Overview

The recent arrival of a new Chief Information Officer has created a unique opportunity to chart a vision and a new direction for the use of Information Technology to continue to advance the mission of UVM. This vision will attempt to acknowledge and embrace national trends in Information Technology within the Higher Education community as a point of reference. The vision will also draw from two recent external reviews of IT at UVM to suggest future actions that could propel the University into its next level of excellence.

Context

As pointed out in the 2016 Moran Report and the 2017 Enterprise Technology Services (ETS) Administrative Unit Review, UVM has implemented some of the most complex mission critical systems, which are supported by highly dedicated teams of individuals. With very little turnover over the years, many of the Information Technology professionals have served the University for a long time, and have consequently established a remarkable preservation of institutional knowledge and cultural practices.

In recent years, however, the evolution of the field of Information Technology and the construction of new buildings have exposed vast disparities and inefficiencies in the overall UVM technology domain. For instance, the existence of two major ERPs (Enterprise Resource Planning systems) such as Banner and PeopleSoft, the aging telecommunications infrastructure along with the occasional unnecessary duplication of efforts might lead one to question how the disparate IT efforts and investments align with the University’s ambition. The recent administrative unit review of ETS has not only pointed out the need for an alignment of Information Technology to the University’s central mission of teaching, learning, research and service, but the report also suggested the creation of a governance structure. Such structure should be the place where strategic conversations related to technology begin. A governance structure of this kind would also have responsibility for helping to shape or perhaps maintain a focus on Information Technology as a strategic element of the University.

Using resources from Educause (the largest Higher Education IT professional organization) as a reference, it would be appropriate to try to situate UVM on an IT maturity spectrum. In other words, we should ask where UVM stands on a spectrum that ranges from (a) maintain the status quo, (b) grow the environment or (c) to simply leapfrog to transform the organization in a way that establishes the technological foundation that allows the University to better serve its 21st century learners.

To answer the aforementioned question, I have spent the past three months engaged in a listening tour to develop an appreciation for the proficiencies and the areas of opportunity within UVM’s
overall technological environment. It is very encouraging to note and confirm that the University’s central IT organization, which is made up of 70 individuals, under Dean Mara Saule’s leadership has implemented and maintained some of the most complex systems one could expect at an institution of this size. They have also implemented or integrated some cloud-based technologies within the University’s portfolio, and are working diligently to maintain a safe and stable computing environment. At the same time, cultural realities and the digital deferred maintenance, coupled with insufficient personnel, have hindered the institution’s ability to (a) fully leverage its current investments or (b) properly plan for the adoption of new services that would bring efficiencies while improving the overall user experience and mitigating risks of varying degrees. In this context, it is imperative to envision that Information Technology at UVM move beyond its current state of simply maintaining to a state of growth and transformation.

Vision for the Future

A new vision for the use of Information Technology is not only necessary, but it is also timely at this critical point in history where organizations depend on their digital infrastructure to maintain a certain competitive advantage. This vision cannot be fulfilled by simply operating Information Technology as a utility. Instead, this vision must be intended to transform the student experience. Essentially, this vision will create a Next Generation Digital Learning Environment (NGDLE) that employs a set of tools to engage the learner both in and outside the classroom. The success of this vision will depend on our investment in both personnel and in an infrastructure that is robust, highly available, flexible, secure and resilient. We envision an environment that ultimately reduces the distance between learning and information, an environment in which resources must be directed to: (a) Develop the Teaching & Learning Environment of the Future; (b) Support Faculty Research, Scholarship and Creative Activities; (c) Support and Improve Administrative Processes; (d) Promote Information Security and Protection of Digital Assets; (e) Improve Operational Efficiencies; and (f) Enable the Oneness of IT at UVM.

Below are some concrete initiatives UVM should consider in order to start creating its own version of the Next Generation Digital Learning Environment.
Strategic Plan and Priorities

Updated based on feedback from IT Governance in January 2019

1. Help develop the Teaching & Learning Environment of the Future
   a. Deploy tools and technology to engage 21st century learners
   b. Deploy digital backpacks to support teaching and learning
   c. Infuse research computing into the classroom
   d. Embrace learning analytics to understand trends and patterns affecting students
   e. Embrace mobile computing as well as mobile apps

2. Support Research, Scholarship and Creative Activities
   a. Refresh the Vermont Advanced Computing Core
   b. Create a data repository to support all researchers, regardless of discipline
   c. Partner with other influencers to facilitate the creation of Data Management Plans and deployment of supporting technology
   d. Promote Internet2 as a research collaboration tool

3. Support and Improve Administrative Processes
   a. Infuse business process analysis into software implementations to encourage reengineering when appropriate
   b. Implement data analytics and Business Intelligence (BI) and a data integration hub between key administrative systems
   c. Partner to initiate an ERP modernization effort and evaluation

   a. Enhance University information security posture and awareness
   b. Implement enhanced security platforms
   c. Improve incident response capabilities
   d. Enhance third party relationship management
   e. Improve technology resiliency and continuity

5. Improve Operational Efficiencies
   a. Invest in more modern IT infrastructure to ensure systems meet University needs
   b. Deploy a unified communications system and enhance collaboration tools
   c. Promote best practices through resource acquisition, consolidation of resources and shared professional development

6. Enable the Oneness of IT at UVM
   a. Establish Information Technology governance
   b. Implement a formal project management methodology to guide technology projects
   c. Increase collaboration among IT professionals across UVM and strengthen the role of Collaborative IT
   d. Improve campus-wide communications around information technology