

Product Platform Rulebook

Rulebook Implementation Strategy Options

Part 1 (Q4 2022) & Part 2 [Q1 2023]

Issued March 2023



Report Structure

The structure of this report is deliberately kept as pragmatic and simplistic as possible to clearly set out the decisions and actions needed for stakeholders during the deployment phase of the Construction Innovation Hub programme. There will never be the perfect strategy for industry uptake but using consistent methodology with informed and transparent collective stakeholder decision-making, should offer a robust and reasonable strategy.

This report consists of two parts:

Part 1 sets out the decision making and recommended actions to be resolved during Q1 of 2023. Part 2 provides a refined and focused set of actions from the outputs of a workshop that was held in January 2023. This part of the report will inform an end of Q1 2023 Product Platform Rulebook Rollout Strategy.

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Strategy Options: Part 1 (Q4 2022)

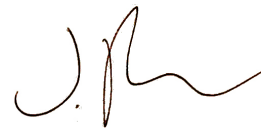
Introduction

We recognise the Construction Innovation Hub's appreciation of Better Delivery's impartial and objective approach to developing the Product Platform Strategy Options. Our approach is to methodically demonstrate the best delivery opportunities for our varied clients, regardless of construction type. We sit in a unique place between the construction supply chain and end-users. Our role is to understand, translate and integrate the various Government directives and aspirations into tangible outputs for our client base of Local Authorities, Housing Associations, Main Contractors and Offsite Manufacturers.

Whilst we have become known for our leading practical knowledge of the emerging and rapidly evolving Modern Methods of Construction (MMC) space, we like others who share our ambition to overhaul the sector, see MMC as an enabler to deliver better and not necessarily as a 'silver bullet' solution. We take a holistic approach to advising our clients, factoring in the wider eco system, value based considerations, focusing on working with our clients to define clear outcomes, performance requirements and critically embed key metrics to enable them to monitor and benchmark success or as we call it, "Better Delivery". Although we were involved in the beta edition consultation of the Product Platform Rulebook, we have not been involved in the development of version 1. Perhaps critically we are coming at this with a fresh pair of eyes, with the intent of presenting 'path of least resistance' options to take the Rulebook forward into the implementation stages as part of the legacy strategy.

It is important to highlight that this report is intended to offer options to 'lead the horse to water' without touching the horse (i.e., we are not advising the Product Platform Rulebook is changed or revised) however, we are highlighting in a constructive way, key decisions that we believe need to be made to progress and gain maximum impact.

As always, our input is entirely objective and impartial, which is entirely appropriate for the needs of this report and we thank you for the opportunity to provide this piece of strategic advice for the Construction Innovation Hub.



Jamie Parr
Founder & Director
Better Delivery

Purpose of this report

This report is intended to act as a decision-making catalyst to enable the Construction Innovation Hub's stakeholders with the necessary choices to instigate clear industry deliverables aimed at maximising the industry's Product Platform uptake. By the end of Q1 2023 there needs to be a clear roadmap to industry implementation, having identified the optimum uptake strategy within the boundaries of government incentivisation.

Fundamentally, there is an urgent need to identify and consolidate these decision points for collective stakeholder agreement, as well as the future industry actions need to increase the industry's uptake.

This report will not critique or change any aspect of the Hub's previous work, however the intent is to use the provided decision-making matrix to identify the 'lowest hanging fruit' solutions available from the Hub and other stakeholders' arsenal of previous, ongoing, and future/planned work, such as the Value Toolkit, to pragmatically expedite the industry rollout.

Acting as a strategy catalyst, this report will suggest decisions and actions/ implementation tools adding advised motivational/need to have weightings. The intent being that these decisions, actions, and weighting will be collectively reviewed and agreed with the necessary stakeholders during Q1 2023 and revised as required.

Ideally, this impartial presentation of decision making should be quickly resolved by collective review and understanding of the above workstreams/ initiatives. A 'first pass' at the decision matrix combined with identifying the other Construction Innovation Hub workstreams/outputs should reduce and focus what decision points are left to resolve and which tools need to be implemented.

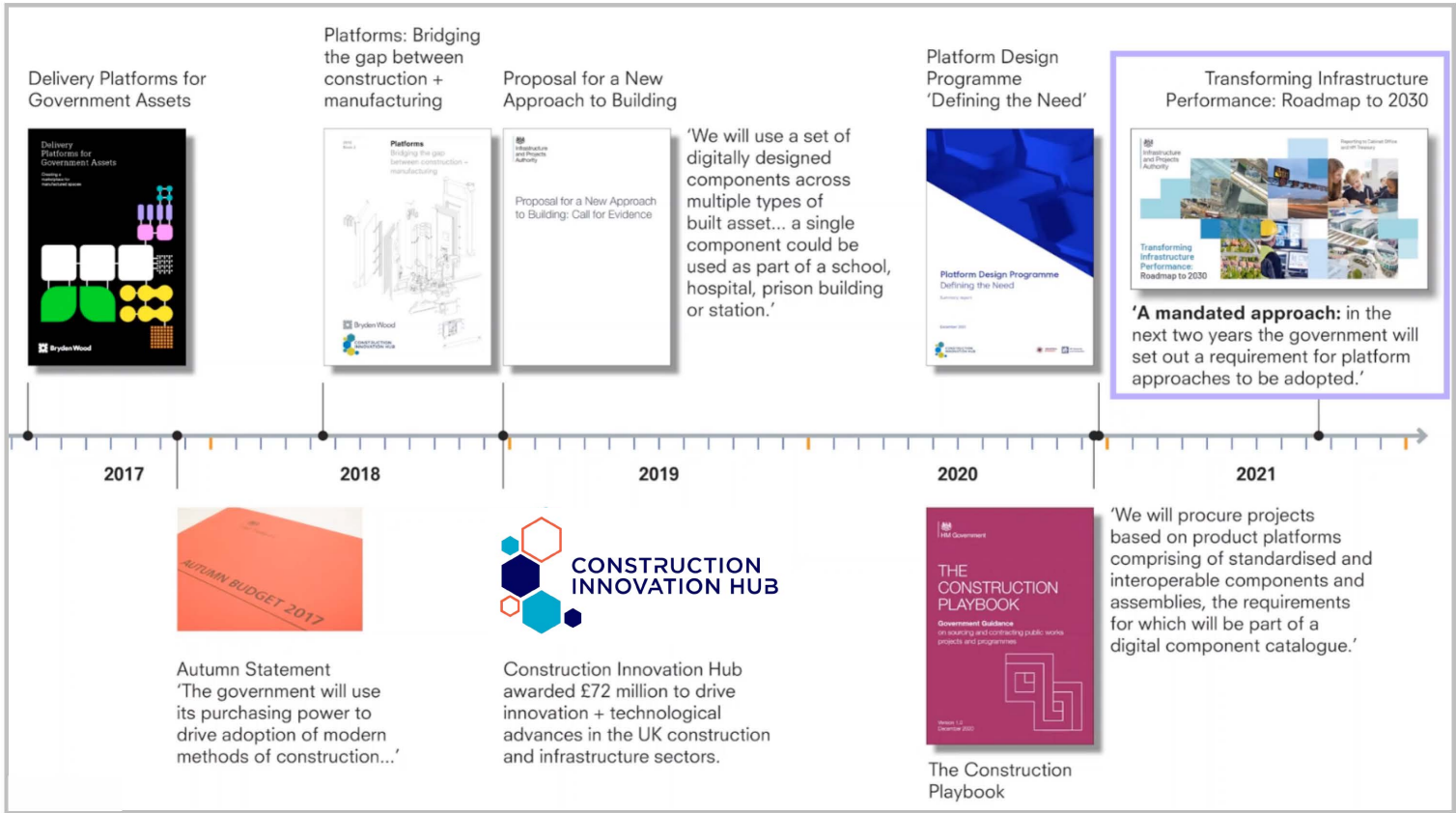


Report Requirement Background

The Construction Innovation Hub, in accordance with the Government's timeline, has taken the 14 statements of intent within the Construction Playbook and converted these into product platform logic within the Product Platform Rulebook.

There is a clear directive for the UK construction industry to adopt product platforms. The hypothesis for platform approaches was set out in the Hub Platform Programme, which then led to the Product Platform Rulebook's explanation of the platform logic required for the industry to interpret their own product platforms.

Better Delivery, although having been part of the Product Platform Rulebook beta edition industry response, is not a member of the Hub collective and has not been part of its development. This independent position allows us the opportunity to develop an objective and agnostic approach to developing bridging period strategy options. It is this holistic approach that enables us to pragmatically set out the decisions and actions.



Report Premise

Key principles

This report is not a commentary on any existing product platforms or any previous Hub outputs.

The report will:

Reinforce the product platform mantra for ingenuity and competitive advantage whilst setting the rules of the game. Therefore, keep the working data with the users and set parameters for the required measurement metrics, whilst accepting that data exchange is necessary for the selection and comparison between systems during early project stages.

Target the remarkable opportunity to tangibly measure and prove the benefits of product platforms and offsite, using industry agreed and aligned metrics rather than anecdotal or isolated examples.

The critical mass of uptake and data capture will prove the efficiency benefits of product platforms generating a self-supporting Value Proposition.

Identify Initial Government assistance to 'kick-start' the industry acceptance.

Act as a consolidated decision-making tool for Q1 2023.

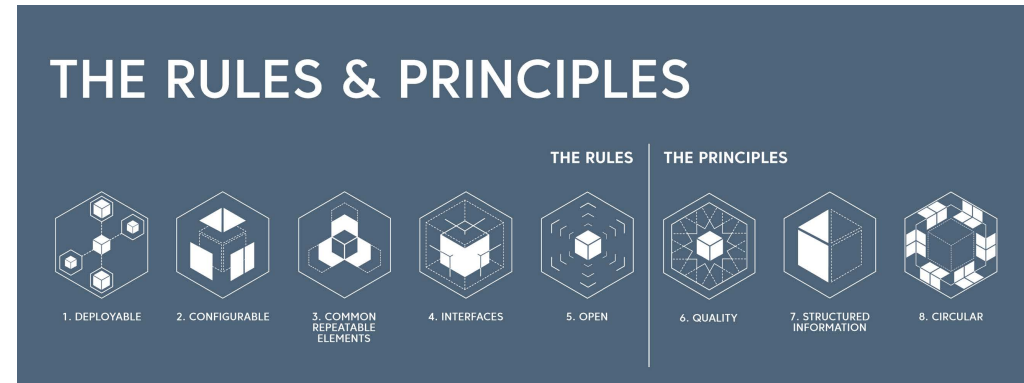
Protocols will vary depending on the strategy.

Identify methods to assure the potential platform uptake audience is not exposing themselves to unreasonable innovation leadership risk.

Identify further actions needed to implement product platform rollout.

Although the report advice/options are prescriptive, the collective chosen strategy will most likely be a hybrid solution.

This report is predicated upon awarding Government procurement projects. Private sector incentives do overlap into the realm of Government initiatives, such as using pre-approved platforms to reduce 'red tape', planning timescales etc. These considerations are not included in the report.



Rules and Principles for the Product Platform

Industry Motivation Principles

If the Product Platform Rulebook is a guidebook for platform logic, then we can use the following simplification analogy:

The simpler it is to understand and use, the easier it is to accept

The Reality of the Industry's Response

There has to be a commercial reason to invest, set up and operate a product platform approach to delivering construction projects. Therefore, we need to play devil's advocate and assume the position of the decision makers who will be taking the decision to change the way they operate.

Target Value Proposition Mantra

- What is it?
- How do I use it?
- How does it make me money?
- How does it secure more work?

Motivation comes down to two simple principles:

- They want to do it.
- They fear the repercussions of not doing it.

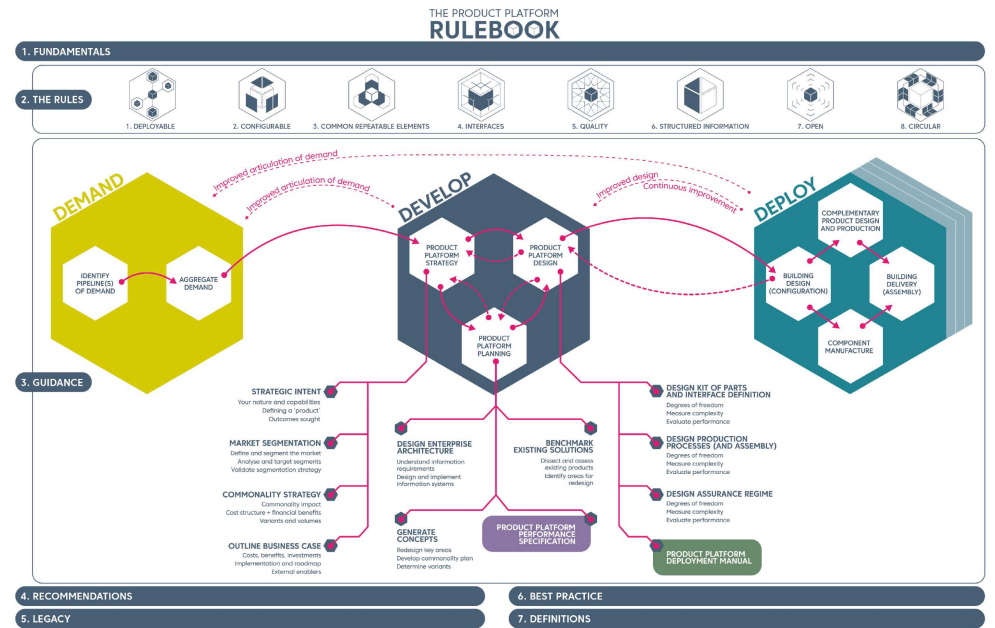


Fig. 1C. Product Platform Development Framework Structure & Navigation Aid

Navigation aid to the Product Platform Rulebook

Bridging the Rulebook to a Clear Value Proposition

This Premise at a Decision-Making Level

A decision to set up and implement a product platform offering, represents a considerable business commitment. As a decision maker, there are two positions:

1. What are the opportunities?
2. What am I missing out on?

Given the considerable financial investment and risks, this decision would need tangible data to inform the decision.

The clearer this data is provided to decision makers, the easier the decision

Mandating Platform Approaches

The “Transforming Infrastructure Performance Roadmap to 2030” highlights “a mandated approach” which, in the context of voluntary acceptance of conditions to secure public contracts, means that the Government’s procurement conditions would include some required level of platform delivery.

It is accurate to state that with public procurement, the Government sets their requirements, and the industry reacts to the conditions.

Clearly, offering a product platform mandated/performance specified requirement is a clear motivation. There is also a strategy discussion to elevate the ‘threat’ or hype of future mandating to increase the concept of the fear of missing out amongst the industry.

Self-Perpetuating Principle

Underpinning the entire premise for the introduction of industry wide product platform implementation is the simple concept that the efficiencies of platform approaches will provide the necessary evidence-based value proposition to prove the benefits needed for the industry’s uptake.

To kickstart this movement, there is a need for the Government to act as the catalyst to motivate and entice the uptake, which naturally requires very clear measurement of the value proposition. Once this critical mass of uptake is complete, then the inducement is no longer required.

A mechanism to extract, monitor and confirm a harmonised set of Value Metrics from the platform providers will be required to demonstrate the tangible benefits of using product platforms.

Ideal Industry Position

Every project is considered as a product platform solution project, unless proven to be less beneficial if delivered in a platform method.

Setting the Rules

If some modicum of success measurement and control of industry product platforms is required, then the 'Rules of the Game' need to be defined before the industry starts to play the game.

The more prescriptive/less interpretive these rules are, then the clearer the requirements are and the ability for the industry to understand and accept. Identifying the best compromise between defining the rules and maintaining individual innovation and competitive advantage is another key target for the strategy decision making.

The more oversight that's required, the more prescriptive the solution.

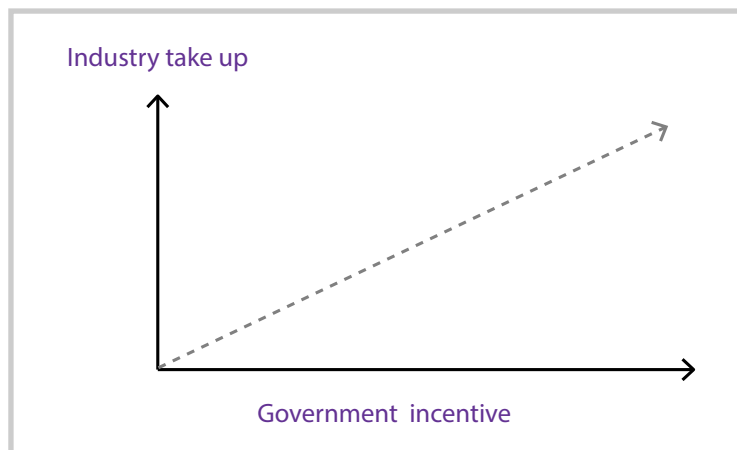


Chart: Uptake vs Government Incentive

These rules will require a mechanism, typically a Platform Annex, the structure of which would need to be aligned to the industry uptake.

All of these decisions need to be agreed and confirmed in order to reduce resistance to uptake and demonstrate parity across the industry.

The Product Platform Rulebook has successfully converted the Playbook's subjectivity into objective product platform logic. In its current form, it allows those who understand it, the opportunity to develop their own product platforms using the Product Platform Rulebook as a guide. The "Gap" between the Rulebook and the successful implementation of clear value proposition tools and protocols needs to be identified in this strategies document to ensure that the market understands and operates within the oversight of robust success criteria.

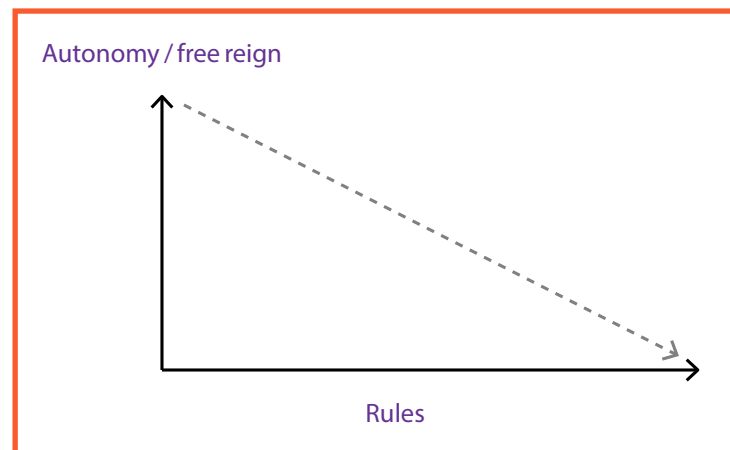


Chart: Autonomy vs Rules

Gap Bridging

Realistically, the path of least resistance is for the market to respond to prescriptive protocols set by their government clients, allowing 'free range' within defined boundaries. There is a definite value measurement methodology gap, which is currently recognised by tools, such as BS Flex 390.

This exercise will never be an exact science, therefore, having considered a manageable but comprehensive list of rule setting, we have identified the following decision points to build the structure across the gap. Bridging the gap is the key to successful implementation/industry take up.

To move forward, we need to agree the product platform rules and tools. Most decision points will be dependent upon resolving/agreeing other decision points.

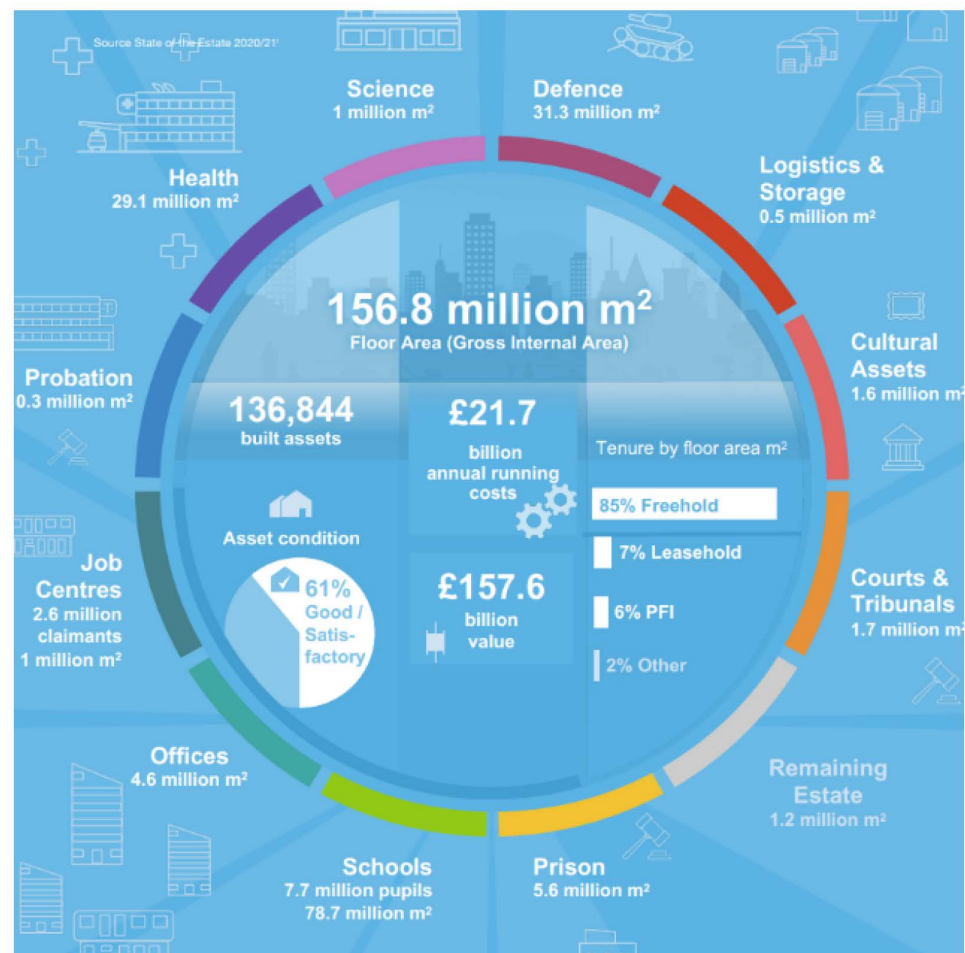
This report will set out a Decision Point Matrix for collective stakeholder agreement during Q1 2023. Due to the overlap in decision points, a clearer and more focused strategy should present itself, resulting in a considerably amalgamated list of decision points.



Decision Points

1. How do we measure value?
 - a. Use Flex 390?
 - b. Identify finite, say 8 objective and subjective criteria?
 - c. We need DATA Driven Decisions.
 - d. Is Embodied CO2 required?
 - e. What's outside of the current Public Procurement Frameworks ERs?
 - f. How do we weight metrics?
 - g. Need to agree a Value Definition Framework
 - h. Bespoke Scorecard
 - i. Data is the prize.
 - j. How do we accommodate the subjective 4 Capitals stuff?
2. How do we collate data?
 - a. Which Data do we use?
 - b. Crucial to protect individual platform data.
 - c. Easiest to use Product Productivity Taskforce
 - d. Link to PDF source: [Measuring Construction Productivity](#)
3. What constitutes a product platform?
 - a. Does a connector such as ConXtech or Vector Block?
 - b. How much platform = A Platform?
 - c. A % of project?
 - d. PMV ?
 - e. Software or needs physical product?
 - f. Do we start out as every project is a product platform solution and then Go/No Go from there?
4. How do we measure risk?
 - a. ISO 31000?
 - b. Current accredited systems?
5. How do we measure competency?
 - a. Capabilities for Modern Construction (CMC) Matrix?
 - b. Prequalification?
 - c. Construction Product Quality Planning (CPQP)?
6. How do we train people to set up their platforms and understand the rules?
7. Do we change Output Specifications?
8. Do we incentivise funding?
9. Do we guarantee pipeline?
10. Do we engage market to rate their most attractive motivation options?
11. What form of contract is needed?
 - a. CM?
 - b. Product Platform Annex?
 - c. A bespoke contract?
12. Who is the audience?
 - a. Tier 1s?
 - b. Tier 2s?
 - c. Consortia?
13. Mandates?
 - a. When?
 - b. Innovation Project Mandates?
 - c. Understand what Mandate means.
 - d. Tax breaks for R&D?
 - e. Tax breaks for manufacturers to collaborate by producing systems?

14. Do different types of estate need different product platforms?
 - a. How much variability?
 - b. Purely structural and MEP?
 - c. Highways? They're pretty much product platforms anyway?
15. How do we control Innovation vs Standardisation vs Bespoke Platforms?
 - a. As long as the requested protocols/data are provided, then no restrictions on types of platform?
16. Tolerances as per trad?
17. Specifications as per trad?
18. Is there a prescriptive BIM LOD?
19. Best Option to produce a set of product platform ERs?
20. Teams of product platform Advisors/Assessors?



Types of Government Estate

Capturing Value

Harnessing the Opportunity to Prove what “Better” Means

Realistically, there's no point in migrating an industry move to product platforms if there's no proof that they're beneficial.

Whilst many projects have demonstrated certain improvements, there is no consistent measurement across the industry. Theoretically robust academia produced methodologies have been inconsistent and 'fallen over' when disseminated to the industry. The best platform approach solutions are generating competitive advantage for private vertically integrated consortia and this methodology and data is not shared. Additionally, these projects are specific to individual products, such as hotels and Build to Rent apartments.

Better Delivery has always questioned the rigour of industry improvement claims and even when the credentials of the academia are impeccable, a 'deep dive' into the methodology reveals the results to be too inconsistent to be used credibly.

The product platform initiative offers a remarkable opportunity to set up a system to collate harmonised metrics across a spread of product platforms, thereby proving the benefits for a set number of parameters. Correctly instigated and working, it should provide the necessary value proposition data to create a self-perpetuating industry uptake.

Crucially, only a set number of rule-based metrics are required, allowing the individual platform ingenuity, sensitivity data and competitive advantage to remain within each platform provider.

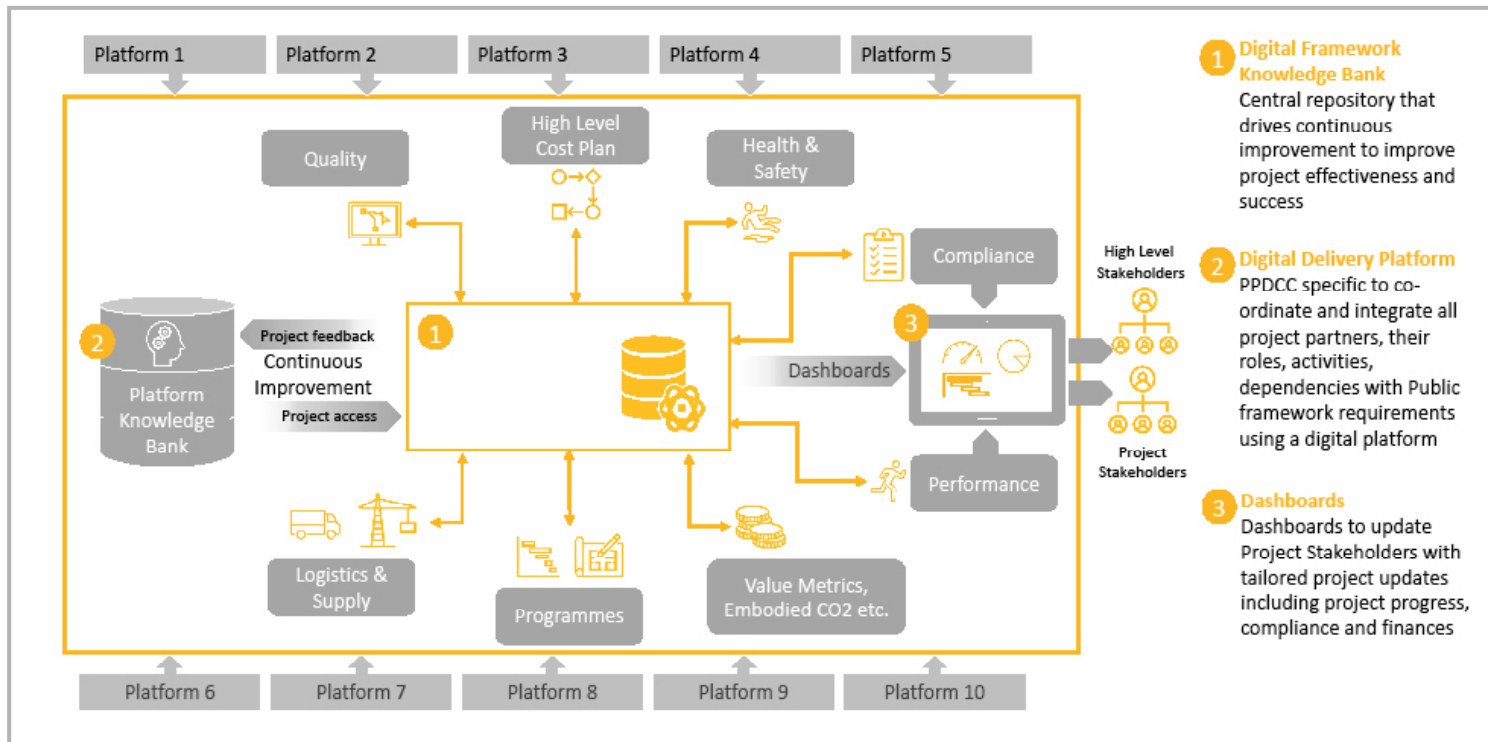
Setting value metrics with parity across platforms, will manage the MMC/ Offsite/Onsite variability of platform approaches.

Product Platform Data Control Centre (PPDCC)

A Common Data Environment will be necessary to manage the various platform data. Typically, this would be represented below in what is a suggested "Product Platform Data Control Centre".

This diagram is intended as a suggestion to outline a solution and, as with other Construction Innovation Hub initiatives, may well be under current consideration.

Product Platform Data Control Centre



Strategy Options

The following strategy options are intended to set out a scale of potential product platform take-up assistance options. This is a 'shopping list' for collective discussion and will likely result in a hybrid strategy choice (somewhere between 1 and 3)

It's reasonable to assume that the industry uptake ratio/success will be directly proportional to the incentives and completeness of the rules of engagement.

If we consider that the industry uptake success can be determined by a scale where:

1. Strategy 1 is the minimum amount of incentive/assistance launch – effectively 'here's the Rulebook, off you go'.
2. Strategy 2 is an agreed position between Strategy 1 and 3 and will be the chosen hybrid option.
3. Strategy 3 is a fully supported and incentivised launch, with prescriptive rules of engagement, specified toolkits and operating data collection/management (see the Product Platform Data Control Centre).

What does Strategy 1 Need? (The Minimum)

Issue Product Platform Rulebook V2
Confirmation of the audience

What does Strategy 3 Need? (The Shopping List)

Product Platform Rulebook V2
Confirmation of Industry Audience
Clear description confirming exactly what constitutes a product platform solution
Benchmarking of current product platform players.
Efficiency Metrics Report to entice product platform take up. Benefits of product platforms
Industry Engagement Appetite Report
Engagement of Government stakeholders to understand appetite to motivate funding and pipeline
Tax incentives for Building Product Safety Act (BPSA) products.
Tax incentives for platform R&D
Tax incentives for collaboration between product providers to provide a combined system solution
Confirmation of Incentives for funding and guaranteed pipeline
A Government sponsored product platform Implementation Taskforce.
Confirmation of all of the decision points
A mechanism to capture and monitor performance metrics across the platform providers/audience, such as the Product Platform Data Control Centre example
Produce a Go/No Go project abnormalities matrix for all projects to be considered as product platform solutions unless the matrix demonstrates it is not the optimum solution

Conclusions and Better Delivery's Recommendations

The Product Platform Rulebook outlines the logic required to implement product platforms. Whilst parameters are given, there is now a more literal requirement for a Rulebook setting out the necessary standards and regulations required to specify the industry's uptake of platforms and performance metrics.

We conclude that:

The construction industry reacts well to being told what to do in the context of public procurement.

The simpler/clearer the information, the better the reception.

Decisions need to be made. Engage via a workshop to debate the decision matrix.

A clear roadmap of industry uptake actions needs to be presented to agree and secure government uptake incentives by the end of the bridging period.

Progression will be limited unless we can prove that product platforms are a better solution and to do this we need to agree what metrics constitute value and we need a way to collate and disseminate this internally and externally, a CDE such as the suggested Product Platform Data Control Centre model is Better Delivery's recommendation.

A mechanism to review and certify preapproved platforms, with associated incentives/rewards would be Better Delivery's recommendation.

There is an obvious crossover/confusion between product platforms and other MMC/offsite/IC/PMV initiatives. This needs to be clarified and demarcated.

Forms of contract need to be agreed.

A comprehensive Product Platform Specification or Annex would be Better Delivery's preferred solution.

A workshop to debate the decision matrix combined with a list of other Hub tools/outputs should provide a clearer understanding of the preferred strategy, usable tools and future actions.

Evidently, several 'Industry Controls' need to be developed. It seems practical to set up an independent and unbiased product platform taskforce, with a clearly defined remit and scope, agreed by the end of Q1 2023, with all of the future actions needed to produce the agreed rules, tools, assist the industry's understanding and provide the necessary platform preapprovals.

Appendices

Decision Point Matrix

Product Platform Data Control Centre example

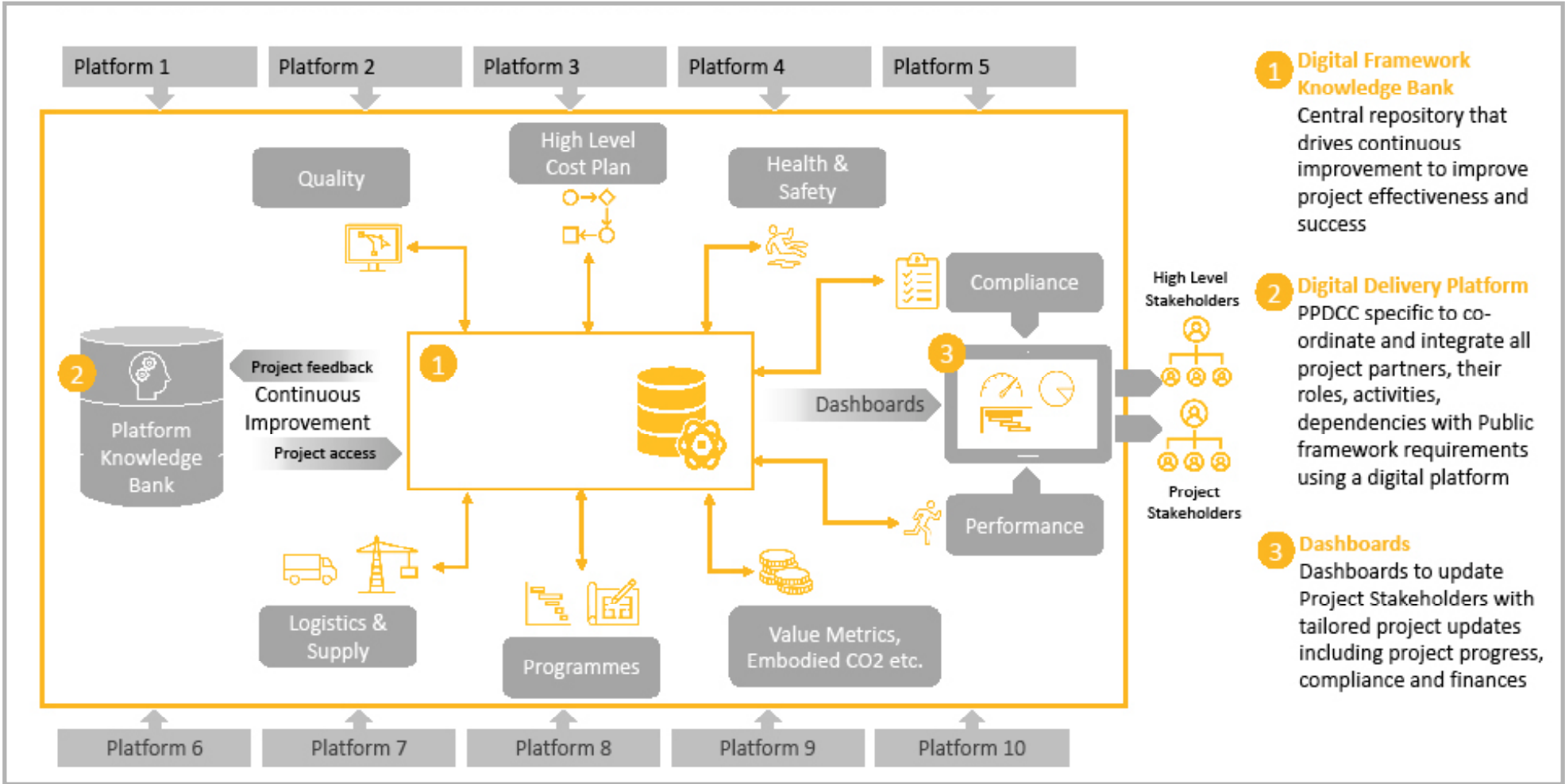
Suggested Audience Engagement Questionnaire for Q1 2023

Decision Point Matrix

Decision Point (Rated 1 to 10 Lowest to Highest)	BD Suggested Industry Need Rating	Collective Adjusted Industry Need Rating	BD Suggested Government Assistance / Input Rating	Collective Adjusted Government Assistance / Input Rating	Decision Point Premise
Value Measurement					
Specify a Value Definition Framework - a bespoke set of Value Metrics, Cost, Programme, Safety, Embodied CO2 etc.	6		3		In order to measure "better" or the benefits of a Product Platform approach, an agreed set of value metrics needs to be managed across the platforms.
Agree the premise that all decisions are quantitative data driven.	6		3		The industry responds well to quantitative data. Subjective criteria will need to be converted to tangible measurables and confirmed in the rules.
Clear demarcation of value measurement that sits outside of traditional construction measurement.	6		3		Some overlap of value metrics will inevitably result. Confirming the exact parameters of what constitutes a Product Platform will be necessary to address this decision point.
Should there be weighting of metrics?	1		7		Whilst potential platform audiences will vary in size and capability, it is far more robust, from a methodology perspective, to apply the platform rules with parity. Agreeing and managing a weighting premise will be challenging and onerous.
Agree the premise that proof of better data is the 'prize' when it comes to demonstrating the value prop of platforms	7		2		Simple premise, but will need to override other decisions that might detract from the robustness of data collection.
Data Collection and Management					
Agree premise that individual platforms/audience IP and sensitive data remains within their purview and only a determined set of value/performance metrics is required.	8		3		Ensuring that Platform investment and IP, effectively competitive advantage, is maintained by the audience is a clear enticement for the industry uptake.
Use Productivity Taskforce Data Collection Criterion?	5		2		The Productivity Task Force work appears to be a simple solution to data capture. Perhaps select a finite number
Agreeing What Constitutes a Product Platform. Agree the Parameters of 2.3 of Rulebook					
A software only or physical solution?	10		3		There are some current industry perception that in silico solutions constitute platforms. Whilst the PPR logic is given, a simpler set of parameters is needed to specify the industry.
Set out a finite list of Rulebook Categories without the interpretation of the PPR.	10		5		The minimum requirement for industry uptake is the clear understanding of what it is they should be doing.
Use PMV to measure Platform eligibility?	5		4		Industry has a head start understanding of PMV. Perhaps a simpler solution. Some sort of bespoke methodology required.
How do we differentiate between MMC/IC/Offsite and Product Platforms? What's the overlap?	7		5		When does offsite become a Platform? How do we align the Levelling Up MMC Categories with Platforms?
Should Gov specify that every project should be considered as a Platform solution unless demonstrated to not be the optimum solution?	9		9		Effectively, the "mandate" that is highlighted on the roadmap. An assessment matrix, based upon GO/NO GO gateways would be required. This methodology would need considerable input and have to accommodate project specific abnormalities. Perhaps plagiarise from Autodesk's IC Maturity Assessment?
Use a Product Platform approval panel to assess/rate and approve platforms?	8		8		Perhaps a part of a Platform Taskforce. Would need an assessment methodology and objective review/scoring.
Instigate a Product Platform Preapproved accreditation	9		8		The industry likes preapproved schemes. Clear motivation/rewards for having preapproved platforms would need to be specified.
Use a current platform and use it as the analogue for preapproval	5		5		Might limit industry appetite, potentially unethical, simpler to instigate.
Risk Management					
What risk management protocols are required from the audience for product platforms?	9		3		An agreed set of requirements need to be specified. Do we use existing risk management systems, ISO 31000? Underwriting of Product Platforms a blocker?
Audience Competency to Use Platforms					
What method do we specify for competency?	9		3		Perhaps the CMC Matrix? CPQP or a bespoke platform matrix?

Training the Audience					
Provide an industry understanding/training for Product Platforms?	5		7		Depends upon how much detail is given via other decision points, such as a comprehensive set of Requirements, therefore simplifying the understanding will reduce the amount of training/education input
Specifying Product Platforms					
Should We Produce a Bespoke Set of Product Platform ERs/Output Specification?	9		8		Clear and direct prescriptive expectations covering all reasonable parameters of Product Platforms, in accordance with other forms of construction would be BD's most effective solution advice. Requires considerable input to produce, but simplistic for the
Do we leave the Platform Rules open to interpretation?	5		7		BD suggests that this is at odds to the standardisation of platform approaches. Initially, less input for oversight, but a mechanism to validate for preapproval will be required.
Incentivising					
Do we offer financial assistance to set up PPs?	5		8		Obviously dependent upon the amount. Important to gauge the industry in Q1 to better understand. Initial BD discussions put this below pipeline enticement.
Do we award multiple project frameworks to preapproved platforms?	8		8		Clearly the greatest motivator for a standardised platform approach is repeat project guarantees. It offers economies of scale and easy platform investment decision making. Important to gauge the industry motivation in Q1
Do we provide a predictive 'these are the benefits if you use product platforms' report?	4		5		The scrutiny of this report would need to be rigorous. There are many claims of 'better' but no robust proof of how the potential equals results.
Do we offer tax incentives to product suppliers who collaborate with other suppliers to produce system solutions?	5		5		Overcomes some current competition issues. Promotes RGD.
Do we float the idea of short-term 'mandating' of platforms to secure public projects?	5		5		BD's other industry research has identified a tangible FOMO amongst Tier 1s. Many are already strategising the incorporation of offsite capabilities within their group. Some targetted alignment of the clear crossover is advised.
Do we engage the audience in Q1 to better understand their motivation?	3		2		A simple closed questionnaire with, say 20 potential audience recipients would be an easy and quick way to inform Q1 decision making.
Form of Contract					
Do we need to change the form of contract to suit Platforms?	5		6		Reducing the audience risk via, say CM, such as The Forge, would be more palatable for uptake. Ideally some ongoing CIH work will address this.
Who is the Audience?					
Need to confirm the intended platform providers?	10		2		Need to determine if there are any limitations? Tier1s, 2, Consortia?
Platforms for All Estate Types?					
Do we need different platforms for different types of estate?	9		3		Fundamental decision. What estate types do we compare? Do we reduce platforms to, say, 5 types of gov estate? What estate already uses platform approaches?
Tolerances					
Is there a need for different tolerances to trad?	4		2		Manufacturing mindset/approach may be incompatible with trad tolerances. Not dissimilar to offsite interface issues. BD suggestion to caveat potential interface issues rather than specify them.
BIM Requirements					
Is there a minimum LoD requirement?	3		2		BD would recommend that there isn't a prescriptive LoD. Needs to be considered against existing specifications. It is unlikely that a platform approach would not provide a reasonable level of BIM maturity.
Product Platform Taskforce					
Set up a finite period, say 3 year. Platform Taskforce to assist industry uptake and review platform submissions/preapprovals.	7		7		Seems as though an oversight and assistance vehicle is required. Theoretically, if the data capture and proof of better data is performed correctly, then this should be a transient requirement.

Product Platform Data Control Centre example



Strategy Options: Part 2 (Q1 2023)

Strategic Roadmap to Approved Product Platforms

Part 2 Report Evolution

Part 1 of this report identified the decision making by government stakeholders and the tools needed to implement a successful uptake strategy.

We have worked with the Hub's programme as effectively as possible to:

Reality Check the Part 1 Decision Points against Industry Leaders during Construction Innovation Hub Open Day Workshops on the 30th January 2023

As recommended in Part 1, the Industry Engagement Questionnaire has been refined and issued to the potential platform audience to capture their feedback and inform Part 2 of this report

An Industry Uptake Platform Taskforce scope of services/charter is identified in this report to develop the required toolkit of rules, specifications, metrics and data environments needed to manage and motivate the uptake



Roadmap Premise

Know the destination, see the journey, is a very useful maxim in this, seemingly, very complicated challenge to affect changes to the way UK Government estate is delivered.

If the destination is:

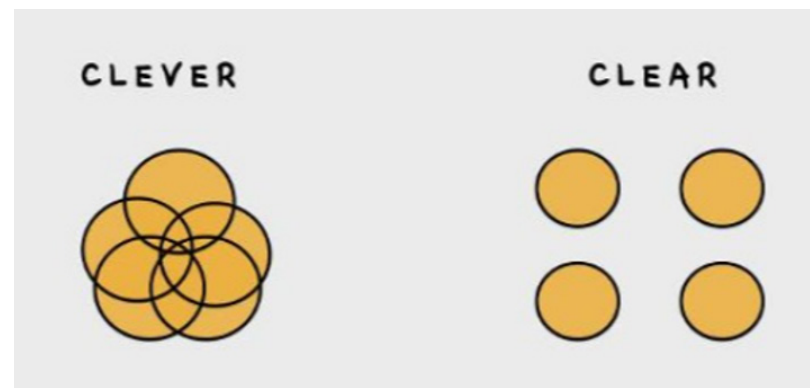
All Government Estate projects will be realised by Approved Platform Providers unless analytically proven to not be the optimum solution.

There's a lot of 'grey' involved to resolve.

Currently, we have a lot of very clever work that's been produced to address areas of 'grey'. The next step is to assemble a kit of parts from this previous work:

- An analytical method of assessing Approved Platforms vs Optimum Solution
- An analytical method of assessing and approving Platforms
- A defined set of performance metrics to measure, with parity, every Approved Provider's Platform
- Provide data driven proof of platform benefits to effect industry change

We need to convert:



Construction Innovation Hub Innovation Day workshops

About the session

The Hub hosted an Innovation Day at MTC on the 30th January 2023. As part of this day, two sessions of key industry attendees were separated into round table groups headed by representatives of Government Estate types, MoJ, DfE etc.

Each 1 hour workshop was intended to identify how Product Platform industry uptake would affect:

1. The End State
2. Demand
3. Supply
4. Measurement Metrics



 CONSTRUCTION INNOVATION HUB

Outputs
Construction Innovation Day Workshop:
The future of Platforms in Construction
30 January 2023

 with  

17 March 2023

Summary

- On 30th January 2023 we held a Construction Innovation Day with the aim of bringing industry and government together like never before.
- The day gave industry and government the opportunity to work through projects together and share ideas and solutions for the future.
- As part of the agenda we held two sets of workshops entitled **The future of Platforms in Construction** with five tables focused and led as follows: -

1. **Education with DfE:** Adam Jones with support from Sue Patterson (MTC) and Kayleigh Hadjimina (Hub)
2. **Offsite Framework with Crown Commercial Services:** Kumar Kairamkonda and Mike Kennedy-Gill (CCS) with support from Emma Carroll-Walsh (MTC)
3. **Product Platform Rulebook with BEIS:** Fergus Harradence (BEIS) with support from Ron Lang (Atkins) and Ben Carlisle (Mott MacDonald) and Jonny Reid (MTC)
4. **NHP (New Hospitals Programme):** Tom Stocks (NHP) and Mike Shaw (Mace) with support from Peter Morgan (MTC)
5. **Ministry of Justice :** Gareth Jones and Nour Sidawi (MoJ) with support from Liam Hill (MTC)

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Questions

- What is your clear vision of the end state?
- What are the demand-side opportunities/challenges?
- What are the supply-side opportunities/challenges?
- How will you measure improvement? Productivity, quality etc...?

Education with DfE

Clear vision of the end state

- Clear vision of the end state
- Moving from current state to a 2023 future state
- Standardised design approaches moving towards mass-customisable platform solutions
- Creating space for innovation
- Creating consistently high-quality learning environments
- Optimising the design of teaching and learning spaces to align with evolving educational requirements

Demand-side challenges

- Cultural attitudes
- Resource availability
- Variable estates
- Established procurement practices based on traditional delivery
- Over-complexity

Demand-side opportunities

- Policy leadership
- Pipeline of projects
- Sharing of risks
- Combined problem solving

How will you measure improvement? Productivity, quality etc...?

- Value Toolkit
- Benchmarking
- Cross government metrics for construction
- Post-occupancy evaluation & feedback
- KPI related to desired outcomes

Supply-side challenges

- Challenging market conditions
- Skills shortages & capability
- Resistance to change
- Competitive interests leading to lack of collaboration

Supply-side opportunities

- Benchmarking
- Learning from other industries (automotive and aerospace)
- Increased collaboration
- Combined problem solving
- Investment in people, skills, and processes

Offsite Framework with Crown Commercial

Clear vision of the end state

- Nobody saying "what's in it for me?"
- A framework should be an enabler (for opportunity and innovation)
- Business as usual through information management and BIM learning
- A point where we can capture our learning and begin continuous improvement with a supported framework for capturing it
- Data informed decision-making and agile thinking
- Balanced scorecard approach based on the Value Toolkit

Demand-side challenges

- Breaking through existing barriers of procurement rules
- New integrated forms of contract = Trust
- Capturing innovation and certifying
- Access to good suppliers

Demand-side opportunities

- Organisations committed to continuous improvement, strategically
- New integrated forms of contract = Trust
- A good level of profit for the risk they are taking
- Shift business model to integration led through digital design

How will you measure improvement? Productivity, quality etc...?

- Data point system for procurement
- 'Best quality' approach to organization selection and management
- Industries' standard measurement for assets of Value Toolkit
- Measure improvements in suppliers against above aspects
- Invest in R&D – Test, pilot and track benefits across whole lifecycle (not cost)
- Programme performance measures

Supply-side challenges

- Capability for Modern Construction (CMC)
- Supplier targets lead with values and continuous improvement

Supply-side opportunities

- Early stakeholder engagement with the right people
- Collaborative drafting of 'Terms of contract'
- Capture learnings and adapt

Product Platform Rulebook with BEIS

Clear vision of the end state

- Clear vision on what we want to achieve and how far does government get involved
- What does a procurement model look like? Social value v building
- Product Platforms enabling MMC / Offsite
- Manufacturers fully utilised factories and delivering diverse products
- Standardisation not being a 'dirty word'
- Data driven supply chain

Demand-side challenges

- How do we give confidence to supply chains and invest in factories
- Product lifecycle management
- Difficult for new entrants

Demand-side opportunities

- Local and national governments coming together
- Automotive "Platform Groups"

How will you measure improvement? Productivity, quality etc...?

- Reduced carbon
- Productivity – drives other benefits
- Government productivity
- Errors and waste
- Standardised v bespoke
- Social value benefits

Supply-side challenges

- Disaggregated – do we want this supply chain?
- .. And to what level

Supply-side opportunities

- Manufacturing approach
- Common repeatable elements based on specs
- Reduced product variants

NHP (New Hospitals Programme)

Clear vision of the end state

- Mutual dependency

Demand-side challenges

- Financial
- Controlling risk
- Developing collaboration
- Meaningful early involvement

Demand-side opportunities

- Supply chain working with you (rather than 40 plus hospitals)

Supply-side challenges

- Investment
- Appetite for risk
- Financing

Supply-side opportunities

- Cross-sector involvement
- Investment

How will you measure improvement? Productivity, quality etc...?

- Measuring outcomes in a new way rather than time / cost / quantity
- Value-based consistent outcomes

Ministry of Justice

Clear vision of the end state

- Reduce risk of re-offending
- Rehabilitate environment
- All projects procured as a product platform, unless proven to be not the most optimal solution
- Creating a supply chain platform for products servicing all government departments
- Standardised baseline requirements across government departments
- Utilising cross-government learning to deliver increased value.

Demand-side challenges

- Maturity
- Pipeline and longevity of demand
- Long-term vision (politicians/government departments)
- Motivation
- Common understanding of DfMA and other terminology
- Cross department collaboration

Demand-side opportunities

- Cutting waste
- Lessons learned
- Job satisfaction
- Consistent pan-government metrics/data

How will you measure improvement? Productivity, quality etc...?

- Waste
- Performance – Biddings
- Task force that measures the performance of platform approach
- Societal outcomes – Rehabilitation / reoffending
- Value Toolkit

Supply -side challenges

- What am I being asked for, and why
- IP issues and collaboration
- Financial and Insurance's recognition of alternative methods of delivery
- Clear benefits (ROI, pipeline)
- Disruption of current business model – how to make a profit
- Risk/accountability

Supply-side opportunities

- Increased certainty/clarity / cost certainty
- Innovation

Organisations, departments and companies taking part in the workshops

- AMRC University of Sheffield
- Akerlof
- Algeco
- Aliaxis UK
- Atkins
- AutoMutatio
- Balfour Beatty
- BAM Nuttall Ltd
- BD Solutions
- BEIS
- Better Delivery
- BMI Group UK
- Bryden Wood
- Built Environment - Smarter Transformation
- CIOB
- Constructing Excellence North West
- Coventry University
- CPA
- Crown Commercial Service
- Defence Infrastructure Organisation (DIO)
- Department for Education
- Elsewedy Electric
- Empirisys
- Enterprise Ireland
- Faithful + Gould
- Fenton Partners
- Government & Industry Interoperability Group
- GRAHAM
- Grimshaw
- HLM
- Infrastructure and Projects Authority (IPA)
- Innovate UK
- Kier Group
- Lean Construction Institute
- LMC
- Loughborough University
- Mace Group

Common consensus across workshops

- Importance of collaboration across supply chain
- Creating a safe environment for innovation to happen (and where necessary, allowing innovation to fail-fast, minimising wasted cost and time on live projects)
- Cross-sector information sharing on lessons learned
- Platform-based approaches needed
- Need for space for innovation to create bespoke mass construction
- The procurement process needs to change
- A new method for measuring success is needed which isn't cost/time/quantity

Organisations, departments and companies taking part in the workshops

- McAvoy
- Metis Digital
- Ministry of Justice
- Ministry of Defence
- Morgan Sindall
- Mott MacDonald
- NCCUK
- New Hospital Programme
- Offsite Alliance
- PB Marketing Consultants
- Portakabin
- PwC
- RIBA North
- RICS
- Roger Bullivant Limited
- Seismic Group
- SGP
- Sir Robert McAlpine
- Skanska
- Société du Grand Paris
- Spirel
- Stantec UK
- Tata Steel
- TRL
- University of Birmingham
- University of Salford
- Woolgar Hunter
- WSP

Better Delivery's comments

There is obvious commonality across the Government workshop groups. The consensus issues are all addressable by implementing the recommendations within this report.

Part 1 of this report identified the decision points needed to quantify the 'grey' detail of consensus group thinking. Democratic exercises like this, inevitably generate repeat consensus amongst participants. The fundamental problem is a lack of stakeholder decision-making to progress from the accord. Hence the decision point recommendations of Part 1.

Notwithstanding the intent, pragmatically, it is also important to highlight that words like "collaboration" and "trust" are entirely subjective and quite unhelpful in the context of £multi-billion public procurement frameworks, unless the mechanisms and contracts of these terms are explicitly confirmed to all parties. There is no place for ambiguity in this context, particularly when we dealing with hospitals, for example. Clear and precise requirements are the bedrock of trust and collaboration. Agreeing to do something, understanding the requirement and removing obstacles to performing is how trust and collaboration are realised. Unfortunately, there is an apparent misconception that trust and collaboration are based upon tacit empathic relationships. Clearly, this is not a model that is applicable to large scale Government procurement.

Questionnaire Returns

Q1 2023 Period Evolution

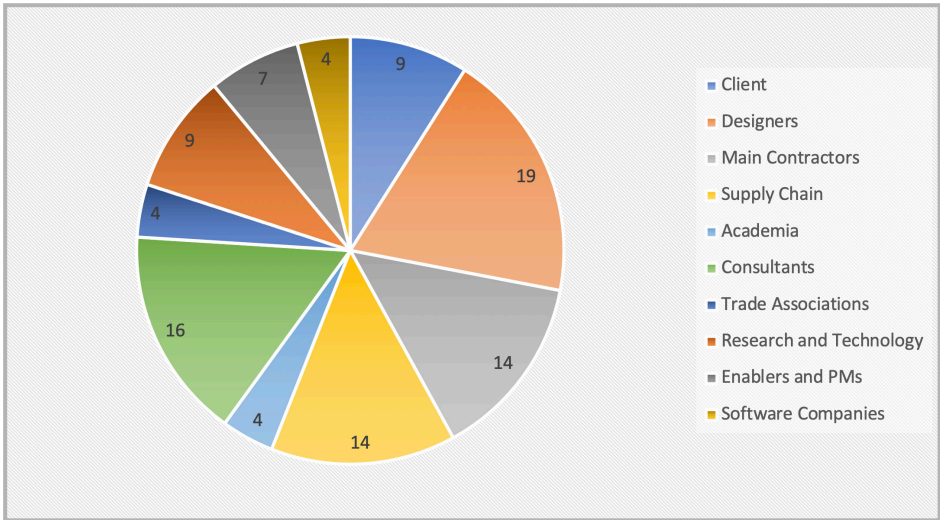
In accordance with our recommendations, the suggested Part 1 Report questionnaire was reviewed and adjusted by the Hub partners resulting in a Survey Monkey version being issued to potential audience members on the 7th February 2023.

This revised questionnaire requested more information about the audiences platform solutions.

Assisted by various Hub members and partners, a total return of from 56 audience members provided useful data to inform the Part 2 recommendation in this report.

Questions and Responses:

1. What type of company are you?



Company types by %

2. Have you read the Product Platform Rulebook?

82% said yes and 17% said no

Encouragingly, 82% of the audience had read the Rulebook, however, there was a distinct lack of parity across the audience types. Those who responded with yes are broken down as follows:

- Clients: 60%
- Designers: 100%
- Main Contractors: 62%
- Supply Chain: 62%
- Academia: 100%
- Consultants: 100%
- Trade Associations: 100%
- Research and Technology: 80%
- Enablers and PMs: 80%
- Software Companies: 50%

In the context of 56 total returns, there should be some caution applied to any conclusions, but evidently, it is reasonable to identify a clear theme between two groups:

- Main Contractors, the Supply Chain, Clients and Trade Associations
- Designers, Academia, Consultants

3. Do you have your own Product Platform?

55% said no and 48% said yes

Of those who responded with a yes, nearly half (48%) said that they aligned to the Rulebook rules, but they took a "Different Approach". Which is counter-intuitive and requires some further investigation to understand what this means.

4. If you answered yes, please provide any details you are able to share, such as the systems covered (services, structure, façade, foundations etc.), when development started, project examples and benefits realised. Links to websites/case studies would be welcome.

5. Are you considering/already setting up your own Product Platform?

Given the wide range of audience types, this question was targeted to determine if Main Contractors and the Supply Chain, without current platforms, are considering them. Only 38% of Main Contractors had a current platform solution and only one of those that didn't, was currently/planning to develop one.

Only 38% of Main Contractors and 25% of the Supply Chain had a current platform solution

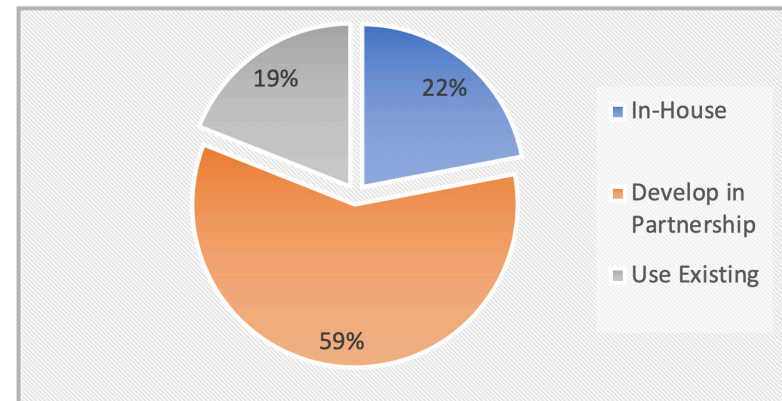
Only 25% of the Supply Chain didn't have a platform solution, with only half of them intending to develop one.

6. If you answered yes, please provide details, such as the systems you are considering focusing on (services, structure, façade, foundations etc.), sector(s)/building type you are targeting, when development started, project examples and benefits realised.

Some of the reasons for targeting platform solutions were typically:

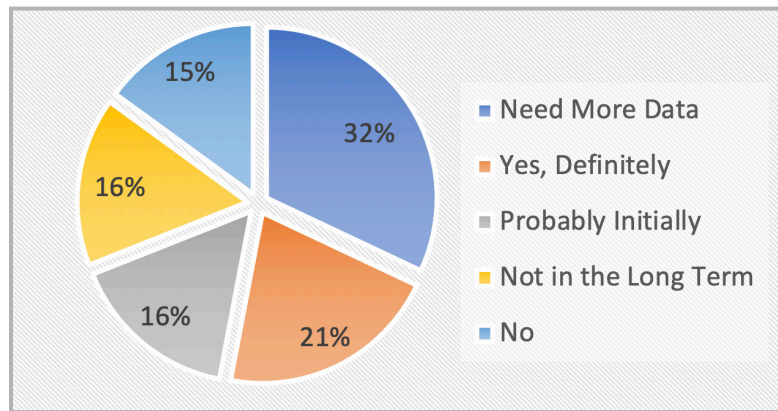
- To provide volumetric solutions for DfE estate.
- Focusing on standardised DfMA for DfE and NHS estate.
- Targeting standardisation for Frameworks.
- Regulatory compliant 2D kit of parts for DfE and NHS estate.
- Fully compliant MEP installations.
- Targeting labour shortages solution.
- Providing increased project timeline savings for Government estate.

7. Would you prefer to use a current Product Platform, develop in-house or in partnership with others?



Development option?

8. A potential barrier sometimes raised is that the cost of implementing a Product Platform might outweigh the benefits? Do you agree?



Cost implementation barrier?

9. How influential would a government financial incentive/grant to develop and implement Product Platforms be? Please rate, with 1 being the least influential, 10 the highest.

The average score was 8.05

10. How important would a government guaranteed project pipeline be to your company for supporting development and implementation of Product Platforms? Please rate, with 1 being the least influential, 10 being the highest.

In accordance with the principles of product platform approaches, a guaranteed pipeline was more influential than financial incentives/grants scoring an average of 8.94

The average score was 8.94

11. How would you expect Government procured programmes/projects to specify Product Platform requirements? e.g. Employer's Requirements, Output Specification Annex etc.?

The responses to this question included:

- Government needs a campaign to highlight
- Mandating their use at feasibility stage.
- Making platforms a compliant bid requirement.
- Forming unified manufacturing alliances.
- ISO19650/Uniclass specification.
- Align MMC to social value scores.

Over 75% of the audience were unambiguous about needing clear instructions in the form of specifications and ERs.

12. Would you be willing to accept that a condition of deploying an Approved Product Platform means providing data and performance metrics to a secure centralised database (with controlled permissions to prevent competitors from viewing confidential information and suitable safeguards to protect intellectual property)?

96% of the audience agreed that providing performance metrics would be a condition of being an Approved Platform Provider.

13. Would you welcome the assistance of a Government Funded Product Platform implementation taskforce to assist in setting the parameters of Product Platforms, helping you with their set-up, gathering of secure parity performance data metrics (that doesn't compromise any competitive advantage or innovation)?

86% of the audience welcomed a 'Platform Taskforce'

Their typical remit comments included:

- Robust testing and quality control methods, alignment with the Hub (or similar) guides, e.g. rulebook, CPQP, Value Toolkit. Clearer collaboration models and responsibilities. Simpler processes and systems.
- Common data clear and concise implementation.
- Mandate the playbook – e.g., published pipelines, early supply chain involvement etc to support buy in and development of platform and to assess market health and capability and most appropriate delivery models. involvement in some of the early adopter platforms working groups. Tracking and reporting on progress and benefits realised through TIP action plan.
- Ensuring value performance and safety.
- Develop clear standards to ensure level playing field.
- Focus on enablers, evidence, learning and some form of certification function (ensuring independence).
- Their focus should be on providing support to industry and governance so that the data is collated appropriately at the right time. Their authority is to report any non-compliance as this would potentially be a breach of contract.
- Focus on defining what a compliant solution looks like and how this is implemented. Remit to share best practice and promote

platform solutions. Authority is a difficult one unless there is an intent to mandate and therefore police implementation.

- This needs turning through 180 degrees, to focus on manufacturing, not contracting, supporting innovation and the development of advanced manufacturing solutions that meet the needs of social infrastructure.
- Standardisation across the industry with agreed parameters and reportable data.
- Providing true industry-wide information to those who need it. This needs to include those who are not simply manufacturers or suppliers such as ourselves.
- Focus should be the points noted in the question. Remit would be to facilitate organisations working together to aggregate demand and to provide financial, procurement or other incentives to implement platform approaches. This may be necessary in the early stages of adoption as costs may be higher until they are more widely adopted.
- Governance.

Harnessing a Common Data Environment

Measuring better

Part 1 of this report identified the need for a way to set and capture data across the proposed Product Platforms as a minimum requirement to prove how the various solutions will perform using an agreed set of performance metrics.

Fundamentally, how do we prove that Product Platforms, or ANY type of construction delivery is better than others, without systematic measurement?

A Remarkable Opportunity

As highlighted in Part 1 of this report, the construction industry has a poor track record of capturing and measuring robust data outside of individual projects. By setting a simple set of reporting metrics for Product Platform providers, which can be scaled as required to include wider metrics and more subjective criterion, a clear picture of the pros and cons of Platform methods will emerge.

Optimised Construction Solutions Across a Program of Work

Rather than consider the requirement for this CDE as an addition to Government procurement, it should be regarded as a way to measure performance, identify savings across programs of work (certainly by confirming commonality) which sets performance metrics, regardless of the construction delivery methodology. This then offers the opportunity to accommodate traditional, MMC/Offsite, Product Platforms and other hybrid delivery, yet as importantly, it can compare methods to identify the best delivery methods, or the optimised Construction.

Mandation of Platforms

Mandating in the context of “though shalt use product platforms” is predicated upon there being enough ‘fear of missing out’ motivation to deliver platform solutions in order to secure work.

There needs to be an acceptance of the mandate to enter into contract. Certainly, it can be the go/no go criteria for contract award, however, this

would need careful consideration.

Our advice would be to ask the supply chain to demonstrate how their platform approaches have/will achieve the key success factors required by each Government client and to suit the context of each project or framework. This would be a far more palatable and fairer solution than dictating a platform approach.

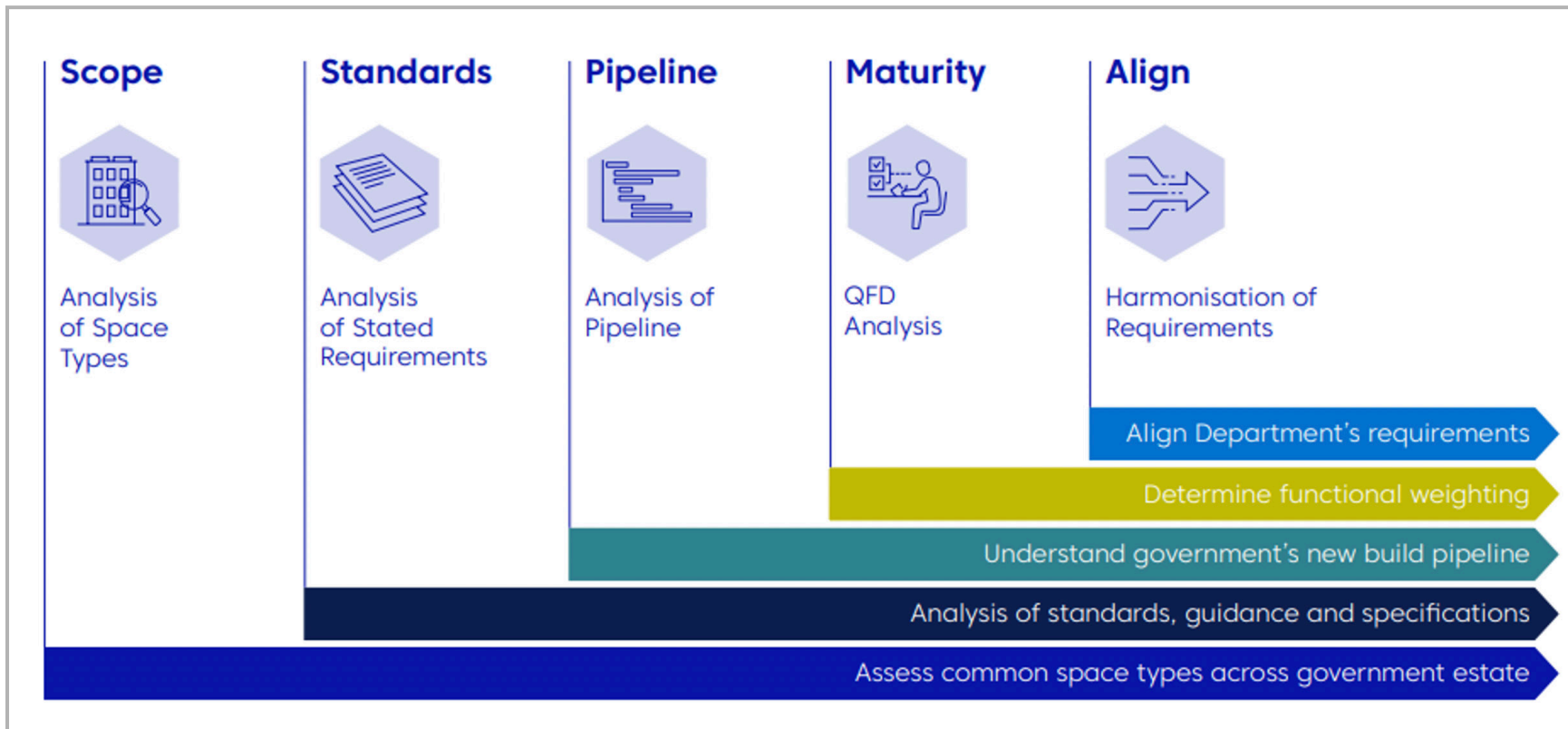
Optimising specifications and typologies to suit platform solutions is our recommendation and then asking the market to respond. An alternative to mandation could be demonstrating a clear value proposition for the uptake of platform solutions, via a large scale, like for like, scheme exemplar.

Additionally, a CDE, when collated correctly, will provide the macro view across a number of platform providers and generate the proof that platforms are a better method.

The Ideal World Scenario

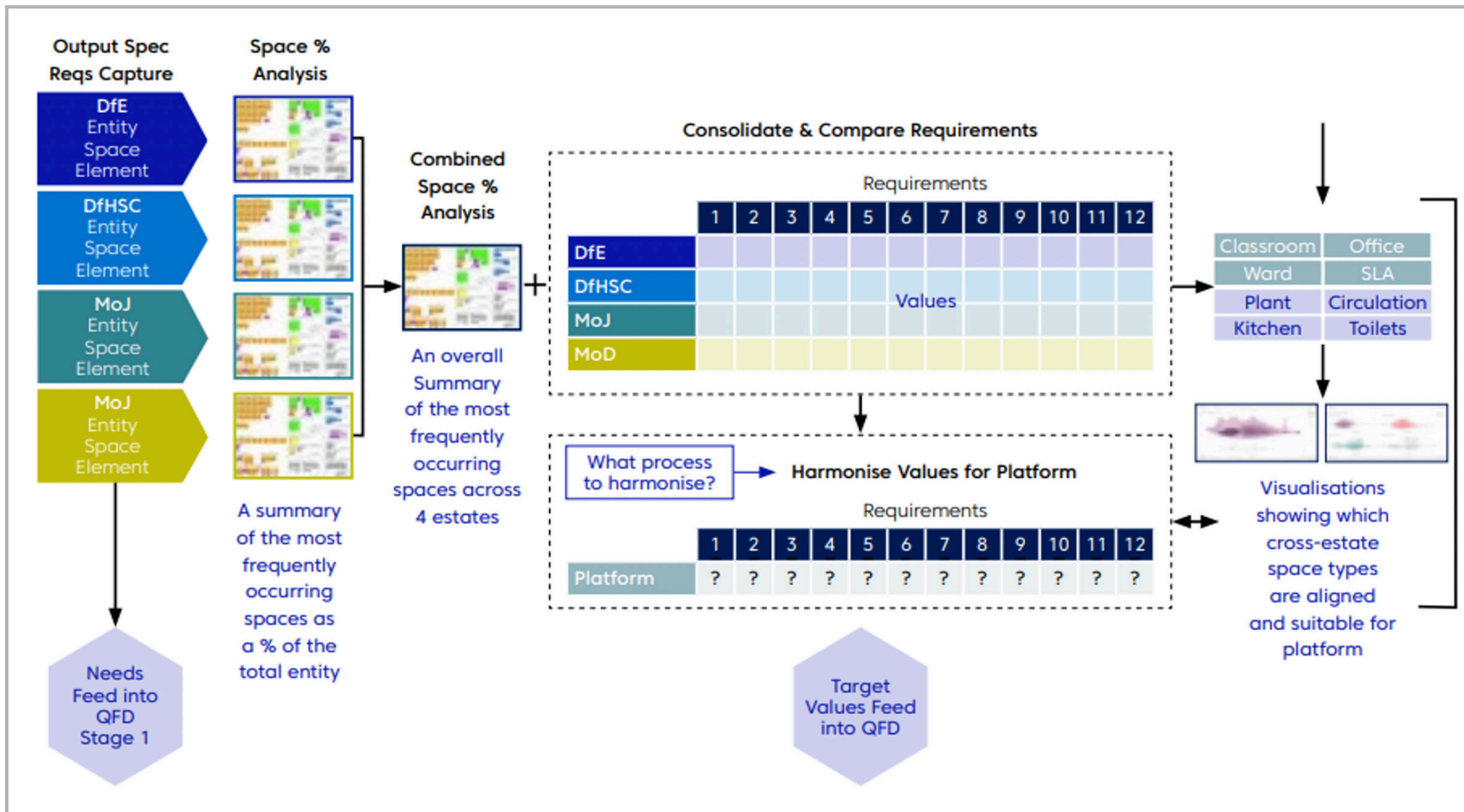
Although optimistic, theoretically, a 10 year lookahead of all Government Estate Procurement is entirely feasible. In the spirit of identifying and using previous Hub outputs, “Defining the Need” explored potential approaches to suit the similarities and differences across 5 Government Estate providers:

- Department for Education
- Ministry of Defence
- Ministry of Justice
- Department of Health and Social Care
- Ministry of Housing, Communities & Local Government



Defining the 'need process' overview

Evidently, there has already been a robust approach to quantifying the objective and subjective requirements of these various departments.



Process flow of defining the Need Requirements Analysis

Utilising the harmonisation work of Defining the Need and combining this with the Platform logic of the Product Platform Rulebook and the measurement methodology within The Value Toolkit, there is enough 'intelligence' to fundamentally change the paradigm of UK Government procurement if it is considered as a Program of Works over a useful timeframe (10 Years).

It's a blank canvas, but the canvas and brushes are pre-sized, whilst there's a pre-defined pallet of colours. The talent and flair is up to the artists.

Fundamentally, all Government Estate is made up of 'stuff'. Although each department has their own specific needs and specifications, the commonality of stuff will be remarkable:

- Lighting
- Switches
- Sockets
- Plasterboard
- Windows.
- Doors.
- Flooring.
- Skirting.
- MEP

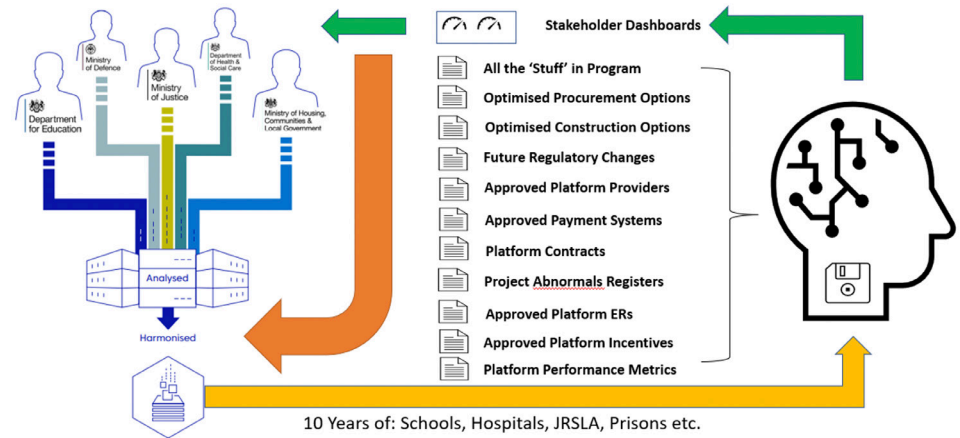
The Premise is Quite Simple

Effectively, we know the performance parameters, massing and typologies for all estate types, therefore, a reasonable national assessment of the quantity, cost and specifications of all estate types over a 10 year lookahead period can be predicted. In addition, a 10 year retrospective of as-built estate will also reinforce the understanding of this prediction.

If we know the quantity and specification of the 10 year lookahead, we can identify all the 'stuff' via elemental cost plans. Once this is collated, we will be able to optimise the estate by repeatability and align construction and procurement strategies to maximise platform approaches, all of which are predicated upon commonality and repeatability.

A simple Transportation Program Analogy would be to identify the quantity and types of transportation vehicles needed, the commonality of components and then make informed decisions to alter the transportation to harness commonality benefits.

Type	Tyres	Brake Pads	Brake Discs	Motorisation	Gearbox	Radiators	Lights	Wiring Harness	Airconditioning System	Switches
Cars	a	a	a	a	a	a	a	a	a	a
Buses	b	b	b	b	b	b	a	b	b	a
Lorries	b	b	b	b	b	b	a	b	a	a
Taxis	a	a	a	a	a	a	a	a	a	a
Ambulances	a/b	a/b	a/b	a	a/b	a/b	a+c	a/b	a	a



Maximising the potential to capture & harness Government procurement over a 10 year look-ahead programme

Using Past Data to Avoid Future Problems

By using the historical data to identify the decision making over, say, the last 10 years of UK Government Estate delivery, we are able to identify ways to avoid repeating the same mistakes, by prompting the CDE to advise upon improved decision-making for the next 10 years.

Starting off a CDE to evolve into the 10 Year 'Brain'.

Compared to current BIM CDEs, this Product Platform Data Control Centre (PPDCC) a literal and entirely suggested title to impart the concept, is a far

less complicated proposition. There is no need to collate typical BIM LOD 2+ Information, just a clear set of performance metrics. The difference being that these criteria need to be assessed with parity across a range of platform providers.

A starting point CDE would be similar to the suggested PPDCC in Part 1 of this report.

What to Measure?

Initially, a simple set of performance metrics could start as:

- Cost
- Time
- Quality
- CO2 Reduction
- Health and Safety Metrics

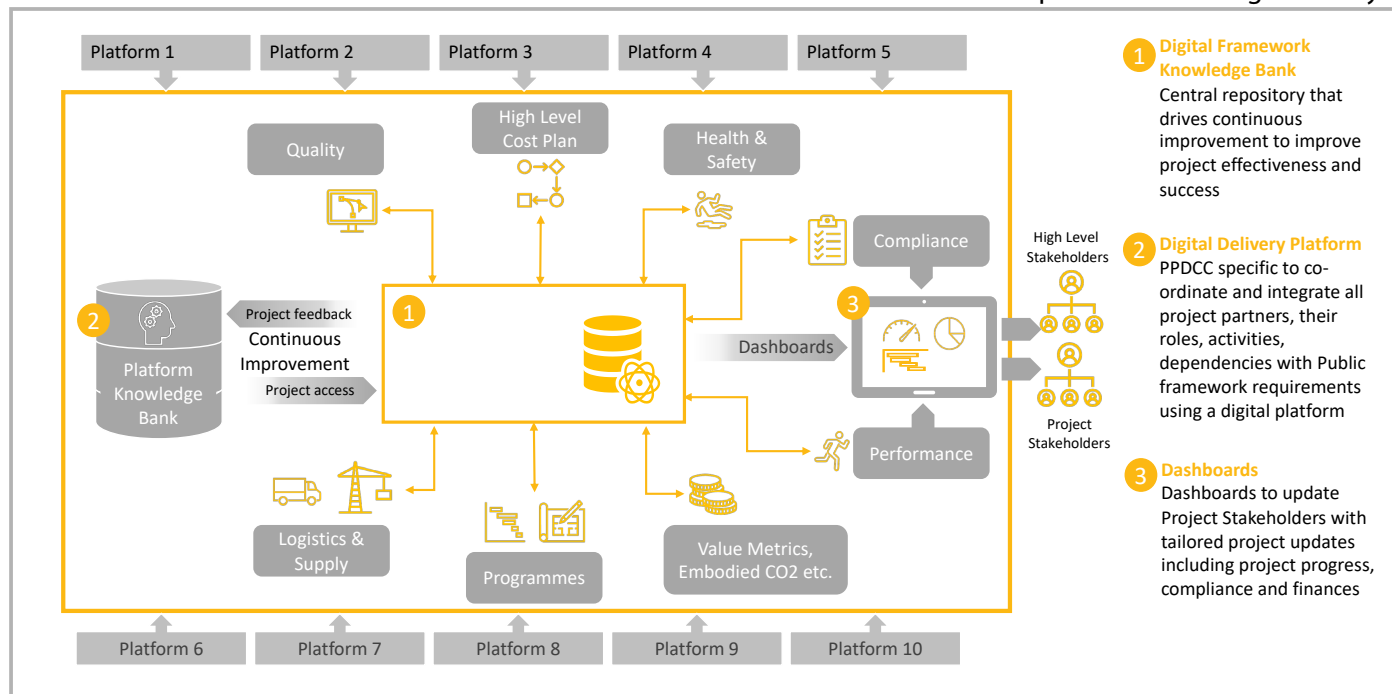
The skill in setting these metrics is producing a data capture methodology that provides a consistent 'picture' of how various influences affect these metrics. Identifying all of the project specific parameters that may affect the delivery of these metrics, such as Abnormals (sic) is crucial to managing this methodology.

Potentially, the most effective methodology plagiarism can be gleaned from Approved for Payment solutions, with the key being impeccable scoped line-item milestone management. This granularity of detail will increase the understanding of reasons for failure or success, whilst increasing the parity across a program of works.

Crucially, setting and capturing this high-level data ensures that individual Platform Providers' competitive advantage data is not shared amongst other providers.

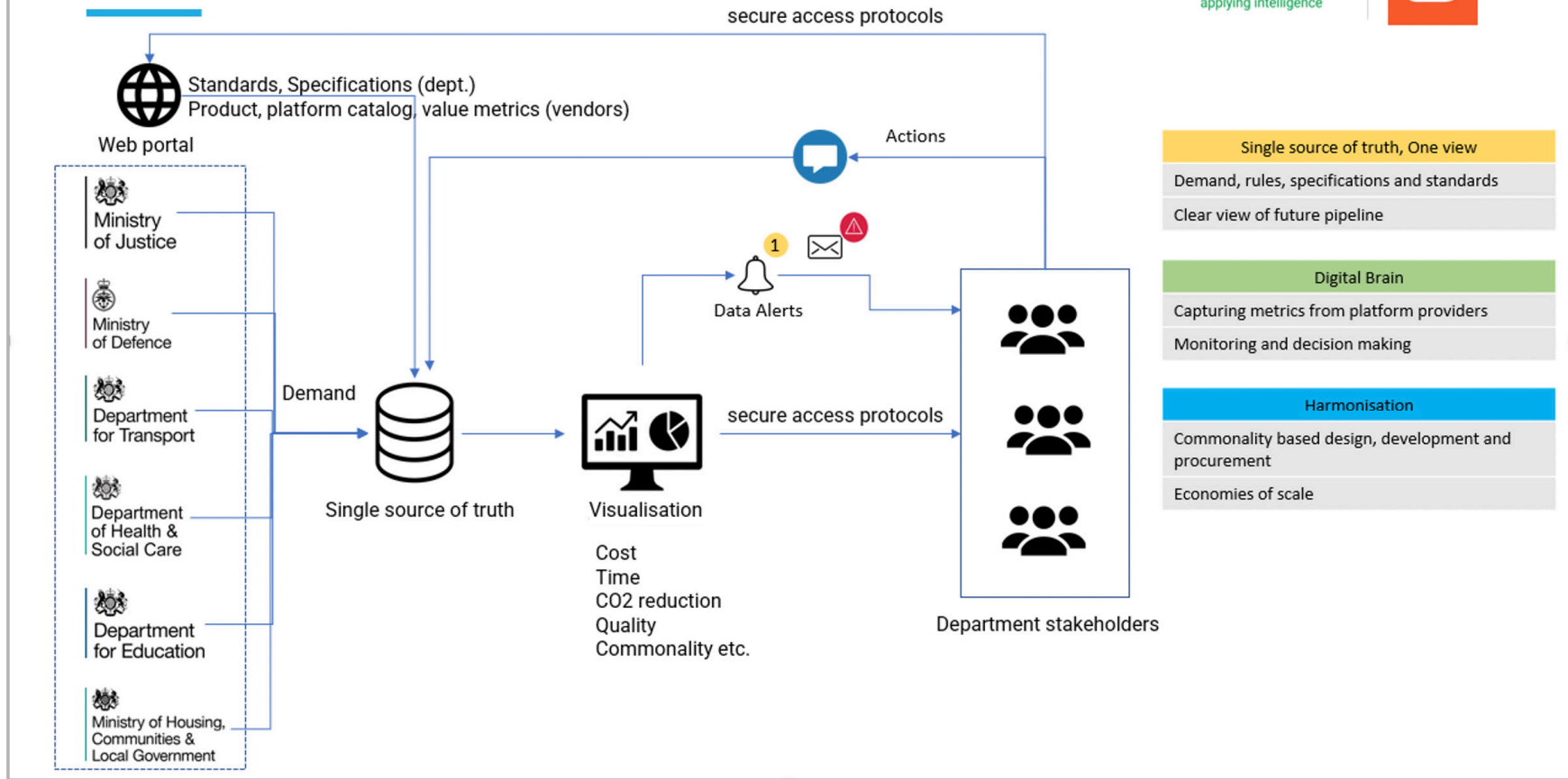
Dashboards

As per the PPDCC concept diagram specific dashboards to suit stakeholders will provide as much granularity as required to suit their needs:



Product Platform Data Control Centre (PPDCC)

Platform Concept

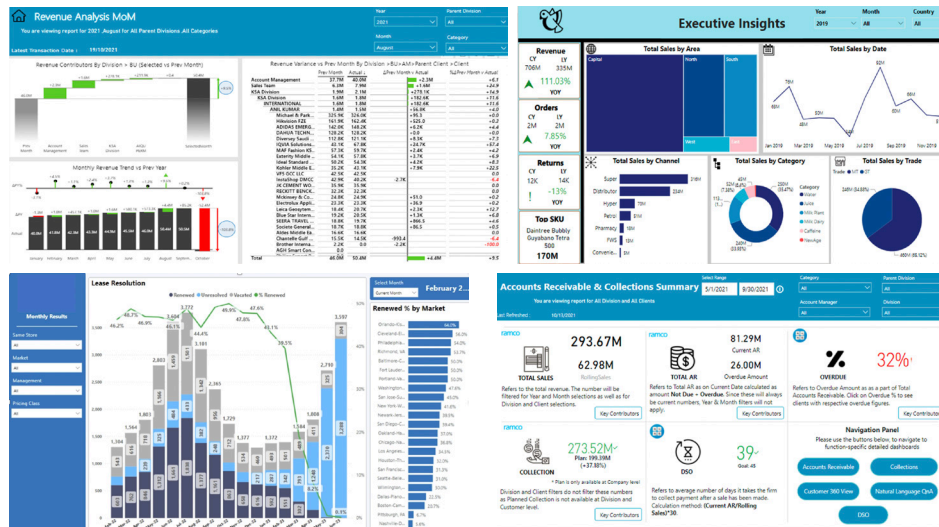


- Single source of truth, One view**
 - Demand, rules, specifications and standards
 - Clear view of future pipeline
- Digital Brain**
 - Capturing metrics from platform providers
 - Monitoring and decision making
- Harmonisation**
 - Commonality based design, development and procurement
 - Economies of scale

Platform concept diagram

Reporting Formats

Given the relatively simple nature of the initial CDE, reporting formats are entirely flexible to suit the needs of stakeholders. Typical Examples:



Obtaining Data

There have been recent examples where impeccably instigated research methodologies have failed to produce robust or sufficient data from construction projects, simply because the people working on these projects, did not have the sufficient motivation, understanding, resources or time to complete the data. Additionally, alterations in staffing, which is an inherent part of a construction project's timeline, risk the data capture.

Fundamentally, the Data capture must not impede or interfere with the current workforce. Nor should it be reliant upon project team individuals. As such a designated CDE portal, team of data acquirers and optimised automation of data 'scraping' is required.

It would also be necessary to make the provision of data a contractual requirement of having an Approved Product Platform solution.

All of the Data Capture scope would need to be clearly specified for a Product Platform Rollout Taskforce.

It is evident that a considerable amount of previous Hub work has been performed to evaluate and set out this type of CDE solution logic which would only require consolidation and agreement to instigate and construct an initial version.

Need to update and improve the CDE

The more data that can be captured, the better the result. It seems prudent to instigate 6 monthly CDE review workshops to review its performance, effectiveness and make changes via version updates. As with any data-based learning environment, its effectiveness will improve with data quantity and careful management.

Conclusions

1. The 'blocker' to agreeing a Product Platform Industry Strategy is not a lack of previous outputs problem, it is a lack of decision-making problem.
2. There is now a need for a select group of qualified individuals to be given a mandate to collate the best of the available outputs and develop the few additional protocols needed to produce a 'Toolkit' for the management and accreditation of Approved Product Platforms.
3. There is no point in migrating Government Estate Procurement to platform solutions, unless it is unequivocally proven to be better.
4. Whilst there have been individual platform pilot schemes, these lack the scale and robustness of methodology to prove the benefits and convince the potential platform providers to invest in platform solutions. It is important to highlight that repeatability is an integral part of being a Platform. Prototypes are to be considered in this context
5. The pros and cons of investing in platform solutions needs to be provided to audience board level decision makers to inform their long-term strategies.
6. There has to be a robust and transparent method of capturing performance metrics from platform providers to prove the benefits.
7. The potential platform providers are waiting for the UK Government to set their platform rules and requirements. The client must 'level the playing field'.
8. The opportunity to consider all Government procurement as a 10 year lookahead programme of works would cause a fundamental paradigm shift in benefits.

Recommendations

- a) Produce an unambiguous definition of what constitutes a Product Platform Solution. It needs to clearly confirm how traditional, MMC/ Offsite/PMV and in-silico solutions are incorporated.
- b) Produce a transparent assessment methodology for "Approved Product Platforms". This must be predicated upon analytical and robust selection criteria, whilst maintaining competition.
- c) The incentives for an Approved Product Platform need to be confirmed to potential platform providers enabling them to make the executive decision to invest and progress a platform offer.
- d) A "Proof of Better" platform vs non-platform pilot should be undertaken at a scale, ideally with sufficient repetition, that demonstrates the value proposition of platform approaches. Currently, there is no conclusive, like for like, demonstrations that are convincing enough to prove the benefits of platform approaches. Done correctly, this will resolve many of the motivation challenges.
- e) A set of Platform Performance Metrics need to be agreed and confirmed as a requirement of an Approved Product Platform.
- f) A common data environment needs to be implemented to, as a minimum, collate and monitor platform performance metrics across providers (see PPDCC) with a goal to evolve into a Government Estate Procurement "Brain" maximising platform approaches across a 10 year lookahead programme of works.
- g) A Product Platform Taskforce requires a mandate to:
 - a. identify and select the best available toolkit of solutions from the previous Hub and other Government outputs such as:
 1. Value Toolkit
 2. Future Homes Hub
 3. Defining the Need
 4. Product Platform Rulebook

1. Measuring Construction Site Productivity
 2. Previous QFD Analyses
 3. Pipeline Maturity Analyses
 4. BSI Flex 390
 5. Construction Product Quality Planning (CPQP) Resources
 6. Digital Quality
 7. Digital Quality Assessment and Transformation
-
- b. Calculate the potential benefits of approaching Government Estate procurements, as per the 'Harnessing a Common Data Environment' section might deliver.
 - c. Set up and manage, with 6 monthly version update meetings, an initial Platform CDE.
 - d. Produce a methodology to assess and certify Approved Platforms.
 - e. Perform the certification for Approved Platforms.
 - f. Liaise with Government to confirm Approved Platform benefits.
 - g. Identify opportunities for a large scale, like for like, Platform benefits exemplar scheme.
 - h. Produce a Platform Annex Specification.