

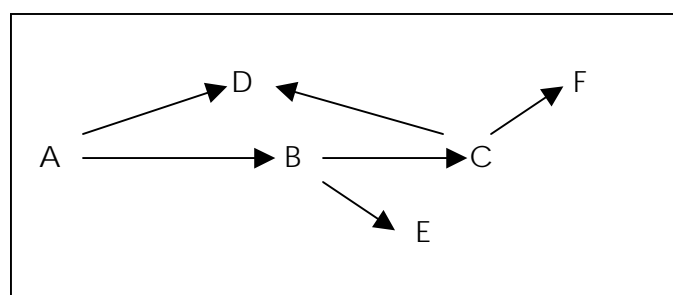


HenleyCentreHeadlightVision

Appendix K: Understanding the systems and futures tools employed

A report for Natural England's
outdoor recreation strategy

1. This is a technical appendix which summarises the drivers' assessment processes used in the mapping analysis used in the Impact Paper, and in the impact matrix analyses which are a common feature across the five core papers.
2. Most futures work is based on understanding the relationships between 'drivers of change' in a particular system, and the ways in which the system may respond and adapt over time as drivers evolve and the relationships between them change.
3. In the case of the Henley Centre work for the Countryside Agency and its future Natural England partners, the overall 'system' is outdoor recreation in England between now and 2020. There are also subsystems for each of Demand, Supply, Health and Planning.
4. The critical factor is establishing the relationship between different drivers within the system. As stated we used two main tools, the mapping analysis and the matrix approach. These seek to achieve the same aim through slightly different methods and therefore can act as a check on each other.
5. The mapping analysis by identifying causal relationships between drivers and their direction. In the simplified diagram below, Driver A influences both Driver B and Driver D. In turn Driver B influences Drivers C and E. However, such relationships are often less tidy than this clear directional flow implies. Driver C also influences Driver D in this diagram. In practice, there will also be feedback loops in parts of the diagram.



6. Assessment of which driver will influence another can be made in a number of ways. Some are well-established in the evidence base (Increasing affluence will lead to an increasing spend on leisure and services). Some are based on futures practice and knowledge of or research into user trends (people find themselves short of time or energy and attach more importance to well-being as a result). Some, including those which are specialist to the subject area) are tested with stakeholders during interviews, literature review, and through dialogue during workshop processes, drawing on the tacit knowledge of participants. Sometimes during the analysis it becomes clear that a driver which is a part of the logic of the narrative is absent. This will be added.

7. The map thus constructed can be tested by eye. Generally, this helps to identify issues which are significant to the overall behaviour of the system. We also use a software tool, Decision Explorer (www.banxia.com) which tests the mapped relationships by use of algorithms which assess the level of connectedness of different drivers to the overall system. It should be emphasised that this is not a 'black box'. It does nothing that could not be done, more slowly, by eye. It does, however, remove cultural or institutional bias from the assessment process.
8. Drivers with the greatest number of relationships, both in terms of immediate connections and also secondary or tertiary connections, are the most important and the most uncertain. As such, these are the most unstable and will have greatest impact if they change.
9. The second tool, the Impact Matrix, also infers information about the overall system by understanding the causal relationships between the drivers, but through a slightly different methodology. Again, relationships are assessed through application of judgement; outcomes are relative, not absolute. The conceptual framework is based on a technique originally developed by the French futurist Michel Godet.¹
10. The impact matrix is constructed by drawing up a matrix which includes all the drivers identified through the research phase, including workshops, as appearing to be important and/or uncertain. Each driver is then scored for the extent to which it influences each of the others (typically a scale of 0-5 provides sufficient range and variety, where '5' represents 'significant influence', '1' represents 'a little influence', and '0' represents 'zero or minimal influence'). Driver A is thus assessed for its influence on **all** of the other drivers in the set, from Driver B to Driver *n*. This process is then repeated for each of the other drivers in the set, down to the last Driver, Driver *n*. As with the Mapping Analysis, the process is conducted through the application of informed judgement. The process is shown visually in the table below.

	A	B	C	D	E
A	X	2	-	1	-
B	et c	X			
C			X		
D				X	
E					X

11. The outcome at the end of the scoring process is that each Driver has two scores attached to it. The "dominance score", summed at the right hand

of the matrix, represents the sum of its horizontal scores (the total influence it has on all the other drivers; or how dominant its effect it is on the other drivers). The 'dependence' score, summed at the bottom of the matrix, is the sum of its vertical scores, which represents the influence which all of the other drivers have on it (or how dependent it is on the influence of the other drivers). These scores are then ranked and reflected visually in the Impact Matrix.

12. Outcomes in the Impact Matrix are relative, not absolute. Drivers are distributed in the Matrix by calculating the relative weight of their Dominance scores (high, medium or low) and their Dependence scores (also high, medium or low) and assigning them to the relevant square in the 3x3 grid.
13. When this process is repeated for overlapping sets of drivers (as we have done for different Recreation Papers) and in the context of a different question ("what is the impact of this driver on the others in the context of the demand for outdoor recreation" versus, say " "what is the impact of this driver on the others in the context of the relationship between outdoor recreation and health"), the outcome for a particular driver is likely to change from paper to paper.
14. The purpose of an impact matrix is to help understand which drivers of change are open to influence in any given system, which influence the system from outside (and will therefore create the context for change) and which are effects. The benefit of this for strategic purposes is that it reduces effort which might otherwise be expended on issues outside of one's control, focuses attention on places where the strategist may have an influence, and helps understand unintended consequences.
15. Analysis of the Impact Matrix is as follows:
 - **High/Medium Dominance, Low Dependency** drivers influence the system, but are largely outside it. They are 'context-setters'. Policy needs to respond to it, but will have little influence on such drivers
 - **Low Dominance, High /Medium Dependency** drivers are outcomes of the system. They do not influence very much, but are influenced. They are typically linked clearly to other drivers within the system. They can't be influenced directly but through the drivers of change which influence them.
 - **Low Dominance/Low Dependency** drivers are unimportant in terms of the overall working of the system and can be disregarded,
 - **High /Medium Dominance, High/Medium Dependency** drivers are generally well connected together, and form the heart of the system under analysis. In policy terms the degree of connectedness means that there are opportunities to influence outcomes.
16. It should be noted that because the Impact Matrix is constructed by judgement, and because positions are relative, that the positions of drivers can move around within the Impact Matrix when outcomes are reviewed. However, from some experience of these review processes, such movements tend to be minor.

17. On those occasions when we have analysed drivers' sets both through Mapping Analysis and through the Impact Matrix approach (including on the current project) we have found that there is a strong overlap between drivers identified by Decision Explorer as being highly connected to the overall system, and those identified by the Impact Matrix as being High Dominance/ High Dependency. The correlation for 'High/Medium' and 'Medium/Medium' drivers is less strong but still extant.

Endnotes

ⁱ Michel Godet, *Creating Futures*. London, Economica, 2001.