Technological Change

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Overview

The Greater Green Bay Area is not thought of as a technologically advanced region. When it comes to the development of new technologies, areas like Silicon Valley, Boston, New York – and, more regionally, Chicago and Minneapolis – are thought of first. When you recognize that most of these areas have more technology professionals than the City of Green Bay has people, this reality isn't likely to change anytime soon.

That does not mean, however, that our community cannot be a technology-enhanced region. We have a great history of technology-enabled visionaries, who have been focused on how best to apply new technologies. A striking example of this was in 1988 when the founder of a start-up company, Qualcomm, walked into Don Schneider's office with a new technology that would enable Schneider National to connect trucks with satellite-based data communication devices. By the time he left Green Bay he left with a deal – and checks for $10 million – that transformed the transportation industry and moved Schneider into an industry-leadership role.

This ability to envision how to apply new technologies – to create new value for our enterprises – lies at the heart of the opportunity for our community. Done well, we will enhance the quality of our community – economically, environmentally, and socially – and improve the overall health of the region. Otherwise, we risk losing our competitiveness to other areas. Simply, there will be communities that win and there will be those that lose through emerging technology transformations.

Our challenge is simple: what will it take to win?

Timeline

It is important to recognize that we will not control the timeline. Technology will advance – and accelerate exponentially – whether we do anything or not. Instead, the question is what is the window of opportunity that we have to take advantage of these emerging technologies, for the benefit of our organizations, businesses, and citizens in order to advance the competitiveness of our area? Additionally, while it is important to recognize that the future is unknown and unknowable, I would suggest that the 2020-2025 window will be critical for our area to envision and apply these emerging technologies.

Key Stakeholders

While it would be easy to state that every public official, locally-led business, aspiring entrepreneur, education leader, non-profit, and arts community member all have a stake in this future, the question is more complex. I would argue that the connections between these stakeholders – and the connectors themselves – are the real stakeholders that can facilitate this change in a widely-beneficial manner.

Trends

The key technological trends that will create both opportunities and challenges for our community include:

- Artificial Intelligence & Machine Learning: includes technologies such as deep-learning, neural networks, and natural language processing. These technologies will enable intelligent systems that learn, adapt, and have the potential to act autonomously.

- Connected & Intelligent Devices: includes the Internet of Things (IoT) and AI enabled devices that advance from stand-alone devices to collaboratively-capable devices.

- Blockchain: includes distributed ledgers that enable the transfer of value between parties. This technology enables trust to be developed in an inherently untrustworthy environment and provides complete transparency between participating parties.

- Adaptive Security: includes cyber-security and IoT security that can learn and adapt to emerging security threats on personal and commercial information, infrastructure, connected devices, and machines themselves.

While other significant trends exist in technology, these four, focused on how technology behaves, connects and communicates, establishes trust, and protects itself from threats, are at the core of this emerging technology environment.

Emerging Issues / Questions

As we consider how the technological change factor will impact the Greater Green Bay area, we may consider:

- How can our stakeholders learn about emerging technologies? Does the University System – and UW-Green Bay in particular – have a role in this learning?

- What will it take for our organizations – both for- and not-for-profit – to create connections to new technologies?

- What role will start-ups and innovation have in advancing the technology capabilities of our community?

- How can we create connections between sectors – business, environment, social, educational, sciences, arts – that enable collaboration concerning the deployment of new technologies?

- How can we create a culture of innovation and risk-taking that would be capable of pursuing applications of these new technologies?

- Finally, what will it take for our community to advance while technology continues to advance exponentially?