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Module 6.2 Assignment - Case Study: Strangler Pattern at Blackboard Learn (2011)

The case study presented in Chapter 13 of The DevOps Handbook highlights BlackBoard Inc.’s transition from a Monolithic architecture to a more modular, service based approach. The need for this shift became evident in 2010 when David Ashman, Chief Architect of Blackboard Inc., noticed the number of lines of code in their monolithic code repository continued to grow, but the number of commits was decreasing. This indicated increasing difficulty in introducing safe and reliable code changes that would not break the existing system.

In 2012, Ashman committed to shifting Blackboard to a service based architecture that uses the strangler pattern. The idea of a strangler pattern allows for the slow and incremental migration from the monolithic architecture to a more modular system. Ashman accomplished this by creating “Building Blocks”. The Building Blocks allowed developers to work independently on separate modules, effectively decoupling them from the monolithic codebase. As work on the Building Blocks continued, the size of the monolithic repository began to decrease, and the number of commits for the Building Block repositories began to increase.

This case study underscores the complexity and maintenance challenges that monolithic systems present once they become too large. It highlights the effectiveness of incremental migration strategies, like the strangler pattern, in modernizing legacy systems, and how modular architectures foster developer autonomy, faster iteration cycles, and improve software maintainability. Blackboard’s success demonstrates that breaking down monoliths into smaller, modular services enhances scalability and reduces risk.