



INSTITUTE OF COMMISSIONING & ASSURANCE MONTHLY NEWSLETTER

INSIDE

IN THIS ISSUE

The Two-Sided Coin of the Outcome Standard

Projects Are Living Systems, Not Linear Plans

Infrastructure's Sovereign Turn: Why the ICxA Roadmap Defines What Comes Next

CEO's Message

By Paul Turner, P.Eng., PMP

Megaprojects Live in a Governance-Fog.

Megaprojects don't fail because of bad people or bad intentions – I believe everyone genuinely wants to do great work and deliver successful projects (well, most people). Instead, projects are failing because they're stuck operating in a Governance-Fog.

Governance-Fog is when decisions get made without clear visibility, without clear roles and responsibilities, and when accountability is scattered across the many layers of stakeholders. Everyone is working hard, but only

a few (if any) can see the whole system clearly enough and early enough to steer it to the desired outcome.

Governance-Fog isn't about poor project management or about unclear reporting. Governance-Fog is structural from the start. The construction industry has built a governance model optimized for outputs. This worked fine decades ago, but as projects have become more complex, more integrated, with more interconnected electrical and mechanical systems, this old governance model has not kept up with the pace of change.

The current governance model assumes that more procedures, more oversight, and more documents will produce better outcomes. But the data shows otherwise, with projects later

and more overbudget than ever. What's been created instead is noise - layers of reviews, endless revisions, and a constant drift from the outcome the project was meant to deliver in the first place.

When performance evidence is scattered, and when system commissioning is treated as an afterthought, projects become stuck in a thick Governance-Fog. The results are predictable: cost overruns, schedule delays, and frustration by all stakeholders involved. These symptoms point to the underlying real root cause of why these issues exist on projects. The real root cause is that projects cannot see through the Governance-Fog – they are led in the dark - and nobody has a clear line of sight from intent to outcome.

Outcome Assurance™ changes that. Outcome Assurance™ clears the fog by aligning project governance with evidence-based decisions right from the outset. Outcome Assurance™ connects leadership decisions to real system readiness, not just progress milestones and deliverables. Outcome Assurance™ is a new way to lead projects and ensures that information flows upward as insight to make informed decisions, and that accountability is built on real-world verification and data, not assumptions and gut feelings.

What's needed on projects to clear the Governance-Fog is not more rigid processes and control - what's needed is more connection and collaboration by real human beings leading large multidisciplinary teams of people to accomplish great things together. Project owners, designers, builders, and operators must see themselves as part of one living project ecosystem, not disconnected functions producing outputs. Governance must evolve from supervision to synchronization.

The truth is, megaprojects don't fail at the end. They fail at the start, when clarity gets lost in the fog as projects have become more complex, and leadership mistakes visibility for oversight. Our mission at ICxA is to clear the fog, to help leaders see the system outcome as it truly is, and to allow leaders to lead teams toward the outcome the project was meant to achieve.

Megaprojects need better vision to see through the Governance-Fog and lead to the intended outcome. That's what Outcome Assurance™ delivers, and that's how we lead the industry out of the Governance-Fog.

Paul Turner, P.Eng, PMP

CEO/Founder, ICxA



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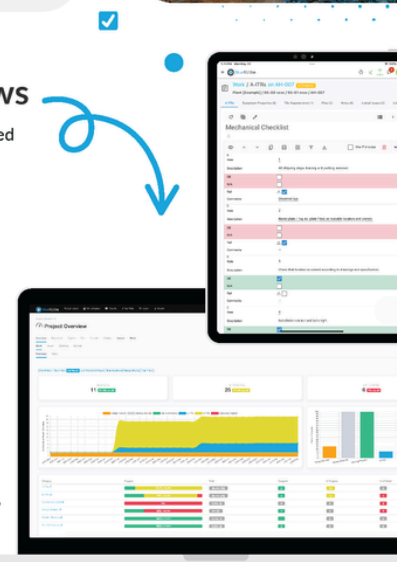
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THE ANALOGY CORNER

Distilling key ICxA themes into clear, concise, and engaging perspectives

by Peter Foxley

ICxA Commissioning Governance & Policy Director



THE TWO-SIDED COIN OF THE OUTCOME STANDARD

In the evolving lexicon of commissioning and governance, phrases like “commissioning-led outcomes” and “governance-led outcomes” are more than linguistic habits - they signal a deeper systemic truth. The Outcome Standard, as institutionalised by ICxA, is a coin with two distinct yet inseparable sides: **Commissioning** and **Governance**. Together, they form the currency of infrastructure performance - one side assures confidence, the other enforces control.

This duality mirrors the architecture of global ISO standards:

- **ISO 9001** formalised Quality Management Systems through Quality Assurance and Quality Control to validate both process and product
- **ISO 14000** institutionalised Environmental Management Systems and Compliance Protocols to embed sustainability and resilience

- **ICxA** now brings that same rigor to infrastructure governance - defining Outcome Assurance and Outcome Control as the dual architecture of value creation credibility.

ISO Standard	Core Pillars	ICxA Unified Architecture
ISO 9001	Quality Assurance & Quality Control	Outcome Assurance & Outcome Control; Financial & Social Capital
ISO 14000 Series	Environmental Management & Compliance	Climate/Nature Capital & Governance Capital
ICxA Outcome Standard	Commissioning & Governance	Systems-Based Activation & Value Delivery Legitimacy



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Get tips and best-practices for commissioning of your industrial plant process/energy system projects.

THE ANALOGY CORNER CONT'D...

ICxA builds on the legacy of ISO standards by embedding multi-capital value realisation into infrastructure commissioning and governance - aligning systems with societal, economic, and planetary imperatives.

Side One: Governance - The Hand That Holds the Coin

Governance is the stabilizing force. It defines the rules of engagement, sets thresholds of acceptability, and builds the architecture of accountability. It is the hand that holds the coin - ensuring it is not lost, misused, or counterfeited.

This is the domain of the Outcome Authority and the Outcome Architect and Controller - practitioners who operate at the intersection of business imperatives and stakeholder expectations: the Why and the What.

- **Outcome Control:** Governance sets the legal, financial, and ethical boundaries within which commissioning must operate
- **Legitimacy:** It anchors assurance in institutional credibility, regulatory alignment, and stakeholder trust
- **Continuity:** Governance ensures commissioning is a sustained discipline across lifecycle phases - not a one-off act
- **SDG & ESG Alignment:** Like ISO 14000, it embeds sustainability, resilience, and nature-positive outcomes into value creation

mandates.

Side Two: Commissioning - The Hand That Spins the Coin

Commissioning is the activating force. It translates governance intent into operational reality. It is the hand that spins the coin - testing, measuring, validating, and integrating systems to ensure outcomes are not just promised, but proven.

This is the sphere of the Commissioning Outcome Manager (CxOM), Interface Leaders (CxIL), Integration Engineers (CxIE) and Operations Assurers (CxOA) - practitioners who operate at the intersection of socio-technical requirements and activation: the System What and the How.

- **Outcome Assurance:** Commissioning verifies that systems and interfaces perform as intended under real-world conditions
- **Integration:** It orchestrates people, processes, and platforms into a unified value creation framework
- **Adaptation:** Commissioning responds to complexity, adjusting methods to meet evolving standards and stakeholder needs
- **Sustainability in Practice:** Like ISO 14000's EMS, commissioning embeds environmental performance into system design and validation.

Distilling key ICxA themes into clear, concise, and engaging perspectives



THE ANALOGY CORNER CONT'D...

The Edge - Where Governance Meets Commissioning

The edge of the coin is where friction becomes function - where quality, performance, and legitimacy are forged. It's the interface where governance models meet commissioning methodologies, benchmarked against the Outcome Standard Framework, to form a seamless assurance loop.

This is the realm of the Outcome Architect and Controller (OAC), Commissioning Outcome Manager (CxOM) and Outcome Authority Auditor (OAA) - practitioners who operate at the intersection of activation and oversight: We've delivered what was promised.

- **Dual Accountability:** Both sides must be visible, measurable, and auditable
- **Systemic Assurance:** The coin must spin cleanly - no bias toward control without validation, or validation without oversight
- **Institutional Resonance:** ICxA exists to define, credential, and protect this coin - ensuring it is recognized, valued, and trusted globally.

Why This Matters

In today's complex infrastructure systems, assurance is no longer a single act - it's a systemic currency. It demands both activation and oversight, embedded through commissioning and governance. This isn't just

terminology; it's a logic of legitimacy. And the Outcome Standard is that currency. Just as ISO 9001 gave industry a shared language for quality, and ISO 14001 defined environmental responsibility, ICxA introduces a unified architecture for Outcome Assurance and Control. Its two sides - Commissioning and Governance - must be minted with precision, circulated with credibility, and audited with integrity.

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CERTIFIED OUTCOME AUTHORITY (ADVANCED)



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PROJECTS ARE LIVING SYSTEMS, NOT LINEAR PLANS

by Paul Turner, CEO | ICxA

I've often thought of projects as living, breathing organisms - systems that need to be nurtured to come to life. This is a great way to think of projects as interconnected systems, not as linear outputs. When you see a project this way, you begin to recognize the interdependencies, feedback loops, and organic growth that define real project progress.

Projects aren't static installations - it is not as simple to just get things installed and the project is done.

Projects are ecosystems where every team, every component, every system, and every decision point affects the outcome of the project and how healthy it is at the end. The construction industry has traditionally approached project delivery through linear thinking - design what needs to be built, buy some stuff, install some stuff, and maybe test some stuff at the end. This rigid linear approach is challenging though, since mistakes and errors compound as time progresses, with a gamble at the end to see how it turns out.

However, when we treat projects as living interconnected ecosystems, like a growing community, we acknowledge complexity and learn how to lead through connection, not only relying on typical project management controls.

The traditional project management mindset is built on sequences and compliance: define the scope, assign the work, check the boxes. But real success doesn't emerge from compliance - it emerges from system integration to bring projects to life.

Living systems require nurture over time to grow when they're strong and coddling when they're weak, so they can stand on their own as they mature. They require monitoring and feedback by caregivers, not just reporting by observers.

Projects and systems depend on relationships, not just deliverables.

The job of Outcome Authorities is much closer to that of a shepherd watching over their herd, rather than a manager reporting on progress.

Projects require someone who cultivates conditions for life to thrive, not someone who simply manages progress on a Gantt chart.

That's what Outcome Assurance™ is really about, leading systems to life with intention, not working in silos, hoping things will spring to life on their own at the end. It's about understanding how each subsystem, stakeholder, and decision connects to the intended outcome, before financial investment decisions are made and before contracts are signed.

Consider the two primary species of megaprojects: mechanical and electrical. Most people working on projects would relate to the industry they work in rather than the species of project they're bringing to life.

But there are a lot more similarities than you might think between an LNG processing port and a wastewater treatment plant. There is natural gas in the pipes of one system and shit in the pipes of the other.

But the pipes, pumps, and motors to treat these two substances is very similar,

configured in different arrangements to accomplish the intended outcome of each plant process.

The other variable besides the mechanical or electrical species of project, is the degree of civil work that precedes both. Let's look at some examples. A hydroelectric generating station is largely a civil earthworks project – a large hole to carve in the river and replace with thousands of cubic meters of concrete. There is a small electrical/mechanical portion at the end that often gets forgotten about since the project is comprised mostly of civil work.

On the other hand, an HVDC transmission system has a smaller civil component consisting of tower foundations and site grading for each converter station. Most of the project is comprised of

electrical/mechanical systems, and the systems-aspect gets much more attention given the smaller civil component.

Systems-based thinking is therefore much more understood and transparent, given the higher visibility of systems on this type of electrical project.

On the other hand, systems within mechanical projects can be much less obvious. When there is a room full of many pipes, pumps, motors, and valves, this can compromise multiple systems within the same room, and the boundaries between systems become much less obvious and can get overlooked.

These three factors - mechanical, electrical, and civil - define a project's ecosystem and complexity far more than the industry that



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each project is within.

The percentage that each of these disciplines exists on projects dictates the level of systems-based thinking that exists within the project team, therefore determining the sequencing, integration risk, and ultimately, the path chosen by stakeholders to achieve (or not achieve) assured outcomes.

It's also true that mechanical projects outnumber electrical projects – there are far more mechanical projects in the world given the number of water treatment plants, wastewater treatment plants, chemical processing facilities, oil and gas systems, and manufacturing facilities.

But both mechanical and electrical projects rely on the same principle: every part must function as one plant process or system as a whole to achieve the project outcome.

Regardless of the species of projects, if we continue to treat projects as checklists instead of systems, we'll keep experiencing the same failures: late completions, scope conflicts, and operational issues that surface long after handover.

But when we treat projects as living breathing ecosystems - when we design for integration instead of to deliver outputs, we create the necessary conditions for success. We stop tracking and reporting on activities and start cultivating and nurturing outcomes.

This is the foundation of commissioning-led governance.

It's how Outcome Assurance™ reframes project delivery from the inside out, focusing on system readiness, feedback alignment, and the health of the entire organism, not just the performance of its parts.

The next generation of project leaders won't just manage schedules and budgets, they'll nurture electrical and mechanical projects to life as integrated systems. They'll understand

that success comes from cultivating conditions where every part of the project can thrive.

At ICxA, we're equipping leaders with the frameworks, standards, and certification pathways to do exactly that. Our Global Outcome Assurance Standard, Global Commissioning Standard, and Global Operational Readiness Standard are available to everyone to move the industry beyond compliance, and instead move toward systemic performance. Because projects are not mechanical or electrical processes to simply be managed and reported on. They are living systems to be nurtured to life.

Join the movement at www.icxa.net to access the ICA Global Standards, explore certification pathways, and learn how Outcome Assurance™ can transform your projects.









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INFRASTRUCTURE'S SOVEREIGN TURN: WHY THE ICXA ROADMAP DEFINES WHAT COMES NEXT

by Peter Foxley
ICxA Commissioning Governance & Policy Director

In a world shaped by complexity, systemic risk, and rising demands for trust and accountability, infrastructure stands at a pivotal crossroads. The traditional focus on asset delivery is no longer enough. What's needed now is a shift toward **outcome credibility** - where systems are not just built, but trusted, validated, and valued.

Two global signals underscore this urgency:

1. **McKinsey's "Infrastructure Moment"** (September 2025) calls for a fundamental rethinking of how infrastructure is planned, financed, and delivered - emphasising outcomes, resilience, and institutional trust.
2. The **Blue Dot Network (BDN)**, launched in April 2024 by the Organization for Economic Co-operation and Development (OECD, Paris HQ) and founding nations - Australia, Japan, Spain, Switzerland, Türkiye, the UK, and the US - introduces a global certification for infrastructure projects that meet internationally recognised standards for:
 - Financial transparency
 - Economic, environmental, and social sustainability
 - Climate resilience
 - Inclusiveness

Together, these initiatives reflect a growing consensus: infrastructure must evolve from **project-based delivery** to **systems-based outcomes and governance**. But while the need is clear, the architecture is missing.

Enter the Outcome Management Framework

The **Institute of Commissioning and Assurance** provides the sovereign discipline that defines how infrastructure outcomes are **activated, validated, and trusted**. It sets the **Outcome Management Framework (OMF)** - a dual architecture of:

- **Outcome Assurance:** Commissioning-led activation of systems, interfaces, and value
- **Outcome Control:** Governance-led enforcement of thresholds, stakeholder alignment, and institutional accountability

ICxA formalizes commissioning as a sovereign discipline and embeds governance as a continuous lifecycle function. It defines practitioner roles across both sides of the outcome loop: Outcome Authority, Outcome Authority Auditor, Outcome Architect & Controller on the oversight side; Commissioning Outcome Manager, Interface Leaders, Integration Engineers, and Operations Assurer on the activation side. Together, these professionals operate across the full spectrum - from system activation to assured value creation.

This architecture doesn't merely echo global standards like **ISO 9001** (Quality Management Systems), **ISO 14000** (Environment Management Systems), and the **Blue Dot Network** certification frameworks - it connects them, completing the outcome assurance and control chain with sovereign precision.

Why This Matters

Infrastructure today is no longer defined by what gets built - but by what delivers lasting value and earns public confidence. As the built environment expands to encompass digital, climate, and social systems, the demand for **trans**disciplinary governance, commissioning-led validation, and multi-capital assurance has become urgent.

ICxA provides the roadmap to meet this shift. It defines a **sovereign architecture for outcomes** - where commissioning activates value, governance enforces accountability, and assurance validates performance.

Together, ICxA, McKinsey's reframing, and the Blue Dot Network form a triad of transformation. They signal a new era in infrastructure - one where systems are

designed, delivered, and credentialed through a sovereign lens, and where trust is not presumed, but systematically earned.

What It Takes: Turning Vision into Systemic Change

Operationalizing the Outcome Management Framework requires more than technical alignment - it demands a shift in mindset across the built environment. ICxA offers the architecture, but its adoption depends on coordinated action across institutions, practitioners, and global standards.

ICxA is actively codifying and publishing its interconnected Outcome Standards and protocols - aligned with ISO and Blue Dot Network frameworks - to enable global interoperability and recognition. This establishes a common language for outcome



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assurance and control across systems, sectors, and borders.

In parallel, the practitioner ecosystem is being mobilized. Roles such as Outcome Authority, Auditor, Architect and Controller, and Commissioning Outcome Manager are being formally defined, credentialed, and embedded within delivery organizations - ensuring capability, legitimacy, and consistency at every level.

To demonstrate value, **pilot projects** will soon be launched - applying ICxA principles to real-world infrastructure initiatives. These will serve as proof points for this paradigm shift in action.

Strategic engagement with the **Blue Dot Network** is essential. Aligning ICxA certification pathways with BDN certification frameworks will ensure global legitimacy and unlock cross-border investment confidence.

At the institutional level, we must **build capacity**. Governments, investors, and delivery agencies need support to adopt ICxA as a sovereign assurance and control architecture - not just for compliance, but for credibility.

Finally, we must **communicate the shift**. Promoting systems-thinking across the built environment will embed commissioning governance as a core discipline - one that defines not just what infrastructure is, but what it delivers.

Closing Message: Defining the Infrastructure, We Deserve

The future of infrastructure will not be shaped by concrete alone - but by the systems of trust

that surround it. ICxA offers more than a framework; it offers a unified architecture for credibility in a world that demands it.

As global standards converge and expectations rise, the built environment must evolve - from delivery to assurance, from compliance to confidence, and from ambition to activation. The ICxA Roadmap is ready. The Outcome Management Framework is defined. The moment is now.

"Let us build not just infrastructure - but life within it".