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Module 2.2 Assignment

The case study Operation InVersion at LinkedIn (2011) shows how the company ran into significant deployment issues right after its IPO in 2011. To deal with these problems, they stopped all feature development for two months. During this time, they focused on rebuilding their computing environments, deployments, and overall architecture. LinkedIn's Operation InVersion highlights the importance of addressing technical debt as part of regular work.

At first, LinkedIn used a big monolithic Java app called Leo to handle all their page services through servlets and manage JDBC connections to Oracle databases. As traffic grew, they split off two critical services from Leo early on. By 2010, they primarily focused on developing new services, with nearly a hundred running outside Leo. However, Leo's bi-weekly deployment schedule caused a lot of headaches, like frequent downtime, complex troubleshooting, and tricky code releases. Senior engineering manager Josh Clemm noted the need to break Leo into smaller, functional, and stateless services to tackle these issues effectively.

The issues with Leo became a big problem. By 2011, the team had to work late nights to keep LinkedIn's site running. This constant pressure made it clear that they needed a long-term fix. Realizing how critical the situation was, Kevin Scott, the VP of Engineering, and other top engineers decided to stop developing new features. This break allowed them to focus on fixing the core infrastructure with Operation Inversion, which was crucial for the platform's stability and reliability.

LinkedIn's experience taught them to address technical debt for scalability and reliability. Another lesson learned is that monolithic architectures can get hard to manage as a system grows. Also, moving to a microservices architecture was a benefit because making deployments and troubleshooting much smoother and more reliable. They also made a smart move by pausing new feature development to focus on fixing their core infrastructure. This break was essential for long-term stability. Lastly, the experience showed them that making organizational and cultural changes is crucial to supporting these technical transitions and keeping everything running smoothly. This case illustrates the importance of balancing new feature development and managing technical debt to ensure sustainable growth and system reliability.