Title: Digital Transformation Through Enterprise Architecture and AI: A Stakeholder-Driven Framework for Public Sector and Academic Innovation

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Abstract:
Digital transformation (DT) is a strategic shift that redefines how organizations operate and deliver value. This lecture synthesizes ten applied studies from the Czech Republic, showing how Enterprise Architecture (EA), Artificial Intelligence (AI), and stakeholder engagement jointly support sustainable transformation across public administration, academia, and industry.

EA, particularly through the ArchiMate modeling language, enables organizations to document AS-IS states and design TO-BE states, aligning business processes with IT infrastructure. Case studies from municipalities and regional governments demonstrate how EA improves service delivery and supports national digital strategies. AI and GenAI technologies further enhance EA modeling, especially in academic settings, where students use AI to automate tasks and enrich architectural designs. Cybersecurity is addressed via a CSIRT framework tailored to academic institutions, incorporating risk assessment and incident handling under GDPR and NIS2 constraints. Human-computer interaction (HCI) is explored through the redesign of HR processes in local government, where EA and BIS improve user experience and data security. A stakeholder-centric perspective highlights the role of EA boundary objects in early engagement and alignment. Interviews across sectors reveal that effective stakeholder management is essential for successful DT planning and delivery. ArchiMate helps bridge semantic gaps and fosters collaboration between business and IT. The lecture also touches on formal methods, cloud computing, and distributed systems, emphasizing EA's role in managing complexity and ensuring interoperability. Methodologically, the studies combine surveys, interviews, and modeling, offering insights into barriers, strategies, and the value of EA and AI in transformation efforts.

In conclusion, this lecture presents a framework for digital transformation that integrates EA, AI, and stakeholder management. It offers practical guidance for advancing innovation in public administration and academia, aligned with key conference themes.

Biography:
Martin Lukas, Ph.D. is an Associate Professor at the Czech University of Life Sciences in Prague, Department of Information Technologies. With expertise in Digital Transformation supported by Enterprise Architecture, Business Information Systems in different national sectors, and Project & Program Management of large ICT initiatives, all enhanced by Artificial Intelligence, he has significantly contributed to the development of a national methodology for evaluating eGovernment web portals of Czech public administration bodies. His research interests include: Digital transformation strategies in the public and private sectors, Enterprise architecture frameworks and their practical implementation in different sectors of the national economy, evaluation methodologies for ICT projects and eGovernment

services, integration of AI in the teaching process in HEI, business process optimization, cybersecurity, and information assurance in digital ecosystems.

He actively collaborates with national and international institutions and regularly publishes in local journals and international conference proceedings. In addition to his academic work, he serves as a consultant and advisor for digital innovation initiatives in banking and public administration.