

What is a scenario?

A scenario is a *plausible* and *coherent* narrative about the future of a place or a situation for the production of anticipatory knowledge¹. Scenarios are plausible in the sense that a future scenario emerges from historic and present-day conditions. Scenarios are coherent in the sense that they reflect causal relationships between system variables that can be tested and that are internally consistent.

However, within these constraints, there is an invitation to think creatively and to push the limits of what we often think is possible, desirable, or inevitable. Scenario development has taken both *forecasting approaches* - looking to the future based on past, existing, and anticipated conditions - and *backcasting approaches*, which start from a desired future condition and determine what it would take to achieve the end goal².

Why scenario planning?

- Scenarios make explicit the assumptions that different actors around the table may carry implicitly about the way that things work.
- Scenarios are particularly good at helping participants articulate their values, visions and ideas about change.
- Scenarios point to gaps in understanding, data needs, and they can integrate diverse forms of knowledge.
- Scenarios can be used to explore the impact of alternative policy choices into the future in such a way that practitioners can assess, evaluate, and contrast the relative benefits and impacts of different policies.
- Scenarios help to anticipate and deal with uncertainty and shocks.
- Scenarios bring people together around a cohesive vision of the future.



Types of scenarios

Adaptive scenarios explore strategies in response to extreme events using mixed forecasting and backcasting approaches. UREx SRN adaptive scenarios deal with drought, heat and different types of flooding.



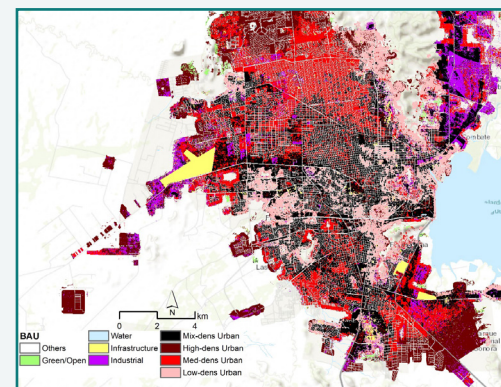
Drawing of a cooling station in Phoenix by Patricia Ronczy

Transformative scenarios explore normative futures based on achieving sustainability and resilience goals. These scenarios present radically transformed futures and they are developed using a backcasting approach.



Illustration of an "Innovative Valdivia 2080" by Maria Maurer

Strategic scenarios are built based on the goals and strategies outlined in planning documents. The strategic scenario can be considered a baseline against which to compare the co-produced adaptive and transformative scenarios.



Strategic scenario of Hermosillo, Mexico in 2080 by Ahmed Mustafa

¹Millennium Ecosystem Assessment (2005). Four Scenarios. *Ecosystems and Human Well-being Scenarios* (pp. 225-294). Millennium Ecosystem Assessment. Island Press.

²Iwaniec, D. M., D. L. Childers, K. VanLehn, A. Wiek. (2014) Studying, teaching and applying sustainability visions using systems modeling. *Sustainability: Science Practice and Policy*, 6:4452-4469