

# TRUSTED AI HEALTH DATA THROUGH DATA ASSET FOUNDATIONS

## A DATA-GOVERNANCE-LED USE CASE FOR AI HEALTH-TECH

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# EXECUTIVE SUMMARY

Health systems generate vast quantities of clinically rich data, yet structural, legal, and governance constraints prevent this data from being safely and productively used for AI development at scale. As a result, AI health-tech innovation remains fragmented, slow, and difficult to operationalise across multiple providers.

The Data Asset Foundations (DAF) framework provides a structural solution by enabling health data to be placed into a legally defined, independently governed entity. This allows health data to be clearly identified, controlled, registered, and utilised for AI health-tech purposes under consistent, auditable governance—without transferring ownership of primary clinical records or undermining patient trust.

This use case outlines how an AI Health Data Asset Foundation can enable scalable, compliant secondary use of health data for AI training, validation, and monitoring, while preserving provider control and public confidence.

## THE PROBLEM

Health data is valuable but structurally constrained. The reality today:

### HEALTH PROVIDERS

- hold large, longitudinal datasets (EHRs, labs, imaging, outcomes)
- operate under strict consent, confidentiality, and ethical obligations
- face high reputational risk from opaque or poorly governed data sharing

### AI HEALTH-TECH COMPANIES

- struggle to access representative, multi-site datasets
- rely on bespoke, slow-to-negotiate data-sharing agreements
- face resistance from providers due to governance uncertainty

### THE RESULT

- AI models trained on narrow or biased datasets
- duplication of effort across providers
- limited generalisability of AI tools
- erosion of trust from clinicians and patients

Health data is under-utilised not because it lacks value, but because it lacks a scalable governance structure.

# THE DATA ASSET FOUNDATIONS SOLUTION: CONVERTING HEALTH DATA INTO A GOVERNED AI ASSET

The DAF framework introduces a statutory data container designed specifically to support controlled and lawful data utilisation.

## SATISFYING 'IDENTIFIABILITY' (CLEAR DATA ASSET BOUNDARIES)

**Current State:** The Data Asset Foundation framework introduces a statutory data container designed specifically to support controlled and lawful data utilisation.

### DAF Unlock:

- each dataset is formally defined (scope, population, time period, data types)
- registered in the statutory Data Asset Register
- assigned a unique identity with metadata, lineage, and governance attributes

**Result:** Health data becomes a clearly bounded AI training dataset, not an abstract pool of records.

## SATISFYING 'CONTROL' (LAWFUL RESTRICTION OF ACCESS AND USE)

**Current State:** Control is asserted through contracts that are difficult to monitor or enforce.

### DAF Unlock:

- Data Asset Dedication Instruments formally dedicate stewardship rights to the DAF
- the Foundation Council and Data Enforcer restrict access and permitted purposes
- use is limited to defined AI health-tech purposes only

**Result:** The Data Asset Foundation provides demonstrable control over who can use the data, for what purpose, and under what conditions.

## OPERATIONALISING CONSENT AND LAWFUL BASIS

**Current State:** Consent handling varies by provider and dataset, creating complexity and risk.

**DAF Unlock:** The Data Asset Register records:

- consent and authorisation types (explicit consent, opt-out regimes, research exemptions)
- applicable limitations, expiry dates, and conditions
- withdrawal and sunset rules

**Result:** Consent becomes standardised, transparent, and auditable across datasets and providers.

## ENFORCING DE-IDENTIFICATION AND SECURE ACCESS

**Current State:** Data sharing often relies on trust in downstream handling.

**DAF Unlock:**

- mandatory de-identification and anonymisation standards
- explicit re-identification risk assessment and mitigation
- requirement that access occurs only within Trusted Execution Environments (TEEs)
- no uncontrolled release of raw datasets

**Result:** Providers gain confidence that data cannot be misused or re-identified.

### Summary of practical impact:

Area	Traditional Approach	DAF-Based Approach
Data sharing	Bespoke agreements	Standardised dedication instruments
Dataset definition	Ambiguous	Registered, bounded assets
Consent handling	Fragmented	Centralised, auditable
Security	Data transfer	TEE-based controlled access
Scalability	Low	High

The AI Health Data Asset Foundation transforms fragmented clinical data into a governed, reusable resource for AI innovation—without compromising patient trust or provider control.

# BUILDING THE AI HEALTH DATA DAF: A PRACTICAL SCENARIO

## STEP 1: DATA DEDICATION

Multiple hospitals dedicate defined secondary-use datasets (e.g. de-identified inpatient EHRs and outcomes) to the AI Health Data Asset Foundation.

**Effect:** Clear scope, purpose limitation, and reversion rights established.

## STEP 2: REGISTRATION

The Foundation registers the dataset in the Data Asset Register, capturing dataset boundaries, consent basis, purpose, update frequency, and governance status.

**Effect:** The dataset becomes a recognised, governed data asset.

## STEP 3: SECURE AI DEVELOPMENT

Approved AI developers access the dataset:

- only within TEEs
- for defined purposes
- under logging and audit controls

**Effect:** AI development proceeds without uncontrolled data distribution.

## STEP 4: DATASET UPDATES AND LIFECYCLE MANAGEMENT

Providers supply scheduled updates, corrections, and outcome data. The Data Asset Foundation and Data Asset Register manage versioning, consent expiry and withdrawal, and sunset and reversion events.

**Effect:** the dataset remains current, representative, and trustworthy over time.

# THE DATA-FIRST STRATEGY FOR HEALTH AI

This approach shifts the focus from governing individual AI models to governing the data they rely on—creating a stable, reusable foundation for innovation.

By focusing on data governance rather than model governance, the Data Asset Foundation enables faster AI experimentation without compromising trust, reuse of datasets across multiple AI projects, and consistent provider protections regardless of vendor.

The Data Asset Foundation acts as a long-lived data infrastructure layer upon which different AI tools and use cases can be built over time.

## WHY THIS USE CASE MATTERS

### FOR HEALTH PROVIDERS:

- retain control over data
- reduce governance and reputational risk
- enable secondary use without “selling data”

### FOR AI HEALTH-TECH:

- access scalable, multi-site datasets
- reduce onboarding friction
- operate with clearer legal and governance footing

# THE ISLE OF MAN

A self-governing nation in the heart of the British Isles, the Isle of Man is renowned for its political stability, forward-looking regulation, and collaborative business environment. As home to one of the world's most agile digital economies, it is the ideal jurisdiction to pioneer the future of data.

## DIGITAL ISLE OF MAN

Digital Isle of Man is an Executive Agency within the Isle of Man Government, driving the Island's digital future by creating the environment for business success, shaping policy, and leading innovation. It empowers businesses to grow and lead globally, positioning the Isle of Man as a hub for digital excellence.

## EDM ASSOCIATION

To deliver the Data Asset Foundations initiative, Digital Isle of Man has partnered with the EDM Association – the world's leading global association for data management, standards and analytics. With more than 700 member organisations spanning financial services, technology, government, and numerous industries, the EDM Association sets the global standards for data best practices, governance, and value realisation.



# JOIN THE FUTURE OF THE DATA ECONOMY

This is your opportunity to shape global standards, pioneer new business models, and unlock the full commercial power of your data.



[www.digitalisleofman.com/data-asset-foundations](http://www.digitalisleofman.com/data-asset-foundations)



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## IMPORTANT DISCLAIMER

The strategies, structures, commercial models and functionality outlined in this document are hypothetical and illustrative and are intended to support discussion of potential Data Asset Foundation use cases in the context of the proposed Foundations (Amendment) Bill 2025 and associated programme in the Isle of Man. These measures are proposed only and remain subject to parliamentary approval, amendment and Royal Assent. Any operational mechanisms – including Data Governance Frameworks, controls, standards, assurance processes and any functional specifications for a Data Asset Register – remain in draft/development and may change materially as legislation, regulations, procurement and system design are finalised.

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