



Construction Sector Committee

Position Paper

Digitalisation: Strengthening Construction Product Integrity and Traceability

EUROCHAM Malaysia serves as the amplified voice of European Business in Malaysia. It is the independent chamber of commerce representing European companies across sectors — providing advocacy, access, and intelligence to drive competitive advantage.

The EUROCHAM Malaysia Construction Sector Committee brings together leading industry players across the construction value chain, serves as a collective platform for members to exchange expertise, address industry challenges, and engage with stakeholders on key priorities.

Through industry advocacy and collaboration, the Committee aims to advance policy discussions and promote the adoption of international best practices, sustainable solutions, and modern construction methods to enhance the productivity, resilience, and competitiveness of Malaysia's construction sector.

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Executive Summary

The Malaysian construction and engineering sector relies on complex supply chains involving manufacturers, distributors, contractors, engineering consultants and project owners. For higher-risk engineered products, ensuring that the product supplied is authentic, compliant with applicable requirements and supported by reliable technical documentation can be challenging, particularly where procurement involves multiple intermediaries.

The issue is not the absence of standards or certification mechanisms in Malaysia, but the ability to consistently **verify and connect existing product, certification and supply-chain information to the physical product throughout the project lifecycle**.

EUROCHAM supports a proportionate approach to strengthening product verification and traceability for selected higher-risk construction products and engineered components. Improved traceability can help establish a clearer link between the physical product and information relating to its manufacturer, specification, testing, certification and provenance.

International developments provide relevant reference points. The European Union is progressively implementing its Digital Product Passport framework across product categories, including construction products under the EU Construction Products Regulation. In the region, Singapore provides a relevant benchmark for construction quality assessment and digital delivery through initiatives such as BCA's CONQUAS and Integrated Digital Delivery framework.

EUROCHAM proposes that Malaysia explore a risk-based approach that builds on existing standards, certification and documentation systems rather than creating parallel compliance processes. This could include strengthened minimum traceability principles, greater consideration of technical and lifecycle value in procurement, and appropriate digital mechanisms for selected higher-risk products.

EUROCHAM further proposes a Government-industry technical working group to assess implementation options and consider a controlled pilot involving a defined group of higher-risk engineered components. This would allow the benefits, costs and practical implications of improved product verification and traceability to be evaluated before any broader implementation is considered.

Relevancy and Strategic Value to Malaysia

Construction and infrastructure projects involve increasingly complex supply chains and multiple layers of procurement. For specialised engineered products, project owners and engineers may need to establish not only whether a product meets the relevant technical requirements, but also whether the product supplied can be reliably connected to its stated manufacturer, specifications, testing and certification.

Improved product traceability can strengthen this verification process by creating a clearer link between the **physical product and the information required to establish its provenance and conformity**.

A more transparent and verifiable supply chain could contribute to:

- **Safety and reliability** — supporting greater confidence that higher-risk products meet the relevant technical and performance requirements.
- **Quality assurance** — improving the ability to verify product origin, specifications, testing and supporting documentation.
- **Procurement confidence** — enabling project owners and engineers to make more informed purchasing decisions where products may appear technically similar but differ in quality, performance or lifecycle value.
- **Supply-chain accountability** — improving visibility across manufacturers, suppliers, contractors and other project participants.
- **Lifecycle management** — supporting access to relevant product information during installation, operation, maintenance and replacement.
- **Digitalisation** — creating opportunities to connect physical products with verified digital information and existing project information systems.

The objective is not to create additional layers of certification, but to improve the ability to **verify and connect information that may already exist across different stages of the supply chain**.

Problem Statement

The Malaysian construction and engineering supply chain faces challenges in ensuring product quality, traceability and protection against counterfeit, fraudulent or suspect components. Products that appear similar may differ significantly in performance, quality, testing and reliability, with such differences often difficult to verify at the point of procurement and only becoming apparent during installation, operation or failure.

A key challenge is therefore the ability to establish and verify the **provenance and conformity of products throughout the supply chain**. Where information on the manufacturer, product specification, production batch, applicable standards, testing or certification cannot be readily connected to the physical product, project owners, engineers and procurement teams may face greater difficulty distinguishing compliant and fit-for-purpose products from those of uncertain origin or quality.

Strengthening product traceability can help address this information gap by creating a clearer link between the physical product and the information needed to verify its origin, specification, conformity and relevant quality documentation. This can support more informed procurement decisions, improve accountability across the supply chain and enable more effective verification where products are higher-risk or critical to safety, performance or long-term asset reliability.

The issue is therefore broader than individual product quality. It concerns the **integrity and transparency of the construction supply chain**, the ability of project owners and engineers to make informed procurement decisions, and the capacity of procurement and quality assurance systems to recognise demonstrable technical and lifecycle value.

EUROCHAM Policy Position

EUROCHAM supports a policy direction in which construction procurement and quality assurance increasingly recognise verified product quality, technical compliance, traceability, performance and lifecycle value alongside price.

International Policy Context

International practice is increasingly moving towards stronger digitalisation, verification and traceability of products and construction information. The European Union is progressively implementing its Digital Product Passport framework across product categories, with construction products also addressed under the EU Construction Products Regulation.

In the region, Singapore provides a relevant benchmark for construction quality assessment and digital delivery through BCA's CONQUAS quality assessment system and Integrated Digital Delivery (IDD) framework, which promote objective quality assessment and digital information exchange across the construction lifecycle.

These developments provide useful reference points for Malaysia to consider how product verification and traceability could be strengthened proportionately for selected higher-risk construction products, while building on existing standards, certification and digitalisation mechanisms.

4.1 Adopt a Proportionate, Risk-Based Approach

Malaysia could work closely with industry and technical stakeholders to identify construction products and engineered components where enhanced verification and traceability may be warranted, particularly where failure could materially affect structural integrity, safety, load-bearing performance or critical plant operation.

Requirements should be proportionate to the level of risk and should avoid applying the same compliance burden across all construction products. The framework should also consider the practical implications for SMEs, suppliers and international manufacturers operating in Malaysia.

Where possible, the approach should build on existing documentation and certification systems rather than create parallel compliance processes.

4.2 Strengthen Minimum Traceability Principles for Higher-Risk Products

It is proposed to consider minimum traceability principles that enable an authorised project party to establish a clear chain from the project and supplier through to the manufacturer, product identification and relevant batch, heat or serial information, together with applicable material or test documentation.

The purpose should be to improve accountability and enable verification of product provenance by connecting existing certification, testing and product information to the physical product, without unnecessarily duplicating existing certification or documentation requirements.

4.3 Strengthen Technical and Lifecycle Considerations in Procurement

For government and critical infrastructure projects, procurement evaluation could give appropriate weight to technical compliance, quality assurance, product traceability, supplier capability, performance and lifecycle cost alongside initial purchase price.

This would help ensure that apparently comparable products are assessed on a sufficiently comparable technical and lifecycle basis, while supporting fair competition among suppliers that invest in engineering, quality assurance, certification and technical capability.

The appropriate weighting and evaluation methodology should be determined by the relevant authorities and technical stakeholders, taking into account the nature and risk profile of individual projects.

4.4 Explore Digital Product Verification and Traceability

Malaysia should explore appropriate digital mechanisms to improve the accessibility, authenticity and traceability of information relating to selected higher-risk construction products.

Possible mechanisms could include unique digital identifiers or QR-based access to verified information such as manufacturer, product reference, applicable standards, conformity or test documentation, production information and authorised supplier details.

The approach should build on existing digitalisation initiatives and documentation systems where practical, rather than creating unnecessary parallel processes.

4.5 Establish a Government-Industry Technical Working Group

A multi-stakeholder working group could be established to examine the practical implementation of this policy direction. The group could include relevant government agencies, standards and conformity-assessment bodies, manufacturers, suppliers, EPC contractors, developers, engineering consultants and industry associations.

Potential areas for consideration include:

- identifying higher-risk product categories;
- developing minimum traceability principles;
- verifying manufacturer and supplier information;
- assessing digital verification options;
- considering interaction with existing standards and certification systems;
- reviewing procurement and specification considerations;
- assessing implementation costs and administrative burden; and
- establishing appropriate indicators for evaluating effectiveness.

The working group could also consider a **controlled pilot involving a government or major infrastructure project and a defined group of higher-risk engineered components**. Such a pilot would provide an opportunity to assess whether improved product verification and traceability can deliver measurable benefits without creating disproportionate cost or administrative burden, while identifying practical considerations before any broader implementation.

Conclusion and Next Steps

The integrity of construction products is closely linked to the reliability, safety and long-term performance of Malaysia's infrastructure. As supply chains become more complex, the ability to verify the provenance, conformity and supporting information of higher-risk products becomes increasingly important.

EUROCHAM believes that Malaysia can strengthen this area through a **proportionate, risk-based approach to product verification and traceability**, building on existing standards, certification and digitalisation mechanisms rather than creating unnecessary additional compliance layers.

International developments, particularly the European Union's evolving Digital Product Passport framework, provide useful reference points, while Singapore's experience in construction quality assessment and digital delivery demonstrates the value of progressive digitalisation across the construction lifecycle.

EUROCHAM therefore proposes continued dialogue between Government and industry to identify suitable higher-risk product categories, assess appropriate traceability principles and explore practical digital solutions. A targeted pilot could provide evidence on the benefits, costs and implementation considerations before any wider approach is considered.

As a next step, EUROCHAM would welcome an initial dialogue with relevant government and technical stakeholders to validate the identified gaps, understand existing mechanisms and assess the feasibility of establishing a Government-industry working group and pilot.

Scope and Governance Note

This position paper is developed from industry input and reflects broader sector considerations rather than the commercial position of any individual member company.

EUROCHAM's role is to facilitate dialogue between European businesses and Malaysian stakeholders and to advocate for policy outcomes that support safety, quality, transparency, fair competition and efficient construction delivery.

The paper does not prescribe specific technical standards, certification methodologies, digital architectures or regulatory instruments. Any future technical or regulatory requirements should be developed and assessed by the relevant authorities, standards and conformity-assessment bodies and industry stakeholders through appropriate consultation.

The recommendations focus on strengthening verification, traceability, procurement considerations, digitalisation and industry-government collaboration, while recognising that any future regulatory or technical requirements would require appropriate assessment of proportionality, implementation costs and industry readiness.