
Advances in Project Management Series¹

Thinking in Patterns: Problems, Solutions and Strategies

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Humans have long been fascinated with patterns in nature and in socially constructed work and cultural environments. Consequently, the abilities to identify patterns and make sense of reality have been highly prized.

British philosopher, Social and political theorist, Sir Isaiah Berlin highlighted the central role of patterns:

*“The pattern, and it alone, brings into being and causes to pass away and confers purpose, that is to say, value and meaning, on all there is. **To understand is to perceive patterns.** (...) To make intelligible is to reveal the basic pattern.”* (p. 129)

Patterns are regular and intelligible forms or sequences that are discernible in the way that events unfold, or that something happens or is done. Patterns can thus be described as perceptible regularities in nature or in manmade (artificial) designs.

The Pattern Movement

Christopher Alexander, an influential, albeit controversial, architect and design theorist advanced the study of patterns over a series of books documenting his observations on the relationship between form and function and the art of design.

In *Notes on the Synthesis of the Form*, Alexander defines the process of design as “*the process of inventing things which display new physical order, organization, form, in response to function*”. Alexander explains that form is adapted to the context of human needs and demands that has called it into being. However, the search is for creating a kind of harmony between a form, which is yet to be designed, and a context, which cannot be properly described. The adaptive process proceeds in a gradual, piecemeal fashion allowing an organic design. The form is moulded not by designers, but by the slow patterns of changes, which avoid the traps of premature preconception of ideas. This allows designers to create new concepts out of the structure of the problem,

¹The PMWJ *Advances in Project Management* series includes articles by authors of program and project management books previously published by Gower in the UK and now by Routledge. Each month an introduction to the current article is provided by series editor **Prof Darren Dalcher**, who is also the editor of the Gower/Routledge *Advances in Project Management* series of books on new and emerging concepts in PM. To learn more about the book series, go to <https://www.routledge.com/Advances-in-Project-Management/book-series/APM>. Prof Dalcher's article is an introduction to the invited paper this month in the PMWJ.

resulting in a form that is: well adapted to its context, non-arbitrary and correct. The book has proved influential in multiple disciplines including architectural design, civil engineering and software development: Industrial Design Magazine described it as “*one of the most important contemporary books about the art of design, what it is, and how to go about it.*”

Thirteen years later, Alexander, together with his team, released a book focused on architecture, urban design and community liveability, emphasising the role of patterns. The book remains a perennial best seller in architecture and has spawned research and new developments (including the WIKI architecture) in many other disciplines. A *Pattern Language* revolutionised the way problems are conceived and considered. The basic rationale asserts that users are more sensitive to their own personal context and needs than professional architects. Delivering a pattern language, encompassing timeless constructs in the form of 253 patterns, enables participants to develop a community and work with their neighbours to improve their context, or neighbourhood, design a house, or a wider community, and collaborate on bigger projects.

Combining different established patterns forms a kind of language, with each pattern offering a word, or thought, in the wider context needed to address a need and deliver a new solution. Sequences of individual patterns, akin to sentences, can deliver complete buildings and environments that work together. The pattern language can empower individuals to design relevant solutions that address their own concerns, reflecting the preferences of the relevant community.

The principles of employing a pattern language were documented in an earlier book *The Oregon Experiment*, which records the experience of an environmentally active community engaged in shaping and constructing its own environment in a departure from a more centralised form of planning and control. The experiment carried out at a university in Oregon encouraged users to prioritise and develop their own community. Alexander and his colleagues identified the *organic order* needed to balance the needs of the part with the needs of the whole, so that both the importance of the part and the coherence of the environment as a whole are maintained. Growth and development, they reasoned, are often hampered by the inability to manage the subtle balance needed for maintaining this organic order.

“This is a fundamental view of the world. It says that when you build a thing you cannot merely build that thing in isolation, but must repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.”

– Christopher Alexander (1975)

Designing with patterns

The basis for developing the pattern language concept flows from the appreciation that many medieval cities appear to have been constructed in attractive and harmonious fashion. Alexander et al. explain that the equilibrium is maintained by acknowledging an important duality and the balance of building to existing standards and local

regulations, whilst allowing architects sufficient space and autonomy to adapt to a particular situation and the local preferences and priorities of the users.

For added trust, patterns are tested in the real world and are reviewed by multiple practitioners for both aesthetic beauty and practicality. They include a provision for future modifications and adjustments, recognising that needs and preferences change over time requiring adaptation in strategy and approaches. Communities revolving around pattern languages have emerged and organised in other domains including software development, which has witnessed a centrally structured definition and cataloguing efforts of proposed new patterns by an active community.

Patterns can be combined and repeated to create sequences that support and enhance other patterns, thereby enabling larger architectures that underpin communities and their needs, and deliver long-term satisfaction as part of a balanced and well-considered approach.

Strategy development and patterns

One area that has not been particularly well addressed through patterns revolves around the development and delivery of organisational strategy.

The majority of strategies fail to be implemented and deliver the benefits envisaged at the outset. Put plainly, most strategies are not fit for purpose. Using Alexander's terminology, strategy development is failing to find the harmony between a form, which is yet to be planned and delivered, and a context, which has not yet been defined, and is bound to change before the form is even delivered. Moreover, strategies cannot be devised in isolation from the world surrounding them. Indeed, observing the same tensions, French General and statesman, Charles de Gaulle noted that you have to be fast on your feet and adaptive, or else your strategy becomes useless.

Christopher Alexander was concerned about the duality embedded in refining the balance needed for the organic order, encompassing the importance of the part, in the context of the wider environment.

"But in practice master plans fail - because they create totalitarian order, not organic order. They are too rigid; they cannot easily adapt to the natural and unpredictable changes that inevitably arise in the life of a community."

– Christopher Alexander et al. (1975)

Attempts to rethink strategy tend to focus on the development of new methods for conceiving and refining strategy, often ignoring the essential aspects of strategy development. Such attempts also disregard the key criticisms expressed by Alexander and his colleagues. This month's contribution endeavours to reverse this residual neglect by introducing a new framework and approach for thinking about strategy. Patrick Hoverstadt and Lucy Loh strive to bridge the gap between strategy development and strategy execution by challenging and re-thinking many of the aspects taken for granted and agitating for a new and improved paradigm. The article, developed from their forthcoming book, *Patterns of Strategy*, Published by Routledge, offers a unified

approach to viewing the dynamic nature of strategy through the application of patterns as a revolutionary strategy. They encourage a view of organisations as dynamic and active, in direct competition with other players in the environment.

Hoverstadt and Loh position strategy development as an emergent process that influences and is influenced by the business ecosystem. The book offers descriptions of 80 common patterns of strategy enabling the development of strategy as a series of manoeuvres within an overall aim to improve the strategic outcomes. The patterns enable the organisation to devise different approaches for collaborating and competing within the wider organisational landscape.

Towards re-thinking the role of Strategy

Powerful strategies are but the beginning. Michael Porter observed that a strategy delineates a territory in which a company seeks to be unique. Yet, companies typically realise only a meagre proportion of their strategy's potential value.

Hoverstadt and Loh offer a new perspective to re-consider the fluid and complex dynamics of strategy formulation and the longer-term aspects of alignment and delivery through effective and meaningful execution. Their focus on manoeuvres further introduces three core dimensions of *fit*, *time* and *power* enabling organisations to sustain, alter or improve their strategic position in order to create, sustain or enhance their advantage.

Projects link to, emerge from and pertain to organisational strategies and plans. The main contribution of Hoverstadt and Loh is in challenging the ways we think about and relate to organisational strategies. Bringing patterns into the conversation could offer a potential game changer for understanding organisations, strategy, and change.

Developing a deeper and more meaningful understanding of the dynamics of strategy and change is likely to impact directly on the space for projects and programmes in the strategic context. Patterns of strategy could offer the vocabulary and perspective needed to engender a new and more meaningful conversation about delivering promised benefits and identifying strategic progress. Coupled with Alexander's themes of organic order, form, users (stakeholders), context, and additional ecological concerns about the dynamics of cooperation and competition, the work might encourage new ways of addressing and making sense of the areas of strategy, execution and the dynamics of change.

Ultimately, invoking the idea of patterns offers a new richness in addressing the dynamics of natural processes. Intriguingly, patterns often point to a contrast between two intertwined features, as partially acknowledged by Alexander. Rules and laws often reflect the wish to transition into an orderly state through legislating for change and delivering a detailed plan that focuses on the delivery of change at the individual level. In contrast, the environmental influences and dynamics of the whole often provide a lively context which responds, reacts, adapts and otherwise, complicates any intervention plan. Delivering and executing requires an identification of the organic

order between the two aspects by defining the long lost harmony between form and context. The secret simply lies in attaining and sustaining that harmonious balance.

References:

Alexander, C. (1964) *Notes on the Synthesis of the Form*, Harvard: Harvard University Press.

Alexander, C., Ishikawa, S and Silverstein M (1977) *A Pattern Language: Towns, Building, Construction*, Oxford: Oxford University Press.

Alexander, C., Silverstein, M., Angel S., Ishikawa, S. and Abrams, D. (1975) *The Oregon Experiment*, Oxford: Oxford University Press.

Berlin, I. (1997) *The Proper Study of Mankind: An anthology of Essays*, London: Chatto & Windus.

Hoverstadt, P and Loh L. (2017) *Patterns of Strategy*, Abingdon: Routledge.

Editor's note: Editor's note: Prof Darren Dalcher is the editor of the Gower/Routledge Advances in Project Management series of books on new and emerging concepts in PM. To learn more about the book series, go to <https://www.routledge.com/Advances-in-Project-Management/book-series/APM>. The above article is an introduction to the invited paper this month by another Gower author. You can find previously published articles by Prof Dalcher and Gower authors at www.pmworldlibrary.net.

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