COP BACKGROUND COMPLEXITY AND SYSTEMS THINKING





COMPLEX ADAPTIVE SYSTEMS

SOCIAL SYSTEMS...

... have semi-autonomous agents.

These agents are connected to other agents.

They interpret and respond to their changing environments.

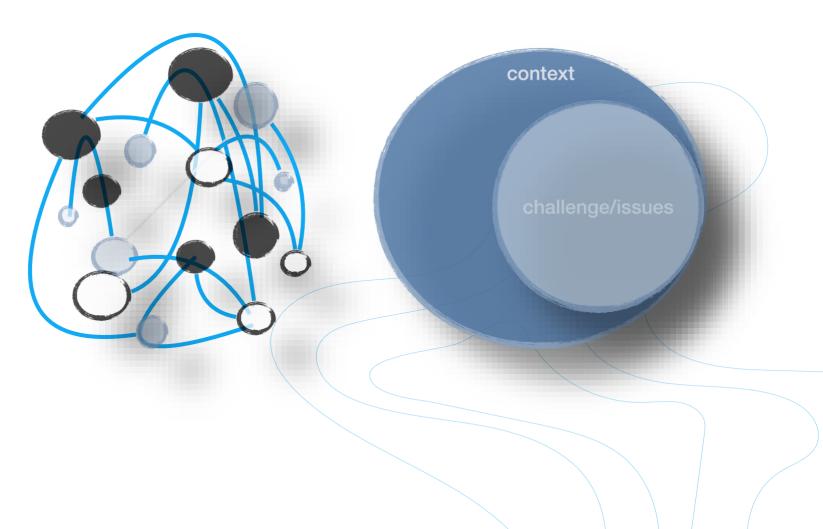
They adapt by changing their capabilities.

These develop and change over time.

Changing agent behaviours and interactions changes the whole system.

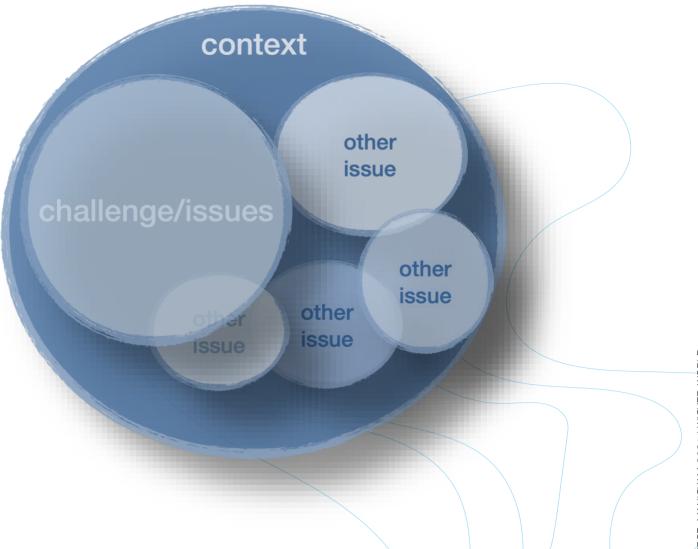


SYSTEMS ARE INTERCONNECTED



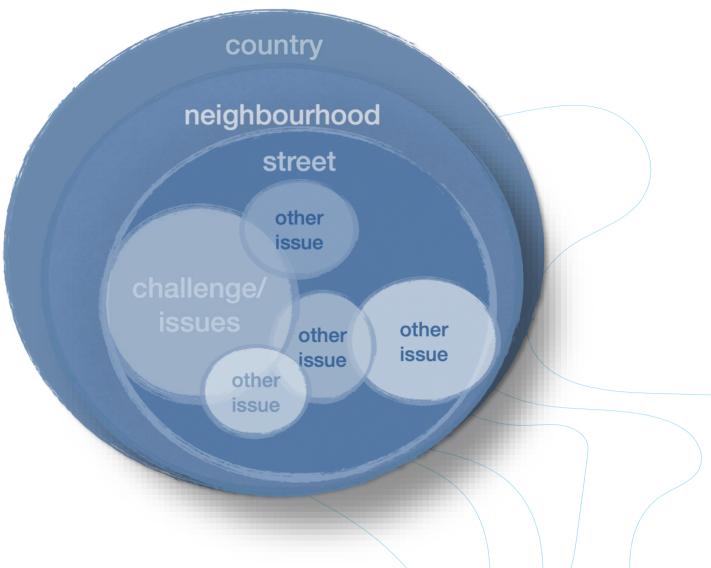


SYSTEMS ARE INTERCONNECTED





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SOCIAL CHANGE ASSUMPTIONS

TRADITIONAL APPROACH

- Top down
- Change follows predictable stages of development
- Clear goals and structures
- Expert knowledge & professions leading in defining & solving challenges
- Intervention at different levels (individual, group, organization)
 - Organized in separate domains, roles, responsibilities
- Success is pre-defined and measurable

COMPLEXITY APPROACH

- Top-down & bottom-up (selforganizing)
- Agents adapt to uncertainty
 - Emerging goals, plans, structures
- Knowledge is distributed amongst all stakeholders, need for 'collective sensemaking'
- Interventions affect other issues and systems levels
- Interconnected systems and developments
- Success is 'better' or 'good enough'



COLLECTIVE STRATEGIES IN SOCIAL INNOVATION

COLLECTIVE SENSEMAKING ~ MAPPING THE COMPLEXITY ~

What is the issue? Symptoms, assumptions, interests, etc.

What are other connected problems or issues?

What are possible solutions?

Which factors are making the problem worse, and which better?

Who are relevant stakeholders? Are we missing anyone?

Can we connect the dots? Identifying underlying patterns & systems dynamics



COLLECTIVE STRATEGIES IN SOCIAL INNOVATION

BUILDING COMMON GROUNDS THROUGH MAPPING

~ LISTENING, UNDERSTANDING & MOVING FORWARD ~

Enlarging the scope of the problem/issue

Creating awareness & sense of urgency

Identifying self-interest & collective interests

Identifying & using differences

Building trust ~ cannot be forced but without trust, no moving forward.



COLLECTIVE STRATEGIES IN SOCIAL INNOVATION

FIRST NEXT STEPS ...

Define general direction of change

Define playing field & (simple) rules of the game

Encourage experiments, learning & self-organising

Look for small changes with 'big' effects

Facilitate ownership & transparency (trust)



=> CHANGE HOW PEOPLE PERCEIVE, INTERACT & COLLABORATE

~ SYSTEMIC CHANGES WILL EMERGE ...





WICKED WORLD

Complex Challenges and Systems Innovation

RECOMMENDED READING...

Karel van Berkel Anu Manickam Noordhoff

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