Disrupting policy with vision and action to deliver broadband to under-served rural communities
A Manitoba case study

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**About Rural Development Institute**

**Mission**
- To use research, policy, and practices to assist rural areas to reach their potential with partners from government, businesses, and others
- Support rural research networks

**Mandate**
- Use applied research to inform decisions
- co-create and disseminate knowledge
- grow rural researchers

**Organization**
- 20 years of applied research
- 14+ research affiliates, 5 FTE, 4 project managers, 4 grad researchers
- project funding, community-based

[www.brandonu.ca/rdi/](http://www.brandonu.ca/rdi/)
Purpose

• Disrupting policy
• Vision: Rural broadband is possible – P3
• Action: Customized network & skills/knowledge

Overview

• What is known?
• What is missing?
• What is proposed?
• What are next steps?
What is known?

• Coverage varies (cell phone)
• Rural gaps – dynamic situation
• Providers narrowing rural gap (ISPs)
• Economic impacts
• Return on investment
  – connecting Canadians (rural analysis needed)
What is known? Coverage varies

Basic coverage
What is known? Coverage varies

3G

Source: Bell
What is known? Coverage varies

4G 21 Mbps (future extension)

Source: Bell
What is known? Coverage varies

4G 42 Mbps  Future extension

Source: Bell
What is known? Rural gaps

- Waterways, railways, road ways, info-hwy
- $3.27B govt invested since 2000 (MTS 2010)
- 2.1 M rural households in high cost-serving area (CRTC 2010)

CRTC approach (2011)
- Market forces
- Govt subsidy
- 2017 @ 5Mbps = aspirational goal

Comparison of Contribution to GDP 2009

OVUM: “The Benefit of the Wireless Telecommunications Industry to the Canadian Economy” April 2011
What is known? Rural gaps

1.5 Mbps broadband in Canada

Trend line: Minimum 1.5 Mbps availability in rural areas may not reach 90% by 2017

(CRTC Annual Monitoring Reports 2004 to 2011, excludes Hi Speed Packet Access)
What is known? Narrow gap

NetSet
(Eastman, Lac du Bonnet, Carman, Brandon Area, Portage la Prairie, West Interlake/Gypsumville, Western, Swan River, Dauphin, Flin Flon, The Pas)

Xplornet
Approach:
Local leaders, Local techn, Local pre-paid anchor + HHs

(S. Toderash, NetSet)

4G Satellite Coverage in Manitoba
What is known? Narrow gap

RFNOW Inc.
160km fibre, 1000 clients

BCN
Serving 51 Communities

Moosomin
Virden
Carlyle

S. Andrews CEO
What is known? Narrow gap

- 10G network
- 28 communities connected
- Data networking, off site backup
- E-business applications
- Video conferencing, VoIP
- CAD, Financial, Medical Imaging
What is know? Narrow gap

- Alberta’s Supernet
- $300m, essential utility
  - Goal: 98% HH connected
  - Rural centres with an anchor (school, hospital, library, justice, govt office) + last mile by market forces
  - Problem: last mile too expensive for providers
  - 2011: fact finding – where is BB? Not? What are the options? Actions

Ab Eco Development Authority 2010.
What is known? Economic

• Different level impacts
  – Global, national, regional

• BB accelerates innovation
  – New services
  – Improved productivity
  – Attracting employment

• Concentrated impact
  – Health, schools, justice, financial, manuf.

• Positive impacts after 4 yrs in businesses with training/learning program

• An increase business penetration of 5-6% means .6-1.8% job growth

(Katz 2009)
What do we know? Economic

Economic impacts

- Construction (direct)
- New jobs (indirect)
- Secondary (induced)

Economic multipliers (Jobs)

- 1.38 – 1.83
- 1.93 – 3.42

Katz 2009: Greenstein & McDevitt 2011
What is known? Economic

South Dundas, ON

- 10,500 pop
- Invest $1.3M into fibre
- 62.5 new jobs
- $2.8M bus. expansion
- $140k additional rev
- $7.9M Prov taxes
- $4.5M Fed taxes

(Katz 2009)

Eastern ON Network

- Underserved area
- Invest $170M fibre
- Govts ($55M), Local ($10M), ISPs ($105M)
- Revenue sharing (10 yrs)

(Rural Ontario Institute 2012)
What is known? 7 factors key

ROI of connecting Canadians

- Increases productivity
- Creates new jobs and opportunities
- Generates new investments
- Enhances our social lives
- Connects families and friends
- Makes communities safer

Source: Bernard Lord, Pres. cwta 2012

Use of BB is a function of:
age, income, family size
(Horrigan 2010)
What is known? summary

• Rural BB coverage is improving
• Still digital gaps (10%)
• Providers, big and small, are narrowing rural gap
• BB drives innovation, jobs, revenues
• Multiple yrs of impact possible, learning program key
• Economic impact, missed opportunity
• ROI built around 7 factors (B. Lord)

...BUT What is missing?
What is missing?

- A vision and practical approach?
- **Vision**: bring broadband to under-served rural MB areas, one after another
- 463 rural centres & RMs
- 420 connected

21,728 pop. (147-2493)
FN pop. 7865 (x8)
# MB Communities without Broadband

1. ARGYLE (1,073)
2. BADEN (Part of Division No. 19)
3. BALMORAL (Part of Rockwood; 7,692)
4. BARROWS (no data)
5. BIG BLACK RIVER (Part of Division No. 19)
6. BISSETT (Part of Division No. 19)
7. BROCHET FN (306)
8. CLEARWATER LAKE (Part of Division No. 21)
9. CORMORANT (Part of Division No. 21)
10. DAWSON BAY (Part of Division No. 19)
11. ETHELBERT RM (383)
12. FALCON LAKE (Part of Division No. 1)
13. FISHER BAY (Part of Division No. 19)
14. GILLAM (1,209)
15. GRAND RAPIDS (336) / GRAND RAPIDS FN (651)
16. GUNTON (Part of Rockwood; 7,692)
17. HERB LAKE LANDING (no data)
18. HOMEBROOK (Part of Division No. 19)
19. ISLAND LAKE (Part of Wasagamack FN; 1,160)
20. KELSEY (CARROT VALLEY) RM (2,453)
21. KELSEY (WANLESS) RM (Merged with Carrot Valley)
22. LITTLE GRAND RAPIDS FN (796)
23. LOON STRAITS (Part of Division No. 19)
24. MOUNTAIN (SOUTH) RM (570)
25. MYSTERY LAKE LGD (147)
26. NATIONAL MILLS (Part of Division No. 19)
27. OPASKWAYAK CREE FN (2,578)
28. OXFORD HOUSE FN (1,947)
29. PELICAN RAPIDS FN (Part of Division No. 19)
30. PIKWITONEI (Part of Division No. 22)
31. POINTE DU BOIS (Part of Division No. 1)
32. POPLARVILLE (Part of Division No. 19)
33. POWELL (Part of Division No. 19)
34. RED DEER LAKE (Part of Division No. 19)
35. SALT POINT (Part of Division No. 19)
36. SHERRIDON (Part of Division No. 21)
37. STEVENSON ISLAND (no data)
38. VALLEY RIVER FN (427)
39. WEST HAWK LAKE (Part of Division No. 1)
40. WESTGATE (Part of Division No. 19)

*Pop. 2011*
Integrated Action Framework
Connecting under-served communities

What is proposed?

Access

Leaders – Regional

Leaders – Providers

Users

Strategic impact with social marketing

Uses

Leaders – local & technical
What is proposed? Social marketing

- **Goal**: modify behaviours toward a goal (seat belts, not smoking)
- Engage specific grps
- Build critical mass
- Longer term 3-5 yrs
- Learning along the way
- 3 RDI projects
  - 9000 MB beef producers
  - Global conference 2013
  - Water conservation
What is missing?

Access
- Provider(s)
- Speed Mbps?
- Install groups
- Benchmarks

User skills
- Training
- Impact examples

Leaders
- Regional support
- Local support
- Tech support
- Action plan

Uses
- Baseline of 40+
- Business case
- Social marketing framework
Next steps

• Gain support for approach
• Partners & funding
  – Start up project
  – Researcher-in-residence
  – 2+ yrs project with install grp
Thank you

Questions, comments, & discussions