

Wireless Public Alerting

**Serving public safety critical needs and
protecting the most vulnerable**

April 2016

Bruce Power

- Formed in 2001
- Canada's only private nuclear operator
- World's largest nuclear power complex
- Provides 30% of Ontario's electricity



- Core value is "Safety First"



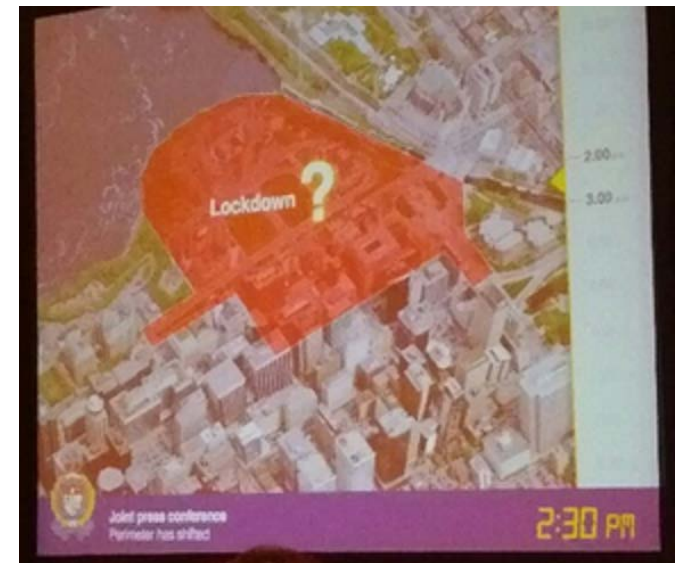
Canadian Public Alerting Urgency

- Global volatility compels alerting needs
 - Climate, disasters, terror, political, etc.
- Alerting gap highlights
 - Police/Fire, EMO, Security seek solution
 - Parliament attack
 - Slave Lake
 - Manitoba Tornadoes
 - Address Social Media misleading info
- National solution required
 - Canada falling behind many countries
 - U.S, Australia, Norway, Cambodia, etc.
 - No single agency/department responsible

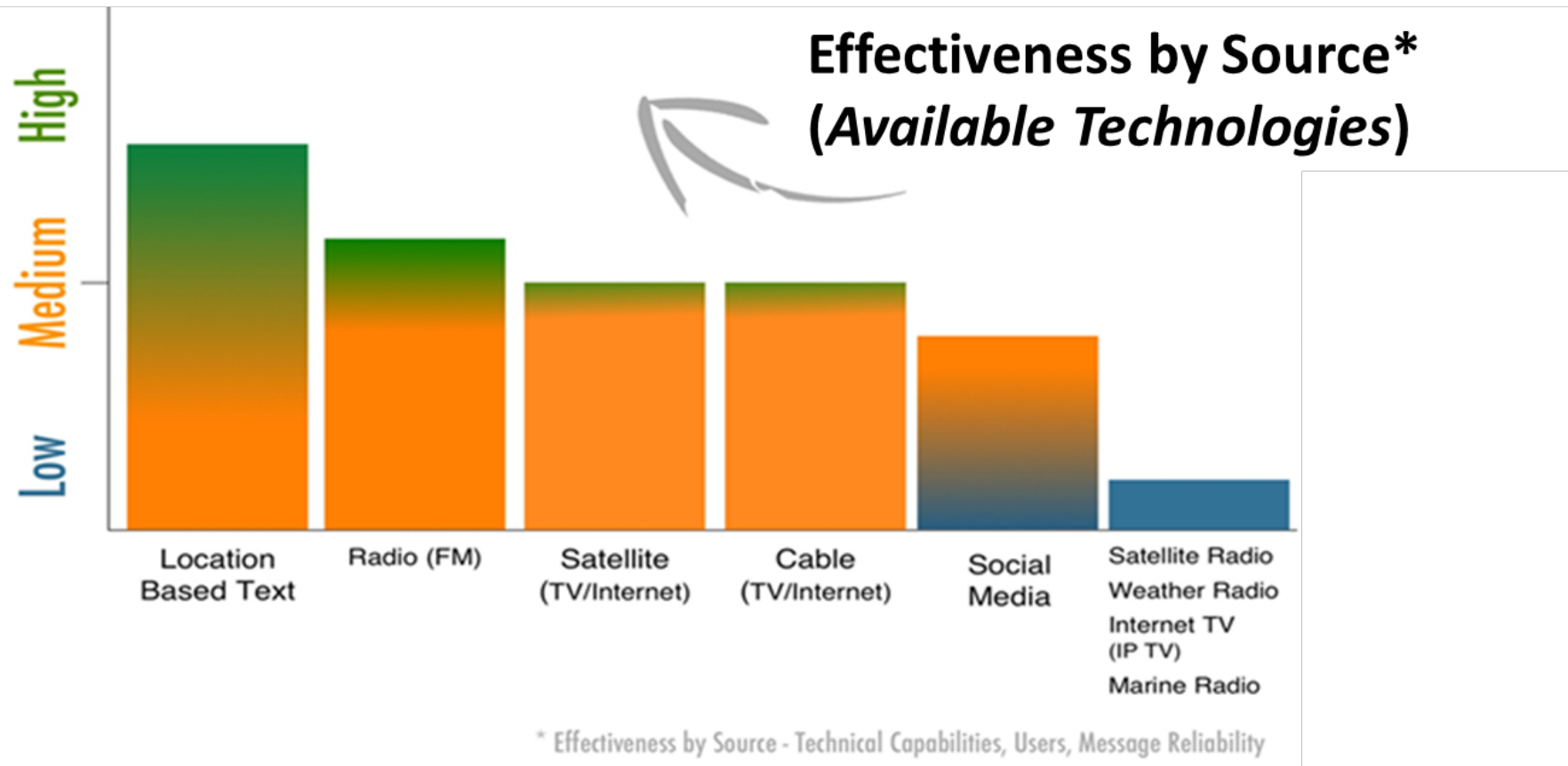


WPA Near-term Objectives

- Universal Reach
 - “no one left behind” due to technology
 - must reach all devices
- Location Granularity
 - targeted alerts to building level
 - alert staging potential
- Accountability
 - auditable confirmed delivery
 - ‘trusted source’ verification



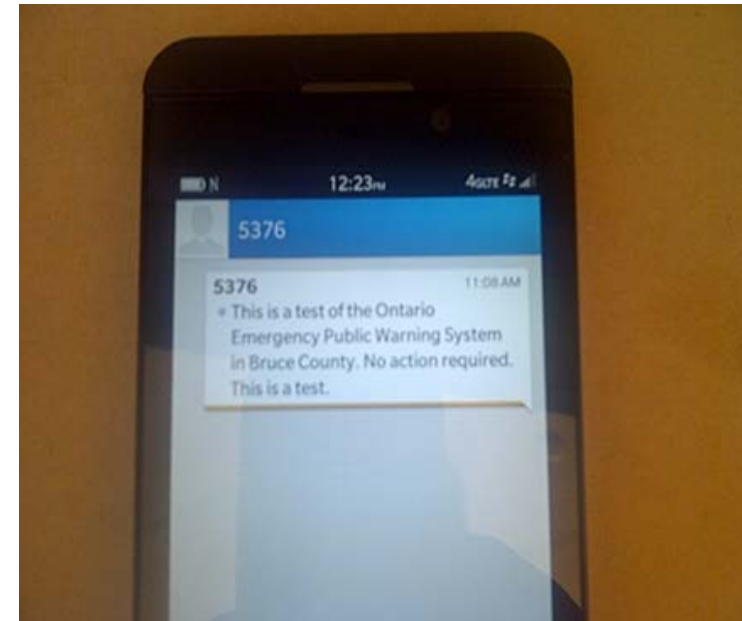
Reach Analysis



*Bruce Power Study: Effectiveness by Source (technical capabilities, users, message reliability)

LB-SMS Tested in 2014

- Works on all networks and all phones international
 - Includes flip phones and smart phones
- Granular - up to 5 square meters
- Provides ability to show receipts
 - Effectiveness/accountability
- Provides Two-way coms
- Provides capability to ad links directing to more information.
- Speed not tested, but others experience up to 500 texts/second.

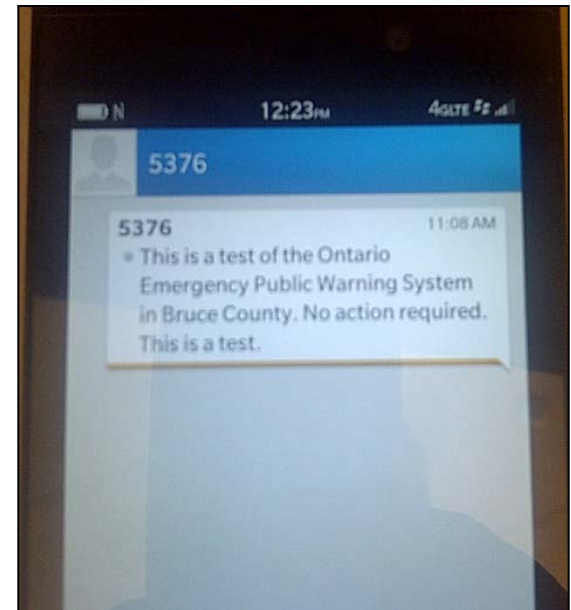


Current Research

- Industry Canada led Cell Broadcast research
 - Phone receives radio signal
 - Ability to blanket a wide area quickly with an alert message
 - Granularity is not as precise (~ 1 km)
 - Requires specialized phones to work, need to change across Canada
 - Only works on LTE Network
 - Designed to only work on Can and US phones
 - Designed for 90 Characters and no support for weblinks

Timely WPA Concerns

- Solutions with long time lines leave gaps unaddressed and public at risk
 - New solutions need new devices
 - Risk of leaving most vulnerable public behind (elderly and poor)
- WPA with features/benefits of both LB-SMS and Cell Broadcast (Hybrid) is best/preferred long-term solution
- LB-SMS is an available solution to provide widest 'reach' using existing devices to fill current alerting gaps



“This is a test of the Ontario Emergency Public Warning System in Bruce County. No action required. This is a test.”
(Nov 2014)

Where to Next

- Need to continue with research on Cell Broadcast /LTE technology.
- LTE Broadcast good for large data transfers, but not yet robust
- Need to put in place what is available today.
 - All handsets. No one left behind
- Stay ahead of technology, not chase it
- Look to U.S. and learn from mistakes



CRTC Public Consultation

- CRTC Call for Public Consultation now active
- Public has until May 30, 2016 to provide comment.
- A mandate is needed to implement a system now that works on all cell phones and all networks
- Have your say.

Go to:

- <http://crtc.gc.ca/eng/archive/2016/2016-115.pdf>



Thank You