



AEROSPACE INFORMATION REPORT

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The Evolution of Configuration Management (CM) Into an Accelerating Digital World

RATIONALE

In today's digitally motivated environment, it becomes necessary to define where Configuration Management (CM) fits into new and emerging development methodologies of the world we live in today, and where we expect it to be in years to come.

This document's intent is three-part. Explore the possibilities as (1) CM professionals provide guidance in a digitally transformed world that uses new development approaches by the (2) emerging software industry, and (3) non-CM practitioners can now recognize and appreciate the value of CM and its contributions to the success of new and existing initiatives and products.

That is not to say, however, that CM cannot be enhanced and made more effective by the responsible use of enabling technology. What this document describes are the next steps forward by uniting CM and software into a cohesive coupling that supports one another and furthers the goals of each.

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1. SCOPE

The purposeful integration of existing and emerging technologies into CM practice will enable collaboration with supporting systems and provide stakeholders access to authoritative and trusted data in a timely fashion at their desktop to help drive educated decision making. This lays to rest the misguided myth that CM and supporting systems operate at cross-purposes.

What does it mean to have CM in a world of new initiatives and 2-week sprints (i.e., time-boxed work periods), multiple increments producing Minimum Viable Products (MVP) and synchronized with Model Based Systems Engineering (MBSE) while being digitally transformed? MBSE initiatives drive the jump from “2D” data to “3D” data, thereby becoming a Model-Centric practice. Products now enable technology to push the product lifecycle management process to new levels of efficiency and confidence. This mindset is evidenced by five major functions of CM, as discussed below, and described in EIA-649C.

1.1 The Challenge Ahead

Our intent is to challenge CM professionals with the new evolution of the current mindset that is required to function in a digitally transformed world that uses new development approaches. We want to challenge the community of CM practitioners to think about what their world will be like in 5-10 years. We want the business world to recognize the value proposition of CM now and in the future, as well as how CM contributes to the success of new initiatives and products. Additionally, all concerned need to realize that CM is more than just mere version control or change boards.

Figure 1 shows an accepted view of progressive product development, from an MVP perspective. In each stage of the “Like this!” section of this diagram the product described is a means of transportation. The message is that transportation evolves to more capable forms. Consider CM from this same viewpoint. At all times, we should have an MVP-type capability of CM on our programs and projects. CM then likewise evolves to become increasingly capable and appropriate for each application involved.

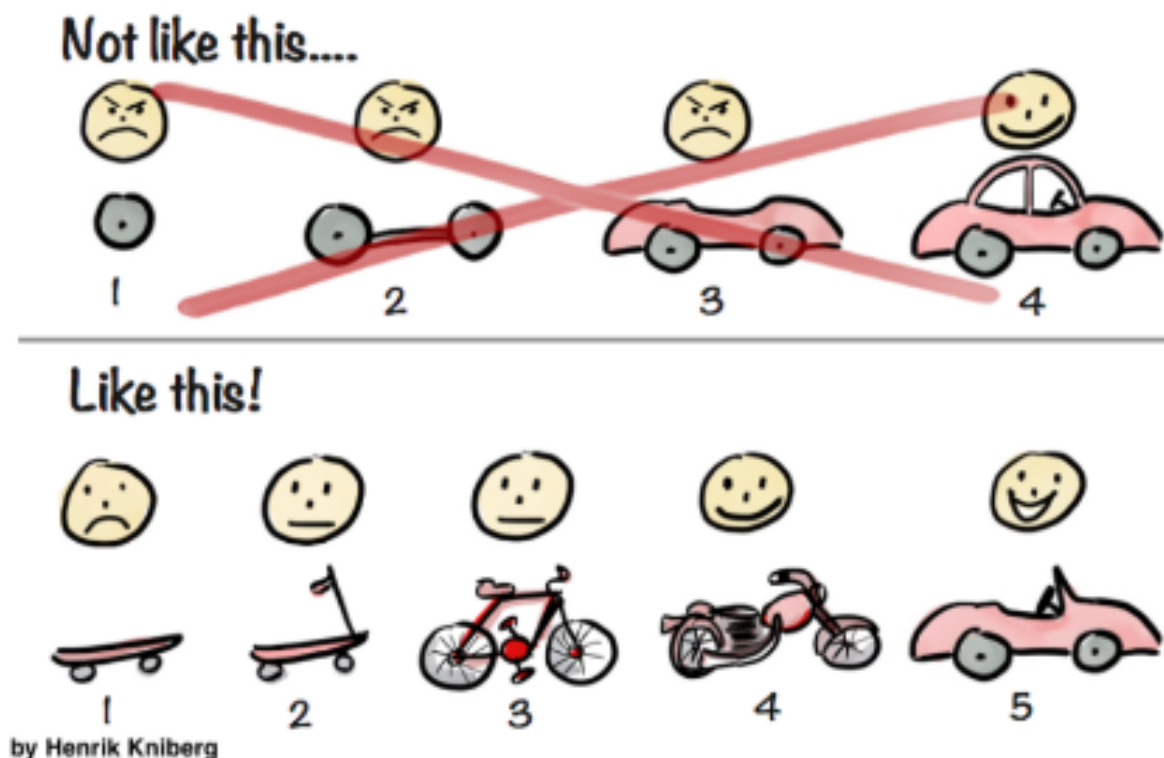


Figure 1 - Minimum viable product representation