Privacy Engineering Domains

IT Infrastructure Architect

By the 2022-2023 IAPP Privacy Engineering Section Advisory Board

"I develop our information technology infrastructure to ensure data flows between systems have controls in place to limit data use for specific purposes. I ensure architecture includes platforms that support data-element classification and handling, granular data retention and deletion, and accountability"

-IT Infrastructure Architect

Tasks

Apply privacy by design principles to:

- Support business operations, solution design and development, and implementation to ensure applicable privacy principles are met.
- Ensure systems are maintained and resilient against harms and threats.
- Collaborate on solution design to meet requirements with functional stakeholders, including external vendors and consultants.
- Research and review technologies and systems components and design are adequate to ensure privacy and data protection; articulate mission/vision, capability models and technical architecture in support of securing privacy objectives.

Professional profile

Technical competencies: Business process modeling, IT engineering/computer science, networking/cloud, data science, information security, application infrastructure, systems engineering and programming.

Areas of experience: Data science/privacy data systems and platforms, artificial intelligence, systems/database administration, systems and network/cloud architecture, security administration, solutions development, program management, business intelligence data, and technical engineering.

In the organization

Reports to: Chief information and security officer, chief technology officer (head of infrastructure security or platform engineering).

Works with: IT/engineering, legal, compliance, risk assurance, business operations, manufacturing, audit, supply-chain, procurement.

Strategic drivers

- Ensuring resilience against privacy, data security and cybersecurity risks.
- Building the capability to address increasingly complex challenges related to data transfer and data localization requirements.
- Apply privacy principles such as data necessity and accuracy.

> "The advent of cloud computing and 5G networks and the rapid adoption of AI into IT systems and modern application stacks has created a disaggregated IT systems architecture."

Tools and resources

- Cloud services providers, IT vendors, external consultants, software developers, systems integrators.
- Security and privacy certifications training.
- Industry working groups and task forces.

Getting it right means

- Strong culture of innovation with privacy as a business differentiator and enabler in the marketplace.
- An understanding of privacy controls and industry standards and practices related to privacy and data protection.
- Awareness of developing tools and fields in privacy pertinent to supporting privacy in developing infrastructure.
- Lower attrition of highly skilled engineers who are not only privacy-aware, but able to cross disciplines to develop and add value to the organization.

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