

# SCIENCE With PRACTICE OF AND TECHNOLOGY

## STEM and Social Sciences: Technology Partnerships for Thriving Rural Communities



Dr. Nadilia Gomez

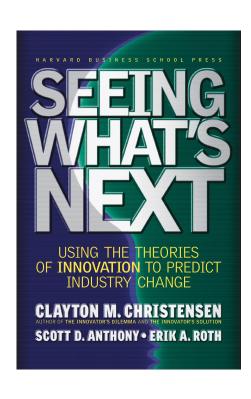
Dr. Marie-José Montpetit





Dr. Max Zhang

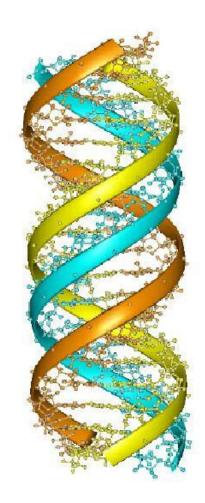
### **Innovation Theory & Telecom Megatrends**



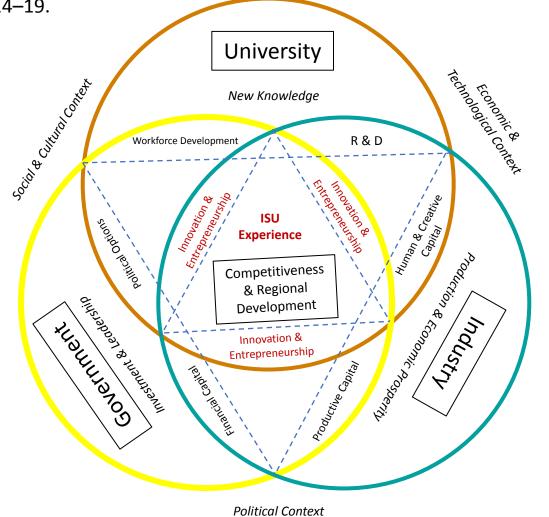
From leading agriculture and rural industries to leading broadband innovation

- Wireless-application co-design & customization
- Rural-urban nexus
- Connected Communities & Internet of Things
- Telecom innovation democratization
- Distributed energy systems

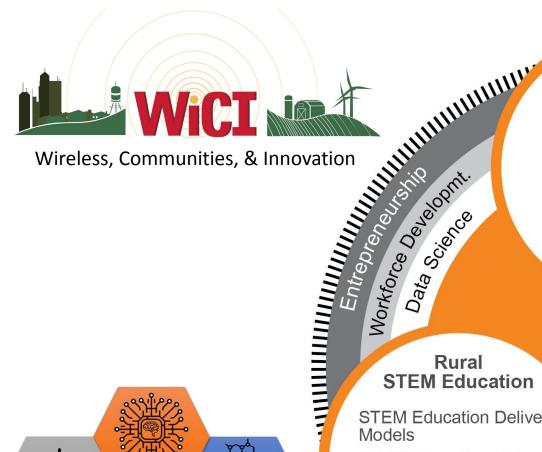
Etzkowitz H, Leydesdorff L (1995) "The Triple Helix—university—industry—government relations: a laboratory for knowledge-based economic development." *EASST Review* 14: pp.14–19.



Triple helix of DNA – more unstable than the double helix but holds more information.



Farinha, J. and Farinha, L. (2013) "Triangulation of the Triple Helix: a Conceptual Framework", *Triple Helix Association*, pp. 1-21. Dorhout's edits/additions.



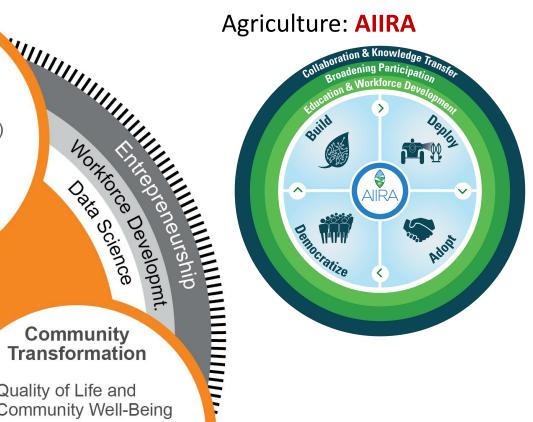
**Innovative Rural Tech** 

Rural Broadband

Extended Reality (XR)

Applications for Manufacturing and Agriculture

Al Institute for Resilient Agriculture: AIIRA



**ARA** 

wireless living lab

STEM Education Delivery Models

STEM Education Network Inclusive and Digital STEM Curriculum

Quality of Life and Community Well-Being

Bridging the Rural Data Science Gap

Policies for the Rural **Innovation Economy** 

Data Science Workforce Developmt.

Entrepreneurship

Design Center for Manufacturing Translational Quality of Life

**TechTHRIVE: THriving** Rural communities in an InnoVation Environment









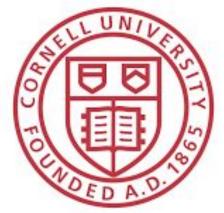
**LPWAN** 



Developing a public IoT network based on LPWAN

- Engagement-driven
- Community-inspired
  - Agriculture
  - Civic applications for municipalities
  - STEM education
- Bridging digital divide

IoT class



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