



Cambridgeshire Autonomous Metro

CAM Special Purpose Vehicle (SPV)

High Level Organisational Design

v0.1 – July 2020



Introduction

The design framework defines the parameters for the organisational design. It is used as a basis to develop the capability map and high level design options

- a Context
- b Organisational design within the operating model
- c Approach to developing the organisational design
- d Organisational design considerations

Context

The Cambridgeshire Autonomous Metro (CAM) is a proposed new transport network to be built in the Greater Cambridgeshire region

DOCUMENT PURPOSE

The purpose of this document is to outline the high level organisational design of the proposed CAM special purpose vehicle (SPV).

HISTORY OF THE SPV

In September 2018, the CPIER report (Cambridgeshire and Peterborough Independent Economic Review) identified that significant investment in transport infrastructure was required to support further economic growth in the area. This was followed in February 2019 by the strategic outline business case (SOBC), which was developed for the Cambridgeshire and Peterborough Combined Authority (CPCA) who are overseeing the project.

In November 2019, an options assessment for how the project could be delivered was produced by Pinsent Masons. Option 1 was the final recommendation.

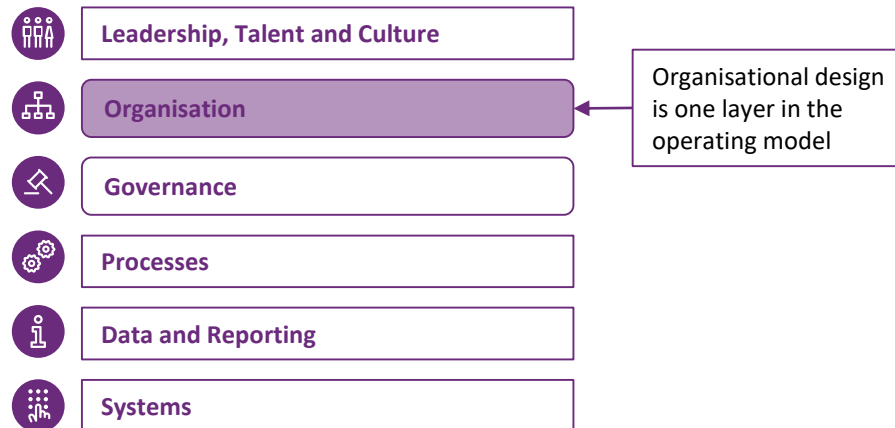
1. Private company solely owned by CPCA as promoter – the SPV
2. Urban regeneration company
3. Joint venture with private company (creating a standalone corporate vehicle) as promoter
4. Private sector third party as promoter under contractual arrangement with CPCA
5. CPCA as sole promoter

Organisational design within the Operating Model

Organisational design is one of the layers of the Operating Model

The Operating Model

- An operating model provides a clear articulation of “**how**” an **organisation’s operations will be configured** to execute the organisation’s strategy. It **brings strategies and policies to life** and can support stakeholder alignment, operational readiness and business case development
- An operating model can be **articulated across a series of “layers”**, which need to come together in an **integrated and coherent design** to describe the organisation at a **single point in time**

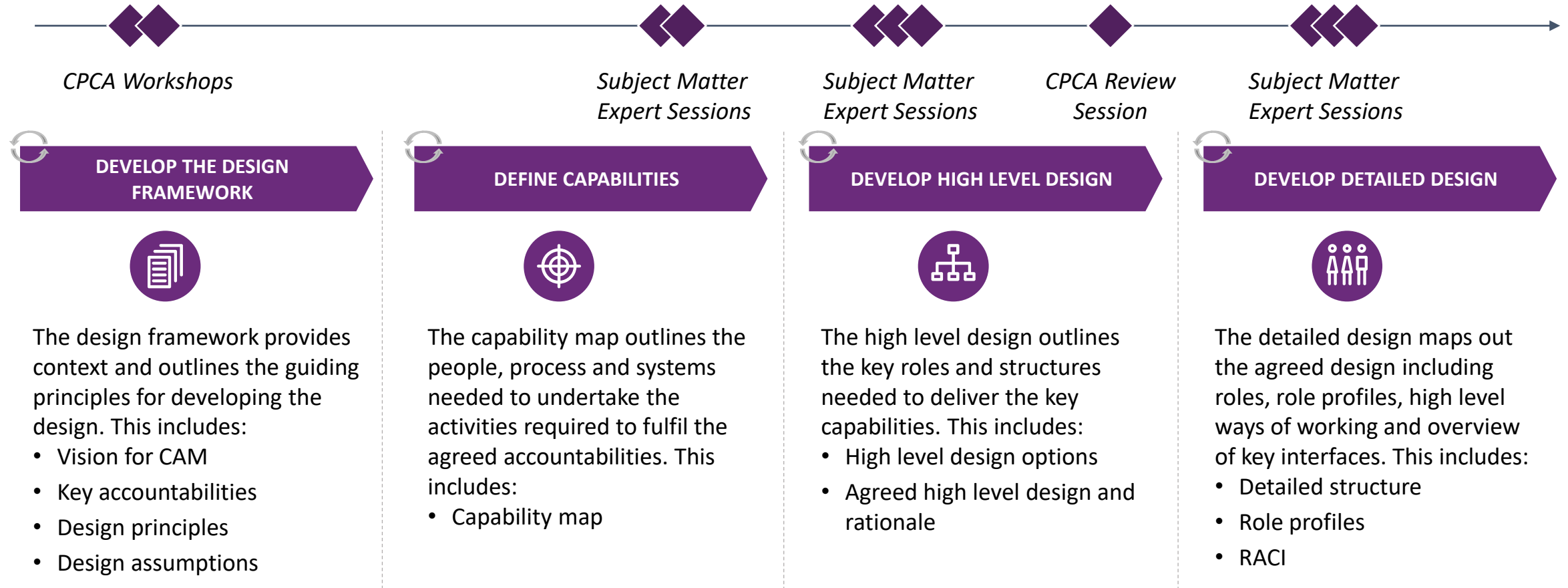


Organisational Design

- Organisational design is the **accountabilities, structure, role descriptions and sizing (FTE and Headcount)** needed to deliver the SPV’s strategy
- Organisational enables **capabilities to be delivered in the most efficient, productive and cost effective manner**, delivering a high quality coherent service
- It also enables **individuals to understand what is in their remit** with clear roles, responsibilities and performance measures

Approach to developing the organisational design

The following outlines the approach taken to develop the organisational design for the SPV



Organisation design considerations

The organisational design has been developed as a framework to guide the implementation of the SPV. It should be iterated depending on the requirements of programme at the time

1. The organisational design was developed based on **good practice for capital delivery programmes** and **our experience working with similar organisations**. It is intended to be used as a **guide to setting up the SPV**
2. The design has been tested with a **network of SMEs to review the design** across the each of the functions
3. For each section of the design, the high level design, and each function, the **assumptions which underpin the design are noted**
4. The design products, for example the RACI should be used as frameworks for how to define accountability within the organisation. The OD design and products should be **tested and agreed with SPV Leadership** over a series of leadership days/ workshops
5. The organisational design forms **one part of the operating model**. To develop the SPV into a functioning organisation the other layers of the operating model will have to be considered which may influence the design, for example the commercial model functions
6. The design is **iterative** and should be reviewed to ensure it is still fit for purpose of the current stage of the programme and requirements



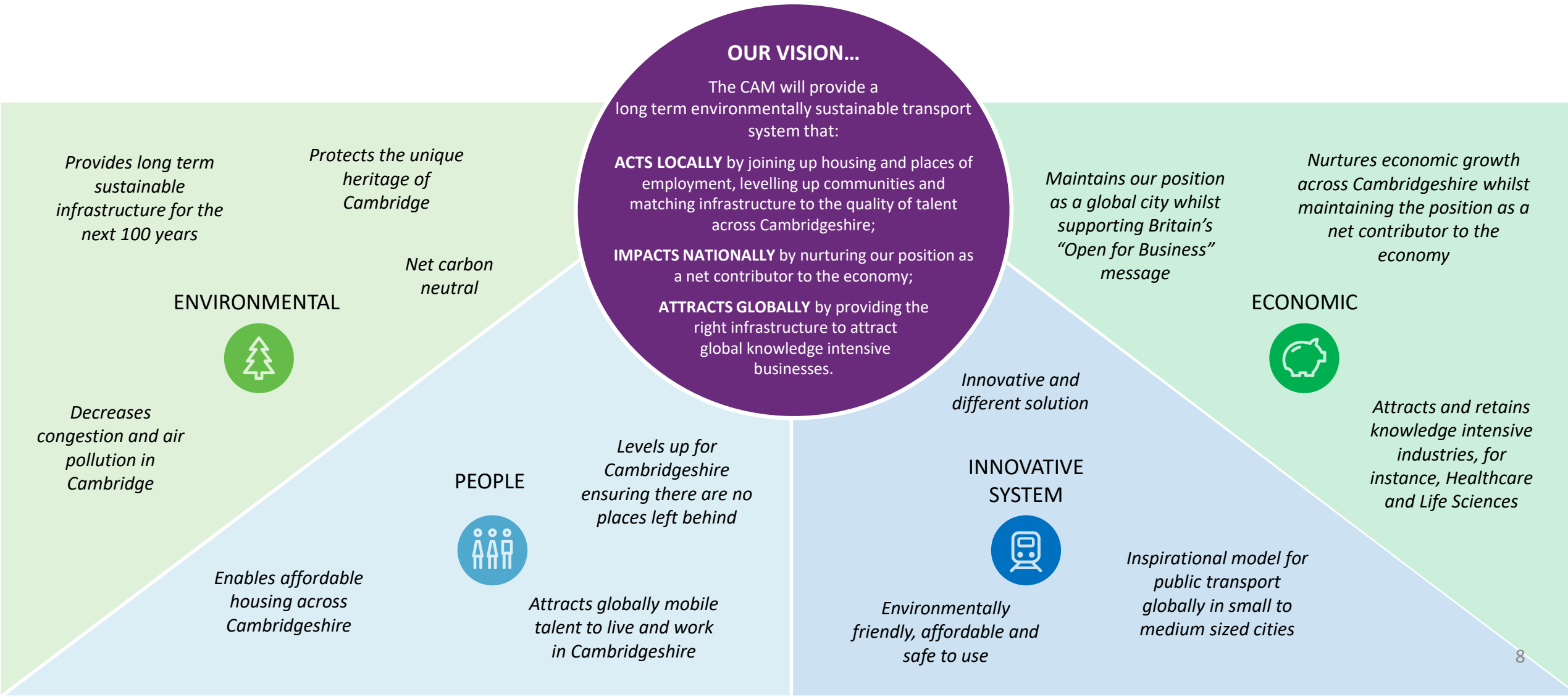
The Design Framework

The design framework defines the parameters for the organisational design. It is used as a basis to develop the capability map and high level design options

- a Vision for CAM
- b Relationship between the SPV, CPCA, GCP and Contractors
- c Accountabilities
- d Design principles
- e Design questions and assumptions

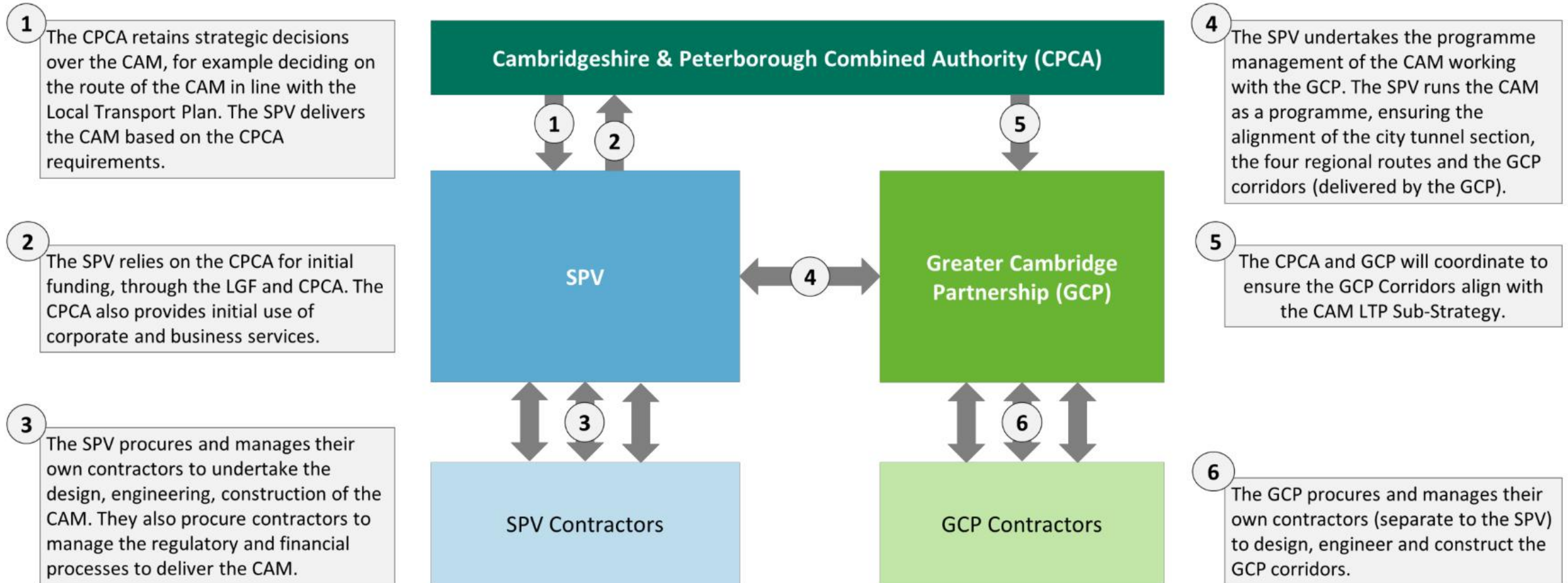
Vision for CAM

Acts Locally, Impacts Nationally and Attracts Globally



Relationship between the SPV, CPCA, GCP & Contractors

The CPCA retains decision making over the CAM programme, while the SPV and the GCP deliver the CAM network across Cambridgeshire through a series of contracts



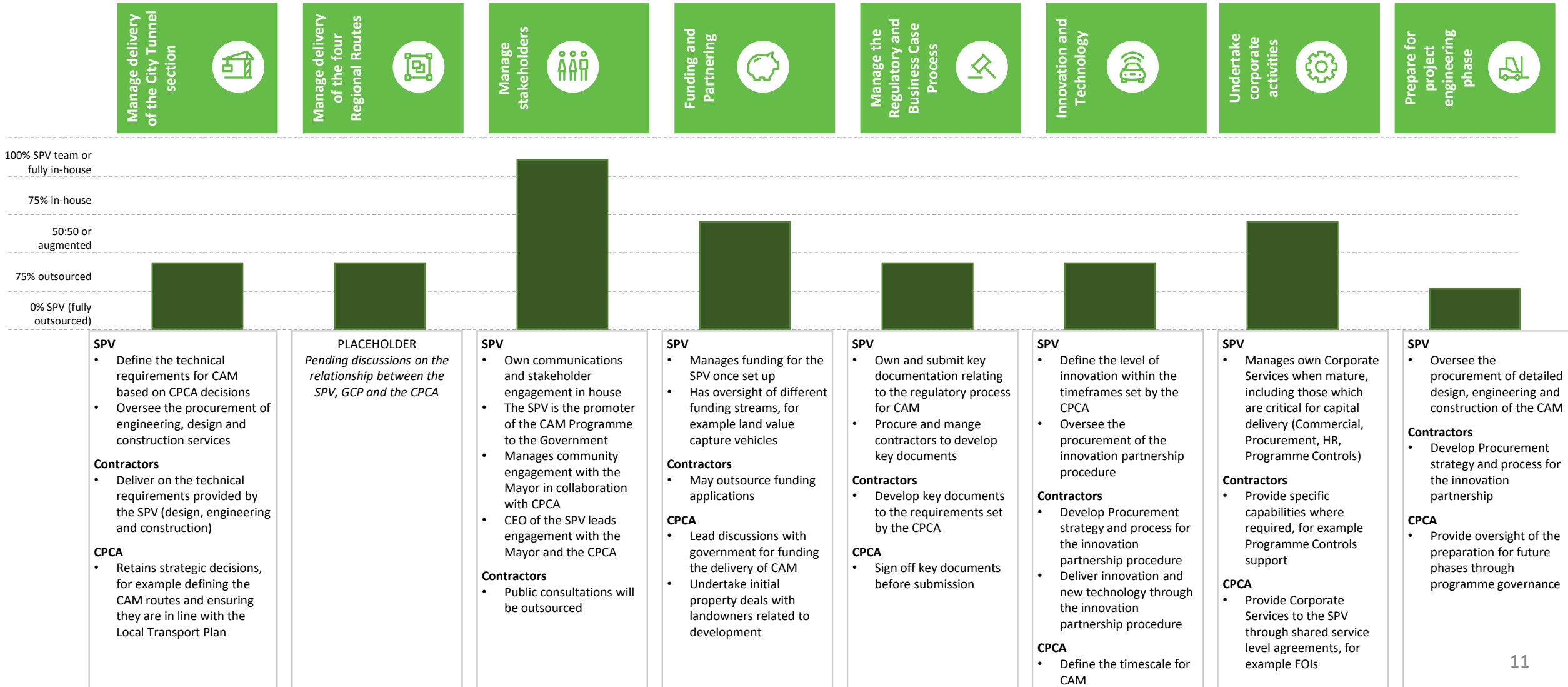
Accountabilities

The short-to-medium term accountabilities of the SPV have been broken down into 8 groups. These groups will align to the key capabilities that the SPV will require.

Manage delivery of the City Tunnel section 	<ul style="list-style-type: none"> • Contribute detailed scope and functionality of the city tunnel section of the CAM project and its subsequent construction to meet the operational requirements • Deliver technical activities required to develop this scope including planning consents and land referencing activities • Deliver the required Environmental Impact Assessment • Maintain and ensure compliance with appropriate environment, construction and safety standards • Manage delivery partners to complete work, taking a proactive role in the management of safety, schedule, cost quality and risk performance • Own the delivery plan and overall scheme completion date and opening date • Enter into property deals with landowners for land required for CAM 	Manage the Regulatory and Business Case Process 	<ul style="list-style-type: none"> • With inputs from the relevant parties, manage and deliver the Outline Business Case (OBC), Full Business Case (FBC) and Transport Works Act Order (TWAO) • Define handover for operations of CAM • Own the systems safety and assurance, and operational certification processes. • Contribute to carbon net-zero regulatory planning.
Manage delivery of the four Regional Routes 	<ul style="list-style-type: none"> • Progress detailed scope and design options for the delivery of the four regional routes to contribute to an overall business case for this package of work • Manage delivery partners to complete work, taking a proactive role in the management of safety, schedule, cost quality and risk performance 	Innovation and Technology 	<ul style="list-style-type: none"> • Define the level and scale of innovation suitable for CAM within the timelines agreed with the CPCA • Manage the innovation partnership procedure to define new technology (e.g., infrastructure, vehicle, etc.) to be used for the CAM system • Manage potential aligned technology to support the CAM system operations, (e.g., passenger transport app) • Manage the IP for CAM, ensuring that the commercial aspects of innovation and new technology are properly managed
Manage stakeholders 	<ul style="list-style-type: none"> • Own the consultation and stakeholder engagement activities related to the CAM scheme and relevant community involvement activities • Manage the governance and relationships between the SPV and the GCP/CPCA • Manage formal communications between the SPV and external stakeholders • Maintain oversight of progression of internal (e.g. C2C / GCP corridors) and external (e.g. A10 project, Cambridge South development, EWR) schemes. 	Undertake corporate activities 	<ul style="list-style-type: none"> • Procure and oversee design services, surveys and other work needed to achieve these tasks, and project manage them • Develop, own and provide internal assurance against Programme Controls processes (cost, schedule, risk etc.) • Undertake the reporting necessary to satisfy itself and key external parties (e.g. DfT) • Be responsible for all other corporate activities necessary to operate as a business including finance, commercial, procurement, HR, IT, legal, HSE and office management service
Funding and Partnering 	<ul style="list-style-type: none"> • Manage the spending of the initial seed funding investment for the SPV (currently proposed to be funded by the LGF and CPCA) • Secure funding for the further development of CAM to TWAO approval by the SPV once the initial seed investment has been utilised • Prepare and negotiate structures for the funding, financing and contracting of construction and operation of the CAM • Approach private sector and other stakeholders for funding, likely through partnerships of the development and/or construction of the CAM • Managing and controlling spending of relevant budgets throughout the programme lifecycle 	Prepare for project engineering phase 	<ul style="list-style-type: none"> • Support the evolving understanding of technology requirements, and lead on the procurement of the innovation partnership that will establish the technology that CAM will use • Establish data and asset management strategy and approach for future project phases • Undertake supply chain procurement activities to appoint enabling works contractors






Balance of insource and outsource resources

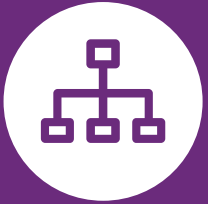
The SPV will deliver the CAM using an augmented resource profile. The level of outsourcing depends on the accountability



Design principles

Design principles are guiding statements which help to shape and inform the organisational design and provide a framework to evaluate design options

DESIGN PRINCIPLE	IMPLICATION: the organisational design will...
 <p>1. The SPV organisational structure will be scalable to ensure the right capability and capacity to deliver each phase of the programme</p>	<ul style="list-style-type: none"> a) evolve throughout the lifecycle of the programme. The organisational design will outline roles which are required Permanent ly within the organisation and those needed for particular phases ensuring there is the right capability and sufficient capacity at each stage in the programme b) enable the organisation to be scalable, with appropriate controls in place to remain within quality, time and budget commitments
 <p>2. The SPV will have oversight and assurance of elements of CAM which are delivered through contracts</p>	<ul style="list-style-type: none"> a) define the overarching capabilities needed to deliver the CAM and define which capabilities are delivered within the SPV and which are outsourced to contractors b) enable the SPV to work in partnership with contractors to deliver the CAM ensuring there are appropriate mechanisms in place to ensure the SPV, the delivery partner and the wider supply chain are aligned and integrated at each stage of the project lifecycle c) provide sufficient capacity and technical capability within the SPV to provide assurance on key elements of the programme which are outsourced to contractors
 <p>3. The SPV will actively engage with key stakeholders and provide sufficient assurance to the CPCA</p>	<ul style="list-style-type: none"> a) enable sufficient leadership roles to be outwards facing versus inwards facing b) promote effective interfaces with key stakeholders, for example the Mayor and the CPCA, allowing SPV leadership to shape and influence the delivery of CAM
 <p>4. Have lean and effective structures that increase empowerment and have clear accountabilities</p>	<ul style="list-style-type: none"> a) clearly define roles and reporting lines, driving single points of accountability for different functions and activities b) ensure any “matrix” structures are clearly defined, with clear accountabilities and assigned leads across each dimension c) allocate strategic, tactical and operational decision making authority to the appropriate management level in the organisation, increasing empowerment at all levels of the organisation d) enable appropriate technical assurance, balancing the need to set tolerance levels to delegate responsibility with a need to maintain quality and reliability of outputs
 <p>5. Promote collaboration and integration across the organisation, fostering a dynamic working environment where innovation is encouraged</p>	<ul style="list-style-type: none"> a) align ways of working so that activities are done in a consistent way across the SPV, enabling alignment and collaboration b) incentivise collaboration across teams sharing ideas and resources, promoting different perspectives and challenge on key issues, combining services and creating synergies to deliver a high quality service c) embed innovation and use of new technology within the organisation



High level design

This section provides an overview of the high level design of the SPV

- a SPV Capability map
- b Recommended design
- c How it works in practice

Recommended design: functional design

The following outlines the main functions in the SPV

Strategy and Sponsorship

Strategy and Sponsorship will set the strategy for CAM and ensure the programme benefits are realised. This includes:

- Setting the strategy and aligned business plan
- Overseeing the regulatory process for CAM, including the OBC and FBC
- Owning and developing the SPV operating model at each stage of the programme lifecycle
- Acquiring and managing the funding for CAM across the programme lifecycle

Stakeholder Engagement and Communications

Stakeholder Engagement and Communication will manage all engagement for the delivery of CAM working closely with the CEO and the Mayor. This includes:

- Managing senior stakeholder engagement working in conjunction with the CEO, for example with the CPCA, DfT
- Managing all public engagement including consultations
- Managing all external and internal communications

Delivery

Delivery will ensure the design, engineering, construction and handover of the CAM system. This includes:

- Managing contractors to deliver the CAM system
- Oversees the delivery of the GCP routes
- Ensuring robust programme controls for the CAM programme
- Managing activity to enable delivery of CAM, for example consents

Engineering

Engineering will provide specialist engineering expertise to Delivery and manage innovation across the CAM system. This includes:

- Providing technical expertise for the CAM network
- Supporting the innovation partnership procedure to develop new technology and liaising with the selected product creator into detailed design

Corporate Services

Corporate Services will manage the internal running of the SPV to ensure it can function as an organisation. This includes:

- Providing key HR, Finance, Commercial and Procurement and IT and Data services
- Providing Legal advice where required, including managing IP

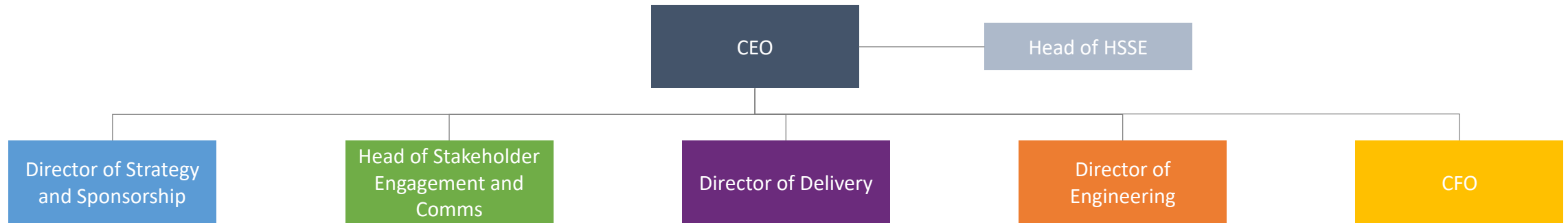
HSSE

HSSE will ensure the Health, Safety, Security and Environment of the CAM Programme. This includes:

- Maintaining and ensuring compliance with appropriate environment, construction and safety standards
- Set the health and safety policy and culture for the CAM scheme

Recommended design: L1

The following outlines the high level design for the SPV including the L1 structure



SPV capability map

The capability map outlines the capabilities (mix of people, process and technology) which the SPV needs to undertake

Strategy and Business Planning			
Vision develop and materialisation	Business Planning (0-2 yrs)	Strategic planning (2-5 yrs)	Economic analysis
Capital investment decision making	Business strategy realisation	Assurance planning and integration	Corporate reporting inc stage gate reviews

Customer			
Demand analysis	Customer experience	Customer journey management	

Sponsorship			
Business case set up	Business case oversight and realisation	Benefits identification	Programme Assurance (IAS, IAAP)

Funding and Financing			
Financial strategy and planning	Private sector partnering and funding	Public sector funding	Financing
Commercial negotiation for partnering and funding	Land Value Capture	Related property commercial opportunities	Advertising and naming rights

Operating Model and Business Change			
Operating Model	Business change	Learning	Leadership development

HR			
Resourcing strategy	Recruitment and selection	On-boarding	Employee engagement
Performance management	Remuneration	HR Services (e.g. payroll)	Employee relations

Stakeholder Engagement and Comms			
Comms and engagement strategy	Marketing and branding	Media relations	Social media
Community engagement	Consultation	External stakeholder management	Government relations
Internal communications	Correspondence management	Events management	

Programme Management (inc Programme Controls)			
Programme Design and Control	Planning and Reporting	Risk and Issue Management	Outcome Management
Programme Support			

Consents			
Land referencing (TWA0 / DCO)	Planning Obligations (S106)	Planning Applications	Protective Provisions
Code of Construction Practice	Other 3rd Part Agreements	Asset Protection Agreements	Other consents

Property		
Property agreements	Property safeguarding and acquisition	Statutory and non-statutory compensation

Finance			
Financial Strategy	Financial reporting (including Public Sector Accounting)	Cash flow forecasting	Cash flow management
Payment management	Financial risk management	Financial modelling	Insurance (if required)
Tax management (if required)	Treasury (if required)		

Engineering and Design			
Digital Engineering	Asset management and maintenance	Systems engineering and assurance	Civil, Built Environment and Permanent Way
Geotechnical and Drainage	Station Systems	Signals and Telecoms	Power and Electrification
Rolling stock and depots	Carbon	Noise and visual impairment	Water and waste
Heritage			

Design			
Architecture	Landscape	Urban design	Arts and culture

Intellectual Property (IP)			
Develop IP (R&D)	Codify IP	IP Protection	IP Commercialisation

Health, Safety, Safety and Environment (HSSE)			
Health and Safety (inc well-being)	Quality	Security and Resilience	Workplace environment
Environmental minimum requirements	Environmental technical services (air, noise, water, heritage)	Environmental assurance and compliance	

Commercial and Procurement			
Commercial Strategy	Procurement execution	Market engagement	Contract Performance Management
Category management	Contract Integrity		

Facilities management	
Facilities management	Accommodation provisioning

Asset Management		
Asset maintenance strategy	Asset Management planning	Asset Management policy

Asset Information			
Asset Information Strategy	Asset information management	Asset Information Systems	Data acquisition technologies


Vehicle Operation and Maintenance			
Vehicle operations strategy	Vehicle operational readiness	Vehicle Maintenance	Fleet Management
Franchise Specification			

Network Operations			
Operational Strategy	Network operational readiness	Service planning	Asset Operation
Telemetry and SCADA	Asset management system monitoring	Possession management	Fault and Incident Management

IT and Data			
Technology strategy and architecture	Tech partnering and Innovation	Service integration and orchestration	Service Delivery
Data and analytics	Cyber security	Data compliance	

Legal			
Legal advice	Legal and regulatory compliance	Legal risk management	Corporate secretariat

Key

 Future capabilities

Note: please refer the RACI spreadsheet for detail on the accountabilities across the SPV