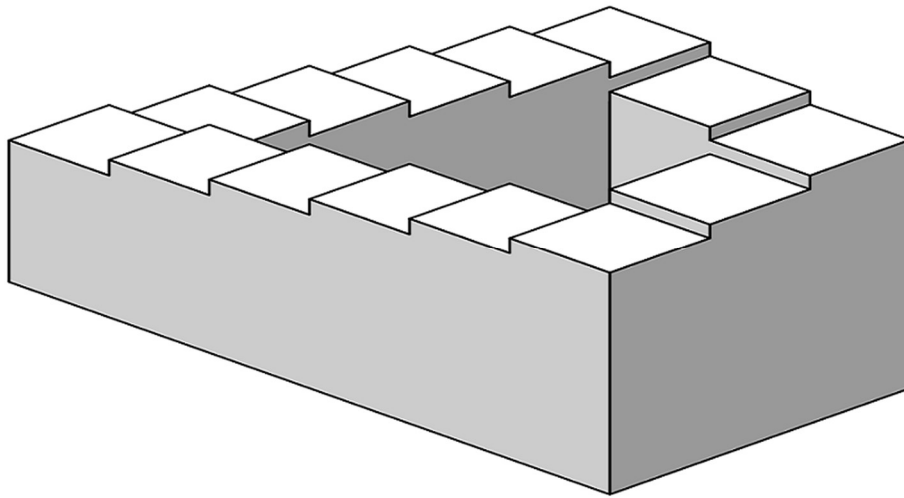


## SIMULATION AND CRISIS



System Engineering is witnessing the surge of organizations, experts, methods, tools, reference books, that organize themselves in a consistent nebula, animated by a logic of its own and indulging in self-congratulation.

This nebula remains unconnected to the issues that triggered its development: the need to come up with a method of general application to master with the same scientific rigor as classical (energetic) physics the development of mechatronic system, software centered, in which the network of causality addressing the needs cannot be conceived in terms of energy transfer. To bridge the gap between low-level craft and “high level” considerations stands the magical “functional analysis”.

From a basic developer’s perspective wandering from crisis to crisis, it gives the strange feeling of a parallel world without perceptible benefit. It just generates additional burden through imposed traceability with ethereal concepts such as “system”, “function”, “flow”, “requirement”, ... without any clear connection with factuality so long as they are not eventually, magically, turned into software components and material objects.

Quite symptomatic of this dummy mastery of complexity is the almighty “V-cycle”. It has no correspondence whatsoever with the chaotic development processes. The idealized link it puts forth between design artifact and IVVQ phase is just a dream, as if functional analysis had ever been able to yield artifacts usable as reference, without fastidious and hazardous interpretation, to assess at IVVQ time the conformity of the realized with the goals that triggered its development. How can one imagine there could be a formal connection between scientifically undefined concepts based on mere verbose “common sense” and the physical qualifications produced by any test bench?

As is, System Engineering stands to the development processes just as the stock market stands to real economy, an autonomous reality with catastrophic (in the Tom’s acceptance) coupling with factuality: the countless crisis any developer experiments. There is the point: for experts involved in international committees, for decision-makers, for high-level managers, this other reality just doesn’t exist. There is just a self-standing image that points to nothing but to itself and an associated booming economy that maintains and develops that simulacrum. It makes impossible any dialectic between the



representation of the expectations and the achieved reality, where lays yet the stake of efficiency. Instead, conventional wisdom asserts a pseudo-obvious efficiency while massive investments yield no measurable productivity. The more expensive it is, the more efficient it must be (MIL/SIL are now trendy). Striking is the fact no manager ever speaks in these terms of system engineering nor is able to clearly formalize his goals, just, for example, the basic that it is no worth writing requirements if there are not individually factually verifiable. Instead, magic tools-solutions and methods are invoked, experts are called on, but only individual common sense and hard work in endless trial and errors loops make it eventually possible for project spinning out of control to yield some result.

So long as there is no consciousness of this situation, so long as it remains quite profitable to develop this simulacrum, any initiative to rationally meet the challenge of mastering complex developments will be ignored or wiped out.