

NGI101x - Governance Challenges part I

Welcome back to the course. My name is Hans de Bruijn. My two web lectures for this week are about the essence of the governance challenge in the world of infrastructure.

In the earlier lectures, you have been told what the developments in the world of infrastructure are - processes like convergence, internationalization and decentralization. These processes result in some governance issues.

Put simply, these processes result in more players, more relations between physical systems and more relations between these players. As a result of that, a web of interdependencies emerges: many systems and many players, with different rationalities and interests, depending upon each other. In such a network of interdependencies, no single actor is in charge - decision-making is always a result of a process of interaction, of a negotiation. On top of that, there are many unknowns and often split incentives, which makes the world of infrastructures even more complex. Re-watch prof. Middleton's lecture - she has a very powerful overview of the main elements of complexity.

The question now is, what this complexity mean for governance. There are two core notions I would like to share with you.

The first is that central planning in such a world is of course impossible. No one oversees all the complexity, there are too many uncertainties. And who should make that plan, if the world is a network of interdependencies and if there is no one single actor in charge?

So what will happen? Lets first have a look at the basic pattern.

There are different sectors, different countries, different players and all these sectors, countries and players will develop their own activities. They will make plans, anticipate other plans, react to other plans and execute these plans. There will be some coordination, emerging spontaneously, but you simply cannot coordinate everything. Some actors will negotiate or interact, others will not.

The result will be a patchwork like structure that is continuously changing, not in a radical way, but in an incremental way. Many people will complain that we need more coordination, more joint up initiatives, but that is almost impossible in such a fragmented world. In such a structure, decision making on the future of infrastructures will probably be a very sluggish process. There are many actors, no one is in charge, there are many interests, so decision making is inherently slow.

Decision making is what Nobel prize winner Charles Lindblom called a matter of muddling through. We can only make very small steps and sometimes we will make one step forward and two steps backward. So the basic observation is: in a world of convergence, internationalization and decentralization - we will be faced with patchwork like structures and muddling-through like decision making.

The question is: is that a problem? At first sight, yes. Many people will say that we need transparent structures, not patchwork-like structures and for integrated decision-making, not muddling through.

But Lindblom teaches us something different. He not only says that muddling through decision making is inevitable, but that we should also prefer that type of decision making. There are two reasons for that.

The first is that muddling through decision-making is conducive to learning processes. In a complex world, we often do not know what the impact of a decision will be. So it is better to make a small step than a big leap forward. When we make a small step, we will learn what the impact is, and subsequently we can make a next step. If a step has unwanted or negative consequences, the damage will be limited, because it was only a small step. If however, we opt for the big leap. There is the risk of unwanted or negative consequences. The damage will be much bigger and learning will be much more difficult.

So making small steps makes it easier to adapt to unforeseen developments. A big leap forward in a dynamic world always carries a risk. The world might change and the big leap might result in what is called 'locking in'. The big leap is in the direction of option A, but the world changes and option B becomes more feasible.

The bigger the leap, the bigger the chance that we will be locked in eventually. Small steps make us much more adaptive. So don't think that you can change the whole transport system overnight, based upon a grand design. That you can make the energy system sustainable within a short period of time. If you liberalize a system, don't think that you will harvest the planned advantages of liberalization. Maybe this sounds as common sense, but there are many pleas for radical changes. Given the complexity of these systems, radical change is not only impossible, but might even be deceptive.

So the first observation is that muddling through is not only inevitable, but might also work - it is conducive to learning and adaptiveness. The second core notion is on the complexity of these types of situations. Earlier, professor Middleton explained the concept of complexity. In a world full of

There is a very fundamental idea in the literature on governance. In a complex world, you can never fully understand the content of a problem; it is too complex for that, there are too many unknowns; there are too many mechanisms that result in non-deterministic outcomes or system instability. And we sometimes do not know what these mechanisms are!

In the next web lecture we will discuss how we go from content to process.