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CROSSRAIL PROJECT GOVERNANCE – WHY WE MUST REFRAME COMMISSIONING AS OUTCOME ASSURANCE

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Crossrail, Governance Failure Modes, and the Case for Commissioning-Led Outcome Assurance

Introduction

Crossrail's eventual success is undeniable. Yet the journey to completion exposed systemic governance weaknesses that have been documented in detail by independent reviews. This paper does not diminish the achievement; rather, it seeks to honour it by ensuring the lessons are embedded in future practice.

Our perspective is grounded in a wide body of authoritative reports - including those from the National Audit Office, the Infrastructure and Projects Authority, and the Department for Transport - which together provide a comprehensive record of the programme's governance challenges and delivery risks.

For ICxA, these findings underscore a central lesson: **commissioning-led governance and outcome assurance must be embedded at the sponsor and governance level, not delegated to construction groups, programme partners, or delivery contractors.**

Crossrail - Governance Observation

While the **Joint Sponsor Team (JST)** and the **Project Representative (PRep)**, were tasked with providing independent oversight, their ability to manage risk was fundamentally constrained. Key risks - from requirements traceability to operational readiness - were not consistently defined, validated, tracked, or evidenced. Instead, construction-led, schedule-driven narratives dominated reporting. Lacking a reliable evidentiary base, oversight became reactive rather than preventative, allowing systemic risks to remain hidden until they crystallised into delivery crises.

Governance and Requirements on Crossrail

The Intended Model

- **Joint Sponsors (DfT and TfL)** set the strategic intent and funding envelope.
- **Joint Sponsor Team (JST)** and the **Project Representative (P-Rep, Jacobs)** provided independent oversight on behalf of the Sponsors.
- **Crossrail Ltd (CRL)** acted as the delivery body, responsible for authoring the System Requirements Specification (SyRS) and managing requirements traceability through the DOORS database.
- **Programme and Delivery Partners** supported CRL in execution:
 - **Transcend JV (CH2M, AECOM, Nichols, Turner & Townsend)** – programme management, integration, and controls. Supported by **First Class Partnerships (FCP)** as a specialist rail operations advisor.
 - **Bechtel-led Project Delivery Partner (Bechtel, Halcrow, Systra)** – responsible for delivery of the central section.
 - **Network Rail** – responsible for overground works, aligned to CRL's SyRS.

The Reality

- CRL did produce a comprehensive SyRS and maintained traceability from sponsor intent → system requirements → contract specifications → verification and validation evidence.
- However, governance forums often failed to interrogate this data effectively. **The tools existed, but the culture of governance did not leverage them for decision-making.**

Governance Failure Modes

Traceability Without Accountability - Although DOORS, a proprietary requirements management tool owned and licensed by IBM, provided full requirements traceability, governance leaders failed to demand and act on evidence-based assurance. The data existed, but it was locked within a specialist environment requiring significant training and typically accessed only by siloed technical experts. This created a barrier between the information and the governance forums that needed it most. Instead of enabling accountable decision-making, DOORS became a compliance repository - reinforcing the gap between delivery data and sponsor-level assurance.

Optimism Bias and Deadline Fixation - The IPA's Crossrail Review identified how the drive to meet the December 2018 opening date fostered a culture of optimism bias and deadline fixation. This created conditions of *groupthink* - where the desire for alignment and "can-do" positivity overrode critical challenges:

- Requirements traceability evidence was sidelined in favour of construction-led, schedule-driven narratives.
- Systemic readiness risks were masked, as dissenting voices and assurance signals were downplayed.
- Independent oversight (including P-Rep reporting) struggled to cut through the prevailing consensus, limiting the Sponsors' ability to intervene effectively.

Fragmented Interfaces and Siloed Assurance - While CRL's SyRS covered the whole railway, integration with Network Rail's surface works and contractors' requirements was inconsistent. Governance forums often reviewed siloed progress rather than system-level readiness.

Systems Completions as a Structural Governance Gap - Completions were relegated to a late-stage technical exercise instead of being treated as a core governance responsibility. This structural gap meant operational readiness was consistently under-represented in sponsor-level decision-making across all phases of the project.

Lessons Learned

1. Change Must Be Driven from the Top - Commissioning-led governance cannot be solved at the delivery tier. Sponsors and governance leaders must set the lifecycle conditions for success.

2. Systems-Based Completions Are a Governance Responsibility - Outcome assurance depends on system-based planning from the outset, embedded in governance structures and stage-gates, not left to late-stage technical activity.

3. Information Integration Is the Weak Link - Commissioning start-up and operational readiness were under-resourced in structured data and deliverables, leaving -long-term- operators without the tools to sustain performance.

4. Tools Don't Replace Governance - DOORS enabled requirements traceability, but without governance leaders demanding and acting on the evidence, it became a compliance exercise rather than a decision-making instrument. The deeper lesson is that sponsors must treat requirements and assurance data as their **sovereign knowledge system**. Reliance on proprietary, delivery-side tools risks locking critical intelligence in silos. Sponsors should mandate **open, non-proprietary platforms** that guarantee transparency, interoperability, and long-term stewardship of the knowledge base on which strategic decisions depend.

Our Recommendations

To ensure the lessons from Crossrail are not lost — and that future megaprojects deliver better outcomes for society — we propose that commissioning-led governance be established from the outset. This approach reinforces legitimacy, enhances accountability, and secures enduring public value.

Positioning

Establishing commissioning-led governance is critical to shaping and setting standards. By equipping sponsors, funders, and project directors with the frameworks, toolkits, and credential pathways to embed it, we can ensure infrastructure is delivered with transparency, consistency, and measurable outcomes.

Owner-Operator Stewardship

The project owner/operator must retain ownership of the information and knowledge system that underpins decision-making. Without this evidentiary backbone - where requirements, risks, and readiness are transparently defined, validated, and tracked - governance bodies cannot exercise effective oversight. Decision-grade evidence must remain sovereign to the sponsor, not dispersed across delivery partners, ensuring accountability and protecting the public interest.

Sovereign Benefit

Elevating commissioning to a transdisciplinary practice safeguards national and institutional interests. By embedding requirements traceability as a governance-driven assurance mechanism - rather than a narrow technical exercise. This will ensure that sponsor intent is transparently translated into demonstrable public value. This closes the gap between political mandate and delivery reality, protecting legitimacy, accountability, and long-term societal outcomes.

Global Relevance

By reframing commissioning as outcome assurance, this enables sovereign agencies and institutional funders to avoid the governance breakdowns that undermined Crossrail. In doing so, this will set a new global benchmark for transparency, legitimacy, and performance - ensuring that infrastructure investment consistently delivers sustainable benefits for communities and economies worldwide.

Conclusion

Crossrail demonstrates that **tools alone are not enough**. Governance failure did not stem from the absence of requirements traceability, but from the inability of governance leaders to use it as the backbone of decision-making, from the outset.

For ICxA, the lesson is clear: **commissioning-led governance must be embedded at the sponsor level**. Systems-based completions, robust information integration, and evidence-based assurance are non-negotiable. Only by embedding these transdisciplinary principles can major projects deliver outcomes that are **affordable, sustainable, transparent, tracked and aligned with long-term public value**.