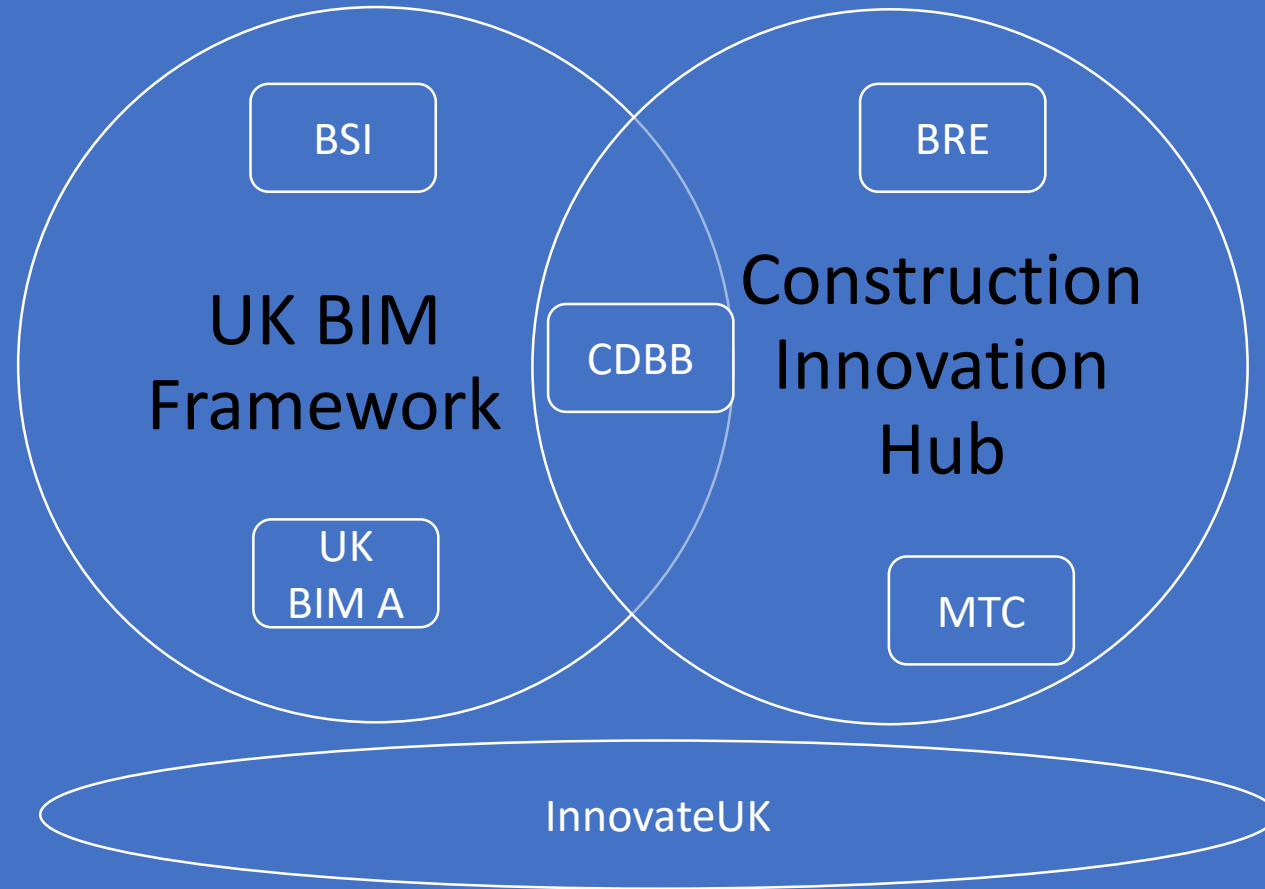


D-COM : Digital COMpliance

**D-COM: Digitisation of Requirements,
Regulations and Compliance Checking
Processes in the Built Environment**

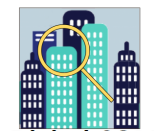
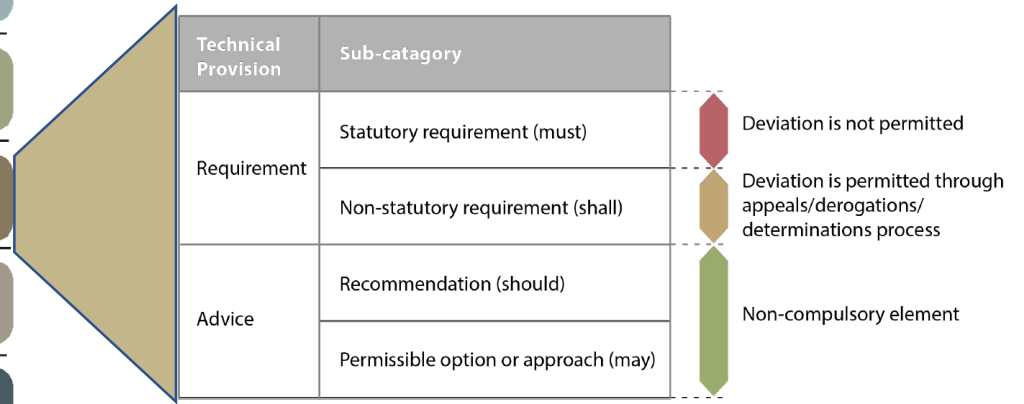
- 1. Research Network and State-of-the-Art, Survey and Research Strategy**
commissioned by Centre for Digital Built Britain
- 2. Pilot implementation**
commissioned by Innovate UK
- 3. Implementation Strategy Report**
commissioned by Construction Industry Hub

UK BIM Structures



Regulations, Requirements and Recommendations

Lifecycle Stage:	Brief and Design	Construction	In Use	Retrofit/Refurbish
User:	Architect	Engineer	Facility Manager	Building Control
Context Used in:	Advisory	Creative		Decisive
Type of Check	Regulation	Requirement		Standards
Domain:	Building	Planning		Infrastructure
Degree of Automation	Information Exchange	Validation		Partial
Target	Capacity	Performance		Safety
Regulations:	CEEQUAL, LEED, BREEAM, CDM Regulations, BRE 'Site Layout Planning for Daylight and Sunlight', PTAL	Building Regulations, Manual for Streets, London Housing Design Guide, National Space Standards	Town Planning Regulations, Manual of Contract Documents for Highway Works, Rail Design Manual, Nuclear	Design Manual for Roads and Bridges, New Roads and Street Works Act, Utility Network Regulations



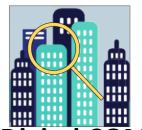
D-COM : Digital COMPLIance

D-COM: Digitisation of Requirements, Regulations and Compliance Checking Processes in the Built Environment

Insights

- There is an appetite for automation [but] automation should have human oversight.
- The near future will include **Human Aided Design** and **Human Aided Compliance**

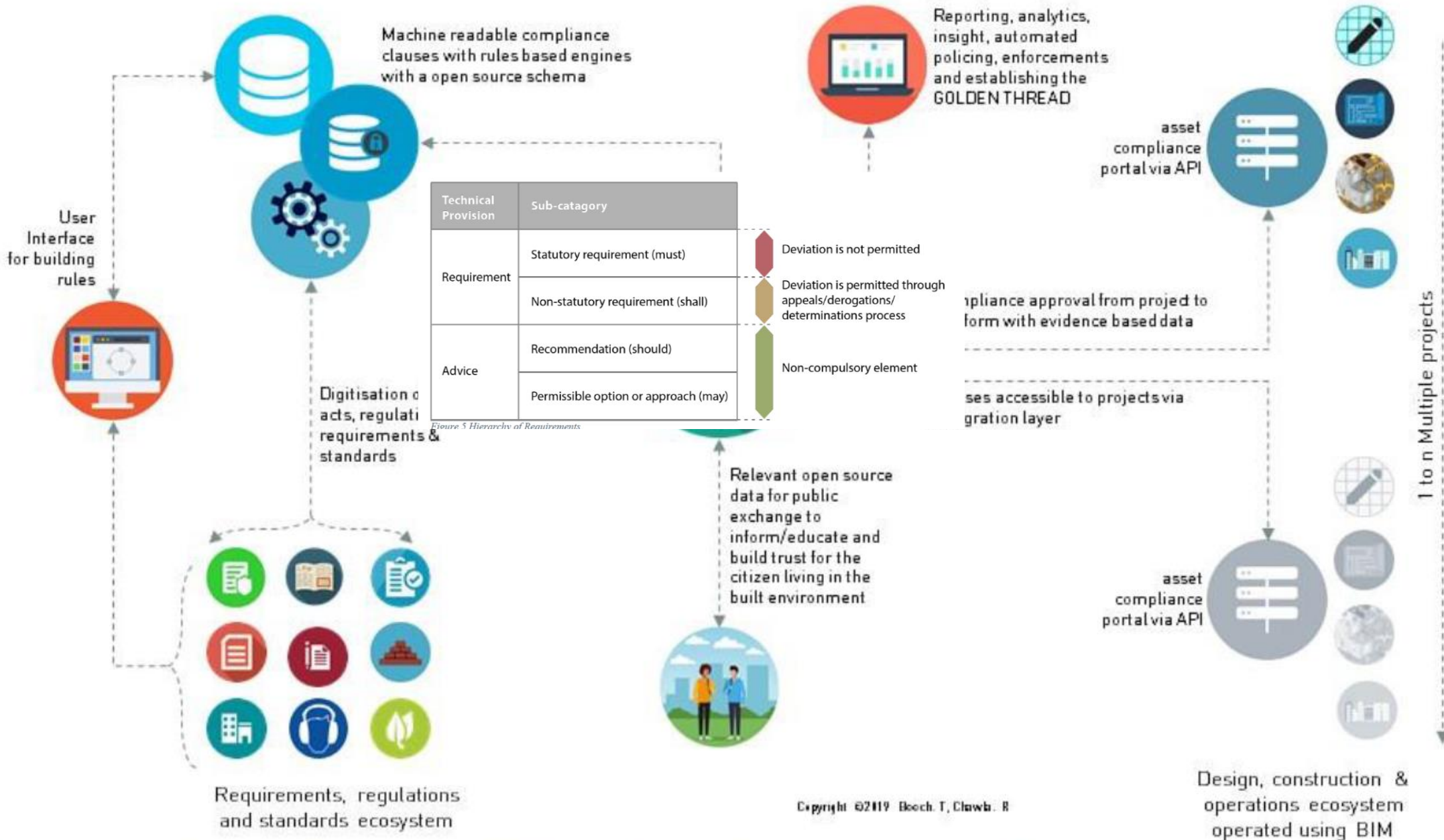
<u>Rank</u>	<u>Capability</u>	<u>Average Response</u>
1	Shared open standards for regulation clauses.	3.85
2	Ability to pre-check for compliance prior to formal submission.	3.46
3	Brief and regulatory requirements to be contractually enforceable	3.45
4	Rule processes to track decisions and uncertainty	3.36
5	Strict legal responsibility for compliance.	3.33
6	As proposed/designed and as built structured asset information (e.g. BIM) to be required for non-domestic projects.	3.26
7	Primacy of structured asset information (e.g. BIM) over documentation and drawings for the purposes of compliance submission	3.21
8	As proposed/designed and as built structured asset information (e.g. BIM) to be required for all projects.	2.85
9	Standard data and criteria for social, environment and economic impact assessments	2.83
10	Reduced costs for assessment	2.71
11	Artificial intelligence to interpret between regulations/requirements and proposals, such as natural language processing.	2.68
12	Public right to see compliance assessments.	2.38



D-COM : Digital COMPLIance

D-COM: Digitisation of Requirements,
Regulations and Compliance Checking
Processes in the Built Environment

A digital solution to capture requirements, regulations and standards to be complied with digitally, through a rule based engine



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Digital Compliance – at a glance

Approach

Principle 1



Agile

We will use rapid deployment approach to develop the platform and features quickly for use test & learn methodology.

Principle 2



Open source

We will take advantage of the open source ecosystem to build a cost effective and robust solution that meets the requirements.

Principle 3



Innovation

We will use innovative leading edge technology to deliver enhanced capabilities that will deliver against our objectives and business case.

Principle 4



Collaboration

We work closely with the project teams, authorities to ensure that all stakeholders have a buy-in to the solution and is successfully implemented.



D-COM : Digital COMPLIance

D-COM: Digitisation of Requirements, Regulations and Compliance Checking Processes in the Built Environment

Distributed services

- Vertical API integration and interoperability with current compliance tools to allow recording and sharing of trusted, validated results to a granular level



D-COM: Digitisation of Requirements, Regulations and Compliance Checking Processes in the Built Environment

- Support uploading of structured asset information for checking

Dictionary and Calculators (BIMBOTS)

Models (BIM)

Captured RRR

- Digitally capture, share and manage documented regulations, requirements, standards and their individual clauses
- Provide rule-based execution of these machine-readable regulations

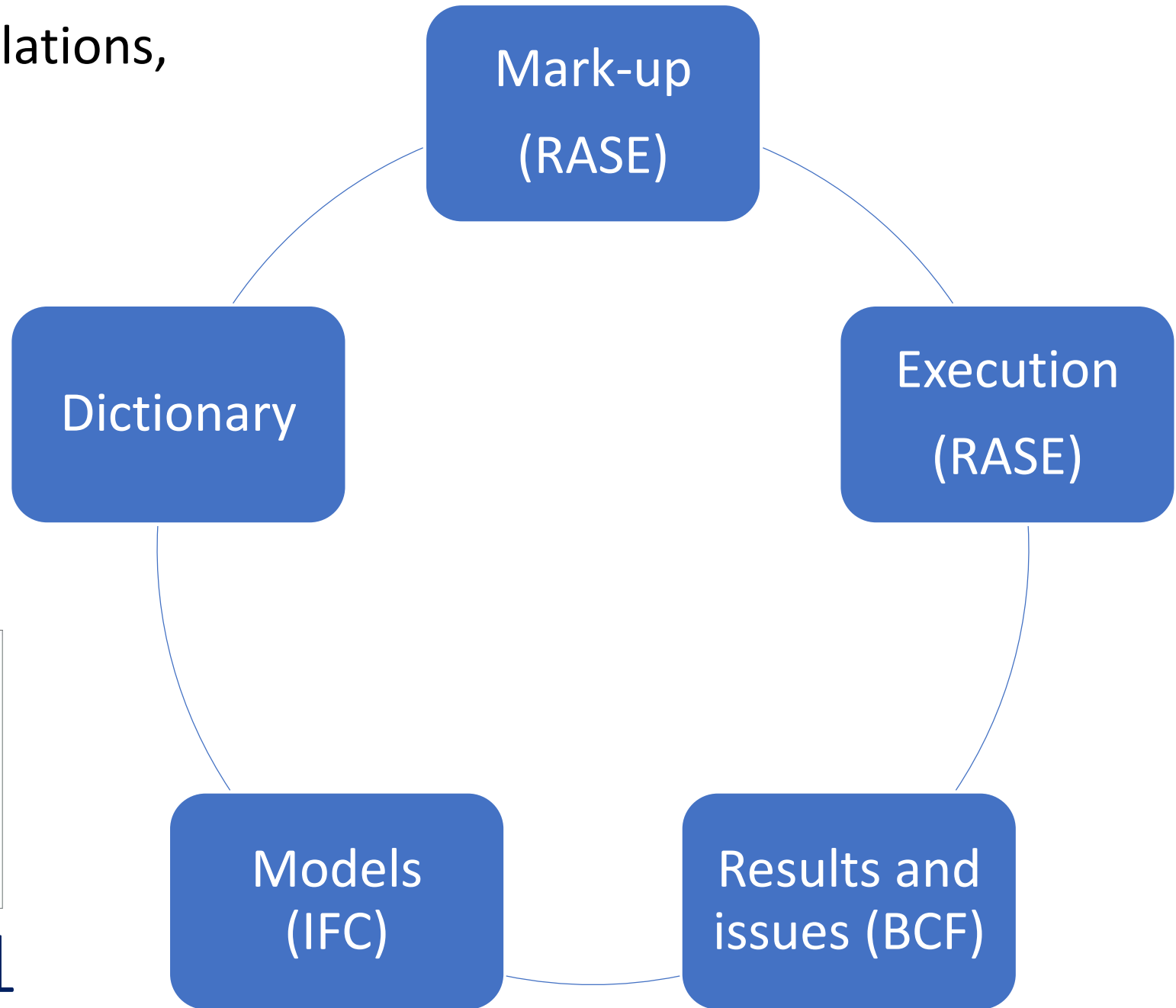
COMPLIANCE ENGINE

- Easy generation of regulatory-compliant reports and digital information and analytics, suitable for a variety of levels (government, project, general public).

Results and issues (BCF)

A workbench for regulations,
requirements and
recommendations

Demonstration
Movie
Questions?



AEC3 Require1