Abstract: Construction Engineering is all about production and producing something useful is the very reason for projects to exist. How then to explain why Construction Engineering has progressively fallen out of focus in construction project management education and research? For an answer, we must understand the development of the discipline of construction management since the 1950s, a development that yielded a non-production-oriented approach to project management, one that provides the currently accepted operating system for managing the work in projects.

This paper first traces the history of the development of the traditional operating system and related commercial terms and organizational practices. It argues that traditional practices rest on an assumption that careful development of a project schedule, managing the critical path and maximizing productivity within each activity will optimize project delivery in terms of cost and duration.

Subsequently we describe an alternative operating system, developed and proposed by the Lean Construction community. In contrast to the traditional approach, lean defers detailed planning until closer to the point of action, involves those who are to do the work in designing the production system and planning how to do it; aims to maximize project performance (not the pieces), and exploits breakdowns as opportunities for learning. The history of this development will be traced in broad strokes.