Major Themes in This Book

We consider the following to be the major themes of the book:

1. **Technology and enterprise architecture are indeed strategic to many enterprises, but what this entails needs to be reconsidered.**

   We have found that the best approach to building the right capabilities and supporting systems is to engage enterprise architects in strategic discussions so that they can:

   - Understand the true, evolving needs of the enterprise, ensuring that systems are developed and operated to support the changing capabilities, and

   - Provide guidance on emerging technologies and ways of doing things, including potential opportunities afforded by existing systems.

   While many enterprises have already embraced strategic EA, a number of EA concepts and methods must now integrate fitness for the ever-changing, disruptive context.

2. **Sudden, disruptive changes in the context require rapid adaptation. Enterprises need to embrace just-in-case thinking and build in flexibility to adapt capabilities for plausible scenarios.**

   In order to survive and thrive in the presence of potentially significant disruptions, an enterprise must re-evaluate its lean, just-in-time processes to understand what they need to survive and continue to provide their key capabilities. This would include:

   - Sufficient margins of safety for inventories, supply chains, physical structures, rainy-day funds, etc. Safety margins will vary depending on the difficulty of obtaining replacements, safety of supply chains, etc.

   - Built-in flexibility to address multiple plausible scenarios. Scenarios are addressed extensively in the book, and diverse business models, supported by compelling user experiences, are necessary to address them.

   - Ability to rapidly adapt to and thrive in disruptive crises. We introduce the FUSERS System Qualities Framework model to evaluate system qualities and the overall fitness of the enterprise capabilities. (FUSERS is an acronym for Function, User/stakeholder experience, Safety/security, Economy, Responsiveness, and Sustainability.) The ability to monitor fitness deficiencies and adjust FUSERS categories rapidly is key to returning to "good enough" fitness after disruptions. Disruptive crises can provide major opportunities to improve fitness.

3. **Day-one mistakes can have large and lasting consequences. A major day-one mistake is to act before understanding the uncertainty inherent in the context.**

   Common day-one mistakes include faulty mental models, desirability biases, going along to get along (forbidden topics, elephant in the room), group think or

group fragmentation/polarization, and avoiding inconvenient facts.

Our cycle starts with recognizing and interpreting contextual signals, especially those indicating potential disruptions. Thus, on day one, the stakeholders consider all of the relevant changing context, the evolving customer needs, and indeed the entire ecosystem.

4. **Strategic enterprise architecture begins with people, not technology. Every successful architectural initiative starts with engaging key stakeholders, including those with different technology-adoption profiles, and reaching a consensus.**

The technology—including its risks and opportunities—must be clearly understood by all participants in the enterprise's ongoing strategic conversation. Strategic enterprise architects must be adept at educating non-technical participants. Often the use of metaphors, such as urban planning as a way to think about enterprise architecture, can help stakeholders understand how technology needs to mesh with business thinking.

Our approach focuses on identifying and dealing with the mental models and biases, engaging stakeholders to understand what success and fitness for context must mean. Key to success is understanding the technology adoption profile—how an enterprise thinks and feels about new technology (mental models and culture) and how it will likely act or react. Influential stakeholders may have different technology adoption profiles that will impact the direction of the enterprise and its readiness to survive and thrive in the changing context.

5. **Architects must balance fitness for today's purpose with fitness for tomorrow's disruptive context. Fitness is the key to surviving and thriving in disruptive times.**

This is the fundamental Strategic Enterprise Architect's Dilemma: how to ensure that capabilities and supporting systems are architected to meet present-day needs and to be flexible enough for future contexts identified by scenarios.

Sustaining this balance is likely to be challenging, especially in organizations in which architects are already addressing urgent issues. We employ "essential checklists" to help key stakeholders, including enterprise architects, consider important operational readiness and longer-range questions to ensure ongoing fitness of the capability and supporting systems.

6. **Because ongoing fitness is key, enterprise architecture must focus on adaptability!**

The enterprise needs to be fit for the changing context, and the scenarios represent the strategic stakeholders' best guess about the plausible futures they need to be ready for—and the capability adaptations that will be required. In essence, the scenarios drive the evolution of the Strategic Enterprise Architecture.

We call this concept "scenario-driven Strategic EA."

We introduce six Strategic Enterprise Architecture views and an Adaptive Enterprise Cycle methodology that emphasizes capability fitness, including continuous learning and adaptation. The views and methodology "mash up" concepts and approaches from many

disciplines, helping practitioners make enterprise architecture strategic and actionable.

The Strategic Enterprise Architecture views

Each architecture view is a partial description of an architecture from a distinct perspective. The full set of views together provide the complete architectural description.

Each Adaptive Enterprise view applies to any kind of enterprise, outlining what it needs to consider to be viable in today's and tomorrow's context. The views can be analyzed at various levels of detail, from a cursory review to an in-depth exercise. The six key views, along with our reason for including each, are:

- The **Enterprise Essentials** view captures what the enterprise is and why it exists, including its unique value, vision, and capability, and the business model, culture, and strategy for providing those.

  Strategic EA is all about the enterprise. Everybody needs to know what the enterprise is all about.

- The **Strategic Context** view describes the environment that stakeholders consider might plausibly impact the enterprise now and in the future. It includes conditions (e.g., trends, disruptions, and underlying structures) for different scopes, timeframes, and strategic factors (e.g., society, economics, politics, technology).

  Fitness for what? Context! (Not just the often mentioned "fitness for purpose.")

- The **Strategic Stakeholders** view characterizes the key stakeholders and their concerns. It includes their roles, expertise, influence, interests, needs, goals, perceived risks and opportunities.

  This makes explicit who the strategic contributors are and their concerns. It helps uncover the important issues to be discussed and identify who needs to participate. (This can be key in reaching consensus, following the maxim: "Without participation there is no buy-in.")

- The **Capability Architecture** view describes the systems that provide the enterprise's capabilities now and in the future. It includes models of the enterprise's capabilities, systems and their components, and ecosystem.

  Only by getting the strategic stakeholders actively participating can you architect (and build) the right thing.

- The **Strategic Fitness** view shows the likely fitness of the enterprise capabilities in the current and emerging contexts. It includes stakeholder evaluations of the enterprise's past, current, and future ability to survive and thrive based on contextual and enterprise factors.

  Fitness is the key to surviving and thriving in disruptive times.

- The **Strategic Initiatives** view describes and prioritizes the initiatives needed to adapt the systems to improve the fitness of the enterprise capabilities for the current and emerging contexts.

It defines enterprise architecture updates and investments needed to reduce or eliminate misfits.

The Adaptive Enterprise Cycle

Enterprise architecture traditionally includes development cycle phases of Plan, Develop/Implement, and Manage/Operate. We add two new phases, Recognize and Improve. We also add an ongoing Integrated Governance and Learning activity. The two new phases are, in summary:

- **Recognize (Sense & Interpret)** begins with each new potentially disruptive change.

  Achieving fitness for context requires continuous monitoring of new developments, especially strategic signals of possible disruptions that would require new flexibility and/or adaptation.

- **Improve (Assess & Adapt)** analyzes operational issues and attempts to make adaptations without starting a new cycle.

Complex adaptive systems like enterprises require that architects actively adapt the systems throughout their lifetimes. (No reliance on "big architecture up front"!)

The continuous **Integrated Governance & Learning** activity operates across all lifecycle phases.

A thriving organization learns from both the good and the bad decisions—at each phase.

A continuous, iterative, and adaptive approach to the cycle phases ensures rapid, agile responses to disruptions, using the built-in flexibility, whenever

possible, to adapt to—and seize advantage from—what may well become a "new normal."

7. **Adaptation must be rapid enough.**

   Being recognized as a leader in its domain is critically important for most enterprises. Preserving that recognition requires that an enterprise adapt its capability effectively enough to remain relevant and attractive to its clients. Not only must the enterprise make the right adaptations with the right qualities, it must make them in a timely manner, that is, as quickly as the context requires—but no quicker. (Bringing new or adapted offerings to market before the market is ready for them can be costly, sometimes ruinously so.)

   Being ready with updated capabilities and offerings when the market is ready requires intelligence and wise investments in R&D, which must often be started many years ahead of operational deployment at scale.

   Some things, however, cannot be anticipated, e.g., natural disasters and pandemics. Accordingly, the enterprise must also be able to launch a major, urgent effort to react quickly and decisively to a new disruption.

   Enterprises can adopt the following strategies to help them adapt in a timely manner:

   - General responsive capability
     - Keeping adequate resources on hand to deploy in emergency situations
     - Designing their operations to avoid single points of failure, using resources (including

substitutes) that are likely to be available under a broad range of disruption scenarios
- Paying attention to strategic signals (including those associated with scenarios, safety/security emergencies, operational outages, etc.)
- Practicing situational complexity analysis and decision making

- Flexibility
  - Building a variety of capabilities and expertises that can be tapped if and when needed
  - Creating parameters and operational options to address all relevant scenarios rapidly

- Modularity
  - Architecting and building systems with loosely coupled components that are easily reconfigured (many of which will be off-the-shelf "building blocks")
  - Architecting robust integration mechanisms for components. For technical systems these include adopting well-defined standards (e.g., platforms, stable APIs to services as the only communication mechanism allowed) and ensuring that that modules are readily replaceable without causing cascades of change.

- Autonomy
  - Organizing projects with relatively small, nearly independent teams that can work in parallel, coordinating only on essentials. This is the often-overlooked governance needed for effective agile development, and a key insight from the Open Group's *Open Agile Architecture (OAA)* standard.