The Licensed Project Initiator (LPI) Opportunity: From Infrastructure Vision to a High Value Exit

Initiate a Multi-Billion-Dollar Regional Infrastructure Project through HOPT-AS & HLAS

A distinctive entrepreneurial opportunity to originate and develop a major industrial infrastructure project, with a high-value exit opportunity

1. The Licensed Project Initiator (LPI) opportunity

Some of the world's most ambitious infrastructure opportunities begin with a simple question:

Who will bring together the industries, investors and infrastructure providers needed to turn a regional opportunity into a major infrastructure project?

Under the Hub-Only Pipeline Topology Architecture Standard (HOPT-AS) and Hydrogen Logistics Architecture Standard (HLAS), this question can an answered through the Licensed Project Initiator (LPI) model.

Developed by Novonanmek Material Sciences Private Limited, HOPT-AS and HLAS provide an architectural framework for large-scale Carbon Capture, Utilisation and Storage (CCUS) and Hydrogen infrastructure respectively.

The LPI model creates an entrepreneurial pathway to initiate and develop a regional infrastructure opportunity that could ultimately support a multi-billion-dollar investment programme.

A Licensed Project Initiator (LPI) is an independent entrepreneur or organisation designated & licensed by Novonanmek to initiate, organise and develop a multi-party infrastructure opportunity under the relevant architecture framework.

The LPI's role may include:

- Identifying a regional infrastructure opportunity and its potential participants.
- Engaging industrial companies, infrastructure providers, potential users, investors and relevant public-sector stakeholders.
- Coordinating preliminary technical, commercial and infrastructure assessments.
- Helping develop the proposed project structure and its commercial proposition.
- Exploring potential revenue streams, investment interest and development pathways.
- Preparing the opportunity for consideration by infrastructure developers, investors and other project participants.

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The LPI brings an entrepreneurial approach to infrastructure development: rather than waiting for a fully formed project to emerge, the LPI takes the initiative to organise the opportunity and develop the relationships and proposition needed to move it forward.

The commercial proposition is compelling: **create value by originating the project opportunity, then potentially realise that value through an acquisition or competitive exit before the infrastructure itself is built.**

The opportunity is not simply to participate in a major infrastructure project. It is to become the entrepreneur who brings that project into existence.

2. Understanding HOPT-AS

The Hub-Only Pipeline Topology (HOPT) is an architectural approach designed to support shared, regional CCUS infrastructure.

Instead of connecting every industrial emitter directly to a CO_2 pipeline, HOPT uses centralised regeneration hubs.

Under this approach:

- Industrial facilities capture CO_2 in solid-bound form.
- CO_2-laden solids are transported to centralised regeneration hubs using conventional logistics such as road, rail or barge.
- At the hubs, gaseous CO_2 is released, conditioned and prepared for onward transport.
- CO_2 pipelines connect hubs to other hubs and to storage or utilisation facilities, rather than connecting directly to individual emitters.
- Reusable solid sorbent is returned to participating industrial facilities.
- Additional emitters, hubs and logistics pathways can be incorporated as the regional network develops, while preserving the governing architectural principles.

This architecture is intended to support shared infrastructure, lower participation barriers and scalable deployment across industrial regions.

For an entrepreneur, the significance is that a regional infrastructure opportunity can potentially be developed around multiple industrial participants rather than a single industrial facility.

The result is a potential platform for a much larger infrastructure development opportunity.

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3. Understanding HLAS

The Hydrogen Logistics Architecture Standard (HLAS) is an architectural framework designed to support coherent, shared hydrogen logistics systems across a region.

Rather than treating each hydrogen project as a standalone facility, HLAS defines how production, transportation, aggregation, storage, distribution and export infrastructure can be organised as parts of a connected regional network.

Under this approach:

- Hydrogen is produced at designated Production Hubs, which form the origins of Hydrogen Corridors.
- Hydrogen Corridors connect production with regional demand and may use pipelines, road, rail, waterways, maritime transport or combinations of these modes.
- Large Users may connect directly to a corridor, while Small Users are served through Regional Aggregation Hubs that consolidate demand from multiple users.
- Backbone Pipelines can connect Production Hubs, helping integrate supply across a wider region.
- Export Hubs can provide a route to international or inter-regional markets.
- Where hydrogen is transported in a chemical carrier, corridor facilities may be used to regenerate gaseous hydrogen for users who require it.
- The network can evolve as new producers, users, hubs and logistics pathways join, while its governing architectural principles are preserved through HLAS's Dynamic Compliance framework.

HLAS is concerned with the architecture and relationships between infrastructure components; detailed engineering, operations, commercial arrangements and regulatory oversight remain subject to their applicable requirements.

For an entrepreneur, the significance is that a regional hydrogen logistics opportunity can be developed around a network of producers, users and infrastructure participants—not just a single production facility or customer. The opportunity may grow as participation and demand develop, while its actual commercial value and any LPI exit remain dependent on the specific project and transaction.

Download HLAS

4. What is an LPI?

A Licensed Project Initiator (LPI) is an independent entrepreneur or organisation designated by Novonanmek to initiate and organise a regional infrastructure opportunity under HOPT-AS.

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The LPI brings together the industrial participants, infrastructure interests, technology providers and potential investors needed to develop a structured project proposition.

The LPI is the entrepreneurial originator of the opportunity.

Rather than waiting for a fully formed infrastructure project to emerge, the LPI takes the initiative to organise the participants, develop the commercial proposition and prepare the opportunity for investment and implementation.

HOPT-AS provides the architectural foundation. The LPI creates and develops the regional opportunity. Infrastructure developers and investors can subsequently take the project forward.

5. What does an LPI do?

The LPI's function is to transform a regional infrastructure opportunity into a structured, commercially attractive project proposition.

Its principal activities include:

- **Identify the opportunity:** Recognise regional industrial clusters where shared CCUS infrastructure could create value.
- **Mobilise stakeholders:** Identify and engage industrial emitters, infrastructure providers, potential users, government stakeholders and investors.
- **Organise the industrial cluster:** Bring independent participants together around a coherent regional infrastructure opportunity.
- **Develop the project proposition:** Coordinate preliminary technical, commercial and infrastructure assessments.
- **Shape the commercial model:** Develop the proposed project structure, explore potential revenue streams and examine investment interests.
- **Build the investment case:** Develop the information and commercial proposition needed for consideration by major infrastructure developers and strategic investors.
- **Prepare the exit opportunity:** Position the developed opportunity for potential acquisition, transfer or competitive auction.
- **Coordinate project advancement:** Help move the opportunity towards detailed development, investment and implementation.

The LPI's principal commercial contribution is the value created through initiative, stakeholder mobilisation and project opportunity development.

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6. What makes the model distinctive?

The LPI does not necessarily have to become the eventual owner or operator of the infrastructure.

The model separates the creation of the opportunity from the capital-intensive business of developing and operating the physical infrastructure.

The LPI can therefore focus on creating a commercially valuable opportunity that an established infrastructure developer or investor may be willing to acquire and take forward.

7. The commercial proposition: Create the opportunity, realise its value

A regional CCUS infrastructure network may involve multiple industrial emitters, regeneration hubs, logistics networks, CO_2 pipelines, storage facilities and supporting infrastructure.

The resulting investment opportunity could be substantial.

However, a large infrastructure project does not need to be fully constructed before the entrepreneur who originated it can potentially realise value.

The LPI model is designed around this distinction.

The opportunity is to create value at the project-origination and development stage, rather than necessarily carrying the project through to commercial operation.

As the opportunity becomes more organised, its participants identified and its commercial proposition developed, it may attract interest from major infrastructure companies, strategic investors and other organisations capable of taking it forward.

This creates several potential exit pathways.

8. The exit pathways

Exit 1 — Acquisition of the LPI organisation

A major infrastructure developer or strategic investor may seek to acquire the LPI organisation itself.

The attraction is the opportunity that the LPI has originated and developed, together with its stakeholder relationships, project-development progress and commercial potential.

An acquisition valuation may reflect the maturity of the opportunity, the participation of relevant stakeholders and the commercial prospects of the proposed project.

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For the LPI entrepreneur, this could create a route to realise the value of the organisation and its originating work through a corporate acquisition.

Exit 2 — Acquisition or sale of the developed opportunity

The LPI may transfer or sell the developed regional infrastructure opportunity to an interested infrastructure developer or investor.

In this scenario, the LPI creates and organises the opportunity, develops its commercial proposition and positions it for acquisition.

The acquiring organisation can then take responsibility for the next stages of project development, financing, construction and operation.

This creates a potential exit directly linked to the value of the developed opportunity, without necessarily requiring the LPI to build the physical infrastructure.

Exit 3 — Competitive auction

A developed infrastructure opportunity may be offered through a competitive auction.

Interested infrastructure developers and investors can be invited to bid for the opportunity to take the project forward.

Where multiple parties are interested, competition may help establish the market value of the opportunity and potentially create an attractive exit route.

For the LPI, this offers a possible pathway to realise value from the project-development work through a competitive process.

9. The central commercial advantage

These exit pathways create the possibility of realising value before the infrastructure is built or begins operating.

The LPI's commercial achievement is the origination and development of a valuable infrastructure opportunity that other organisations may be willing to acquire and implement.

No particular exit is guaranteed. The actual value and timing of any transaction will depend on the opportunity's development, market interest, commercial terms and the outcome of negotiations or any competitive process.

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10. Why a multi-billion-dollar infrastructure opportunity matters

Large regional infrastructure projects can bring together substantial industrial demand, infrastructure investment and long-term development potential.

The LPI model provides an entrepreneurial route to initiate and organise such an opportunity.

The commercial attraction lies in the potential to create value across three dimensions:

Regional scale: Develop an opportunity capable of serving multiple industrial participants across a regional industrial cluster.

Commercial development: Build stakeholder participation, project structure and a commercial proposition that can attract serious infrastructure developers and investors.

Potential exit value: Position the developed opportunity for acquisition, transfer or competitive auction, potentially before the infrastructure itself is constructed.

The ultimate infrastructure investment could be multi-billion-dollar in scale. The LPI's own potential commercial outcome, however, is a separate matter and will depend on the value of the opportunity developed and the terms of any eventual transaction.

11. From LPI designation to infrastructure development

The LPI opportunity can be understood as a progression from project origination to potential commercial realisation.

Stage 1 — Designation

Novonanmek designates an eligible entrepreneur or organisation as an LPI under the HOPT-AS framework, subject to the applicable licensing arrangements.

Stage 2 — Opportunity origination

The LPI identifies a regional infrastructure opportunity and begins engaging the relevant industrial participants and infrastructure interests.

Stage 3 — Project development

The LPI coordinates preliminary assessments, develops the project structure and builds the commercial proposition.

Stage 4 — Investor and developer engagement

The opportunity is prepared for consideration by major infrastructure companies, strategic investors and other potential project participants.

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Stage 5 — Potential exit

The LPI may pursue acquisition of the organisation, acquisition of the opportunity itself, or a competitive auction.

Stage 6 — Infrastructure implementation

Following acquisition or award to a successful developer or investor, the project may progress towards detailed development, financing, construction and operation, potentially through a dedicated Special Purpose Vehicle (SPV).

Novonanmek continues its role as Architecture Steward throughout the subsequent development of HOPT-AS or HLAS infrastructure

12. An entrepreneurial opportunity with a distinct value proposition

The LPI model is intended for entrepreneurs and organisations interested in originating and developing major regional infrastructure opportunities.

It offers a way to participate in the development of substantial industrial infrastructure without necessarily becoming the long-term infrastructure owner or operator.

The model also recognises that the creation of a valuable infrastructure opportunity requires a different set of capabilities from those required to finance, construct and operate the eventual assets.

The LPI focuses on opportunity development.

Infrastructure developers and investors can bring the resources, technical capabilities and capital required to take the project forward.

This creates a potentially attractive division of roles between the entrepreneur who originates the opportunity and the organisations equipped to implement it.

13. Roles in the model

The model brings together distinct roles:

- **Novonanmek** develops and stewards the HLAS and HOPT-AS architecture frameworks.
- **The LPI** initiates and develops the regional infrastructure opportunity under the applicable framework.
- **Developers and investors** may acquire or take forward the opportunity and, subject to their own assessments and arrangements, progress it toward implementation.

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14. The opportunity starts with the right initiative

HOPT-AS & HLAS provides the architectural foundation for a regional CCUS & Hydrogen infrastructure opportunity.

The LPI model provides the entrepreneurial mechanism to bring that opportunity to life.

For the right entrepreneur or organisation, the proposition is to initiate a regional infrastructure project, organise its participants, develop its commercial potential and position it for a possible high-value exit.

The ambition: originate the opportunity. Build its commercial value. Create the conditions for a major infrastructure developer or investor to take it forward.

Explore an LPI opportunity

Entrepreneurs, organisations and prospective project initiators interested in exploring an LPI opportunity under HOPT-AS are invited to contact Novonanmek Material Sciences Private Limited.

Email: infra.architecture@novonanmek.com

Novonanmek Material Sciences Private Limited

Originator, owner and steward of the Hub-Only Pipeline Topology Architecture Standard (HOPT-AS) and the Hydrogen Logistics Architecture Standard (HLAS)

This document describes a potential commercial opportunity and possible exit pathways. It is not an offer of investment, a promise of project financing, a valuation, a guarantee of acquisition or exit, or a legal agreement. Actual project development, licensing, investment and transactions are subject to applicable requirements, due diligence and separately agreed terms.

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