

# SYNERGISTICS: AN OVERVIEW

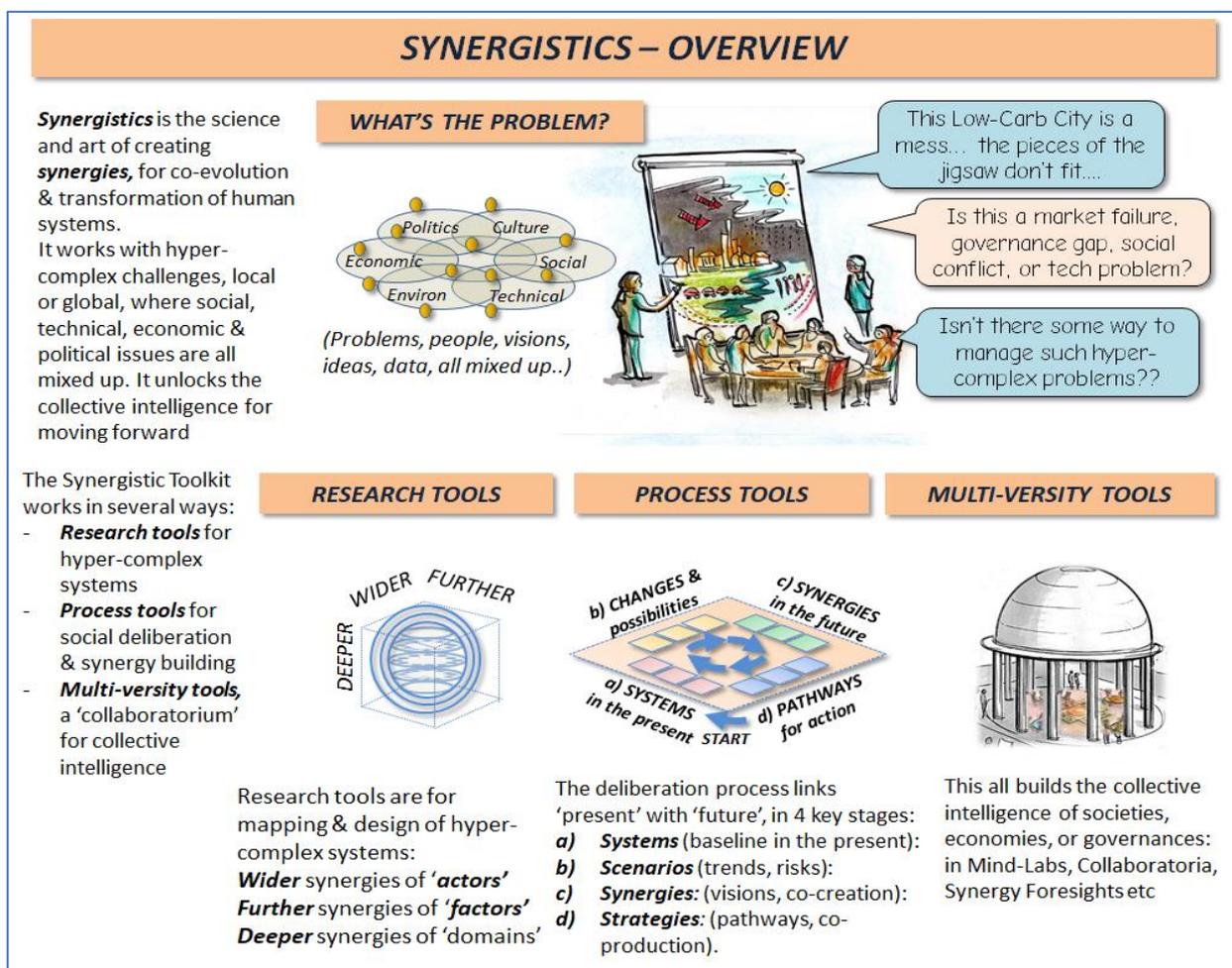
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[www.manchester.ac.uk/synergistics](http://www.manchester.ac.uk/synergistics)

and [www.urban3.net](http://www.urban3.net)

We are surrounded by huge, hyper-complex, inter-connected challenges. Working on climate change, for example, we have to combine earth science with society, technology, economics, politics and cultural issues: local and global, short term and long term are all mixed up. Other challenges, such as artificial intelligence, or social inequality, are equally hyper-complex, inter-connected, controversial and contradictory. How to move forward?

'Synergistics' – the science and art of working with synergies – has been developed for such challenges. It provides practical methods and tools, for joined up thinking which links problems with solutions, where progress depends on collective intelligence, in organizations, institutions, value-chains, enterprise models, networks or communities.



Where to start? With simple drawings or diagrams, on flipcharts or napkins or sticky notes. With more or less detail, we can do 'synergistic mapping' of people / organizations and systems (i.e. 'actors' and 'factors'). This is the start of a synergistic research program. To help move this forward we developed the Synergistic Toolkit, with tools for different levels:

- a) **Research tools** for mapping and designing hyper-complex systems
- b) **Process tools** for social deliberation & synergy building
- c) **Multiversity tools**, for a 'Collaboratorium' or 'Mind-Lab' for collective intelligence

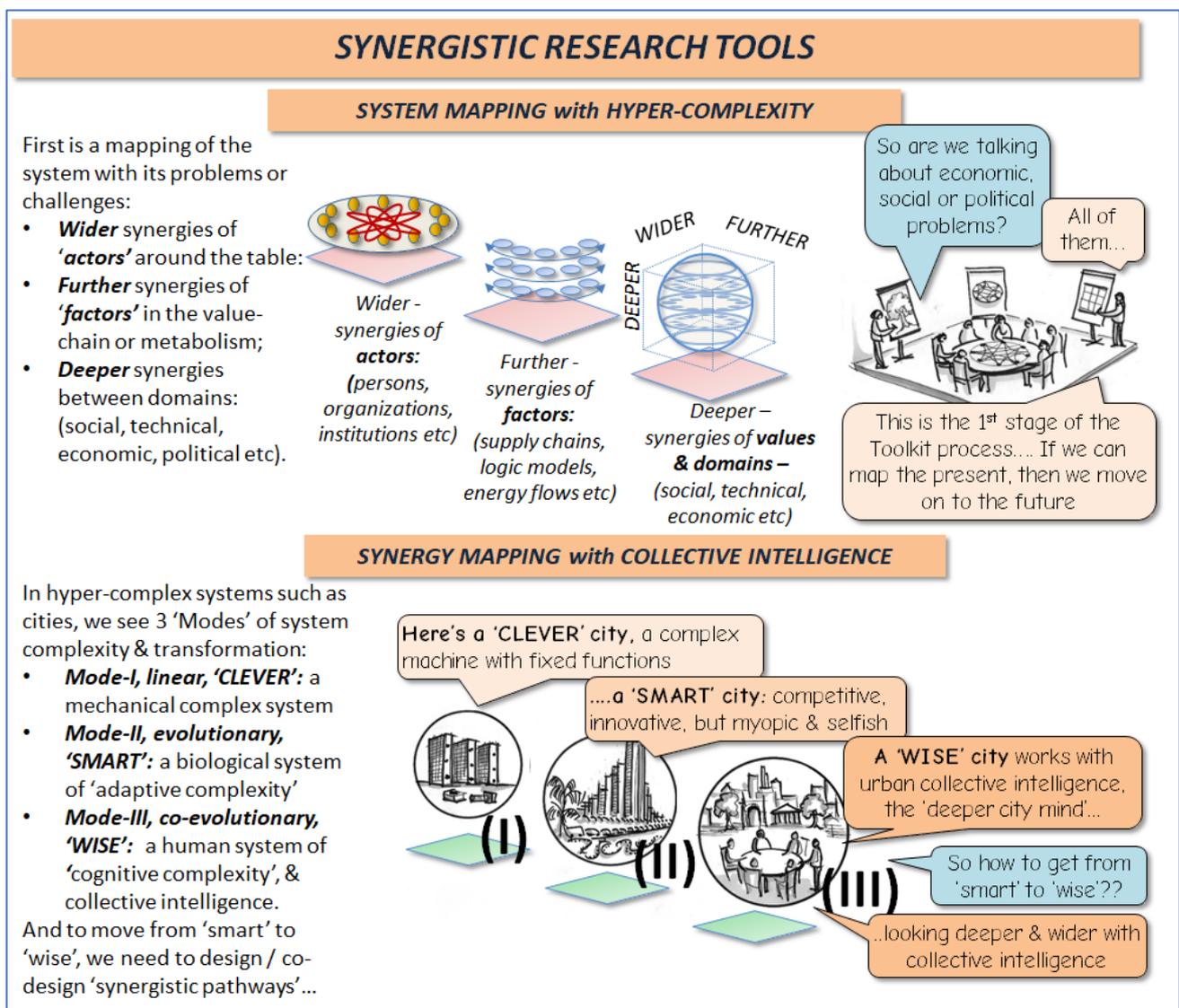
## SYNERGISTIC RESEARCH TOOLS

Societal challenges and hyper-complex problems call for both technical analysis and other angles on human experience, such as visual media or role-plays. With all these we begin to explore systematically, pushing beyond the normal boundaries and silos and departments, looking -

- **Wider** - synergies of actors (people or organizations or institutions or objects).
- **Further** – synergies of factors (flows & metabolisms, value-chains, enterprise models etc)
- **Deeper** - synergies between different domains and value systems (social, technical, economic, political, cultural etc).

Then we look for synergies which are not only mechanical but human: which can turn linear problems into co-evolutionary transformations. A city is a good example:

- 1) **Mode-I**, ('1.0'), mechanical change and '**clever**' systems: 'a city as machine'
- 2) **Mode-II**, ('2.0'), biological evolution and '**smart**' systems: 'a city as jungle or market-place'
- 3) **Mode-III**, ('3.0'), human co-evolution and '**wise**' systems: 'a city as civilization'.

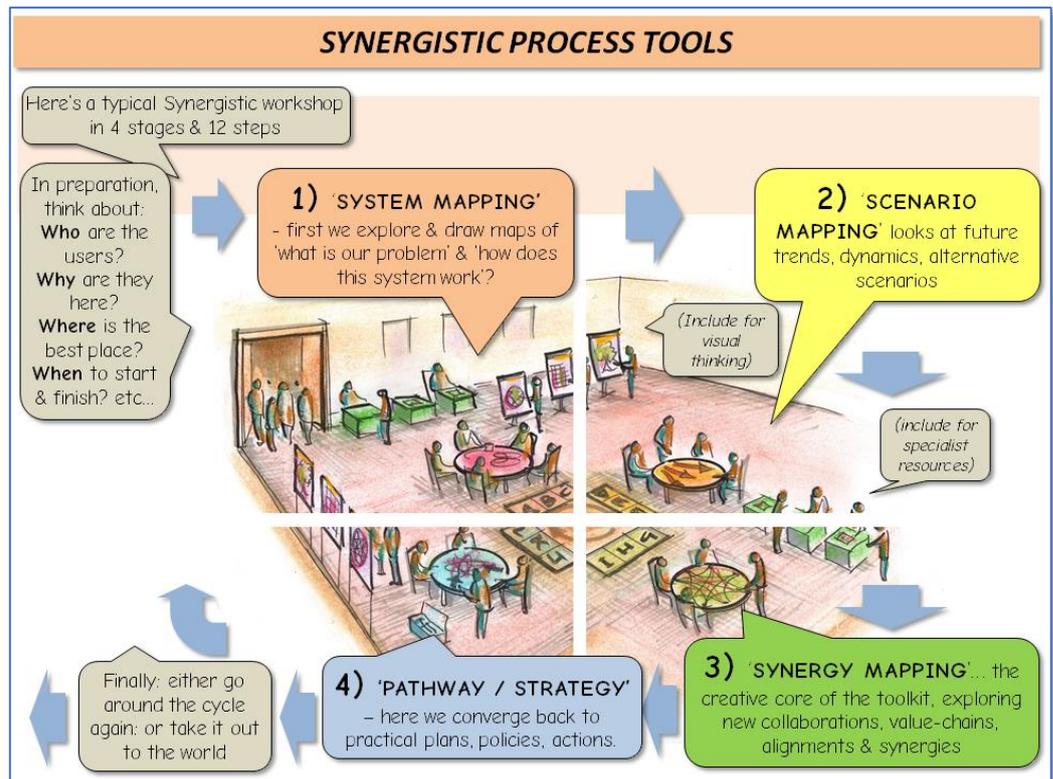


## SYNERGISTIC PROCESS TOOLS

To explore Mode-III transformations and the potential for collective intelligence, calls for creative out-of-the-box thinking. This is not only technical analysis, but more social deliberation: envisioning, synergy building and co-creation. For this we use the synergistic process tools, a flexible kit of parts, with 4 stages and 12 steps:

- a) **System mapping / co-learning:** the baseline syndromes and issues on the table:
- b) **Change mapping / co-knowledge:** the dynamics of change and alternative futures:
- c) **Synergy mapping / co-creation:** design of opportunities, innovations, transformations:
- d) **Pathway mapping / co-production:** design of pathways, road-maps, policies, projects:

Then the practical question is generally – ‘what is to be done??’ For this, we need ways to move from ‘problem’ syndromes (generally in Mode-I or II, ‘clever or smart’) – to ‘solution’ synergies (generally in Mode-III or ‘wise’). So we design ‘pathways’, in the form of **‘synergistic pathways from smart to wise’**. These are flexible and creative combinations of co-learning, co-creation and co-production: visualized as Pathway Mappings, which navigate between problems and solutions.



The picture here shows all four stages in one big room (in reality each could be at a different time and place). The scheme is completely flexible: it can take 4 hours, 4 days, 4 weeks or 4 months, depending on time, people and resources. It can be formal or informal, all the way to a drink in the bar. The cycle can be more interactive, with a real-time workshop type programme, with maybe 40 participants in each session. Or the cycle can be more about desk-study, data-mining, system mapping, expert panels and interviews.

Overall these tools help to identify ‘what kind of problems’ are we talking about: and then link to ‘what kind of solutions’ are most useful, creative and transformative.

## SYNERGISTIC MULTI-VERSITY & COLLABORATORIUM TOOLS

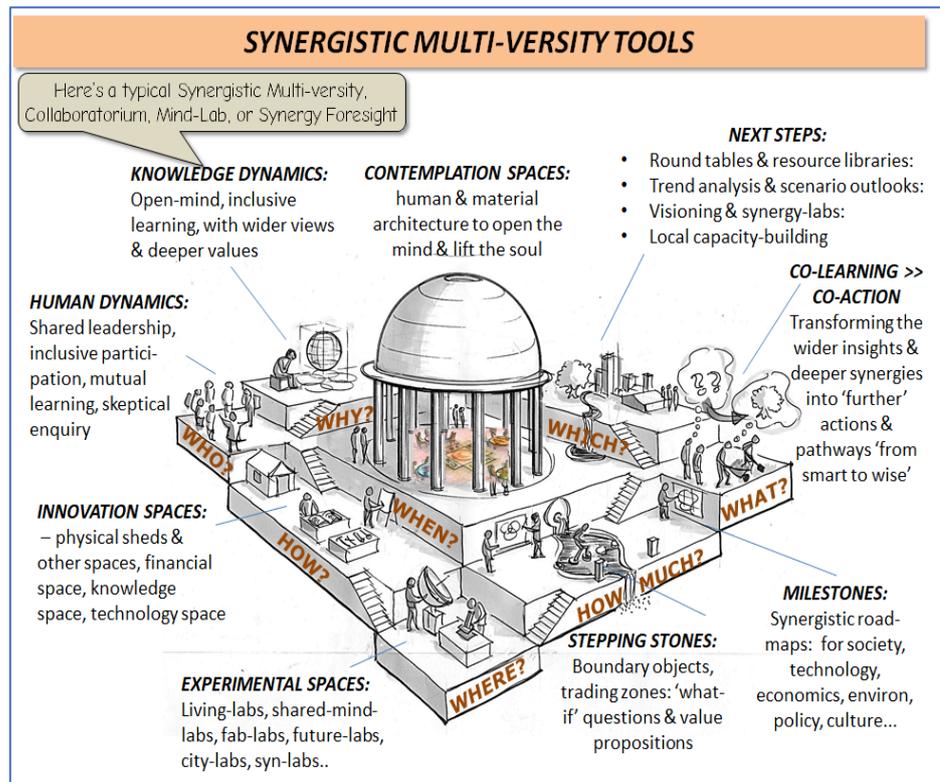
All this starts to build up a wiser ‘collective intelligence’, or a **‘deeper mind’** of cities, economies, governments or any other human system. This goes way beyond smart digital technology, (although smart can be very useful if we learn how to manage it).

The question follows – how to understand or how to grow such a **deeper mind**, in societies, technologies, economies, politics etc?? how does this collective learning and thinking work, and can it be written up or transferred, assessed or evaluated?? There are no fixed answers to these, but many starting points.

One concept is the **Multiversity**, from the idea that useful learning is distributed all around society, not just in the ivory towers of academia. Another is the **Synergi-city**, taking the urban as the basic unit for societal organization. Another is the **Foresight-III** approach, pushing standard foresight methods towards collective intelligence. A fourth is the Mind-Lab or **Collaboratorium**, an experimental research hub. The **Collaboratorium** program at Manchester is building a library of case studies, resources and guidance: in various countries we try different forms of engagement / action research, from lectures and forums, to structured workshops / interviews, with policy, business, civil society and academia.

For the multiversity there are practical questions: **who** is involved, **what** is their purpose, **where** to start, **how much** resources are needed, **how long** does it take, and so on. Here are a wide range of tools, which all enable in some way the collective intelligence –

- Spaces for experimentation, innovation and contemplation:
- Human dynamics and knowledge dynamics, for synergy and collaboration:
- Milestones and stepping stones, to help with navigation of the pathways:



The book **Deeper-City** shows 40 synergistic pathways – not all possible combinations but enough to get started. These pathways are labelled 'Mode-III' or just '-III' for short. For example:

- **City-III:** an intelligent, self-organizing, responsive city and/or region, which provides livelihoods, takes on board ecological cycles, and builds a just & equitable society
- **Economy-III:** systems of production and livelihoods, with recirculating profit and mutual finance, moving from 'winner-takes-all' to 'winners-are-all'.
- **Technology-III:** managing the digital transition from 'smart' tech to 'wise' systems: which integrate markets and supply chains in their context of communities and livelihoods.
- **Governance-III:** political structures which by nature are 'empowering with' rather than 'power over', with public services based on co-production.

Overall, Synergistics doesn't claim to be a 'theory of everything', to forecast the future, or provide easy answers. It's more like a flexible umbrella for other theories or models, all relevant in the co-evolutions to come. The Synergistic Toolkit isn't fixed in stone, it's for users to adapt for the collective intelligence transformation.