

Global Major Infrastructure and Construction Projects with Great Fastener Demand

全球重大基建計畫與扣件需求展望



Which Megaprojects can Genuinely Open New Markets for Fastener Suppliers?

Global construction demand is not rising evenly. In October 2025, the World Steel Association estimated global steel demand at about 1,749 million tonnes for 2025 and initially forecast 1,773 million tonnes for 2026. By April 2026, it had revised the 2026 outlook to 1,724 million tonnes, representing growth of only 0.3%.

The message for fastener executives is clear: waiting for a broad market boom is a weak strategy. Growth must be found in concentrated pockets of investment where tunnels, bridges, rail systems, stations, airports and energy facilities create years of specification-driven demand.

Major infrastructure projects attract fastener manufacturers for an obvious reason: scale. A new railway, airport, tunnel or power plant can require millions of structural bolts, anchors, rail fastenings, threaded components, support-system fixings and specialised connection products.

But scale can be deceptive. A large project may generate substantial orders without helping a supplier build a sustainable market position. A manufacturer can spend years qualifying, win one contract, deliver the products and still have no local distribution, no access to the next project and no recurring business. For CEOs, therefore, the critical question is not: How many fasteners will this project consume? It is: Can this project give our company access to a larger and repeatable market?

A megaproject becomes strategically valuable when it leaves the supplier with assets that remain after construction ends: certification, local production, relationships with major contractors, access to system manufacturers, a recognised technical reference and an aftermarket position.

Seven major projects across seven regions illustrate very different market-entry opportunities. They should not be treated equally.

An Executive Comparison

Table 1 considers the attractiveness of each project for an established international fastener manufacturer. It is not a ranking of project size. It evaluates the wider market that each project could unlock.

The table reveals an important distinction. The largest potential markets are not necessarily the easiest or most profitable to enter. India offers enormous repeat potential but demands localisation. The United States offers scale but imposes formidable domestic-content and qualification barriers. Nuclear power promises high-value business but excludes most conventional fastener manufacturers.

The correct opportunity depends on the supplier's existing capabilities, capital and appetite for long-term investment.

North America:

Hudson Tunnel as a Localisation Decision

The Hudson Tunnel Project is constructing nine miles of new passenger railway between New York and New Jersey, including nearly five miles of tunnel boring beneath the Hudson River. The programme comprises ten construction packages, seven of which are in progress or will be completed by mid-2026. The new tunnel is expected to enter service in 2035.

The project is expected to generate US\$19.6 billion in economic activity and an average of US\$87 million per month in purchases of goods and services. The Gateway Development Commission also explicitly states that it prioritises purchases from American businesses. That final point determines the market-entry strategy.

Table 1.

Project and Region	Wider Market Potential	Entry Difficulty	Localisation Pressure	Repeat-Business Potential	Best Suited to
Mumbai–Ahmedabad High-Speed Rail, India	★★★★	★★★	★★★★★	★★★★★	Technology-led manufacturers prepared to localise
Al Maktoum International Airport, Dubai	★★★	★	★	★★★★★	Construction, façade, MEP and system-fastening suppliers
Rail Baltica, Europe	★★★	★★★	★	★★★★★	Approved or technically differentiated rail suppliers
Sydney Metro West, Australia	★★★	★★★	★★★★	★★★	Suppliers offering labour and lifecycle savings
São Paulo Metro Line 6, Brazil	★★★	★★	★★★★	★★★	Partnership-oriented manufacturers
Hudson Tunnel Project, United States	★★★★★	★★★★★	★★★★★	★★★★★	Suppliers prepared to invest in a US operating structure
El Dabaa Nuclear Power Plant, Egypt	☆	★★★★★	★★★	★★	High-integrity and nuclear-capable suppliers
Selective: ☆ Medium: ★ Medium-high: ★★ High: ★★★ Very high: ★★★★ Extremely high: ★★★★★					

For foreign fastener manufacturers, Hudson Tunnel is not primarily an export opportunity. It is a test of whether the US infrastructure market is large enough to justify localisation. US transportation procurement has moved toward stronger domestic-content requirements. In 2025, the Federal Highway Administration finalised changes ending the general Buy America waiver for manufactured products used in federally supported highway and bridge projects. Although individual rules differ across transport programmes and contracts, the direction of policy is unmistakable: foreign manufacturers relying entirely on imported finished products face increasing disadvantages.

A supplier serious about this market should use Hudson Tunnel as the business case for acquiring or partnering with a US manufacturer, establishing domestic finishing and testing, or licensing proprietary fastening technology to a qualified local producer. That structure could later serve rail projects across the Northeast Corridor, as well as bridges, metros, airports and utility infrastructure.

The upside is enormous. The risk is equally clear. Establishing a US operation for one speculative contract would be reckless. The investment makes sense only when the company has a differentiated product and a wider five-to-ten-year infrastructure pipeline. Hudson Tunnel is attractive for companies ready to become American suppliers. It is a poor target for companies seeking occasional export orders.

Latin America:

São Paulo Line 6 as an Ecosystem Entry

São Paulo Metro Line 6–Orange represents more than R\$19 billion of committed investment. Once completed, the line will extend 15.3 kilometres and include 15 stations, ventilation structures, a control centre, maintenance facilities and train-stabling areas. The first six stations have begun commercial operation since 2 July 2026.

Its wider strategic value lies in the Brazilian supply ecosystem surrounding the project. The line includes rolling stock, stations, tunnelling, electrical systems, platform equipment, maintenance infrastructure and long-term operation. Alstom's 22 six-car trains are being produced at its Taubaté plant, demonstrating the importance of Brazil's domestic rail-manufacturing base.

A foreign fastener manufacturer will struggle to build a serious Brazilian position by shipping irregular container loads through a general importer. Customers require Portuguese-language support, local stock, assistance with approvals and the ability to respond when installation problems occur.

The better strategy is to use Line 6 to enter the network of Brazilian rolling-stock producers, steel fabricators, tunnel-equipment companies, maintenance contractors and rail-system integrators. A specialist manufacturer could contribute corrosion-resistant anchors, locking systems, structural assemblies or application knowledge, while a Brazilian partner provides production, finishing, inventory and customer access.

The project's concession structure also creates an aftermarket opportunity. Construction supply can lead to inspection, replacement and maintenance business during the operating period. Suppliers that record installation locations, product batches and expected service lives can move from selling components to managing fastening performance.

The danger is entering through a weak distributor with no influence over specifications. That produces low-margin sales and little strategic control.

Brazil is suitable for manufacturers prepared to build a genuine local partnership. It is not suitable for companies that confuse exporting with market entry.

Europe: Rail Baltica as a Qualification Passport

Rail Baltica is planned as an approximately 870-kilometre railway connecting Estonia, Latvia and Lithuania to Poland and the wider European network. The estimated cost of the first implementation phase is €15.3 billion. In April 2026, the organisation published a consolidated procurement plan covering the three Baltic states, while procurement of major superstructure materials continued to advance.

For fastener manufacturers, Rail Baltica's greatest value is not the Baltic market alone. It is the possibility of creating a recognised European rail reference.

European railway buyers do not change critical components simply because a challenger offers a lower price. They evaluate fatigue life, interoperability, installation performance, electrical behaviour, coating durability, traceability and long-term maintenance consequences. That makes initial qualification difficult. But the same barrier protects a supplier once it has been approved.

A manufacturer of rail clips, sleeper screws, anchor systems, turnout fasteners or electrification fixings should aim to become part of a complete railway system rather than remain an isolated component vendor. The key customers may be sleeper producers, turnout manufacturers, electrification companies and track-system integrators—not the project owner itself.

If the supplier's component becomes incorporated into an approved system, the system manufacturer can carry that product into future European projects.

Rail Baltica is particularly attractive for companies with a measurable technical advantage: longer fatigue life, reduced maintenance, faster installation, improved insulation, better traceability or lower embodied carbon.

A commodity supplier with no railway approvals and no technical differentiation will burn money pursuing this opportunity.

Rail Baltica offers exceptional qualification value. It should be targeted by companies that want a long-term European rail position, not by producers seeking a one-time volume order.

Middle East:

Al Maktoum Airport as a Regional Product Platform

Al Maktoum International Airport is planned on a 70-square-kilometre site with 19.4 million square metres of built facilities, five runways and 400 contact gates. At ultimate capacity, it is designed to handle nearly 260 million passengers and 12 million tonnes of cargo annually. It forms the centre of the wider Dubai South aviation and logistics development. The scale is extraordinary, but size is not the main strategic attraction.

Airport contractors, façade specialists, baggage-system companies, passenger-bridge manufacturers, mechanical contractors and automated-transport suppliers commonly operate across several Gulf states. Approval by one of these groups can therefore generate repeat business in Saudi Arabia, Qatar, the UAE and neighbouring markets. The supplier should not approach Al Maktoum with a catalogue containing thousands of unrelated fasteners. That positioning is weak and replaceable.

A stronger approach is to create an airport fastening platform: corrosion-resistant façade fixings, fire-rated anchors, vibration-resistant mechanical connections, traceable baggage-system fasteners and packaged assemblies for passenger bridges or automated transport. The objective is to make the package reusable by contractors on other airports and complex buildings.

Dubai Aviation Engineering Projects require new contractors to complete prequalification before becoming eligible to tender. However, direct qualification with the owner is only one route. For many fastener producers, approval by specialist subcontractors and equipment manufacturers will create more repeatable business.

The Gulf also rewards availability. A regional warehouse and technical-support capability can serve airports, data centres, hotels, metros, logistics centres and industrial projects from the same base.

The main risk is intense competition. A supplier offering nothing beyond acceptable quality and a low price will be treated as interchangeable.

Al Maktoum is one of the best regional channel-building opportunities, especially for companies that can turn products into application-specific fastening systems.

Asia:

India's High-Speed Rail as the Strongest Long-Term Growth Bet

The Mumbai–Ahmedabad High-Speed Rail corridor extends 508 kilometres, with around 90% of the alignment elevated. It combines viaducts, steel bridges, stations, overhead systems, noise barriers, ballastless track and a 21-kilometre tunnel section near Mumbai. Construction reached major milestones throughout 2025 and 2026.

The project alone is important. The pipeline behind it is much more important. India's 2026–27 Union Budget announced seven additional high-speed rail corridors. Government analysis placed their combined length at nearly 4,000 kilometres and their potential investment at approximately ₹16 lakh crore.

This changes the strategic calculation. Qualification on the first corridor could become a foundation for an entire generation of railway investment.

However, India's objective is not to remain dependent on imported technology. It intends to develop domestic manufacturing and engineering capability. A foreign supplier that wins an early order but refuses to localise may educate the market and then be replaced.

The strongest strategy is therefore to combine proprietary technology with Indian production. Suitable models include licensing, a joint venture, a technical partnership or a majority-owned local operation.

The company should retain control of the critical knowledge—design, materials, heat treatment, coating or quality processes—while progressively localising manufacturing and service.

Products with potential include fatigue-resistant bridge assemblies, ballastless-track components, vibration-control solutions, electrification fasteners and digitally traceable safety-critical connections.

The opportunity is not limited to high-speed rail. The capabilities established could transfer into metro systems, freight corridors, conventional railway upgrades and bridge construction.

India offers the strongest long-term growth potential in the group. But it requires commitment. Companies unwilling to transfer capability, invest locally and develop Indian management should stay out.

Africa:

El Dabaa as a Quality-System Transformation

Egypt's El Dabaa Nuclear Power Plant will contain four VVER-1200 units with a combined capacity of 4.8 GW. The reactor pressure vessel for Unit 1 was installed in November 2025, followed by installation of the 330-tonne Unit 2 vessel in July 2026. By late 2025, approximately 55% of contract and subcontract orders had reportedly been localised in Egypt.

For most fastener companies, direct pursuit of nuclear safety-class applications would be a bad strategy. Nuclear supply demands rigorous material control, traceability, inspection, process qualification, non-conformance management and long-term record retention. A conventional construction-fastener manufacturer cannot create these capabilities through marketing claims. El Dabaa should instead be viewed as a qualification ladder.

A supplier can begin with non-safety buildings, conventional mechanical systems or balance-of-plant applications. It can then use those projects to strengthen documentation, train employees and demonstrate controlled production.

The resulting quality capability can open markets beyond nuclear power, including oil and gas, petrochemicals, desalination, power generation and high-integrity industrial construction.

In that sense, the most valuable outcome may not be nuclear revenue. It may be transforming the company into a supplier capable of serving industries where failure is expensive and traceability is mandatory.

The risk is obvious: qualification costs can consume years of management attention, while the addressable product scope may remain narrow.

El Dabaa is not a mass-market fastener opportunity. It is a strategic capability-building opportunity for technically mature manufacturers only.

Oceania:

Sydney Metro West as a Contractor-Network Entry Point

Sydney Metro West is a 24-kilometre underground railway connecting Westmead, Parramatta and central Sydney. Four major contracts were awarded at the end of 2025. The linewide package includes 60 kilometres of track and the installation of ventilation, power, communications, fire systems, cross-passages and a major stabling and maintenance facility.

The surrounding market is substantial. Infrastructure Australia's 2025 report placed the country's five-year Major Public Infrastructure Pipeline at A\$242 billion, 14% higher than the previous outlook. Transport represented A\$129 billion of that pipeline.

Australia is therefore attractive, but price-led exporters frequently underestimate its barriers. Customers expect documented compliance, dependable local support, safe installation procedures and products that reduce whole-life project risk.

The strongest fastener proposition is not lower component cost. Australian labour is expensive, so products that reduce installation time, rework, inspection or maintenance can create far more value.

Examples include preassembled fastening kits, visual torque verification, faster anchor systems, longer-life coatings and traceable connections.

The strategic target should be the national contractor, not only the individual project. Large contractors reuse qualified suppliers across transport, energy, water, mining and public-building projects.

An accepted product on Sydney Metro West can therefore become an Australian reference that travels between projects and states.

The main risk is entering without local engineering and inventory support. A distant overseas factory cannot resolve urgent site problems fast enough.

Australia is attractive for technically disciplined suppliers whose products save labour or lifecycle cost. Commodity manufacturers will find the market expensive and frustrating.

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Conclusion

There is no universally best project. There is only the project that matches the company's capability and strategic ambition.

For a technology-led manufacturer prepared to localise, India offers the strongest long-term growth case.

For a supplier seeking access to multiple countries through contractors and integrators, Dubai offers the strongest regional channel opportunity.

For a company already close to European rail standards, Rail Baltica offers the greatest qualification and reference value.

For manufacturers with labour-saving systems and strong technical documentation, Australia offers an attractive repeat-project market.

For firms willing to develop local industrial partnerships, Brazil can provide construction and aftermarket growth.

For companies prepared to invest substantially in domestic manufacturing or processing, the United States offers unmatched scale but the highest localisation barrier.

For suppliers with high-integrity quality systems, El Dabaa can create a route into nuclear and other critical industrial markets. For ordinary fastener producers, it is a distraction.

The wrong way to select a megaproject is to rank projects by construction value and chase the largest one.

The correct method is to ask five harder questions:

1. Will project qualification remain valuable elsewhere?
2. Can we establish a repeatable channel beyond the project?
3. Are we willing to meet the localisation requirement?
4. Do we possess a technical advantage worth protecting?
5. Will the first project lead to a second, third and tenth customer?

A megaproject should not be treated as an oversized purchase order.

It should be treated as a market-entry investment.

The winning supplier is not the company that sells the greatest number of bolts during construction. It is the company that remains in the market and continues winning business long after the ribbon has been cut. ■