Executive Summary

EA Roadmaps and Strategic Vectors

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Enterprise architecture (EA) is in a state of constant change and evolution. Sometimes the changes are minor, and sometimes they are transformational, but in all cases, it is through roadmaps and roadmapping that we plan and manage architectural change. In the accompanying *Executive Report,* we look at this central EA capability to examine how we can improve roadmaps so they become a better communication tool and help us manage the architectural evolution of an enterprise more effectively.

We start the report by reviewing key points about roadmaps: that a roadmap shows a sequence of architectural states; that there are different roadmaps for different people, which cover different aspects of EA; that large-scale change is broken into incremental or transitional steps; and that there needs to be a link between the architectural roadmap and the project activities that deliver it. The report emphasizes that EA roadmaps must show an architectural perspective — something that is unfortunately implied rather than explicit in some roadmaps.

How EA teams will use a roadmap determines its focus, presentation, and content. Typically, organizations use roadmaps to raise debate to an architectural level, to improve capabilities, to evaluate and prioritize investment options, to improve decision making about future options, and to manage the actual change process. Keep in mind that you may need different versions of a roadmap to cover these different uses and the needs of different stakeholders.

## THE DIFFERENT TYPES OF ROADMAPS

There are five types of EA roadmaps, and they are arranged at different levels within a hierarchy of roadmaps: (1) enterprise level, (2) capability level, (3) segment or domain level, (4) component level, and (5) project or deployment level.

For many change programs there are reference roadmaps and maturity spectra that form a useful basis for an enterprise-specific roadmap. In the report, we provide several examples: the use of service-oriented architecture (SOA) maturity models to help an organization make the transformation to a service-based business model; the Enterprise Information Architecture (EIA) Roadmap to make it easier to use information across silos; and the use of the Smart Grid Maturity Model (SGMM) by energy companies to develop architectures that transform the way they manage electricity generation, transmission, and distribution.

The report provides examples and discusses the five types of roadmap. It explains the difference between the five types and shows how they are used together to provide a full picture of architecture evolution. We also discuss the need to manage all roadmaps so that they form a coherent and integrated set. Information on higher-level roadmaps is given more detail at the lower levels, while detailed roadmaps have their context defined at the higher levels.

STRATEGIC THEMES AND VECTORS

One of the strengths of good roadmaps is that they focus on how to make a change by changing the architecture — from the current, through intermediate transition, to target architectures. But this focus can be a weakness if it isn't supported by a corresponding view that shows the dynamics of change. An emerging approach to dynamically model and align a complex set of change initiatives is to use strategic themes and strategic vectors. The concept of vectors has been adapted from the field of mathematics. A vector represents the direction or course followed by "something," which might be a missile or aircraft. In EA, a strategic
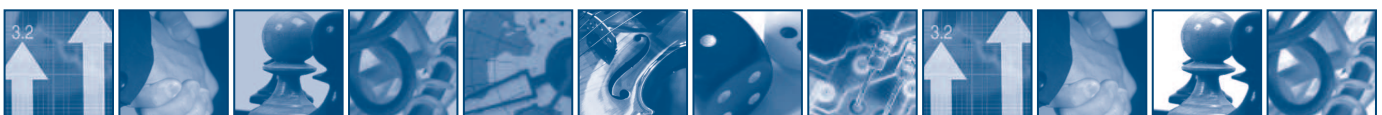
vector represents the overall direction or course followed by a set of change initiatives. By measuring the direction, magnitude, and velocity of each change program, architects ensure that roadmaps meet the strategic needs of the enterprise.

Strategic themes highlight the characteristics of current problems and concerns, and the characteristics of a future architectural state that resolves these and enables future strategic options. The states or transitional steps in a roadmap are documented as enterprise patterns. Roadmaps position the sequence of enterprise patterns and architectural states that are developed. Strategic vectors show the dynamic aspects of change.

On their own, roadmaps give only a crude and unsophisticated view of the intermediate and final states of change, without providing an understanding of the complex interactions between many concurrent change initiatives. Strategic themes and strategic vectors go a long way toward providing this missing dynamic.

TIPS, GUIDELINES, AND LEARNING POINTS

The final section of the report provides tips, guidelines, and learning points — drawn from many contemporary EA practitioners — to help improve the use of roadmaps. Some of these tips are ones that have been covered in more detail earlier in the report. Others address weaknesses in the use of some roadmaps — such as the need to explicitly show the limitations or constraints of the current architecture and the advantages and benefits of transition and target architectures, or the need to validate roadmaps with business and management stakeholders. There are additional tips on keeping roadmaps current, avoiding the perception that roadmaps can feel too perfect, or be seen as a purely top-down practice.

Roadmaps are clearly a critical EA technique and are the primary ways for planning and managing the evolution of architectures. The report concludes by summarizing the four takeaway points:

1. Roadmaps should form an integrated set, with the different types of roadmap arranged hierarchically to improve manageability.

2. Transitional architectural states are best shown as enterprise patterns.

3. Executive decision making should be raised to the architectural level by explicitly describing options and discussing alternative routes.

4 We must add the use of strategic vectors to drive a coherent direction across otherwise silo investments.

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