UMIP Registry Governance Framework

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UMIP Registry Governance Framework
Persistent Infrastructure Identity (PIID)

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Related Documents

- Persistent Infrastructure Identifier (PIID) Issuance Standard v1.0
- Infrastructure Identity Gap - Category Overview
- UMIP Category Whitepaper

1. Introduction

Infrastructure systems form the backbone of modern society. Buildings, transportation systems, utilities, and industrial facilities operate across long lifecycles involving numerous stakeholders including owners, operators, insurers, regulators, and service providers.

Despite the importance of these assets, infrastructure currently lacks a persistent identity layer capable of maintaining a continuous record of system history across ownership changes, lifecycle transitions, and software environments.

Persistent Infrastructure Identity (PIID) introduces a neutral identity framework allowing infrastructure assets to maintain a unique and persistent identifier throughout their operational lifecycle.

The **UMIP Registry** is designed to support the issuance, verification, and lifecycle management of Persistent Infrastructure Identifiers (PIIDs).

The UMIP Registry is designed to serve as a **canonical reference layer for Persistent Infrastructure Identity within the built environment**.

While infrastructure data systems may continue to evolve across engineering platforms, construction systems, asset management tools, insurance risk platforms, and government databases, a persistent identity layer enables these systems to reference a common infrastructure identifier throughout the lifecycle of an asset.

By establishing a consistent identity framework, the UMIP Registry enables interoperability across the infrastructure ecosystem while allowing organizations to maintain autonomy over their operational systems and data environments.

This governance framework outlines the principles, institutional participation structure, and long-term governance evolution for the UMIP Registry.

2. Governance Principles

The UMIP Registry operates according to five foundational governance principles.

Neutral Infrastructure Layer

The registry functions as a neutral identity layer supporting the built environment. It does not control or own infrastructure assets but provides a standardized identity framework enabling interoperability across software systems and institutions.

Ownership Independence

The identity assigned to an infrastructure asset remains persistent regardless of changes in ownership, operators, software platforms, or service providers.

Institutional Participation

Governance evolves through collaboration with institutions across the infrastructure ecosystem including insurers, infrastructure owners, construction firms, facility operators, technology providers, and regulatory authorities.

Transparency

The issuance framework, lifecycle rules, and governance policies are documented publicly to support industry understanding and adoption.

Long-Term Continuity

Infrastructure assets operate across decades. Governance structures are designed to support long-term continuity independent of any single technology vendor or organization.

3. Purpose of the UMIP Registry

The UMIP Registry establishes a **global infrastructure identity layer for the built environment**.

The registry performs three core functions.

Identifier Issuance

Issuance of Persistent Infrastructure Identifiers (PIIDs) in accordance with the PIID Issuance Standard.

Each identifier is uniquely associated with a physical infrastructure asset and remains persistent across its lifecycle.

Identity Verification

The registry maintains verification mechanisms ensuring that issued identifiers remain unique and collision-resistant across the registry environment.

Lifecycle Continuity

The registry supports infrastructure lifecycle continuity by allowing infrastructure assets to maintain a persistent identity across system upgrades, renovations, ownership transitions, and operational lifecycle events.

4. Governance Structure

The UMIP Registry governance model is designed to evolve in phases as industry participation expands.

Phase 1 - Foundational Governance

In the initial phase, governance is administered by **UMIP Inc.**, the founding organization responsible for establishing the Persistent Infrastructure Identity framework and maintaining the initial registry infrastructure.

Responsibilities include:

- operation of the registry infrastructure
- issuance verification procedures
- publication of standards and documentation
- coordination of industry participation

Phase 2 - Institutional Advisory Participation

As adoption expands, the registry will incorporate an **Institutional Advisory Board** composed of representatives from across the infrastructure ecosystem.

Potential advisory participants may include:

- infrastructure owners and operators
- insurance and reinsurance institutions
- engineering and construction firms
- infrastructure technology providers
- infrastructure investment institutions

The advisory board contributes to the evolution of registry standards, governance models, and long-term operational policies.

Phase 3 - Multi-Stakeholder Governance Model

Long-term governance may evolve toward a multi-stakeholder framework supporting broad institutional representation across the global infrastructure ecosystem.

This model may include formal governance committees addressing:

• technical standards evolution
• registry policy development
• ecosystem interoperability
• long-term infrastructure stewardship

5. Institutional Participation

Organizations interested in contributing to the evolution of the Persistent Infrastructure Identity framework may participate in advisory discussions and governance development.

Participation may include:

• contributing operational insights
• assisting in pilot implementations
• providing technical feedback on registry standards
• supporting ecosystem interoperability initiatives

The objective of institutional participation is to ensure that the registry evolves in alignment with real-world infrastructure operations.

6. Registry Neutrality

The UMIP Registry does not function as a competing infrastructure management platform.

Instead, the registry is designed to support interoperability across the infrastructure ecosystem by providing a **persistent identity layer that other systems may reference**.

This allows infrastructure assets to maintain a consistent identity across:

• engineering platforms
• construction management systems
• facility and asset management software
• insurance underwriting and risk platforms
• government infrastructure databases

7. Governance Evolution

Infrastructure identity is a foundational layer that will continue evolving as the industry adopts persistent infrastructure identifiers.

Future governance development may include:

- expanded institutional participation
- formal standards committees
- interoperability frameworks with infrastructure technology providers
- global infrastructure registry collaboration

Governance updates will be published as new versions of the UMIP Registry Governance Framework.

8. Versioning

Governance documentation will evolve through versioned releases.

Current version:

UMIP Registry Governance Framework - Draft v1.0

Future revisions may incorporate insights from pilot deployments, institutional participation, and ecosystem feedback.

9. Invitation to Participate

Organizations interested in contributing to the evolution of Persistent Infrastructure Identity are encouraged to engage with the UMIP initiative.

The goal of the UMIP Registry is to establish a long-term infrastructure identity framework capable of supporting the built environment across generations.

Infrastructure identity represents a foundational layer for the future of infrastructure data, lifecycle management, and cross-system interoperability.

10. Infrastructure Stewardship

Infrastructure assets operate across multi-decade lifecycles and often remain in service for generations. The governance model supporting Persistent Infrastructure Identity must therefore prioritize long-term continuity, stability, and institutional stewardship.

The UMIP Registry is designed to function as enduring infrastructure supporting the lifecycle identity of physical assets across the built environment.

As the registry evolves, governance structures will prioritize:

- long-term registry continuity
- institutional participation in governance evolution
- interoperability across infrastructure software ecosystems
- preservation of infrastructure identity across asset lifecycles
- resilience of registry architecture across technological transitions

The objective of the UMIP Registry is to support a persistent identity framework capable of serving the built environment across generations of infrastructure development.

In alignment with this objective, the governance framework is designed to evolve with participation from industry institutions while maintaining the long-term integrity of the Persistent Infrastructure Identity framework.

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