simmons+simmons

Physical AI

One Robot. Many Rules.

Autonomous systems. Humanoid robots. Intelligent machines.



THE CHALLENGE

A deployed physical AI system engages multiple European regulatory regimes simultaneously, and these regimes interact rather than operate in isolation. From humanoid robots on factory floors to autonomous mobile platforms securing critical infrastructure, physical AI presents a distinct regulatory problem. Every company developing, manufacturing, deploying or investing in these systems faces a convergence of overlapping legal obligations with staggered compliance deadlines. Sequencing is a commercial rather than purely legal question.

OUR OFFERING

Simmons & Simmons has assembled a dedicated, multidisciplinary Physical AI practice that navigates the full regulatory landscape for autonomous and AI-enabled machines. We advise developers, manufacturers, deployers and investors across the entire product lifecycle, from design and market access through deployment, data governance and liability allocation.

OUR EXPERTISE

Six domains. One joined-up view.

Holistic advice across the core legal domains for physical AI.

01 AI Regulation

Risk classification, transparency and documentation duties, and conformity assessment for AI-enabled systems, including where AI conformity intersects with product conformity.

02 Data Protection

Legal basis for processing personal data, intra-group data transfers, cross-border data transfers and access to data.

03 Cybersecurity & Resilience

Security-by-design, vulnerability handling, incident detection and notification obligations, and supply-chain component security exposure in a robotics stack; incident reporting and data breach response.

04 Machinery & Market Access

Recast machinery framework for AI-enabled and autonomous equipment, conformity assessment, CE marking, and obligations for non-EU manufacturers including EU-side representation.

05 Data Access & Sharing

Data sharing obligations and access rights to machine-generated, non-personal data, machine design obligations, data licensing arrangements, and advice on trade secret / GDPR constraints.

06 Liability

Strict product-liability versus fault-based claims for self-learning systems, liability allocation across the value chain, and evidential requirements for logging, traceability and defensibility.

ADDITIONAL SPECIALIST CAPABILITIES

Sector overlays. Industry-specific compliance for life sciences (Medical Device Regulation), manufacturing, automotive and logistics.

Private equity investments. Buy-side and sell-side due diligence for Physical AI transactions.

IP rights. Design, trademark and copyright protection for robotic systems and AI-generated outputs.

Commercial contracts. Drafting and negotiation of customer and supplier agreements.

Customs. Ensuring that CE marking complies with national customs requirements.

HOW WE WORK WITH YOU

Practical support. Across the lifecycle.

Examples of how we can work with your business.

01	**Regulatory Landscape Mapping**	Comprehensive assessment of every applicable regime for your specific product and deployment scenario.
02	**Classification Workshops**	Scoped classification workshops to determine your risk category and compliance obligations under the EU AI Act.
03	**Market-Access Readiness**	Practical route-to-market planning: conformity assessment, technical documentation, CE marking and notified body strategy.
04	**Liability & Contractual Structuring**	Allocation of liability between developer, manufacturer, deployer and component supplier, and identification of where contracts can and cannot shift it.
05	**Investment Due Diligence**	Regulatory and risk assessment for private equity and venture capital investments in Physical AI companies.
06	**Incident Readiness**	Incident detection, response and notification planning, including where multiple regimes require parallel reporting.
07	**Deployment Agreements**	Contracting for data rights, security obligations and liability in deployment agreements.
08	**Disputes**	Advice on legal disputes, including arbitration and regular court proceedings.

WHY SIMMONS & SIMMONS

Integrated expertise. Commercial perspective.

- **Integrated, not siloed.** We map which regimes a deployed physical AI system engages and how they interact, delivering a single, coordinated compliance strategy rather than piecemeal advice across separate practice areas.
- **Pan-European and transatlantic reach.** We advise non-EU manufacturers as well as model providers on what they must have in place.
- **Commercially focused.** We reframe regulation as risk allocation, advising boards, compliance teams and investors alike on how to turn regulatory complexity into competitive advantage.
- **Sector depth.** We identify sector-specific regimes layering over the general framework in manufacturing, automotive and logistics, and show how sector rules alter the compliance analysis rather than simply adding to it.

OUR TEAM

Our Physical AI practice brings together specialists from across the firm's technology, regulatory, IP, data, disputes and corporate teams, led by:

Christopher Goetz / Minesh Tanna

Practice leads, supported by a deep bench including experts in AI regulation, data protection, cybersecurity, machinery safety, product liability, IP rights and private equity.

GET IN TOUCH

Physical AI is moving from laboratory to deployment. The regulatory framework is live and the compliance deadlines are near. Whether you are bringing a humanoid robot to the EU market, deploying autonomous systems in your operations, or investing in the next generation of robotics companies, we are ready to help you navigate the rulebook convergence.

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