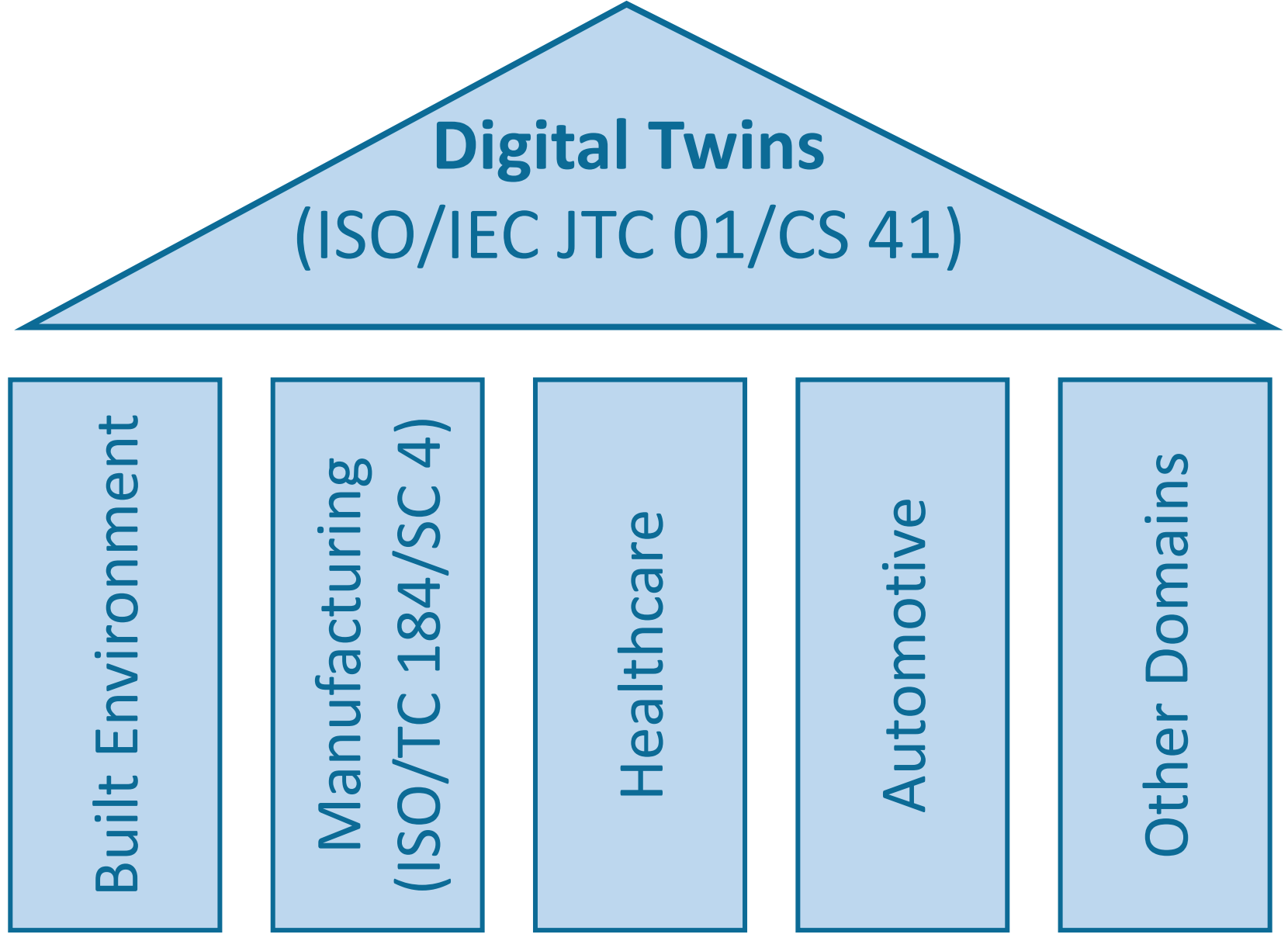# BSI Flex 260 Built environment – Digital twins overview and principles

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It's a crowded Standards space

Digital Twins
(ISO/IEC JTC 01/CS 41)

Built Environment

Manufacturing
(ISO/TC 184/SC 4)

Healthcare

Automotive

Other Domains

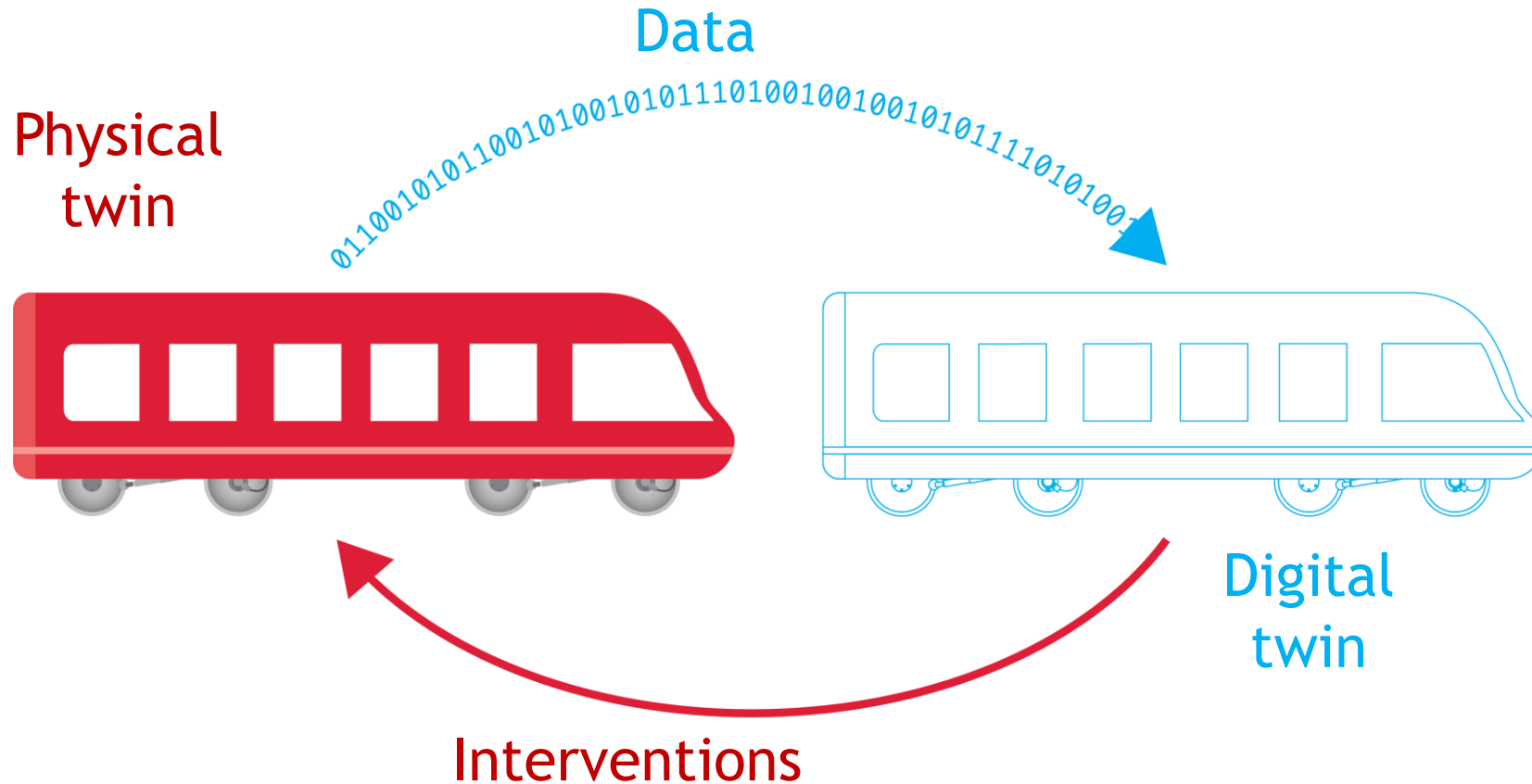# Scope (edited), Digital twins in the built environment

- General principles and for a general audience
- applicable across the life cycle or existence and interaction with the built environment:
  - assets, including both economic and social infrastructure
  - systems, including socio technical systems. (Where systems can form component of a system of systems)
  - process and interfaces, such as: resilience planning as well as associated decision-making.
- not the selection of assets, systems and processes to be represented by digital twins.
- covers applications, interfaces with the natural environment, discrete and connected digital twins but not the practice and technology of connecting them
- Does not specify the security or the management of personal data

Areas Covered

- Digital Twins
  - Discrete
  - Connected Digital Twins
  - Principles of Information Management
- Built Environment
  - Principles of digital twins
  - Extent
  - Applications and Benefits
  - Real world use cases
- Security and personal data protection

Purpose: Must have clear purpose	**Public good** Must be used to deliver genuine public benefit in perpetuity	**Value creation** Must enable value creation and performance improvement	**Insight** Must provide determinable insight into the built environment
Trust: Must be trustworthy	**Security** Must enable security and be secure itself	**Openness** Must be as open as possible	**Quality** Must be built on data of an appropriate quality
Function: Must function effectively	**Federation** Must be based on a standard connective environment	**Curation** Must have clear ownership, governance and regulation	**Evolution** Must be able to adapt as technology and society evolve

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The major disagreements

Data

Physical twin

Digital twin

Interventions

- Does the subject need to be physical?
- Should levels and types of aggregation be specified?
- Does a digital twin require a purpose?

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Thank you

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https://digitaltwinhub.co.uk/

https://www.cdbb.cam.ac.uk/DFTG/GeminiPrinciples

https://publications.jrc.ec.europa.eu/repository/handle/JRC126562

https://www.eff.org/deeplinks/2019/10/adversarial-interoperability

https://standardsdevelopment.bsigroup.com/projects/2021-00634#/section