



BEYOND ELECTRIFICATION

MODERN MOBILITY | IMPLEMENTATION SERIES

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From Site Selection to Implementation

A Practical Delivery Framework for
Transport Energy Infrastructure

One Site. A Defined Constraint. A Justified Investment Decision.

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EXECUTIVE SUMMARY

Existing assets. New energy value. Real projects.

Modern Mobility develops site-based transport energy projects from existing infrastructure. We start with the operator's own data, engineer the configuration that fits the location and establish the commercial route to implementation. Our Kinectra™ technology offers an additional local-generation option at suitable sites, alongside the wider technical portfolio required for an integrated project.

Airports, ports, logistics centres and transport operators know their assets, movements and energy requirements. We turn that existing knowledge into a practical engineering starting point, combining the current site infrastructure with the opportunities that can add measurable value.

Operational experience. A defined commercial starting point.

Modern Mobility has experience with Kinectra™ at a live site operating under real 24/7 conditions. The opportunity is to apply that experience to a new, qualified location through a site-specific engineering project. Existing deployment experience is not presented as a quantified prediction for a new installation.

Start with a Site Engineering Mandate

Nominate one operating location and provide the transport, infrastructure and energy information already available. We define a paid Site Engineering Mandate with a fixed scope and agreed fixed fee. Its outputs are an initial engineered configuration, a like-for-like alternatives and value comparison, and a proposed next project commitment.

Where existing information is sufficient, engineering begins directly. The location determines the agreed scope and milestones; targeted additional measurements are commissioned only where they could change a material project decision.

One successful project can lead to more

Our immediate objective is to develop and implement the first qualified site. Once its technical and commercial results are established, comparable methods and evidence can support the assessment of further sites and potentially a wider infrastructure programme.

01 / DELIVERY MODEL

Five workstreams. One accountable route to delivery.

Modern Mobility is the commercial engineering and implementation counterpart. The Modern Mobility Institute provides the research foundation; the project mandate sits with Modern Mobility.

Transport Energy Infrastructure (TEI) is the framework for situations in which transport demand, energy availability and adjacent infrastructure materially affect one another. The Institute's Beyond Electrification series develops the analytical and decision-making basis. This whitepaper sets out how Modern Mobility applies that basis to a real site and a commercial project.

What happens at each stage

- **IDENTIFY** - Qualify the operating node, the required service, the site counterpart and the opportunity worth engineering.
- **ENGINEER** - Develop suitable configurations, including our own technology where it improves the site-level proposition, and compare credible alternatives.
- **VALIDATE** - Test the decisive technical assumptions against available operating evidence and site-specific requirements.
- **FINANCE** - Build the project economics, allocation of risk and an appropriate investment and contracting route.
- **IMPLEMENT** - Deliver the authorised project scope with qualified partners, commissioning criteria and accountable project controls.

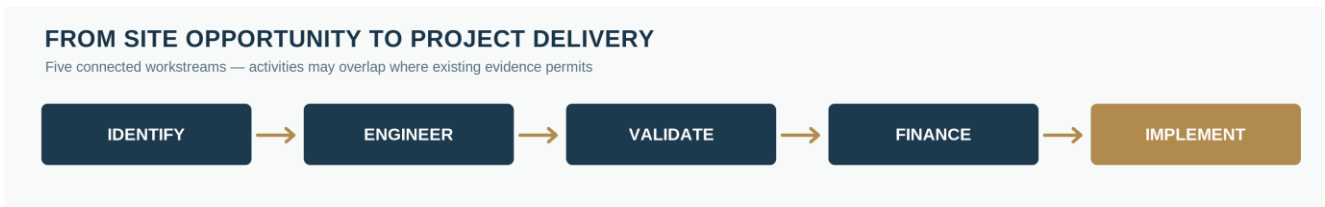


Figure 01. The five connected workstreams. Activities may overlap where the site evidence permits.

A partner with an implementation objective

We are engaged to develop executable infrastructure opportunities, not simply produce a report. Each stage has deliverables that enable the operator to commission the next one. When a project advances, Modern Mobility aims to take responsibility for the agreed development and implementation scope alongside appropriately qualified engineering, construction and technology partners.

02 / SITE QUALIFICATION

The right first site is not necessarily the biggest.

It is the location where recurring operations, usable infrastructure, energy demand and an authorised counterpart create a credible route to a project.

Our initial qualification starts with records the operator already uses to run the location. Five conditions indicate whether the site merits a defined engineering mandate.

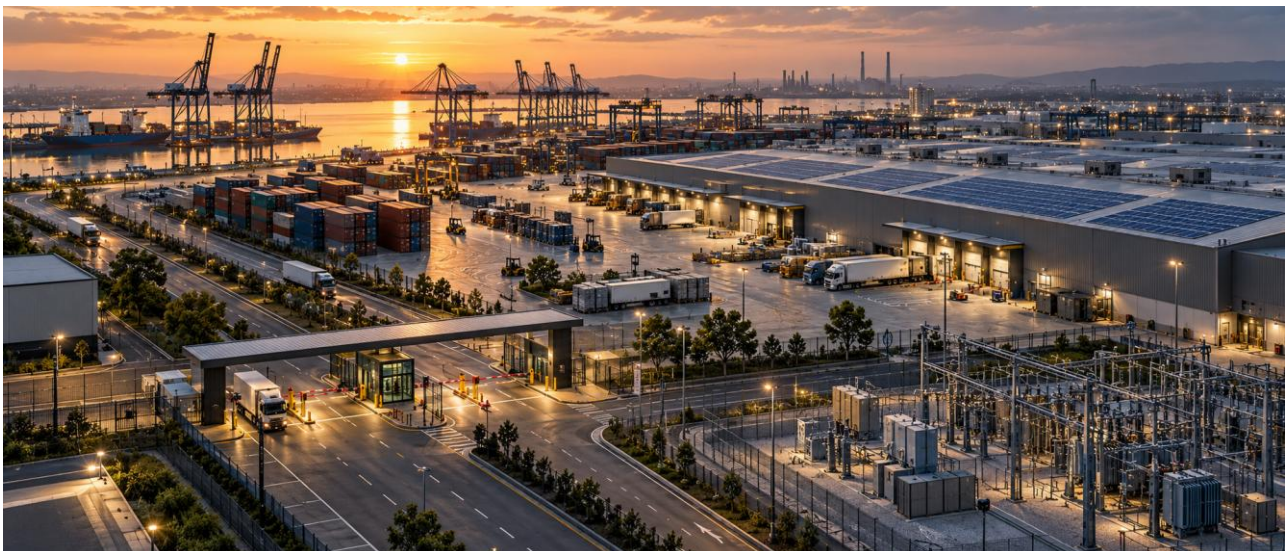
- **TRANSPORT ACTIVITY** - Documented movements, schedules or other repeated operating patterns relevant to the proposed infrastructure opportunity.
- **LOCAL ENERGY DEMAND** - Identifiable loads and timing: the energy produced or managed must have a plausible value at that location.
- **PHYSICAL SUITABILITY** - Civil, structural and electrical conditions that can accommodate an appropriate configuration without compromising the transport operation.
- **ACCOUNTABLE OPERATOR** - An owner, concessionaire or authorised operating partner able to provide information and approve the next stage.
- **DELIVERY ROUTE** - A credible path through access rights, permissions, implementation partners and commercial decision-making.

Where we concentrate our effort

For Kinectra™, we look for structurally suitable sites with repeated relevant transport events and useful local energy demand. For broader TEI applications, the decisive condition may instead be charging, existing generation, storage, connection capacity or operational scheduling.

The initial result

Using existing site information, we identify the operating node, the opportunity and the engineering work required next. The purpose is to move a qualified location into a concrete mandate—not to create a separate data-collection project by default.



03 / OPERATIONAL & ENERGY BASELINE

Build the engineering brief from the site's real operating needs.

We establish the capability the operator needs, the infrastructure already available and the value that an intervention must create.

Modern Mobility begins with the operator's existing transport, energy and infrastructure records. Where these establish the necessary baseline, engineering starts immediately. We request new measurements only for specific gaps that could change the proposed configuration or investment decision.

The information that changes the decision

- **OPERATIONS** - Required transport capability, movements or operating cycles, critical time windows and service continuity.
- **ENERGY** - Metered electricity use where available, peak load, load profile, tariffs and planned demand with its evidence status.
- **EXISTING ASSETS** - Grid capacity, local generation, distribution, civil structures, available space and relevant upgrades.
- **DELIVERY REQUIREMENTS** - Rights, access, permitted works, protection, maintenance, approvals and relevant counterparties.

Turn information into a specification

A concise Site Baseline & Constraint Statement draws together the existing records, the operator's required capability, the relevant constraints and any decision-critical gaps. It forms the initial engineering brief; it does not require a separate extended data-gathering phase where the information is already available.

This stage also establishes the reference case against which investment options will be compared: maintaining and optimising existing infrastructure, conventional development and an integrated configuration where justified. Equivalent operational capability remains the common denominator.

Tangible operator benefit

For a data-ready site, the immediate output is an engineering brief and a defined next work package. We spend the project's resources on developing an implementable solution, not recreating the operator's existing datasets.

04 / TECHNICAL ARCHITECTURE

Make the existing site part of the energy solution.

The project starts with the operator's existing grid connection, distribution, physical infrastructure and operating loads. Modern Mobility then determines which additional assets can improve the site's energy performance and investment case.

We engineer the interfaces between transport activity, energy production, grid supply, storage and consumption as one site-specific configuration. Every proposed component has a defined operating role, cost and engineering requirement.

Five interfaces, one engineered site

- **GENERATION** - Existing photovoltaic and other generation sources, plus new local production options where the physical and commercial case supports them.
- **GRID & DISTRIBUTION** - Available connection power, electrical compatibility, protective systems, import/export and feasible reinforcement.
- **STORAGE** - Time-shifting, peak management or resilience where a defined operating and financial need supports the investment.
- **CHARGING & SITE LOADS** - Fleet requirements, operational facilities, infrastructure equipment and relevant duty cycles.
- **CONTROL** - Monitoring, scheduling and coordination sized to deliver measurable operating improvements.

Kinectra™ - an additional asset Modern Mobility can bring

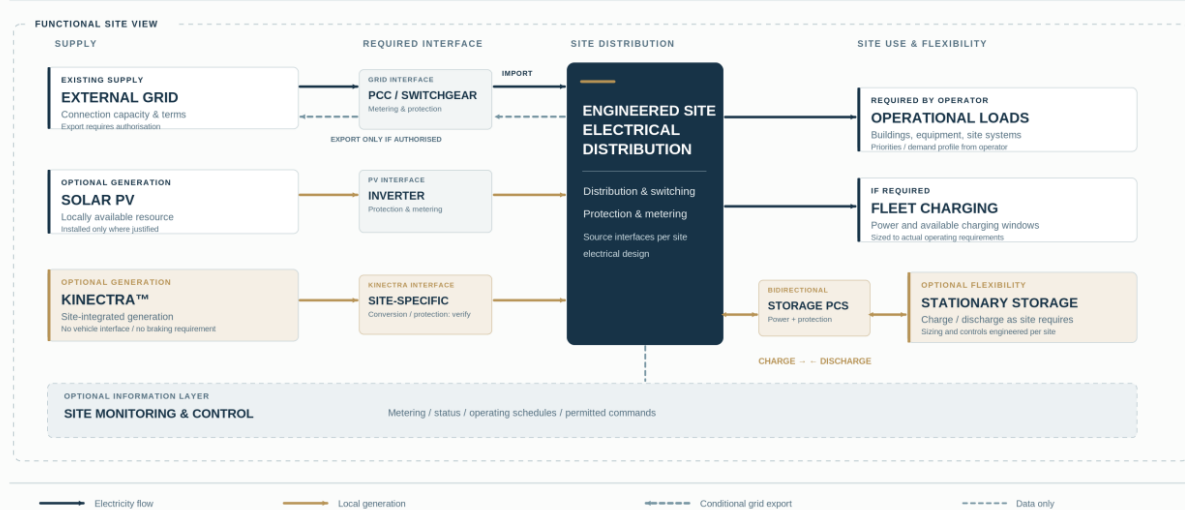
Kinectra™ gives Modern Mobility an additional local-generation capability for structurally suitable existing transport infrastructure. We target repeated relevant transport activity and identifiable local energy demand. The technology has no vehicle interface, does not recover braking energy and does not require controlled deceleration. Its inclusion in any new site configuration is determined through site engineering.

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SITE ENERGY ARCHITECTURE

Separate source interfaces. Explicit power flows. Engineering starts with the site.

04 / ENGINEER



FUNCTIONAL SYSTEM SCHEMATIC / NOT AN ELECTRICAL SINGLE-LINE DIAGRAM

Actual electrical topology, equipment ratings, Kinectra™ output interface, export permissions and control scope require site-specific verification.

Figure 02. Illustrative functional TEI site architecture. Selection and interfaces are engineered for each location.

The output is a site architecture that identifies the appropriate system elements, technical interfaces and engineering packages for project development and implementation.

05 / COMMERCIAL ENGINEERING OFFER

Commission one site. Create the first project.

Our commercial starting point is a paid **Site Engineering Mandate** for one nominated location. Using the operator's existing information, we develop a concrete site configuration and the technical and economic basis for the next project decision.

Site Engineering Mandate

The Site Engineering Mandate covers one nominated location under an agreed fixed scope and fixed fee. Modern Mobility uses available transport, infrastructure and energy data to develop technical options and a practical development pathway. Site access, information requirements, deliverables and commercial terms are established in the mandate.

- **OPTION A / OPTIMISE** - Targeted improvements to existing infrastructure and operating arrangements.
- **OPTION B / CONVENTIONAL** - Targeted conventional reinforcement or an alternative investment that meets the same operator requirement.
- **OPTION C / INTEGRATE** - An integrated site-energy configuration that can include Kinectra™ where the operating and investment case supports it.

A contractable first step

The operator commissions Modern Mobility under a defined statement of work: agreed deliverables, a fixed fee for the initial scope and site-specific milestones. Data-ready sites can move directly into engineering. Material new requirements or independent studies are separately agreed rather than silently expanding the mandate.

The operator receives decision-ready deliverables

- **SITE CONFIGURATION** - A defined operating node, relevant baseline and initial engineered technical configuration.
- **ALTERNATIVES & VALUE** - A practical comparison of technically credible routes, including Kinectra™ where suitable, with an initial economic framework.
- **NEXT PROJECT DECISION** - Priority verification tasks, the conditions for the next commitment and a proposed development or implementation mandate.

Transparent evaluation

Modern Mobility discloses its commercial interest in any proprietary technology proposed. At the operator's request, an independent technical reviewer can examine the alternatives comparison and supporting evidence under an agreed scope.

THE FIRST COMMERCIAL STEP / SITE ENGINEERING MANDATE

One nominated site • Existing operator data • Agreed fixed scope and fee • Initial engineered configuration • Comparable alternatives • Next project decision

06 / TECHNICAL VALIDATION

Existing operations. Relevant evidence. Site-specific results.

Existing operational experience provides the starting point; new-site performance is established through focused engineering. This lets us concentrate verification on the issues that materially affect the operator's investment decision.

Modern Mobility holds operating and performance records from existing Kinectra™ deployment. Detailed measurements and, where authorised, reference-site information can be reviewed by qualified counterparties under appropriate NDA, subject to existing site and operator disclosure rights. Any forecast for a new location is developed separately from that location's operating conditions.

What the operator can examine

- **REFERENCE EVIDENCE** - Available operational history, relevant measurement definitions and technical documentation, subject to appropriate confidentiality and disclosure rights.
- **SITE FIT** - Structural, civil, electrical and operational compatibility at the proposed location.
- **EXPECTED PERFORMANCE** - Site-specific power and energy assumptions, relevant losses, availability parameters and measurable acceptance criteria.
- **DELIVERY READINESS** - Maintenance access, electrical and safety interfaces, accountable suppliers and installation requirements.

Validation sized to the decision

Existing operating evidence and focused engineering review are the starting point. We commission targeted measurement or a bounded pilot only when it resolves a decision-critical uncertainty. Independent validation remains available when required by the operator or financing parties.

The result is an evidence-backed technical proposition: the configuration, performance basis, remaining uncertainties, the actions required to resolve them and the decision they affect. This directly feeds the project economics and the next contractual stage.



07 / PROJECT ECONOMICS

Make the economics visible.

For the operator, the decision is practical: which technically credible route best meets the required operating capability and delivers a justified site-level business case?

Using the operator's site data, Modern Mobility prepares a like-for-like comparison of three credible routes: optimisation of current infrastructure, conventional reinforcement and an integrated configuration where relevant. The assessment applies a common operating requirement, cost boundary and investment horizon; it quantifies energy value, life-cycle costs and implementation risks where sufficient inputs are available.

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ONE SITE. THREE INVESTMENT PATHWAYS.

07 / FINANCE

Compare viable options — alone or combined — against the same capability and operator data.

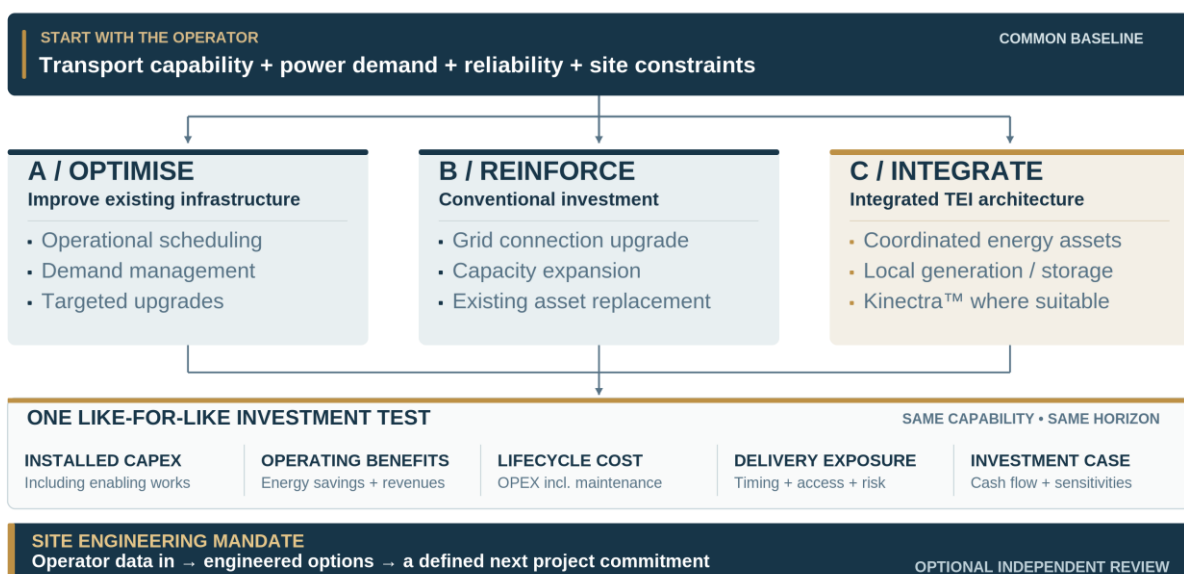


Figure 03. Comparable pathways and evaluation criteria; project values are established from the nominated site's own data.

A like-for-like comparison, built on your data

Each route is evaluated against the same required operating capability. We compare installed investment, demonstrable operating benefits, lifetime operating costs and delivery risk without counting a benefit twice. Kinectra™ is included where site suitability and economics support it.

The business case the operator can use

- **CAPEX** — Installed and integrated project cost, including enabling works and contingencies.
- **OPERATING BENEFITS & COSTS** — Quantified electricity and other demonstrable benefits, with losses, lifetime OPEX and contractual expenses recorded separately to prevent double counting.
- **DELIVERY EXPOSURE** — Access, programme, connection, availability, procurement and counterparty risks.
- **INVESTMENT DECISION** — Sensitivities, commercial structure, investment metrics and conditions for authorising the next stage.

Turn the model into a project offer

The result is a proposed next commercial commitment: the detailed engineering, contracting and financing preparation needed for the selected development path. Where appropriate, Modern Mobility brings relevant suppliers, infrastructure partners and financing institutions into that delivery programme.

08 / DECISION & CONTRACTING

GO / ADAPT / NO-GO

Each Site Engineering Mandate ends with a documented decision proposal and a defined next-step scope.

GO - Move into the authorised next stage

The technical and economic evidence supports a specific commitment. Modern Mobility translates that result into a statement of work for detailed engineering, investment preparation, technology integration or implementation, with agreed accountabilities and acceptance criteria.

ADAPT - Keep the opportunity and adjust the project

The underlying opportunity remains attractive, but a different configuration, additional evidence, a revised operating model or a new investment structure could strengthen the project. We identify the change needed and propose a bounded next action.

NO-GO - Close the proposed intervention

If the identified intervention cannot justify an actionable next stage, the operator receives the reasons for that decision. The location may still support another approach or become relevant if operating or investment conditions change.

The commercial result

Where the evidence supports further development, Modern Mobility offers the next engineering or implementation package under a defined scope, project milestones, delivery responsibilities and commercial terms. The project moves forward from the completed mandate rather than restarting site qualification.



Four environments. One practical first-site strategy.

Our approach is designed for existing infrastructure with an identifiable operator, an operational requirement and the potential for a bankable improvement.

AIRPORTS - Build on existing investment

An airport cargo, service or landside operating node can combine recurring transport activity with significant electrical demand and established infrastructure. We assess where grid supply, existing generation, storage and suitable additional technologies create a commercially justified project.

PORTS - Turn operating nodes into energy opportunities

Gates, logistics aprons and terminal operations can offer recurring activity, fixed loads and access to electrical infrastructure. An initial port-node assessment can determine whether Kinectra™ or another system improvement strengthens the local energy proposition.

MOTORWAYS & FREIGHT CORRIDORS - Start at a real node

Toll, service and other operating facilities offer potential entry points where transport events, physical infrastructure and local energy requirements meet. We qualify individual nodes first and develop corridor expansion from evidence at the initial site.

DEPOTS & LOGISTICS - Engineer around operations

Fleet turnaround times, charging demand, fixed electrical loads and infrastructure constraints define the business case. We examine existing resources, complementary equipment and site-appropriate new generation rather than prescribing a uniform depot package.

The replication opportunity

Across these environments, the commercial strategy is consistent: secure the first engineering engagement, establish the site-level project case, implement a viable reference project and evaluate the next set of locations using comparable performance and investment criteria.



10 / START A PROJECT

One suitable site is enough to begin.

Tell us which operating location you want to develop. We will use your existing site knowledge to define the first engineering mandate and establish a practical route towards an implementation decision.

Your route to the first project

- **01 / NOMINATE A SITE** - Identify one suitable airport, port, logistics or transport node and the person authorised to discuss it.
- **02 / AGREE DATA ACCESS** - Start from the available movement, energy and infrastructure records; put suitable confidentiality arrangements in place where needed.
- **03 / COMMISSION ENGINEERING** - Agree the scope, commercial terms and initial deliverables for a Site Engineering Mandate.

What the first mandate delivers

An initial engineered site configuration, a credible alternatives and value comparison, priority evidence tasks, and a concrete proposal for the next development or implementation stage. The scope is agreed to fit the location's data and actual requirements.

From the first site to programme delivery

Where the site case supports investment, Modern Mobility can develop the subsequent engineering and implementation packages with the operator and qualified delivery partners. A proven first project provides the foundation for assessing wider deployment.

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RESEARCH FOUNDATION | Modern Mobility Institute, Beyond Electrification, Research Papers 01–03 (2026).

Commercial project development, engineering and technology delivery: Modern Mobility.