National Digital Twin

THE ISLE OF WIGHT DEMONSTRATOR AND THE EDUCATION PROGRAMME

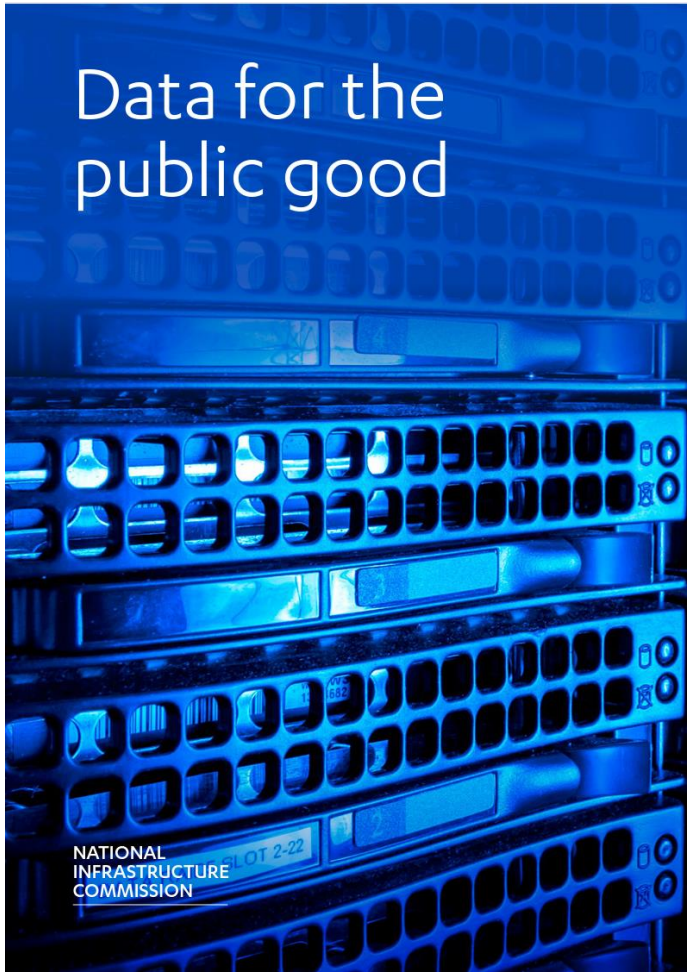
IAIN MISKIMMIN

Introductions

National Infrastructure Commission - 2017

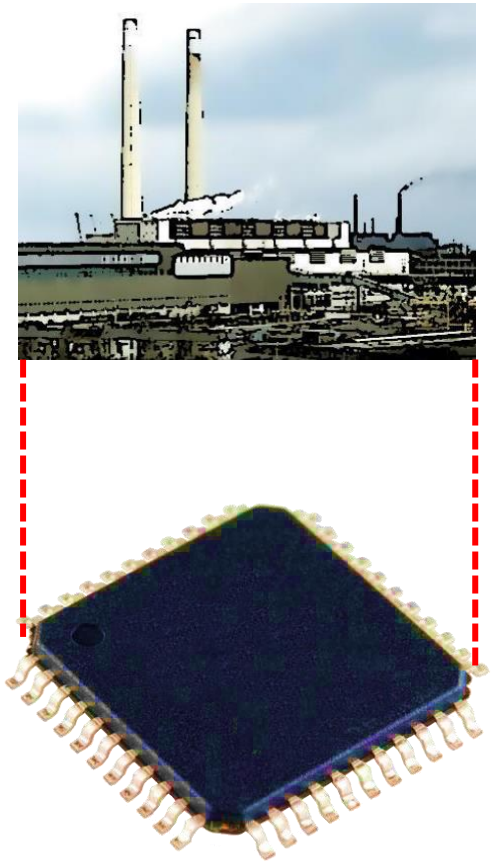
The ability to share information and use it effectively

- Improved services
- Greater efficiencies



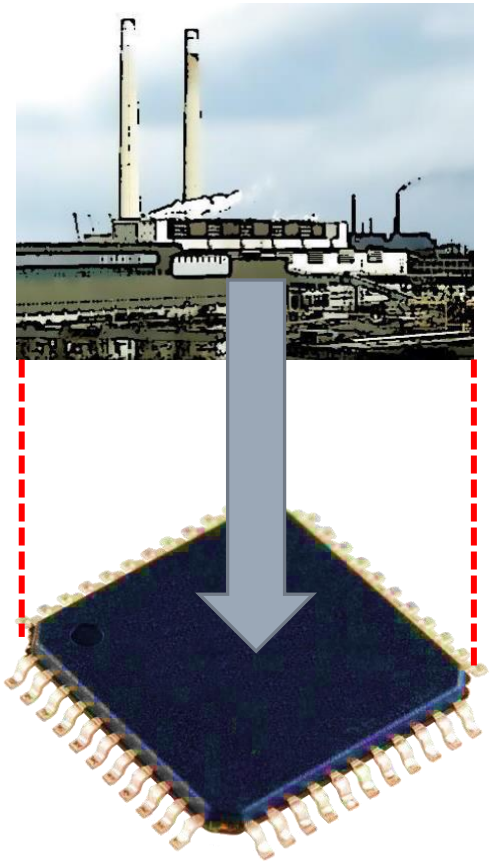
Digital Models, Shadows & Twins?

National Digital Twin?



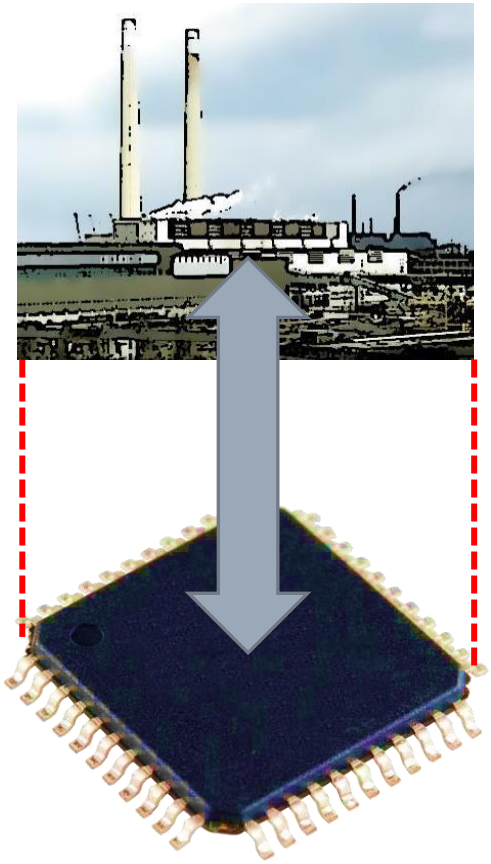
Digital Model

A digital representation of the physical frozen in time.



Digital Shadow

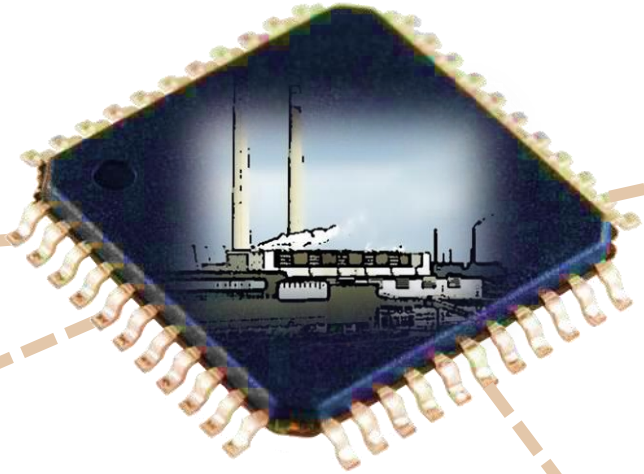
A digital representation of the physical that is updated as the physical changes.



Digital Twin

A digital representation of the physical that is updated as the physical changes and allows the digital to make changes to the physical (Manually, Reactively & Predictively)

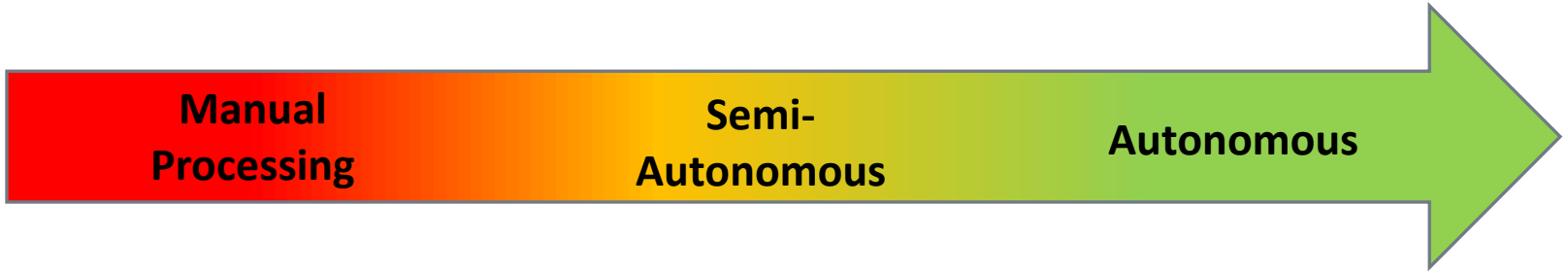
Simulation

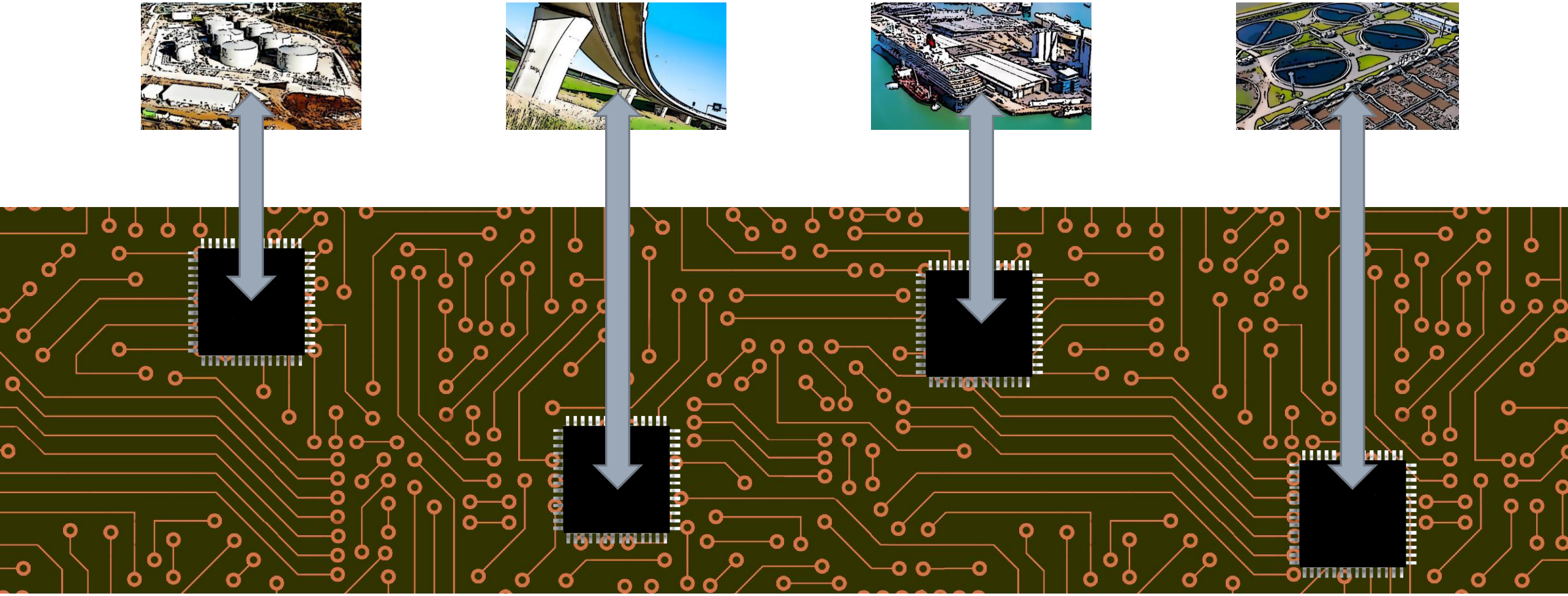


Optimisation

Visualisation

Interrogation

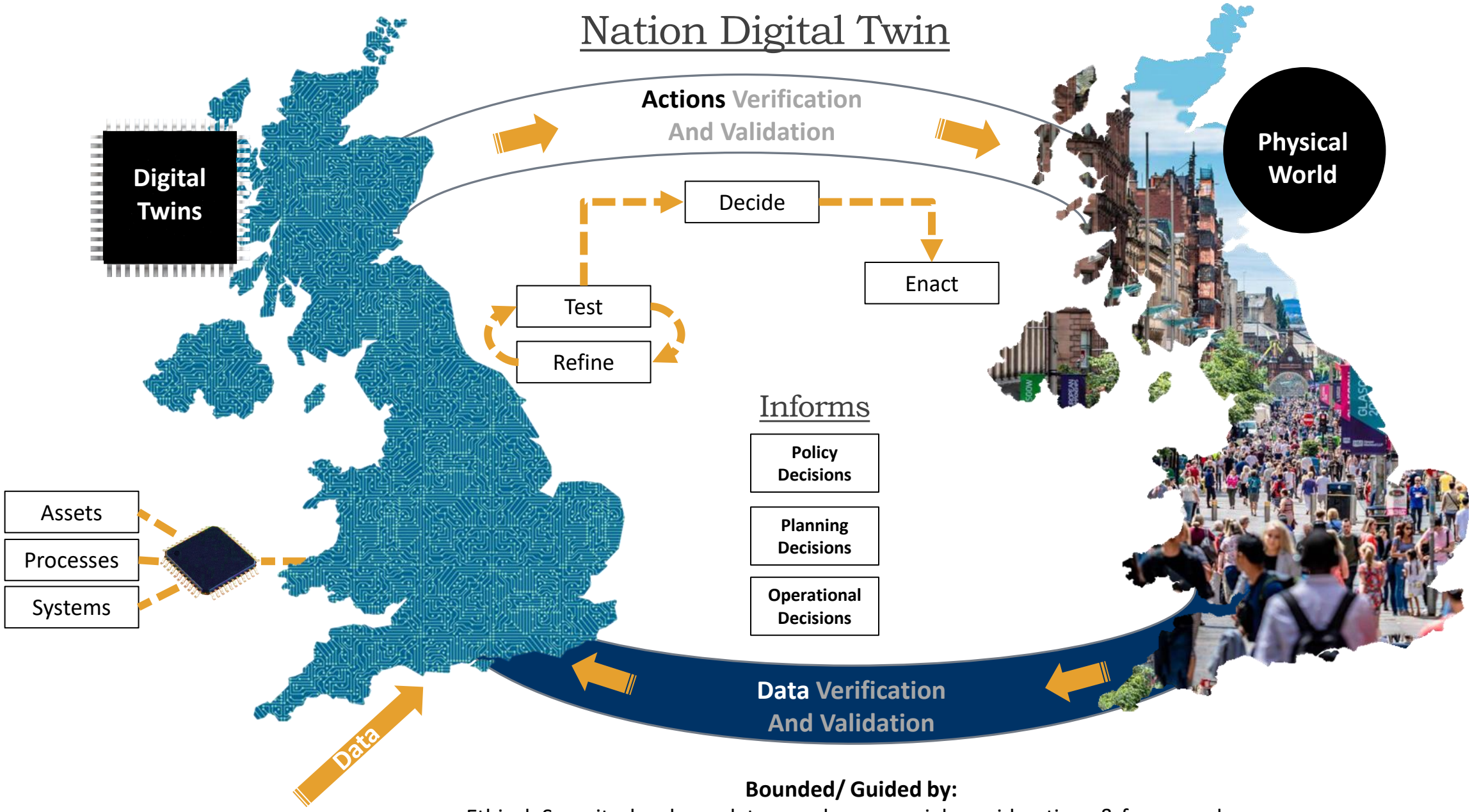




National Digital Twin

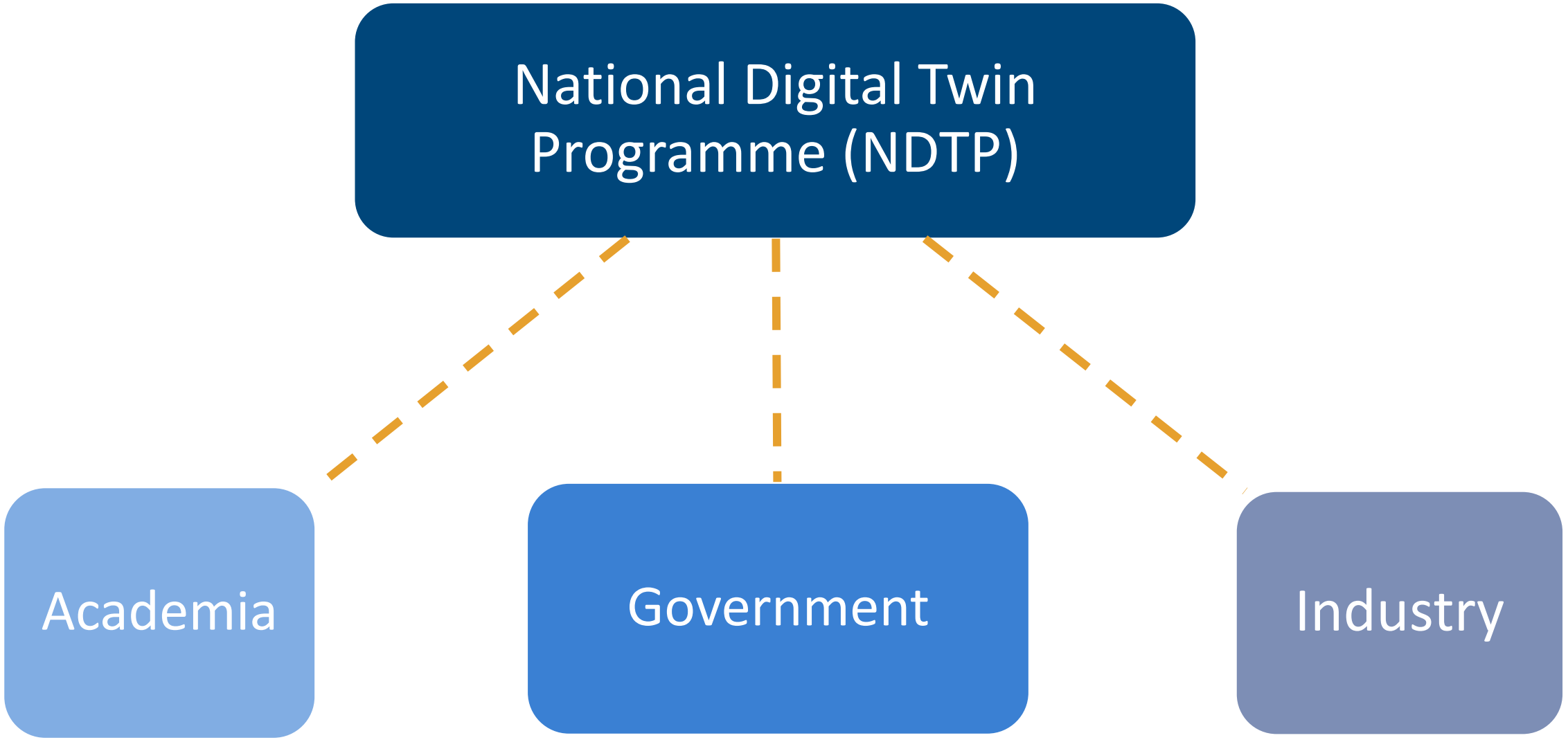
An ecosystem of multi-domain, multi-sector digital twins, connected via securely shared, interoperable information of a known quality

Nation Digital Twin



Bounded/ Guided by:

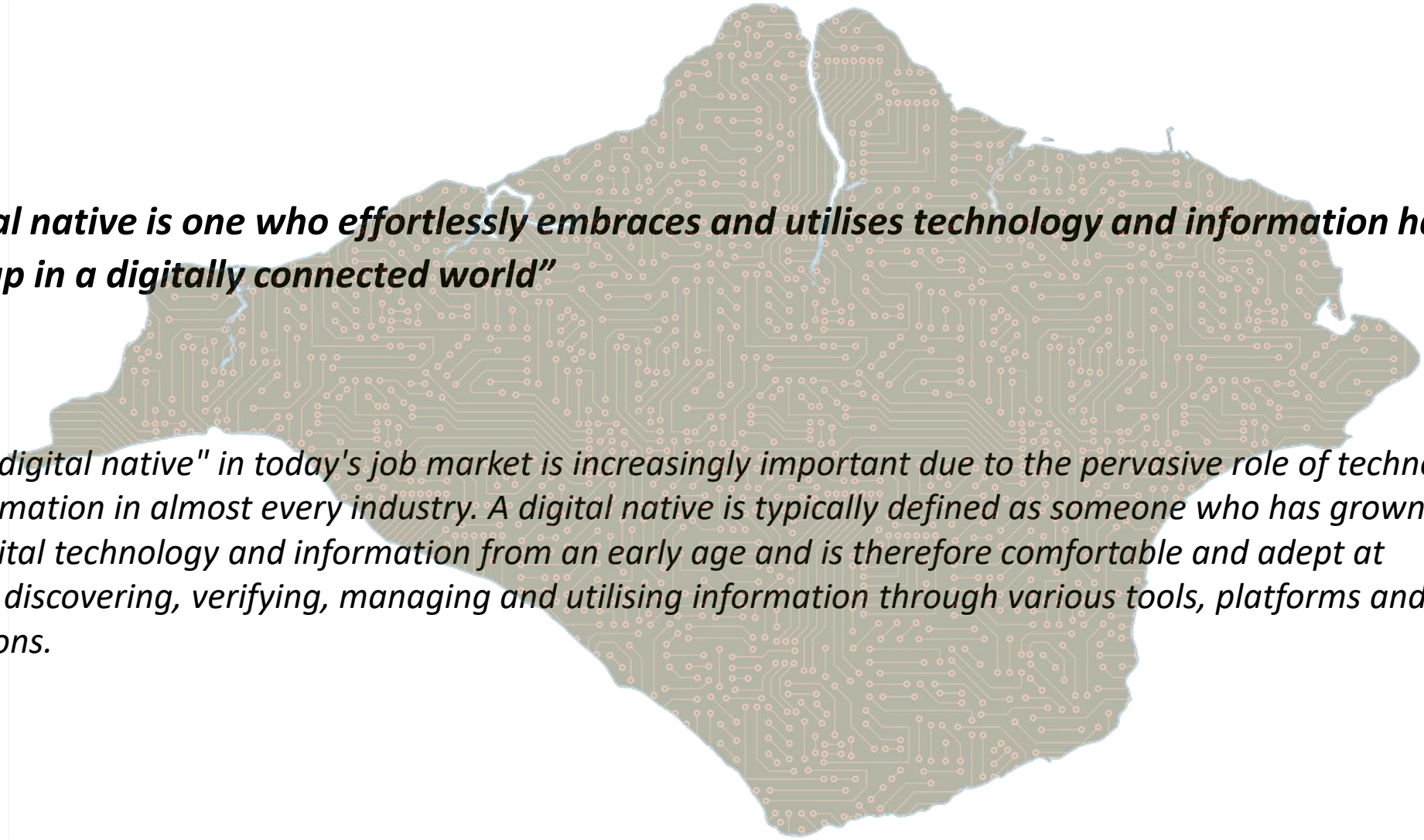
Ethical, Security, legal, regulatory and commercial considerations & frameworks


National Digital Twin Programme (NDTP)
Academia
Government
Industry

Why the Isle of Wight?

- Infrastructure examples
- Distinct boundaries
- Forward thinking sectors

- Net Zero
- Retrofit
- Resilience Planning
- Education Programme



“A digital native is one who effortlessly embraces and utilises technology and information having grown up in a digitally connected world”

Being a "digital native" in today's job market is increasingly important due to the pervasive role of technology and information in almost every industry. A digital native is typically defined as someone who has grown up using digital technology and information from an early age and is therefore comfortable and adept at creating, discovering, verifying, managing and utilising information through various tools, platforms and applications.

The Curriculum Conundrum!

It empowers individuals to make informed decisions, enhance efficiency, and leverage data for innovation and growth.

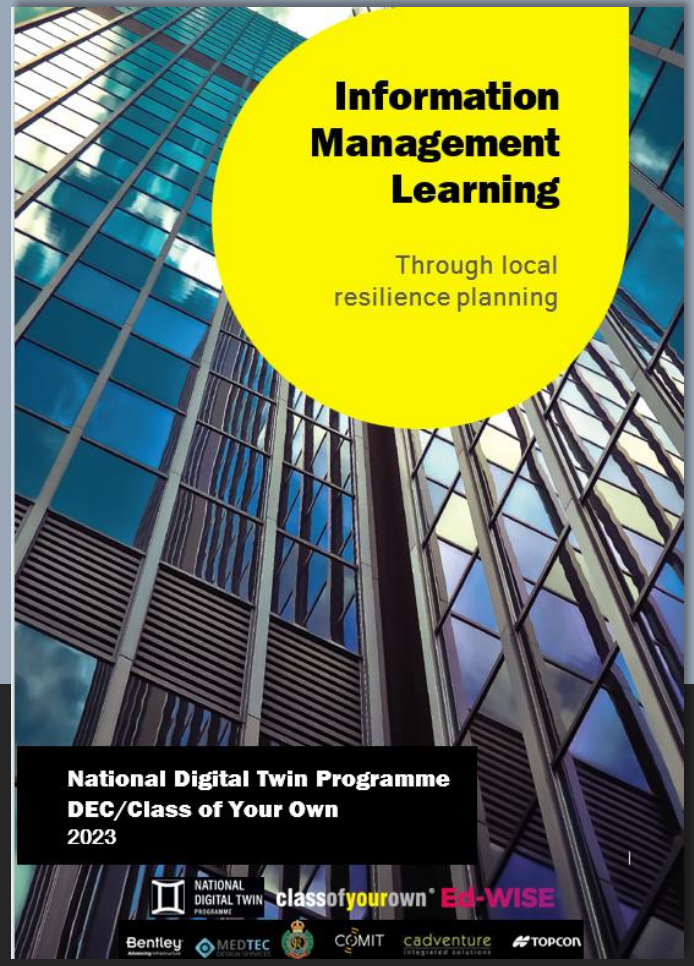
Regardless of the career field, effective information management contributes to success by enabling professionals to navigate complexities, solve problems, and stay relevant in their industry.

It is complimentary to the following subjects:

- Geography
- Urban Studies
- Environmental Studies
- Information Technology
- Earth Science
- Computer Science
- Maths
- English
- Digital Literacy
- Civic Education
- Communication Skills

Based around a local resilience challenge, the learnt skills are transferable to any career stream a student might choose.

Information Management is a key skill across all sectors.



Education Partner

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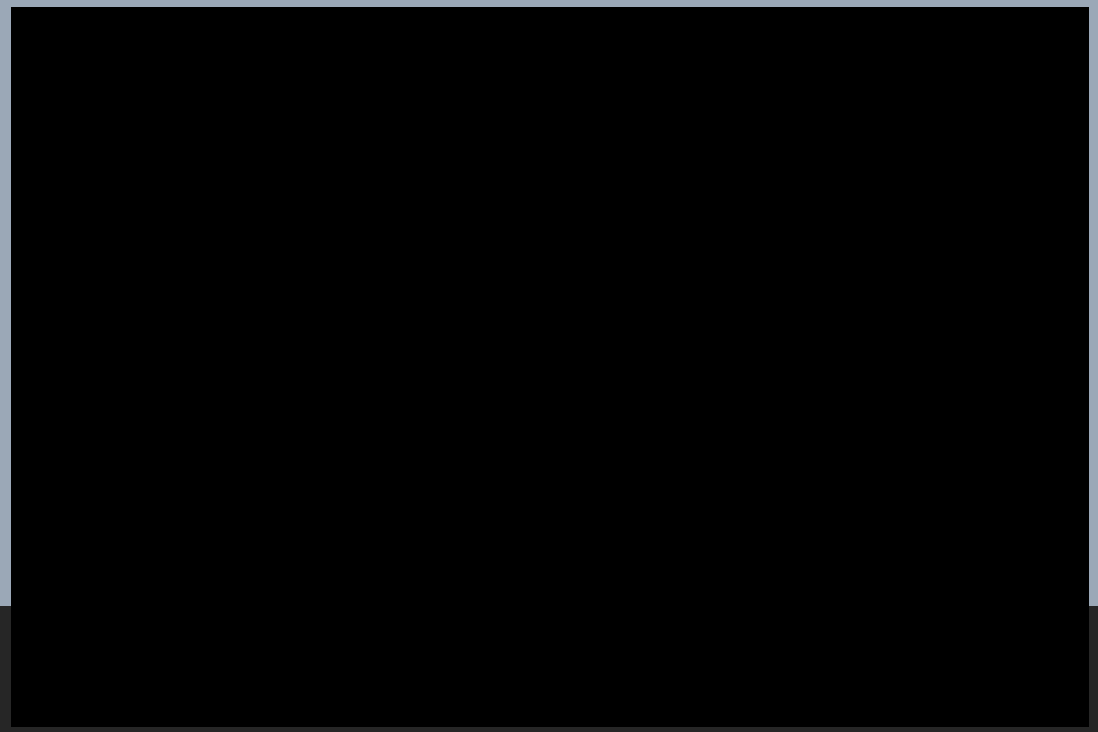
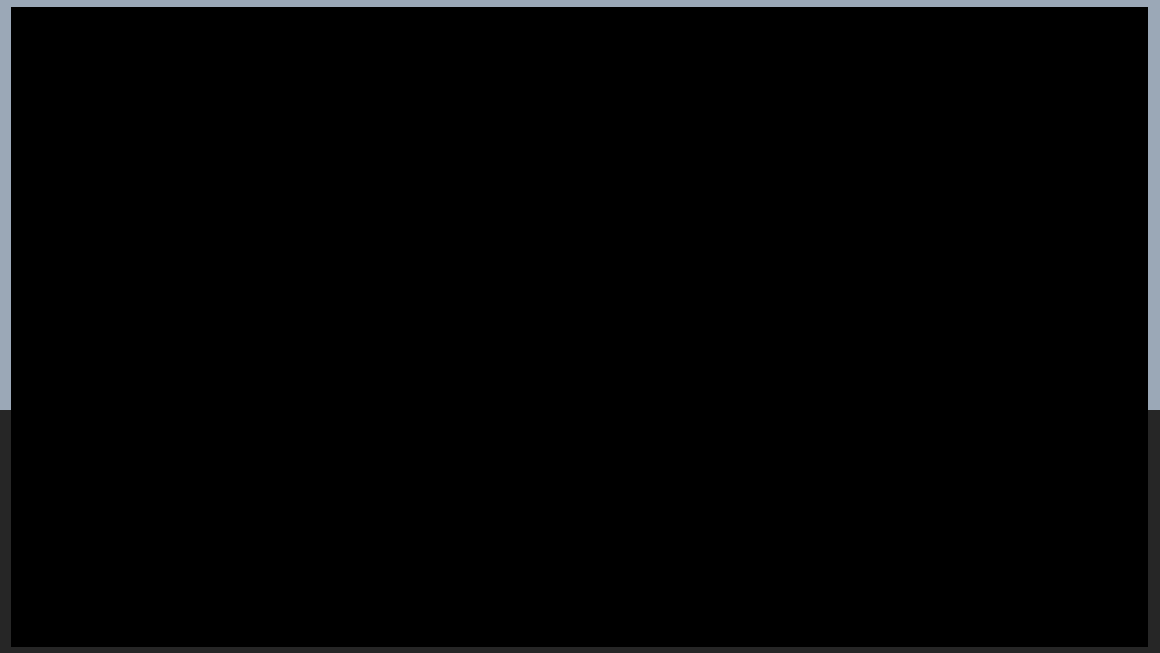
The Resilience Challenge!





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