

Wicked Problems

What defines a problem as wicked is that it is difficult or impossible to solve since the underlying requirements are incomplete, contradictory and in flux. The reason the term “wicked” is used to describe them is not because they are evil, but because they resist solution. Since these problems are underpinned by complex interdependencies, every attempt to solve them may create still other problems.

The phrase was first used by C. West Churchman in 1967 in an editorial he wrote for Management Science. Later, in 1973, Rittel and Melvin Webber formally defined wicked problems in "Dilemmas in a General Theory of Planning," contrasting them with tame problems which do have solutions.

Rittel and Webber's formulation specified ten characteristics:

- There is no definitive formulation of a wicked problem.
- Wicked problems have no stopping rule.
- Solutions to wicked problems are not true-or-false, but good or bad.
- There is no immediate and no ultimate test of a solution to a wicked problem.
- Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to learn by trial and error, every attempt counts significantly.
- Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
- Every wicked problem is essentially unique.
- The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution.
- The social planner has no right to be wrong (i.e., planners are liable for the consequences of the actions they generate).

The essence of a wicked problem is that there is no final solution. Examples are poverty, sustainability, health, the environment, climate change, natural disasters, like earthquakes, tsunamis, epidemics, etc. As you might have already guessed, everyone has a different point of view on how to approach these problem because they all have different interests.

If you consider the example of climate change, for example, how interests vary across stakeholders becomes quite clear. Not everyone believes that reducing greenhouse gasses is the answer to global warming. In fact, there are scientists, like Leighton Steward, who argue that we actually have to increase the levels of carbon dioxide because otherwise food production will suffer because plants that grow in higher concentrations of carbon dioxide produce larger fruit and vegetables while consuming less water. So, there are opposing points of view on whether or not global warming is a problem that must be solved.

Even between those who agree that greenhouse gases must be reduced to control global warming, there is also heated debated on who should reduce them. Should emerging economies reduce their emissions? Finally, their citizens can achieve a radically different lifestyle: less poverty, access to health care, a house. Why should they make the sacrifice? Undoubtedly, they have less of an interest in reducing emissions. After decades, if not centuries, of tribulation, they can finally enjoy life. Should industrialized countries reduce their emissions? If they were to reduce their emissions without advanced technologies that allow them to remain competitive with the emerging economies, they would loose their advantage and the quality of life of their citizens would suffer, not to mention that their loss of purchasing power would affect the growth of the emerging economies. There is no optimal solution for all of the stakeholders...especially one that does not have a voice yet – the future generations.

Strategies for Tackling Wicked Problems

Although there are no final and complete solutions to wicked problems, there are strategies for finding the optimal solution.

Authoritative

This approach strives to tame wicked problems by making only a restricted group of people responsible for finding a solution. This reduction in stakeholders involved in the problem solving process eliminates many competing points of view and renders the problem less complex. The distinct disadvantage is that the individuals in charge of finding a solution may not appreciate the points of view of all of the stakeholders.

Competitive

This approach requires the stakeholders to come up with their preferred solutions, which are then evaluated against each other. This allows for a number of solutions to be proposed and the best one can then be chosen. However, pitting stakeholders against each other can create an adversarial environment where stakeholders have no incentive to share knowledge. This can lead to stakeholders proposing less than optimal solutions.

Collaborative

This approach engages all of the stakeholders in an attempt to elaborate the best solution for all parties with a vested interest in solving the problem in order to find the best possible solution for all stakeholders. The collaborative approach typically involves meetings between the stakeholders in order to examine issues and share ideas in the pursuit of a common solution.