2.5.4 Comparing Methods of Engineering References

Here are a couple of references as you explore systems engineering differences between management methods:

MITRE Systems Engineering Guide: https://www.mitre.org/publications/systems-engineering-guide/enterprise-engineering/engineering-informationintensive-enterprises/design-patterns

- Good set of design principles
- Explains the difference in coupling for design flexibility and robustness

Lean Systems Engineering Designs with Test-Driven Development: https://ocw.mit.edu/courses/aeronautics-and-astronautics/16-885j-aircraft-systems-engineering-fall-2004/lecture-notes/lean_ii.pdf

- Blends lean concepts and systems engineering
- Discusses continuous flow of identifying, exploring, and executing against system improvements
- Explains the evolution of large-scale systems with incremental improvements using the V-Model

Application of Modular Building Concepts in Civil Engineering (note modular means a loosely coupled or decoupled design):

- High-level overview of modular construction: https://en.wikipedia.org/wiki/Modular_building
- Modularity for design flexibility: https://www.jstor.org/stable/259016?seq=1#page_scan_tab_contents

An argument for Tightly Coupled Designs even in IT: https://www.zdnet.com/article/where-and-why-do-we-still-need-tight-coupling/