Options for Transforming the IT Function Using Bimodal IT

Ingmar Haffke, Darmstadt University of Technology (Germany)
Bradley Kalgovas, University of New South Wales (Australia)
Alexander Benlian, Darmstadt University of Technology (Germany)

Executive Summary

Bimodal IT decomposes the IT function into two modes—Traditional and Agile—the former focused on stability, the latter on the speed and experimentation necessary to support innovative uses of IT in a digital business context. The full article describes four bimodal IT archetypes and the factors that drive an organization to adopt bimodal IT. Our research found that companies switch between different archetypes as they transform the IT function, and the possible IT transformation journeys are described in the full article.

Four Archetypes of Bimodal IT

Archetype A: Project-by-Project Bimodal IT. With this archetype, a second Agile IT mode is established and used by selected projects. For each project, the IT function has to choose whether to use the Traditional or Agile mode. The Agile mode allows project teams to follow startup-like processes to support digitization projects, and helps to overcome the historic perception of the IT function as non-innovative and too slow to respond. Project-by-Project Bimodal IT can be a good choice for companies that are reluctant to engage in major changes because it allows them to gradually introduce an alternative to the Traditional mode.

Archetype B: Subdivisional Bimodal IT. With this archetype, companies structurally subdivide the IT function into two distinct groups, one of which operates in Traditional mode, the other in Agile mode with resources devoted to IT innovation and experimentation. The latter requires a different employee skill set from that typically found in traditional IT units.

Archetype C: Divisionally Separated Bimodal IT. With this archetype, companies establish an Agile mode division completely outside the traditional IT function. The Agile division is frequently led by a chief digital officer (CDO) and is often referred to as the “digital division.” This form of bimodal IT causes the highest level of internal disruption and is especially appropriate for firms that have fallen behind their increasingly digital competitors and want to signal their digital ambitions both internally and externally.

1 The full article is published in the June 2017 issue of MIS Quarterly Executive, available online at www.misqe.org.
Archetype D: Reintegrated Bimodal IT. After successfully establishing bimodal IT, firms may decide to reintegrate Project-by-Project, Subdivisional or Divisionally Separated Bimodal IT units and thus create a seemingly unimodal IT function that operates with heightened levels of agility and explorative capabilities. This Reintegrated bimodal IT archetype allows a firm to fully focus on its digital business transformation mission while moving traditional backend systems operations to outsourcing partners or to a smaller subdivision that operates in the background. With this archetype, the IT function effectively retains its Traditional mode in the background while appearing to external stakeholders as a unimodal IT function.

Comparison of the Four Archetypes. The differences between the four different archetypes lie primarily in the extent of internal disruption caused by the bimodal split, the level of cultural divide they give rise to, the management of IT resources and alignment mechanisms between the business and IT function, as well as between the two modes of IT. These differences are described in the full article.

Switching Between Archetypes. Some firms have switched from one bimodal archetype to another. Although shifting from Archetype A to B, or from B to C, appears to be more common than other transitions, we found no evidence that bimodal IT begins with Archetype A and then sequentially moves through B, C and D. However, it is not uncommon for groups within the IT function initially (and informally) to adopt Project-by-Project Bimodal IT (Archetype A) before IT management introduces bimodal IT by design.

Navigating the Bimodal IT Transformation Journey. The full article describes possible pathways for transforming the IT function through various states of bimodal IT using the analogy of an urban metro map. Transitioning along the pathways obviously involves massive organizational change efforts and can easily take years to complete. Transforming the IT function therefore requires the appropriate level of commitment from all parties involved, and journeys on the metro map should not be seen as a “hop on, hop off” trips.

Guidelines for Transforming the IT Function

1. Recognize and Promote the Importance of Bimodal IT. Senior business leaders must work with the IT function’s leadership team to champion the efforts to establish bimodal IT. Both business and IT leaders must be involved in deciding and steering the IT function toward its destination, keeping in mind that “quick wins” and early success stories often build the necessary trust. Effectively communicating the purpose and vision behind the transition to bimodal IT also serves as a motivational tool to secure important stakeholder buy-in at the various stages of the journey.

2. Select a Bimodal IT Archetype and Articulate your Future Vision. Firms should articulate the final vision (destination) for the IT function before embarking on their transformation journeys. The destination should be derived from and aligned with the organization’s overall business strategy and digital transformation initiatives, taking account of the characteristics of each of the four bimodal IT archetypes and the organization’s specific circumstances. The choice of the initial bimodal IT archetype is particularly crucial, as it determines the course of the journey and sends signals to the rest of the organization.

3. Continuously Re-evaluate Whether to Switch Bimodal Archetype. Negative experiences with a specific archetype are not the only reason for switching to a different archetype; successful implementations can also, over time, lead to a need to switch to a different archetype. For example, success with Divisionally Separated Bimodal IT can lead to Subdivisional Bimodal IT where the Agile mode is incorporated into the IT function. Moreover, firms should monitor the maturity of their bimodal IT setup and consider the concept of unimodal agile or multimodal IT, or of embedding IT competencies directly within the business units.

4. Set up Appropriate Governance to Manage the Transformation. It is critical to ensure that appropriate governance mechanisms are established to enable bimodal IT to assist the organization in achieving the desired objective of increasing the IT function’s explorative capabilities and agility. Effective bimodal governance instruments include steering committees specific to each mode and employee incentives linked to mode-appropriate key performance indicators.

Moving Beyond Bimodal IT. Over time, firms may eventually move away from bimodal concepts to realize their future vision of corporate IT. Some companies, especially those that have arrived at Reintegrated Bimodal IT, ultimately strive for a unimodal agile design, which can be achieved by outsourcing Traditional mode operations so that the IT function can fully focus on supporting digital business objectives.

In summary, bimodal IT is an important organizational tool that enables the traditional IT function to eventually transform into an entity that effectively supports the business as it undergoes digital transformation. Despite the disruption caused when bimodal IT is introduced or when moving from one bimodal IT archetype to another, our study provides important organizational learnings not only for the IT function but also for the rest of the organization.