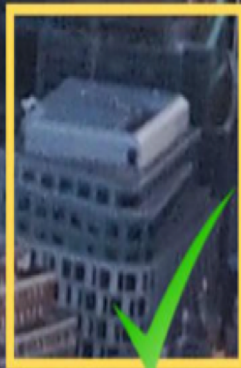


Digital Compliance DCOM Network

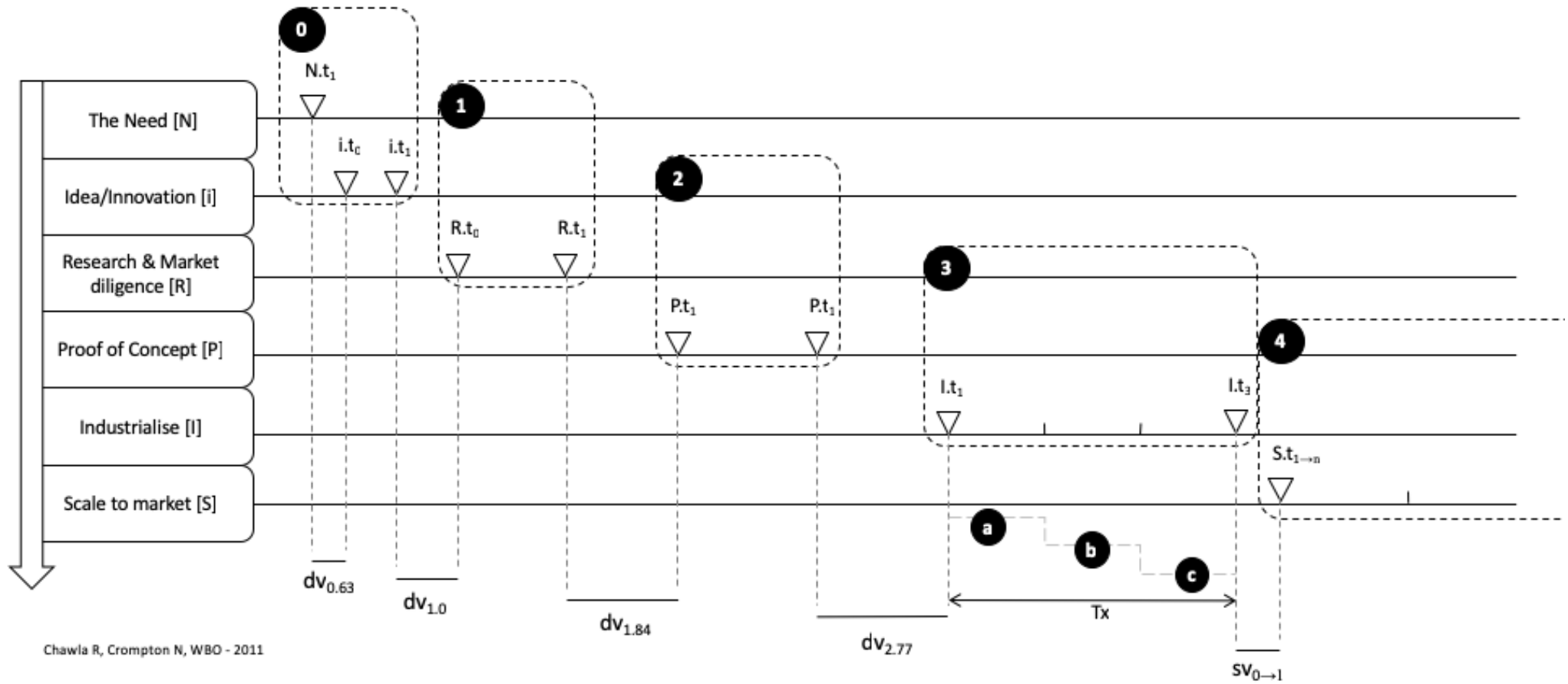




- The starting point for the D-COM roadmap is a standard innovation product/process development framework.
- This framework describes the stages that development of innovative product/process must go through.



Innovation, product or process development framework



Chawla R, Crompton N, WBO - 2011

DCOM Roadmap

07/2018 12/2018 4/2019 12/2020 2021 2024 2025

More specifically, the roadmap has the following stages:

0. Gestation of idea or innovation against a need or a market void
1. Commitment to research and market diligence
2. Development of pilot or proof of concept
3. Industrialisation of pilot or proof of concept. Subdivided into three sub-stages:
 - a. building of product or process to 90% of the finished article
 - b. trialling and testing of the product or processes - BETA
 - c.refining and readying the product or process for scaling
4. Scaling of industrialised product or process



D C O M

In addition to the capabilities documented in the roadmap we also identified a series of market forces documenting changes to direction/attitudes within the built environment sector that must be achieved for automated checking. These market forces as listed below:

- Government direction towards automated compliance checking effectively communicated.
- Required cultural change to accept automated compliance checking.
- Investment in automated compliance checking.
- Policy and transparent rules to demand chain of custody for all materials and associated data.
- Structured data for designed and built assets as opposed to documents and drawings submissions to become compulsory.
- Regulatory requirements become contractually enforceable.
- Open access building regulation clauses/standard clauses.
- Establishment of a public right to see compliance assessments - Transparency and metrics demonstrating compliance and non-compliance.
- Implementation of a strict legal responsibility for compliance with regulations and standards.
- Phasing out of negotiated regulations and increasing the transparency of regulation compliance.
- Creation of an enforcement regime for changes to assets.




D C O M



D C O M

It should be noted that there is no mention of security implications and mitigation of risk around digitisation of detailed model – as, in our view, this a key issue that underpins every aspect of digitising the built environment. Secondly, we have no specific mention of proof of concept prototype development as a capability in Table 6, this is because this is represented as part of our overall development framework (Stage 2) and **absolutely key** to the future development in this area.



DCOM

Cataloguing and prioritising of regulations that are suitable for automation.

Engaging in direct consultation with Ministry of Housing, Communities and Local Government building regulation policy unit and with Building Regulation Advisory Committee.

Developed green and white papers for presentation to government and establish funding

Stage 1 - Research

Development of rule processes to track decisions, feedback, and uncertainty

Detailed mapping of digitized regulation/requirement/recommendation processes

Digitisation to be given voice with policy-implementors

Development of an understanding of parallel regulations that indirectly impacts digitisation of compliance checking

Conducting Impact assessment of digitisation of regulations

Stage 2 – Pilot

Persistent data linkages between requirements and supplied product to prevent variation on specification.

Chain of custody of materials and data

Accommodate multiple UK data models and multiple data dictionaries

Specification of a continual feedback loop process to incorporate appeals/derogations/determinations data in reviewed regulations

Production of audience specific guidance on digitisation of regulations/requirements/recommendations.

Detailed evidence-based business model for digitization of regulatory compliance.

Explore routes to export developed toolchains to international audience and exploit international developments

Creation of standard data and criteria for social, environment and economic impact assessments

Stage 3 – Industrialisation



D C O M

Definition of precise digitized regulation clauses.

Continuous checking the quality of assets using calibrated instrumentation along with other data sources

Consistent/Structured data models and APIs (Application Programming Interface) for compliance checking

Enabling development of generative design based on regulations and requirements

Investigation of relationship between regulations and identification of overlaps and gaps

Calculation method validation services

Develop robust inspection methods/rules to reducing dependence on human inspectors

Professional development and training in compliance checking for all that interface with it – including clients and supply chain.

Stage 4 – Scaling