



Dual-Use AI and the Enterprise 5.0 Era: Building Intelligent, Resilient, and Human- Centered Systems

AI as the Defining Technology of Enterprise 5.0

At BGV, we believe that Artificial Intelligence is the defining technology of the Enterprise 5.0 era — the epoch in which intelligent automation, adaptive decision-making, and human-machine collaboration converge to transform every dimension of enterprise performance and societal infrastructure.

Where Enterprise 4.0 focused on connectivity and digitization, **Enterprise 5.0** introduces cognition and resilience. It is characterized by intelligent systems that not only execute but also **understand**, adapt, and collaborate.

AI now serves as both **the engine and the architecture of progress** — orchestrating data, computation, and human insight into a single intelligent fabric that powers growth, security, and sustainability. At its best, AI does more than automate processes; it **augments human capability**. It enables organizations to perceive and respond to complexity in real time, converting uncertainty into an advantage. In this sense, AI is not merely a technology; it is a **strategic capability** — the new language of enterprise and national resilience alike.

Dual-Use AI: The Connective Tissue Between Innovation and Resilience

As enterprises and nations navigate increasingly complex AI ecosystems, **Dual-Use AI** is emerging as the **connective tissue between commercial innovation and societal resilience**.

Historically, “dual-use” referred to technologies with both civilian and military applications. Today, that boundary has dissolved. The same AI models that optimize logistics, detect fraud, or manage energy grids also secure data infrastructures, monitor critical assets, and strengthen the systems on which economies depend.

In this sense, dual-use AI is no longer about militarization — it is about **modernization**.

It represents the fusion of **enterprise intelligence and national resilience**, linking the private and public spheres through shared infrastructure, ethical governance, and technological sovereignty.

At BGV, we view dual-use AI as **an engine of responsible transformation** — technologies that advance enterprise performance while reinforcing the stability, transparency, and sustainability of the systems that sustain global prosperity.

Why Now: The Forces Driving the Dual-Use AI Transformation

Three converging dynamics have made the rise of dual-use AI inevitable and urgent.

a. Complexity as the New Normal

Global interdependence has made resilience the new competitive advantage. Supply chains, financial systems, and digital infrastructure now operate in a state of continuous flux. In this environment, **AI becomes the nervous system** that allows enterprises and societies to sense, adapt, and respond to change at machine speed

b. AI Maturity and Convergence

AI has crossed a threshold from research to deployment.

Generative, multimodal, and edge systems now operate securely within mission-critical environments that were once thought too sensitive or too slow to automate. Agentic AI systems reason, summarize, and coordinate actions in real time, enabling enterprises to **embed intelligence everywhere** — from operations and cybersecurity to sustainability and workforce management

c. The Capital Realignment Toward Resilience

Investment is now following necessity. Global capital markets increasingly reward resilience — funding technologies that protect, adapt, and scale responsibly.

Venture and sovereign funds alike are investing in AI systems that safeguard critical infrastructure and enhance enterprise adaptability. This signals a new economic logic: in the Enterprise 5.0 era, **resilience is profitability**.

From Defense to Intelligence: The New Dual-Use Landscape

Dual-use innovation today spans eight interconnected domains:

Energy & Power, Data & Information Security, Sensing & Perception, Critical Infrastructure, Space & Edge Intelligence, Resilience, Sustainability, and Human Performance. Together, these domains define the architecture of intelligent civilization — systems that sustain growth, security, and human potential.

Across these domains, BGV's portfolio companies are building **AI systems that serve enterprise needs and societal purpose**:

- **AiDash** – Satellite intelligence for infrastructure and climate resilience.
- **ThetaRay** – AI-driven anomaly detection securing financial and digital ecosystems.
- **Cryptosense (SandboxAQ)** – Quantum-safe cryptographic governance for trusted data.
- **Percepto** – Autonomous inspection systems enabling predictive maintenance and safety.
- **EverestLabs** – Robotics and vision systems advancing sustainability and the circular economy.
- **Lyzr** – Domain-specific AI agents augmenting human workflows and decision-making.

Each of these technologies demonstrates how AI designed for enterprise value can **scale responsibly** across critical systems — strengthening both business performance and civilizational resilience.

The BGV Advantage: Building the Architecture for Responsible Scale

BGV operates across **Silicon Valley, Tel Aviv, Paris, Bangalore, and Tokyo** — the global innovation corridors where dual-use opportunity is densest and the interplay between enterprise and national innovation ecosystems is most dynamic

Our **operator-led model** ensures that AI-native startups integrate governance, compliance, and scalability from inception. Through partnerships with the **Ethical AI Governance Group (EAIGG)**, we co-developed the **AI Native Startup Playbook**, providing founders with a repeatable framework for responsible AI development — one that embeds human oversight, ROI architecture, and ethical alignment into product design.

This foundation allows BGV-backed ventures to scale across borders and sectors while maintaining transparency, safety, and accountability — the essential ingredients of trust in the AI era.

responsibilities.

Responsible AI as Civilizational Infrastructure

At BGV, we view **responsible dual-use AI as civilizational infrastructure** — the digital, cognitive, and ethical scaffolding upon which 21st-century societies will depend. The goal is not to build more intelligent machines, but **smarter civilizations** — systems that are transparent, resilient, and fundamentally human-aligned.

Our investment philosophy centers on **stewardship**: founders and technologists who recognize that innovation carries societal responsibility.

Responsible AI should therefore serve not just enterprise performance, but the **broader imperatives of resilience, transparency, and global stability**. It should enable **open, secure, and adaptive societies** that thrive amid technological acceleration.

Conclusion: Toward an Intelligent, Resilient Future

The Enterprise 5.0 era is defined by intelligence — not only in machines, but also in how societies choose to utilize it. As dual-use AI becomes the connective tissue between innovation and resilience, the world stands at an inflection point: Will we deploy AI merely to optimize performance, or to strengthen the systems that sustain civilization itself?

At **BGV**, our answer is clear.

We invest in technology as **stewardship** — systems that are intelligent, responsible, and enduring. This is the essence of **dual-use AI**: innovation that serves both the progress of enterprises and the collective resilience of humankind.