

## SITUATIONS THAT INCREASE THE LIKELIHOOD OF UNKNOWN UNKNOWNs

The six factors (shown in the left-hand column) that increase the likelihood of unk-unks can operate through six project domains.

	RESULT	PROCESS	ORGANIZATION	TOOLS	GOALS	CONTEXT
<b>Complexity</b>	Specifications for the project deliverables entail complexity; for example, product parts must fit into a tight space or some are tightly coupled while others must be separated	Integrating work from multiple suppliers who must mutually agree on many design parameters	Several involved functions, suppliers and geographic locations have not yet established norms for interaction	A variety of software tools from different vendors must seamlessly interact	Needing to satisfy thousands of competing requirements, making the range of mutual acceptability small to nonexistent	Multiple stakeholders have different agendas and visions of success
<b>Complicatedness</b>	Product or service design is unprecedented or unintuitively structured	Activities are not clearly organized and managed by an integrated scheduling system	Participants are new to the type of work, have not worked together before or are not fluent in the same language	Reliance on new, nonintuitive software tools	Requirements are unfamiliar or unclear	Working with new types of clients or customers
<b>Dynamism</b>	Product or service design is still evolving and may change with the availability of new technologies	Activities change due to the availability of new process technologies	The project calls for new talent and approaches to address changes over time	Technological developments necessitate adoption of new software and hardware systems	Goals change as stakeholders' needs and values change over time	Working in a highly volatile or high-velocity, hypercompetitive environment
<b>Equivocality</b>	Different perspectives on design of deliverables leads to vagueness about their features and attributes	Different perspectives suggest multiple ways to accomplish key tasks, obscuring a clear choice	Decision makers must balance multiple, often divergent viewpoints	Indecisiveness in tool selection or use	Multiple issues and divergent perspectives blur understanding of the project's goals	Susceptibility to macro socioeconomic issues such as environmental regulations, mass transit or sustainability
<b>Mindlessness</b>	The project's final deliverable is very similar to prior projects, yet it differs in some small but critical aspects	Activities similar to past experiences and traditions, leading to overconfidence and insensitivity to nuances	Participants lack the mindset and skills to think "outside the box" and critically examine small deviations or weak signals	Software tools are used without regard to seemingly minor incompatibilities	Single-minded focus on a narrowly defined result — for example, staying within time or cost constraints	Similarity to earlier projects, yet with novelty in some key aspect such as scale-up or a new application
<b>Project Pathologies</b>	Some product components do not have a clear connection to a responsible organizational unit	Some activities do not have a designated doer or supporting tool	Expertise is fragmented into subspecialties and silos; broad, experiential knowledge is squeezed out	Overreliance on a single line of in-house tools; failure to use appropriate outside resources	Obsession with consensus building and suppression of cogent, diverse views	Stakeholders are large bureaucracies or multiple national, cultural or geographic agencies