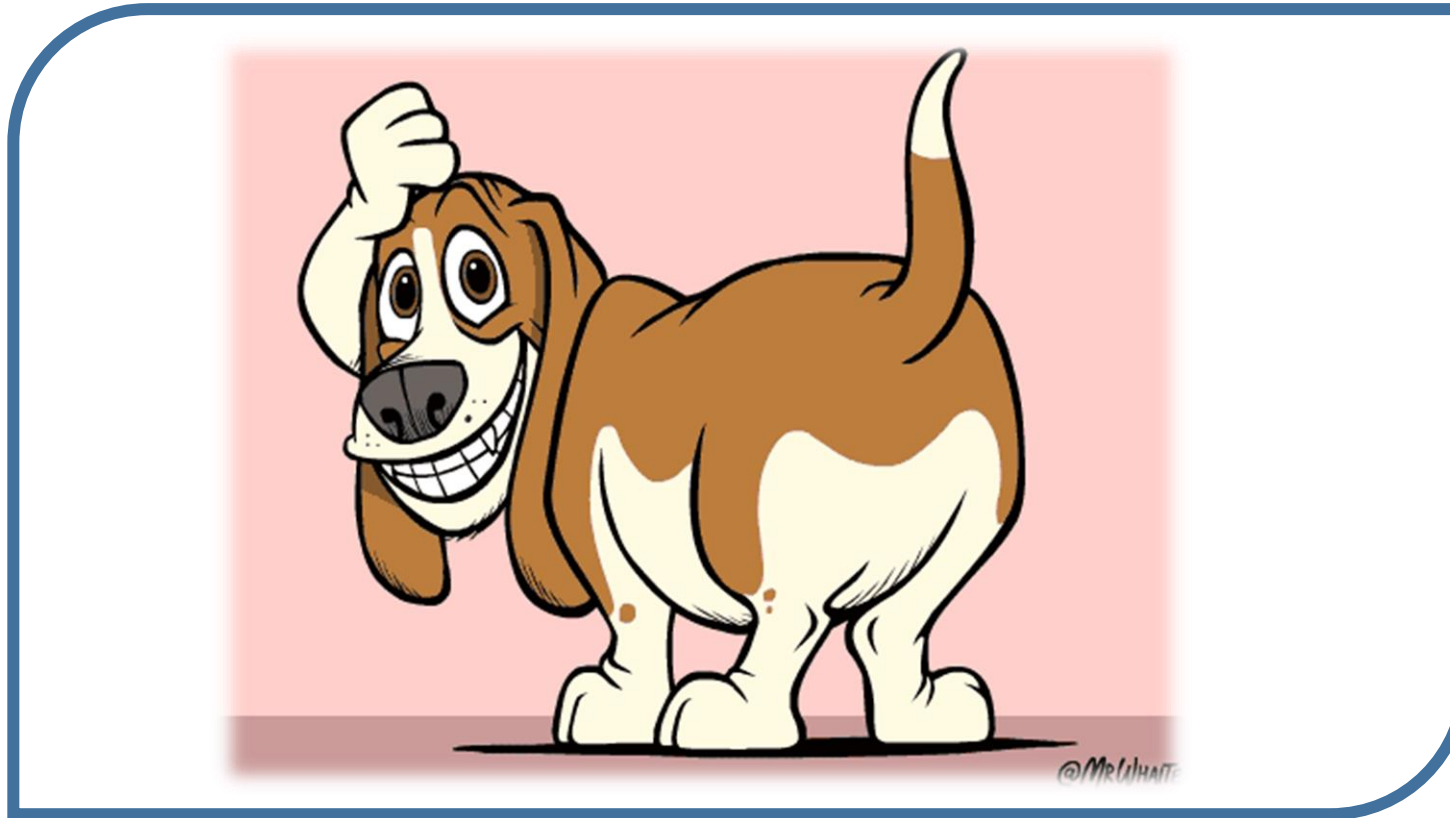
No Asset Register



No set Maintenance Standards



No SLA's



THE BIG QUESTION



UNIVERSITY OF BIRMINGHAM



Poor Help Desk Configuration



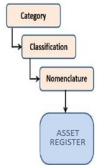
Multiple Databases



No PPM Planner



Only Statutory Assets Maintained



No Asset Register



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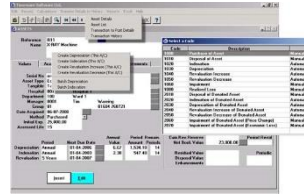
No
“One Version
of the
Truth”



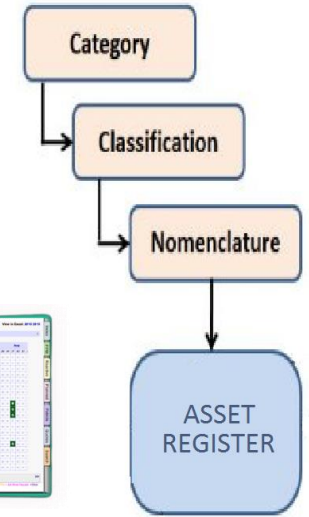


Starting Point

- No Asset Register
- No set Maintenance Standards
- Poor Capital Projects Quality O&M and Handover Info
- No coordinated central CAD drawing library



- No Asset Nomenclature
- No central PPM Planner



Finishing Point



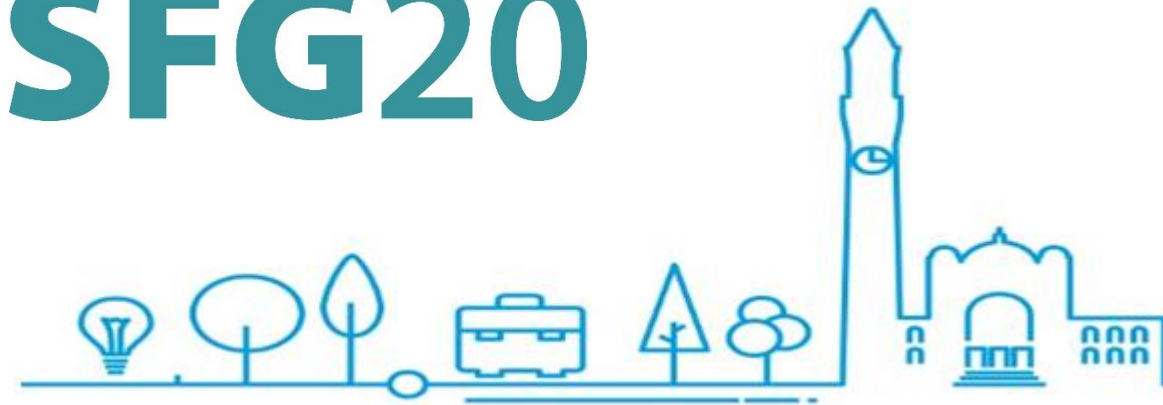
UNIVERSITY OF
BIRMINGHAM

1. CREATE A FUTURE PROOF ASSET NOMENCLATURE

- Site Geography – UoB Room Naming Protocol
- UniClass 2015 Naming Convention
- SFG20 – Maintenance Schedule Referencing
- Specific System/Product Details
- Condition
- Lifecycle & Replacement Costs



SFG20





Finishing Point

1. Asset Collation & Verification



Multiple Databases

2. BIM aligned Asset Register

3. Upgrade CAFM Help Desk to an **IWMS**
(Integrated Workplace Management System)



4. BIM




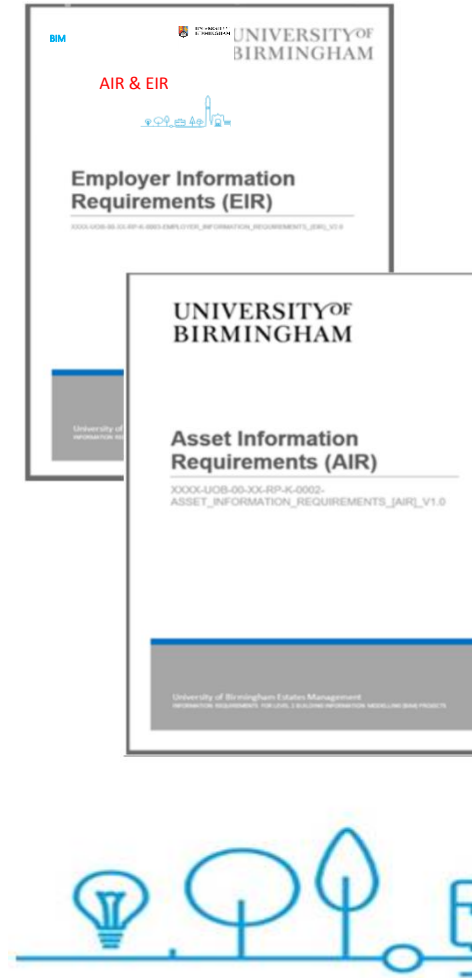


BIM & BOM

1. Agree BIM requirements with University Stakeholders

2. Develop BIM Document Suit

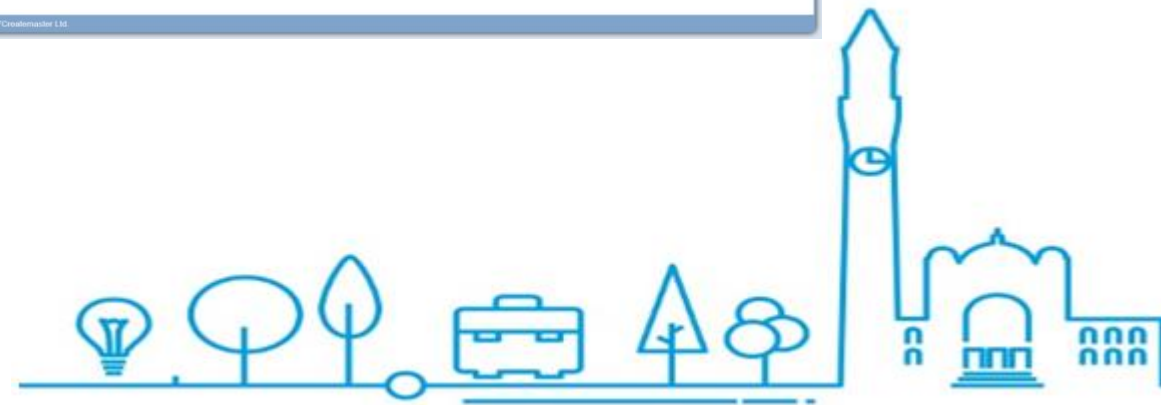
-  Asset Information Requirements AIR TEMPLATE
-  Capability Assessment TEMPLATE
-  EIR COBie Roles and Responsibilities TEMPLATE
-  EIR DataStructure FM Schedule TEMPLATE
-  EIR Level Of Development [LOD] TEMPLATE
-  EIR Model Production Delivery Table (MPDT) TEMPLATE
-  EIR Plain Language Questions [PLQ] TEMPLATE
-  Employer Information Requirements [EIR] Template
-  Type Of Spaces Descriptions





BIM & BOM

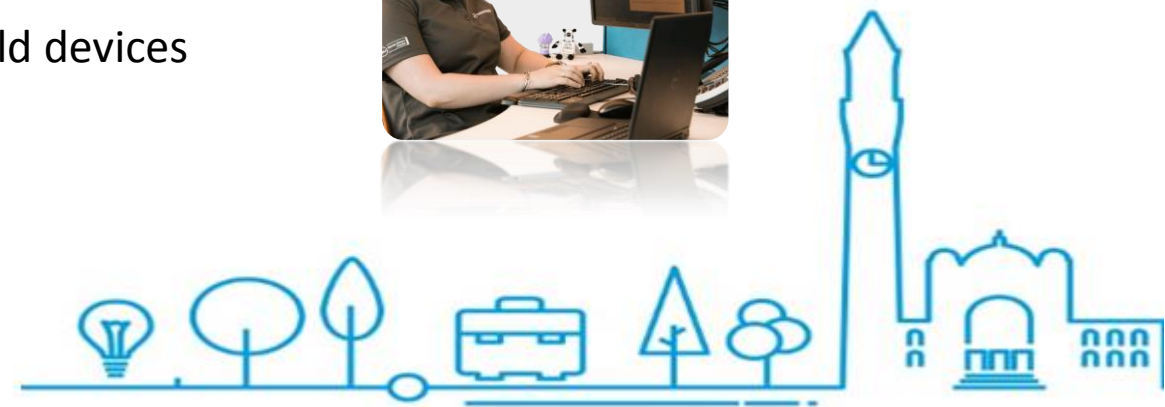
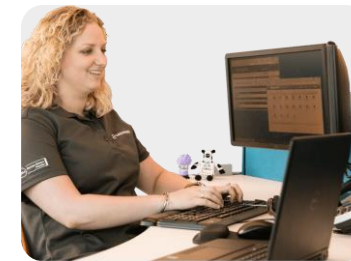
3. Amend Capital Project Prelims for inclusion of BIM - EIR & AIR documents
4. Establish AIR Data Thresholds
 - <£5M Full BIM delivery
 - >£5M Revised BOM Delivery
 - Old O&M structure
 - New AIR Asset Register
5. Cobie AIR Data imported Directly in to the new IWMS at pre-determined RIBA data drop thresholds.
6. Statutory & Warranty Maintenance contracts now created up to six months before contract handover





IWMS & SFG20

1. Planon R16 IWMS contains various data libraries
2. The SFG20 / Best Practice Task Sheets are imported directly in to the Library
3. PPM Calendar is Auto-generated via the customised SFG Library
4. All planned & Reactive Tasks are aligned to the Asset Register & SFG library
5. Tasks are issued directly to DL staff or Contractors Field devices
6. Real Time Reporting & Accurate M.I





Lifecycle Management

Portfolio

By Location | By Element

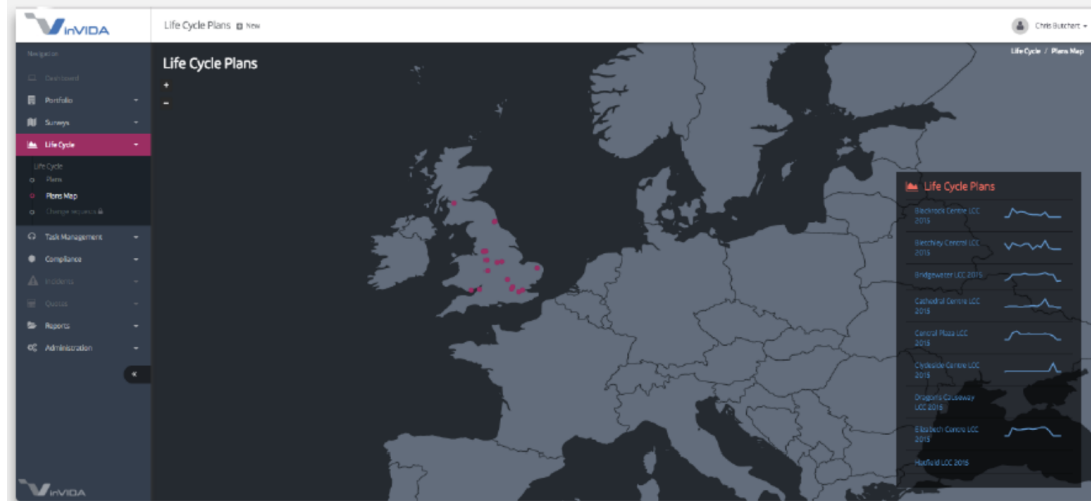
Buildings 10

Description	Address	Health & Safety Issues	Priority 1 Assets	Priority 2 Assets	Total Assets	Total Images
Blackrock Centre	Brierley Hill, West Midlands DY5 10K	3	13	14	1176	1073
Bletchley Central	67 Midsummer Place, Central Milton Keynes, MK9 3GB	0	0	13	388	1741
Bridgewater	Market Square Stoke-on-Trent, ST1 1PS	1	23	19	605	2386
Cathedral Centre	40-46 St Stephens St, Norwich NR1 3SH	0	14	1	397	470
Central Plaza	West Mall, Derby DE1 2PQ	18	164	1	1041	677

- **Direct Cobie Import of AIR data**

- **Geography**
- **Condition**
- **Risk**
- **Statutory Status**

- **Generation of Individual and Site / School-College or Campus based Lifecycle plans**

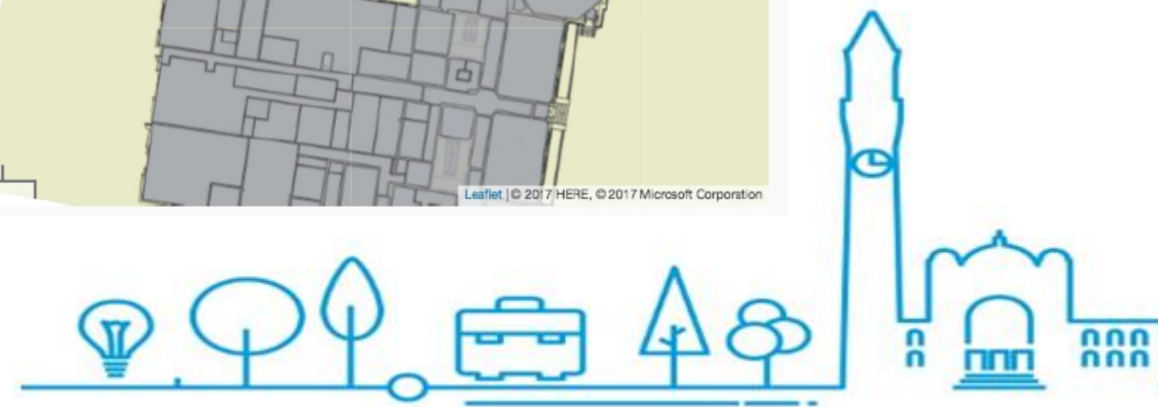


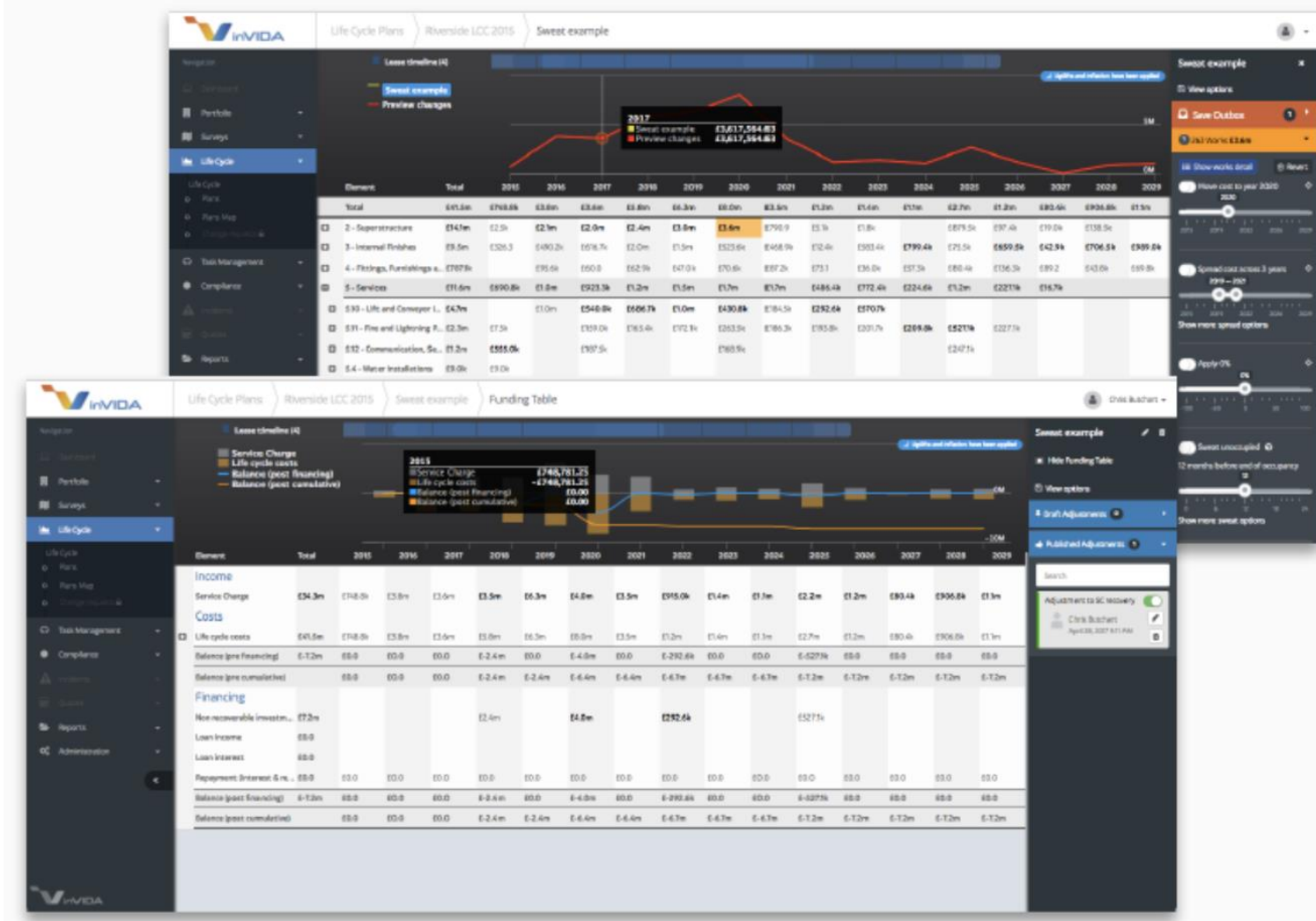


Individual Building Lifecycle detail by system or facet

The screenshot displays the inVIDA software interface for the University of Birmingham. The main view is for the '1290 : Engineering Building'. It includes a navigation sidebar on the left, a top header with the university logo and user name 'Chris Buchart', and a central content area. The content area features a building image, key statistics (Total Assets: 0, Total Systems: 453, Total Images: 2), and a table of spaces. The table lists various levels of the building and their associated metrics.

Description	Health & Safety issues	Priority 1	Priority 2	Total Assets	Total Systems	Total Images
01 Basement	0	1	1	0	51	0
02 Ground Floor	0	1	1	0	51	0
03 Mezzanine Level	0	1	0	0	51	0
04 First Floor	0	1	1	0	51	0
05 Second Floor	0	1	1	0	51	0
06 Third Floor	0	0	1	0	51	0





Customisable Lifecycle Model variations

- Risk & Statutory Orientations





Auditing & M.I Dashboards

The image displays two views of the Intu software interface. On the left, a tablet shows a mobile application with a navigation menu and a map of a shopping centre. On the right, a desktop browser window shows the web interface. The browser window includes a sidebar with navigation options like 'Home', 'Surveys', 'Dashboard', 'Lift Cycle', 'Task Management', 'Compliance', 'Reports', and 'Administration'. The main content area features a tree view of assets, a 3D architectural model of a building, and a detailed view of a 'Floor Finish (marble)' asset. This detailed view includes a photo of the floor and a table of properties:

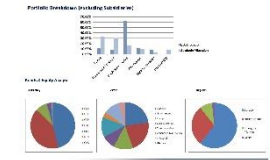
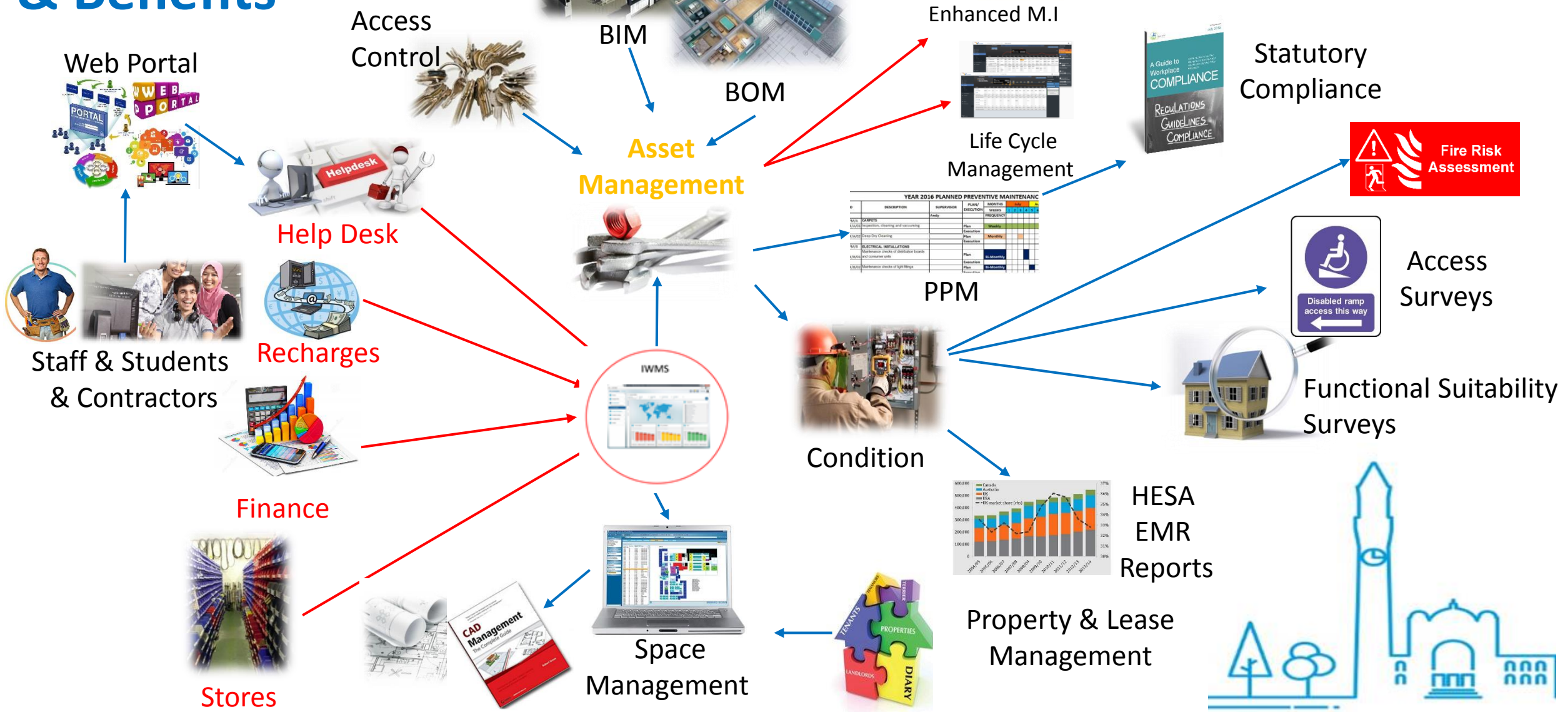
Property	Value
Description	Floor Finish (marble)
Elemental Classification	3.2 - Floor Finishes
Material or Finish	Other
Other national	Marble
Health and Safety Issue	No
Condition	A - Good
Price	4 - 1000 Items
Quantity	1
Unit Type	m2



IWMS Development & Benefits



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Enhanced M.I.



Life Cycle Management

YEAR 2016 PLANNED PREVENTIVE MAINTENANCE

ID	DESCRIPTION	SUPERVISOR	PLANNED EXECUTION	ISSUES	WEEKS	RESOURCES
001	GAZPETS					
002	Electronics, cleaning and servicing	Plan	Execution			
003	Shop Dry Cleaning	Plan	Execution			
004	ELECTRICAL INSTALLATIONS	Plan	Execution			
005	Maintenance checks of distribution boards	Plan	Execution			
006	Final and consumer ends	Plan	Execution			
007	Maintenance checks of light fittings	Plan	Execution			

PPM



Statutory Compliance



Fire Risk Assessment



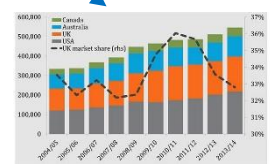
Access Surveys



Functional Suitability Surveys



Condition

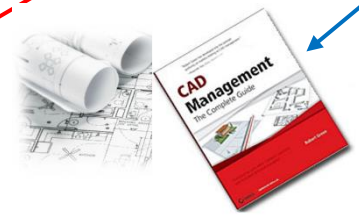


HESA EMR Reports

Property & Lease Management



Space Management



Stores



Finance



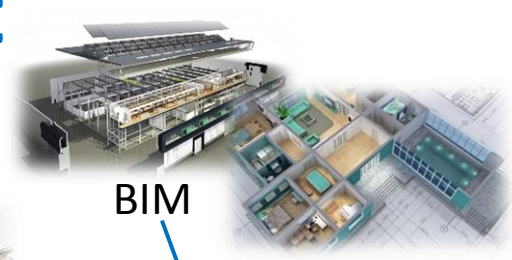
Recharges



Help Desk



Access Control



BIM

BOM



Asset Management



Web Portal



Staff & Students & Contractors



All because
we focused
on:

BIM Aligned
Asset
Management



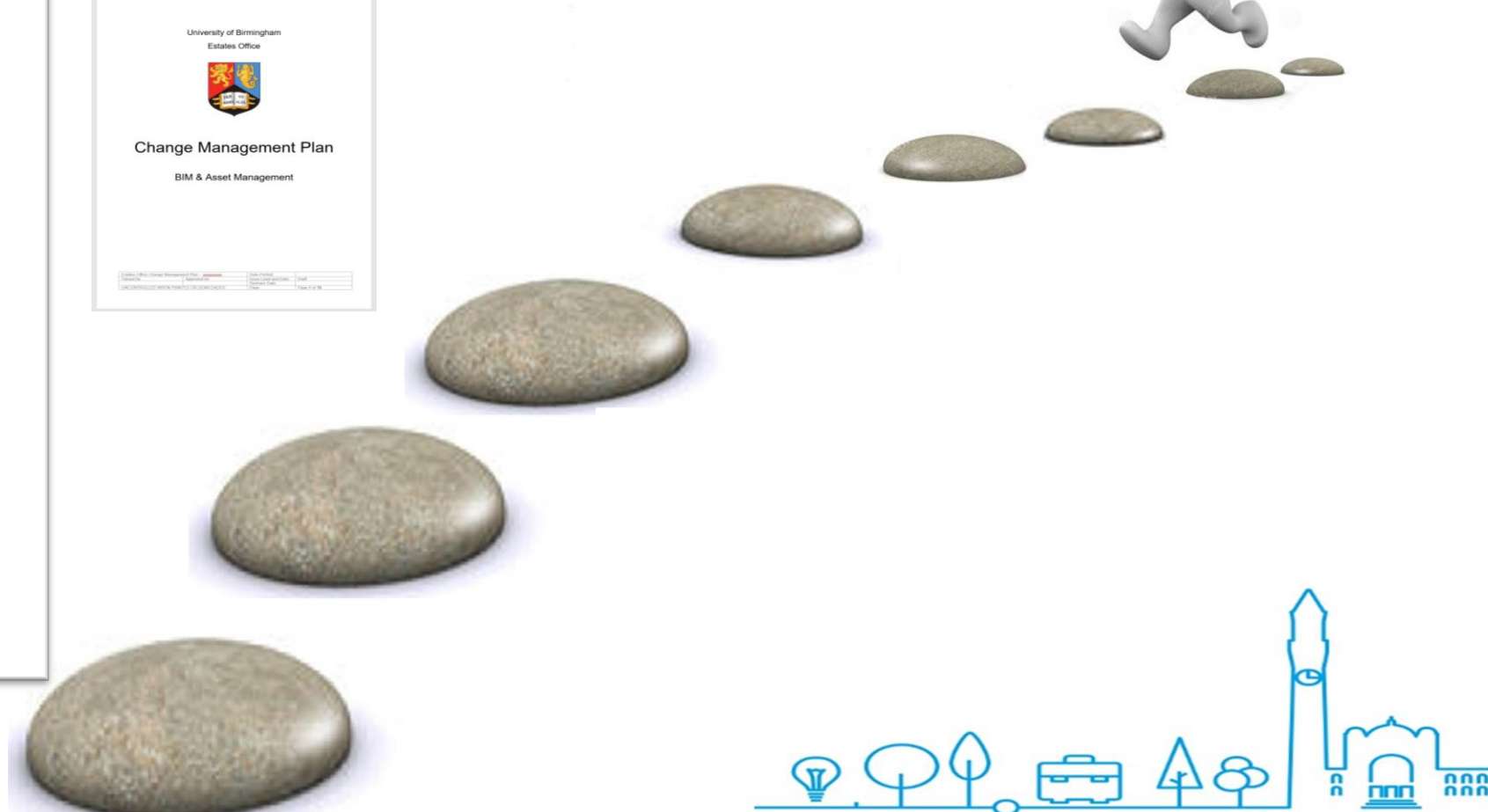
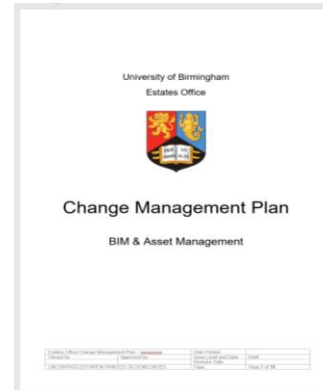


Asset Management Stepping - Stones



1. Develop a **Change Management Plan**

Contents	
1. Introduction	4
2. Identify the change	4
2.1 Type of change	4
2.2 Reason/need	5
2.3 Strategic goals/aims/objectives	5
2.4 Scope	6
2.5 Current state	6
2.6 Future state	6
2.7 Readiness for change	8
2.8 History	10
3. Change Detail	11
3.1 Human Resources	11
3.2 Finance	11
3.3 Risk Assessment	11
3.4 Training Needs Analysis	13
4. Change Strategy	13
4.1 Stakeholder Analysis	13
4.1.1 Key contributors	14
4.2 Identify Areas for resistance	15
4.3 Change Management Team (implementation team)	16
4.4 Change Strategy	17
5. Implementation	19
5.1 Implementation Action Plan	19
5.2 Communication Plan	20
5.3 Training Plan	22
5.4 Systems Plan	22
5.5 Resistance Reduction Action Plan	23
6. Ongoing Monitoring and Review	23
Appendix 1 – managing resistance	25
Appendix 2 – Resistance Checklist	28
Appendix 3 – Areas of Defined Responsibility	29





Asset Management Stepping - Stones

2. Set up your **Asset Nomenclature**

Geography	Campus (See Picklist)	Building Name	Building Number	Floor	Room Number	Room / Location Name
Asset General	Asset Category (See Picklist)	Asset Template (See Picklist)	Local Name / Description / Additional Information	Plant Reference	Asset Status (See Picklist)	
Classification	UNICLASS 2015 Subgroup	UNICLASS 2015 Section	UNICLASS 2015 Object	Equip ID Bar code No	SFG 20 / Compliance Reference	
Asset Specific	Manufacturer	Manufacturer Model	Serial Number / ID No	Condition Rating (See Picklist)	Condition Assessment Date	Installation Date
	Warranty	Replacement Value				



1. Develop a **Change Management Plan**



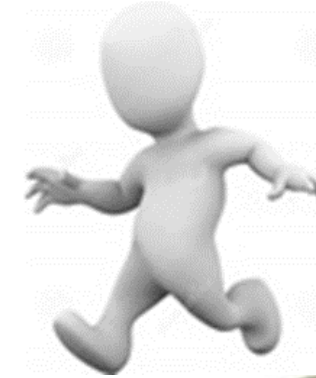


Asset Management Stepping - Stones

3. Complete a Desktop **Asset Collation** exercise



Multiple
Databases



1. Develop a **Change Management Plan**
2. Set up your **Asset Nomenclature**



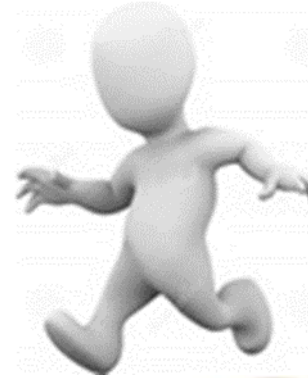


Asset Management Stepping - Stones

4. Complete **Asset Verification & Nomenclature Data GAP Analysis**



**What's
Missing?**



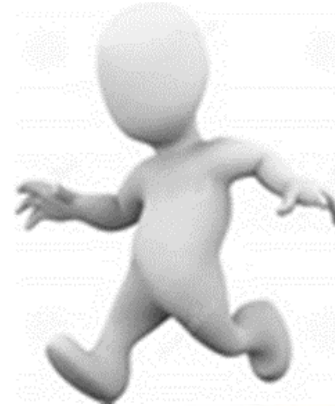
1. Develop a **Change Management Plan**
2. Set up your **Asset Nomenclature**
3. Complete a Desktop **Asset Collation** exercise





Asset Management Stepping - Stones

5. **Import Asset Data** in to your chosen CAFM/IWMS



1. Develop a **Change Management Plan**
2. Set up your **Asset Nomenclature**
3. Complete a Desktop **Asset Collation** exercise
4. Complete an **Asset Verification & Nomenclature Data GAP Analysis**





Asset Management Stepping - Stones

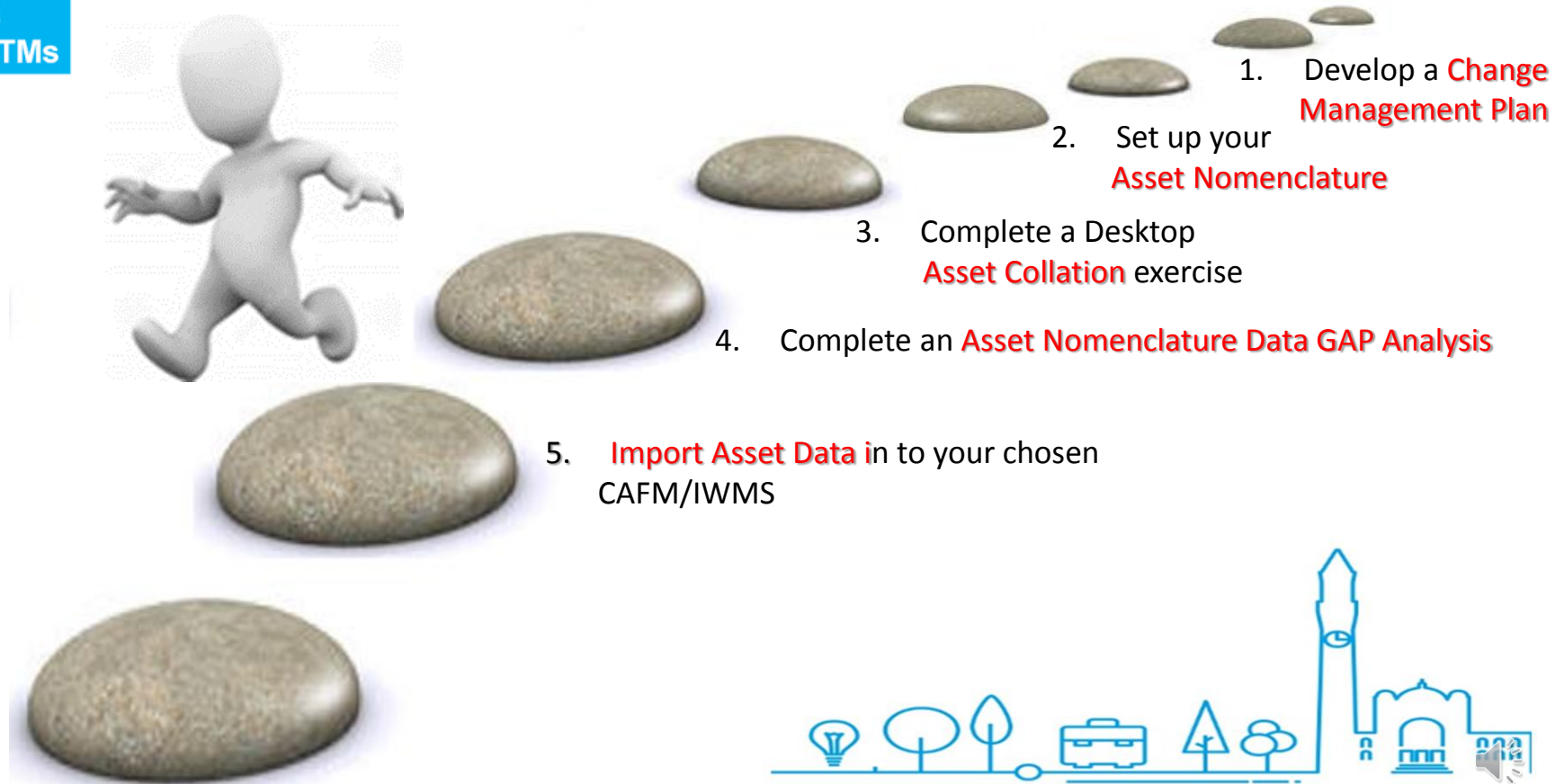
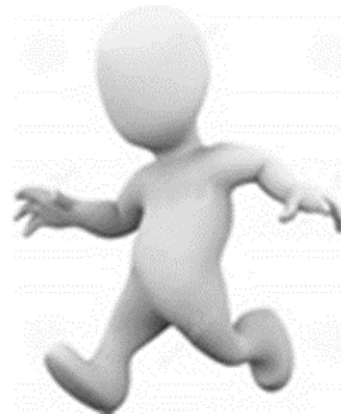
6. Set up your **Standards Library**



Health Technical Memoranda
HTMs

SFG20

BSRIA





BIM Stepping - Stones

1. Develop a **Asset Nomenclature**

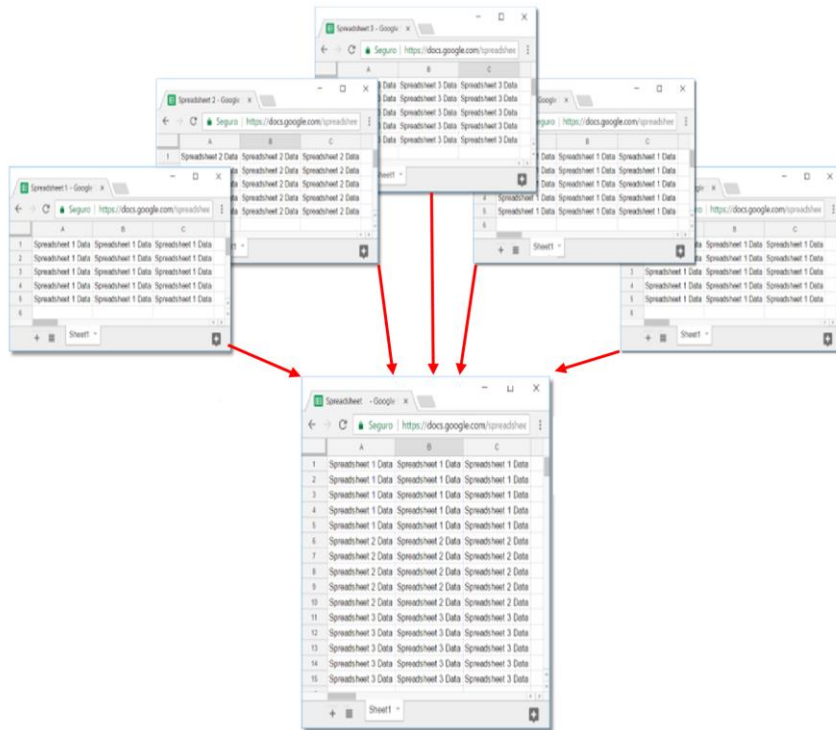
GEOGRAPHY	Campus	Building Name	Building Number	Floor	Room Name	Room Number
ASSET GENERAL	Description	Plant Reference	Asset Status	Equip ID Bar / QR	Model	Serial Number
ASSET CODING	UNICLASS 2015 System	UNICLASS 2015 Product (Parent)	UNICLASS 2015 Product (Child)	SFG 20 Reference		
INSTALLATION	Manufacturer	Condition Rating	Installation Date	Warrantee	Replacement Value	





BIM Stepping - Stones

2. Align Asset Register with Planon **PEAT /DIT** Sheet



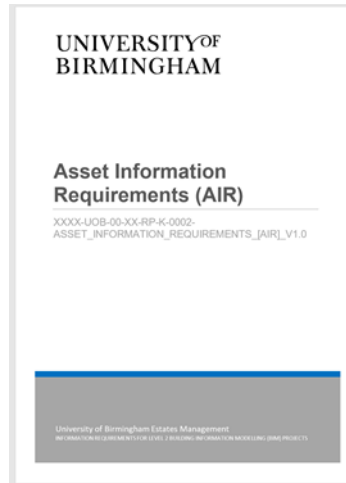
1. Develop an **Asset Nomenclature**



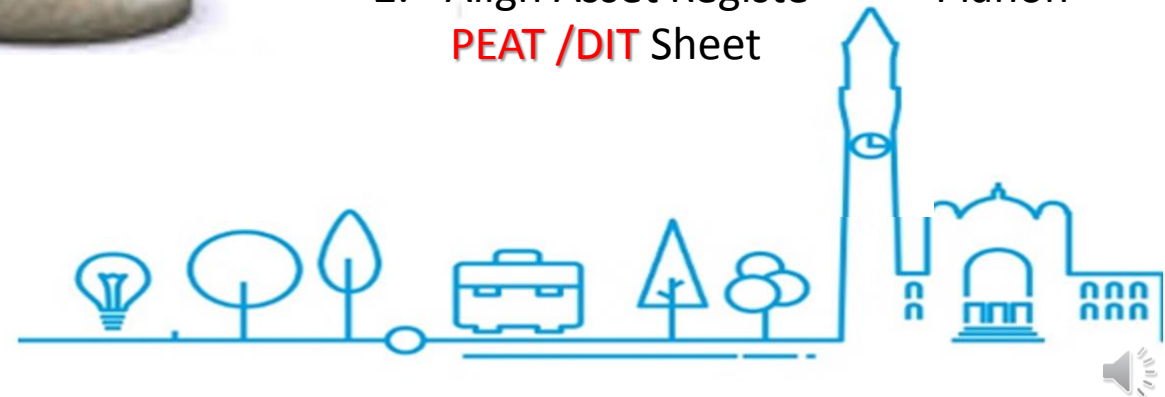


BIM Stepping - Stones

3. Amend Prelims to Include **AIR** Requirements



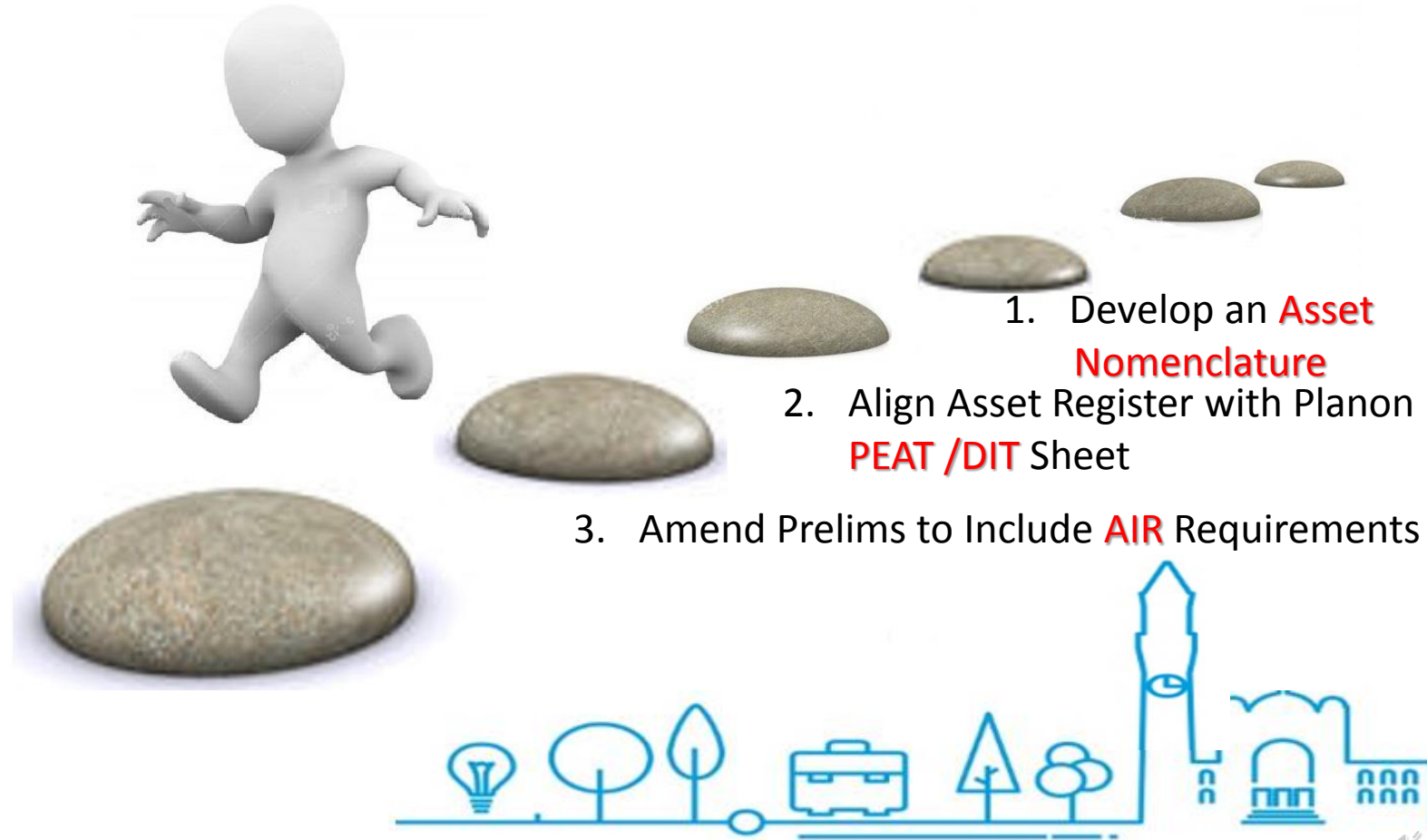
1. Develop an **Asset Nomenclature**
2. Align Asset Register with Planon **PEAT /DIT** Sheet





BIM Stepping - Stones

4. Develop **BIM EIR** Suite



1. Develop an **Asset Nomenclature**
2. Align Asset Register with Planon **PEAT /DIT** Sheet
3. Amend Prelims to Include **AIR** Requirements






BIM Stepping - Stones

5. **Import Asset Data** in to your chosen CAFM/IWMS



1. Develop a **Change Management Plan**
 2. Set up you **Asset Nomenclature**
 3. Complete a Desktop **Asset Collation** exercise
 4. Complete an **Asset Verification & Nomenclature Data GAP Analysis**
- 



UNIVERSITY OF
BIRMINGHAM



Microsoft
PowerPoint Slide Show



Thank you for Listening Are there any questions?

A “Data Legacy”

for Future Generations!



“One Version of the Truth”

