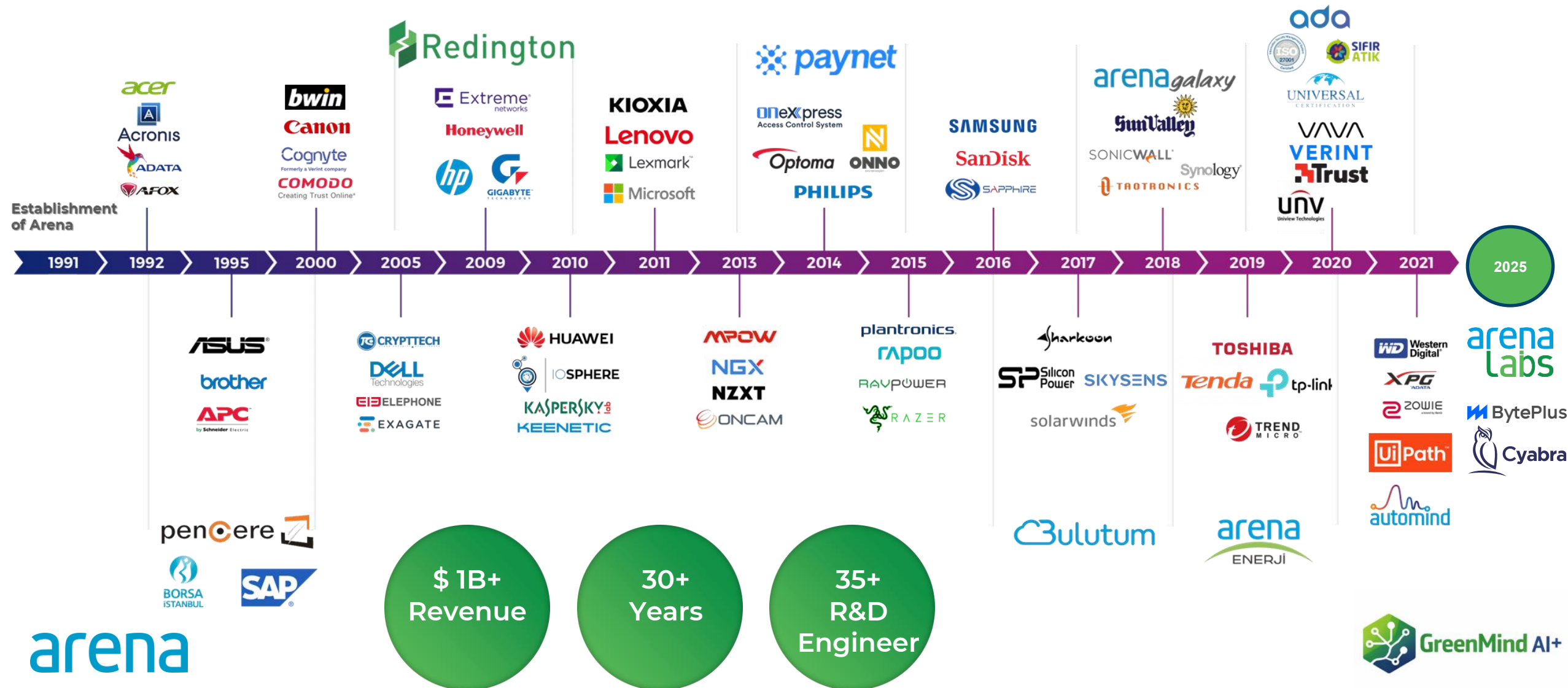


arena



GreenMind AI+

About Arena



Title & Strategic Context

GreenMind AI+

- AI-driven lifecycle intelligence for low-carbon energy systems

Programme: EUROGIA 2030

Coordinator: Arena Bilgisayar Sanayi ve Ticaret A.Ş. (Türkiye)

- Coordinator & Industrial AI Lifecycle Owner
- Leads system architecture, industrial data integration and AI operationalization
- Responsible for large-scale industrial validation and EU market deployment

Consortium:

- Türkiye (Industrial Lead – Arena)
- EU Technology Partner (AI & Energy Systems)
- EU Research Partner (Algorithms & Validation)

Strategic Fit with EUROGIA 2030:

- Supports energy transition
- Enables low-carbon technologies
- Industry-driven innovation
- Creates measurable European value

Problem Definition

- Industrial and connected systems are still managed reactively.
- Energy inefficiencies remain invisible
- Failures are detected too late
- Maintenance is not predictive
- Lifecycle carbon impact is not measurable
- Circular economy is not operational at scale
- Rising energy costs and increasing carbon regulations require a new, intelligent approach.

The problem is currently unsolved at scale and limits energy efficiency, sustainability performance and economic lifetime of industrial systems.

Proposed Solution

GreenMind AI+ is an AI-driven lifecycle intelligence platform that integrates:

- Predictive maintenance
- Fault detection
- Energy optimization
- Lifecycle & carbon tracking
- Circular economy enablement

The platform connects operational data, AI models and sustainability metrics into one scalable architecture. Arena leads the end-to-end platform architecture, ensuring scalability, vendor-agnostic integration and secure industrial deployment.

Unlike existing fragmented solutions, GreenMind manages the entire lifecycle — from operation to optimization to reuse.

Innovation & R&D Content

State of the Art

- Isolated monitoring systems
- Standalone AI tools
- Manual lifecycle management
- Energy reporting without intelligence

GreenMind Approach

- Cross-domain AI models trained on operational data
- Integrated energy + maintenance + lifecycle intelligence
- Scalable, modular architecture for industrial deployment

R&D Challenges

- Data harmonization across heterogeneous systems
- AI performance validation at industrial scale
- Integration of sustainability intelligence into operational workflows
- Deployment and lifecycle management of AI models in real industrial environments(Arena responsibility)

The project goes beyond the current state of the art by embedding AI-driven lifecycle intelligence directly into low-carbon industrial systems.

Use Cases, Impact & Market

Initial Use Cases

- Energy-intensive industrial equipment
- Smart buildings and connected energy systems

Expected Impact (Indicative)

- 10–20% energy savings
- 15–30% reduction in unplanned failures
- Measurable CO₂ emission reduction
- Extended product lifetime

Market & Exploitation

- EU-first deployment
- SaaS and industrial licensing model
- Clear commercialization roadmap
- This is not a research-only project.
It is designed for industrial validation and market deployment.

Consortium, Scope & Partner Call

Consortium Roles

Arena (TR) – Coordinator

- Industrial AI architecture & lifecycle orchestration
- Multi-vendor industrial data harmonization
- Pilot deployment and operational validation

EU Tech Partner

- Core AI & energy modelling

EU Research Partner

- Algorithm development & validation

Project Scope

- Duration: 30 months

Phases:

1. Core R&D & Architecture
2. Prototype Development
3. Industrial Pilot & Validation