FOOD – 3.0:

Collective Food-Farming Intelligence

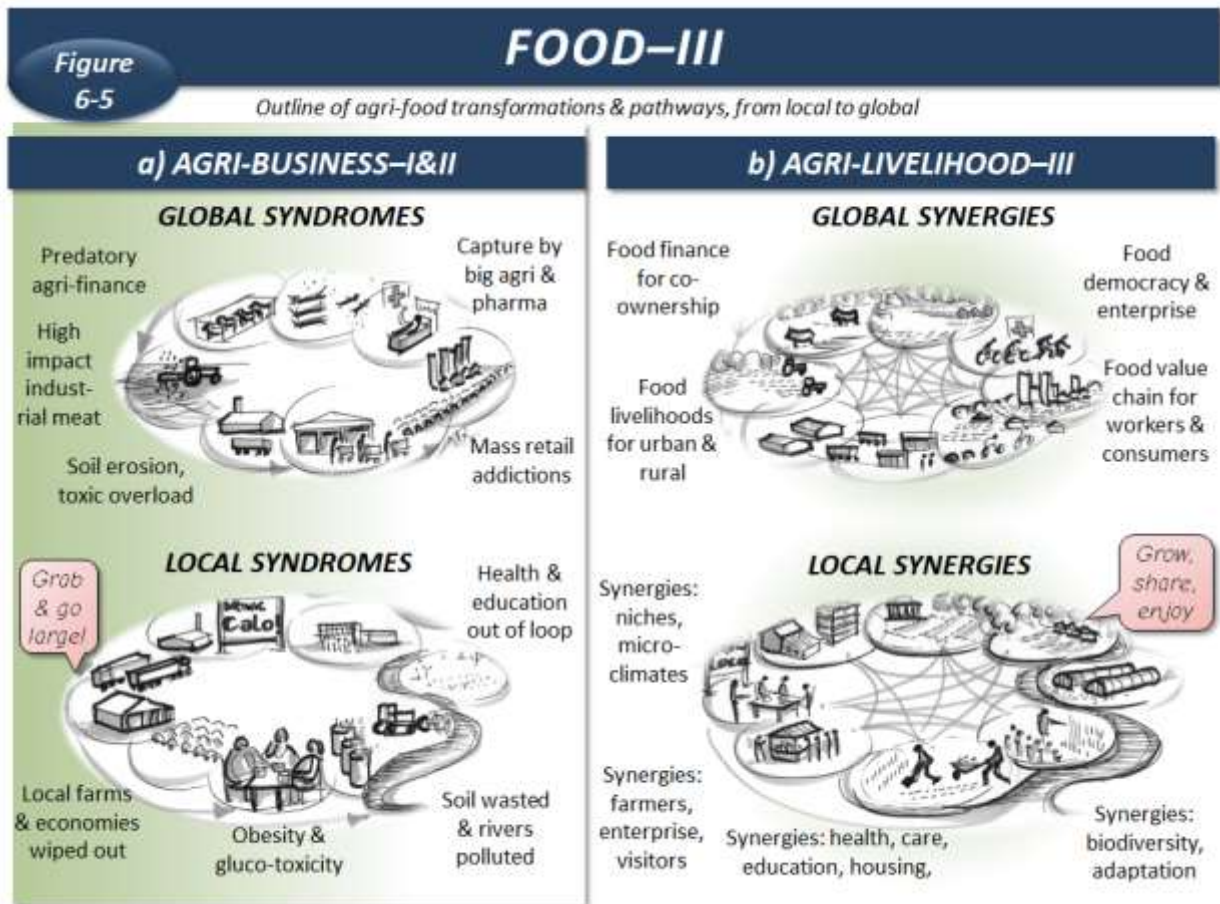## OVERVIEW – PROSPECTS & POTENTIAL IN FOOD & FARMING

The 2008 financial crisis was also a food crisis. Basic prices doubled, citizens went hungry and political turmoil followed. Climate change now brings drought, desertification, soil erosion, invasive species and loss of pollinators, loading the stress on indigenous farmers already under pressure from agri-business and urban developers. If current trends continue, by 2050 we will feed a third more people than today on land-intensive meat diets, with disruption from climate change, mass extinction, human migration and resource conflict.[1]

Figure 6-5

FOOD–III

Outline of agri-food transformations & pathways, from local to global

a) AGRI-BUSINESS–I&II

GLOBAL SYNDROMES

Predatory agri-finance

High impact indust-rial meat

Soil erosion, toxic overload

Capture by big agri & pharma

Mass retail addictions

LOCAL SYNDROMES

Grab & go large!

Local farms & economies wiped out

Obesity & gluco-toxicity

Health & education out of loop

Soil wasted & rivers polluted

b) AGRI-LIVELIHOOD–III

GLOBAL SYNERGIES

Food finance for co-ownership

Food livelihoods for urban & rural

Food democracy & enterprise

Food value chain for workers & consumers

LOCAL SYNERGIES

Grow, share, enjoy

Synergies: niches, micro-climates

Synergies: farmers, enterprise, visitors

Synergies: health, care, education, housing,

Synergies: biodiversity, adaptation

The challenge of a *Food-3.0* or ***FOOD-III*** agenda is generally agreed: to meet human needs, support farming and food-based livelihoods, respect local ecosystems and maintain the global climate. As for ways forward, there are profound differences. Can new technology and global markets save the day, or as the IAASTD puts it, 'multi-functionality' in food and farming, for communities, economies and ecologies?[2] Clear targets are now set by the EAT Commission, for 'safe operating space' on the global farming supply side, and healthy diets on the consumer demand side, aiming to shift from meat and sugar towards fruit and vegetables, nuts and legumes.[3] But this and similar reports from FAO, WHO and others, tend to stop short of the structural issues. There are huge challenges and pressures from agri-business lobbies, land conversion economies, geo-political trade dependencies and cultures of mass consumption. Here the *synergistic mapping* is a useful starting point for food systems design:

- 'Mass' food in a *Mode-I* industrial production system;
- 'Smart' food, a *Mode-II* system of finance, technology innovation, marketing, lifestyles and impact displacement;
- 'Wiser' food, a *Mode-III* combination of eco-efficient production, social responsibility and well-health, linking global chains with local livelihoods.


The qualities of this *Mode-III collective food-farming intelligence* is both a global and local agenda. So how to make it work, in the face of predatory agri-business and pathological food cultures?   Here we use the synergistic toolkit for mapping and design of pathways forward….

'Food-III' has to somehow, connect the business of food and farming, with social, technology, ecology, economic, political and cultural issues. Meanwhile, other 'grand challenges' such as artificial intelligence or social inequality, are even more 'hyper-complex', inter-connected, and controversial. What can be done?

'Synergistics' – the science and art of working with synergies – has been developed for such challenges. It provides practical methods and tools, to help explore and enable 'collective intelligence'. It can work in organizations, institutions, supply chains or value-chains, business / enterprise models, networks or communities.

To explore the potential for collective intelligence, calls for creative and visionary thinking. For this we use the Synergistic Toolkit, a flexible set of techniques with 4 stages and 12 steps:

   a)   *System mapping:* the baseline syndromes and issues on the table: also includes '*co-learning'*:
   b)   *Scenario mapping:* the drivers of change & alternative futures: ('*co-knowledge'*):
   c)   *Synergy mapping:* design of opportunities, synergies, innovations: ('*co-creation'):*
   d)   *Strategy mapping*: design of practical pathways, road-maps, policies & projects ('*co-production'*).
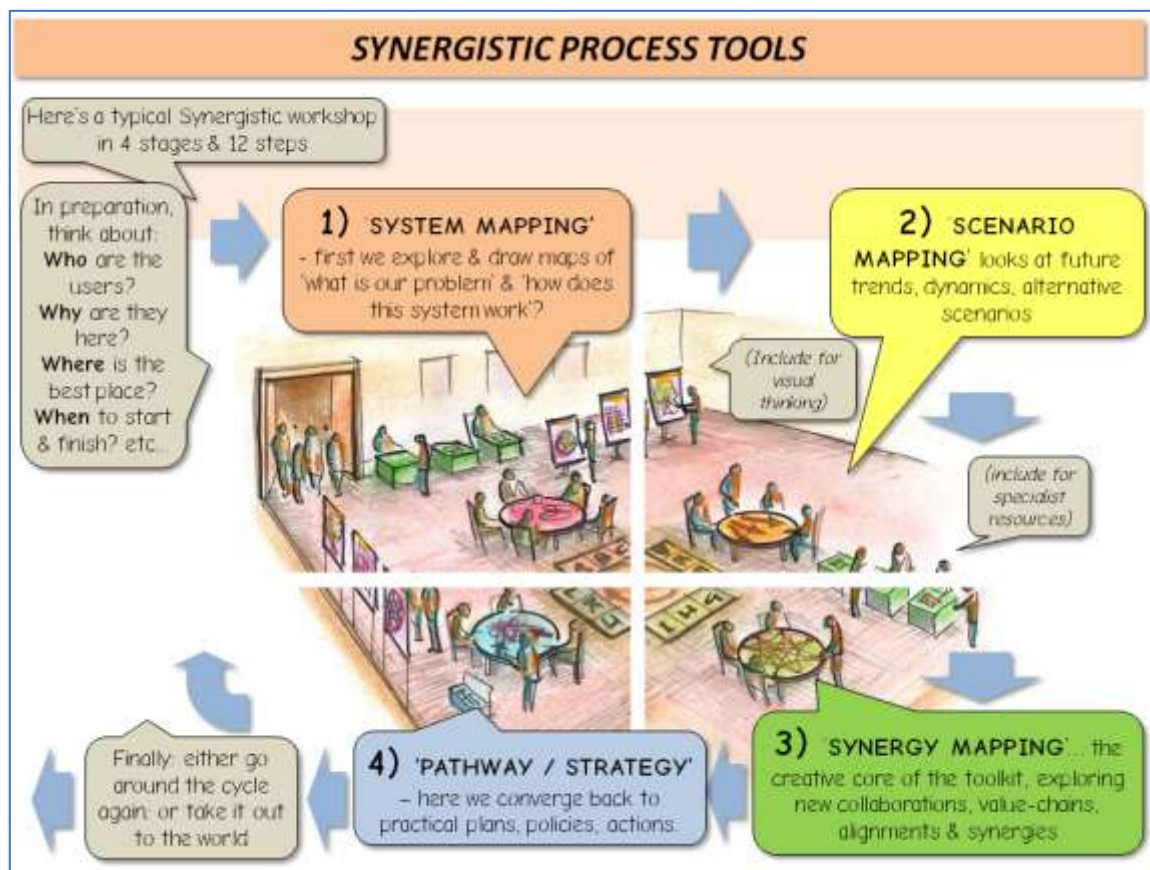
The picture here shows all four stages in one big room (in reality each could be at a different time and place)**.** The scheme is very flexible: it can take hours, days, weeks or months, depending on time, people and resources. The cycle can be more interactive, or more about desk-study, data-mining, expert debate, or stakeholder interviews. Overall these tools help to explore 'grand societal challenges': to identify 'what kind of problems' are we talking about: and then explore 'what kind of solutions' are most useful.

Visual thinking is at the centre of the synergistic methods and tools. This Guide provides a series of templates and typical questions, for each of the 4 stages and 12 steps.
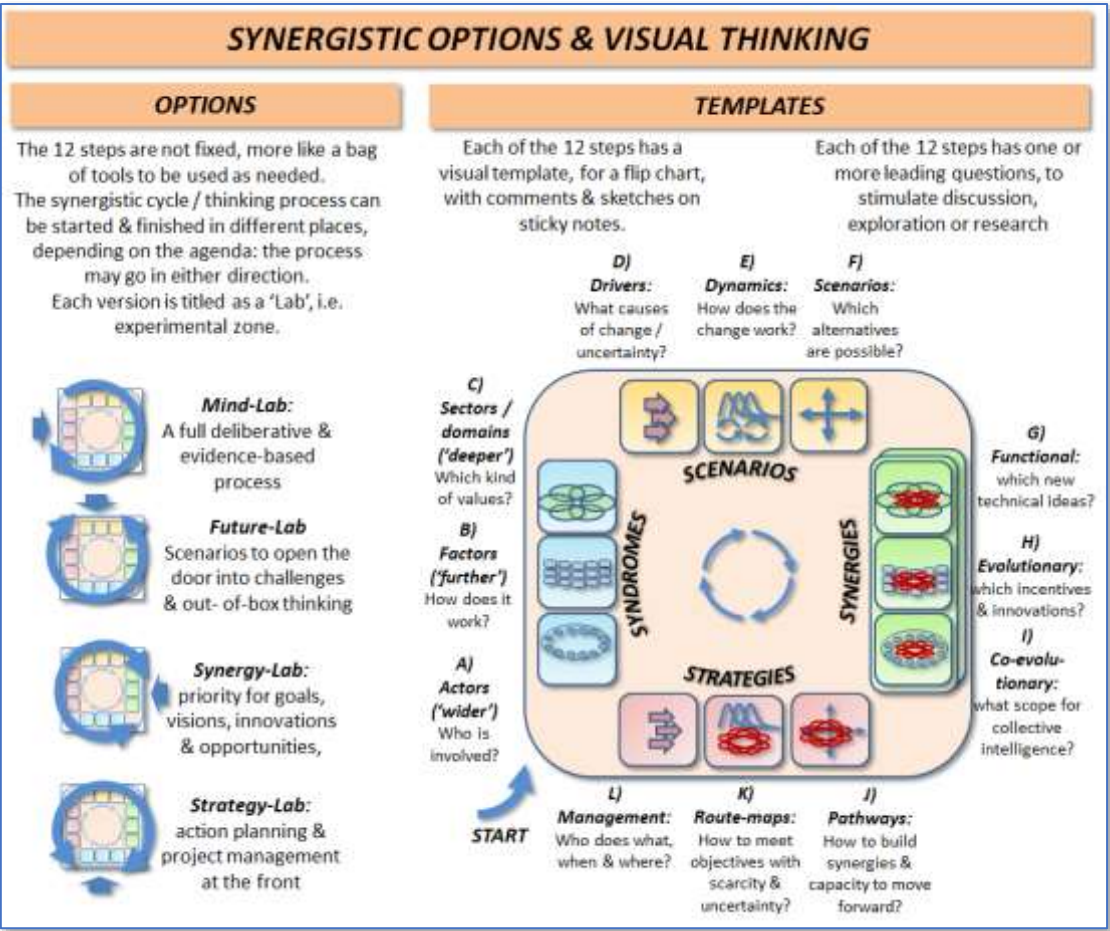
VISUAL THINKING AND VISUAL TEMPLATES

These visual templates provide a easy and practical structure for building and visualizing complex information, i.e. concept maps / systems maps / *deeper-mind* maps. (these are different to *mind-maps*, as they focus on collective intelligence with multiple agendas).

The templates can be easily copied onto flip charts with writing or images on sticky notes. The order of using the templates depends on the theme, the event, the participants etc. Sometimes we start with the Scenario Mapping (D,E,F): in others we start with Synergy Mapping (G,H,I).

Overall, visual thinking is one of the best ways to explore creative, out-of-the-box, inter-connected ideas.

- Participants are asked for visual ideas or small sketches, to be completed by a graphic facilitator.
- Participants can respond to 'future cards', 'scenario visions', or other visual inputs
- Participants are encouraged to draw concept mappings, using the visual templates.
- The templates are very flexible, and can be used in a creative open-minded way.
- If participants don't agree on the images or mappings, each can do their own version.
- The templates in stage 1 & 3 are focused on the development of collective intelligence.
- The templates in stage 2 & 4 fit with mainstream futures / scenario methods: and with standard route-mapping / project management methods.

Each of the 4 stages and 12 steps is shown in the following pages, with likely questions to be addressed, and with cues for visual thinking methods. The graphics on the left side are blank templates (to be copied onto flip-charts or similar). The graphics on the right side are worked examples (based on a low-carbon example).

A) ACTORS MAPPING – ('WIDER' SYNERGIES): ***'ROUND TABLE'*** TEMPLATE

- *Q: Who is involved?*
- *Q: how do they interact?*

Identify the most important people, stakeholders, communities: explore their roles & relations (social, economic, political etc).
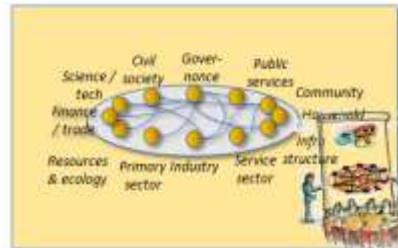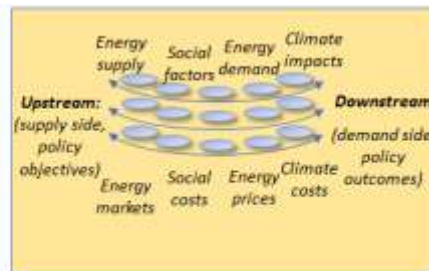

B) FACTORS MAPPING – ('FURTHER' SYNERGIES): ***'BUSINESS MODEL'*** TEMPLATE

- *Q: How does the system work?*
- *Q: Where are the upstream / downstream factors?*

Explore the metabolism or flows (resources, money, policy, labour, social value etc):

Look for upstream causes / downstream effects of the flows, (e.g. ecological / social impacts)

C) DOMAIN MAPPING – ('DEEPER' SYNERGIES): ***'CLOUDY CRYSTAL BALL'***.

Questions to be addressed:

- *Q: Why is this project important?*
- *Q: Which values & domains are involved?*

Explore what kind of problems & what is the scope: which are the goals / visions? (social / technology / economic / environment / political /cultural etc).
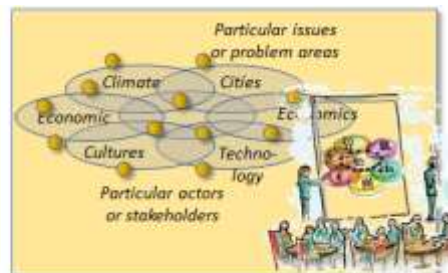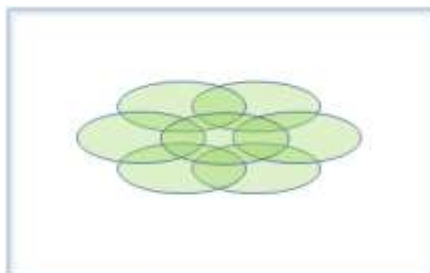
DRIVERS - *'FORCE FIELDS'* TEMPLATE

- *Which forces of change?*
- *Which uncertainties?*

Identify each kind of change, for impact & uncertainty. Select the top 2 or 3 most important changes.
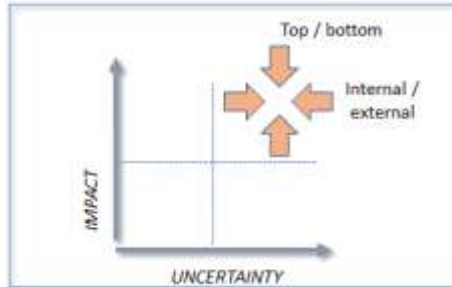
D) HORIZONS - *'3 MOUNTAINS'* TEMPLATE

- *When are the horizons of each change?*
- *Which are surface / structural / archetype changes?*
- *When is there growth / decline/ restructuring?*

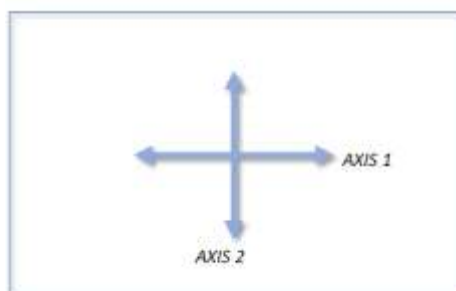Explore which are short / medium / longer term changes:

Explore the patterns or cycles of change
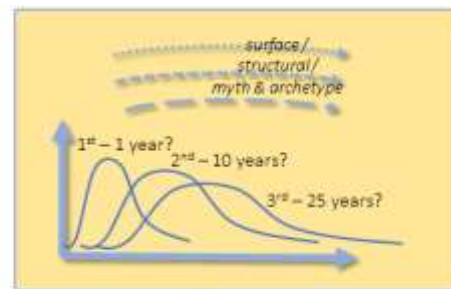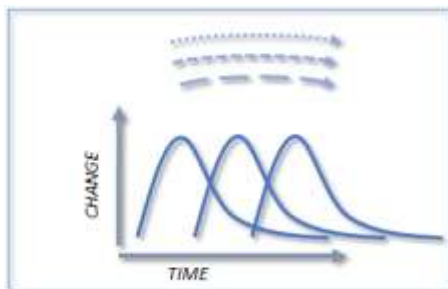
E) SCENARIOS - *'CROSS-ROADS'* TEMPLATE

- *What if the best / worst happens?*
- *Which are the most 'interesting' alternative futures?*

Explore 'what-if' the top 2/3 changes are high / low impact, positive / negative.

Explore the scenarios with stories, headlines, images.

F) LINEAR – (MODE-I) - *'CLEVER IDEAS'* TEMPLATE

- *How to improve the functions & operations?*

Explore practical ideas & synergies between the 'actors' & 'factors' (social / technology / economic / environment / political /cultural etc). Draw the possible inter-connections.
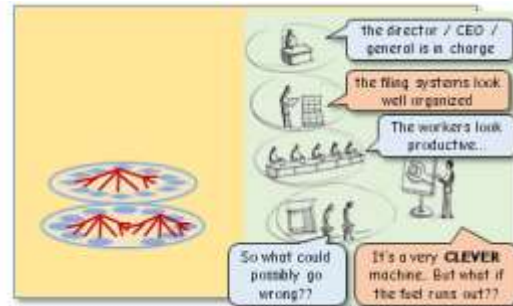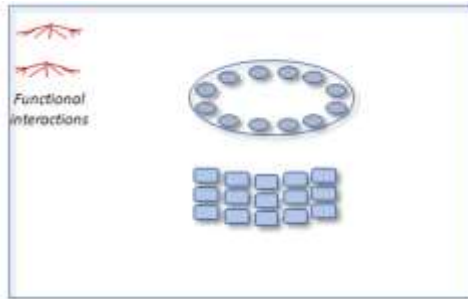
G) EVOLUTIONARY (MODE-II): *'SMARTER IDEAS'* TEMPLATE

- *How to make smarter inter-connections?*

Explore the state-of-the-art entrepreneurial ideas & synergies between 'actors' & between 'factors'. Draw the possible inter-connections.
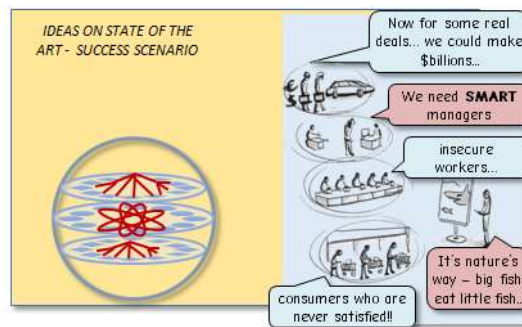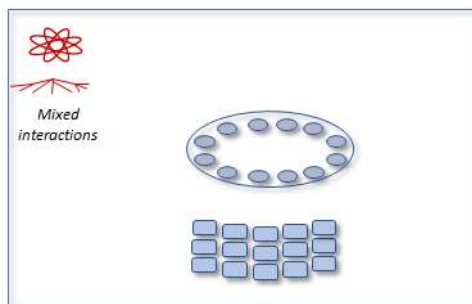
H) CO-EVOLUTIONARY (MODE-III): *'WISER IDEAS':* TEMPLATE

- *How to grow a wiser kind of intelligence?*

Explore beyond state-of-the-art 'visionary' ideas & synergies, between different 'actors' & 'factors'. Draw the possible inter-connections, with multiple layers.
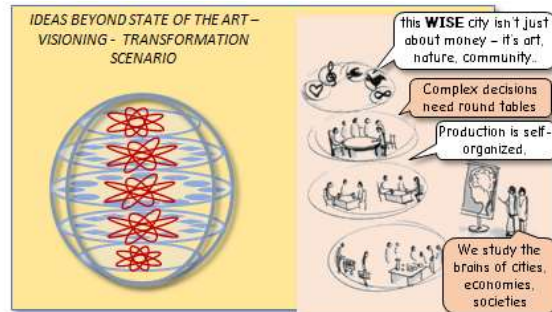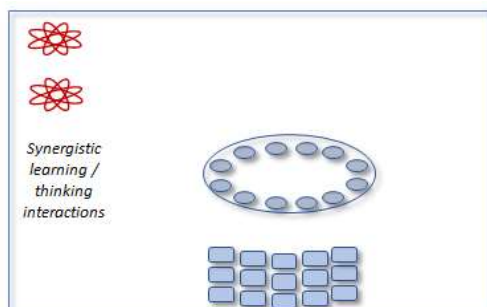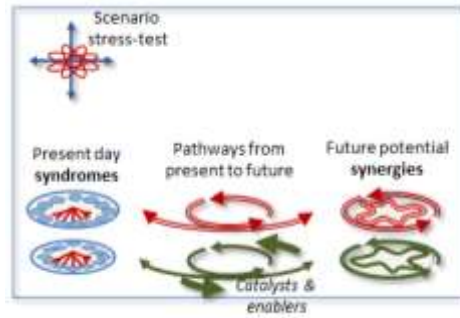
(J) PATHWAYS - 'PATHWAYS'

- *Which pathways could best realize the opportunities??*
- *Are these future-proofed?*

Develop 'pathways' of strategic change, which connect the most robust ideas / synergies (internal / external: short /medium / longer). *(there are different formats to show the pathways)*
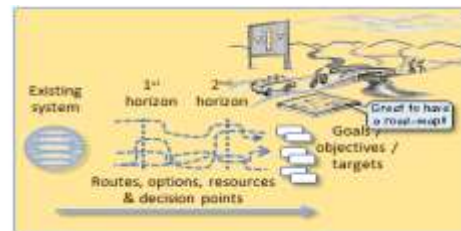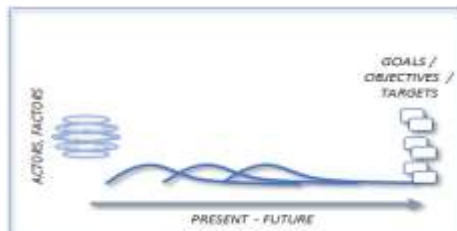
Test the best ideas / synergies against each scenario: & select the most robust.

(K) ROUTE-MAPS - 'ROUTE-MAPS'

- *What strategies could turn the pathways into reality??*
- *When are the key stages?*
- *How much resources are needed?*

Identify the goals & objectives: Identify links to plans & actions, actors involved, factors & resources needed. (internal / external: short /medium / longer)

(L) MANAGEMENT/ EVALUATION - 'ACTION PLANS'

- *How to manage the actions?*
- *How to evaluate the results??*

Set up management plan with practical priorities & actions: Identify the next steps with actors & resources: Explore how to monitor performance, evaluate results & feedback.
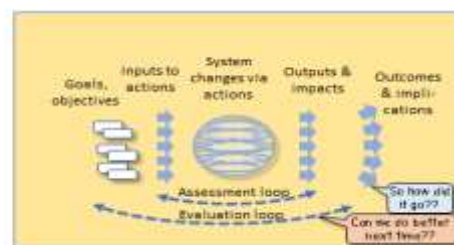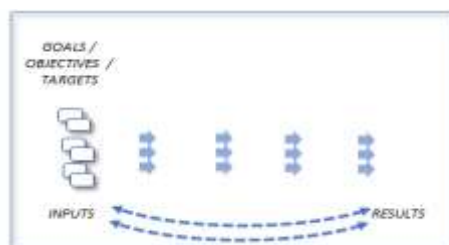
<note>[1] Bourne 2015

<note>[2] IAASTD 2009

<note>[3] EAT-Lancet 2019