

## Chapter I

# A Case of an IT-Enabled Organizational Change Intervention: The Missing Pieces

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### ABSTRACT

*This case study documents an organizational change intervention concerning the implementation of a novel information technology at a university-owned research foundation (URF). It evidences the disparate expectations and reactions by key actors toward the change event, marking a mismatch between a new paradigm required by the new technology and existing information technology practices. Drawing upon change management and management information systems (MIS) literature, we discuss the perceived change management issues hindering the change process at URF. Our discussion is tempered by a theoretical lens that attempts to integrate the literature bases drawn upon in this research. In particular, resistance from in-house IT specialists was observed as the strongest force obstructing the novel IT implementation. This study offers a forum to stimulate both researchers and practitioners to rethink the necessary elements required to enact change, especially with respect to novel IT implementations.*

## ORGANIZATIONAL BACKGROUND

The information technology (IT) enabled change process reported in this case is being implemented in a university-owned research organization (hereafter, the parent organization will be referred to as the *university* and the research organization will be referred to as *URF*). URF was formally incorporated in 1967 as a not-for-profit corporation with its origin as a space science and technology research laboratory that was created in 1959. URF was established primarily to provide an organizational structure for the management and physical support of applied research, the discovery of new ideas, and the advancement of new technologies. Since its establishment 40 years ago, URF has expanded from supporting a single-disciplinary research base to a multidisciplinary research base in space science and technology, small molecular systems, water science and technology, and associated information technologies; from owning one research laboratory to over 15 research facilities and laboratories; from having two university professors who started the first research laboratory to employing more than 400 scientists, engineers and administrative staff. Over the years, URF has evolved into a distinct research institute with international recognition as an associated reputation as a world-class research facility. URF not only provides research administration, management, and stewardship of funds for university-wide research projects, but also undertakes much of its renowned research activities in space, water and bio-molecular science and technologies via its various research units.

URF currently has three research units and one technology commercialization office: the Space Unit (SU), the Molecular Unit (MU), the Water Unit (WU), and the Commercialization Office (CO). Each unit is characterized by its own identity in terms of management style, culture, finance, and research capacity. SU, as one of 10 university affiliated research centers (UARCs) in the nation, is the largest unit within URF and generates 94% of total URF research funding. The sources of funding by agency include: Ballistic Missile Defense Organization (BMDO) 39.7%, Air Force 20.6%, Navy 18.6%, NASA 15.5%, Private 2.0%, other Department of Defense (DoD) 1.5%, other Federal 1.4%, National Science Foundation (NSF) 0.4%, and state funding 0.4%. A board of trustees provides oversight and direction for the policies, procedures and development of the organization. There are currently 16 members on the board with backgrounds in academia, industry and government. The president of the university (the parent organization) appoints URF's directors with approval from the existing board.

Until about five years ago, URF was managed and administrated under the auspices of a university model in all operational aspects such as finance, human resources, and research/business development. The vice president of research for the university had played a key role in the management and administration of URF. A major portion of URF research funding was contract and grant-based and its financial structure followed A21 — a university accounting scheme.

However, during the past five years, URF has experienced tremendous growth that demanded transformation from a university-oriented organization to a business-oriented corporation. Moreover, the increased scrutiny by federal government audits required URF to move to a more independent business environment. As a result, the accounting scheme has recently moved from A21 to A122, a not-for-profit protocol, to reflect the

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