BUILDING FOUNDATIONS FOR DIGITAL TWINS:
A ROAD TO SMARTER ASSET INFORMATION ASSURANCE

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The Information Management Mandate Transforming Infrastructure Performance Roadmap to 2030 Annex B

8. The client (shall)…

'e) have a digital mechanism for defining its information requirements and then **procuring, receiving, assuring, and storing, via a system of record**, the information that it procures;'

Information Management Platform Guidance

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Specification

The expertise of appropriate stakeholders is used to fully define the information requirements

Procurement

All information requirements, including the requirements relating to information assurance, are included in contractual documents

Delivery

Appoint competent parties to deliver both the physical asset and the specified information requirements.

Assurance

Information delivered across the contract line is checked against contractually defined standards at the point of delivery

Storage

Information delivered across the contract line is immutably stored, preserving the full transaction history, provenance and audit trail back to the specific exchange and contracted information supplier. This in turn is translated into a separate open standard structured data repository, for use by the organisation

Presentation

Links to stored information enable that information to be presented and analysed during projects and ongoing operations over the lifecycle of the built asset(s)

Exploitation

Information can be utilised, and existing enterprise systems updated, through automated transfer of assured published information, to improve the quality of the information they store

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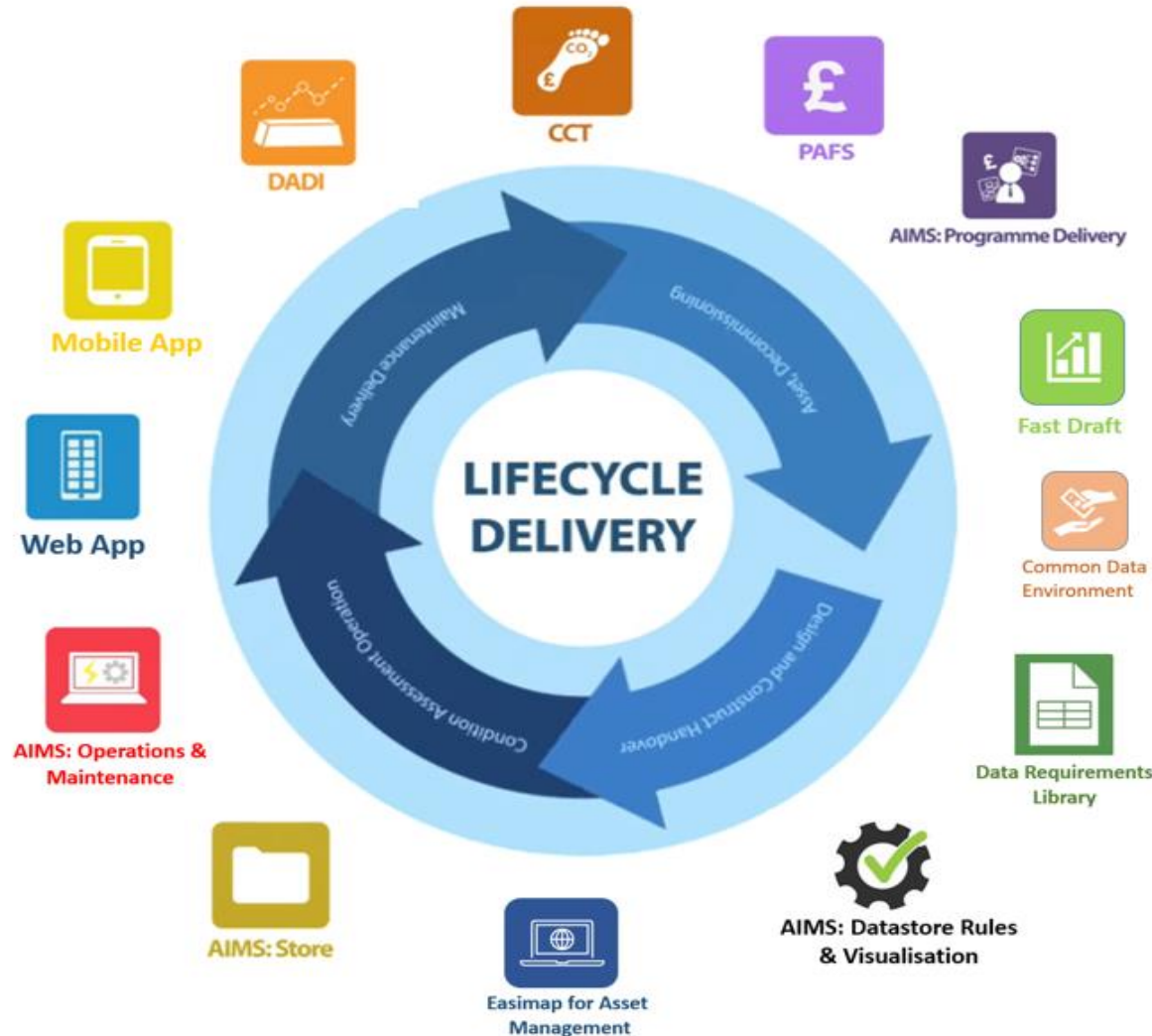
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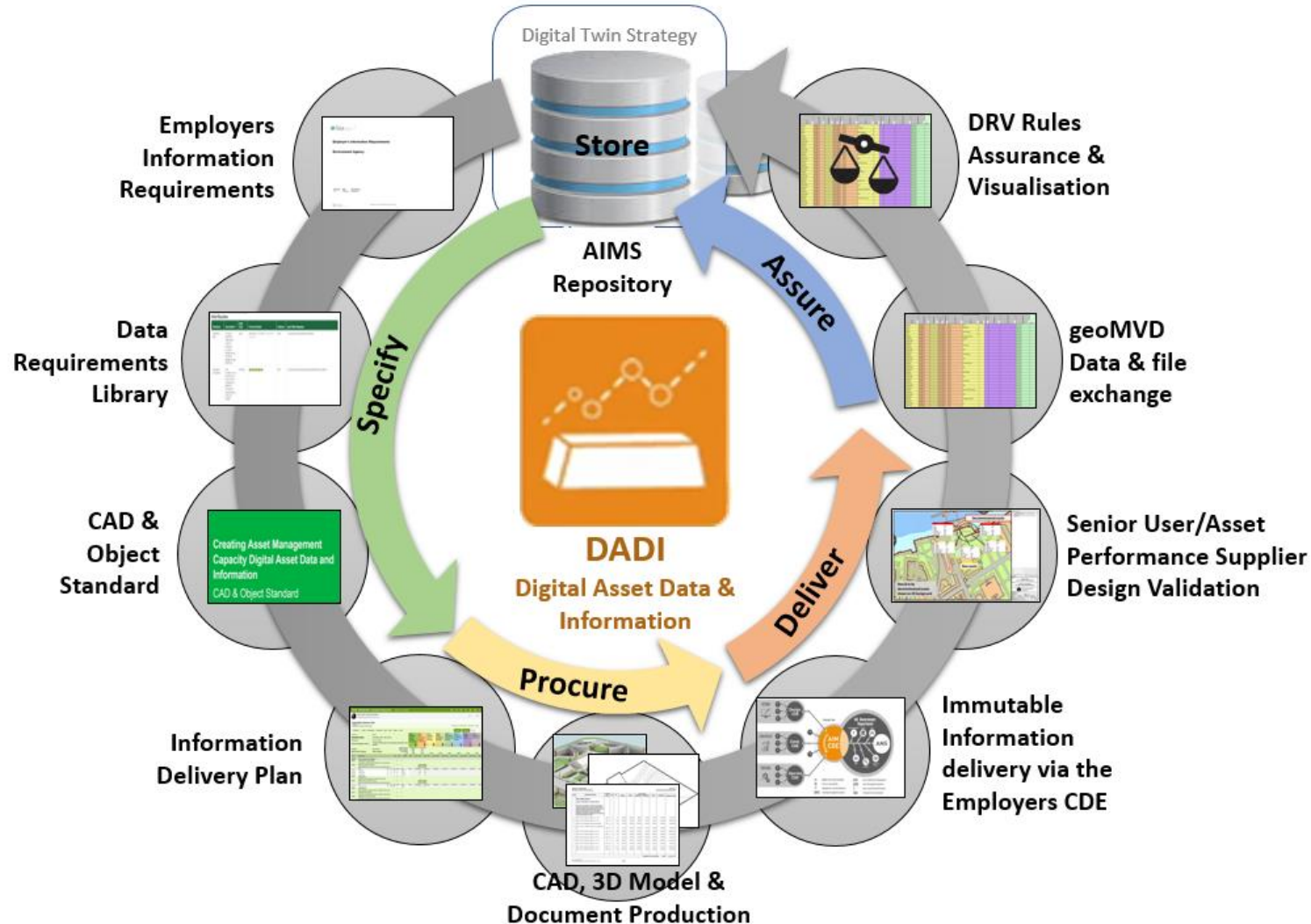
Environment Agency Information Journey

The Digital Vision

"For the Environment Agency and its partners to have information they can trust and rely on, even when it is produced by someone else, to make sound business decisions quicker and faster. Our staff and partners to be productive anytime, anywhere, from any device using the most appropriate technology. To use smart technology in a coherent, secure way and build our capability to prepare ourselves for more digital working in the future."

To 'remove the mundane' to enable us to focus on delivering a world class digital service
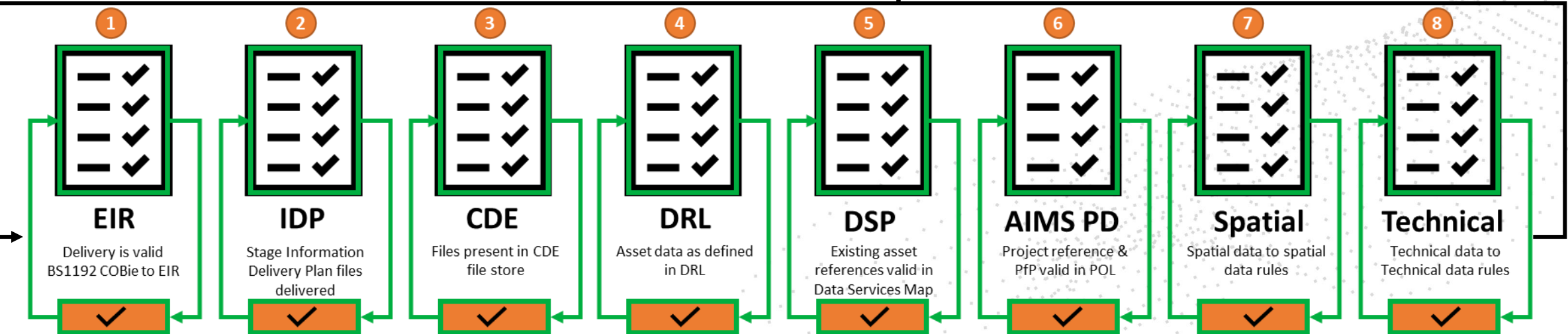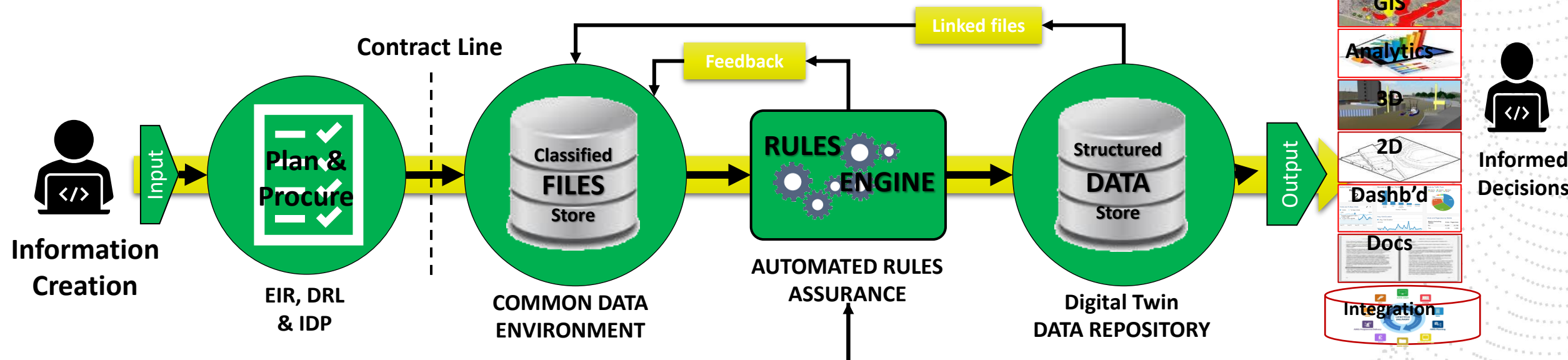
Environment Agency Information Delivery

Environment Agency Information Management

- **Controlled** data delivery

- Golden thread **system of record**

- Data **quality**

- System **integration**

- Data **storage**

- Building **foundations** for Environment Agency's Digital Twins

- Asset data needs to be sorted, arranged, presented visually and actionable
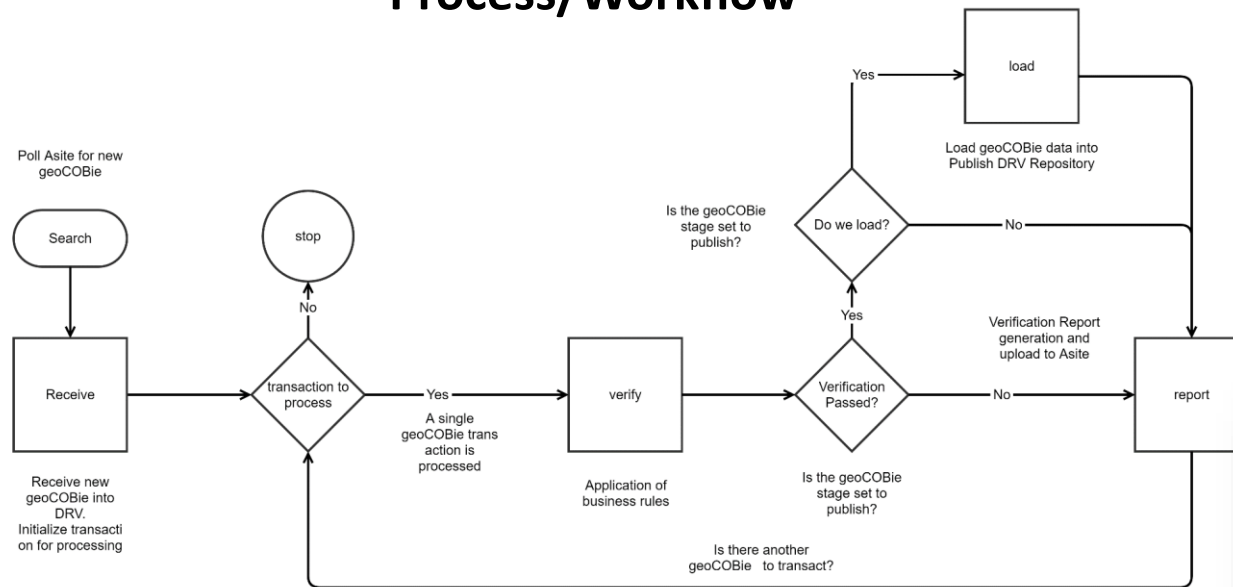
Environment Agency Information Assurance

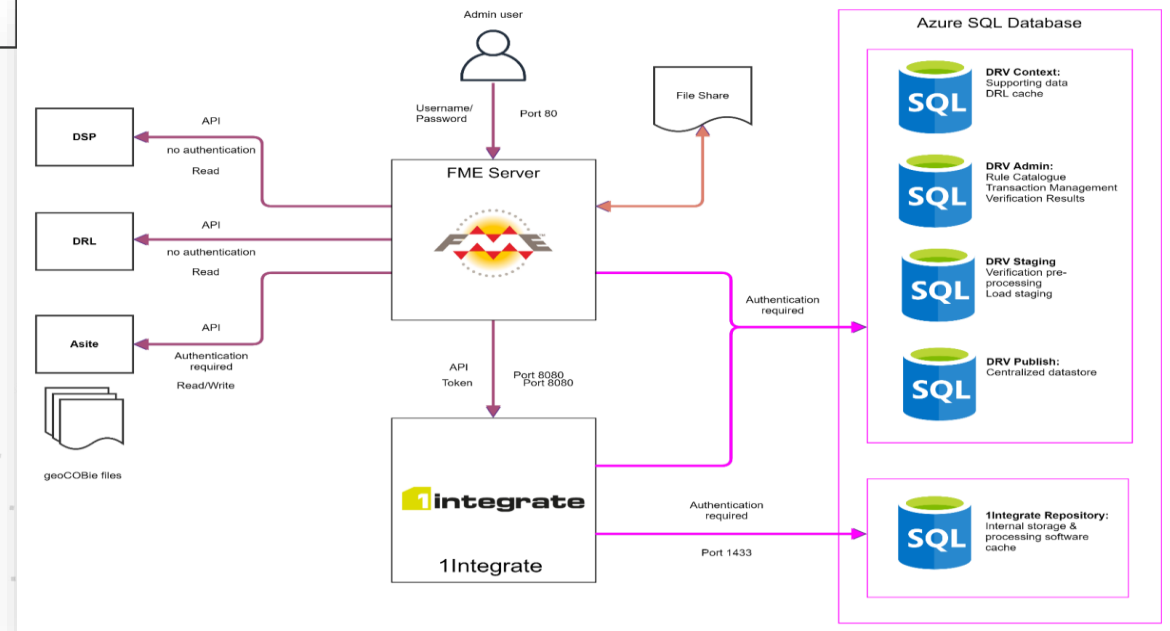Automated rules based file and structured information assurance process

Environment Agency Information Assurance

Process/Workflow

Technology

Published Resources

1Spatial:

- A road to smarter asset information assurance on-demand webinar.
- Environment Agency asset information assurance case study.

https://1spatial.com/news-events/on-demand-webinar/the-road-to-smarter-asset-information-assurance/

- Data Foundations.

https://1spatial.com/products/capabilities/data-foundations/

Government and Industry Interoperability Group:

- Step-by-step guidance on implementing an information management platform.
- Contract clauses to support the procurement of interoperable information.
- Glossary – to increase understanding and drive consistency.
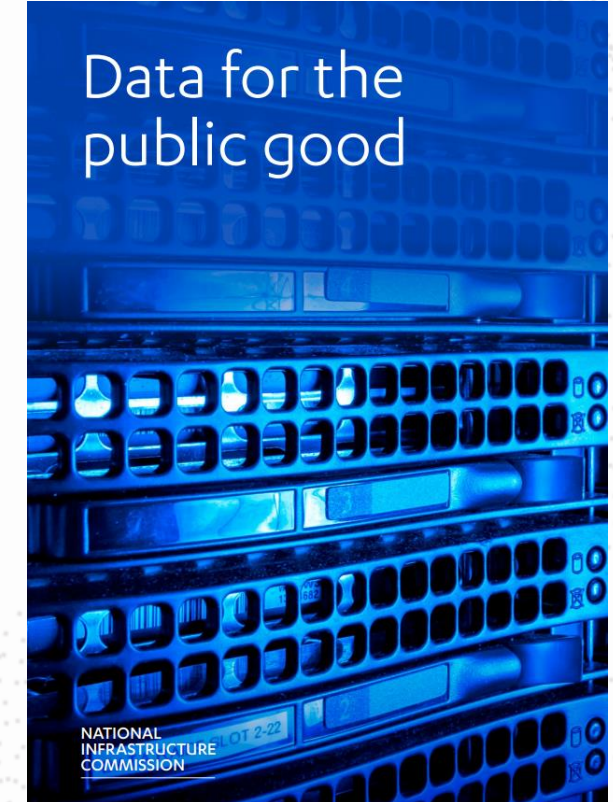- A case study of the Environment Agency's modular technology approach.

https://www.cpni.gov.uk/information-interoperability

Data for Public Good

"The more information we have about the nation's assets (infrastructure), the better we can understand it.

The key is to collect **high quality data** and use it effectively. One path is to set **standards** for the format of data, enabling high quality data to be easily shared and understood; much that we take for granted today is only possible because of agreed standards, such as bar codes on merchandise which have enabled the automation of checkout systems"

Data for the public good report, National Infrastructure Commission

Thank you

Get in Touch

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