



CPB contractor's pilot to enterprise rollout on Aphex

This case study highlights the **best practice approach** from CPB Contractors on how to **select and run a successful Pilot Project**, how to build and present the business case through to enterprise adoption.

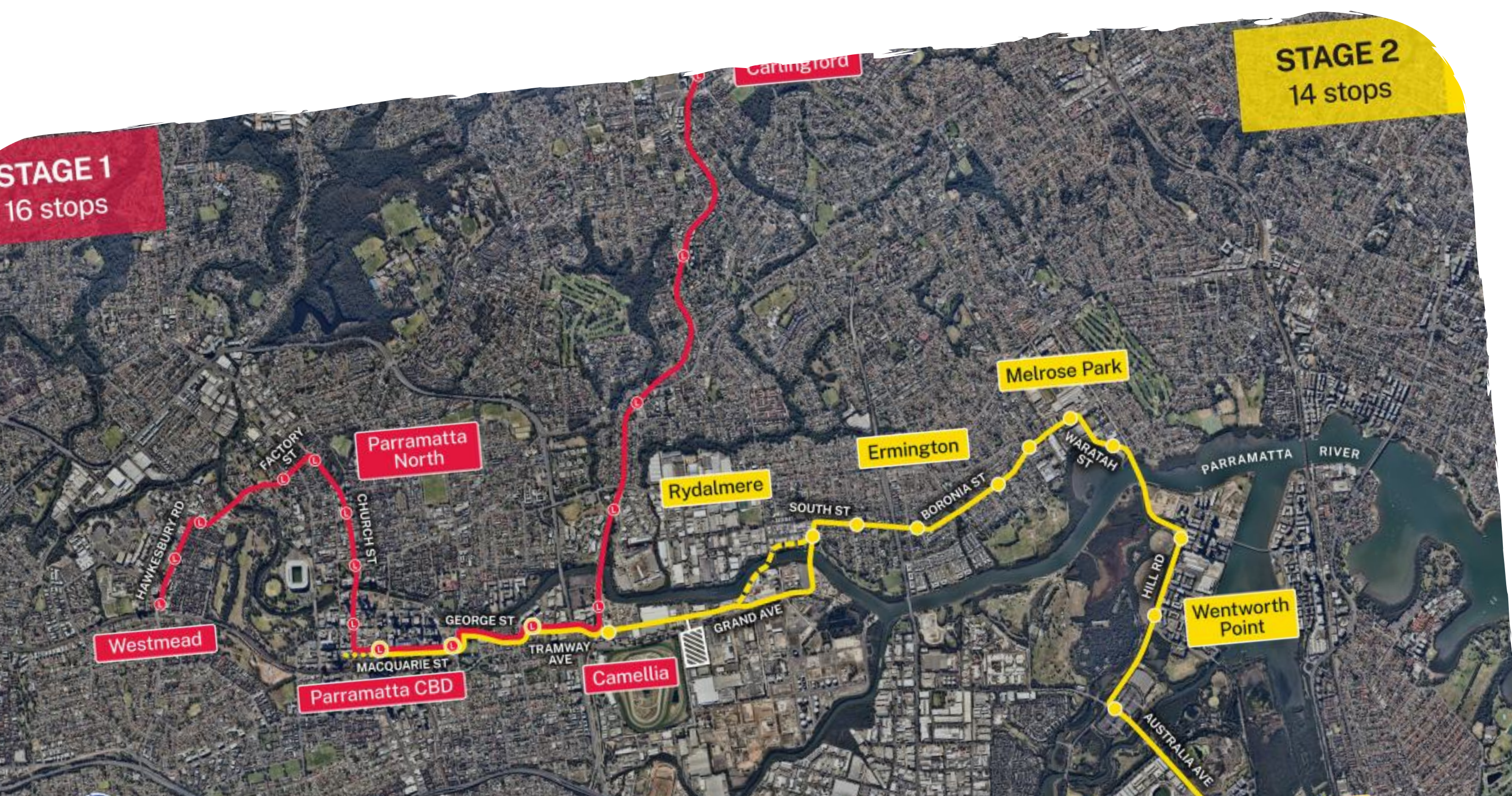
Contractors running existing projects on Apex can leverage the methodology to guide their pilot project and formalise the business case for implementation across all projects.

CPB Contractor's Pilot Process

To appropriately assess and deploy a new solution at scale, CPB Contractors undertook a replicable and thorough approach.

1. Existing Projects

Three existing CPB Contractors projects successfully utilised Apex as their short-term planning solution throughout the trial period. Parramatta Light Rail, a \$2.4 billion project including the construction of over 20km of light rail, was a strong example of a good proof-of-concept project. It reflected the typical setup, pressures and approach of the large-scale infrastructure projects that are typical for CPB Contractors.



The Project Team involved reported qualitative success and positive feedback. This was then quantified and validated by CPB Contractor's Planning Working Group which found Apex provided the following benefits:

- A greatly improved platform for creating Weekly Work Plans
- Greatly improved visibility of the short-term plans across all team members through the Apex online platform.
- Greatly improved coordination of plans, leading to increased early detection of incompatible plans. This, in turn, reduced the frequency of incompatible works detected too late, a major contributing factor to wasted productivity.
- Improved accuracy and efficiency in delivering PlanPercent Complete and Root Cause analysis.
- Simplicity in developing visual programs / flip books to communicate with site supervision and sub-contractors.

2. Executive Sponsorship

These benefits were presented, proving that Apex could successfully mitigate, and sometimes totally remove, the persisting issues of disconnected planning, data integrity and process inefficiencies.

They also provided testimonials and onboarding data showing that the software was easy to deploy and implement within the existing process at CPB Contractors.

Approval was given to run a formal pilot of Apex with a view to Apex becoming the preferred short-term planning solution.

This formal pilot required a suitable project, a rigorous evaluation process to understand project success, and a full presentation for executive sponsorship on a business-wide rollout (if successful). It was important for CPB Contractors to understand the 'reach' Apex would need to ensure sufficient coverage across the business.

The individuals involved at the initial rollout stage will vary for each contractor. Typically, the head of planning, or someone similar, would assess the verbal feedback from projects, key data points, and process improvement and make the case to the relevant internal groups to formalise a program for testing.

3. Selection and Deployment

Once CPB Contractors had approved an official pilot, the Head of Planning selected the Warringah Freeway Upgrade (WFU) Project to deploy, assess, and report back on the suitability of Apex for adoption more widely within CPB Contractors.

Contractors should look for projects that are indicative of complex works to stress-test the software effectively.

WFU was a complex infrastructure project with a marked increase in budget and external pressures compared to the existing projects using Apex, making it an ideal choice for the pilot program.



4. Results

ROI of software cost to expected savings of 1:4

- **\$144,000** expected savings from being able to relocate crews effectively by using the clash detection feature

ROI of software cost to expected savings and cost avoidance is 1:15

- **\$240,000** in expected cost avoidance by saving Engineers & Planners time
- **\$120,000** in expected cost avoidance by removing the time Engineers need to spend in other software

In switching from traditional short-term planning software to Apex for the WFU Pilot Project, CPB Contractor's project team enjoyed tangible expected savings from avoiding unplanned stand down of crews through utilising the work front clash detection feature on Apex. The Project also enjoyed tangible savings of engineer and planner staff time through improvement to previously inefficient processes and unreliable data.

ROI was driven by tangible benefits such as preventing crew stand-downs through Apex's work front clash detection, and intangible improvements in project management processes, both crucial for evaluating the formal Pilot.

"At it's core, Apex is a simple, easy to use online planning software which provides all the functionality required that is missing from the current solutions being deployed"

CPB Contractors Apex Review Report

With the results from the pilot being overwhelmingly positive, compiling the Business Case was the next step towards a full business rollout.

Enterprise Evaluation

Having run a successful Pilot project, capturing key information against specific requirements, the CPB Contractors team moved on to the organisation-wide implementation phase. This consisted of two main parts: Building the Business Case and Rollout.

1. Building the Business Case

To appropriately assess and validate deploying a new solution at scale, the stakeholders presented the Business Case internally, structured around an in-depth report.

The sections below detail some of the core elements of the CPB Contractors business case, with some indicative findings, to help inform how other contractors can structure and detail a similar report.

a) Software Criteria Assessment

CPB Contractors conducted a thorough market evaluation to compare Apex to other available solutions.

Apex led in meeting both 'Must-Have' and 'Should-Have' for CPB Contractor’s requirements, with the closest alternative meeting only 52% of these. Apex is the only solution that offers live and collaborative planning capabilities, distributed planning responsibility, and assignment of locations.

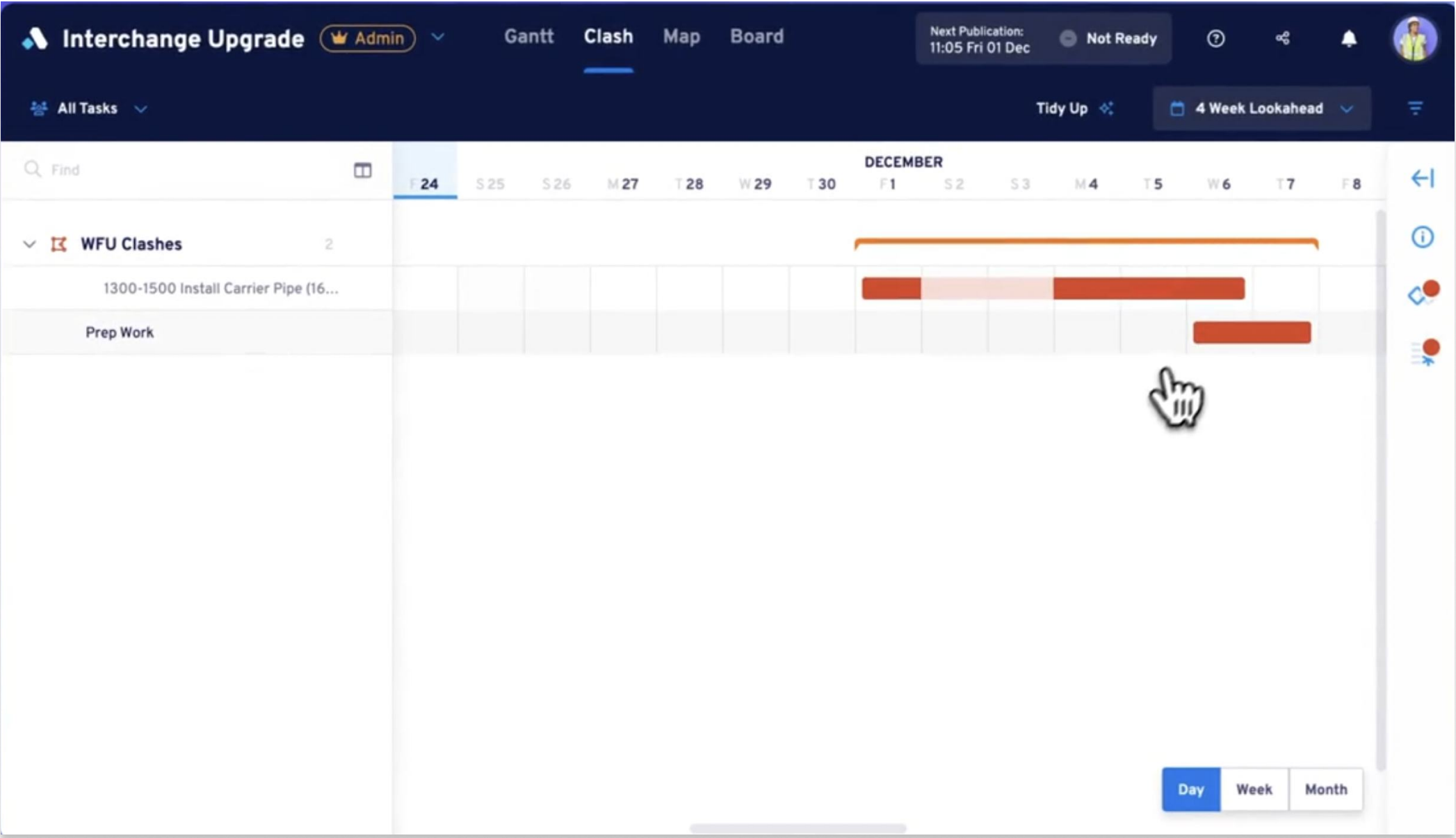
Requirement Criteria	Apex	Alternative One	Alternative Two	Alternative Three
Scheduling software	✓	✓		✓
Collaborative planning	✓	✓		
Time & Space Clash detection	✓			
Assignment of locations & work areas	✓			
Assignment of resources & labour	✓	✓	✓	
Milestone tracking	✓			
Interactive sharing	✓			
Import from the Master Schedule	✓			
Print Gantt	✓	✓		✓
Plan readiness assistance and tracking	✓			

Example of must have requirement criteria to assess a pilot project

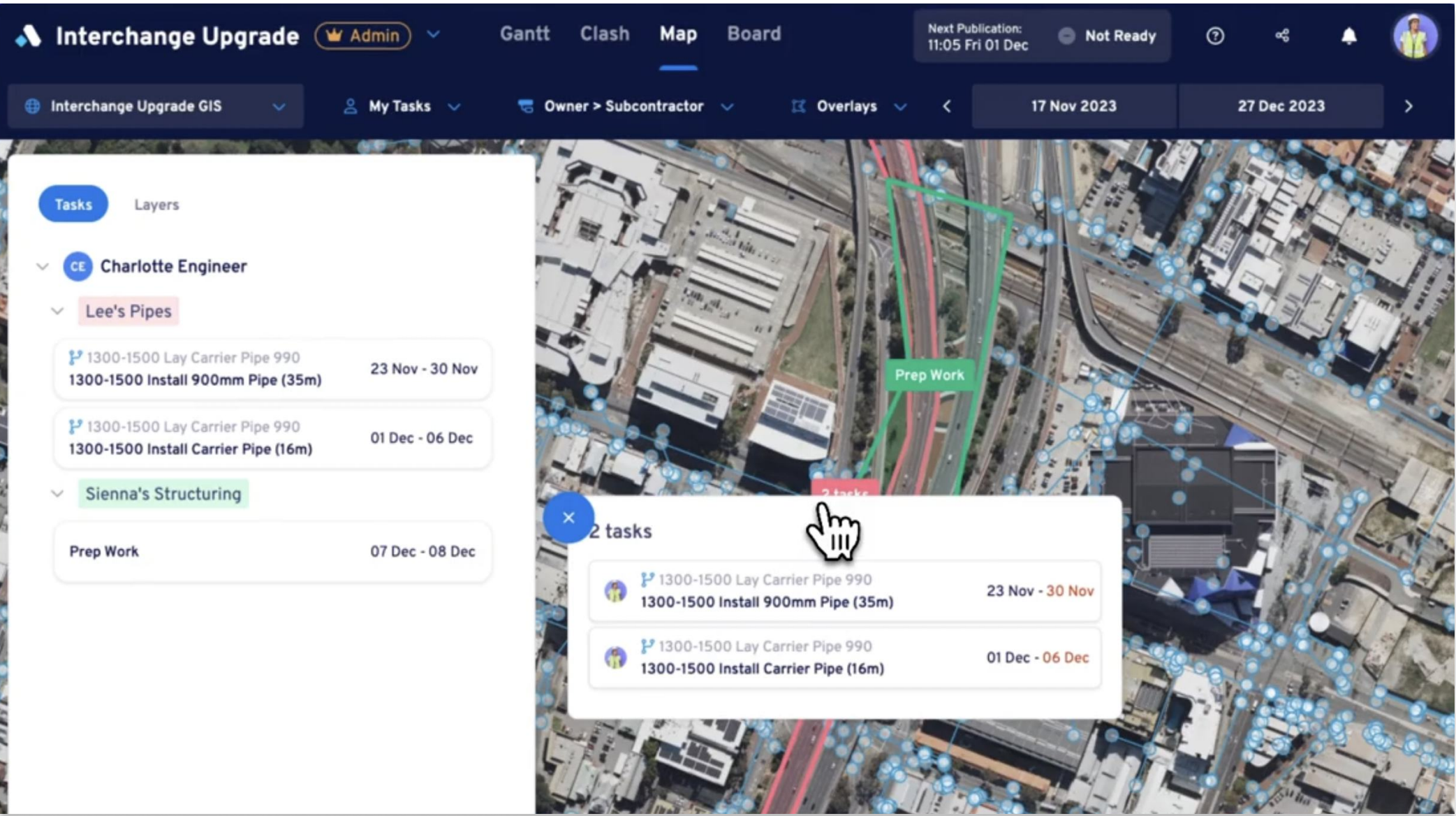
The report described specific differentiators in-depth, covering the functionality improvements and increased benefits generated by Apex. This added credibility to the pilot project team’s feedback that Apex replaced outdated processes and systems.

Examples of Apex’s advantages are below:

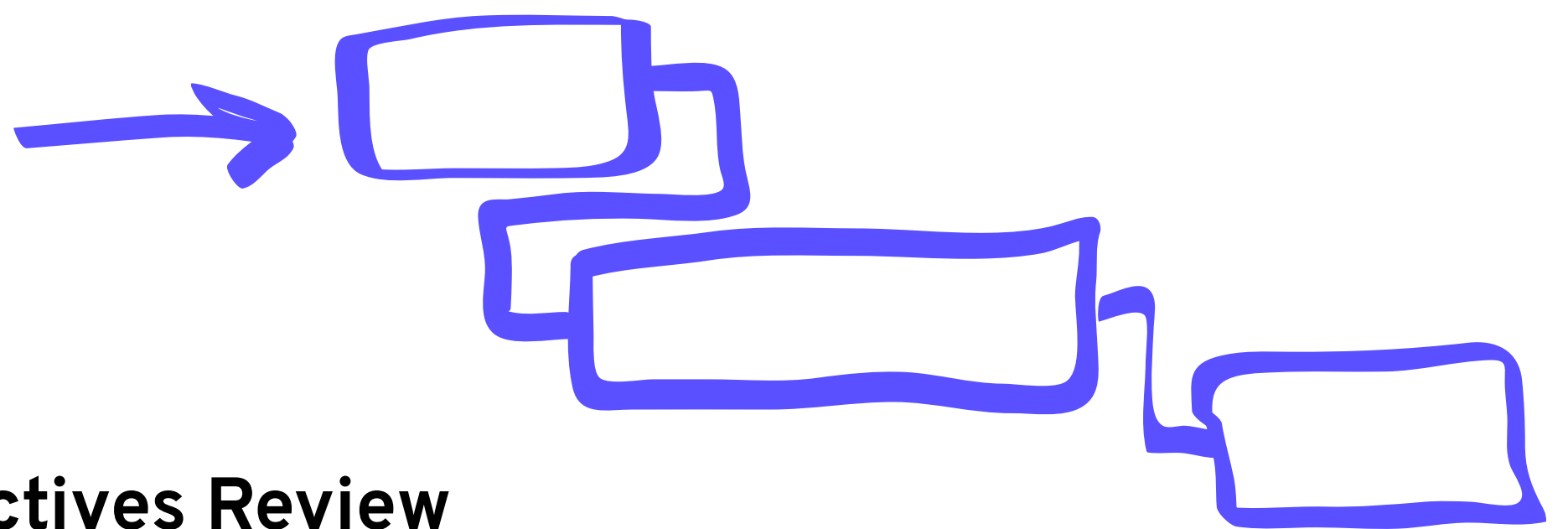
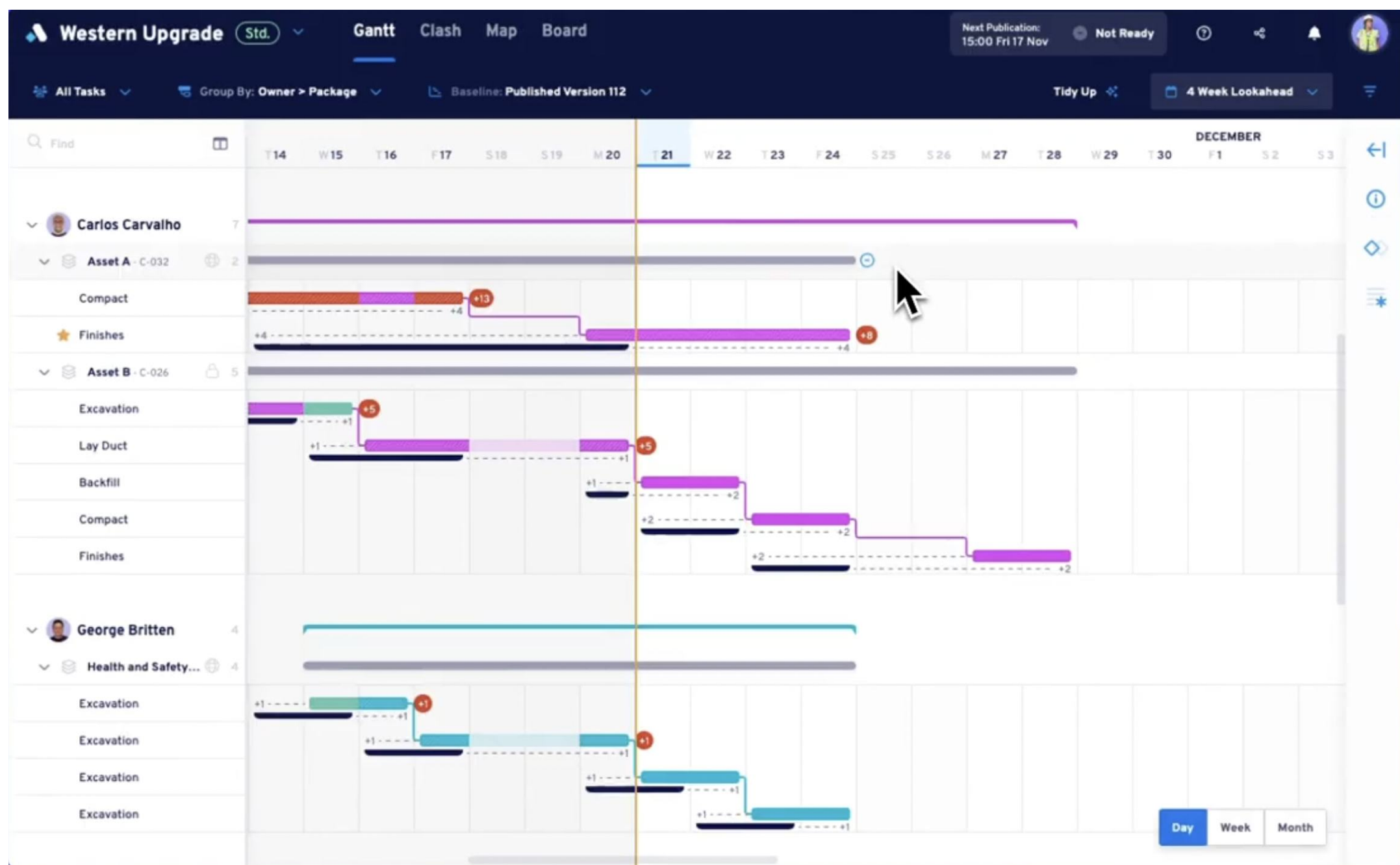
Physical time-location clashes can cause crew stand-downs, or if clashing works are allowed to proceed, may lead to safety incidents. These are automatically highlighted in Apex to prompt communication, action and mitigation.



Mapping and the ArcGIS integration allowed teams to visualise their activities within the actual project’s design context, imagery, or services. Seeing where work is physically taking place, is a quick and effective way of communicating a plan.



Automatic weekly baseline data, and the ability to overlay this to visualise performance all in one database rather than in separate spreadsheet files in multiple locations on a network drive was a key differentiator.



b) Business Objectives Review

Software cost, simplicity, reliability and integration were core areas assessed by the Pilot.

CPB found Apex:

- to be simple and easy to use, which increased efficient and transparent short term lookahead planning while simplifying management of the Integrated Master Program (Level 3).
- removed the reliance on ‘honesty’ from engineers in update cycles, instead providing a framework to capture all changes and a robust process that ensured the integrity of schedule reliability data.
- able to support a fully integrated Construction Execution Program and Short Term Lookahead Program due to the ability to import Master Schedules from Primavera P6, and all types of files from Microsoft Project and Powerproject.

Moreover, Aphex significantly reduced administrative burden on engineers and planners, allowing more time to manage performance in the field and engage in high value-added activities.

c) Cost Benefit Analysis

Quantifying ROI of a new software is a key section in any business case. CPB Contractors categorised the projected benefits from implementing Aphex into tangible and intangible benefits.

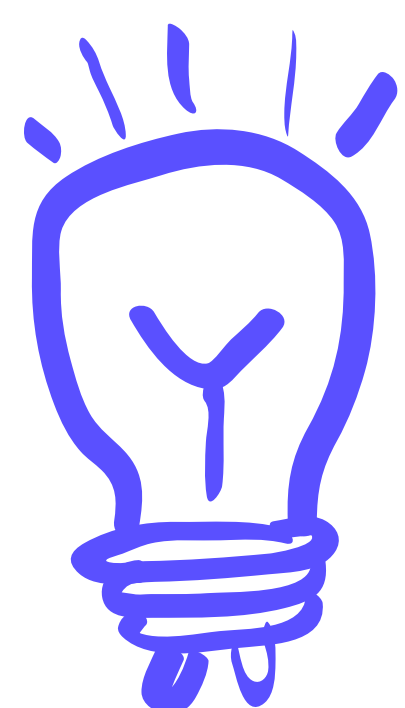
- **\$144,000** expected savings from being able to relocate crews effectively by using the clash detection feature
- **\$240,000** in expected cost avoidance by saving Engineers & Planners time
- **\$120,000** in expected cost avoidance by removing the time Engineers need to spend in other software
- **\$40,000** in expected cost avoidance by automating dashboard reporting for Planners

The ROI of software cost to expected savings is 1:4, and to both expected savings and cost avoidance is 1:15. This is because the cost of the software was minimal and capped, given its cloud-based nature and lack of needed hardware.

Though CPB Contractors focused on tangible and intangible benefits, other cost-benefit analysis points include opportunity costs, direct costs, indirect costs and competitive costs. A different combination will work for different contractors when assessing software, as goals, objectives and limitations are so contextually specific.

d) Support and Onboarding Learnings

The CPB Contractors trial presented software limitations and potential risks, though most found mitigation was feasible, or would be covered by software updates from the vendor following the Pilot.



The trial project identified the following limitations/risks:

1. One limitation of Aphex is that it is hosted online. This may present challenges on projects where internet connectivity is marginal or unavailable. Where connectivity is available, Aphex guarantees 99.5% uptime and 24-hour RTO and RPO targets in its Service Level Agreement.
2. Limited WBS customisation was a challenge for some engineers as the WBS is managed by the Project Administrator (typically the Planning Manager).
3. Aphex cannot change or improve the behaviour of engineers in and of itself. Those few who typically pay little heed to short-term lookahead programs may continue to do so. However the inbuilt reporting and integrity of the system allows these behaviours to be identified and challenged.

Responsiveness and documentation of user requests by Aphex during the Pilot were strong, helping CPB Contractors to confirm that any risks raised would be assessed and addressed in future releases.

42 feature requests were made by CPB teams during the pilot

15 addressed & implemented

14 accepted & added to the roadmap

13 logged & awaiting sufficient upvotes

2. Rollout

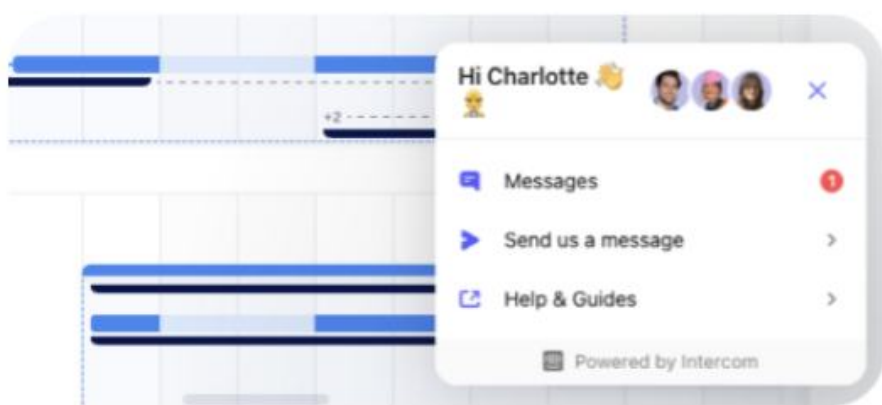
Implementing the move to Aphex for short term planning across CPB Contractors involved focusing on new projects, or those in their early stages, to standardise Enterprise Level Aphex Access.

Implementation and Review

The CPB Contractors team works closely with a dedicated Customer Success Manager who provides guidance on implementation strategies and assists in setting up new teams for success.

Knowledge Sharing

A key focus at CPB Contractors is establishing a culture of continuous improvement and adoption of best practices. Support extends to sharing insights and learnings both within and across projects, enhancing collaborative learning. Engineers, planners, project managers, and site agents have access to various training resources and support options, ensuring they can leverage the software effectively in their roles.



LIVE SUPPORT IN APP



APEX HELP SITE



TAILORED CPB DEMO VIDEO

CPB Contractor's Conclusion

CPB accepted the Enterprise Adoption Business Case in May 2023. This led to the signing of an Enterprise Agreement to adopt Apex as the standard tool for short-term planning across the whole business.

Over the next 3 years, CPB Contractors and Apex will ramp up onboarding across the business. At the time of compiling this Case Study (month 5 of the agreement) CPB Contractors has successfully deployed Apex far beyond it's year 1 target. The initial focus is on the short-term planning process for activities, clash detection, collaboration, weekly 'promises', and reliability/cause of slippage tracking. Project teams are encouraged to get this piece right before moving on to leveraging many of the other features Apex has to offer.

[Watch a Demo](#)

