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Module 6.2 Assignment

By 2011, Blackboard Inc., one of the largest purveyors of education technology, was having major problems with its flagship product, Blackboard Learn. Over the years, the platform had become a very complex monolithic application, with vestiges of old technologies like Perl still residing in its codebase. The mounting complexity burdened integration and testing processes, thus reducing the productivity of developers. Addressing these problems, Chief Architect David Ashman led a re-architecting effort that began in 2012, using the Strangler Pattern: incrementally introduce new applications and services to take over specific pieces of functionality of the legacy system, while being able to, over time, remove the pieces no longer used (Kim et al., 2016).

As systems age, the development tools, hosting technology, and even system architectures they were built on can become increasingly obsolete. As new features and functionality are added, the complexity of these applications can increase dramatically, making them harder to maintain or add new features to (RobBagby, n.d.) .

In the implementation of the Strangler Pattern, Blackboard built self-contained components within the company commonly referred to as "Building Blocks." This strategy allowed the engineering team to upgrade obsolete functionalities bit by bit with minimal risks related to a whole system change. As new services were integrated with time, legacy components were stripped off, giving way to better maintainability and scalability of the system (Kim et al., 2016).

According to the Azure site this pattern is not suitable when:

* When requests to the back-end system cannot be intercepted.
* For smaller systems where the complexity of wholesale replacement is low.

This case study illustrates how the Strangler Pattern can be used to modernize complex legacy systems incrementally without rewriting it.

**References:**

Kim, G., Debois, P., Willis, J., & Humble, J. (2016). *The DevOps Handbook: How to Create World-Class Agility, Reliability, and Security in Technology Organizations*. https://dl.acm.org/citation.cfm?id=3044729

RobBagby. (n.d.). *Strangler Fig pattern - Azure Architecture Center*. Microsoft Learn. https://learn.microsoft.com/en-us/azure/architecture/patterns/strangler-fig