

interpretations form a complex whole; where components could be interfaces or combinations of hard- and software, interactions refer to all information flow, interpretations stress subjectivity and context points at situation dependency (ISCE Research, www.ISCE.edu).

In a project context I would like to define project complexity as interrelatedness between men and machines.

Complicatedness should not be confused with complexity. An airplane is complicated; but experts can tackle a problem therein. In contrast, the weather, an ecosystem or a flock of seagulls are complex; here we look for patterns to come to an understanding.

Following the NTCP diagram as developed by Shenhar & Dvir (2007), figures 1 and 2 show the NTCP diagrams for two of my projects.

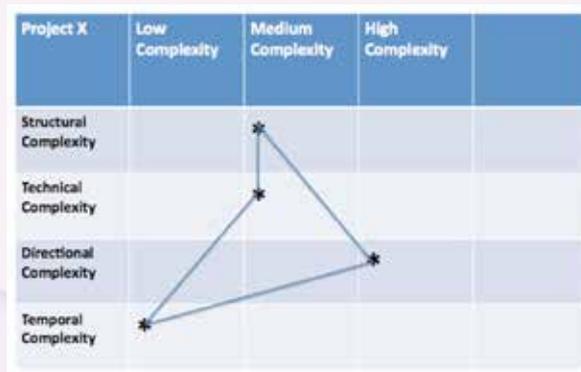
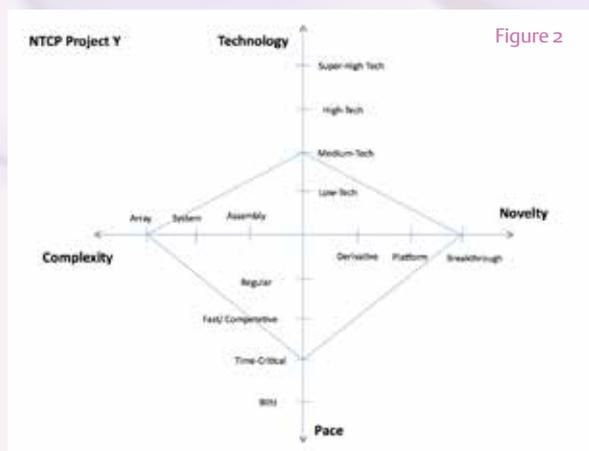
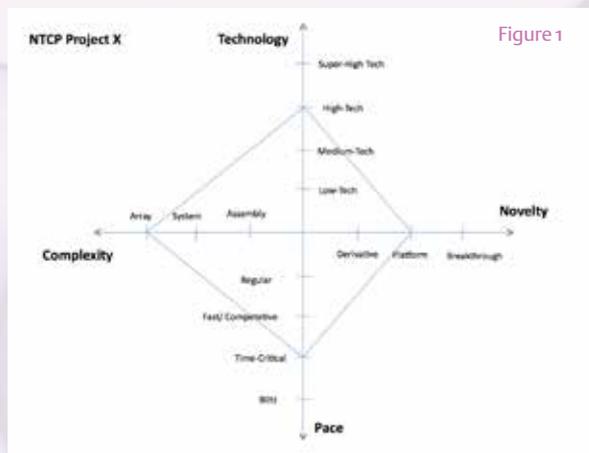


Figure 3

Remington and Pollack (2007) refer to *Structural* (“We can’t see the forest for the trees”, “How can we keep track of all the interdependencies”), *Technical* (“How do we do or make it”, “There is nothing like this out there”), *Directional* (“How do we share understanding”, “No one seems to be on the same page”) and *Temporal* extremes (“It is like standing on quicksand”, “Everything keeps shifting”). Figure 3 shows my complexity map of project X. I like to refer to models like NTCP, or complexity mapping, as being “outside scans”. They enable the project manager to come to a better understanding of where in their project environment complexity resides, to be able to draw that storyline. The area of complexity is also the area of “unknown-unknowns” or the area of uncertainty; that is the area beyond risk management, beyond risk mitigation (“I, dear executive, just don’t know what could happen there, and you don’t know either, but we have to deal with it”). Executives don’t like uncertainty – it is managerially unwanted (Stirling, 2010) – but it is there, certainly in complex projects. What I propose is to explicitly point at uncertainty in the mandate phase of the project (Berndt, 2014). Daring to address areas of uncertainty is in my view an act of project manager leadership.

Are then all projects complex? Following Snowden and Boone’s Cynefin model (Snowden & Boone, 2007), and although I think complexity trumps all categorization, not many projects will be done in simple environments where one categorizes and responds to a problematic situation. I suspect that projects mainly reside in complicated areas where one analyses and responds or in complex areas where one probes, senses and responds, and projects can turn chaotic where one starts acting without much longer-term