



PROJECT COST AND CARBON TOOL (PCCT)

Request for Information

Disclaimer:

For the benefit of both parties we would like to make it clear that this request is for information purposes only, does not replace or prejudice any formal procurement process which we may subsequently undertake and does not constitute a commitment or contract between the parties.

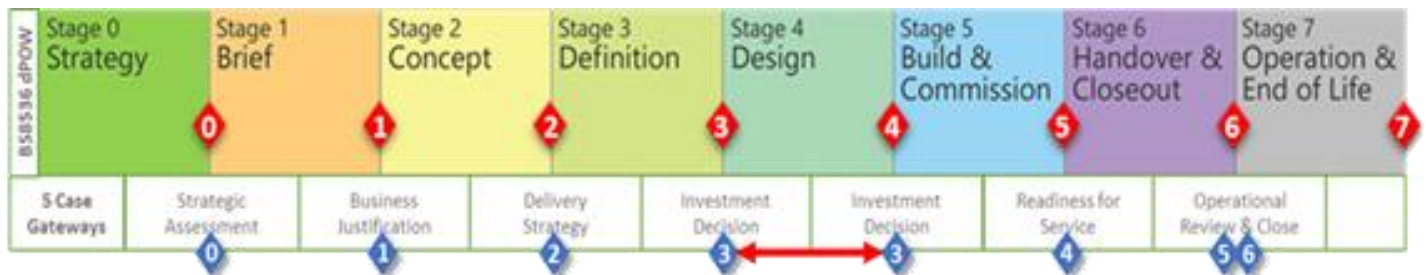
Environment Agency All Rights Reserved.

This document, which is supplied in confidence, together with its contents is the copyright property of The Environment Agency. Neither the whole any part or extract may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature, nor shall it be used for any purposes other than those for which written permission was given at the time of release, except to the extent, and for the purposes, specifically approved in writing by The Environment Agency.

Introduction

The aim of the PCCT project is to provide the Environment Agency with a software tool or tools that will improve their ability to estimate cost and carbon impact for construction work.

The Environment Agency (EA) is introducing the Next Generation Supplier Arrangements (NGSA), which means that the EA are moving away from competitive tendering towards a single supplier model whereby the client (EA) will set a price for a piece of work. The work relates to the construction and maintenance of flood defence assets. The construction of the assets can be grouped together into a project to help with funding, and EA runs approximately 600 projects over six years. Projects typically range in size from £0.5m to £50m.



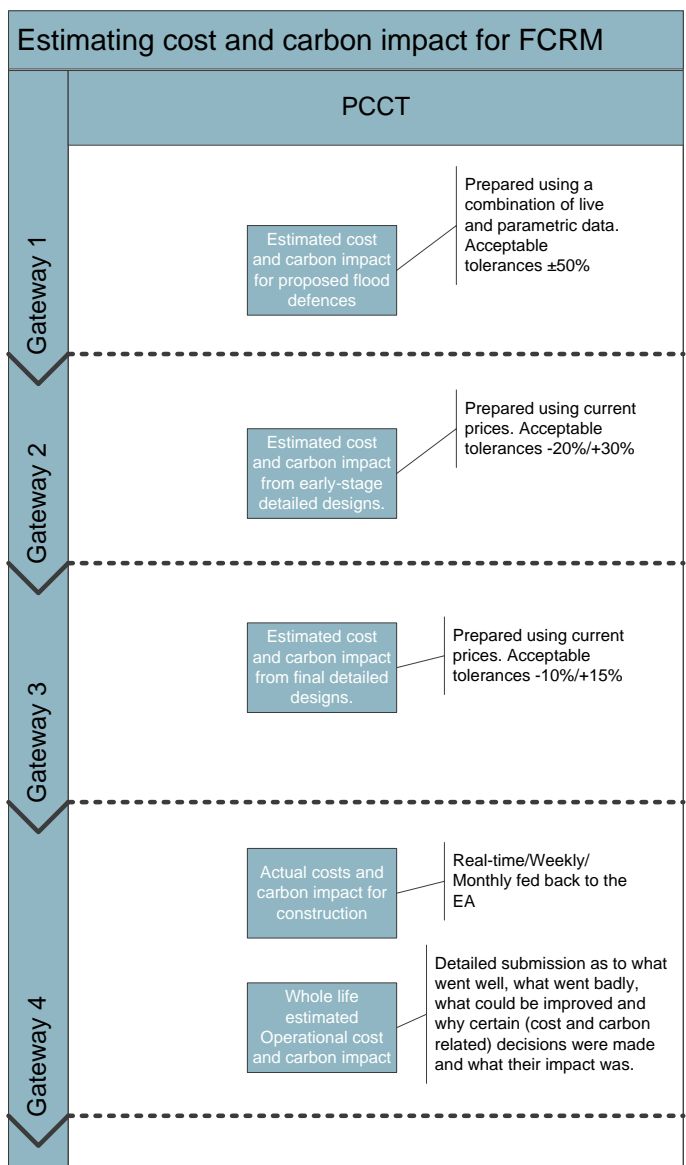
The software will be used by approximately 100 users, with a mixture of users (some requiring full cost and carbon estimating, some carbon only, and some requiring only access for data input purposes). This may increase over time. To obtain funding to construct assets, a project goes through gateways to approve the release of money to proceed to the next stage. The diagram above shows the project stages and gateways (signified by blue diamonds).

Through each successive gateway the accuracy of the project estimate is expected to improve providing greater forecast confidence.

1.1 Cost Objective

Under the Collaborative Delivery Framework (CDF) used by the NGSA, EA staff are being asked to provide estimates at each funding gateway and to progressively refine the accuracy.

A long-list of designs are considered during Gateway 1 and parametric estimates prepared, with allowed tolerances of +/- 50%. Gateways 2 & 3 which have target estimation tolerances of -20/+30% and -10/+15% respectively, are more likely to use bottom-up, detailed estimates, drawing on outline and detailed designs respectively.



The cost is agreed at the end of Gateway 3. At Gateway 4, the assets have been built along with the actual costs and carbon impact have been incurred. This information can be used as a data-point to improve future parametric estimates. This is essential if the EA are going to be able to set prices for works they want completed.

1.2 Carbon Objective

The EA have set KPIs in relation to the carbon cost of assets they build or procure. This is achieved through identifying at Gateway 1 the carbon impact of the various options, one of which becomes the benchmark carbon target for the project. A more detailed bottom-up carbon usage calculation is produced at Gateway 2, refined at Gateway 3 and the final actuals at Gateway 4 are fed back into the Carbon Modelling Tool as a new set of data-points.

The objective is to have a carbon solution that provides the granular detail required to calculate the whole life carbon for each asset throughout the project lifecycle. With specific stages whereby a bottom up estimating approach is required in tandem with cost, and the facility to gather actual carbon information, in a manner that is systematic and automated but also supported by auditable data. Utilising available emission factors and data sources such as the Inventory Carbon and Energy database (ICE) to calculate the carbon value or from produce information available.

1.3 Combined Objective

The combined cost and carbon objective is to have a solution that estimates the financial cost and carbon impact for a project in a single solution that is achieved through an approach of standardised bottom-up estimating, together with empirical, parametric cost and carbon models for early-stage estimates (Gateway 1) and continues to use a standardised bottom-up detailed cost and carbon breakdown structure for more accurate estimates (Gateways 2 & 3). The actual cost and carbon should be captured and tracked throughout the whole of the asset lifecycle as the project progresses in order to ascertain the actual cost and carbon against the forecast estimate, in order to use this data for empirical cost and carbon models in the future.

1.4 Whole-life

Once an asset has been handed over to operations, estimates for the operation and de-commissioning of the asset are prepared and used by Asset Management.

1.5 Integration & standards

The solution will need to integrate with other EA IT software and systems in particular the Microsoft suite of online products, (Office 365, Project Online, and SharePoint Online) as well as a using the EA-wide datastore. It must also comply with BIM, COBie, NEC3 & 4 and be capable of using SPONS and CESMM4 data and schemas.

1.6 Design Aspirations

In conjunction with the Government Digital Service (GDS) we have established an architectural direction of travel; this can be summarised as a preference for "cloud first" and "cloud native" solutions offered on a SaaS model. The PCCT project are keen to understand all of the architectures offered by the market place and the benefits of each.

1.7 Implementation

We are also keen to understand the following in terms of implementing a new solution:

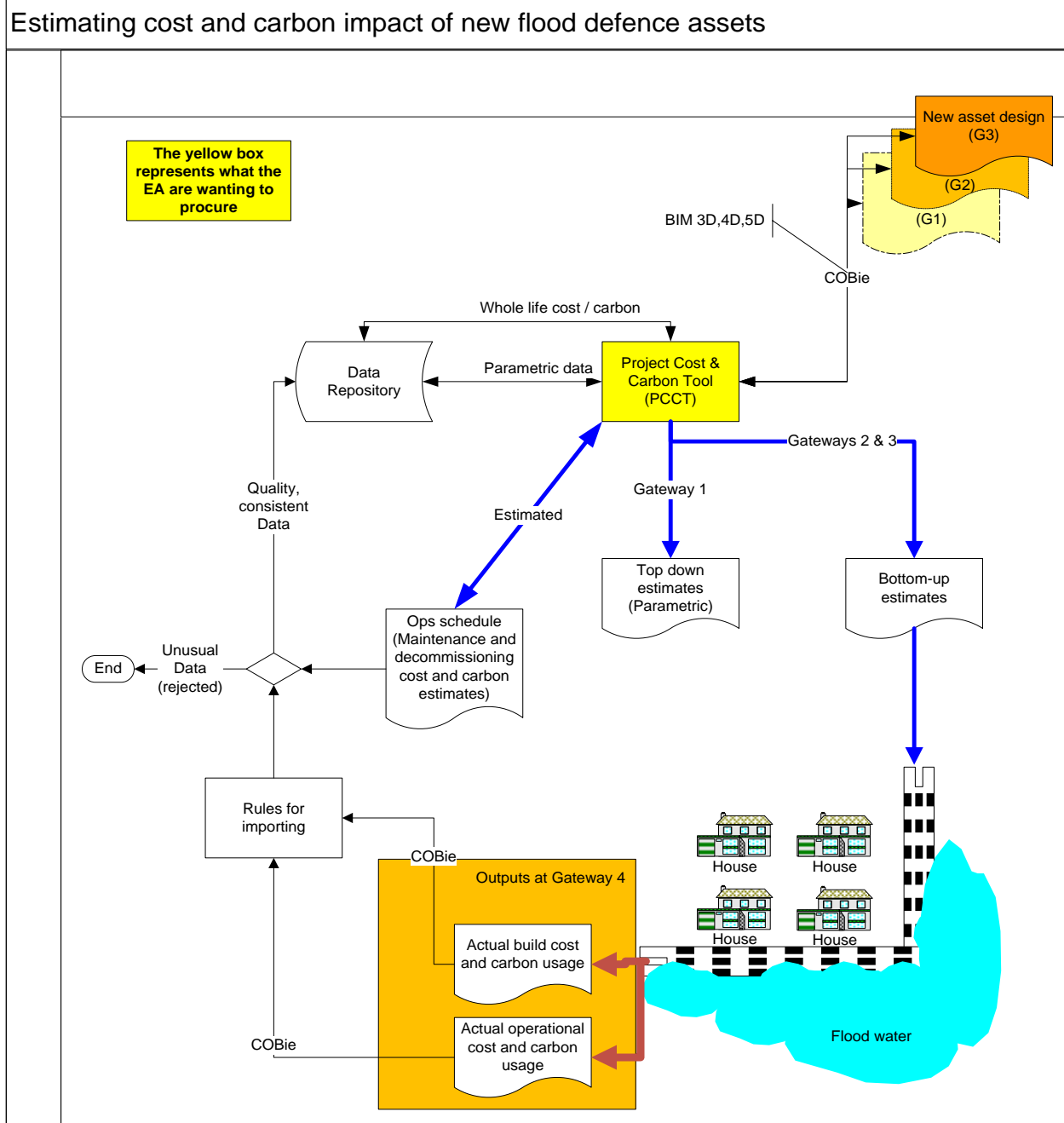
- Clear migration strategy from legacy systems to ensure protection of data and configuration.
- Implementation strategy that reflects guaranteed continuity of service throughout transition.
- Provision of multi-layer training and documentation for technical staff to suit role requirements.

1.8 What are we asking of you?

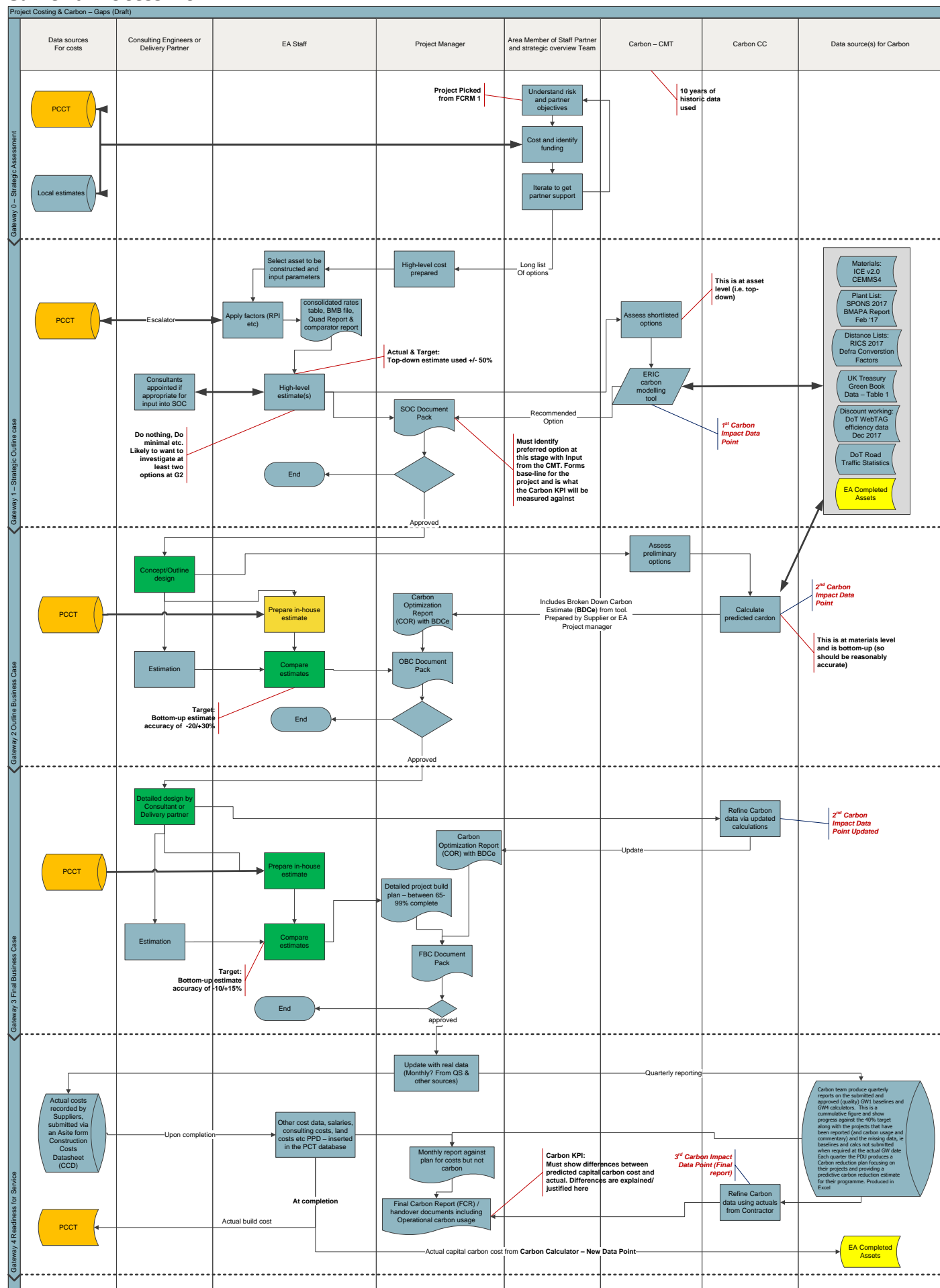
It should be noted that there are no preconceived ideas on how a new system should be designed or implemented. All valid options will be considered

1. We would like to ask suppliers to document how you would respond to our requirements by 15th February 2019 with:
 - a. **Technical Options:** High level outline of possible technical solutions. This will include infrastructure and application architecture diagrams.
 - b. **Delivery Approach:** an indication of design, migration and implementation timescales including milestones.
 - c. **Product roadmap:** for your core products and how they align to the roadmaps of the suppliers of the major components of your solution.
 - d. **Benefits:** An indication of the benefits associated with your solutions
 - e. **Pricing:** An idea of ROM costs to include: design, configuration, migration, implementation, and on-going costs.
2. If you have questions with regards to this RFI please contact Louise Pawlowska (louise.pawlowska@environment-agency.gov.uk) by 3pm on Thursday 7th February 2019. Please copy Alice Brown (alice.brown@environment-agency.gov.uk) into all correspondence.
3. We are offering one to one sessions for suppliers, to allow us to discuss your submission with you. Time will be made available during the week commencing 25th February 2019 by WebEx. Please advise as soon as possible if you would like to attend one of these sessions and we will arrange a meeting.
4. The document will be read by a technical audience. Please include an executive summary on the first page of your response in no more than 500 words.

1.9 Context diagram



Current Process flow



Blank page