

Appendix 10d: Innovation Strategy

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1 Introduction

This document describes the strategy for how the Innovation Programme delivers options for improvements in sustainable, resilient service provision in Yorkshire Water Services (YWS). Innovation referred to in this document means Research and Development (R&D) Innovation. Cultural Innovation and Supply Chain Innovation are also described for context covering the whole meaning of “innovation” for the business.

In summary, a R&D Innovation budget resides within the Managerial and General capital programme. The investment has no regulatory outcomes associated with it. Customer benefit is demonstrated through Outcomes, implementation of the knowledge created. The programme is governed by YWS processes and reports against a balanced scorecard aligned to the Innovation Strategy Map. The strategy is to invest in a small number of high value projects informing transformational change whilst accommodating a programme of smaller projects designed to deliver incremental benefit. R&D Innovation is driven and administered by a small core team drawing upon agile technical and project management support from inside and outside the company.

The strategy encompasses the end to end process of R&D Innovation. This includes input from external networks, capture of Company risks and opportunities, programme creation, funding mechanism and delivery through the project lifecycle and calculation of return on investment. It informs how investment realises the R&D Innovation purpose:

“To deliver options for a receptive business to resiliently outperform in delivery of service and growth through a programme of Research and Development based upon clear articulations of risk and opportunity stimulating a culture that, through leadership, is creative, collaborative, learns and shares knowledge.”

1.1. OFWAT Context.

OFWAT has clearly stated its intentions and expectations for the 2019 Price Review (PR19). In *Delivering Water 2020* it states: “PR19 is focusing on four key themes to benefit customers: Great Customer Service, Resilience, Affordable Bills and Innovation.” It continues: “OFWAT’s price review is an important tool for delivering trust in water. PR19 provides the framework for a resilient long-term future for water, providing more of what matters to customers at a price they can afford and are willing to pay. We plan to deliver PR19 in a way that is:

- customer focused;
- long-term; and
- incentivises companies to innovate and be ambitious.”

1.2. YWS Perspective.

YWS delivers water and waste water services in the Yorkshire region utilising well governed policies and strategies. Asset Planning and Solutions deliver new assets through capital investment scenarios and invest in capital base maintenance to maintain the asset base as stable (i.e. not improving or declining in their serviceability). Operational and Maintenance regimes ensure customer service and environmental expectations are met. Information Technology assets and systems gather data for interrogation to inform operations and maintenance teams and longer term understanding of assets, how they perform and what improvements can be made. Business strategy is to focus on being an exceptional wholesaler of water and wastewater service and delivering returns to investors.

- 1.2.1.** Customer, environmental and financial performance targets within the five-year asset management periods (AMP) are articulated through Performance Commitments (PC). These are commitments made to our customers and agreed with OFWAT. There are incentives to outperform and penalties for poor performance. In AMP 6 (2015 – 2020) YWS performs to twenty-six PC's with annual targets to meet.
- 1.2.2.** The longer term is considered through published Strategic Business Objectives (SBO's) stretching out twenty-five years. There are six, Safe Water, Excellent Catchment Rivers and Coasts, Sustainable Resources, Strong Financial Foundations, Trusted Company and Water Efficient Regions. Each has initiatives with appropriate targets over the whole term.
- 1.2.3.** The SBO's and PC's align with asset strategies and policies which set out how we address challenges in the short and long term in delivering service to customers.

Fundamentally, the R&D Innovation Programme informs delivery of both short and long-term targets and, through knowledge creation, informs changes to existing, or establishment of new, policies, strategies and targets. This is across all the functional areas of the business.

2. Innovation Defined.

Innovation is a term which can be used in many contexts. To establish a clear Innovation Strategy, it is important to define and contextualise terminology which can be related to, and recognized by, all colleagues. Appendix 1 articulates three types of Innovation pertinent to YWS. All positive business change, which is fundamentally what innovation is, relies upon the ability to articulate business risks and opportunities over a baseline level of performance.

2.1 Cultural Innovation is how creative, collaborative and process driven colleagues within the business are to make positive changes in how the company delivers services. It is the day to day process of continuous improvement. It also demonstrates the maturity and capability of partners, and their aspiration, to suggest or make those changes.

2.2 Supply Chain Innovation. Once articulated, if a risk or opportunity cannot be mitigated or realised through process change by colleagues or partners, the Supply Chain should be stimulated utilising the Procurement process. This in turn is dependent upon the ability of the business (client and Procurement colleagues) to articulate and specify on which the supply chain can deliver. The procurement process should be two-way to allow innovative solutions to be offered over traditional solutions. R&D Innovation funding is not primarily designed to trial at-market solutions unless as a last resort if they cannot be evaluated by conventional means.

2.3 Research and Development Innovation's purpose is to fill gaps in knowledge, services and products which cannot be provided by the Supply Chain or by process changes, with the Business taking ownership of delivery. The programme establishes a small number of significant, high value projects informing transformational change. This is balanced by a programme which delivers options for incremental benefit. Utilising external networks to introduce elements of the unknown, "art of the possible" to the business is a key activity. Projects or programmes of R&D are usually but not always investigated by the articulation of hypotheses or null hypotheses.

2.4 Innovation Process Flow in Practice. The flow of risk and opportunity articulation and how these are mitigated or realised can be seen in Appendix 2. This is currently not consistently applied. Risks and opportunities can be identified from within all functional departments of the Business. These can be self-generated, informed by supply chain, through R&D Innovation or the external environment. Risks and opportunities are owned by the business function. They can reside in team documentation e.g. Team Hub process, or corporate systems, for example the Corporate Risk Register or CRSA process. Realisation of opportunities or mitigation of risk, once clearly articulated, can be self-delivered or enter the Procurement or R&D Innovation processes.

3. Innovation process.

3.1. Innovation Business Process Map. The R&D Innovation process has been mapped. A summary document can be seen in Appendix 3. The full process resides within the Innovation Sharepoint site. The process is highly governed through Programme Delivery (PD) in Business Support Group. A global standard of research, development and implementation has been adapted to articulate a production line mentality of projects as they mature. The “seven-circle” model of innovation can be seen in Appendix 4. The most important elements of the flow are the “Stop” and “Go” stage gates. Through project governance and management, the flow of projects can be stopped or reverted a stage at any point in the life cycle.

3.2. Innovation Resource (Appendix 5). The Manager of Innovation is accountable for the R&D Innovation process and delivery of business plan targets. There are two Programme Managers who are responsible for a clearly defined element of the Programme. Innovation Technical Specialists ensure the import of global research and thinking to programme development and align that through engagement with specialist colleagues, informing and challenging our company technical perspectives. Project Management resource is secured through PD or filled through external sources for projects that require specific skills or there are capacity issues in PD. A Business Sponsor ensures governance from a client perspective. Technical resource is also secured from internal or external sources as capability or capacity dictates

3.3. Innovation Principles. The programme is underpinned by two principles.

3.3.1 The Circular Economy, as defined by the MacArthur Foundation, articulates the benefits of designing out wastes in a process in all its formats.

3.3.2 Aggregation fosters the view that linking multiple risk and opportunity solutions maximises returns on investment. “The whole is greater than the sum of its parts.”

There is a desire that where ever appropriate mutual benefit with customers, partner organisations and stakeholders will be derived.

3.4 Strategy Map. The Innovation strategy is based upon a Strategy Map which can be seen in Appendix 6. There are four perspectives each with objectives. The perspectives flow and link upward.

3.3.1 The foundation is a strong Culture of Innovation. Although this is a subjective term, it aligns with other critical areas of focus in the Business including Health, Safety and Wellbeing.

3.3.2 Process links all resources delivering a programme of work.

3.3.3 Deliverables links to options for customers or clients.

3.3.4 The implementation of the deliverables realises benefit in the form of Outcomes.

3.5 Innovation Metrics. Appendix 7 highlights the metrics by which the R&D Innovation Programme is measured. Lead measures, Forecast ROI and Forecast Spend Profile, ensure the supply chain of projects is affordable and has the potential to deliver the desired return on investment. The necessary lag measures are 8:1 return on investment (measured from the completion of the project/programme of work for a ten-year horizon); 50% leverage meaning a target of financial and in-kind support to the value of half the programme; Effectivity of 50% ensures that a balanced approach to risk is taken i.e. the programme is sufficiently stretching in aspiration; by value 80% of the budget will be spent on transformational themes; and, project slippage is managed through PD.

4. Risk, Controls and Governance

Programme risk and appropriate controls are managed through Programme Delivery with Programme Board the accountable body. This utilises a well-articulated Risk and Control process and is captured in the Corporate Risk Self-Assessment (CRSA). Corporate policies underpin all activities. Consultation with Programme Delivery, Group Risk and Internal Audit, Group Legal and the Procurement and Contract Management Departments ensure adherence as part of the Project Management lifecycle.

Project delivery risks and controls draw upon support from personal and process Health and Safety, Asset Integrity, Finance and technical resource from within the business. This is prescribed in the Project Management lifecycle.

Responsibility for delivering scorecard measures lies with the Programme Managers, Accountability with the Manager of Innovation. Principal consultees are accountable Senior Managers within the business and their teams around whose risks and opportunities the programme revolves. Programme Board, BIC, KMT and YW Board are largely informed on this basis and consulted for approval purposes. Accountability for administering and reporting the Innovation budget, resides with the Manager of Programme Delivery. A RACI can be seen in Appendix 8.

Quarterly reports to BIC feedback programme content and performance against the measures.

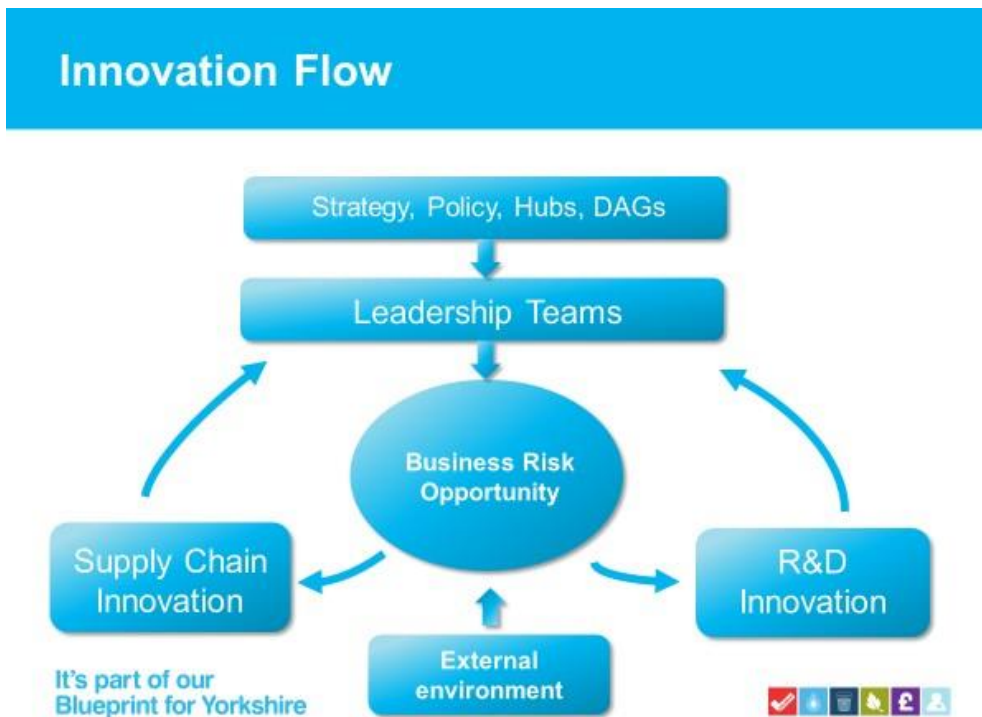
5. Summary.

Innovation in YWS relies upon a culture that identifies the need for and drives and manages change, one that welcomes disruptive, transformational change derived through the supply chain or through R&D Innovation. It is dependent upon clear articulation of risk and opportunity and a strong internal and external, collaborative network. Without clear visions, strategies and a receptive culture the capability of implementing sustainable, resilient solutions and therefore delivering Great Customer Service, Resilience, Affordable Bills through Innovation is reduced.

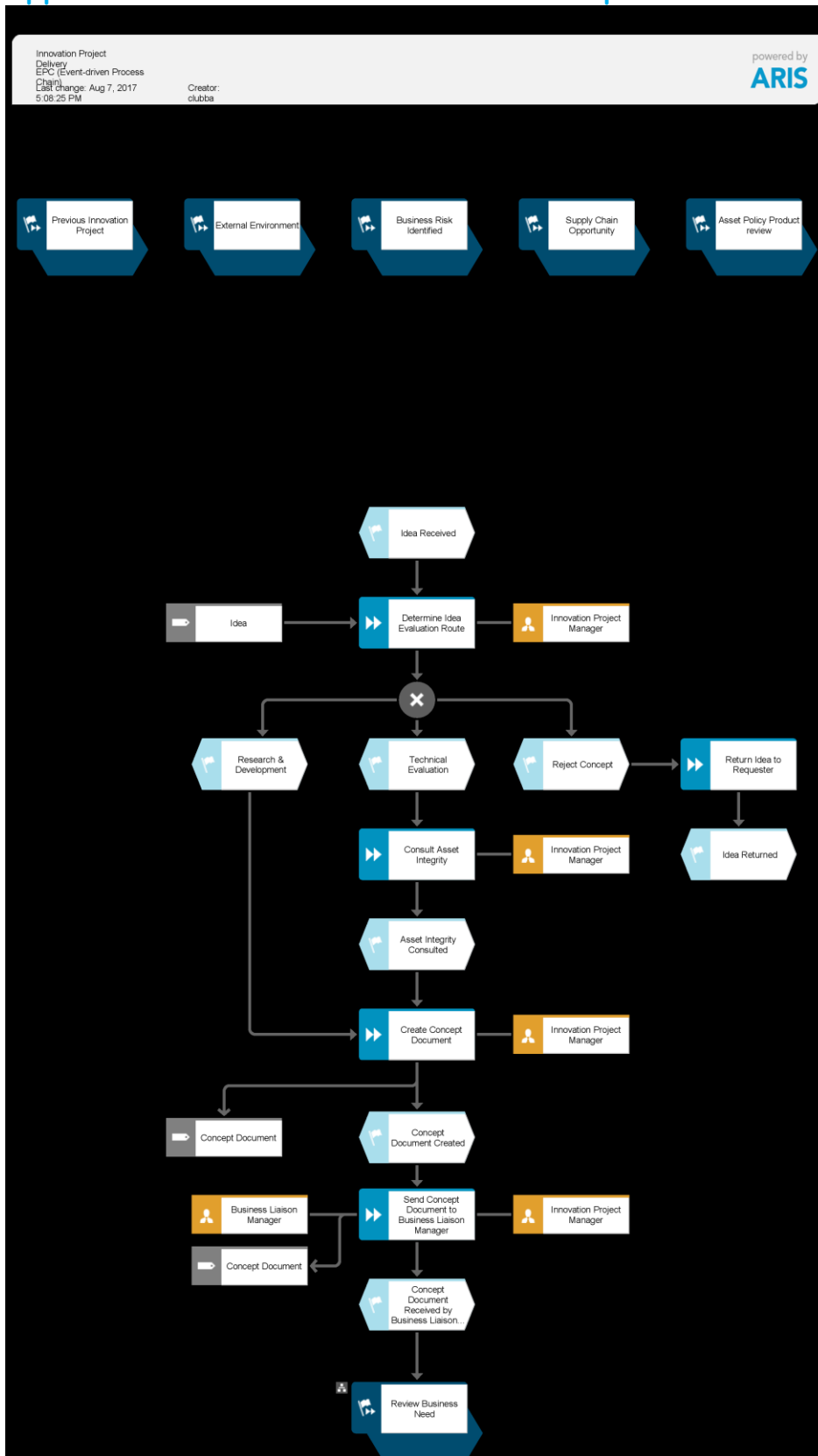
Appendix 1.



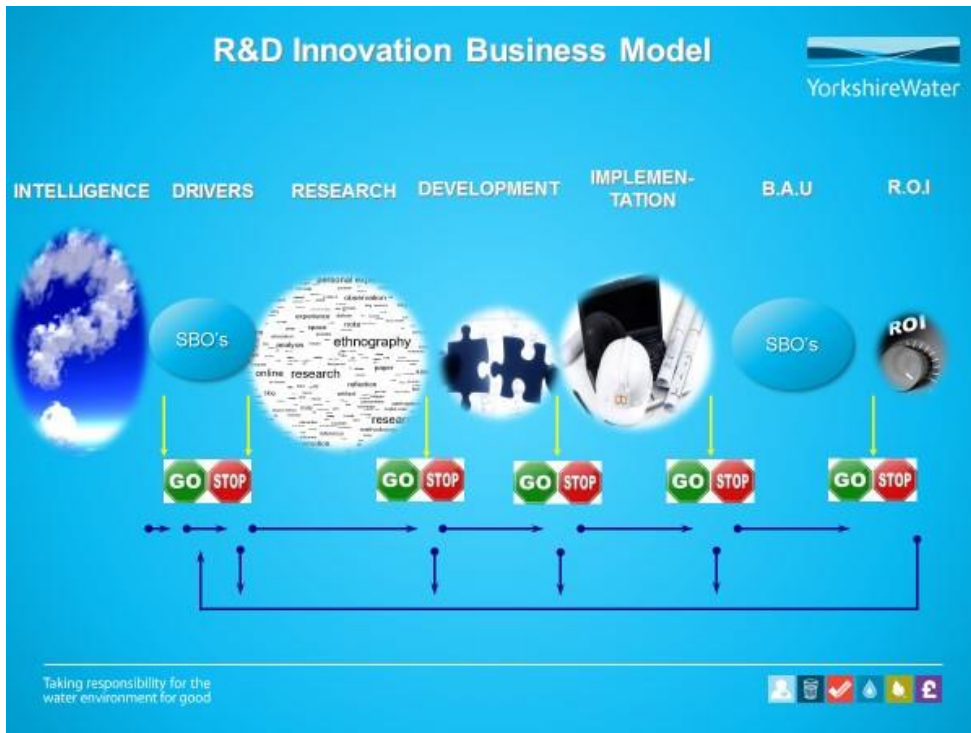
Appendix 2



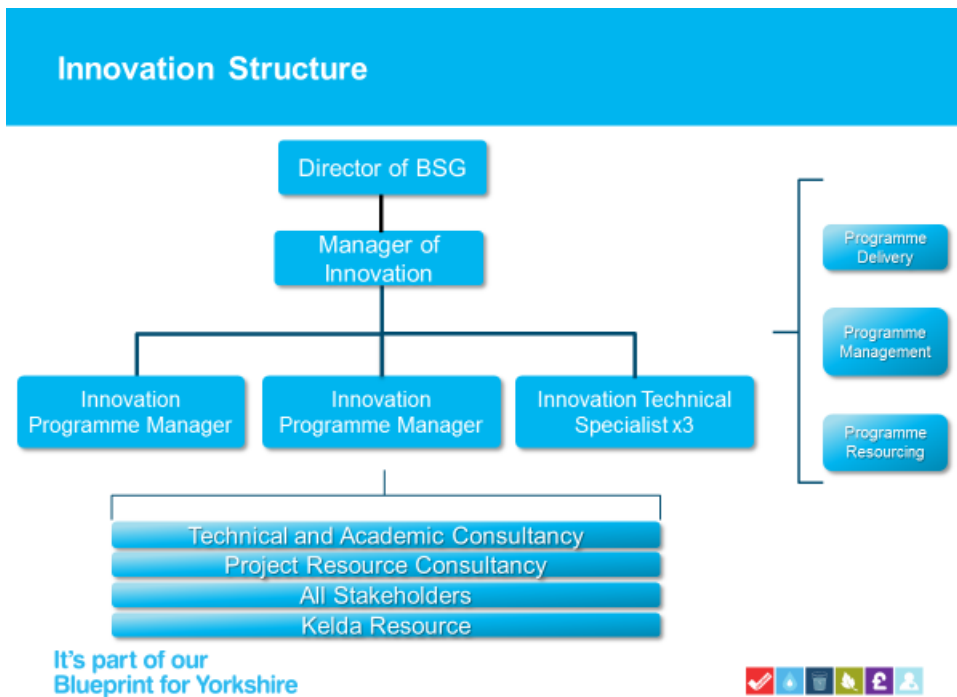
Appendix 3 Innovation Business Process Map



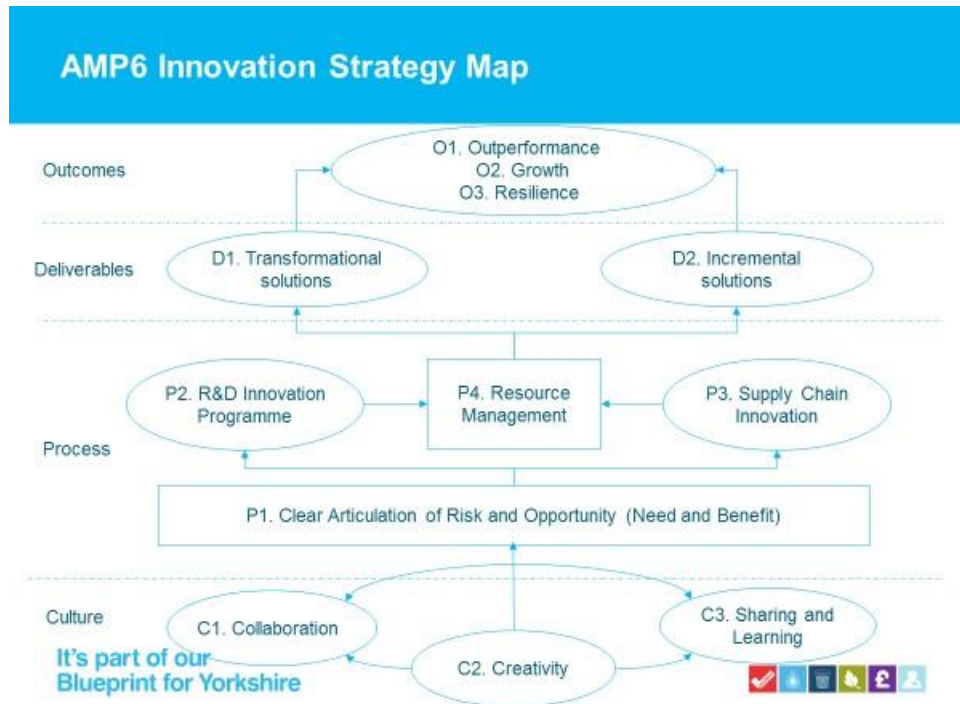
Appendix 4



Appendix 5



Appendix 6



Appendix 7



Appendix 8 - Innovation RACI

	Asset Strategy (environmental and risk & investment)	Asset Planning (investment, planning, analytics)	Principal Engineers	Asset Safety & Integrity (Keith)	Asset policy & assurance (Asset Standards)	Asset Integrity Delivery (standard products and solutions)	Asset Solutions (programme & project delivery YW)	Delivery and Consultant Partners	Land, Property and Planning / Keglend	Service Delivery	Engineering reliability (Maintenance)	Finance BP	Regulation	Legal	Kelda Markets	Enterprise Architecture & BFM	Procurement and Contract Mgmt	Programme Delivery	Innovation Team	KMT / Group Board
Innovation Process and Programme	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	A,R	C,I
External	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	A,R	R
Internal	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	A,R	R
Ideas generation	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	A,R	R,C
Research, Development and Concept	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	R,C,I	A,R	C,I
Definition Development and Approval	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	R	A,C	I
Contracting	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	C	R	A,C	
Procurement	I	I	I	I	I	I	I	I	I	I	I	I	I	C	I	I	C	R	A,C	
Project Delivery	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	C,I	R,C,I	C,I	C,I	R	A,C	I
Solution Deployment (integration into BAU)	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	A,R,C,I	I	C,I	A,C,I

