GCLM 2.0

Global Construction Leadership Model — Six-Pillar Foundational Framework

Framework Reference Document

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This is a condensed, practitioner-facing reference document summarizing the GCLM 2.0 model. It is derived from the corresponding working paper — the AI-GCLM, AADS, AI-GAP, and CKI working papers, each of which extends this base model — where the full literature review, methodology, and evidentiary grounding are presented in detail. This reference document presents the framework's structure for quick practical use; readers seeking citations, limitations, and the underlying research argument should consult the source working paper. The framework itself remains conceptual and has not been empirically validated against a controlled sample.

Overview

The Global Construction Leadership Model (GCLM 2.0) is the foundational leadership framework underlying the author's applied research program. It organizes the capabilities a construction executive needs into six pillars, spanning strategic direction, data-driven decision-making, lean execution, human-centered leadership, technology integration, and sustainability stewardship. GCLM 2.0 is the base model that the AI-GCLM, AADS, AI-GAP, and CKI frameworks each extend with a domain-specific technology or governance layer (artificial intelligence and digital twins; mega-project autonomous decision systems; global infrastructure investment advisory; and large language model-based knowledge management, respectively).

The Six Pillars

Pillar	Focus
1. Strategic Visioning	Enterprise-level capability to set long-horizon capital allocation and organizational strategy across a multi-project portfolio.
2. Data-Driven Decision Making	Organizational capability to treat performance data, cost data, and schedule data as formal, auditable inputs to executive decisions rather than advisory context alone.
3. Lean & Agile Execution	Execution practices minimizing waste and enabling continuous re-planning in response to real-time project conditions.

4. Human-Centered Team Leadership	Leadership practices that prioritize team cohesion, communication, and human judgment as the organizational counterweight to process and technology.
5. Technology & AI Integration	Organizational capability to adopt BIM, digital tools, and (in later extensions) AI systems as the technical backbone of project delivery.
6. Regenerative Sustainability Stewardship	Leadership responsibility for environmental and social outcomes across a project's full lifecycle, not solely its construction phase.

How the Extended Frameworks Build on GCLM 2.0

Each domain-specific framework in the research program takes GCLM 2.0 as its starting point and adds pillars or modules addressing a specific technological or governance gap:

- AI-GCLM adds a formalized “Autonomous Intelligence Leadership” pillar (an expansion of Pillar 5) and a new “Intelligent Decision Support Systems (IDSS) Governance” pillar, producing an eight-pillar model for AI- and digital-twin-informed construction leadership.
- AADS applies the same governance logic to mega construction projects specifically, producing a five-module structure (Predictive Risk Intelligence, Cost Optimization Intelligence, Autonomous Scheduling & Execution, Digital Twin Integration Layer, Intelligent Project Governance).
- AI-GAP extends the model into infrastructure investment advisory (Data Aggregation & Market Intelligence, Predictive Investment Risk & Return Analytics, Decision Intelligence & Scenario Simulation, Cross-Border Regulatory & International Business Compliance, Explainable Advisory & Governance).
- CKI applies the same logic to construction knowledge management (Conversational Engineering Assistant, Automated Documentation & Specification Generation, Contract Analysis & Risk Detection, Technical Knowledge Retrieval, Hallucination Mitigation & Human Verification Governance).

Application Guidance

GCLM 2.0 is intended as a diagnostic and developmental tool for construction executives: an organization or individual leader can be assessed informally against each of the six pillars to identify where leadership capability is strong and where it is underdeveloped, before layering on any of the domain-specific extensions above.

Status: Conceptual leadership model, developed from the author's practice experience and applied across the research program above. Not independently empirically validated against a controlled sample; see the companion working papers' Limitations sections for framework-specific validation status.