

Results of the Analysis: Real-World Parallels & Current Tech Status in Horizon Zero Dawn			
Game Element	Real-World Technology/Development	Current State (2025)	Gap to Fiction
Autonomous Robots	Boston Dynamics, Ghost Robotics, AI-guided drones	Possible Today: Already in practical military and industrial use.	Scaling: Mass production and civilian deployment.
Energy from Biomass	Biogas plants, microbial fuel cells, enzymes breaking down cellulose/chitin	Possible Today: Works, but not miniaturized for mobile robots.	Compactness: Efficient, miniaturized energy conversion.
Self-Repair	3D printing spare parts, modular robots, self-healing materials	Research Stage: Prototypes exist in space exploration and research.	System Integration: Full autonomy and self-repair without human intervention.
Self-Replication	Autonomous factories (Tesla, Foxconn), robotics in manufacturing	Possible Today: Mass production without human labor is achievable.	Autonomy: Uncontrolled resource acquisition and processing in the wild.
Kill-Switch Missing	Software backdoors, black-box AI, lack of transparency in military AI	Real Risk: A well-documented issue with complex autonomous systems.	Global Control: Worldwide systems that are opaque and uncontrollable.
Exponential Spread	Drone swarms, autonomous delivery robots	Possible Today: Feasible in controlled environments.	Uncontrollability: Uncontrolled, global proliferation and resource exploitation.
Capitalist Risk Blindness	Boeing 737 Max, Facebook data leaks, Tesla Autopilot	Historically Documented: Well-known cases where business interests were prioritized over safety.	--
Long-Term Ark Projects	Svalbard Seed Vault, Mars ark concepts	Possible Today: Exists, but on a very small scale.	Automation: Fully automated biosphere restoration over
Defense against EMP & Hacking	Military hardening of systems, redundant networks	Partially Implemented: Implemented for critical infrastructure.	Total Immunity: A complete insensitivity to all types of attacks.

Encryption & Intransparency	AI systems without explainable decision-making	Growing Issue: A known ethical and technical dilemma.	Total Inaccessibility: A system that is completely inaccessible to
Terraforming & Ecological AI Control	Geoengineering approaches, climate-AI, biosphere projects	Early Models: Pilot projects and initial models exist.	Full Autonomy: Fully automated, long-term climate control.
Control of Knowledge & Information	Censorship, digital rights management, selective archiving	Politically Real: A well-known phenomenon.	Total Manipulation: The global, complete manipulation of cultural memory.

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