

C
is for
complexity





According to a recent survey of 1,500 chief executives conducted by IBM's Institute for Business Value, Global complexity is the foremost issue confronting these CEOs and their enterprises. The chief executives see a large gap between the level of complexity coming at them and their confidence that their enterprises are equipped to deal with it.

Synergies when $1+1=3$



Complex systems are highly interconnect and interdependent, but added to this is the fact that things are *interconnected synergistically* – that is to say we can't just simply *summate* the differing strands of a problem because strands are interdependent and affect each other. this one of the true sources of complexity.

Where as we may have a good understanding of an organisation or environment in terms of its different components and their properties -departments and their budgets or countries and their GDP etc. - what we often lack is knowledge of the interconnections, the interdependencies and synergies, these are less tangible, more difficult to quantify and elusive to our tradition analytical models, but within complex systems where the connectivity is deep they are very significant to the actual functioning of the system.



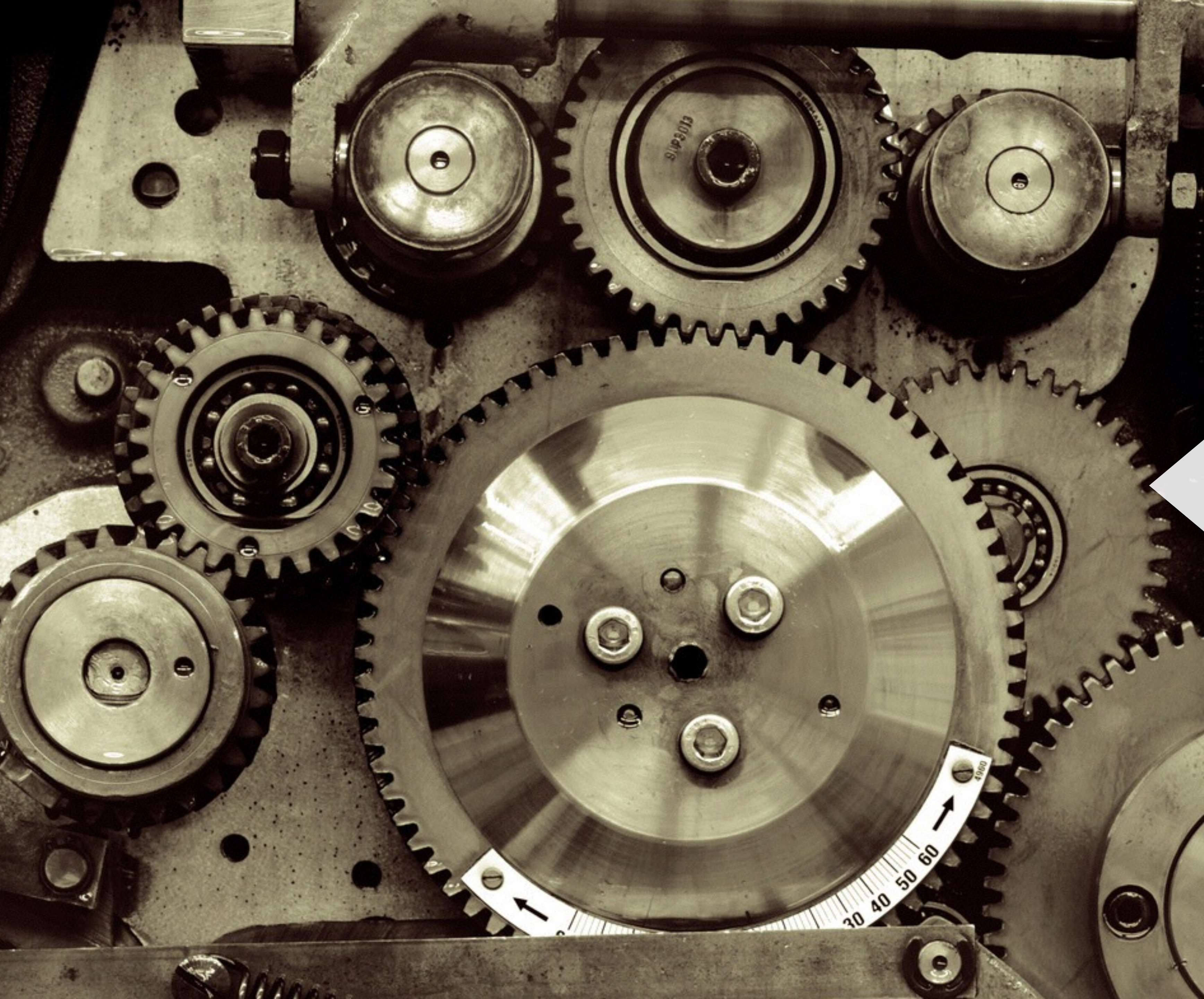
The net result of this is that we do not always know what the outcome to a direct intervention within the system will be.



Example

The Iraq war of 2003 may be cited as an example of this, a nation such as Iraq is a complex system of multiple, densely interconnected social, political, cultural and economic institutions. The Allied invasion was a direct intervention in order to achieve a clear objective of removing the contemporary regime. The result – the output to the system - was a set of nonlinear interactions leading to an unintended chaotic scenario.





Reductionism

Traditionally we try to exclude complexity - so as to be able to centrally control the system - we divide up the organisation into well defined components so that they will operate through simple cause and effect interactions in a mechanical fashion.

Accepting and harnessing complexity means giving up the capacity to centrally control and directly influence the different parts of the organisation. So how then can the organisations achieve any collective, desired objective?





Managing complexity means to a certain extent giving up the traditional concept of strategy and leadership - that is creating goals and directly aligning the organisation's elements towards achieving them - and instead focusing more on creating the context that will enable organisations to be able to succeed, thrive and develop.

Organisation's DNA

This means having a vision of where the organisation is going, its values and embedding this in the DNA of the organisation so that it can adapt to change on the local level, reducing the need for interventions. Thus it is about the creation of a context that enables the emergence of the desired outcomes.





Creating the tools

We may not be able to intervene or directly control the out come to events but we can manage the initial conditions, the tools, protocols and connections, all of which influences the context within which the organisation's elements generate out comes.

Summary

- Heightened interconnectivity, interdependency and synergistic relations makes it very difficult to know the outcome to an intervention within a complex system.
- Traditionally we avoid this scenario by decomposing the organisation into components, thus reducing the complexity to make the organisation manageable through direct top down interventions.
- Managing complexity means giving up this capacity for direct control over the out put to the system and focusing our capacity for management upon the initial conditions.
- We can then influence the out come by creating the appropriate initial context.
- This means having a broad vision and set of values that are embed into the enabling context to the organisation



Complexity Lab



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