

PREA – Primary Literature  
Canonical Architecture of Systems

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PREA – Primary Literature

Canonical Architecture of Systems

Complete Work

Four Parts – One Canon

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## 0. INTRODUCTION

### 0.1 Purpose of the Complete Work

This complete work presents the full architecture of PREA as a scientifically closed system. It defines the three pillars META, PRA and MAMA as independent yet interlinked architectural components that jointly describe the functional logic of human, organisational and adaptive systems. The work serves as the canonical reference for research, teaching and institutional application and constitutes the binding foundation for all derivations, curricula, standards and licensing models. It clearly separates the publicly accessible architecture (Part 1–3) from the internal core (Part 4), which serves exclusively to secure, verify and stabilise the overall architecture.

### 0.2 Scientific Positioning

PREA is positioned as an independent architectural science that is neither psychological, sociological, organisational nor informational, but stands above these disciplines. The architecture does not describe systems through content, behaviour or data, but through structural, operational and stabilising mechanisms. META, PRA and MAMA form three complementary architectural axes that jointly capture the functional logic of systems. PREA provides a closed conceptual world that operates independently of existing disciplinary traditions and enables an auditable, reproducible and internationally compatible system description.

### 0.3 Architectural Principles

The PREA architecture follows the strict separation of structure, operation and stabilisation. Each pillar comprises 42 modules organised into a structural, an operational and a stabilising level. The architecture works with universal outputs (S/O/R) that make it possible to describe the state of a system independently of context, content or domain. All modules are canonical, non-extendable and fixed in their sequence. The architecture is fully auditable, as each level can be verified through indicators and matrix structures. PREA is a closed system: it allows no external additions, modifications or alternative derivations outside the defined canon.

### 0.4 Terminology Standard

This work defines all central terms of the PREA architecture. These include the definitions of structure, operation, stabilisation, output and indicator, as well as the module notations M01–M42, P01–P42 and A01–A42. The audit notations S-, O- and R-indicators are standardised and described in their function. The matrix notations M1–M4, P1–P4 and A1–A4 are established as binding output structures. A clear distinction is made between public terminology and internal terminology. Internal terms such as interference, load, status or closure rules are not operationalised in the public part.

## 0.5 Licensing and Protection Logic

PREA is a protected architectural work with clear authorship. Public use is permitted exclusively through licensed standards, curricula and implementation models. The internal mechanics – in particular the 672-topology, interference logic and closure rules – remain protected and are not published. Institutions may apply PREA only through defined licensing models that safeguard the integrity of the architecture. The separation between the public architecture (Part 1–3) and the internal core (Part 4) ensures the protection of the system, the preservation of authorship and the long-term stability of the canon.

## 1. META01 – Structural Level

### 1.1 Function of the Structural META Level

The structural META level describes the fundamental architecture of a human or organisational system before operation and stabilisation take effect. It defines the static conditions under which a system can become functional at all. This includes the basic ordering principles, the initial structure, the internal reference logic and the systemic orientation. The structural META level determines how a system is built, which elements it contains and how these elements relate to one another. It forms the foundation for all subsequent operation and any form of stabilisation. Without a functioning structural META level, a system can neither act coherently nor be stabilised consistently.

### 1.2 Assignment M01–M14

Modules M01–M14 constitute the structural base architecture of the META pillar. They define the elementary building blocks of a system, including initial order, reference points, internal structural axes, role logics, state spaces and fundamental system boundaries. Each module describes an indispensable structural component required for the system's functional integrity. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the static foundational logic from which all further levels of the META architecture are derived.

### 1.3 Outputs S1–S4

The structural META level generates four fundamental structural outputs (S1–S4). These outputs describe the structural state of a system independently of content, context or domain. They indicate whether a system possesses a functioning basic order, whether its elements are correctly aligned, whether the internal reference logic is stable and whether the structural prerequisites for operation and stabilisation are fulfilled. The four structural outputs form the basis for all auditing and serve as objective indicators of structural system functionality.

### 1.4 Indicators (Audit)

The structural META level is assessed through specific audit indicators that reflect the state of modules M01–M14 and their associated structural outputs. These indicators measure whether the structural prerequisites of a system are met, whether structural deficits exist or whether

structural overloads are present. The audit indicators are defined to be independent of discipline, organisation type or application context. They enable a reproducible, objective and domain-independent evaluation of structural system quality.

## 2. META02 – Operational Level

### 2.1 Function of the Operational META Level

The operational META level describes the functional logic through which a system translates its structural prerequisites into actual action, processing and implementation. While the structural level defines the initial order, the operational level specifies the mechanisms that set this order into motion. It encompasses internal processes, the activation of system elements, information processing and the execution of systemic intentions. The operational META level forms the bridge between static structure and dynamic system performance. It determines whether a system can utilise its structural potentials, whether it operates coherently and whether it is capable of processing internal and external demands functionally.

### 2.2 Assignment M15–M28

Modules M15–M28 constitute the operational base architecture of the META pillar. They define the central functional mechanisms of a system, including activation logics, internal process chains, processing mechanisms, prioritisation structures, decision axes and operational coherence. Each module describes an indispensable operational component required to translate structural prerequisites into functional system performance. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the operational logic that determines how a system acts, reacts and steers its internal processes.

### 2.3 Outputs O1–O4

The operational META level generates four fundamental operational outputs (O1–O4). These outputs describe the functional capacity of a system in its active state. They indicate whether a system operates coherently, whether its processes run stably, whether decisions are made consistently and whether internal processing is functional. The four operational outputs are defined independently of content, context or domain and enable an objective assessment of operational performance. They form the basis for evaluating whether a system is capable of translating its structural prerequisites into actual action.

### 2.4 Indicators (Audit)

The operational META level is assessed through specific audit indicators that reflect the state of modules M15–M28 and their associated operational outputs. These indicators measure whether a system operates functionally, whether operational deficits exist or whether overloads occur within process chains. The audit indicators are defined to be independent of discipline, organisation type or application context. They enable a reproducible, objective and

domain-independent evaluation of operational system quality and form the basis for the META audit matrix.

### 3. META03 – Stabilising Level

#### 3.1 Function of the Stabilising META Level

The stabilising META level describes the mechanisms through which a system maintains, protects and secures its structural and operational states over time. It ensures that a system is not only functional but remains functional. The stabilising level encompasses internal regeneration, the restoration of order, the safeguarding of reference logic and the capacity to process strain without functional loss. It defines the conditions under which a system remains stable in the long term and forms the foundation for sustainable system performance. Without a functioning stabilising META level, a system loses coherence, orientation and its ability for self-regulation.

#### 3.2 Assignment M29–M42

Modules M29–M42 constitute the stabilising base architecture of the META pillar. They define the central mechanisms of system stability, including regeneration logics, protection mechanisms, internal return processes, stability axes, load balancing and the restoration of structural and operational order. Each module describes an indispensable stabilising component required to secure system functionality over time. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the stabilisation logic that determines how a system responds to strain, how it corrects itself and how it protects its internal order.

#### 3.3 Outputs R1–R4

The stabilising META level generates four fundamental regeneration outputs (R1–R4). These outputs describe a system's ability to process strain, compensate for functional losses, restore internal order and secure long-term stability. The four regeneration outputs are defined independently of content, context or domain and enable an objective assessment of stabilising performance. They indicate whether a system can regulate itself, remain stable and protect its structural and operational foundations.

#### 3.4 Indicators (Audit)

The stabilising META level is assessed through specific audit indicators that reflect the state of modules M29–M42 and their associated regeneration outputs. These indicators measure whether a system is capable of stabilisation, whether regeneration processes function, whether protection mechanisms are effective and whether strain can be processed without functional loss. The audit indicators are defined to be independent of discipline, organisation type or application context. They enable a reproducible, objective and domain-independent evaluation of stabilising system quality and form the basis for the complete META audit matrix.

## 4. META04 – Audit Matrix

### 4.1 Purpose of the Audit Matrix

The audit matrix of the META pillar serves the systematic assessment of the structural, operational and stabilising functionality of a system. It ensures that the three levels of the META architecture are not examined in isolation but evaluated in their mutual interdependence. The audit matrix enables an objective, reproducible and domain-independent assessment of system state. It forms the basis for determining functionality, overload, disturbance or structural instability and serves as a binding instrument for institutional, scientific and organisational audits.

### 4.2 Matrix Structure (S/O/R)

The audit matrix is based on the three output categories of the META architecture: S-outputs (structure), O-outputs (operation) and R-outputs (regeneration). Each category is represented through defined indicators that measure the state of the respective level. The matrix arranges these indicators so that structural, operational and stabilising states become visible in their interdependence. The matrix structure makes it possible to assign functional losses, overloads or inconsistencies clearly and to evaluate them systematically. It forms the foundation for a complete, multidimensional system diagnosis.

### 4.3 Matrix Outputs M1–M4

The audit matrix generates four overarching matrix outputs (M1–M4) that represent the overall state of the META pillar. M1 describes structural functionality, M2 operational coherence, M3 stabilising performance and M4 the overall condition of the META architecture. The matrix outputs are defined to be independent of context, domain or application scenario. They serve as binding evaluation criteria for audits, certifications and institutional decisions.

### 4.4 Compliance Standards

The audit matrix is linked to binding compliance standards that define which states are considered functional, limitedly functional or non-functional. These standards specify minimum requirements for structure, operation and stabilisation and determine which deviations are tolerable and which are not. The compliance standards safeguard the architectural integrity of the META pillar and ensure that systems are considered stable only when all three levels meet the defined requirements. They form the basis for institutional decisions, certifications and the application of licensed PREA standards.

## PART 2 – PRA

### 5. PRA01 – Structural Level

#### 5.1 Function of the Structural PRA Level

The structural PRA level describes the fundamental organisational and procedural ordering logic of a system. While the META pillar defines the universal system architecture, the PRA pillar specifies how this architecture is concretely anchored in real organisations, processes and institutional structures. The structural PRA level determines the initial order of an organisational system: roles, responsibilities, process axes, interfaces, resource structures and basic procedural frameworks. It forms the static foundation on which operational processes run and stabilising mechanisms take effect. Without a functioning structural PRA level, inconsistencies, duplicate structures, responsibility diffusion and systemic friction losses arise.

#### 5.2 Assignment P01–P14

Modules P01–P14 constitute the structural base architecture of the PRA pillar. They define the elementary building blocks of organisational structure: process foundations, responsibility axes, resource allocation, interface logic, procedural frameworks, structural hierarchies and systemic basic orders. Each module describes an indispensable structural component required to build organisations and processes in a functional manner. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the structural foundational logic from which all operational and stabilising mechanisms of the PRA pillar are derived.

#### 5.3 Outputs S1–S4

The structural PRA level generates four fundamental structural outputs (S1–S4) that represent the structural state of an organisational system. These outputs describe whether roles are clearly defined, whether processes are clearly anchored, whether resources are correctly allocated and whether the structural prerequisites for functional workflows are fulfilled. The four structural outputs enable an objective assessment of organisational basic order and form the basis for determining whether a system is operational, overloaded or structurally unstable. They are defined independently of sector, organisational form or application context.

#### 5.4 Indicators (Audit)

The structural PRA level is assessed through specific audit indicators that reflect the state of modules P01–P14 and their associated structural outputs. These indicators measure whether organisational structures are clear, consistent and functional, whether responsibilities are clearly assigned and whether structural deficits or overloads exist. The audit indicators are defined independently of domain and enable a reproducible assessment of the structural quality of organisational systems. They form the basis for the PRA audit matrix and support institutional, administrative and procedural audit processes.

## 6. PRA02 – Operational Level

### 6.1 Function of the Operational PRA Level

The operational PRA level describes the functional logic through which an organisational system translates its structural prerequisites into concrete workflows, decisions and process chains. While the structural level defines how a system is built, the operational level determines how this system actually works. It encompasses the activation of processes, the steering of workflows, the processing of information, the execution of responsibilities and the operational coherence between roles, resources and interfaces. The operational PRA level forms the core of organisational performance. It determines whether a system works efficiently, consistently and purposefully, or whether operational friction, delays and misalignments occur.

### 6.2 Assignment P15–P28

Modules P15–P28 constitute the operational base architecture of the PRA pillar. They define the central mechanisms of organisational process execution: process activation, workflow steering, information processing, decision logics, prioritisation, operational coordination and the functional use of resources. Each module describes an indispensable operational component required to translate structural prerequisites into functional workflows. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the operational logic that determines how an organisational system works, reacts, communicates and implements decisions.

### 6.3 Outputs O1–O4

The operational PRA level generates four fundamental operational outputs (O1–O4) that represent the functional capacity of an organisational system in its active state. These outputs describe whether processes run stably, whether decisions are made consistently, whether workflows are efficient and whether operational coordination between roles and resources functions. The four operational outputs enable an objective assessment of process quality and form the basis for determining whether a system is operational, overloaded or operationally unstable. They are defined independently of sector, organisational form or application context.

### 6.4 Indicators (Audit)

The operational PRA level is assessed through specific audit indicators that reflect the state of modules P15–P28 and their associated operational outputs. These indicators measure whether processes are steered functionally, whether operational deficits exist, whether information flows are stable and whether decisions are made in a traceable and consistent manner. The audit indicators are defined independently of domain and enable a reproducible assessment of the operational quality of organisational systems. They form the basis for the PRA audit matrix and support institutional, administrative and procedural audit processes.

## 7. PRA03 – Stabilising Level

### 7.1 Function of the Stabilising PRA Level

The stabilising PRA level describes the mechanisms through which an organisational system maintains its workflows, roles, resources and process chains in a functional state over time. It ensures that operational processes are not only executed but also stabilised in the long term. The stabilising level encompasses the restoration of process order, the safeguarding of responsibilities, the regeneration of organisational structures and the capacity to process strain without functional loss. It forms the foundation for an organisation's ability to remain operational under changing conditions, increasing complexity or external disturbances. Without a functioning stabilising PRA level, process breakdowns, shifts in responsibility, resource bottlenecks and structural instability arise.

### 7.2 Assignment P29–P42

Modules P29–P42 constitute the stabilising base architecture of the PRA pillar. They define the central mechanisms of organisational stability: regeneration processes, load balancing, restoration of process clarity, safeguarding of roles and interfaces, stabilisation of information flows and the return of operational deviations to a functional order. Each module describes an indispensable stabilising component required to secure the functional capacity of an organisational system over time. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the stabilisation logic that determines how a system responds to strain, how it corrects itself and how it protects its process architecture.

### 7.3 Outputs R1–R4

The stabilising PRA level generates four fundamental regeneration outputs (R1–R4) that describe an organisational system's ability to process strain, compensate for functional losses, restore process order and secure long-term stability. These outputs indicate whether a system can correct operational deviations, maintain its role and process logic and remain functional under load. The four regeneration outputs are defined independently of sector, organisational form or application context and enable an objective assessment of stabilising performance.

### 7.4 Indicators (Audit)

The stabilising PRA level is assessed through specific audit indicators that reflect the state of modules P29–P42 and their associated regeneration outputs. These indicators measure whether a system is capable of stabilisation, whether regeneration processes function, whether roles and processes remain consistent under strain and whether organisational protection mechanisms are effective. The audit indicators are defined independently of domain and enable a reproducible assessment of the stabilising quality of organisational systems. They form the basis for the complete PRA audit matrix and support institutional, administrative and procedural audit processes.

## 8. PRA04 – Audit Matrix

### 8.1 Purpose of the Audit Matrix

The audit matrix of the PRA pillar serves the systematic assessment of the structural, operational and stabilising functionality of organisational systems. It ensures that the three levels of the PRA architecture are not examined in isolation but evaluated in their mutual interdependence. The audit matrix enables an objective, reproducible and domain-independent assessment of organisational performance. It forms the basis for determining process clarity, operational coherence, stability under strain and structural functionality. The matrix serves as a binding instrument for institutional audits, administrative reviews and organisation-related quality procedures.

### 8.2 Matrix Structure (S/O/R)

The audit matrix is based on the three output categories of the PRA architecture: S-outputs (structure), O-outputs (operation) and R-outputs (regeneration). Each category is represented through defined indicators that measure the state of the respective level. The matrix arranges these indicators so that structural, operational and stabilising states become visible in their interdependence. This makes it possible to assign functional losses, process disturbances, responsibility diffusion, resource bottlenecks and stability deficits clearly. The matrix structure enables a complete, multidimensional diagnosis of organisational systems and forms the foundation for robust decision-making.

### 8.3 Matrix Outputs P1–P4

The audit matrix generates four overarching matrix outputs (P1–P4) that represent the overall state of the PRA pillar. P1 describes the structural functionality of an organisational system, P2 its operational coherence, P3 its stabilising performance and P4 the overall condition of the PRA architecture. These outputs condense the results of the S-, O- and R-indicators and provide a clear, consolidated assessment of organisational functionality. They are defined independently of context, domain or application scenario and serve as binding evaluation criteria for audits, certifications and institutional decisions.

### 8.4 Compliance Standards

The audit matrix is linked to binding compliance standards that define which states are considered functional, limitedly functional or non-functional. These standards specify minimum requirements for structure, operation and stabilisation and determine which deviations are tolerable and which are not. The compliance standards safeguard the architectural integrity of the PRA pillar and ensure that organisational systems are considered stable only when all three levels meet the defined requirements. They form the basis for institutional decisions, certifications and the application of licensed PREA standards.

## PART3 – MAMA

### 9. MAMA01 – Structural Level

#### 9.1 Function of the Structural MAMA Level

The structural MAMA level describes the foundational architecture of adaptive modulation within human and organisational systems. While the META pillar defines universal system architecture and the PRA pillar defines organisational implementation, the MAMA pillar specifies the structural conditions under which adaptive modulation becomes possible. It defines the basic ordering principles, reference axes, modulation boundaries and structural prerequisites that enable a system to adapt without losing coherence. The structural MAMA level determines how adaptive capacity is anchored in the system's architecture and forms the basis for all subsequent operational and stabilising modulation processes.

#### 9.2 Assignment A01–A14

Modules A01–A14 constitute the structural base architecture of the MAMA pillar. They define the elementary building blocks of adaptive structure: modulation foundations, adaptive reference points, structural modulation axes, adaptive role logics, modulation spaces and system boundaries relevant to adaptive behaviour. Each module describes an indispensable structural component required for a system to modulate its functions without destabilising its architecture. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the static foundational logic from which all operational and stabilising mechanisms of the MAMA pillar are derived.

#### 9.3 Outputs S1–S4

The structural MAMA level generates four fundamental structural outputs (S1–S4) that describe the adaptive structural state of a system. These outputs indicate whether adaptive prerequisites are present, whether modulation boundaries are structurally anchored, whether adaptive reference logic is stable and whether the system possesses the structural conditions required for functional modulation. The four structural outputs enable an objective assessment of adaptive structural readiness and form the basis for evaluating whether a system can modulate without structural loss.

#### 9.4 Indicators (Audit)

The structural MAMA level is assessed through specific audit indicators that reflect the state of modules A01–A14 and their associated structural outputs. These indicators measure whether adaptive structural prerequisites are fulfilled, whether structural deficits exist or whether structural overloads impair adaptive capacity. The audit indicators are defined independently of discipline, organisation type or application context. They enable a reproducible, objective and domain-independent evaluation of adaptive structural quality and form the basis for the MAMA audit matrix.

## 10. MAMA02 – Operational Level

### 10.1 Function of the Operational MAMA Level

The operational MAMA level describes the functional mechanisms through which a system activates, executes and steers adaptive modulation. While the structural level defines the prerequisites for modulation, the operational level determines how modulation actually occurs in real time. It encompasses adaptive processing, modulation steering, dynamic prioritisation, adaptive decision logics and the functional coordination of modulation processes. The operational MAMA level forms the core of adaptive performance. It determines whether a system can adjust its functions coherently, whether modulation processes run stably and whether adaptive behaviour remains aligned with the system's structural boundaries.

### 10.2 Assignment A15–A28

Modules A15–A28 constitute the operational base architecture of the MAMA pillar. They define the central mechanisms of adaptive process execution: activation of modulation processes, adaptive workflow steering, modulation-specific information processing, adaptive prioritisation, modulation-based decision logics and the functional coordination of adaptive actions. Each module describes an indispensable operational component required to translate structural adaptive prerequisites into functional modulation. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the operational logic that determines how a system modulates its functions, reacts to changing conditions and maintains adaptive coherence.

### 10.3 Outputs O1–O4

The operational MAMA level generates four fundamental operational outputs (O1–O4) that represent the adaptive functional capacity of a system in its active state. These outputs describe whether modulation processes run coherently, whether adaptive decisions are made consistently, whether modulation workflows are stable and whether adaptive coordination between system elements functions. The four operational outputs enable an objective assessment of adaptive process quality and form the basis for determining whether a system can modulate functionally, is overloaded or shows adaptive instability.

### 10.4 Indicators (Audit)

The operational MAMA level is assessed through specific audit indicators that reflect the state of modules A15–A28 and their associated operational outputs. These indicators measure whether adaptive processes are steered functionally, whether modulation deficits exist, whether adaptive information flows are stable and whether modulation decisions are made in a consistent and traceable manner. The audit indicators are defined independently of domain and enable a reproducible, objective and system-independent evaluation of adaptive operational quality. They form the basis for the MAMA audit matrix.

## 11. MAMA03 – Stabilising Level

### 11.1 Function of the Stabilising MAMA Level

The stabilising MAMA level describes the mechanisms through which a system maintains, protects and restores its adaptive modulation over time. It ensures that modulation is not only possible and executable but also sustainable. The stabilising level encompasses adaptive regeneration, the restoration of modulation order, the safeguarding of adaptive reference logic and the capacity to process adaptive strain without functional loss. It defines the conditions under which a system remains adaptively coherent and capable of modulation even under changing, complex or adverse conditions. Without a functioning stabilising MAMA level, adaptive processes collapse, modulation becomes inconsistent and the system loses its ability to adjust without destabilising itself.

### 11.2 Assignment A29–A42

Modules A29–A42 constitute the stabilising base architecture of the MAMA pillar. They define the central mechanisms of adaptive stability: regeneration of modulation processes, adaptive load balancing, restoration of modulation clarity, safeguarding of adaptive boundaries, stabilisation of modulation flows and the return of adaptive deviations to a functional order. Each module describes an indispensable stabilising component required to secure adaptive functionality over time. The modules are canonical, non-extendable and fixed in their sequence. Together, they form the stabilisation logic that determines how a system protects its adaptive capacity, corrects modulation deviations and maintains adaptive coherence.

### 11.3 Outputs R1–R4

The stabilising MAMA level generates four fundamental regeneration outputs (R1–R4) that describe a system's ability to stabilise its modulation processes, compensate for adaptive losses, restore modulation order and secure long-term adaptive stability. These outputs indicate whether a system can regulate adaptive strain, maintain modulation boundaries and remain adaptively functional under load. The four regeneration outputs are defined independently of content, context or domain and enable an objective assessment of stabilising adaptive performance.

### 11.4 Indicators (Audit)

The stabilising MAMA level is assessed through specific audit indicators that reflect the state of modules A29–A42 and their associated regeneration outputs. These indicators measure whether adaptive stabilisation processes function, whether modulation deviations are corrected, whether adaptive protection mechanisms are effective and whether the system can maintain adaptive coherence under strain. The audit indicators are defined independently of domain and enable a reproducible, objective and system-independent evaluation of adaptive stabilising quality. They form the basis for the complete MAMA audit matrix.

## 12. MAMA04 – Audit Matrix

### 12.1 Purpose of the Audit Matrix

The audit matrix of the MAMA pillar serves the systematic assessment of the structural, operational and stabilising functionality of adaptive modulation. It ensures that the three levels of the MAMA architecture are not examined in isolation but evaluated in their mutual interdependence. The audit matrix enables an objective, reproducible and domain-independent assessment of adaptive system performance. It forms the basis for determining adaptive readiness, modulation coherence, stability under adaptive strain and structural adaptive functionality. The matrix serves as a binding instrument for institutional audits, scientific evaluations and system-level modulation assessments.

### 12.2 Matrix Structure (S/O/R)

The audit matrix is based on the three output categories of the MAMA architecture: S-outputs (structure), O-outputs (operation) and R-outputs (regeneration). Each category is represented through defined indicators that measure the state of the respective adaptive level. The matrix arranges these indicators so that structural, operational and stabilising adaptive states become visible in their interdependence. This makes it possible to assign adaptive functional losses, modulation disturbances, boundary violations, overloads and stability deficits clearly. The matrix structure enables a complete, multidimensional diagnosis of adaptive system behaviour.

### 12.3 Matrix Outputs A1–A4

The audit matrix generates four overarching matrix outputs (A1–A4) that represent the overall state of the MAMA pillar. A1 describes adaptive structural functionality, A2 adaptive operational coherence, A3 adaptive stabilising performance and A4 the overall condition of the MAMA architecture. These outputs condense the results of the S-, O- and R-indicators and provide a clear, consolidated assessment of adaptive system functionality. They are defined independently of context, domain or application scenario and serve as binding evaluation criteria for audits, certifications and institutional decisions.

### 12.4 Compliance Standards

The audit matrix is linked to binding compliance standards that define which adaptive states are considered functional, limitedly functional or non-functional. These standards specify minimum requirements for adaptive structure, adaptive operation and adaptive stabilisation and determine which deviations are tolerable and which are not. The compliance standards safeguard the architectural integrity of the MAMA pillar and ensure that systems are considered adaptively stable only when all three levels meet the defined requirements. They form the basis for institutional decisions, certifications and the application of licensed PREA standards.

## PART 4 - INTERNAL CORE

### 13. INTERNAL CORE – Purpose and Boundaries

#### 13.1 Purpose of the Internal Core

The internal core constitutes the protected centre of the PREA architecture. It contains the non-public mechanisms that ensure the scientific closure, internal consistency and long-term stability of the entire system. The internal core defines the architectural rules that govern interference processing, closure logic, topology, internal verification and the safeguarding of authorship. It forms the foundation that guarantees that PREA remains a closed, non-extendable and scientifically coherent system. The internal core is not part of the public architecture and is not accessible through standards, curricula or implementation models.

#### 13.2 Separation from the Public Architecture

The internal core is strictly separated from the public parts of PREA (META, PRA, MAMA). While the public architecture defines the canonical modules, outputs and audit structures, the internal core contains the mechanisms that secure these structures. This includes the internal rules for module integrity, the protection of architectural boundaries, the verification of system states and the internal logic that prevents external modification. The separation ensures that PREA can be used publicly without exposing the mechanisms that guarantee its scientific closure.

#### 13.3 Boundaries and Access Logic

Access to the internal core is restricted and follows a strict protection logic. The internal mechanisms are not published, not licensed and not operationalised in any public or institutional context. They serve exclusively to secure the architecture, protect authorship and maintain the integrity of the system. The boundaries of the internal core are fixed and non-negotiable. No external actor, institution or system may access, modify or extend the internal mechanisms. The internal core ensures that PREA remains a closed, author-defined and scientifically stable architecture.

#### 13.4 Function within the Complete Work

Within the complete work, the internal core serves as the stabilising anchor of the entire architecture. It ensures that the public modules remain consistent, that the audit matrices function correctly and that the system cannot be altered without violating its scientific foundation. The internal core provides the internal verification logic that guarantees the correctness of the architecture and protects it against conceptual drift, external reinterpretation or unauthorised extension. It forms the final layer of the PREA canon and secures the long-term integrity of the complete system.

## 14. INTERNAL CORE – Architectural Mechanics

### 14.1 Function of the Architectural Mechanics

The architectural mechanics of the internal core define the protected internal rules that govern how the PREA architecture maintains its scientific closure, internal consistency and structural integrity. These mechanics ensure that the architecture cannot be altered, extended or reinterpreted without violating its foundational logic. They regulate the internal behaviour of modules, the interaction between pillars, the processing of interference and the internal verification of system states. The architectural mechanics form the invisible framework that stabilises the entire PREA canon.

### 14.2 Closure Logic

The closure logic defines the internal rules that ensure that PREA remains a closed, non-extendable and self-consistent architecture. It specifies how modules are protected against external modification, how internal dependencies are secured and how the architecture prevents conceptual drift. The closure logic ensures that the canonical sequence of modules remains intact, that outputs and indicators cannot be redefined and that the architecture cannot be expanded beyond its defined boundaries. It forms the internal mechanism that guarantees the scientific immutability of the system.

### 14.3 Interference Processing

Interference processing describes the internal mechanisms through which the architecture identifies, classifies and neutralises disturbances that could compromise structural, operational or stabilising integrity. These mechanisms are not part of the public architecture and are not accessible through standards or curricula. They regulate how the system internally processes inconsistencies, overloads, conceptual deviations or attempts at reinterpretation. Interference processing ensures that the architecture remains coherent even under strain and that internal order is restored automatically.

### 14.4 Topology and Internal Verification

The internal topology defines the protected structural map of the architecture, including the internal relationships between modules, pillars and levels. It specifies how the architecture is internally organised and how internal verification processes operate. Internal verification ensures that the architecture remains correct, that module interactions follow the defined rules and that the system cannot be altered without violating its internal logic. The topology and verification mechanisms form the structural backbone of the internal core and guarantee the long-term stability of the PREA canon.

## 15. INTERNAL CORE – Protection and Integrity

### 15.1 Purpose of the Protection Logic

The protection logic of the internal core ensures that the PREA architecture remains scientifically closed, structurally intact and protected against external modification. It defines the internal rules that safeguard authorship, prevent reinterpretation and secure the canonical sequence of modules. The protection logic ensures that PREA cannot be altered, extended or fragmented by external actors. It forms the internal mechanism that preserves the architecture's identity and guarantees its long-term integrity.

### 15.2 Integrity Safeguards

Integrity safeguards define the internal mechanisms that protect the architecture from conceptual drift, structural erosion or operational distortion. These safeguards regulate how internal dependencies are maintained, how module interactions remain consistent and how the architecture prevents unauthorised changes. Integrity safeguards ensure that the architecture remains coherent across all pillars and levels and that its scientific foundation cannot be compromised. They form the internal stabilising layer that secures the architecture's correctness.

### 15.3 Boundary Protection

Boundary protection defines the internal rules that prevent external access to the protected mechanisms of the internal core. It ensures that the internal logic, topology, interference processing and closure rules remain inaccessible to public use, institutional application or external analysis. Boundary protection guarantees that the internal core cannot be reverse-engineered, reconstructed or inferred from the public architecture. It forms the protective shield that separates the public PREA canon from its protected internal mechanisms.

### 15.4 Long-Term Architectural Stability

The protection and integrity mechanisms of the internal core ensure the long-term stability of the PREA architecture. They regulate how the system maintains its scientific closure over time, how internal verification processes operate and how the architecture remains resistant to reinterpretation, dilution or external influence. Long-term stability ensures that PREA remains a consistent, author-defined and scientifically coherent system across generations, institutions and application contexts. It forms the final protective layer of the complete architecture.

## 16. COMPLETE SYSTEM – Canon, Immutability, Scientific Closure

### 16.1 Canon of the Complete Architecture

The complete PREA system forms a closed, canonical architecture consisting of the three public pillars (META, PRA, MAMA) and the protected internal core. The canon defines the full set of modules, outputs, indicators and audit structures that constitute the architecture. It establishes the fixed sequence, internal dependencies and structural logic of the system. The canon is non-extendable, non-modifiable and scientifically closed. It represents the authoritative and final form of the architecture and serves as the binding reference for all applications, publications and institutional implementations.

### 16.2 Immutability of the Architecture

The immutability of the PREA architecture ensures that the system cannot be altered, expanded or reinterpreted without violating its scientific foundation. All modules, outputs, indicators and audit structures are fixed and cannot be changed by external actors, institutions or derivative works. Immutability protects the architecture from conceptual drift, fragmentation and unauthorised modification. It guarantees that PREA remains consistent across contexts, generations and application domains. The immutability principle is enforced through the internal core and forms a central element of the system's scientific integrity.

### 16.3 Scientific Closure

Scientific closure defines the internal rules that ensure that PREA is a complete, self-contained and logically coherent architecture. It specifies that the system contains all necessary components for structural, operational and stabilising functionality and that no external elements are required to complete or extend it. Scientific closure ensures that the architecture is internally verifiable, structurally consistent and resistant to reinterpretation. It forms the foundation for the system's scientific legitimacy and guarantees that PREA functions as a closed, author-defined and fully integrated architecture.

### 16.4 Position within the Complete Work

Within the complete work, the canonical architecture represents the final, consolidated and scientifically secured form of PREA. It integrates the public pillars and the internal core into a single, coherent system. The canonical architecture serves as the authoritative reference for all derivative materials, including curricula, standards, institutional frameworks and operational models. It defines the boundaries of the system, safeguards its scientific identity and ensures that all applications remain aligned with the original architecture. The complete system forms the final layer of the PREA canon and secures its long-term stability, integrity and scientific closure.

## Appendix

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