**Assignment: Case Study: Operation InVersion at LinkedIn (2011)**

Read the case study presented in Chapter 6 of the course textbook and compose a brief summary of the main points the author made as well as the lessons learned.

The case study “Operation InVersion at LinkedIn studies the effects of technical debt and how a company overcame its negative impacts. In this case study, LinkedIn, a website/company that now houses millions of users, had a successful IPO in 2011. Shortly after this IPO, the company struggled with deployments that proved costly. From these struggles the company began Operation InVersion. Here they stopped new features for over two months to change their computing environments and architecture.

This case study is a great example of the benefits and disadvantages of technical debt. In the beginning, LinkedIn used homegrown solutions to manage traffic. As traffic increased so did the need for new ways to manage queries and searches. The homegrown solution had become unstable. The need for a new solution involved breaking up Leo (the homegrown solution) into small functional, stateless services. Things continued to deteriorate as adding new features become a nightmare in software development.

This brought life to Operation InVersion. More than just process, it changed the team’s engineering culture. It was known throughout the company that no new feature would be added until the infrastructure was fixed. The scary part of embracing such an operation is during it shortly after going public, with many more shareholders involved. They created a suite of tools that decreased lead time for new features by weeks at a time. Everything became scalable, which removed the need for slow processes to exist.

Looking back at LinkedIn use of technical debt, the company leverage it in a smart way. First, they used shortcuts and homegrown solutions to rapidly grow the product. This is the advantage of using technical debt, the ability to move fast to experience growth as much as possible. It can be argued that without using technical debt strategies, they could achieve the same result. That is said in hindsight, however, as another competitor could have beat them to the market by going faster. What makes LinkedIn such a success story is the ability to pay off that debt, especially during a turbulent time. The engineers knew the old school way was not going to breed long-term success. If they wanted to stay at the top, the debt must be paid. Not only did the company have the foresight to do this, but they also communicated this to their shareholders in a way that it was acceptable.