

*'The world is infinitely complex and the human mind fallible, so the future will forever be uncertain'.*

(Dan Gardner, Future babble)

*"It's a poor sort of memory that only works backwards", the Queen remarked'.*

(Lewis Carroll, Through the looking-glass)

*'We tend to "tunnel" while looking into the future, making it business as usual, Black Swan-free, when in fact there is nothing usual about the future'.*

(Nassim Nicholas Taleb, The Black Swan, the impact of the highly improbable)

## **Managing uncertainties in urban and regional development**

We live in an unpredictable world. Take issues such as *oil, food, terrorism, recession, unemployment, deficits and debt, environmental crisis, the decline of the United States...* (Gardner, 2011). The question is: *If the future is unpredictable, doesn't that mean all our planning and forecasting is pointless?*

Not if we know how to manage uncertainties. Dealing with this in the present essay, is not about the treatment of uncertainty in the sciences (Rouvray, 1997), however interesting this may be. This does not mean however that theoretical notions are irrelevant in relation to practical approaches (Van der Sluijs & Schulte Fishedick,1997).

Our focus is on cities and regions which, in the face of global uncertainties, seek a way out of being only at the mercy of what is happening elsewhere. Kuklinski wrote about *a certain autonomy of regions with regard to globalization*. But this *certain autonomy requires a proper management of uncertainties*, starting with acknowledging the fact that uncertainties do exist and identifying them.

To avoid being at the mercy of global events, requires –first of all- a **strategic regional (urban) development plan.**

This implies a vision, which in order to be strategic and not abstract, must be matched with projects. If they match these projects become strategic instead of just ad hoc. This kind of strategic thinking can best be illustrated by the so-called mixed scanning approach (Drewe, 2011).

Mixed scanning proceeds by four interacting steps:

- Analysis of existing situation
- Design brief of the development problems a city or region is facing
- Design/redesign: defining and matching of visions and projects
- Implementation & monitoring

See figure for the interactions involved.

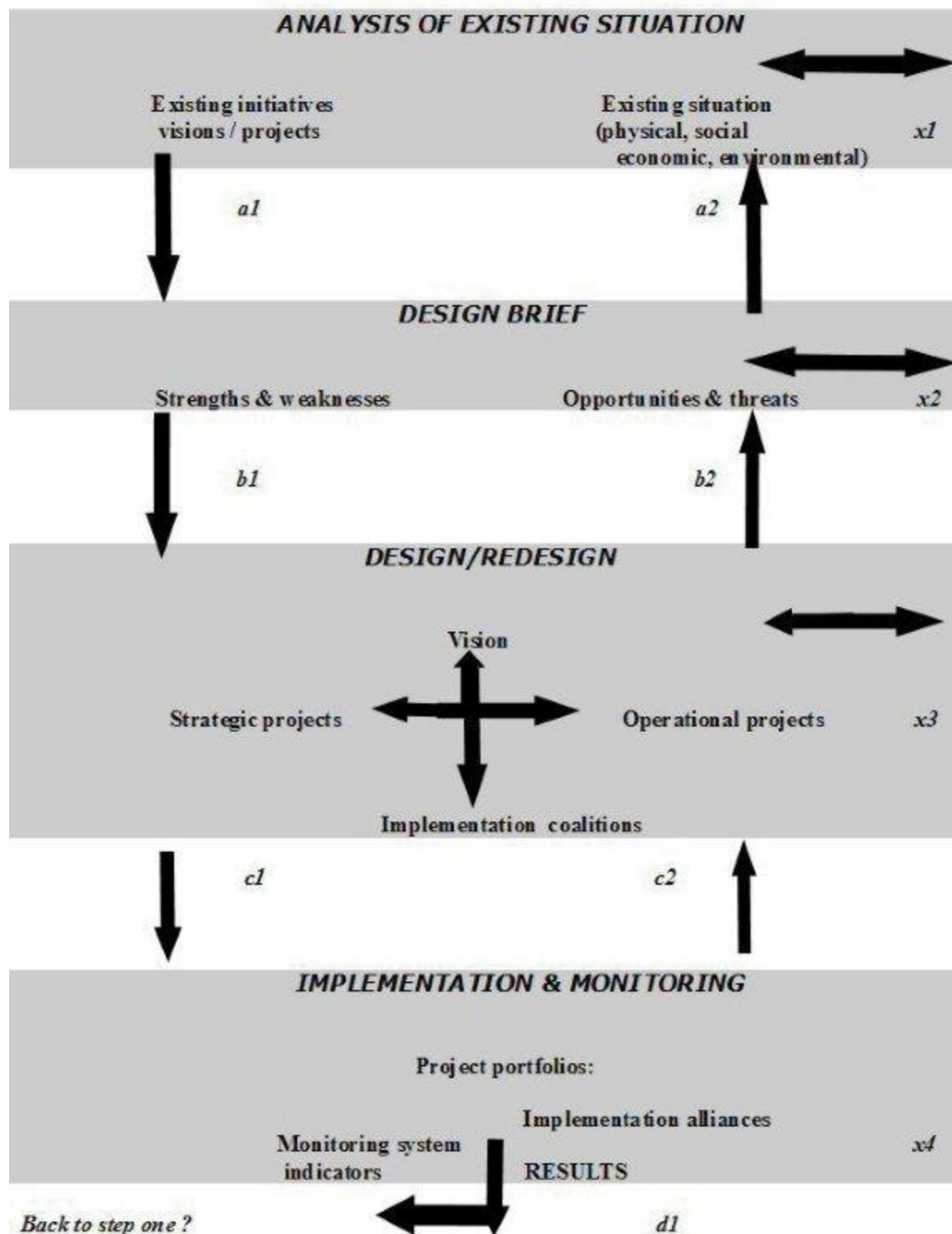
The *analysis of the existing situation* also includes existing projects, visions and ideas with regard to the future of a region (city).

*Design briefs* are primarily focused on internal strengths and weaknesses (known from the SWOT analysis). Mixed scanning is a search for visions and projects that either use a region's strong points or try to mend its weak points. Opportunities and threats (also derived from a SWOT analysis) are external factors that position a territory in a larger context. Existing global scenarios can be used to identify both opportunities and threats.

*Design/redesign* is a step that serves to translate the brief into visions as well as strategic and operational projects. This step includes a reality and robustness check of visions focused on feasibility and sustainability. To do so, an ex-ante evaluation is carried out.

The final step is *implementation & monitoring*.

Uncertainties are not very popular with planners or politicians for that matter. But if uncertainties are not acknowledged, there is no hope for mastering them. Uncertainties mainly pop up respectively at the design brief and the design/redesign stage with respect to (external) opportunities and threats and with regard to robustness – and to a lesser extent – in future-oriented notions analyzed at step one. But mixed scanning, too, caters to ways of managing uncertainties, that is global scenarios and monitoring. More about this later.



The practical approach to uncertainty management took off in spatial/ planning in the UK around 1970. See for example Friend, Power & Yewlett, (1974). This is based on the strategic choice approach launched by Friend & Jessop (1969).

As shown in the figure below (Friend, Power & Yewlett, 1974:32), the authors distinguish three types of uncertainty:

- *Uncertainties about the operating environment*
- *Uncertainties about related choices*
- *Uncertainties about policies*

One might add *uncertainties about means*.

Once the uncertainties have been diagnosed, there are two options:

- They can either be *reduced*
- or they must be *accepted*

Reductions depend on the type of uncertainty:

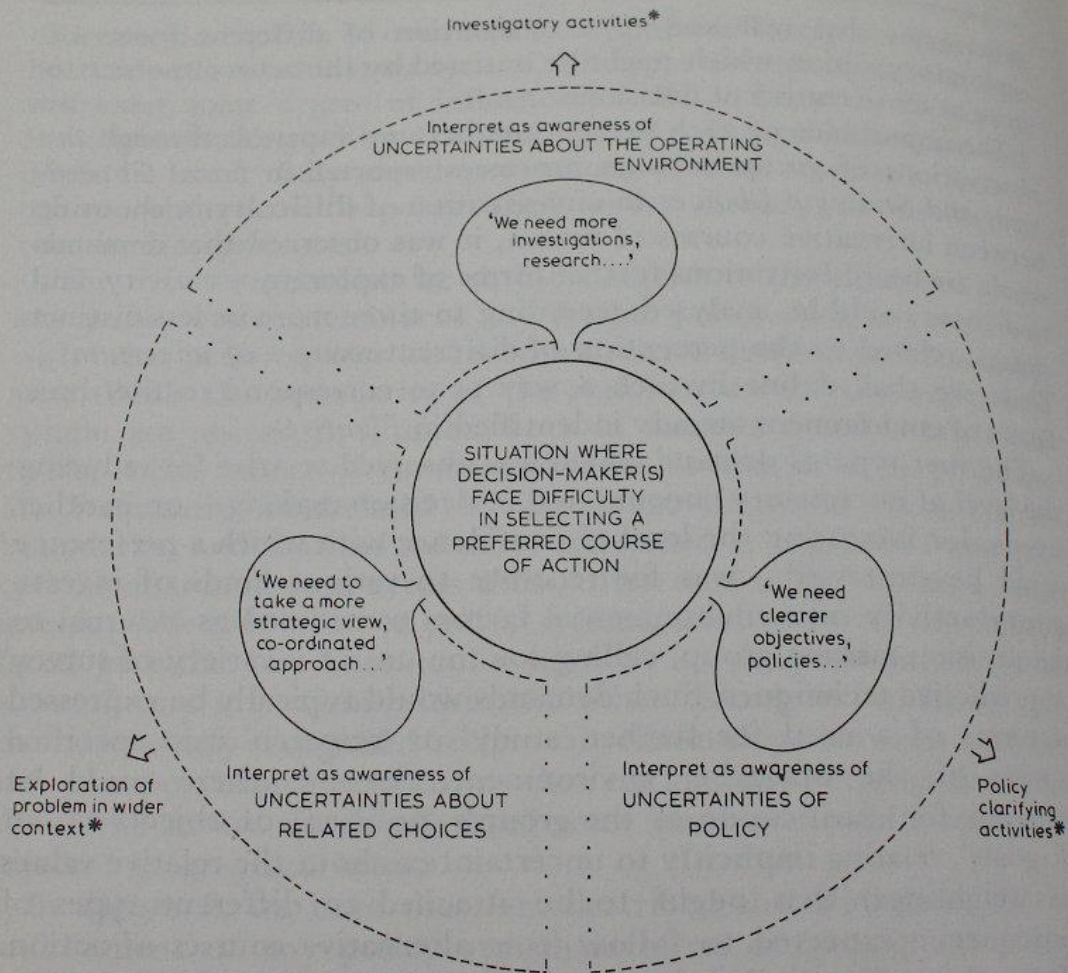
- more research or investigatory activities about the environment in which one operates; these activities preferably should include scenario building
- policy clarifying activities when clearer objectives are needed
- a more strategic view or coordinated approach: after exploring a problem in a wider context, this can lead to partnerships, e.g. an interregional cooperation
- more means, financial and others plus public private partnerships

Focusing on *more research and investigatory activities*, scenario building is of special importance in uncertainty management. The following comments are based on earlier articles (Drewe, 2006,2007) and the practical experience of working with Crozet & Musso (2003).

There are some dos and don'ts involved in scenario building.

Scenarios should not be mistaken for *predictions*. The future simply is unpredictable. There is too much future babble. Neoclassical economists, in particular, can hardly show the way, reducing uncertainty (Keene, 2008).

Figure 10 Sources of uncertainty in decision-making



\* Each of these three types of activity can be regarded as a different form of RESPONSE TO UNCERTAINTY in decision-making. Important choices may therefore be faced, in any difficult decision situation, as to which forms of response (if any) should be initiated

Scenarios do not depict *desirable* futures either. If they are interpreted that way, objectives are rather hidden than the result of policy clarifying activities.

What scenarios *can* do, is show *possible* futures, in our case, for regions.

One also should note that in modern scenario building, the emphasis has shifted from the scenarios themselves to the way they are *used*. Use starts from identifying the level of uncertainty or the type of environment. Companies, for example, may be faced with:

- level one: a clear enough future
- level two: alternative futures
- level three: a range of futures
- level four: true ambiguity

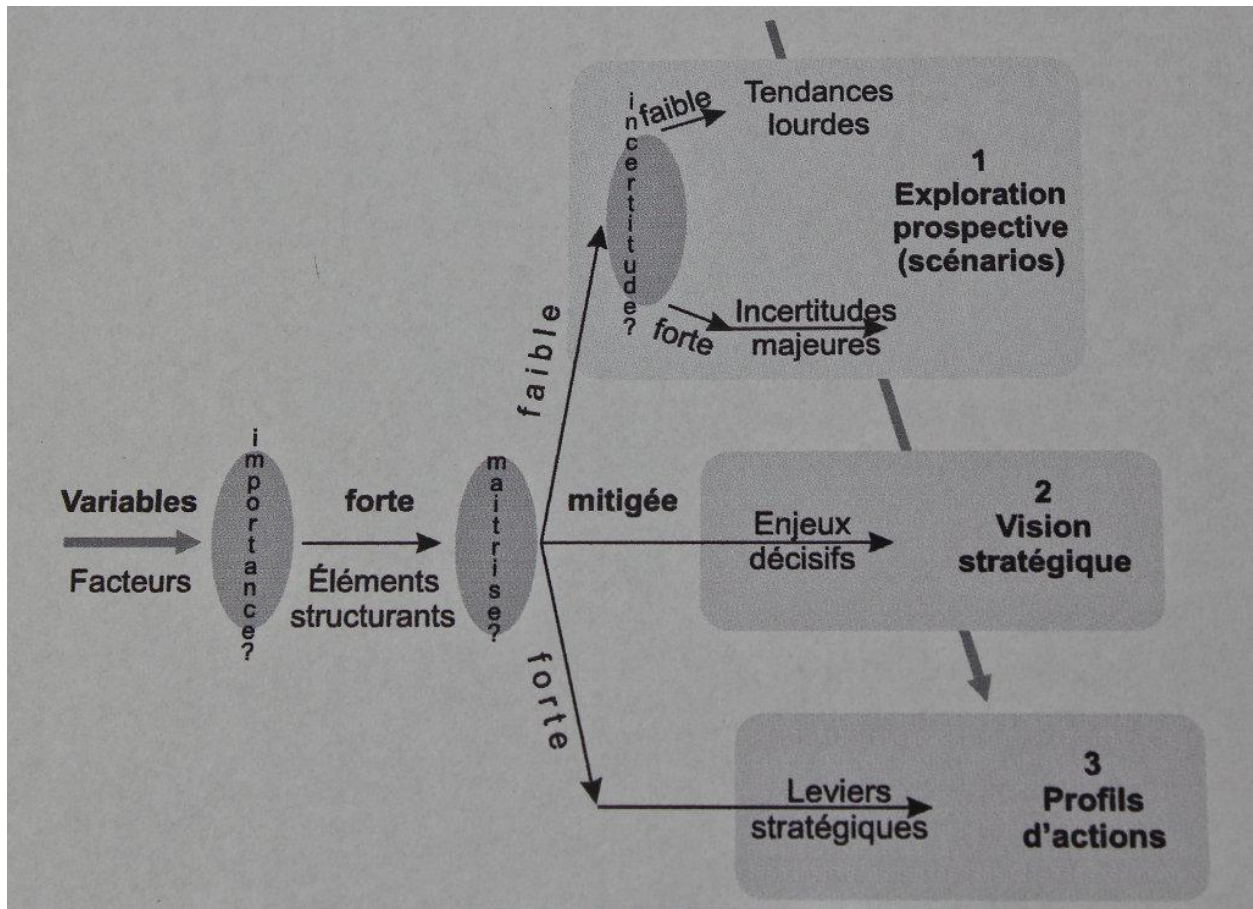
See Courtney, Kirkland & Viguerie (2001) for details.

Arcade (...) distinguishes four types of environment in which e.g. a region operates:

- continuous (dominated by trends)
- discontinuous (ruptures possible and to be expected)
- imponderable (remixing of extreme scenarios)
- indiscernible (total uncertainty)

Each level or type of uncertainty requires a different strategy. In the case of a clear enough future, a scenario is not needed at all. Continuous environments, too, are easily handled. But these levels or environments seem to be rare today, especially in the long view.

Arcade has also proposed an interesting approach for the mastery of uncertainties. The key concept here is controllability (*maîtrise*). See figure (from Crozet, 2003: 60). The question is whether there are controllable areas that can provide strategic levers of intervention (*leviers stratégiques*).



At the end of the day, we may be facing true ambiguity or total uncertainty. Indeed, not all uncertainties can be reduced. Some must simply be *accepted*. However, instead of doing nothing and running the risks, one can strive for built-in flexibility of decision making processes and policy decision as such. Another way of coping with uncertainty is the precautionary principle which helps to choose whether an action should or should not be taken without knowing the risks with certainty (see Wikipedia). This is clearly a case where uncertainties (about harm to the public or to the environment) must be accepted. If the action is not taken, life continues. But if it is taken, the benefits can be enjoyed, but only if the action has not caused grave harms. If it has, however, a worst case scenario is deployed.

Gardner recommends the *model of how a fox works his way forward into the darkness of the future. It is informed by the past, it is revealing about the present, and it surveys a wide array of futures. It is infused with metacognition...It offers hopeful vision of what could be; it warns against*

*dangers that also could be. It explores our values by asking us what we want to happen and what we don't. And it goes no further. It raises issues, and it suggests possibilities and probabilities. But it does not peddle certainties, and it does not predict (Gardner,2011: 263-4).*

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