



**ARRELL
FOOD INSTITUTE**



AT THE UNIVERSITY of GUELPH

Positioning the 'rural' in Agriculture 4.0: Early Trajectories and the ways forward

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IMPROVE LIFE.

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Advisor: Evan Fraser
Committee: Ryan Gibson; Phillip Loring

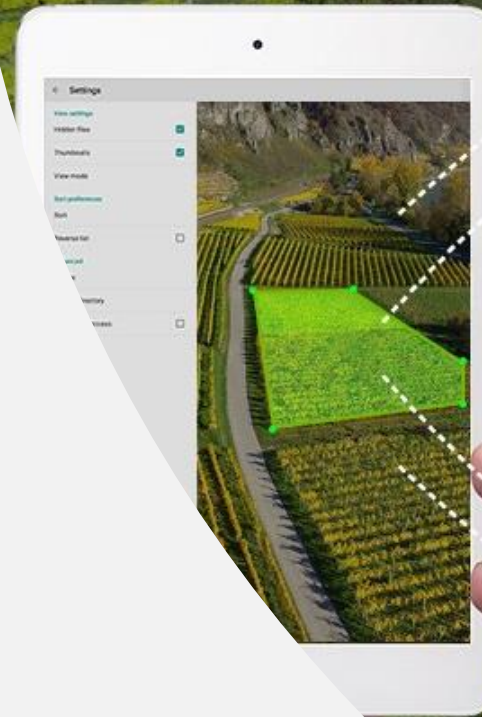
2019 North Atlantic Forum & CRRF Conference, October 1-5, 2019, St. John's, Newfoundland & Labrador, Canada

Presentation Outline

- The BUZZ of Digital Agriculture
- Emerging Discourses and the rural
- My Work

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Digital Transformation in Agriculture

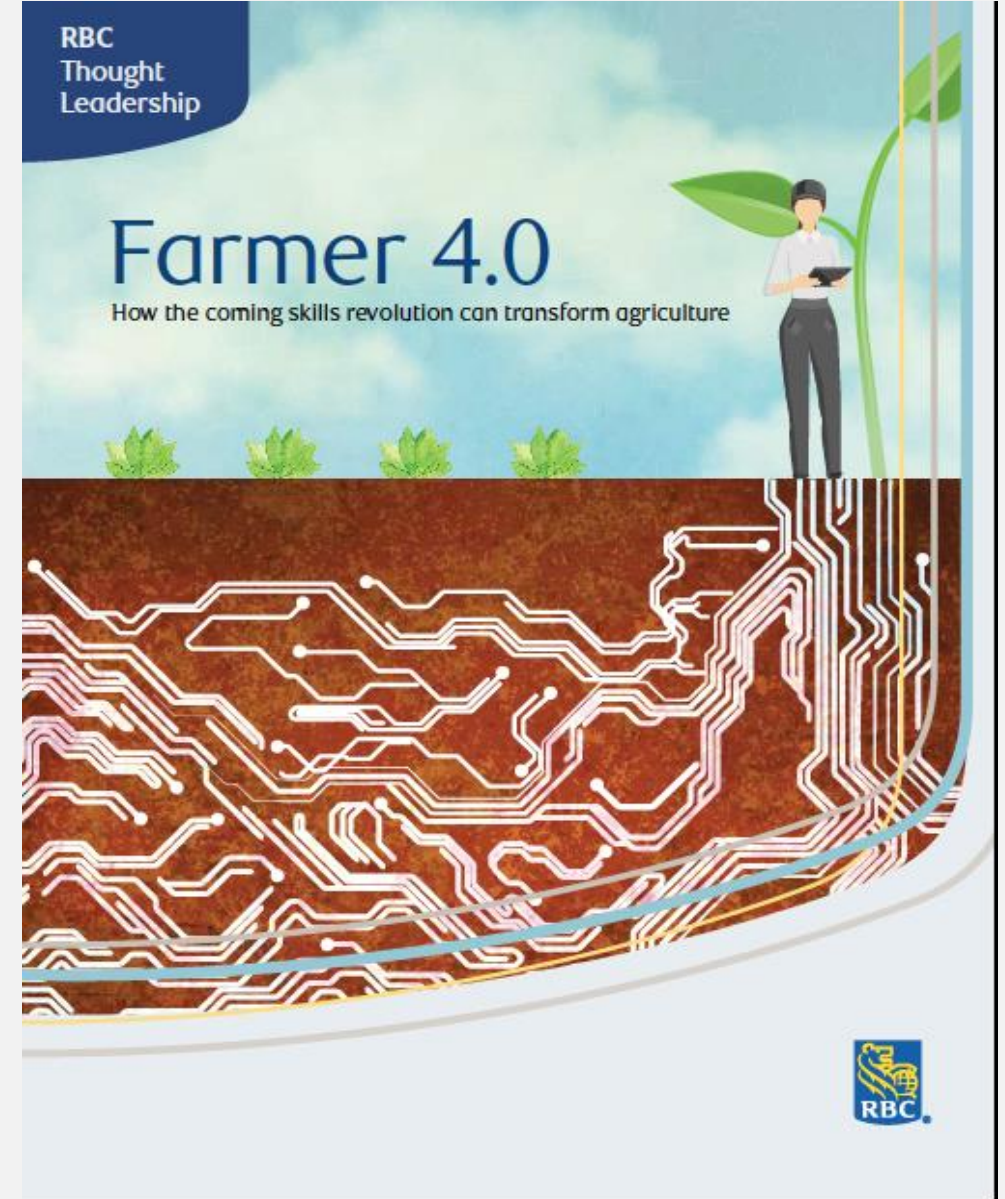


Buzzing Digital Agriculture

“Working for farmers, Dot completes tasks autonomously and enables farmers to spend more of their time focusing on the overall operation of their farms?...”

<https://seedotrun.com/about.php>

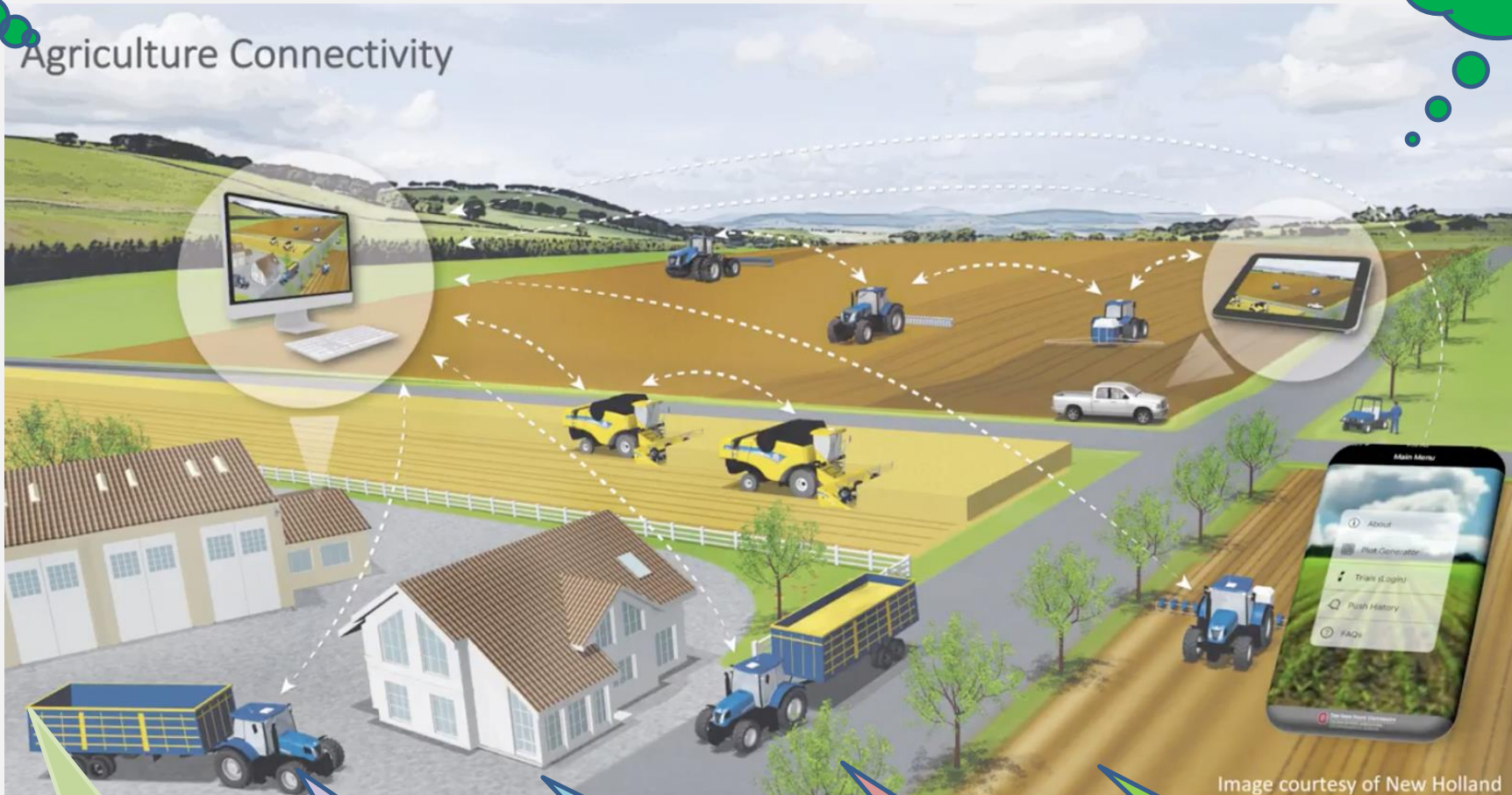
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Agriculture
4.0

Digitising 'the farm'

Digital
Agriculture



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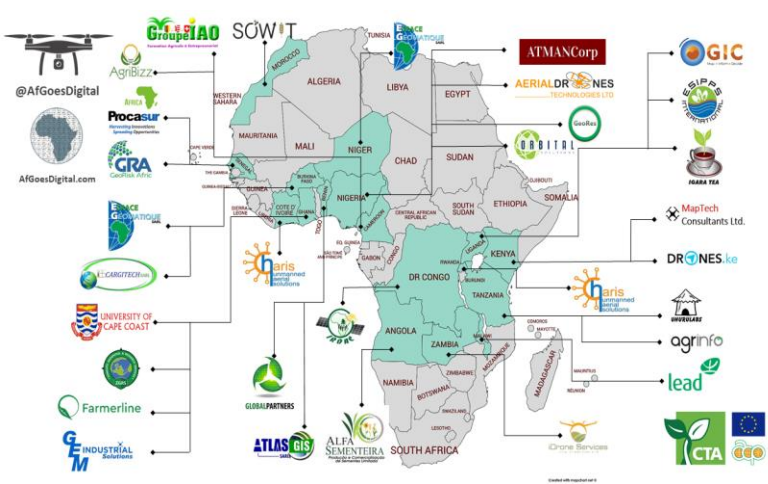
ICT in
agriculture

E-
agriculture

Precision
Agriculture

Smart
Farming

Big data in
agriculture



Digital Farmer Services

An Ecosystem that connects farmers to services.

- ## ADVISORY SERVICES

Send accurate market prices,
weather forecasts, crop tips and
nutrition advice to farmers

- ## MARKET LINKAGES

Provide market opportunities by connecting farmers to commodity buyers.

- ## FARMER PROFILING

Profile and manage farmers for programs such as cash transfers, input subsidies, crop purchase



- ## FINANCIAL SERVICES

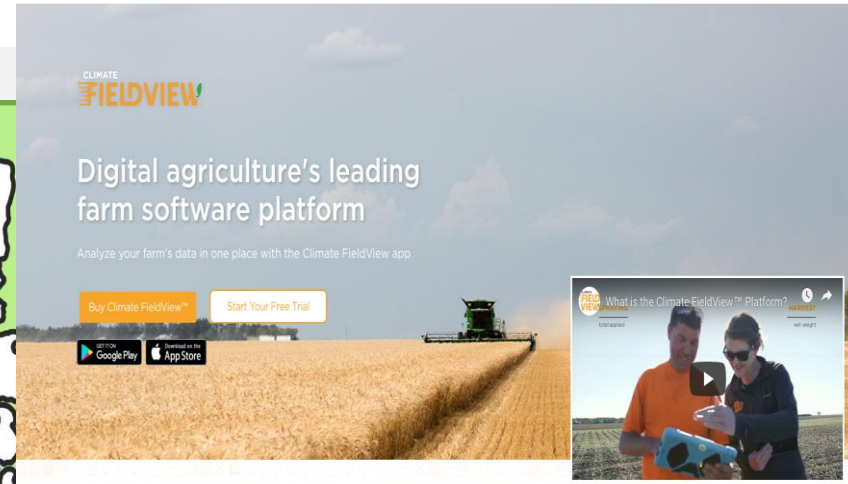
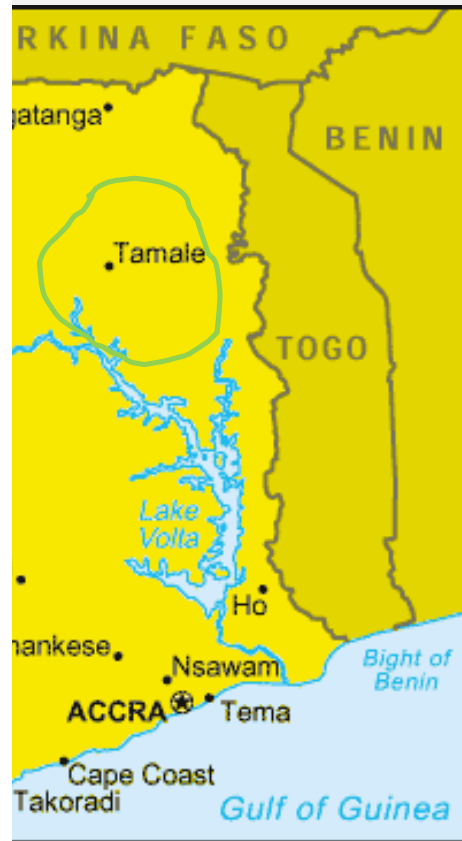
Deliver critical services to farmers including credit, insurance and pensions

- ## PAYMENTS

Pay farmers via mobile money or using the Esoko smart card system which stores transactional data

- ## BUNDLED SERVICES

Partner with us to create bundled services for rural customer acquisition strategy

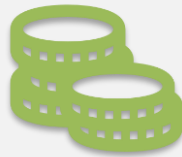
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Digital Agriculture in Practice

Emerging Issues and Questions



Environmental



Economic
implications



Big Data
issues



Socio-cultural
impacts??

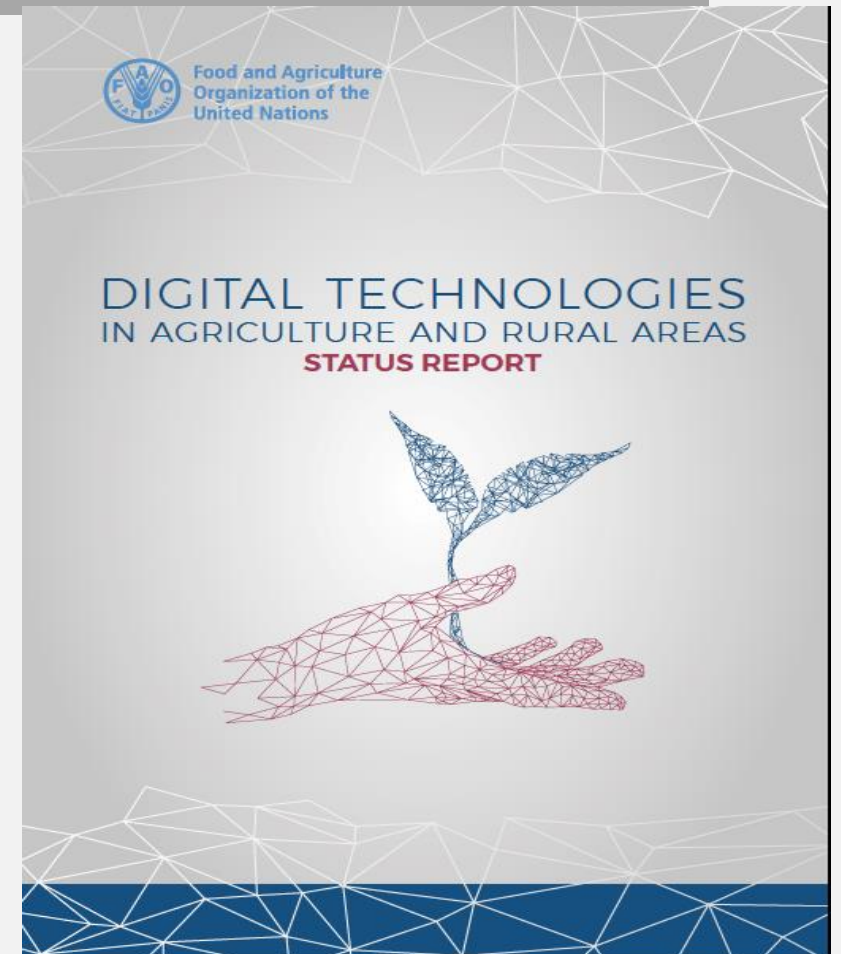
Emerging Issues and Questions



Social impacts??

AGRICULTURAL-RURAL LANDSCAPES

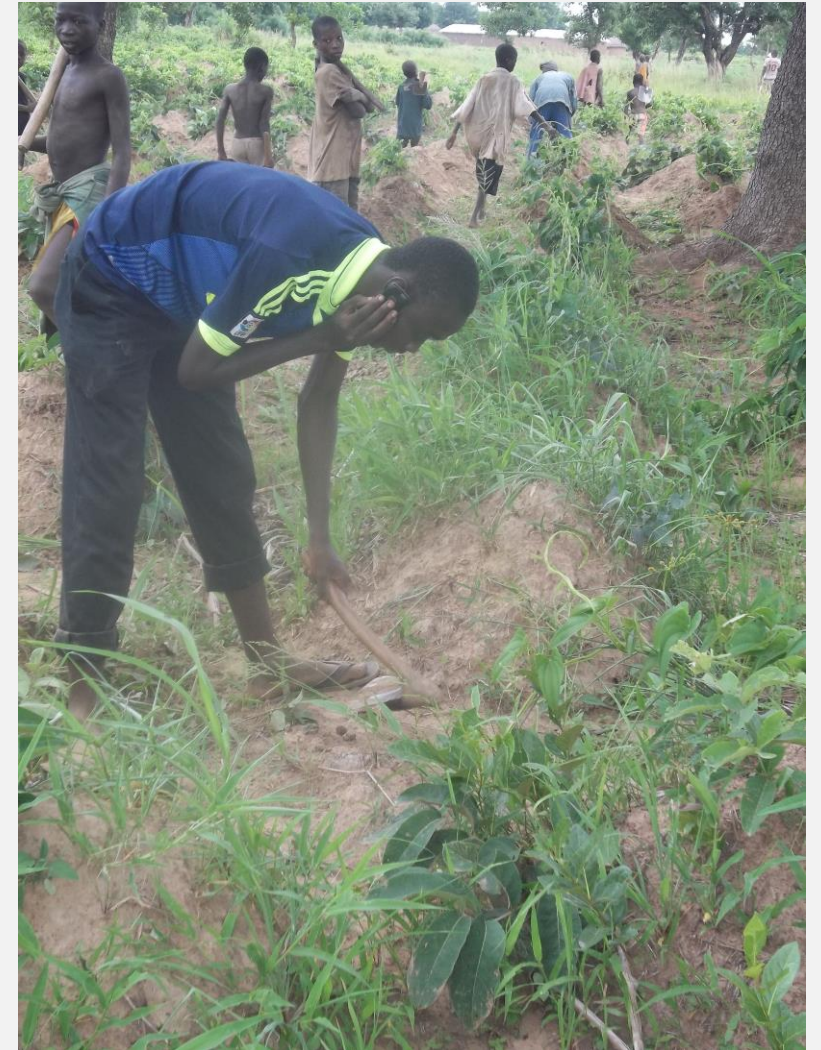
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???...To the countryside

Rose and Chilvers (2018: 1) “...*agricultural societies (rural areas) may be changed, or “re-scripted”*”

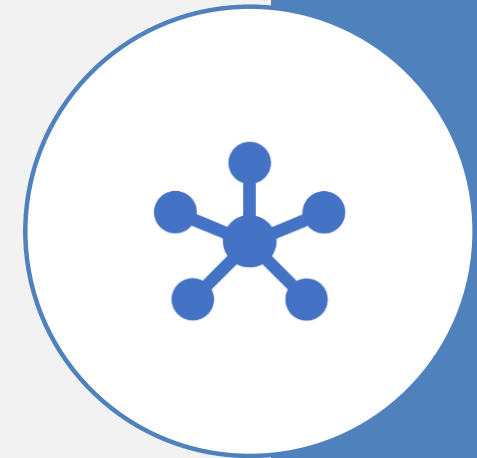
Carolan (2017: 145), mentions of producers expressing anxieties over “*how this (digital technologies) “seemingly ‘objective’ technology amplifies particular characteristics while undermining other qualities that they believe are essential for creating healthy rural communities”.*”



What we are doing

Social/human dimensions of digital technologies in agriculture

- ❖ Data governance and management
- ❖ Changing farming practices and rural communities



What I am doing

1. How is the digital transformation manifesting in distinctive agricultural landscapes? - *Who is using which digital agricultural technologies in what, where, and why?*
2. In which ways are digital technologies changing farming practices, and what further changes are perceived by farmers/producers and other stakeholders?
3. How do farmers and other stakeholders perceive of the impacts of digital agriculture on their (rural) communities?
4. How do we ensure an inclusive and sustainable agriculture 4.0 transition in diverse agricultural (rural) landscapes?


Where are we?

Farms.com™ ↓ Soybean 890-2 Home News ▾ Markets Videos Chat Farm Equipment Classifieds

Trecepta™
RIB COMPLETE™ CORN
Three modes of action.
Powerful insect control.
Get WBC Control →


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Invitation to complete precision ag survey



Jul 29, 2019

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University of Guelph researchers examine the effects of this technology on the ag industry

The University of Guelph (U of G) is inviting Canadian crop farmers to participate in a research project that examines the effects of precision ag on the industry.

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ARE YOU A CANADIAN CROP FARMER?

At the University of Guelph, we are looking for participants for a survey on the use and perceptions of precision agriculture technologies. Please consider taking some time to fill out our survey!


Link to Survey:
[HTTP://TINYURL.COM/PAAGTECH](http://tinyurl.com/paagtech)
Estimated Completion Time: 25 minutes



Contact: smarquis@uoguelph.ca if you have any questions



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Next Steps

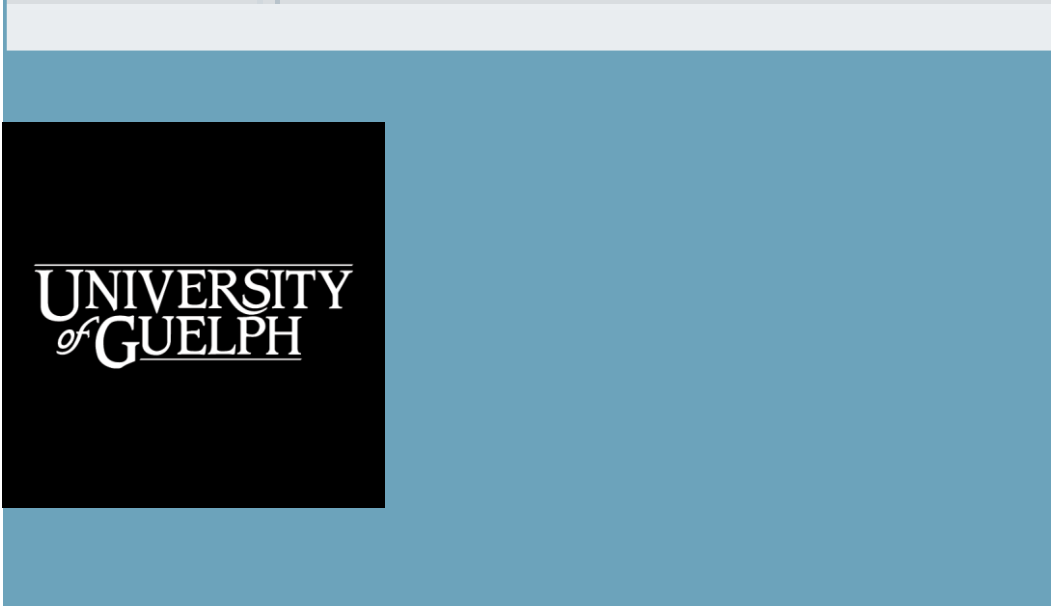
- ❖ Interviews with farmers, technology retailers, service providers, and communities in Canada (Southwestern Ontario)
- ❖ Field work in Ghana to examine the dynamics of digitization in that context by talking to farmers and technology services providers.

Conclusion: Implications for rural



Research

Spaces for further research



Questions

AND

Suggestions

What elements in our rural communities or rural life should we be interested in understanding in the face of digital disruptions? What should we care about?



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