

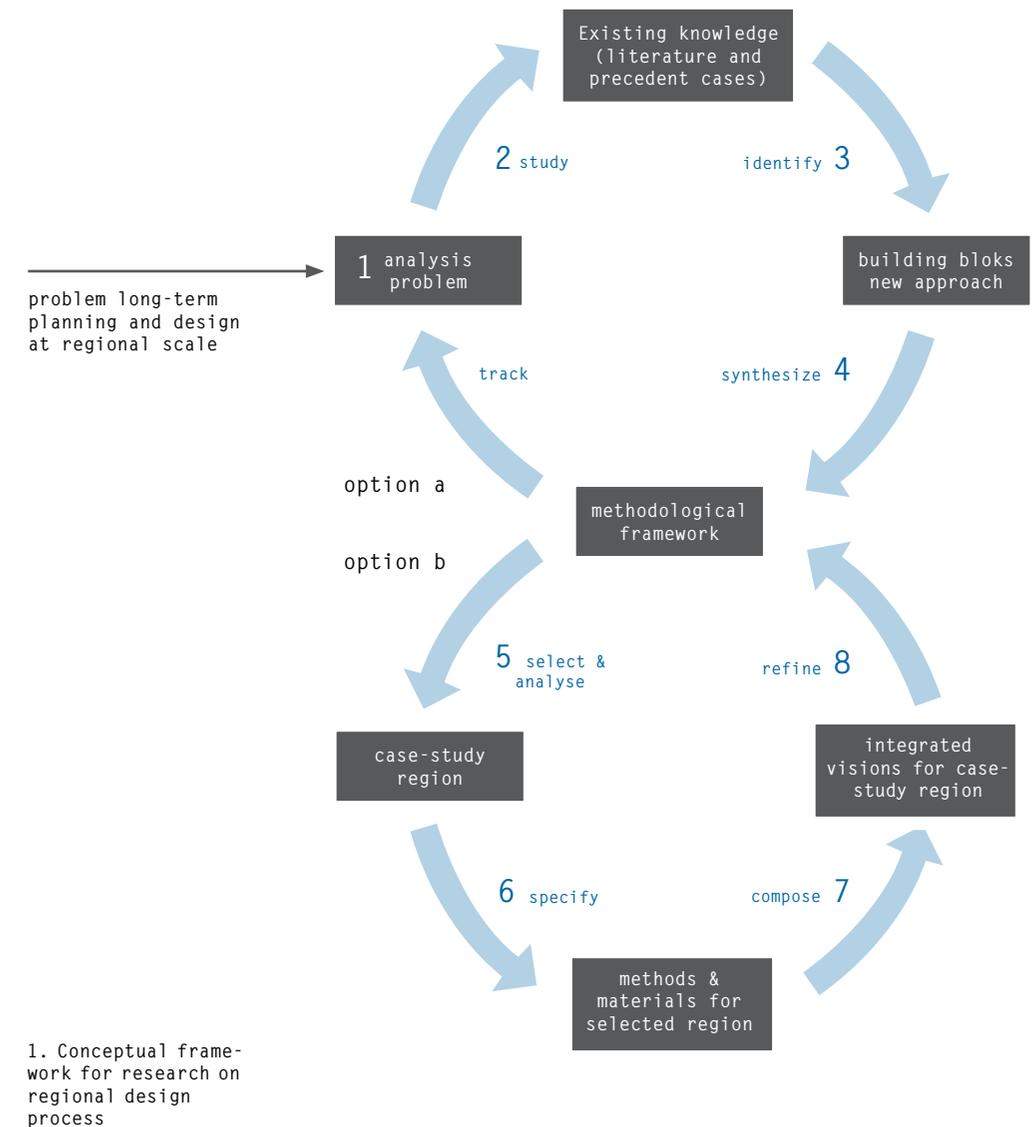
Integrated visions at the regional scale: a five-step approach

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It will take decades to adapt the physical environment to a changing climate and renewable energy sources. That is why we need to construct long-term visions taking into account external trends and forces. While spatial planners and landscape architects have composed many visions at the regional scale, a joint approach would advance long-term thinking in regional planning and design. Imaginative, yet realistic, long-term visions for desirable futures may be achieved by incorporating the following three modes of change in the design process: (a) change due to current, projected trends, (b) change due to critical uncertainties, and (c) intended change. This contribution proposes a five-step methodological framework for the composition of integrated visions. The framework is constructed on the basis of existing planning and design approaches, and the experiences we had while composing several integrated visions.¹

Conceptual framework

Three planning approaches have been of primary interest for the research: strategic spatial planning², design-oriented planning³ and a third approach originating from landscape planning⁴. These three methods provide important building blocks for planners and have been used over the past four years to compose long-term visions to reorganise two regions in the Netherlands along energy-conscious lines. The study aim was to develop substantial and procedural knowledge in the form of design principles and processes. The project team consisted of architects, urban and spatial planners and landscape architects from three Dutch universities, who collaborated with practitioners, decision-makers and stakeholders from the two pilot regions. The emerging approach for the construction of integrated visions was also applied in graduate student design studios and master's theses. Whereas the literature study provided the key building blocks for the proposed methodological framework, the framework was tested and refined through case studies and educational activities.



— Scenario studies

Any proposal for the long-term development of a large territorial system faces a great number of uncertainties due to trends and forces that are beyond the control of planners and designers. Regardless, there is a need to envision a desirable future⁵ and identify actions that can help to reach that future⁶. Scenario studies are a major foundation of long-term spatial planning⁷.

— Design-oriented planning: the cyclic scenario approach

The objective of design-oriented planning is the spatial organisation of landscapes. Planners aim to influence the actions of those who shape the physical environment by, for example, discussing probable futures and desired futures. Design-oriented planning is concerned with long-term development at the regional scale⁸. The cyclical approach uses a four-step methodological framework leading from the concrete present to the abstract future and back to the present again. Because the cyclic scenario approach makes explicit reference to both external and normative scenarios it is described in more detail below.

- 1 Analyse the conditions in the study area along with current trends, relevant policies and programmes and identify focal issues in close collaboration with decision-makers and stakeholders.
- 2 Develop external scenarios that sketch possible futures for the study region based upon the development of technological, economical, societal and other trends.
- 3 Develop normative policy scenarios to explore alternative policy strategies and courses of action that will eventually result in different futures.
- 4 Identify short-term and long-term actions in order to support policy development. Short-term actions ought to be compatible with all scenarios. Actions that appear in all the scenarios can become part of a master plan.

The cyclic scenario approach is useful for a number of reasons. By focusing on a number of key issues, strategic interventions can be identified. Secondly, external and policy scenarios avoid the problem of specifically predicting the future, which is appropriate in complex situations with a high degree of uncertainty. The cyclic scenario approach addresses (a) current, projected trends, (b) critical uncertainties and (c) intended change brought about through policies. However, the development of external scenarios requires substantial resources and special expertise. Employing existing context scenarios may be an acceptable alternative.

— Strategic spatial planning: the four-track approach

Strategic planning aims to facilitate creative inquiry and to bridge the gap between scenarios and decision-making. It is strategic because it is “selective and oriented to issues that really matter”⁹. Its goal is to frame the activities of stakeholders to help achieve shared concerns about spatial changes. Sustainable development is one of the shared concerns that requires a strategic approach

using a long-term vision as an alternative to conventional planning, which offers a single blueprint to address the critical uncertainties and dynamics of large territorial systems. I now elaborate the ‘four-track approach’¹⁰ as an example from strategic spatial planning.

- 1 Analyse the main processes that shape the environment and identify focal issues in close collaboration with local stakeholders.
- 2 Develop a dynamic, integrated and inspiring long-term vision that captures and represents values and meanings for the future.
- 3 Derive actions from the vision, identifying both short-term actions that can help solving present problems and long-term actions that can help to reach a desired future.
- 4 Facilitate the implementation of the actions by creating commitment packages. These may entail moral, administrative and financial agreements between planners, citizens, the private sector and different levels of governance.

Generally speaking, strategic planning literature offers much information on who should participate in the envisioning process but little information on how to actually compose the vision and give shape to the desired future. The value of strategic planning, in comparison with its predecessors, is its emphasis on critical uncertainties and implementable actions as two modes of change. However, the literature on the four-track approach makes no explicit reference to context scenario studies.

— Landscape planning and design: Steinitz’s design framework

Landscape architecture is concerned with the conscious shaping of the human environment. It involves the planning, design and management of the landscape to create, maintain, protect and enhance places so they are functional, beautiful, sustainable and appropriate to diverse human and ecological needs¹¹. The landscape architect’s activities range from site design to regional planning, and the time-scale in which they operate from the medium to the long term. Among the different approaches to landscape design we have chosen Steinitz’s design framework¹², which has been applied successfully in many regional projects.

The framework should be iterated three times in any project and is organised around the following six questions:

- 1 Representation. How should the state of the landscape be described? The analysis of present conditions includes the characteristics of the study area, its boundaries and its development over time.

2 Process. How does the landscape operate in terms of functional and structural relationships between the landscape elements?

3 Evaluation. Is the current landscape functioning well? The state of the landscape is evaluated and any dysfunctions identified.

4 Change. How might the landscape be altered; by what actions, where and when? At least two types of change should be considered in the design process: change using current, projected trends and change using implementable design.

5 Impact. What predictable differences might the changes cause? The impact of interventions should be identified and compared. This phase is based on predictive theory, similar to the study of probable futures.

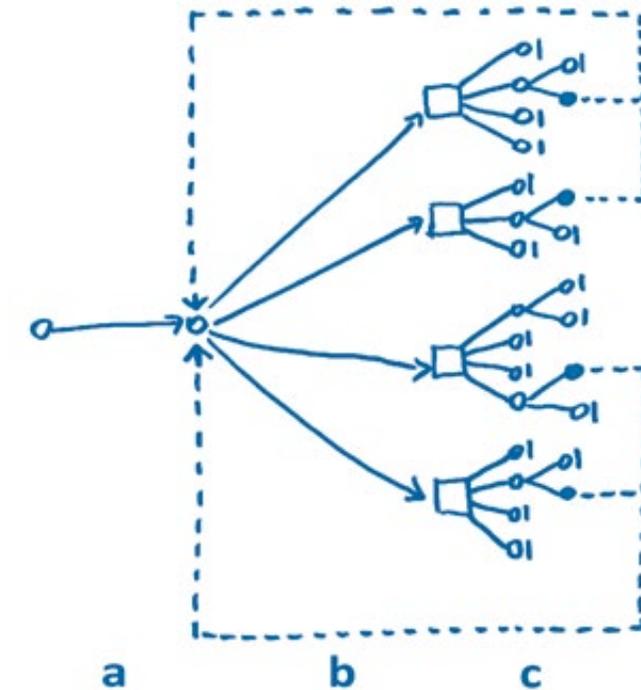
6 Decision. Should the landscape be changed? This phase focuses on a comparative evaluation of the impacts of alternative changes.

— Building blocks towards an alternative approach

We can now compare these three frameworks that provide building blocks for an alternative approach to long-term visions. In terms of similarities, all three methods aim to support decision-making. The first three questions of the design framework correspond to a great extent with the analysis phase of the two planning frameworks. The identification of dysfunctions in the design framework may be comparable with the selection of focal issues in the planning frameworks. The estimation of the impact of alternative interventions, suggested by Steinitz, is similar to the evaluation of policy strategies suggested by the planners. One substantial difference between the three frameworks is that Steinitz and Albrechts make no explicit reference to the use of external scenarios, while design-oriented planning requires context scenarios to be developed as part of the planning process.

Based on our research, we suggest adopting a similar approach to long-term regional design. In brief, critical uncertainties should be integrated in the design process. One critical uncertainty is whether globalisation will continue, influencing land-use patterns in the study region and consequently affecting the development of sustainable energy landscapes. The three modes of change that need to be addressed in the design process are thus (a) change due to current, projected trends, (b) change due to critical uncertainties and (c) intended change.

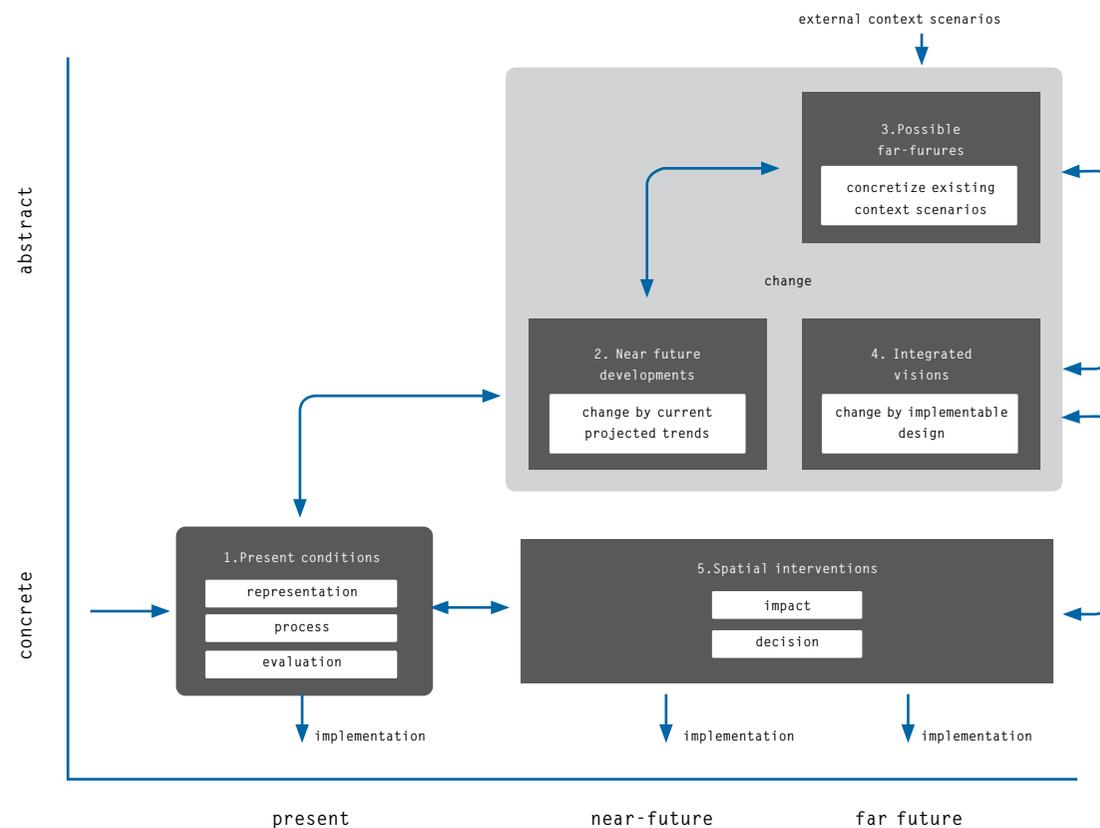
2. Conceptualisation of the three modes of change relevant for long-term visions: (a) change due to current, projected trends, (b) change due to critical uncertainties, and (c) intended change



Methodological framework for integrated visions

We now turn to the question of how to organise the different building blocks to achieve a coherent approach for the composition of integrated visions, aiming for both solid analysis of the present situation and creativity in designing a place that would not otherwise come about. The framework proposed here aims to facilitate the composition of imaginative, yet realistic, long-term visions at the regional scale. We can do this by integrating near-future developments, possible far futures and desired change into the envisioning process. Those three activities are complemented by an analysis of the study region and an evaluation of possible interventions.

The methodological framework is organised around a set of five questions, each of which is subject to one step of the envisioning process.



3. Methodological framework of the five-step approach for integrated visions

The sequence of five steps should be passed through twice. During the first cycle, the context and scope of the study are defined, maps and data are gathered and stakeholders and decision-makers are invited to participate in the study. During the second cycle the actual visions are composed. Although the framework consists of five consecutive steps, the envisioning process is iterative. It may be necessary to return to an earlier step in order to answer all questions fully. If necessary, certain steps can be elaborated more than others; thus, the framework can be adapted to the time and resources available.

— A five-step approach to construct integrated visions at the regional scale¹³

Step 1: analysing present conditions: how does the present region function and how can it be evaluated in comparison with other regions?

To compose integrated visions, for example for sustainable energy transition, both the landscape and the present energy system must be analysed and renewable energy potentials should be mapped. This analysis is best conducted by a multidisciplinary team consisting of planners, designers, thematic experts and experts from the study region.

Step 2: mapping near-future developments: how will the region change in the near-future?

To answer this question we need to analyse current and projected trends and policies and consult key decision-makers in the study region to discern, for example, where land is being set aside to expand ecological corridors. Near-future developments are depicted in a near-future base map. Many of the developments illustrated in this map may not yet have left any marks in the environment but will influence the long-term development of the region.

Step 3: illustrating possible far futures: what kind of possible long-term developments (at which location) are expected in the study region?

A range of possible far futures can be illustrated with help of existing national and regional scenario studies. The more explicit a scenario study is, the easier it is to concretise and map possible developments. Each scenario storyline is illustrated with the help of a scenario base map, composed by experts and verified by local stakeholders.

Step 4: composing integrated visions: how can we turn a possible future into a desired future?

Integrated visions do not aim to render the one and only ideal future; rather they reveal different pathways for reaching a desired future. Each vision thus identifies possible interventions under the conditions established by the respective scenario. This normative step should be conducted in a transdisciplinary manner. Workshops and design charrettes can facilitate the collaboration between experts, decision-makers and stakeholders.

Step 5: identifying spatial interventions: which possible intervention should be implemented?

Possible spatial interventions need to be identified and listed in a comprehensive manner. Tables and reference images are helpful in the discussion with decision-makers. Another task is to assess the robustness of possible interventions, for instance through a comparative analysis of the different visions. An intervention is considered robust when it appears in multiple visions. Robust interventions can be implemented in the short term because they depend less on critical uncertainties. Often, however, less robust interventions are necessary to perform a full transition to a desired future (such as 100 percent renewable energy use). Both robust and less robust interventions need to be considered in decision-making. If resources permit, interventions can be further examined employing methods such as a ‘strategic choice approach’ and ‘robustness analyses’.

Conclusion and outlook

The proposed approach allows for the integration of context scenarios in the design process, taking into account change due to current, projected trends, change due to critical uncertainties and intended change. It consists of building blocks from design-oriented planning, strategic planning and landscape design theory.

The five-step approach can be applied to identify and locate possible interventions, to facilitate commitment packages and to support the development of strategic policies. The five-step approach does not necessarily lead to a spatial plan in the conventional sense. Rather, it results in a set of integrated visions, and a list of possible interventions. These interventions can be illustrated with the help of reference photographs and photomontages. Empirical data such as the relative assimilation of renewable energy of each possible intervention can further facilitate decision-making.

Notes

1. See for example Stremke, S. et al. (eds) (2011) *Beyond fossils: Envisioning desired futures for two sustainable energy islands in the Dutch delta region*. Wageningen: Wageningen University (ISBN 9789461731524).
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9. Albrechts, L. (2006) *Shifts in strategic spatial planning? Some evidence from Europe and Australia*. In: *Environment and Planning A*, 38, pp. 1149-1170.
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12. Steinitz, C. (1990, 2002) idem
13. For an elaborated description and discussion please refer to: Stremke, S. et al. (2011a) *Integrated visions (part I): methodological framework for long-term regional design*. In: *European Planning Studies*, forthcoming.
- Stremke, S. et al. (2011b) *Integrated visions (part II): Envisioning sustainable energy landscapes*. In: *European Planning Studies*, forthcoming.