
PUBLICATION 3 - The Role of the Custodians

Building Sustainable Capacity and Capability

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1 Abstract and How to Use this Document

This is the third publication in the DHCF foundational suite. Publication 1 defined the concept of the Digital Health Commons and the role of DHCF as a coordinating and enabling structure within open digital health. Publication 2 examined why many digital health ecosystems remain fragmented, difficult to sustain, and unable to realise the full value of openness despite significant investment in standards, platforms, and digital transformation programmes.

This publication addresses the next question:

If open digital health requires long-term coordination, stewardship, and accountability, what institutional structures make that possible in practice?

At the centre of this approach is the concept of the Custodian: a trusted, independent organisation responsible for governing and sustaining shared digital health assets on behalf of the community they serve.

Custodians are not vendors, regulators, or passive funding recipients. They are stewardship organisations. Their role is to maintain continuity, assurance, accountability, and long-term public value across the lifecycle of shared digital infrastructure.

Without stewardship, openness alone cannot sustain a digital health ecosystem. Custodians provide the continuity, accountability, and coordination that shared infrastructure requires.

This publication explains:

- what custodians are
- why stewardship matters in open digital health ecosystems
- how custodians emerge and operate
- the role custodians play across the wider ecosystem
- and how DHCF supports the development of sustainable custodianship models

It is intentionally strategic in focus. It does not prescribe a single governance structure or implementation model. Instead, it provides a framework for understanding how durable stewardship structures can support safe, resilient, and scalable digital health ecosystems over the long term.

This publication is particularly relevant for:

- policymakers and public-sector leaders

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- healthcare organisations adopting open digital systems
 - funders and procurement bodies
 - open-source communities and contributors
 - implementation and service partners
 - organisations exploring stewardship or custodianship models

Together with Publications 1 and 2, these publications establish the strategic foundation for understanding why sustainable digital health ecosystems require long-term stewardship, governance continuity, and public-interest coordination.

2 Context and Purpose

Publication 2 - The Digital Health Landscape What's Broken and Why? established that many of the problems facing digital health today are not primarily caused by a lack of technology, standards, or investment. The deeper challenge is structural. Across health systems globally, digital infrastructure is frequently fragmented, difficult to sustain, vulnerable to lock-in, and heavily shaped by short-term procurement, funding, or political cycles.

Open digital health offers a compelling alternative: systems that can evolve collaboratively, interoperate more effectively, and reduce dependency on closed proprietary platforms. Yet openness alone is not enough. Shared digital assets still require governance, coordination, assurance, and long-term stewardship. Without these, even well-funded open initiatives can fragment, lose direction, or fail entirely once initial momentum or funding declines.

This pattern can be seen across many well-intentioned digital health initiatives. Projects may begin with significant investment, strong technical ambition, and genuine public-interest intent, yet still struggle to maintain the durable governance, assurance, and ecosystem coordination needed for long-term sustainability. In some cases, initiatives become overly dependent on specific funders, delivery organisations, or political priorities. In others, institutional knowledge, accountability, or strategic continuity weakens once the original programme, funding stream, or leadership structure changes.

This problem is particularly significant in health and care environments, where digital systems are not simply software products, but part of critical public infrastructure. Clinical safety, privacy, operational continuity, workforce capability, interoperability, and public trust all depend on governance structures that can persist beyond individual projects, procurement cycles, organisational restructures, or changes in policy direction; and this is where custodianship becomes essential.

A custodian provides the stewardship layer that shared digital infrastructure requires. Custodians help ensure that open systems remain safe, governed, aligned, and sustainable over time. They create continuity across ecosystem change, maintain accountability for shared assets, support assurance and compliance activities, and help coordinate the interests of adopters, contributors, service providers, and policymakers.

Importantly, custodianship is not primarily about control. It is about preserving long-term public value.

Custodianship is also not a theoretical concept. Organisations such as the Apperta Foundation CIC have already demonstrated aspects of this model in practice through the stewardship of shared digital health assets such as OpenEyes. However, stewardship structures of this kind have rarely been recognised, formalised, or supported as critical infrastructure in their own right.

Outside healthcare, European organisations such as NLnet Foundation demonstrate how open-source commons can be strengthened through values-led funding, open licensing requirements, community support, and practical assistance for contributors. NLnet is not a digital health custodian in the same sense as Apperta, but it provides an important adjacent example: a European public-benefit organisation that supports open digital infrastructure without seeking to own or control the projects it enables.

This publication therefore focuses on the institutional dimension of sustainable open digital health ecosystems. Its purpose is to:

- define what a custodian is, in role, function, and structure
- explain why stewardship is necessary for sustainable open digital health ecosystems
- describe how custodians support continuity, assurance, and ecosystem coordination
- explore how custodians emerge and operate within federated digital health environments
- clarify the role DHCF plays in supporting, but not controlling, custodianship models

This publication is intentionally strategic in focus. It does not prescribe a single governance model or implementation approach. Instead, it provides a framework for understanding how durable stewardship structures can support safe, resilient, and scalable digital health ecosystems over the long term.

Without stewardship, openness alone cannot sustain a digital health ecosystem. Custodians provide the continuity, accountability, and coordination that shared digital infrastructure requires.

3 What is a Custodian

A **custodian** is a legally constituted organisation responsible for governing, maintaining, and evolving shared digital health assets on behalf of a defined community. Custodians are stewardship organisations. They carry long-term responsibility for ensuring that shared infrastructure remains open, safe, sustainable, and aligned to public value over time.

Unlike temporary programmes or project delivery structures, custodians provide continuity across changing procurement models, organisational restructures, funding cycles, and policy environments. Their role is to help ensure that critical shared digital assets remain governed, trusted, and sustainable beyond the lifespan of individual initiatives.

Custodians are typically structured as **not-for-profit, asset-locked entities**, such as community interest companies (CICs), foundations, or non-profit associations. This ensures that digital assets cannot be sold, or diverted from their intended purpose. Their legal form provides protection, but their strength comes from something more fundamental.

Most successful custodians are **clinically led** or **domain-specialist led**, drawing their legitimacy from trusted expertise. Whether operating in ophthalmology, mental health, diagnostics, or public health, a custodian must reflect the values and lived experience of the community it serves.

Custodians act as the connective layer between three critical spheres:

- the **value chain**, including contributors, business analysts, clinical informaticians, developers, designers, implementation and support partners, tooling contributors, documentation and training contributors, and organisations supporting the ongoing deployment, maintenance, and evolution of shared digital assets
- the **demand side**, including healthcare organisations and public-sector bodies that adopt, operate, and rely upon open digital systems in practice
- the **policy and standards domain**, including standards bodies, regulators, policy-makers, and governance organisations that define the expectations those systems must meet

Custodians help align these spheres around the long-term sustainability, safety, and public value of the shared infrastructure itself.

They operate across these spheres, helping align technical delivery, governance, assurance, and long-term public-interest objectives. Custodians coordinate, translate, and negotiate, ensuring that implementation remains aligned with public needs, policy intentions, and the long-term sustainability of the system.

The role of the Custodian is part coordinator, part facilitator, and part guarantor of long-term ecosystem integrity.

Custodians create the conditions for open solutions to be **trusted, usable, and governed in the public interest**. Without this stewardship layer, misalignment between producers, adopters, regulators, and delivery partners often leads to fragmentation, duplicated effort, weakened assurance, or failure to sustain and scale shared infrastructure over time.

3.1 What makes a Custodian different to existing vendors

A custodian is not a vendor. It does not build the software or provide implementation services. It governs and sustains the shared digital asset in the public interest, supporting strategic direction, change analysis, and the definition of design principles.

Where a vendor is commercially driven and typically accountable to a contract or customer, a custodian is a not-for-profit organisation with an asset lock. It focuses on stewardship, including continuity, safety, and alignment. Its accountability extends to the community it serves, to clinical or domain experts, and to the long-term value of the system.

This continuity becomes particularly important in healthcare environments where organisational responsibilities, procurement priorities, funding arrangements, and national programmes may evolve over time. Custodians help ensure that shared digital infrastructure can persist and mature despite changes in the surrounding institutional landscape.

Custodian funding also works differently. It is based on the value of improving and sustaining a shared product, not on generating financial returns for investors. Funding may come from any source, including public sources, philanthropic organisations, or a coalition of users; however the goal is always long-term benefit, led by improved outcomes, not profit.

A proprietary vendor often offers a perception of reduced risk through tightly controlled support and clear commercial accountability. In contrast, open ecosystems can appear fragmented unless there is a custodian to provide the structure and assurance that users need. The custodian offers that wraparound governance and guidance, making open source systems viable, stable, and trustworthy at scale.

Custodians do not replace vendors. They provide a stable and neutral foundation that allows vendors and service partners to operate within an open, standards-aligned ecosystem. Without custodians, even well-intentioned vendor efforts can lead to fragmentation, duplication, or unsustainable growth.

3.2 The role of the Custodian

The custodian plays a critical role in ensuring that shared digital health infrastructure remains safe, usable, governed, and sustainable over time. It does not deliver the software, but it creates the conditions for trustworthy, repeatable, and scalable use.

Custodians act as honest brokers within the ecosystem. They help balance the interests of contributors, implementers, adopters, policymakers, and service providers, ensuring that shared infrastructure evolves in ways that support long-term public value rather than narrow organisational or commercial priorities.

In practice, the role of the custodian includes:

- **Defining and maintaining design principles** for how the product should evolve
- **Managing legal responsibilities**, including IP ownership, licensing, and trademarks
- **Setting operational standards** for contributors, including code quality, testing, safety assurance, and review
- **Providing assurance** clinically, technically, and functionally, aligned to relevant local and international standards (e.g. DCB0129, ISO 13485, medical device regulation)
- **Operating or overseeing a quality management system (QMS)** to ensure that releases are safe, compliant, and continuously improved
- **Holding legal agreements** with organisations contributing to or using the product
- **Providing structured processes for product releases**, including change design, testing, validation, and final approval
- **Facilitating community collaboration**, including documentation, shared tooling, events, and knowledge exchange
- **Supporting “intelligent customer” capability**, by helping users understand procurement, contracting, and assurance responsibilities

While the custodian does not define standards, it ensures that standards are applied, maintained, and understood. It does not act as a delivery partner, but it provides the stable governance environment in which delivery can happen safely, efficiently, and in line with public benefit.

In practice, this stewardship role also provides continuity across organisational and political change. Health systems, funding programmes, and delivery structures may evolve over time, but shared digital infrastructure often needs to persist for decades. Custodians help preserve governance continuity, institutional memory, and long-term accountability across these transitions.

What a Custodian Does Not Do

- It **does not develop or deliver software directly**
- It does **not replace vendors or service partners**
- It does **not write new standards**, although it ensures they are followed
- It **does not provide direct implementation services**
- It **does not seek commercial return**, and its decisions are not driven by profit

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- It does **not act as a regulator**, even though it may help organisations meet regulatory expectations
 - It does **not operate clinical services**, although it works closely with those who do

By focusing on stewardship rather than control, custodians provide a neutral foundation that connects the value chain, the adopter community, and the policy and standards ecosystem. A custodian coordinates, assures, and enables, preparing the ground for others to act, without delivering or dictating the outcomes.

Operating a custodian organisation, requires structured processes, clear governance, and the capability to manage legal, technical, clinical, and community dimensions. This includes versioning and release procedures, onboarding and engagement models, and formal ways to manage accountability. These operational practices will be addressed in later practical guidance focused on custodian governance, operating models, and implementation.

3.3 How Custodians are Structured

Custodians are typically established as not-for-profit, asset-locked organisations, such as community interest companies, foundations, or public-benefit associations. This legal structure ensures that the assets they manage remain in the public domain and are protected from sale, capture, or misuse.

Legal status alone is not sufficient. An effective custodian also requires governance legitimacy, community trust, and transparent stewardship structures that reflect the needs of the domain and the users it serves. Clinical or domain-specialist leadership is essential, often supported by structured engagement from product users, implementers, and contributors. In practice, this often takes the form of product-specific working groups or governance boards composed of community representatives and subject matter experts.

While DHCF does not mandate a specific internal model, it has observed working examples that follow a common structure. For example, the Apperta Foundation CIC, custodian of OpenEyes, uses the following roles:

- **Technical Custodian:** maintains a product's code integrity, and release process.
- **Accredited Contributors:** contribute code or content within agreed governance processes.
- **Professional Services Partners:** deploy and supports the product in live environments.

This structure separates governance from delivery, while still enabling innovation and implementation to flourish around the product. It allows the custodian to maintain integrity and consistency, while also supporting a healthy value chain.

DHCF recognises this as an important example that has informed the development of custodianship thinking in digital health. Other models may evolve differently based on

context. What matters is that the custodian remains clearly accountable, open in its governance, and focused on long-term public value.

DHCF operates as a custodian of custodians. It does not hold or govern the products, platforms, or digital assets stewarded by individual custodians, nor does it direct their internal governance or operations. Those responsibilities remain with each custodian, accountable to the communities, domains, and jurisdictions it serves.

DHCF's role is to define and maintain the framework that helps credible custodianship form, mature, and remain aligned with Commons principles. This includes shared values, practical guidance, reusable frameworks, and support for the organisational, legal, governance, and sustainability arrangements that allow custodians to operate effectively over time.

As the Commons ecosystem matures, DHCF may also support voluntary assurance or accreditation approaches that help custodians demonstrate their alignment with Commons principles. These mechanisms should strengthen trust and coherence across the network without removing the autonomy, ownership, or operational accountability of individual custodians.

DHCF therefore coordinates and strengthens the custodian ecosystem, while leaving ownership, internal governance, and day-to-day accountability with the independent custodians themselves.

3.4 Why a Custodian Matters

Without durable stewardship structures, open digital health ecosystems face the same risks that have undermined many well-intentioned digital transformation initiatives. Governance gaps lead to fragmentation. Standards drift. Safety, compliance, and alignment weaken over time. No one is responsible for the whole, and trust in the system deteriorates.

The result is often failure, not because the software was inadequate, but because it was left without stewardship.

Common consequences include:

- **Loss of accountability** once initial funding or project delivery ends
- **Contributors / vendors diverging** from the shared roadmap or from each other
- **Inconsistent application of standards**, leading to integration and safety issues
- **Rework and abandonment**, as local implementations are rebuilt or replaced
- **Wasted investment**, both financial and human
- **Erosion of user trust**, especially in safety-critical domains
- **Lack of assurance**, with products that function but do not meet required safety or conformance standards
- **Intellectual property and trademarks** that are not properly managed or protected

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- **Loss of continuity during organisational or political change**, where shared infrastructure becomes vulnerable to programme closure, restructuring, or shifting priorities

By contrast, a well-functioning custodian creates:

- **Clear ownership of governance and assurance**, independent of vendors or funders
- **Clear responsibility** for all in the chain, from contributors through to end users
- **Continuity and resilience**, through long-term oversight and structured change processes
- **Institutional memory**, so that knowledge is not lost with turnover or project expiry
- **Alignment across the ecosystem**, making it easier to collaborate, integrate, and scale
- **De-risked investment**, with a stable structure that supports reuse and ongoing value

These consequences are not simply a list of risks, they are the pressure points that often reveal the need for a custodian. When shared digital health assets become important enough to rely on, they also become important enough to govern deliberately, fund sustainably, and protect over time.

4 How Stewardship Structures Emerge

Custodians rarely begin as formal institutions. They typically emerge when shared digital assets become too important, too widely adopted, or too operationally complex to rely on informal coordination alone.

In many digital health ecosystems, stewardship structures emerge only after the limitations of unmanaged openness have already become visible. Fragmentation increases, assurance becomes inconsistent, accountability becomes unclear, and long-term sustainability becomes difficult to maintain. As shared infrastructure matures, the need for continuity, governance, and coordination becomes increasingly unavoidable.

This section moves from definition to recognition. It considers the circumstances in which organisations begin to see that informal coordination, short-term funding, or standard project governance is no longer enough to sustain shared digital assets safely over time

4.1 Common Starting Points and Triggers

Stewardship structures often begin to emerge when shared digital assets transition from isolated projects into operationally important infrastructure used across multiple organisations, suppliers, or regions.

What may begin as a successful pilot, publicly funded initiative, regional programme, or open-source release can quickly become difficult to coordinate through informal collaboration alone. As adoption grows, expectations around assurance, continuity, governance, interoperability, and long-term sustainability also increase.

At this point, informal coordination often starts to break down. Contributors may begin diverging from shared roadmaps. Deployments become inconsistent. Assurance responsibilities become unclear. Funding may exist for development, but not for long-term stewardship, governance, release management, or ecosystem coordination. In some cases, organisations discover that they have successfully funded a product, but not the structures required to sustain it safely over time.

Other stewardship structures emerge because healthcare organisations or governments recognise the limitations of existing procurement and platform models. Rather than continuing to fund isolated systems or depend entirely on closed vendor ecosystems, they begin exploring how shared digital infrastructure can be sustained collectively in the public interest.

This is particularly common where:

- multiple organisations depend upon the same shared asset
- suppliers or implementation partners need coordinated governance

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- clinical safety or regulatory obligations require structured assurance
 - ecosystems must persist beyond specific programmes, funding cycles, or political structures
 - long-term interoperability and sustainability are prioritised over short-term delivery

In many cases, custodianship emerges not from ideology, but from operational necessity. The more important shared digital infrastructure becomes, the more difficult it becomes to sustain without durable stewardship, governance continuity, and long-term accountability.

4.2 When Stewardship is Missing

In many digital health ecosystems, the absence of stewardship only becomes visible once systems begin to scale, diversify, or become operationally significant. Early success can mask underlying governance weaknesses for years, particularly where adoption grows faster than the structures responsible for sustaining the shared asset.

One of the earliest warning signs is the absence of long-term continuity planning around strategically important infrastructure. Public funding may support the development of digital products or open-source assets, but without durable stewardship structures there is often no clear plan for how those assets will be governed, assured, maintained, or evolved over time.

This can manifest in several ways:

- code is released without a long-term governance or stewardship model
- contribution pathways are unclear or tightly controlled
- intellectual property or trademarks remain vulnerable to commercial or institutional capture
- data remains difficult to access or migrate despite public investment
- ecosystems depend entirely upon centralised delivery teams with no neutral governance layer
- assurance responsibilities for safety, interoperability, or compliance remain undefined
- publicly funded systems remain vulnerable to changing organisational or political priorities

In many cases, organisations initially assume that openness alone will naturally create sustainable ecosystems. In practice, unmanaged openness often produces the opposite outcome. Without coordination, shared infrastructure can quickly become fragmented, inconsistently governed, or vulnerable to abandonment and recapture.

As ecosystems mature, additional signals often begin to emerge:

- contributors or suppliers diverging from shared roadmaps
- duplicated development across organisations solving the same problems independently

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- inconsistent deployments and release processes
 - fragmented approaches to clinical safety, assurance, or regulatory compliance
 - dependency on specific individuals rather than durable institutional structures
 - uncertainty around ownership, accountability, or long-term responsibility
 - publicly funded assets with no continuity plan once programmes or funding streams end

These signs should not be read only as evidence of failure. In many cases, they are the point at which an ecosystem has matured enough to require a more deliberate stewardship structure. The challenge is to recognise that moment early, before fragmentation, duplicated effort, or loss of accountability becomes embedded.

This pattern has been seen repeatedly across digital health, particularly where publicly funded infrastructure is released without durable stewardship arrangements to sustain it over time. In many cases, open-source assets are initially treated as delivery outputs rather than long-term public infrastructure, leaving them vulnerable to organisational restructuring, shifting political priorities, programme closure, or changes in funding direction.

Recent public reporting around NHS England's open-source repositories illustrates how uncertainty around stewardship can emerge even within nationally significant ecosystems. In May 2026, it was reported that NHS England had instructed teams to make public GitHub repositories private while it reviewed security risks associated with advanced AI models. NHS England was also quoted as saying that it would continue to publish source code where there was a clear need. The point is not the individual security decision, but the wider stewardship question: when open assets are dependent on internal programme policy rather than durable custodianship, their status can change quickly as organisational priorities, risk assessments, or governance structures change.

Similar questions have arisen internationally where shared digital health assets have moved beyond single-programme delivery and required more durable arrangements for governance, maintenance, and community coordination.

In healthcare environments, these failures carry consequences beyond technical inconvenience or financial inefficiency. Weak stewardship can undermine interoperability, increase technology debt, weaken assurance processes, and make it more difficult to evolve systems safely over time. In safety-critical environments, the result may ultimately affect patient outcomes.

Importantly, neutral stewardship should not be confused with the absence of governance. In complex digital health ecosystems, failing to coordinate shared infrastructure does not preserve openness. Over time, it often accelerates fragmentation, weakens assurance, and increases dependency on dominant suppliers or unstable institutional arrangements.

The appearance of these problems does not necessarily indicate failure. More often, they indicate that an ecosystem has reached a level of maturity where informal coordination is no longer sufficient, and where more durable stewardship structures are becoming necessary.

4.3 When Stewardship Needs to Become Formal

At a certain point, many digital health ecosystems reach the same conclusion: shared infrastructure cannot continue to rely on informal coordination alone.

This often happens when a product, specification, platform, or shared asset becomes operationally important across multiple organisations or regions. What began as a successful project, programme, or collaborative initiative gradually becomes something more significant. Healthcare organisations begin depending upon it. Suppliers build around it. Clinical workflows evolve around it. Public funding supports it. Expectations of safety, continuity, interoperability, and accountability increase.

At this stage, the challenge is no longer simply delivering technology. The challenge becomes sustaining it responsibly over time.

If shared digital infrastructure is important enough to depend upon, it is important enough to steward deliberately.

In other cases, stewardship structures are established much earlier. Some ecosystems recognise from the outset that strategically important digital assets will require neutral governance, long-term accountability, and continuity beyond individual suppliers, programmes, or funding cycles. Rather than waiting for fragmentation or governance failure to emerge, stewardship is treated as a foundational part of the infrastructure itself.

For many organisations, this is the moment where stewardship needs to become intentional rather than implicit. Questions begin to emerge around governance, assurance, accountability, contribution management, release processes, licensing, trademarks, sustainability, and long-term ownership of the shared asset.

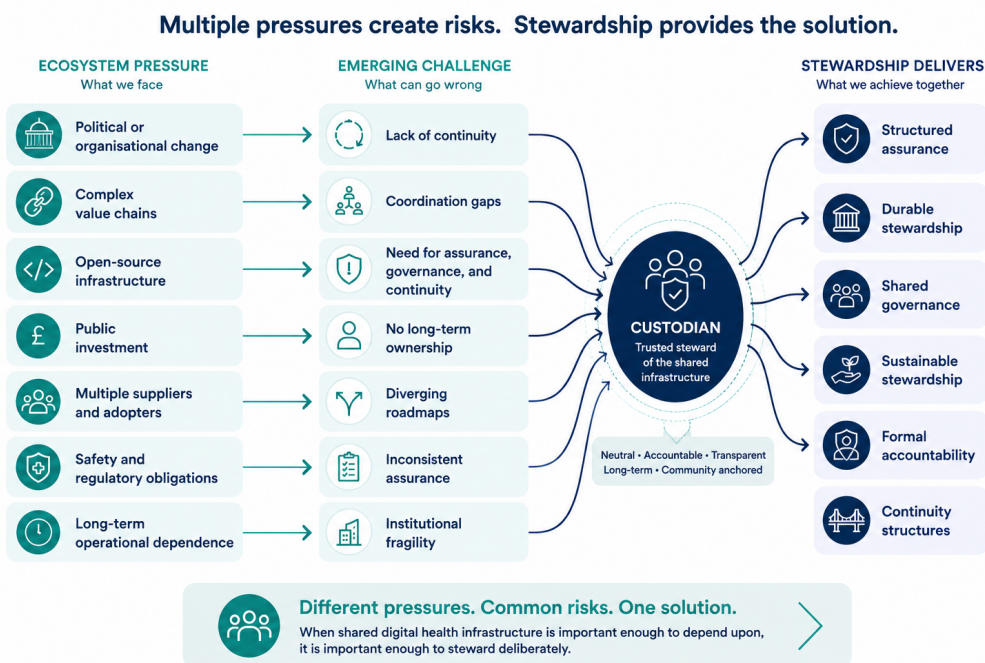


Figure 4.1: How different ecosystem pressures create the need for durable stewardship

Importantly, custodianship does not require a single universal structure. Different ecosystems may evolve different governance models depending on their scale, jurisdiction, maturity, and operational context. Some may emerge around foundations, public-benefit organisations, or community interest structures. Others may evolve through federated regional arrangements or domain-led governance groups.

What matters is not uniformity of structure, but the presence of durable stewardship capability: governance that is trusted, sustainable, accountable, and able to preserve the long-term integrity of shared digital infrastructure.

In many cases, the recognition itself is the critical step. Ecosystems begin to understand that if shared digital infrastructure is important enough to depend upon, it is important enough to steward deliberately.

4.4 DHCF's Role in Supporting Stewardship

One of the recurring structural gaps identified throughout this publication is the absence of durable stewardship capability across digital health ecosystems.

Many organisations recognise the need for greater continuity, coordination, assurance, and long-term accountability around shared digital infrastructure. However, they often lack the frameworks, governance models, institutional confidence, or operational structures needed to establish sustainable stewardship arrangements in practice. DHCF was established to help address these structural stewardship and coordination challenges.

DHCF does not function as a central authority, regulator, or delivery organisation. It does not seek to own national infrastructure or replace existing health institutions. Instead, its role is to support the emergence of credible stewardship structures capable of sustaining shared digital health assets over time.

This includes supporting:

- governance and custodianship frameworks
- reusable organisational and operational frameworks
- alignment between policy, standards, procurement, and implementation
- approaches to long-term sustainability and shared investment
- collaboration between adopters, contributors, suppliers, and public-sector organisations

The goal is not to impose a single institutional model. Different ecosystems will require different stewardship arrangements depending on their scale, maturity, governance environment, and operational context.

What matters is that stewardship becomes intentional, durable, and capable of supporting shared infrastructure beyond individual programmes, suppliers, or political cycles.

DHCF therefore acts as an enabling structure within the wider ecosystem, helping organisations move from fragmented digital initiatives towards more coordinated, sustainable, and publicly accountable digital infrastructure models.

5 Sustainable Custodianship Requires Sustainable Economics

Open digital health ecosystems cannot rely on goodwill, temporary programmes, or isolated procurement exercises alone. If shared digital infrastructure is expected to remain safe, interoperable, and operationally viable over long periods of time, then the organisations responsible for stewarding that infrastructure must themselves be sustainable.

This is one of the most common weaknesses across digital health ecosystems. Funding is frequently allocated to build products, deliver programmes, or achieve short-term policy objectives, while less attention is given to the long-term structures required to govern, assure, coordinate, and sustain shared digital assets over time.

As a result, many initiatives succeed technically but struggle institutionally. They may create useful software, standards-aligned components, or shared assets, but without a sustainable stewardship model those assets remain vulnerable once the initial programme, funding stream, or delivery structure changes.

Sustainable openness therefore requires more than open standards or open-source licensing. It requires sustainable stewardship capability.

Open infrastructure without sustainable stewardship remains vulnerable to fragmentation, abandonment, and recapture.

Importantly, stewardship should not be understood as a passive administrative function surrounding digital infrastructure. Custodians exist to preserve continuity, accountability, assurance, and long-term public value across changing organisational, political, and commercial environments.

5.1 Funding Shared Infrastructure

Shared digital infrastructure creates value across entire ecosystems. Healthcare providers, patients, suppliers, public-sector organisations, researchers, and implementation partners may all depend upon the same underlying digital assets; responsibility for sustaining those assets often remains unclear or fragmented.

Traditional procurement and funding approaches are frequently designed around individual systems, organisational ownership, or short-term delivery outcomes. Stewardship functions such as governance, assurance, release management, interoperability coordination, contribution management, and long-term continuity planning do not always fit neatly within those models.

This creates a structural gap, where shared infrastructure exists, but no durable structure exists to sustain it collectively over time.

Funding stewardship therefore should not be viewed as optional overhead. It is part of sustaining safe, reusable, and dependable digital infrastructure that multiple organisations rely upon.

This includes support for:

- governance and oversight functions
- clinical, technical, and operational assurance
- release and contribution management
- interoperability and standards alignment
- ecosystem coordination and community engagement
- continuity and knowledge preservation
- long-term sustainability planning

Different ecosystems may support these functions in different ways. What matters is that stewardship capability is recognised, resourced, and treated as a long-term responsibility rather than a temporary delivery activity.

5.2 Public-Interest Sustainability Models

Custodians are fundamentally different from traditional proprietary technology organisations because their primary purpose is stewardship of shared digital assets in the public interest which affects how sustainability models must operate.

A custodian may receive support from governments, healthcare organisations, suppliers, philanthropic bodies, research initiatives, or commercial ecosystem participants. However, funding the custodian does not mean controlling the custodian.

The purpose of the funding is to sustain the mission and continuity of the shared infrastructure itself, not to transfer ownership, strategic control, or ecosystem dominance to individual funders.

For this reason, custodians are often established through legal and governance structures designed to preserve mission continuity, operational independence, and public-interest accountability over time. Examples may include community interest companies (CICs), foundations, trusts, non-profit associations, cooperatives, or similar mission-locked entities.

Different sustainability approaches may emerge depending on context, including:

- public-interest grants and seed funding
- coalition funding from adopters or regional partnerships
- subscriber or membership support models
- ecosystem participation agreements
- philanthropy and research funding
- commercial service ecosystems operating around shared infrastructure

No single funding model is universally correct. What matters is that stewardship capability remains sustainable without compromising the independence or public-interest obligations of the custodian.

5.3 Shared Investment and Ecosystem Responsibility

Shared infrastructure creates shared responsibility.

Where multiple organisations benefit from common digital assets, stewardship responsibility cannot remain isolated to individual suppliers, short-term programmes, or single delivery organisations alone.

This includes responsibility not only for funding, but also for participation, governance, assurance, coordination, and long-term sustainability.

Healthy ecosystems therefore tend to evolve towards more collaborative approaches to stewardship investment. Healthcare organisations, suppliers, implementation partners, public-sector bodies, and other ecosystem participants each contribute different forms of value, capability, or resource towards sustaining the shared infrastructure.

This does not require centralised ownership or control. Nor does it require all organisations to contribute equally. What matters is the recognition that sustainable ecosystems depend upon collective investment in the structures that maintain continuity, coordination, and public trust.

In practice, this may include:

- shared governance participation
- contribution of expertise or operational capability
- ecosystem coordination support
- shared funding mechanisms
- regional or domain-level stewardship partnerships
- participation in assurance, testing, or interoperability activities

Without this shared responsibility model, ecosystems frequently drift back towards fragmentation, duplication, or dependency upon dominant suppliers or unstable institutional arrangements.

5.4 Continuity Beyond Political and Commercial Cycles

Healthcare systems operate across long time horizons. Governments change. National programmes are restructured. Suppliers enter and leave markets. Commercial priorities evolve. Funding cycles begin and end.

Shared digital infrastructure must often survive all of these changes.

Without durable stewardship structures, strategically important digital assets can become tightly coupled to temporary organisational arrangements, delivery programmes, or commercial interests. In these environments, continuity becomes vulnerable to institutional restructuring, shifting political priorities, supplier consolidation, or changes in market direction.

The recent public reporting around nationally significant open-source repositories illustrates how uncertainty around long-term stewardship can emerge even where assets have been created within major public institutions. Similar risks have emerged internationally where shared digital assets depended heavily upon temporary programmes, isolated delivery structures, or supplier-led governance approaches.

Custodianship helps reduce these risks by creating a stable stewardship layer focused on continuity, governance, and long-term accountability for the shared asset. The role of the custodian is not to remove governments, suppliers, or delivery organisations from the ecosystem, it is to ensure that the asset can persist and remain trusted as those surrounding structures change.

This continuity includes:

- preservation of governance and institutional knowledge
- long-term assurance and compliance oversight
- maintenance of shared design principles
- protection of openness and interoperability objectives
- coordination across changing suppliers and delivery models
- resilience across political, organisational, and commercial change

Custodians therefore provide an important form of ecosystem stability. Their legitimacy comes not from ownership, market dominance, or political authority, but from trusted stewardship in the long-term public interest.

5.5 DHCF Investment and Ecosystem Development

The Digital Health Commons Forum (DHCF) recognises that sustainable digital health ecosystems require more than technical alignment alone. They also require sustainable economic and stewardship structures capable of supporting long-term continuity.

For this reason, DHCF supports approaches that strengthen the broader Commons ecosystem, including support for:

- shared digital products and infrastructure
- emerging custodians and stewardship organisations
- interoperability and assurance tooling
- ecosystem coordination capabilities
- reference implementations and reusable assets
- education, training, and operational support functions

This approach is informed by wider European experience in supporting open digital commons. NLnet Foundation, through initiatives such as NGI Zero, has shown how

grant funding, open licensing expectations, mentoring, audits, and practical support services can help distributed open-source projects mature while remaining independent. DHCF applies a related logic to digital health, where the additional requirements of clinical safety, assurance, governance, and long-term stewardship make the need for custodianship even more explicit.

This support may include grant funding, seed funding, ecosystem coordination, strategic guidance, or values-aligned investment approaches depending on the maturity and needs of the ecosystem.

Importantly, the goal is not to create permanent dependency upon DHCF itself. Custodians are expected to develop sustainable operational models appropriate to their context over time. DHCF's role is to help ecosystems establish the conditions in which durable stewardship capability can emerge, mature, and remain aligned to public-interest objectives.

Commercial participation is not incompatible with this model. Healthy open ecosystems require suppliers, service providers, innovators, and implementation partners. However, commercial success should operate within stewardship structures that preserve openness, interoperability, shared governance, and long-term ecosystem sustainability.

The objective is not to eliminate commercial participation from digital health ecosystems. The objective is to ensure that shared infrastructure remains governable, sustainable, and accountable beyond individual market cycles, programmes, or suppliers.

6 Stewardship Across the Ecosystem

The previous sections explain why shared digital health assets need stewardship and why that stewardship must be sustained. This section focuses on the ecosystem around the asset.

Open digital health is not a conventional software supply chain. In traditional delivery models, products are usually designed, owned, delivered, and controlled by a single supplier through contractual relationships with customers. Responsibility flows in relatively linear ways between vendor and purchaser.

In a Commons-aligned model, value is created through a wider network of contributors, implementation partners, healthcare organisations, standards bodies, policymakers, assurance specialists, support providers, and commercial suppliers. This is better understood as a value chain than as a traditional supply chain.

The custodian's role is to help that value chain remain aligned, accountable, and safe to participate in. It supports coordination across otherwise independent actors, while maintaining the governance, assurance, and trust needed for shared infrastructure to operate safely over time.

Healthcare ecosystems require controlled openness, not unmanaged openness.

6.1 Beyond the Traditional Supply Chain

The Digital Health Commons model is not based on a single supplier delivering closed technology to passive customers. Instead, it recognises that sustainable digital health infrastructure depends upon long-term coordination between many different participants operating across the wider environment.

These participants may include:

- contributors and developers
- informatics and assurance specialists
- implementation and support partners
- healthcare providers and adopters
- tooling and interoperability providers
- standards organisations and policymakers
- training, documentation, and operational support organisations
- commercial suppliers operating around shared infrastructure

Each contributes different forms of expertise, capability, investment, or operational support into the wider value chain.

Unlike traditional supply chains, these relationships are not purely transactional. They are interdependent. Decisions made in one part of the environment may directly affect safety, interoperability, governance, assurance, or sustainability elsewhere.

This creates the need for durable coordination structures capable of maintaining alignment across the value chain over time.

6.2 Coordinating the Open Digital Health Ecosystem

The custodian acts as a coordination and stewardship layer across the wider ecosystem.

Its role is not simply administrative. The custodian actively helps maintain alignment between the value chain, the demand side, and the policy and standards environment surrounding the shared infrastructure.

This includes activities such as:

- maintaining shared design principles and governance expectations
- coordinating contribution and release processes
- ensuring interoperability and standards alignment
- overseeing assurance and quality processes
- protecting licensing, trademark, and governance integrity
- supporting ecosystem collaboration and dispute resolution
- maintaining long-term continuity of the shared asset
- disseminating the model to organisations in the ecosystem

Importantly, the custodian helps ensure that participants remain accountable not only to contractual obligations, but also to the wider integrity and sustainability of the shared infrastructure itself.

This role becomes increasingly important as digital health environments grow in scale, complexity, and operational dependency.

6.3 Controlled Openness and Ecosystem Accountability

Open ecosystems should not be confused with unmanaged ones.

In healthcare settings, openness must operate alongside governance, assurance, accountability, and proportionate control mechanisms. The greater the clinical, operational, or regulatory risk associated with a system, the greater the need for structured stewardship and oversight.

For this reason, many custodians operate controlled participation models designed to protect the integrity of the shared infrastructure while still enabling openness and innovation.

Depending on context, this may include:

- contribution governance processes

-
- release and assurance controls
 - accreditation or participation requirements
 - interoperability and conformance expectations
 - defined operational and quality standards
 - proportionate oversight based on system criticality and risk

In safety-critical environments, stewardship authority and contribution rights cannot be treated as the same thing.

An organisation may contribute code, tooling, or operational capability into the ecosystem, while the custodian remains responsible for determining whether those contributions meet the standards required for safe deployment and long-term sustainability.

Where ecosystem participants act in ways that undermine governance, assurance, interoperability, safety, or community trust, custodians may also need to intervene proportionately to protect the integrity of the shared infrastructure and the wider ecosystem.

6.4 Protecting Trust Across the Ecosystem

One of the custodian's most important responsibilities is maintaining trust across the wider environment.

This includes trust between:

- healthcare organisations and suppliers
- contributors and adopters
- policymakers and implementers
- standards bodies and operational delivery organisations
- patients, clinicians, and the systems they depend upon

In many digital health settings, information asymmetry creates significant challenges. Healthcare organisations may struggle to assess interoperability claims, assurance quality, technical dependencies, or long-term sustainability risks. Suppliers may operate with different incentives, priorities, or interpretations of openness.

Custodians help reduce these gaps by acting as trusted stewards of the shared governance and assurance environment.

This may include:

- supporting informed procurement and adoption decisions
- helping healthcare organisations become more intelligent customers
- maintaining transparency around governance and assurance
- ensuring ecosystem participants operate within agreed standards and expectations
- protecting interoperability and openness objectives over time

The goal is not to eliminate commercial participation or competition. Healthy ecosystems require active suppliers, implementation partners, innovators, and service

providers. The role of stewardship is to ensure these activities remain aligned with the long-term sustainability and public-interest objectives of the ecosystem as a whole.

6.5 Separating Stewardship from Delivery

A custodian governs the shared infrastructure, but it does not necessarily deliver all operational services itself. This separation is important.

In many proprietary ecosystems, the same organisation controls governance, delivery, implementation, roadmap direction, assurance, hosting, and customer dependency simultaneously. This can create strong forms of lock-in and reduce the ability of the wider ecosystem to participate safely and fairly.

The custodian model separates stewardship authority from operational delivery.

The custodian maintains governance, assurance, ecosystem coordination, and long-term continuity, while implementation, deployment, support, innovation, and operational services may be delivered by multiple ecosystem participants operating within shared governance boundaries.

This allows open digital health environments to remain both open and governable.

It enables:

- plurality of suppliers and delivery partners
- shared innovation and contribution
- reduced dependency on individual organisations
- continuity beyond supplier or programme change
- coordinated interoperability and assurance
- healthier long-term ecosystem sustainability

The custodian therefore acts neither as a passive observer nor as a monopoly platform owner. It acts as the steward responsible for maintaining the integrity, continuity, and public-interest objectives of the shared ecosystem itself.

6.6 Visualising the Ecosystem

The following diagram illustrates the relationship between the custodian, the wider value chain, the demand side, and the policy and standards environment.

It highlights how custodians operate as stewardship and coordination structures across the ecosystem, maintaining alignment, assurance, accountability, and continuity between otherwise independent participants.

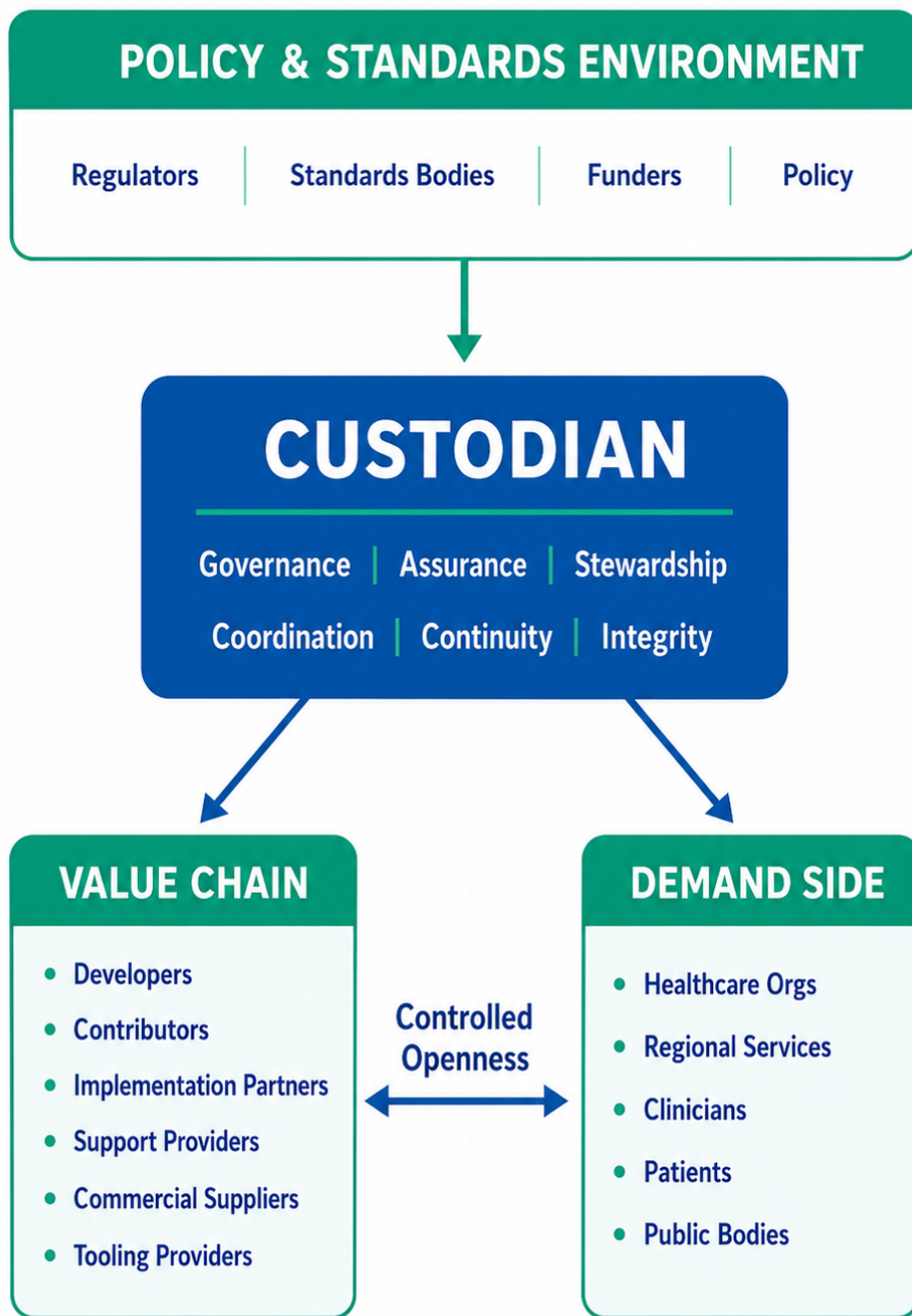


Figure 6.1: The custodian as the stewardship layer across the policy environment, value chain, and demand side.

6.7 DHCF’s Role in Enabling Custodians

Custodians are locally accountable stewardship organisations. They must be shaped by the community, domain, product, or jurisdiction they serve. They cannot simply be designed centrally and applied everywhere in the same way.

DHCF's role is therefore not to control custodians, but to make credible custodianship easier to form, easier to sustain, and easier to connect across the wider ecosystem.

DHCF provides guidance, support, best practice, and practical frameworks that help organisations move from isolated open initiatives toward durable stewardship structures. This reduces duplication, uncertainty, and avoidable reinvention by making proven approaches easier to understand, adapt, and apply.

This is an enabling role. DHCF supports the conditions in which custodians can emerge and mature, while leaving ownership, governance, and operational accountability with the custodian and the community it serves.

DHCF provides the framework to enable custodians to be repeatable, credible, and connected.

6.7.1 Shared Framework for Custodians

The need for custodianship is often first felt as a sustainability problem, not as an organisational design problem.

An organisation, region, or programme may adopt open-source software, open standards, or other forms of digital freedom to avoid the lock-in and fragmentation described in Publication 2. Yet even with those freedoms in place, many of the harder questions remain unresolved: who maintains the asset, who governs change, who assures quality, who manages contributions, who protects the licence and trademark, and who remains accountable when initial funding or delivery structures come to an end?

This is where DHCF can provide practical support. It helps organisations move from recognising these pressure points to understanding the stewardship structures that may be needed to address them.

DHCF supports custodian formation by providing guidance, best practice, and practical frameworks that can be adapted to local, national, regional, or domain-specific contexts. This may include:

- governance approaches for shared digital assets
- legal and organisational considerations, including intellectual property, trademarks, and assurance responsibilities
- sustainability and funding guidance
- contribution and participation models
- design principles and documentation guidance
- examples from existing stewardship organisations
- support for peer learning between custodians and emerging custodians

The purpose is not to impose a single model. Custodians will differ depending on their domain, maturity, risk profile, jurisdiction, and community. A custodian for a life-critical prescribing system may require much stronger governance and assurance arrangements than a custodian for a lower-risk knowledge asset or tooling component.

What matters is that organisations do not have to start from nothing. DHCF helps make the work of forming custodians more understandable, more repeatable, and more connected to wider Commons principles.

6.8 Setting the Boundaries of DHCF

DHCF's role is to enable custodianship, not to replace the autonomous custodians responsible for specific products, domains, or communities. This distinction matters because the legitimacy of a custodian depends on its accountability to the community, domain, product, or jurisdiction it serves. A custodian must hold its own assets, manage its own governance, and take responsibility for the long-term stewardship of the products, resources, or frameworks under its care.

DHCF therefore does not own or operate the assets held by custodians. It does not act as a delivery organisation, implementation partner, systems integrator, product owner, regulator, or standards body. It does not run national services, replace local governance, or control the internal decisions of independent custodians. These boundaries are not incidental. They protect the federated nature of the model and ensure that responsibility remains with the organisation established to carry it.

This does not make DHCF passive. DHCF may provide guidance, support, seed funding, expert input, and practical frameworks to help an emerging custodian think through its legal form, governance model, asset protection, values, sustainability, and contribution arrangements. It may also choose not to support organisations whose purpose, behaviour, or operating model is clearly misaligned with the principles of the Commons. That is not a form of central control. It is a necessary part of protecting the integrity of DHCF's own work and ensuring that its time, expertise, and resources are directed toward credible public-interest stewardship.

A custodian should be designed from the outset to hold and protect the assets it stewards. This includes intellectual property, trademarks, licensing arrangements, governance processes, product direction, and continuity planning. DHCF may own and maintain the frameworks that support custodian formation, but the assets of the custodian should sit with the custodian itself, under legal and organisational arrangements that protect their use for public benefit over time.

Funding does not change this boundary. Where DHCF provides seed funding, grant support, or investment alignment, that support should not be understood as ownership or control. In some circumstances, DHCF may have a temporary advisory or governance role during early formation, depending on the legal structure and context. However, the intended outcome is always a custodian that can operate independently, sustain its own responsibilities, and remain accountable to the community it serves.

DHCF's influence is therefore exercised through guidance, values, shared frameworks, practical support, and ecosystem alignment, not through centralised authority. It helps show what good custodianship can look like, while leaving custodians responsible for applying that learning in ways that fit their own context.

This is how DHCF supports alignment without becoming another point of control.

6.9 Connecting Custodians into a Federated Stewardship Ecosystem

The long-term aim is not to create one central custodian for digital health. It is to support a federated ecosystem of credible custodians, each responsible for the assets, products, domains, or communities it serves.

A custodian may form around a clinical specialty, a regional need, a national asset, a software product, a data model, a reference implementation, or a wider set of shared digital health resources. These custodians will not all look the same. Their legal form, governance model, funding approach, assurance requirements, and operational responsibilities will vary according to context. That variation is expected, and in many cases necessary.

What should connect custodians is not uniform structure, but shared commitment. Custodians should be aligned by common principles: openness, public value, transparency, asset protection, sustainability, controlled participation, and accountability to the communities they serve. They should also be able to learn from one another, reuse proven approaches, and contribute knowledge back to the wider Commons.

DHCF helps create the conditions for this connected ecosystem by supporting shared language, practical frameworks, peer learning, funding alignment, and the exchange of experience between custodians and emerging custodians. This helps prevent each new custodian from having to rediscover the same legal, governance, funding, and operational lessons independently.

This federated approach also reduces the risk that successful open initiatives remain isolated. Without connection, custodians may solve similar problems separately, duplicate effort, or develop incompatible approaches. With shared support and alignment, they can remain independent while still contributing to a wider and more coherent Commons.

This matters because digital health is not one product, one standard, one organisation, or one country. It is a network of interdependent systems, communities, services, suppliers, and policy environments. The stewardship model must reflect that reality. Local and domain-specific accountability should be preserved, but it should not lead to avoidable isolation or reinvention.

DHCF's role is to help custodians form, connect, and mature without removing their autonomy. The result should be a distributed ecosystem of stewardship organisations that can sustain shared digital health assets over time, while remaining accountable to their communities and aligned to public benefit.

The wider open-source sector shows that this kind of enabling role can be powerful when it is handled carefully. Organisations such as NLnet have supported large numbers of independent open-source projects by providing funding, guidance, and practical support while respecting project autonomy. DHCF's role in digital health is more specialised

because health assets carry clinical, operational, and regulatory consequences, but the principle is similar: enable the ecosystem, strengthen alignment, and avoid unnecessary control.

The Commons becomes durable when custodians are not isolated examples, but connected parts of a wider stewardship environment.

7 Implications for Stakeholders

The previous sections have described custodianship as a structural response to a recurring problem: shared digital health assets can become important before the institutions needed to sustain them have been properly established. That argument has practical implications, but those implications are not the same for every actor in the ecosystem.

Policy-makers, funders, healthcare organisations, vendors, delivery partners, and emerging custodians each encounter the stewardship challenge from a different position. Some shape the conditions in which custodians can form. Some depend upon the assets custodians hold. Some deliver services around those assets. Others may be responsible for forming the custodians themselves.

Custodianship changes how responsibility is held across the digital health ecosystem. It is not only a governance model, but a different way of sustaining shared public value.

This section therefore acts as a bridge between the strategic case made in this publication and the more practical guidance that will follow elsewhere in the DHCF publication suite. It does not provide an operational checklist. Instead, it sets out what different stakeholders should recognise when considering how shared digital health assets can be governed, funded, delivered, and sustained over time.

7.1 For Policymakers and Funders

Policymakers and funders have a central role in determining whether open digital health assets become long-term public value or short-lived project outputs.

National and regional programmes often face a familiar choice. A monolithic system may appear safer because it offers a single supplier, a single contract, and a familiar route to delivery. However, as described throughout this publication, that apparent safety often comes with long-term costs: dependency, reduced flexibility, weaker reuse, and limited control over the future direction of the digital asset.

A custodian approach offers a different route. It allows public investment to support digital assets that can be governed, maintained, adapted, and reused beyond the life of a single programme, vendor contract, or political cycle. This requires a different funding mindset. Funders should consider not only how an asset will be created, but how it will be sustained, governed, assured, and protected over time.

This may require funders to give up some direct control. That can feel uncomfortable, particularly in public-sector environments where accountability is closely tied to programme ownership. However, if the right legal structures, values, governance arrangements, and asset protections are in place, that transfer of control can be what

allows the asset to survive independently of future political, financial, or organisational change.

Funding should therefore be designed to support stewardship as well as delivery. Grants, seed funding, and early investment can be essential in helping custodians form, establish governance, build community trust, and develop sustainable operating models. Innovation funding is not the problem in itself. The weakness arises when funding creates useful assets without a credible plan for how those assets will be sustained once the initial programme has ended.

Policymakers and funders should therefore consider whether strategically important digital health assets have a long-term stewardship route. Where they do not, a custodian model may offer a more sustainable path than another centrally managed programme or another closed procurement cycle.

7.2 For Healthcare Organisations

Healthcare organisations are not passive customers in a custodian model. They are part of the community that gives the custodian legitimacy, direction, and sustainability.

This requires a shift in mindset. In traditional procurement models, healthcare organisations may see themselves primarily as buyers of systems or services. In a Commons-aligned model, they also carry shared responsibility for the digital assets they depend upon. They need to become intelligent customers, not only in the procurement sense, but in the wider stewardship sense.

This means understanding the governance, assurance, licensing, contribution, and sustainability arrangements behind the products they use. It also means recognising that risk cannot simply be transferred to a vendor, supplier, or custodian. Deploying organisations retain responsibility for how systems are introduced, configured, governed, and used in their own context.

Healthcare organisations should therefore consider how they participate in the custodianship of shared assets. This may include contributing financially through membership, subscription, coalition funding, or development contributions. It may also include contributing time, expertise, clinical input, testing, assurance, governance participation, and feedback from real-world use.

These contributions should be understood as part of sustaining the assets on which those organisations rely. A custodian cannot remain viable if the organisations that benefit from its work treat it as an external dependency without contributing to its continuity. Nor can the wider value chain function well if healthcare organisations contract poorly, delay payment, seek bespoke advantage over shared improvement, or fail to engage with the community around the product.

The model works best when healthcare organisations act as responsible participants: funding common needs, supporting assurance, working collectively on priorities, and contracting sensibly with value chain organisations for implementation, support, train-

ing, and maintenance. The shift is from narrow organisational purchasing toward shared responsibility for assets that serve a wider public purpose.

7.3 For Vendors and Delivery Partners

Vendors and delivery partners remain essential to the custodian model. The aim is not to remove commercial organisations from digital health, but to change where commercial value is created.

In a custodian model, the shared asset should not become a mechanism for hidden lock-in or private control. The custodian holds the core product, governance model, contribution process, and public-interest direction. Vendors and delivery partners create value around that asset through quality of service, implementation capability, support, training, integration, configuration, design, development, deployment, and responsiveness to customer needs.

This is a significant shift. It requires vendors and delivery partners to work within the governance and assurance expectations set by the custodian. They may need to follow agreed contribution processes, coding standards, design principles, documentation requirements, testing approaches, API expectations, release processes, and customer engagement rules. In some custodian models, this may include formal accreditation or approval as an implementation, support, contribution, or technical partner.

In a custodian model, vendors compete on capability, quality, and trust, not control of the shared asset.

These expectations should be understood as part of creating a fairer and more trusted market. When the shared asset is governed openly and protected by a custodian, commercial differentiation shifts towards capability and quality. Organisations compete on how well they meet customer needs, how safely they deploy the product, how effectively they support users, how well they contribute back, and how reliably they work within the rules of the ecosystem.

Vendors and delivery partners should therefore treat the custodian as the structure that makes a healthier market possible. They retain the ability to build services, expertise, tools, and value-added capabilities, but they should not seek to capture the shared asset itself or use openness language while recreating dependency elsewhere.

The strongest value chain organisations will be those that raise their standards to meet the custodian's expectations and help the wider community succeed.

7.4 For Emerging Custodians

Emerging custodians should address stewardship early, before the product or asset becomes too important to govern informally.

The need may arise in different ways. A public body may hold an important digital asset that needs a sustainable future. An open-source project may have growing adoption but no clear governance. A group of healthcare organisations may recognise that they are repeatedly funding similar functionality. A national or regional programme may want to avoid another cycle of closed procurement and short-term delivery. A clinical community may need a trusted structure to govern a shared product, data model, or reference implementation.

In each case, usefulness alone is not enough. Once an asset is expected to support real services, real users, or real clinical decisions, it needs a credible route for governance, assurance, maintenance, and long-term accountability.

Emerging custodians should therefore think early about legal form, asset protection, intellectual property, trademarks, licensing, governance, community accountability, financial sustainability, contribution models, assurance, and succession planning. These issues are not administrative details to be solved later. They are part of what makes the custodian credible.

They should also be clear about their role. A custodian is not primarily a delivery company. It may hold some delivery capability where appropriate, and in some contexts it may need to coordinate informatics, analysis, or technical custodianship closely. However, its core function is stewardship: guiding, supporting, assuring, coordinating, and maintaining the shared asset in the public interest. The wider value chain should provide the implementation, support, development, training, and operational services that allow the asset to be adopted and used well.

Emerging custodians should build relationships early with the communities they serve, the value chain organisations that will support delivery, and the policy or standards bodies that shape the environment around them. Where organisations do not already have experience in forming or operating stewardship structures, they should seek support from DHCF or similar bodies that can provide guidance, frameworks, and practical support.

Sustainability should be designed deliberately from the start. If the asset matters enough to be used, funded, or depended upon, then its stewardship should not be left to chance.

8 Conclusion

The stakeholder implications above return this publication to its central argument. Custodianship is not a single organisational choice made in isolation. It is a way of structuring responsibility across the digital health ecosystem so that shared assets can remain useful, trusted, and sustainable beyond the circumstances that first created them.

Publications 1 through to 3 establish the foundation for the DHCF publication suite. Publication 1 defined the Digital Health Commons as a shared approach to open, governed, and reusable digital health infrastructure. Publication 2 examined why digital health systems repeatedly fragment despite ambition, investment, and technical progress. This publication has addressed the institutional question that follows from both: how shared digital health assets can be sustained once they become important enough for healthcare organisations, suppliers, funders, and patients to depend upon them.

The answer cannot be openness alone. Open standards, open-source software, and open licensing remain essential, but they do not automatically create continuity, assurance, accountability, or trust. Without stewardship, open assets can still fragment, drift, lose alignment, or become dependent on individual suppliers, temporary programmes, or changing political priorities. In that sense, openness is a necessary condition for the Commons, but it is not sufficient to sustain it.

Custodians provide the institutional response to this problem. They create the structures through which shared digital health assets can be governed, maintained, assured, adapted, and protected over time. Their role is not to centralise control or replace the wider ecosystem, but to hold long-term responsibility for the integrity of the asset and the community it serves. They sit between the value chain, the demand side, and the policy and standards environment, helping those parts of the ecosystem remain aligned around public value rather than short-term delivery pressures alone.

The Commons does not become real because assets are open. It becomes real when responsibility for those assets is held, sustained, and trusted.

This publication has argued that custodianship should be treated as a serious part of digital health strategy. Where national or regional programmes create digital assets, stewardship should be considered from the beginning, not after funding has ended. Where healthcare organisations depend on shared products, their role should extend beyond procurement into participation, assurance, and shared responsibility. Where vendors and delivery partners operate within open ecosystems, their value should come from quality, capability, service, and contribution, not from control of the shared asset itself.

The next stage of the DHCF publication suite moves from foundation to practice. Later publications will provide more detailed guidance across operational blueprints, techni-

cal integration and standards strategy, policy and governance at scale, and the evidence base needed to support adoption. Those publications will explore the practical questions of forming, funding, governing, procuring, sustaining, integrating, and evaluating open digital health ecosystems in real-world settings.

This publication closes the opening argument of the suite by making the case for stewardship as the missing institutional layer in open digital health. Better technology, better standards, and better procurement all matter, but without durable structures to hold responsibility over time, the same patterns of fragmentation and reinvention will continue to reappear. Custodians are the organisations that make openness dependable. They turn open digital health from a set of principles into a sustainable operating model for shared public value.

9 Acknowledgements

We encourage you to take part in shaping the Digital Health Commons. Your ideas, expertise, and collaboration are essential to this work. To get involved, contact us at commons@dhcf.eu

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