

“Life Cycle Governance: From Responsible Innovation to Disaster Management”

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If governance is the solution - then what is the problem? Governance implies a power relationship between governors and the governed. If those who are to be governed are geographically, temporarily and structurally diffuse, then the execution of any form of power - regulation, suasion or otherwise - is difficult to implement. It is also difficult to achieve a collaboration between governors and the governed that would maximize the ability to prioritize problems and opportunities. Therefore, if the problem is the pace, geographic diffusion and novelty of emerging technologies, then the solution lies not only in finding the best way to exert power but also in understanding how to react to the very real power embedded in the governed and their inventions.

In this paper I argue that the menu of ‘governance’ tools is much broader than the connotation of this word implies and that we will benefit greatly from a holistic analysis of the entire life cycle of technology development.

In practical terms, a life cycle analysis reveals many useful analogies and lessons learned from other contexts. For example, the concept of ‘responsible innovation’ is predated by the concept of ‘design for environment’. Pandemics planning and disaster risk management provide methods that should be evaluated in the context of the governance of emerging technologies. The policy move from mitigation to adaption in the climate change context is also illustrative. Life cycle analysis improves the ability for integrative (and adaptive) management of the entire chronology from the upstream engagement of innovators to liability management and benefit sharing issues. Last but not least, a life cycle lens also provides a useful tool for the continuous development and harmonization of regulations.

The life cycle lens, thus, provides three benefits: (a) it is compliant with the belief that traditional governance-by-regulation is no longer possible in many instances, (b) it provides the ability to see the full spectrum of governance options across the various life-cycle steps from innovation to disposal, and (c) it provides the ability to integrate the various governance tools and achieve a dynamic and holistic approach that coordinates the various activities.