

LIFE-CYCLE STAGES



STAKEHOLDERS



ASSETS

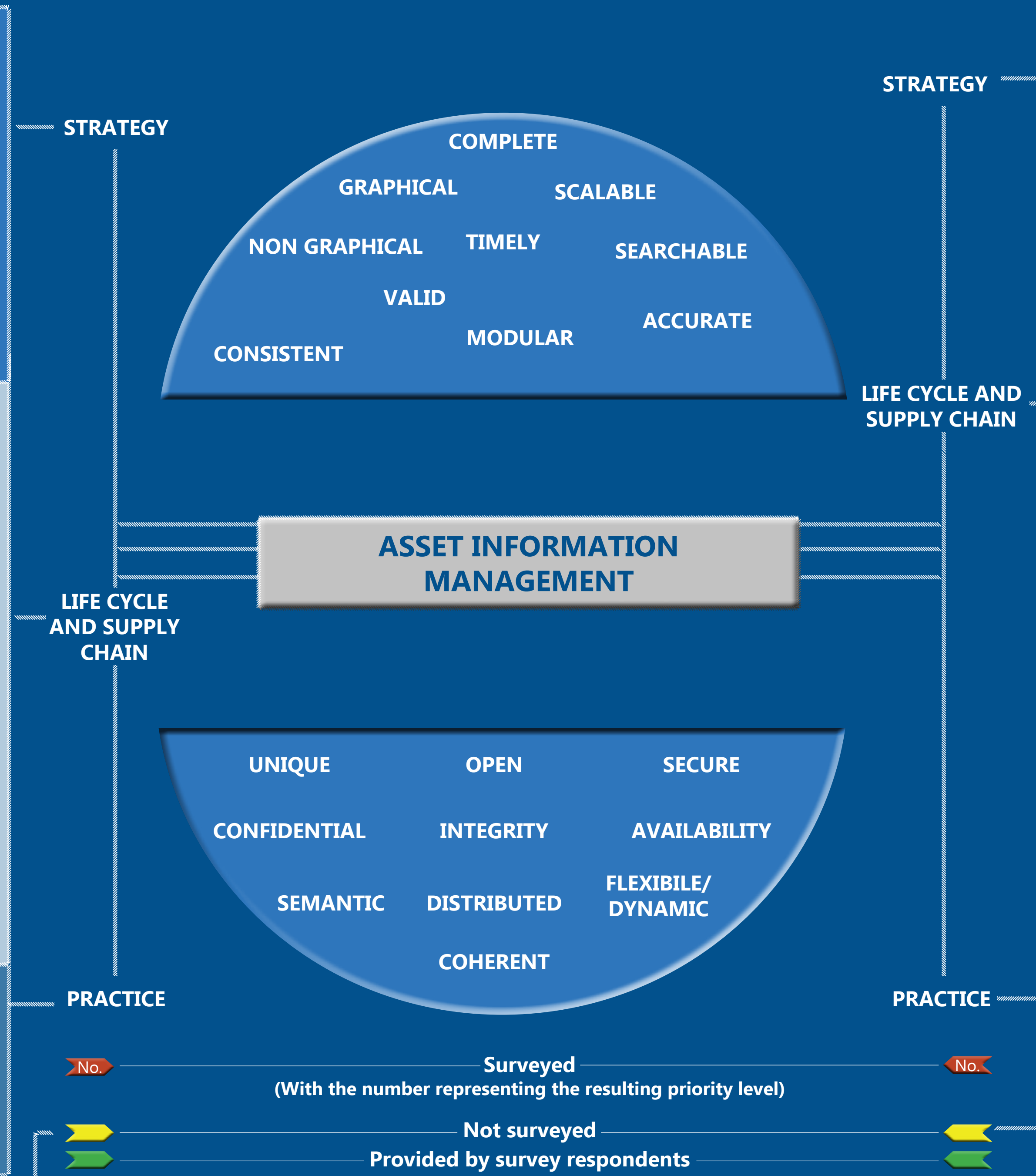


BUSINESS NEEDS

- 12 Implementation of new standards for road asset information management should be supported by change management processes, e.g. communication, training, guidance.
- 17 Asset information management should facilitate a gradual transition of existing asset information to smart information (semantically rich information).
- Standardised information exchange for road infrastructure projects should be suitable for all contract forms (e.g. design-and-build, design-bid-build).
- The organisation that maintains the European Road OTL should be independent and supported by industry.
- Roads authorities should publish their information management requirements to enable their supply chain to develop the necessary systems.
- The standardisation body responsible for the European Road OTL should publish a road map for standardisation in order to inform strategic planning at national and organisational level.
- 4 Relevant asset information should be gathered and updated systematically over the life-cycle of an asset, from its inception through design, construction, inspection, maintenance, and renewal.
- 5 Contractors should be required to handover to the asset owner a set of quality assured, certified as-built graphical and non-graphical information.
- 13 Owners of asset information should provide project / asset management partners with access to all information which is not considered business-sensitive.
- 18 Asset information management should facilitate sharing of information on the internet.
- 19 Common European standards for information management of road infrastructure assets should be based in English, with the possibility to translate to other languages.
- 20 Relevant cost information should be linked to asset information throughout an asset's life-cycle.
- 22 Road asset objects should include information about construction tolerance and as-built deviation.
- 23 Relevant risk management information should be linked to asset information throughout an asset's life cycle.
- Asset management systems should provide information for both the operation of the road network and the maintenance of the road assets.
- The European Road OTL should facilitate linking with other domain-specific IT standards which are not specifically related to road infrastructure (e.g. census data, surveying, railway networks).
- 2 At the outset of a project, asset owners / managers should define their information requirements for each asset type, using established standards where possible.
- 8 An asset object should record the asset's performance, expected time to replacement, physical condition and maintenance history.
- 9 When exchanging asset data, the level of development and contractual status of the data should be clearly stated and defined.
- For the asset management of roads, the capability should be available to discretise the road or traffic lanes into manageable segments.



CORE NEEDS



DATA NEEDS

- Road asset information systems should be based on open information management standards. 1
- Asset information standards should be flexible so they can be used at the national, organisation and project level. 15
- National information management standards for road assets should be based on relevant international standards. 7
- Standards for information management of road infrastructure should be built on existing, adopted, generic standards, i.e. information management standards that are not specific to construction and infrastructure. 7
- Asset information systems should enable access to information through GIS (geographical information systems). 3
- Asset information should be based on the same integrated information standards for all life-cycle stages, from strategic planning through to operation and maintenance. 7
- Design checking, design approval and as-built approval should be conducted using object data with associated model data (e.g. 3D models). 10
- The owner of shared asset data should be clearly identified (e.g. within metadata). 7
- Owners of asset information should be able to provide write access selectively to project / asset management partners. 16
- The history of asset data should be clearly identified (e.g. revision history). 7
- Asset management systems should facilitate querying and search at varying levels of granularity such that portfolio risk, asset condition, commonalities and differences can be analysed. 7
- Non graphical information (eg. specification material test results) should be linked to defined objects. 6
- The European Road OTL should accommodate linking to IFC-Road, IFC-Alignment and IFC-Bridge once those standard is published and adopted. 7
- Linking with other IT standards should be at the data model level as well as the data instance level. 7
- During a project, the compliance of exchanged data with the client's required data structures and data exchange standards should be checked using automated systems. 11
- Standards for exchange and sharing of asset information should be built on established open web standards. 14
- Although the value of some as-built unstructured construction quality documentation (e.g. material test results, method statements) may not be apparent to asset managers at the time of handover, such data may present value in the future and should be linked through standardised objects. 21
- Where physical assets are represented by more than one object, the objects should be linked. 7
- In project and asset information systems, all terms and attributes should have an associated definition to facilitate common understanding. 7
- Geotechnical investigation results (e.g. borehole records) should be shared in a standardised open data format. 7

INFORMATION (SEMANTICS, OBJECTS, DATA & STANDARDS)

