

Tiger Teams — Open innovation for infrastructure projects

Summary of Approach



HS2



September 2021

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Tiger Teams are groups of experts brought together to solve difficult engineering problems.

They are particularly useful for the sort of complex, multi-stakeholder challenges that are often found in infrastructure. Representatives from different stakeholders can work together in a challenging, but collaborative, way to address ideas around innovation. Tiger Teams can therefore help unlock solutions

that the market has failed (or is likely to fail) to address on its own.

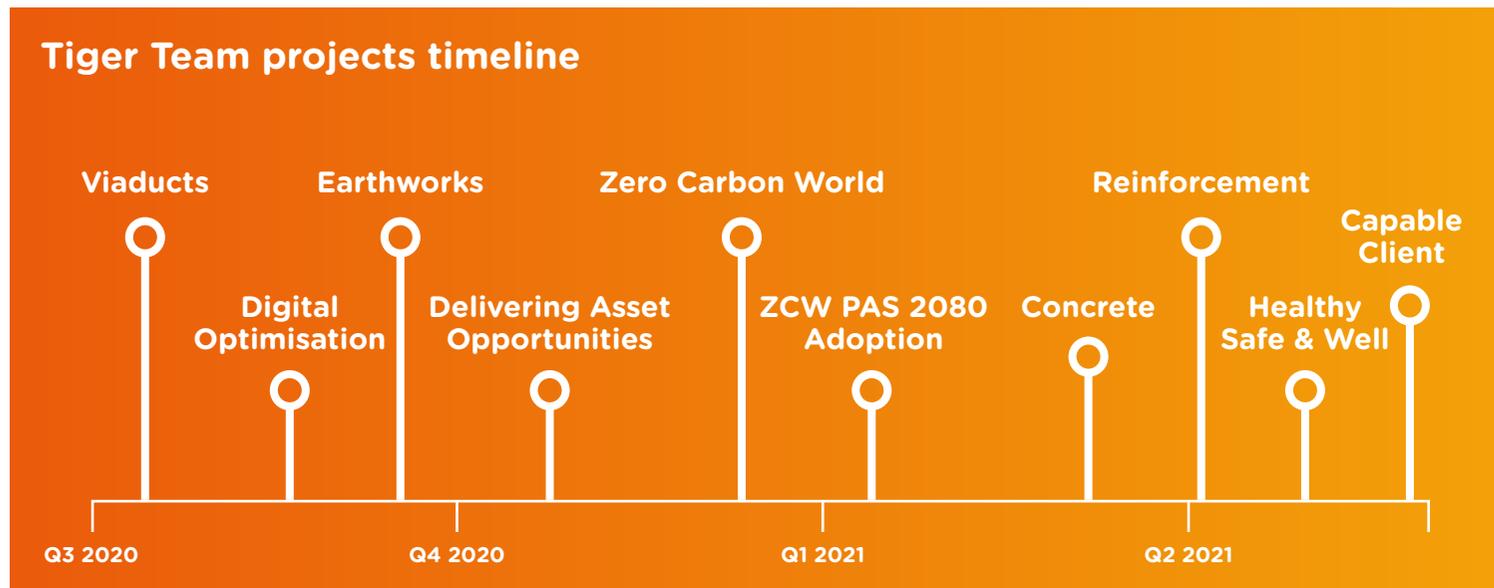
i3P is working with infrastructure clients and their supply chains to embed Tiger Teams as an established methodology for 'soft-system' engineering problems - that is, where the problem definition is subjective and solutions depend on a complex interplay between human, technological and environmental factors. This document introduces the Tiger Team concept and sets out the methodology and approach at a high level.



Tiger Teams were first developed in the 1960s and were crucial to helping ensure that the Apollo 13 lunar landing mission returned successfully in 1970.



We are using Tiger Teams to solve problems such as how to deliver large numbers of accessible station footbridges for the rail sector.



About i3P

Established in 2016, the Infrastructure Industry Innovation Partnership (i3P) is a community of client and supply chain organisations that have made a commitment to delivering collaborative innovation. Its 45 members include infrastructure asset owners, contractors, consultants and Government departments.

The Knowledge Transfer Network (KTN) works with i3P to support members and to help identify, prioritise and promote strategic innovation opportunities.

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The three-stage, 3 'D's process

The Tiger Teams approach works best for complex, interconnected problems. Projects are organised around a three stage process, made up of Discovery, Development and Delivery. The process starts with a broad review of the business case for the innovation in question, and moves towards how to deploy the efficiency improvements identified at scale.



From design sprints to innovation challenges - using an iterative methodology

Tiger Teams bring together groups of knowledgeable experts in Communities of Practice (COPs) to help solve industry challenges. This approach is particularly powerful given the fragmented nature of the construction sector, as it can bring together a variety of stakeholders to understand and unlock improvements in productivity and outcomes.



From design sprints to innovation challenges - using an iterative methodology

Define Problem Research Generate Evaluate Deliver



Tiger Teams work in a structured and iterative way - with options generated (based on a clear articulation of the problem and detailed research), tested and then delivered.

Tiger Teams have provided the following benefits to infrastructure projects:

1

Establishing a Zero Carbon World Community of Practice, comprising over 80 members from across the wider industry.

2

15-20% of efficiencies in programme cost and duration from Digital Optimisation.

3

24 ideas identified and being developed to improve productivity in Earthworks.

4

Identified three major concrete carbon reduction strategies to be piloted for large scale adoption.

5

Undertook a research study to identify significant opportunities to optimise viaduct design on HS2 Phase 2.

6

Creation of a Community of Practice of over 60 experts from the reinforcement industry to identify over 100 innovation opportunities.

“Tiger Teams are able to identify the real blockers to innovation in major infrastructure schemes - and then bring people together to resolve them.”

Andrew Pestana
Innovation Strategy Lead, HS2

We see the real value from this TT (Zero Carbon World) study. The discovery phase has exceeded our expectations and we look forward to the next part of the journey.

David Castlo
Network Technical Head,
Network Rail

To find out more about how Tiger Teams can help with your infrastructure project, contact:

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