

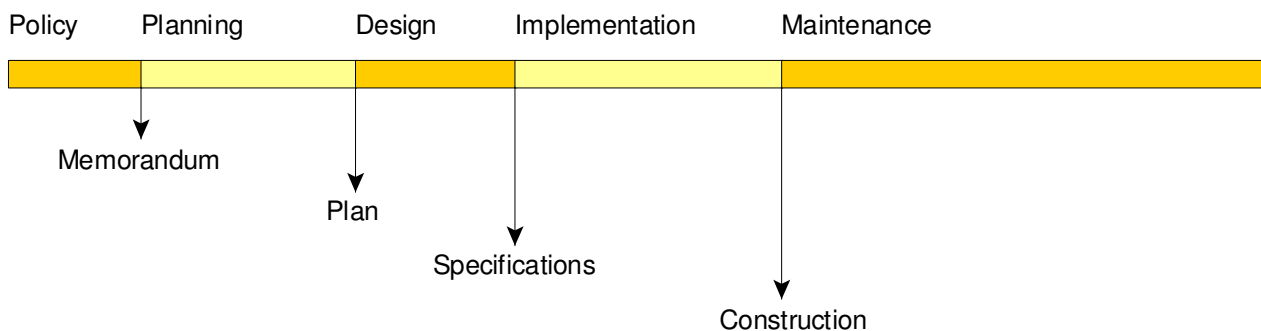
Coping with Complexity: from serial to parallel

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In this workshop I will present a triptych. The first part is about the problem, the second part about mechanisms and the third part about practical implications. My contribution is not about interdisciplinary research, but about a philosophy to organise interdisciplinary processes in practice, from the perspective of a reflective practitioner.

I. The problem

We have different disciplines, because nobody can overlook the whole. The whole process is so complex, that we chop it into pieces. Each specialist is focussing on her or his special thing. There are different dimensions for disciplines. On the same level we find disciplines like water, traffic, housing, recreation, etc. At different levels we find policy people, planners, designers, implementers and asset managers. Also we can distinguish politicians, civil servants, people from private companies (banks, consultants, factories, etc.) and civilians. All these actors influence the results of a process. The problem is that people from different disciplines fail to communicate. The quality of plan will drop and many plans will never be implemented. Each discipline acts from a *rational* and *self-referential* position. Proposition: especially the connections between policy, planning, design, implementation and maintenance are poorly developed.

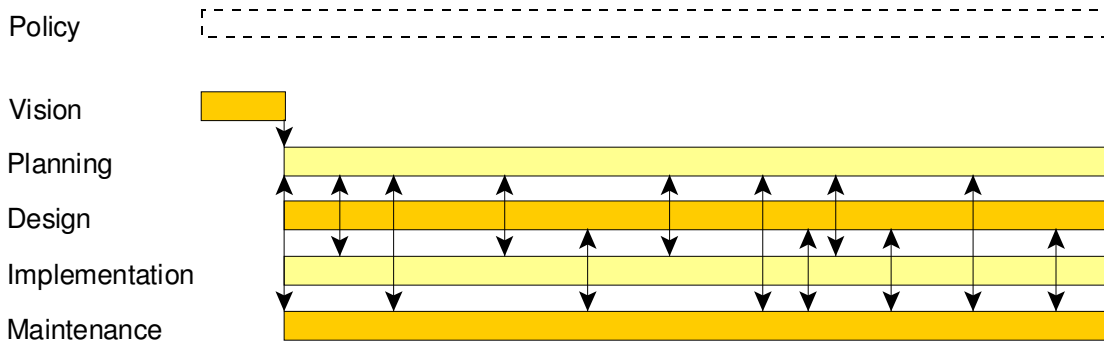


II. Mechanisms (theory)

We can distinguish between complexity and complicatedness. Complexity is viewed as a healthy and natural feature of a developing system, perceptible in both societal and natural processes. Complexity is a precondition for change. Complicatedness is viewed as the result of human actions. In order to get a grip on processes, people think up systems, set up structures, and define rules. Proposition: complicatedness is often the result of resisting complexity. By accepting the fact that processes are complex and that they cannot always be completely controlled, they become easier to deal with. In short: *by accepting that something is complex, it becomes simpler*. Instead of optimising a process (looking for the best solution in an objective way) we should apply an adaptive approach, that offers structure and surprise, asks for subjective decisions and results in an emergent social construction.

III. Practical implications

One of the most significant changes from optimising to adaptation is going from a serial approach (first picture) to a parallel approach (second picture). In this process there is a lot of interaction between people from policy, planning, design implementation and maintenance (asset management). It is e learning process.



For each discipline there is a system – their ‘thing’ – and a context. The essence of adaptation is to have just enough interaction between system and context. This will not be successful when people continue to act pure rational and self-referential. They have to be really interested in others! Context sensitivity is one of the buzz words.

For more: you can download the book “Coping with complexity in integrated water management” from www.govertgeldof.nl → English

Dr Govert Geldof, Senior Consultant, studied Civil Engineering at the University of Technology in Delft. From 1986, Dr Geldof worked at Tauw, where he started to develop ideas about integrated urban water management, both in new and existing urban areas. Dr Geldof introduced source control techniques in the Netherlands. He supported the writing of the 4th Dutch Policy Paper on Water Management, in which source control in urban areas is one of the spearheads of policy. To build the bridge between the technical and social sciences, Dr Geldof uses insights from complexity science. Dr Geldof is a Keynote speaker at the International UDM and WSUD Conference.

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