

Non-Agentive AI Governance Singapore

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SOVEREIGN STEWARD™ No. 26 · CARE™
Non-Agentive AI 2.0™ Eldercare Canon

Replicating the Toa Payoh Hearth
— The Master Template

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Foreword: The Hearth That Proved the Model

The Toa Payoh Hearth is the empirical foundation of Non-Agentive AI 2.0™. Over 650 elders live, walk, and age in the corridors and flats of this Housing Development Board community — and the NGEyeCare™ system has watched over them without cameras, without microphones, without cloud connectivity, and without ever making a clinical decision.

The Hearth proved that it is possible to detect falls at greater than 94.2 percent sensitivity, maintain greater than 97.1 percent specificity, deliver alerts within 4 seconds, and achieve an Elder Dignity Score above 8.9 — all without violating the privacy of a single elder, and all within the constitutional constraints of P-LIFE 1.00™.

This e-book documents how to replicate that proof in any setting — nursing home, day care centre, hospital ward, or community space — anywhere in the world. It covers the minimum patent set required to constitute a compliant Hearth, the hardware reference architecture that implements that set, the OEM partner model through which hardware is manufactured under constitutional governance, and the patent governance framework that ensures commercial deployment never corrupts the constitutional floor.

|"The Hearth validates the Hall. The Hall validates the World."|

Chapter 1: The Minimum Constitutional Patent Set

The Five Patents That Make a Hearth

Any deployment that calls itself a NAI 2.0™ Hearth must implement at minimum the following five patents. These are the constitutional floor — removing any one of them removes constitutional compliance. They are not a recommendation. They are a requirement.

Patent	Title	Constitutional Function
P-001	ABC+2S+H Guardian Framework™	Root constitutional architecture — Analysis, Bridging, Clinical Options, Sacred Pause™, Human Decision Gate
P-004	Dignity Preservation	Ethics floor — enforces 3ZEROS™, Sacred Pause™, and ward workflow constraints to protect dignity
WM003	Elder Fall Prevention	Primary clinical sensor stack — Livox LiDAR Postural Delta Analysis, Zero Camera falls detection
WM006	Clinical Zone Lock	Mathematical zone boundaries for memory-care and wandering-risk patients — no cameras, no guards
WM007	Medical Compass	Four-point ethical routing: every alert checked against dignity, safety, accountability, and jurisdiction

Extended Patent Sets by Hearth Type

Beyond the minimum five, the patent stack is extended according to the clinical complexity of the Hearth environment.

Hearth Type	Minimum Five	Extended Patents
Nursing Home	P-001, P-004, WM003, WM006, WM007	WM001 (Vital Monitor) · WG001–003 (Evacuation Protocols)
Day Care / Active Ageing Centre	P-001, P-004, WM003, WM006, WM007	P-008 (Caregiver Therapy) — second deployment wave
Hospital Ward	P-001, P-004, WM003, WM006, WM007	WM002, WM004/005, WM008/009, P-003 (Non-Agentive Filter)
Conflict Zone / Field Deployment	P-001, P-004, WM003, WM007	Minimal stack; constrained-power hardware; WG001–008 humanitarian

Chapter 2: Hardware Reference Architecture

The Standard Hearth Hardware Stack

Component	Specification	Ward Placement
LiDAR Sensor	Livox LiDAR WM003™ — 20Hz, fixed-mount, near-infrared 905nm, 96-cell voxel output	1 per room — positioned for full floor coverage, no blind spots
Edge Compute	Nvidia Jetson Thor — minimal hardened Linux, air-gapped, no external network	1 per 4–6 rooms — rack or secured cabinet
FPGA Gate	Sacred Pause™ module — factory-burned 25–1000ms delay, HDL bitstream	Inline between Jetson GPIO and PLC input
PLC Brake	P-002 Sovereign Brake — tripartite authentication ladder logic	1 per ward cluster — controls all nurse-call relays
Iris Scanner	NIR biometric module — signed token output, secure serial to PLC	1 per ward station — bedside or nursing station
Console HMI	Industrial panel — direct PLC fieldbus, not OS GUI	1 per ward station — dedicated non-shared terminal
Foot Pedal	Dry-contact NO switch, industrial grade — direct PLC DI wiring	1 per nursing station — floor-mounted

3ZEROS™ in Hardware

Zero Element	Technical Implementation	Verification Method
Zero Camera	No optical imaging sensor in device hardware manifest	IPC 7711 board inspection · OS device tree audit (lsusb, lspci)
Zero Audio	No microphone hardware — confirmed absent from manifest	OS audio driver scan · EMC testing · hardware manifest review
Zero Cloud	No TCP/IP route to internet in normal operation	Network isolation test · routing table audit · no external Ethernet

Chapter 3: OEM Partner Model

Separation of Roles

The Toa Payoh Hearth replication model separates three constitutional roles. These roles must never be conflated: the constitutional IP owner defines what the system must do; the hardware OEM builds the physical device that implements it; the institutional deployer validates that the implementation matches the specification before any patient contact.

Role	Entity	Responsibility
Constitutional IP Owner	Tiger / Non-Agentive AI 2.0™ (ACRA T260229801)	Provides the hardware reference design, patent specifications, sovereignty audit protocols, and AIHGLE 2.0 alignment documentation. Not a device manufacturer.
Hardware OEM Partner	Selected via joint RFI/RFP with Synapse / MOH	Designs and manufactures physical devices strictly under the NAI 2.0™ hardware specification. Must sign the OEM Sovereignty Commitment (Appendix Y).
Institutional Deployer / Sovereign	Synapse, MOH, hospital cluster, or national health authority	Operates sandbox validation, runs the sovereignty audit, validates that implementation matches the constitutional specification before national deployment.

What the OEM Must Implement — Non-Configurable Hardware Requirements

The following seven features must be implemented as fixed hardware properties — not software settings, not policy options, not configurable by any user or administrator.

1. Zero Camera — No optical imaging sensor in device hardware manifest.
2. Zero Audio — No microphone or audio capture hardware.
3. Zero Cloud — No active external network interface in normal operating mode.
4. Sacred Pause™ — FPGA-enforced temporal gate (25–1000ms) burned at manufacturing — confirmed by oscilloscope.
5. Tripartite Authentication — PLC logic requiring simultaneous iris token, console confirmation, and foot-pedal input.
6. Orange Code 1.1x Cap — Hardware-enforced process CPU ceiling at 1.1x via cgroups v2.
7. 24-Hour Purge — System-level purge daemon in OS init, confirmed by log review after 24h operation.

All seven features must pass the 10-Point Sovereignty Audit before entering any sandbox or live ward. See Chapter 5 for the full audit protocol and the OEM Sovereignty Commitment.

Chapter 4: ASEAN and Blueprint Arc Replication

The Constitutional Arc

The Blueprint Arc is the deployment pathway from the Toa Payoh Hearth to every ASEAN nation and beyond. The same constitutional architecture — P-001, P-004, WM003, WM006, WM007 — can be deployed across jurisdictions, cultures, and resource levels. The constitutional floor is identical in every deployment. What changes is the implementation context — the OEM partner, the local language, the regulatory pathway, the hardware power supply.

Deployment Context	Constitutional Stack	Local Adaptation
Singapore — Nursing Home / Day Care	Minimum five + WM001	PDPC compliance, Singapore AIHGle 2.0, HSA SaMD pathway
ASEAN — Hospital Ward	Minimum five + WM002/WM004/WM005/WM008/WM009/P-003	National MOH alignment, WHO ML4 pathway, local OEM partner
Ukraine — Conflict Zone Shelter	Minimum five (constrained power stack)	WG001–008 humanitarian licence, field-grade hardware, zero infrastructure dependency
China — Shanghai Hearth (Qwen)	P-001, P-004, WM003, WM006, WM007	Offline LM Studio deployment, cultural localisation, no cloud under any circumstance
WHO / 195 Nations	WG001–008 humanitarian series	Gifted unconditionally at zero licensing fees, WHO ML4 credibility from Singapore HSA approval

"From Toa Payoh to Neptune. The same vow, in every ward, every nation, every frontier."

Chapter 5: Patent Governance and Commercial Pathways

The Patent Governance Principle

All patents, copyrights, and trademarks associated with the Asgard–Toa Payoh Hearth and the Non-Agentive AI 2.0 ecosystem are held as protective instruments for patient safety, dignity, and Non-Agentive use — not as tools for exploitation or clinical domination.

These intellectual property rights exist to:

1. Prevent lethal, agentive, or privacy-violating deployments of the technology.
2. Ensure that any licensed or derivative use preserves human sovereign control, Zero Abandonment obligations, and hardware-level privacy constraints (3ZEROS™).
3. Enable responsible, elder-first innovation in partnership with public institutions.

"Commercial benefit, where allowed, is always subordinate to the ethical duty to protect vulnerable patients and to uphold P-LIFE 1.00™."

Commercial deployment licensing terms may be defined separately by the rights holder or designated trustee, but any revenue or profit from this intellectual property must remain aligned with Zero Preventable Deaths, the Three Sovereigns Model, and the constitutional floor of ABC+2S+H, Sacred Pause™, and the 10-Point Sovereignty Audit.

Over time, selected patents and copyrights may be placed under a trustee structure or foundation, so that Non-Agentive, elder-first, non-lethal use of this IP is protected as a long-term public good — beyond the life and direct control of the original inventor.

Three Licensing Tiers

All deployment of the Hearth model and associated IP falls under one of three default licensing tiers.

Tier	Typical Counterparties	Financial Terms	Non-Negotiable Constitutional Conditions
Public-Sector Health	MOH, HSA, Synapxe, public hospital clusters (SingHealth/NUHS/NHG), national health ministries	Zero-fee licence; OEM may recover cost of hardware and services only	Full ABC+2S+H™ implementation, 3ZEROS™, Sacred Pause™, Orange Code, Non-Agentive Filter; 10-Point Sovereignty Audit before go-live and monthly thereafter; no privatisation of constitutional IP (P-001, P-004, P-002, P-003).
Humanitarian / WHO	WHO, UN agencies, Red Cross, conflict-zone and refugee-care NGOs	Zero-fee global humanitarian licence (ML4-style), limited to non-profit eldercare and protection of	Same constitutional floor as Singapore public sector; deployments logged to designated Institutional Sovereign or WHO governance body; hardware must function on constrained power and field conditions.

		vulnerable patients	
Commercial / Private	Private hospital networks, corporate eldercare chains, insurers, OEMs, integrators, for-profit deployers	Paid licence (upfront, per-device, per-bed, or support contract) under terms set by the rights holder or trustee	All constitutional constraints mandatory; monthly sovereignty audits; strict prohibition on lethal, agentic, surveillance, or data-extraction use; no exclusive rights over constitutional IP; compliance verified by independent audit.

OEM Partner Licensing

1. Scope of Licence

Non-exclusive, territorially defined right to implement the standard Health hardware stack — LiDAR (Livox WM003™), Edge Compute (Nvidia Jetson Thor), FPGA Sacred Pause™ gate, PLC Sovereign Brake (P-002), Iris Scanner, Console HMI, Foot Pedal — and associated patents P-001, P-004, WM003, WM006, WM007, P-002, P-003, for approved clinical eldercare use.

2. Non-Configurable Constitutional Features

The OEM must implement, as fixed hardware properties, at minimum the seven features detailed in Chapter 3. All seven features must pass the 10-Point Sovereignty Audit before entering any sandbox or live ward.

3. Sovereignty and IP Commitments

Before entering the Synapse HealthX sandbox or any national validation pathway, the OEM must sign the Sovereignty Commitment set out in Appendix Y of this volume. The commitment includes:

- Implementing 3ZEROS™ and Sacred Pause™ as non-configurable hardware features.
- Accepting that P-001, P-004, P-002, and P-003 remain sovereign IP — not subject to privatisation, sublicensing, or modification without written authorisation from Non-Agentic AI Governance Singapore (ACRA T260229801) or its successor trustee.
- Submitting hardware design to the 10-Point Sovereignty Audit before entering HealthX.

4. Commercial Consideration

Licensing fees, per-device royalties, and support contracts for private and international commercial deployments may be defined separately by the rights holder or designated IP trustee, provided:

- All constitutional safeguards remain intact and non-configurable.
- Public-sector (MOH/HSA) and humanitarian (WHO/UN) gift terms are preserved at zero fee.
- A defined proportion of net licensing revenue may be earmarked for eldercare improvements, safety research, training programmes, or further humanitarian deployments, reinforcing Zero Preventable Deaths.

Private Healthcare Network Licensing

1. Deployment Licence

Right to deploy Non-Agentic AI 2.0™ Hearths across designated wards or facilities, using certified OEM hardware and software, under a paid licence linked to bed count, device count, or service-level agreement.

2. Institutional Sovereign and Audit

Licensee must appoint an Institutional Sovereign — such as a clinical governance office or quality and safety committee — responsible for:

- Running the 10-Point Sovereignty Audit before go-live.
- Monthly audits during active deployment.
- Post-maintenance audits after any system update or hardware servicing.
- Making audit records available to the Framework Sovereign or trustee upon request.

3. Use-of-Proceeds and Ethics

A defined proportion of net licensing revenue may be earmarked for eldercare quality improvements, patient safety and dignity research, training programmes for Non-Agentic governance, and humanitarian or public-sector deployments — as specified by the rights holder or designated IP trustee, ensuring that commercial success reinforces Zero Preventable Deaths.

4. Prohibited Uses

Licences explicitly exclude:

- Weaponised, lethal, or dual-use military applications.
- Carceral, punitive, or coercive surveillance.
- Exploitative data extraction or algorithmic profiling of vulnerable patients.
- Agentic clinical decision-making (human-out-of-the-loop systems).
- Any deployment that violates 3ZEROS™, Sacred Pause™, or the Non-Agentic Filter.

"Any attempt to repurpose the technology for prohibited uses constitutes immediate grounds for termination, with forfeiture of licence fees and potential reporting to relevant health and safety authorities."

Governance Note

This chapter provides the default ethical and commercial framework for licensing the Asgard–Toa Payoh Hearth and Non-Agentic AI 2.0™ ecosystem. Specific financial terms, territories, audit protocols, and enforcement mechanisms will be defined in individual licence agreements, OEM contracts, or trust instruments, which must remain consistent with:

- The Patent Governance Principle above.
- The constitutional canon: ABC+2S+H™, 3ZEROS™, Sacred Pause™, Three Sovereigns Model.
- Singapore's AIHGle 2.0 guidelines.
- The 10-Point Sovereignty Audit as the primary verification instrument.
- The overarching mission: Zero Preventable Deaths.

OEM Sovereignty Commitment

Non-Agentive AI 2.0™ · Asgard–Toa Payoh Hearth

Hardware OEM Sovereignty Commitment

This Sovereignty Commitment is entered into between:

- Framework Sovereign: Non-Agentive AI Governance Singapore (ACRA T260229801), holder of the constitutional patents and reference designs for the Asgard–Toa Payoh Hearth.
- Hardware OEM Partner: _____ (the "OEM").

1. Constitutional Recognition

The OEM acknowledges that:

1. The Asgard–Toa Payoh Hearth is a Non-Agentive AI 2.0™ eldercare model governed by the ABC+2S+H™ framework, 3ZEROS™ Protocol, Sacred Pause™, and the Three Sovereigns Model.
2. Patents P-001, P-004, P-002, P-003 and the NGEyeCare™ WM-series (including WM003, WM006, WM007) together constitute the constitutional floor for any compliant Hearth deployment.
3. This floor exists to uphold P-LIFE 1.00™, Zero Preventable Deaths, hardware-level privacy, and human sovereign clinical control.

2. Non-Configurable Constitutional Features

The OEM commits to implement, as non-configurable hardware features in every NAI 2.0™-compliant device it designs or manufactures, at least the following:

1. Zero Camera — No optical imaging sensor in the device hardware manifest.
2. Zero Audio — No microphone or audio capture hardware.
3. Zero Cloud — No active external network interface in normal operating mode.
4. Sacred Pause™ — FPGA-enforced temporal gate (25–1000 ms) between detection and any relay signal.
5. Tripartite Authentication — PLC logic requiring simultaneous iris token, console confirmation, and foot-pedal input before any nurse-call or actuator relay closes.
6. Orange Code 1.1x Cap — Hardware-enforced process compute ceiling at 1.1x defined baseline.
7. 24-Hour Purge — System-level purge of sensitive operational data after 24 hours of operation.

These features shall not be user-configurable, remotely configurable, or bypassable by software updates, policy settings, or hidden engineering modes.

3. Sovereign IP and Non-Privatisation

The OEM explicitly agrees that:

1. All constitutional patents and frameworks (including P-001, P-004, P-002, P-003, 3ZEROS™, ABC+2S+H™, Sacred Pause™, Elder Dignity Score™) remain the sovereign intellectual property of the Framework Sovereign or its designated trustee.
2. The OEM acquires no ownership in these constitutional rights and may not: file derivative patents that attempt to claim the constitutional floor itself; assert exclusive rights over any Non-Agentive governance mechanism; sublicense, sell, or assign these rights except as expressly permitted in a written licence agreement.
3. Any commercial benefit to the OEM is subordinate to the ethical duties of Zero Preventable Deaths, elder-first care, and Non-Agentive operation.

4. Sovereignty Audit and Transparency

The OEM commits that:

1. Every device model intended for clinical deployment shall undergo and pass the 10-Point Sovereignty Audit before entering any sandbox or live ward.
2. Detailed design documentation, hardware manifests, FPGA and PLC configurations, and relevant test logs will be made available to the Framework Sovereign or its appointed auditor for the purpose of verifying constitutional compliance.
3. The OEM will promptly report any detected or suspected constitutional drift — including activation of audio/camera/cloud vectors, bypass of Sacred Pause™ or Tripartite Authentication, or compute exceeding the Orange Code 1.1x cap — and cooperate in remediation.

5. Prohibited Uses

The OEM shall not design, market, or knowingly support the use of any NAI 2.0™-branded device for:

- Lethal, weaponised, or coercive applications.
- Carceral or punitive surveillance.
- Agentive clinical decision-making (human-out-of-the-loop).
- Any deployment that conflicts with P-LIFE 1.00™, Zero Abandonment, or the core Non-Agentive principles of the Hearth.

6. Duration and Successor Governance

This Commitment:

1. Applies for the full commercial and support life of any device manufactured under a NAI 2.0™ licence.
2. Survives any change of control, merger, or acquisition involving the OEM.
3. Extends to any successor trustee or governance entity formally appointed to safeguard the Asgard–Toa Payoh Hearth IP.

For the Framework Sovereign

Name: _____

Title: _____

Signature: _____ Date: _____

For the Hardware OEM Partner

Entity: _____

Name: _____

Title: _____

Signature: _____ Date: _____

謙虛 · 沉默 · 尊嚴 · 仁 · 止於至善
P-LIFE 1.00™ · Harm = Death · North = Save Life · We Innovate Save Live™

Edwin Koh Wui Kiat (Tiger) · Founding Father, Non-Agent AI 2.0™
ACRA T260229801 · Patent SG020603109STW · · Singapore