

Executive Abstract (Official Publication | September 10, 2026)

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EXECUTIVE ABSTRACT: PREA

Sovereign by Design: The mathematically deterministic canonical architecture for eliminating algorithmic unpredictability

Modern digital and algorithmic systems face a structural core problem: algorithmic drift and AI hallucination. Probabilistic models react to external dynamics with unpredictable state changes. Regulatory guardrails, statistical filters or post-hoc stabilization layers cannot reliably control this behavior.

In critical infrastructures, this leads to:

- non-auditable system movements
- unstable process chains
- safety-critical failures
- regulatory risks
- cross-sector cascade effects

This problem remained globally unsolved — PREA provides a fully deterministic system logic that addresses it structurally.

The Technological Breakthrough: PREA

PREA resolves the paradox of algorithmic unpredictability at its root. The architecture transforms external dynamics entirely into an internal system variable, enabling deterministic, reproducible and drift free operation.

External shocks, load changes and dynamic data streams are not processed probabilistically, but are returned to defined, mathematically secured states through a closed stability mechanism.

This mechanism includes:

- Stability Window 0.8–1.2
- Safe State Transitions
- Triple Safeguard – redundancy – error detection – self correction

This structurally excludes:

- drift
- hallucination
- emergent errors
- uncontrolled follow-on states

Scientific Validation

PREA is fully scientifically documented and historically secured through 38 DOI registered publications.

The architecture comprises:

- META – Perception & Order
- PRA – Operation & Role Logic
- MAMA – Stability & Regeneration

as well as a closed model library with 672 original system states.

The stability mechanism is based on:

- Stability Window 0.8–1.2
- Safe State Transitions
- Triple Safeguard – redundancy – error detection – self correction

These mechanisms guarantee deterministic recovery and auditable stability.

Asset-Identity: Greenfield / Core Asset / Risk-Shield Asset

PREA is a global Greenfield Asset.

Originally developed.

Free from legacy constraints.

Free from external models.

Free from proprietary dependencies.

Free from third-party rights.

PREA enables a complete Clean Exit of the originator.

The architecture is designed to be fully transferable — without reservations, without residual rights, without later influence.

With an IP transfer, PREA moves entirely into new ownership.

The originator remains outside the system, outside governance, outside the model library, outside further development.

The Clean Exit is structurally embedded and part of the Greenfield identity.

PREA is based on a closed, original model library.

All models are fully self-contained.

No external frameworks.

No methodological derivations.

No institutional borrowings.

The library is non-modular and non-fragmentable.

PREA is an institutional Core Asset.

The architecture is fully turnkey.

Operationalized.

Auditable.

Immediately licensable.

Globally exportable.

PREA is explicitly IP-transferable.

The architecture is designed to be transferred into governmental, regulatory or international systems — without alteration, without dilution, and with clearly defined responsibility in the new ownership. The IP transfer is part of the design, not an exception.

PREA is a Risk Shield Asset.

It ensures drift-free stability, deterministic control and regulatorily auditable security in critical digital, algorithmic and physical systems.

Compliance-Wall

PREA is natively aligned with the requirements of global regulation and fully reflects their technical criteria:

- EU AI Act – deterministic high-risk system logic – auditable state transitions – drift-free stability
- EU NIS-2 Directive – resilience – integrity – availability – deterministic error response
- BSI Act / KRITIS Framework – elimination of software-induced failures – auditable security mechanics – Safe State Transitions

PREA replaces reactive security models with a mathematically closed security chain.

Strategic Value Anchor for States, Central Banks and International Institutions

PREA provides sovereign states, national and supranational central banks, regional integration areas (AU, ECOWAS, SADC, EAC) and global institutions (UN, OECD, EU, G20) with a deterministic control logic for critical digital, algorithmic and physical systems.

The architecture enables:

- complete auditability of all system states
- deterministic control over deviations
- elimination of drift and emergent errors
- regulatorily clear traceability
- cross-sector stabilization

PREA reduces the effort required for safety-critical development, certification and stabilization because the architecture contains no probabilistic uncertainties.

PREA provides a globally interoperable dynamically deterministic system architecture that enables sovereign states, central banks and international institutions to operate a fully reproducible, auditable and drift-free control logic — independent of technological infrastructure, political system or resource conditions.