Final Report • Alberta Digital Futures Symposium

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Introduction

Advanced broadband networks remain a crucial missing link in the socio-economic development of the vast majority of rural communities in Canada. Technological advances in high-speed mobility applications, generational shift in expectations and values, and an increasingly global economy and marketplace have only heightened the need for rural community connectivity that is ubiquitous, affordable, robust and scalable. Even in embarrassment-of-riches Alberta, most rural communities remain significantly under-served by the province's own jurisdiction-wide fiber optic network.

It is in this context that 50-plus representatives from rural communities, industry, government and academia gathered at the University of Calgary over November 14 and 15, 2013 to identify and discuss the barriers and opportunities for addressing what is one of Canada's most challenging issues in the 21st century. Comprising three streams – technical, socio-economic, and governance/leadership – the symposium included two keynote speakers (see www.digitalfutures.ca for copies of these presentations), a number of virtual attendees coming in via videoconferencing, as well as social networking events.

What follows in this report is a brief summary of these three breakout sessions over the course of the two days, plus the closing plenary session at the end of the second day that laid the groundwork for next-stage planning that is currently underway. Our intent, as per the suggestions and directions of symposium participants, is to generate support for establishing a representative and enduring body of advocacy, outreach and education by way of helping to build capacity in rural communities for envisioning, designing and implementing rural broadband solutions that make sense in the local context.

As part of our commitment to the Open Access movement in Canada, full audio recordings of the sessions, in downloadable and/or streaming digital format, will also be made available through the symposium website (see address above).

The Centre for Information & Communication (CIC) within the Van Horne Institute would like to thank our graduate student researchers and recorders, the Department of Communication & Culture at the University of Calgary, the federal Social Sciences and Humanities Research Council, and Axia NetMedia for their generous support in making this a resounding success.

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Technical Stream Summary (summarized by Linda Vennard, PhD)

A set of overarching questions were initially presented to frame the technical discussion:

> • What is the current state of rural broadband infrastructure?
>
> • What are the options for rural broadband and where is the technology going?
>
> • How does a community source technical expertise?
>
> • How can communities coordinate their activities to either pool expertise or achieve economies of scale?
>
> • What are the common barriers for rural communities?

As the technical session progressed, discussion centred on governance. Of consequence, the technical section collapsed into the governance stream in the afternoon. This section outlines the main discussion points emerging from the technical stream discussion.

1. What is the current state of rural broadband infrastructure?

The technical session began with discussing a definition of broadband and the necessary basic infrastructure rural communities needed. The Alberta government defines broadband as 2 megabits per second (i.e. basic DSL connectivity), which participants did not see as adequate. Participants discussed a range of models, opportunities and challenges associated with current infrastructure and new infrastructure. Three specific examples illustrate the diversity of participants' experiences and perspectives:

> • <u>Partial Ownership:</u> In exchange for ownership of 2 fibers one community granted the telco municipal right of way for 96 fibers and received operational cost relief for 20 years. The telco will provide connectivity of 10-100 MB to the community, along with technical expertise, broadband services and host cloud based storage. The arrangement is motivated by strategic vested interest on both sides.
>
> • <u>Community Broadband:</u> The community of Olds built and operates its own broadband network.
>
> • <u>Government Utility:</u> Discussion focused on how to conceptualize rural broadband – from a private market commodity model to a government utility model. Viewpoints ranged widely and favored both ends of the continuum.

An important factor in rural broadband infrastructure development is that it will be fiber based, which is not covered under CRTC. As a result industry can invest in private infrastructure not currently governed by Canadian regulatory regimes.

2. What are the options and where is the technology going?

Participants addressed this question through two factors. The first (1) was the increasing demand for broadband connectivity, with fiber viewed as the most viable option for sourcing. Participants discussed the role of wireless at some length, and viewed it as an

extension of fiber and also providing mobility. The ubiquitous presence of wireless capability was seen as driving new and innovative business, educational and social opportunities. In this sense, a fiber infrastructure with wireless extension was perceived to be where the technology is going.

The second (2) factor was next generation networks and cloud services, which were seen as fundamental game changers in rural community opportunities. Underlying both discussions was the observation that rural communities and leaders needed to be open-minded and visionary in terms of seeing the potential and opportunities existing and future technology can provide to rural communities.

3. How does a community source technical expertise?

Participants were not at all confident that sufficient technical expertise presently exists within communities to be able to take advantage of the economic and social opportunities afforded by broadband, and clouds in particular. Two possibilities to ensure their needs (current and future) could be met were discussed: (1) recruiting talent from outside the community or (2) growing talent within communities. Participants discussed the changing role of technical personnel and the need to keep abreast of fundamental changes in their jobs.

4. How can communities coordinate their activities to either pool expertise or achieve economies of scale?

Participants discussed a wide range of options to achieve economies of scale. Two examples illustrate:
- Aggregation: Example: 26 BC communities aggregated to negotiate prices for broadband services, which they fund through their hydro revenue stream. The communities benefit from economies of scale and strength of their number.
- Elastic Connectivity and Shared Services to Reduce Operational Costs: Example: Schools and businesses have different high usage patterns, and can share services because of these opposite patterns.

While Participants clearly saw the benefit of pooling expertise and/or joining together to achieve economies of scale, out of necessity they relied on individual contacts rather than benefitting from a formal organization and network to pursue options.

5. What are the common barriers for rural communities?

The common barriers for rural broadband development were readily identified as:
- Economic, i.e. cost
- Uncertainty regarding the role of government
- Lack of leadership and vision
- Technical expertise

Participants saw these from a variety of perspectives and viewpoints, and realized the discussion in the technical stream had ventured into governance. As a result, the technical stream collapsed into the governance stream section for the afternoon.

Socio-economic Stream Summary (summarized by Linda Vennard, PhD)

Early in the first day of the symposium participants in the socio-economic stream generated 14 major points around which to focus discussion: (1) equity, (2) education, (3) control, (4) capacity, (5) shared access, (6) competition, (7) increased awareness, (8) social measures, (9) cultural issues, (10) user training, (11) Aboriginal issues, (12) business opportunities, (13) role of government, and (14) perspective of infrastructure.

These specific points served to initially frame the discussion, which led to Participants recognizing their close interrelatedness. Over two days the initial points were synthesized, and discussion evolved with *seven (7) overarching themes* emerging. These themes are articulated below, and include background context within the original discussion points.

1. **Equality in Education and Healthcare**

   Participants expressed significant concern in a number of areas directly impacting their social environment due to a lack of broadband connections in rural Alberta. Two primary areas that cut across all communities were equality in (1) education and (2) healthcare.

   With respect to education, participants identified significant gaps between plans and visions, and the reality of what was available for Students. A specific example discussed was the Alberta Provincial vision of moving education into a fully digital environment (e.g. e-books, on-line teaching) without considering the lack of availability to full broadband for all communities. This was seen as problematic in terms of equality, and that communities without full access to broadband would be at a disadvantage.

   With respect to healthcare, it was felt that broadband connectivity provided seniors with the means to stay in their homes and live independently longer. The aging of the population of Alberta was taking on increasing importance in the minds of many residents, both for themselves and their communities. It is clear that Albertans want to remain healthy and active in their communities as they and their families age. As a result, they view health and social services delivered through broadband to be a vital and integral part of that goal. In terms of quality of life, Participants felt frequent and continuous access to check in with older family members to be a high priority.

   In terms of the 'economic' impacts that broadband technology might have to education and healthcare, participants felt that these kinds of impacts would be difficult to measure using standard cost/benefit analysis. For example, it is not possible to fix a price to the peace of mind of being able to check up on an elderly parent – or an elderly person knowing that help is close at hand if needed. Participants felt this type of 'social benefit' is lost in a purely economic analysis of cost/benefit.

2. **Lack of Communication and Community Input, With Industry Monopolies Dominating**

Overall, small communities are frustrated as they feel they should already have full access to broadband. Between the Alberta Government and the 'big 3' (Bell, Shaw, TELUS) many rural Alberta communities feel they have no voice in their own future. Bell, Shaw and TELUS have formed partnerships with the government, resulting in market monopolies. Participants view this as not allowing for competition from smaller companies that may be willing to go into the smaller markets to build the infrastructure and work with rural communities to gain access to broadband. Participants expressed a concern regarding a lack of communication with decision makers (industry and government), which in some minds has grown to the level of resentment.

3. **Confusion and Uncertainty Regarding the Role of Government**

Participants expressed uncertainty regarding the role of government (federally and provincially) in rural broadband development. In particular, participants were frustrated with the provincial government. . Most participants were familiar with the Alberta SuperNet, but they had a myriad of unanswered questions as to its present state and, more importantly, the provincial government's future plans for it. Participants were familiar with the Alberta government's approach of providing one drop for each of the province's 424 rural communities to access broadband via the SuperNet. But this approach was not felt to be adequate, since communities are left to their own devices and financial resources to figure out how to connect to it. The 'last mile' and the 'last yard' are constant, continual and frustrating problems that plague rural communities. Participants felt the government is not addressing these issues. Rather, the overall feeling is that that the government has simply passed on its responsibility for these issues to industry.

Participants noted a disconnect between a number of provincial government 'visions' (e.g. education – see previous section) and the reality of the state of broadband access and connectivity in their communities. This extended to economic development in communities, where some communities feel they lack the ability to accept the tenets surrounding a digital economy and its opportunities because of their lack of accessible and affordable broadband. In this sense, the 'talk' and the 'walk' of government need to match up. Participants repeatedly expressed their desire to integrate broadband into their social and economic community development plans, but were realistic in recognizing substantial barriers existed.

The lack of provincial awareness and plans to connect broadband access with the provincial government's social and economic development visions are of significant concern to rural Albertans.

4. **Perception of Broadband as a Utility and Necessary Infrastructure**

Participants discussed a variety of positions on how to perceive broadband. Some participants view broadband as being the same as other infrastructures (roads,

water lines, gas lines, electrical systems), which all people are entitled to have access to and use. Others view it as a market commodity. Strong opinions were voiced on each opposing side.

The perception of broadband was a key point in framing discussions on rural broadband and an important determinant in community development approaches. Discussions on this point circled back to the role of government. Not surprisingly, participants recognized the overlap of their discussions here with the concurrent governance stream.

5. **Uniqueness of Rural Communities and their Development**

By and large Participants expressed the viewpoint that there is not a 'one size fits all' approach to rural community development and, by extension, the role and use of broadband in their respective development plans. Participants illustrated this through discussing a variety of their respective priorities, which tended to coalesce around economic development opportunities and social well being. A substantial amount of discussion involved sharing ideas for economic development opportunities and the potential for broadband to enable them. Some participants saw broadband as extending their existing social and economic development plans, while others saw it as enabling a whole new area for competition and business. For example, 'call centers' are not for every community, but some will be eager to develop them. Participants recognized that while communities have differences, they can still learn from each other. Participants also noted the need for skills and resources (technical and other) to assist them in moving forward in their community development. Discussion of this point similarly circled back to governance issues.

One example illustrating the uniqueness of communities was Olds, which built its own broadband infrastructure. The Olds community shared portions of their process and experience of working with local businesses, the Alberta government and community. Through this partnership Olds was able to construct a broadband network that serves the needs of that community and its surrounding region.

6. **Concern for Aboriginal Communities**

Participants felt the 'digital divide' of rural communities was even more pronounced in Aboriginal communities that are experiencing greater challenges. Currently there is no official national policy for digital services to these communities, and participants felt this is an area in need of attention.

7. **Social Benefits Framework - Models of Rural Community Development and Research**

Participants in the socio-economic stream discussion identified numerous crosscutting issues in their rural communities. One issue was that communication on rural broadband is limited to a discussion of technical and economic concepts, which do not encompass the complexity of social development in communities. In this sense, participants thought that it is essential to move the conversation beyond

merely technical and economic considerations – in order to initiate a discussion of rural broadband development based on 'social benefits'. Participants recognize this would require a process that would translate broadband technology into social benefits for communities, rather than simply economic benefits for industry.

Participants felt a 'social benefits' discussion framework would be more inclusive for all communities, and facilitate greater discussion by inviting more people into the conversation. Participants felt that greater participation would benefit all communities involved.

In summary, over the course of two days the socio-economic stream explored a number of ways that broadband technology could be used to develop their unique rural communities. Throughout these discussions, participants rejected the view that their communities should be conceptualized first and foremost as 'markets'. By the afternoon of the second day, participants in this stream realized that their discussions were overlapping with similar ones in the governance stream. Accordingly, participants here joined the latter group.

Governance and Leadership Stream Summary
(summarized by Mark Wolfe, PhD)

Several seams of discussion emerged in the Governance and Leadership stream over the two days of the symposium, often couched as dichotomies or as occupying positions on respective ends of a spectrum:

1. Vision vs. implementation

As is common in these kinds of *fora*, discussion began with attempts to *frame* the rural broadband issue overall and what that means going forward in terms of leadership and governance. This put multiple perspectives on the table:

> • **Understanding the "larger 'why'" of rural broadband development** – discussion here focused on who was and was not at the table (i.e. youth), what it even means to be in a rural Canadian economic context today, where Canada is today after having been a model for the world in terms of broadband visioning at the highest (federal) policy levels, and the role (and lack) of vision as a coordinating and/or compelling narrative for guiding policy and practice in rural broadband development.
>
> Proponents were of the view that a strong, foundational vision is required at all levels of leadership and governance *before* network development and deployment work is done, with examples like Australia held up as an exemplar. Several finer-grain points of discussion stemmed directly from the visioning theme:
>
> > i. Need to shift our understanding of leadership – from the currently dominant *maintenance model* to more of a visioning model *per se* in order to avoid being simply reactive to the myriad forces at play in rural broadband development, and therefore ad hoc and "patchwork" in overall approach.
> >
> > ii. Need for political independence – all participants seemed in agreement with the sentiment that, whatever else happens at the rural planning and administration level, some mechanism has to be put in place to protect rural broadband initiative from the whims of short-term political leadership.
> >
> > iii. The 'why' matters because it's at bottom in culture – asking "why is broadband important?" is critical because the question tests a community's ability to make sense of opportunities, in terms of wealth creation, community stability, and ultimate sustainability.
> >
> > iv. Paucity of vision within government – several participants voiced strong opinions about the lack of vision for broadband at any level of government, in contrast to projects like parks and recreational initiatives – further underscoring the "maintenance" mentality as a major blocking action in getting to vision around rural broadband development.

• **Understanding the potential for broadband through direct experience (implementation)** – while granting the role of vision in certain cases, several participants instead stressed the importance of implementing network connectivity first and letting demonstrable success itself build awareness and realization of network potential. Here, innovation, stories and "the case" for rural broadband as already being made through implementation brought forward further examples and discussion points, including:

    i.   <u>Examples from abroad</u> – one participant drew on extensive experience in Asia to underscore the organic nature of network uptake and use, particularly among young people, suggesting the situation in Alberta and Canada is analogous.

    ii.   <u>No lack of good stories domestically</u> – the suggestions was made that we already have compelling narratives in the form of Canadian business success stories and that the problem, rather, is that we don't tell them very well.

    iii.   <u>Education/schools the killer app</u> – the case for proceeding with rural broadband development on the basis of demonstrated successes also came from the suggestion that progressive Alberta government support and aggregation of content delivery over recently enhanced infrastructure was changing the game in terms of selling the SuperNet story and infusing communities.

    iv.   <u>Design, architecture and the business case</u> – arguments were also put forward that success routinely had been had by making the case to the political realm in terms of money to be saved, going lightly on the technical details that nonetheless must be the best solution but otherwise either bypassing vision *per se* or couching vision purely in economic terms; this overall view was corroborated by participants currently delivering services – some of them via SuperNet itself – who drew the telling comparison between municipal and particularly remote-camp industry players as two ends of the sales and operating spectrum.

• **Hybrid perspective** – significant time was spent hearing about and referring back to the case of Olds, Alberta, with comparisons along the way to the experience of community engagement and network development in southern Ontario. The Olds focus made sense given what that community has accomplished in bootstrapping its own network and business/governance models, bringing several salient points to the fore over two days of this session, including:

    <u>i.</u>   <u>The need for vision</u> – not, however, in the form of "navel-gazing about what you are" but rather in the form of planning and clear lines of accountability comprising more of a "navel-gazing about what you want to be" – the suggesting being that, as in the case of

Olds who learned it through trial and lots of error, communities need to know what exactly to focus on but also to distinguish carefully between means and ends. In the case of Olds, only after all the design, architecture and marketing/business models had been refined and put into place did town and project stewards realize that what they were really shooting for was not simply a technology play but a "happiness index" – a description of the Olds experience in the context of their overall strategy for sustainability that resonated with proponents of the larger "why" question vis-à-vis rural broadband development in principle.

ii. Need for compelling narrative – the Olds experience also resonated with a suggestion introduced early in the symposium on the need for compelling narratives that ultimately come to articulate the larger "why" behind a community's identity and focus to the future, while also providing evidence of the technology becoming transparent on the everyday level of culture. In Olds, this was expressed through the notion of "sidebars" – anecdotal but prevailing/increasing evidence of residents responding to and telling new stories about life in that community. This also resonated with articulations of the rural school context where a different story is emerging about what is possible in the community thanks to SuperNet upgrades and emerging content delivery models. It also resonated with the view that a key driver for a compelling narrative around broadband in many parts of the country have had to do with crises and economic shocks and the extent to which advanced networks are part of the recovery in those areas.

iii. Need for research/data – in contrast to the SuperNet context of Alberta, participants also learned about the Eastern Ontario Regional Network (EORN) and the South West Integrated Fibre Technology (SWIFT) network project in Ontario, where it was argued that a necessary component for moving projects forward at the community level was the ability to show hard data to make the business case for investment on a community or regional basis – especially given the greenfield nature of rural broadband development in a region that lacks a SuperNet., and where partnerships with universities and colleges were advocated to both manage research costs *and* engage future network managers and policy/decision makers.

2. Public vs. Private models

As anticipated, intense discussion within the governance stream stemmed from basic philosophical differences among participants regarding infrastructure ownership and control (including pricing). Proponents of an entirely open, public ownership model in general drew on historical analogues to existing public transportation infrastructure such as highways and municipal sidewalks in order to justify a taxpayer model that takes ubiquitous and robust network as the basic digital economy infrastructure required to drive innovation at the edge of the network, viz. rural communities. Private-sector model proponents pointed to inefficiencies, time lags in development, political interference and significant extra expense as crippling deficiencies in a public model that doesn't prevail in Canada anyway. These debates put several key discussion points on the table:

> • **"We're not in Kansas anymore"** – public access and ownership model proponents used the extent to which the global social and economic ground continues to shift in the 21st century as an undeniable imperative for unmetered, universal access.   A focal-point topic to resurface multiple times over the two days, several key sub-points were drawn on to support the overall view:

> > i.   Canada out of step with other jurisdictions – including Australia, Sweden, Estonia and regions within the U.S. that have broadband strategies and are acting on them or have fully developed them.

> > ii.   It's a kid's world – digital and now "mobile natives" full-on expect robust network access to "just be," the suggestion being that failure to provide this will heighten youth disenfranchisement and flight from the community.

> > iii. Leadership a barrier at the community level – generational issues tied to old economy values and experience based on a manufacturing paradigm are hindering vision and investment – viz. where the measure of contribution and value is still very much in terms of doing stuff with your hands, not your mind. There was consensus among attendees that leadership is often difficult to come by in municipalities and that awareness building at that level is critical, with the Ontario experience showing by contrast that vision and leadership is where you find it, starting with IT managers but also real estate and green energy proponents – a view validated by examples of municipal utilities in the U.S. using excess capacity on new smart grid utility control networks to effect community broadband objectives with shorter-term investment payout.

> > iv.   Entrepreneurship drain – lack of robust connectivity is demonstrably hurting communities by forcing entrepreneurs to seek opportunities elsewhere, including the United States.

> > v.   Simplicity and user-friendliness – at least one municipal administrator openly supported the public access model, implying it would simplify the decision making process and put local projects on the ground.

• No, we're not in Kansas – we're in Canada – where, even if it's "a little Republican" to say so, economics still drives infrastructure, as was the case with the railroad but also in terms of value proposition. Some of the main points to come out in this context:

i. <u>No consensus on what "open access" even means</u> – it's fine to have a clear definition on Wikipedia but when you have real discussions about open models in actual local contexts, you start to see multiple positions coming out, particularly with regard to what it means in the context of competition.

ii. <u>Lots of moving parts</u> – there's no simple solution in any case given the amount of work that's obviously required by communities or those seeking to help communities understand the opportunities to be had and how to take advantage of them. This resonated with several participants who see precedence and current need for multi-stakeholder action and collaboration, a view again validated by the Ontario experience, but also in the case of QNet in Coquitlam. This kind of system complexity was suggested to have been the driver behind the evolution of the telecom sector in the first place, when provinces were able to effect coordination at all levels and among many players to make rural telephony in Canada a world exemplar.

iii. <u>Measuring success</u> – indeed, the view from Olds, Ontario and Coquitlam underscore measurables, the formermost tying success to the larger visioning plan as articulated in their documentation and processes around sustainability, the use of before and after data gathering in Ontario, and the extent to which partners start showing up and/or agreeing to change the way things are done in order to be part of the QNet play. This is maybe easier in a small town than even a smaller city, but hard-target measurables are critical regardless.

iv. <u>Emerging role of the IXs in Canada</u> – some participants argued that there is no one-size-fits-all model or approach, even with regard to fibre vs. wireless, and especially in light of the emergence of Internet Exchanges in Canada that in the word of one participants is "huge" and will "change everything in the province." This was validated in the case of QNet, where proximity to the Seattle IX is a major component of the overall model.

v. <u>Role of the CRTC</u> – it's also not so simple when it comes to ensuring clarity and level playing fields for services running on a network, bring to the fore the role of the CRTC in helping define in the rural context what is network, what is infrastructure and what are services.

3. Needs and requirements --

With a full range of issues identified and discussed, and with the technical, socio-economic and governance/leaderships streams self-organizing into a singular plenary for most of the second day, symposium attendees got right down to business, generating a number of ideas and suggestions for going forward.

> • **Key focus areas** – a holistic understanding is required in order to translate strategic vision (in terms, again, of "the why") into an organized set of "mechanisms" and "measures" re: rural broadband. This brought several suggestions forward, including:

>> i.   Engagement – starting with "exactly the sort of thing we're doing today" by way of effecting networks of practitioners and ways of getting people together who are knowledgeable and interested in working together.

>> ii.   Leadership – taking engagement and translating it into some kind of purposeful action that reflects the strategic vision associated with it.

>> iii.   Investment – which is actually last in the sequence because "you really have to have a lot of people talking from the same script" before people start committing time and resources to any plan.

> • **Key considerations/reasons for this tri-fold approach** – sensing that "no one size (of strategy/approach) fits all," and that we need something "adaptive," seven specific points were introduced as a possible organizing structure for going forward:

>> i.   Rural development is "nested" – among multiple layers of federal, provincial, municipal and community support (or lack thereof).

>> ii.   Broadband development is comprehensive – it's easy to get lost in the details and lose sight of the bigger picture in its complexity.

>> iii.   Cycle of change is rapid – reflecting several participant comments about the accelerating rate of change over the past 5 years, putting pressure on the sensemaking process at all levels, not just the community.

>> iv.   The learning curve is also steep – in addition to accelerating rates of change, the complexity of the broadband domain is also challenging even established expertise, increasing the need for open collaboration and learning from each other.

>> v.   Disparity between rural and urban is ingrown – given the current system, changes to which are up to us.

     vi.   <u>Communities lack depth of expertise</u> – and attracting it is a challenge, making events like this symposium a value-add.

     vii.   <u>Government and business solutions – alone or together – are not sufficient</u> – there has to be some kind of third agency standing apart from government and business that "makes sense of this and takes action and engages communities." A community of communities, perhaps.

• **Templates already in place** – several existing groups were pointed to as possible analogues or offering features of what a community of communities might look like, including: the First Nations Technology Council in BC; the Pacific Community Network Association; the i-Canada Alliance; Canadian Advanced Technology Alliance; Intelligent Community in the U.S.; the BC Broadband Association; the FTTH Council in the U.S., Europe and Asia; as well as working examples of rural broadband projects like KNET in Ontario and O-NET in Olds, Alberta.

• **Push in Ontario to avoid the "free-fall" stigma** – Intelligent Communities initiative has been successful in Ontario in helping municipalities like Stratford "think differently about themselves," with the result of internalizing what success looks like as an all-important first step – a point linking in with "the why" point continually raised by several participants.

• **Culture change is required at bottom but is also difficult** – the case of Olds again came to the fore as an example of ensuring communities know what to focus on, which is not so much the technology or even the business case as the all-prevailing priorities but rather the conditions that must be created to help end-users envision and integrate the technology into their lives. T his ties back into the idea that the game changer at the community level is to navel gaze not on what you are but on what you want to be.

• **Create a regular venue for dialogue** – one of the best things a proposed community of communities could provide is a regular time and place for people like those attending the symposium to meet and discuss all these issues; communities like Olds have been travelling to the U.S. just to be part of a discourse community.

• **Multistakeholder approach key to balance** – any group emerging from the symposium needs to remain multistakeholder in order to develop the strongest overall narratives. And don't forget the IT guys in the basement.

• **Emphasizing the social context is key** – it's about demographic shifts and economic indicators in the round, but it's also about emerging synergies, including the links between advanced networks and green energy and "the quantum leap households are making."

• **Need for clarity around the founding principles of SuperNet specifically** – in light of the perceived lack of understanding among the general public and even symposium attendees to some extent regarding pricing regimes and general policy intentions and dynamics. Timing is also good given the review process under way

and the extension of the network operation contract to 2018, and so part of that conversation also need to look at how SuperNet changes going forward – what has to be modified to "really extract the whole benefit of this asset" – and who will be accountable and how. It's also material in the context of one participant's point about going into a community and making pitches based on a set of factual data and propositions, only to have a different interpretation come back from the community a short time later. And it's also relevant because the world has in fact changed since the original concept and build of the SuperNet, which makes it doubly important for policy makers to be hearing the outputs from the symposium.

• **Need for neutrality** – if it's about facilitating conversations that help communities understand the vision and the business and technical aspects of broadband development, it must also be neutral because otherwise it will appear to towns as just another sales call.

• **Federal government a potentially useful partner** – having let the digital future portfolio slide, federal ministries are poised to come back around to the broadband strategy, particularly in light of the youth connection, and so the timing is good.

• **Provincial versus community champion** – some debate arose over who is to be the champion of the education function that symposium participants reached consensus on, with some arguing for the community of communities to be the primary instrument or champion, and others suggesting the role was to be a support for champions identified at the community level. A third position from the Ontario experience is that nobody is the champion and you instead build partnerships on a context-by-context basis, which alleviates the pressure on governance/leadership to be the driver and fount of expertise/wisdom.

• **Partnerships need to be cross-sectorial** – starting with the half dozen ministries in the Alberta government alone who have "a really big stake in this conversation," but also the municipalities associations and the federation of Canadian Municipalities whose new president is going to be broadband champion Brad Woodside. It was suggested as well that communities also want to hear from peers more than government, so groups like the Local Government Administrative Association and the chambers of commerce and local economic development authorities are logical participants.

Governance/Leadership summary

With initially the technical and then the socio-economic streams collapsing naturally into the governance/leadership section by mid-morning of the second day, this stream was effectively a plenary format of discussion for most of the symposium. This afforded a highly polyphonic discourse space in which prevailed a divergence in views one would normally expect in a large-group dynamic.

On the issue of governance, for example, participants remained philosophically and practically divided on the notions of vision, strategy and the primary role of any "agency" that might evolve from the symposium. This included protracted and pointed discussion around the founding principles of the SuperNet but with little consensus ultimately being

reached on exactly where we are at today with broadband governance in Alberta and Canada beyond the admission that local governance is extremely sensitive to the political cycle and its dynamics. The absence of any formal digital strategy at either of the provincial or federal levels was also acknowledged, making cases like Olds, Coquitlam and the Ontario partnerships-based experiences a kind of roll-your-own ruling paradigm.

Debate around leadership was also vigorous, with proponents mainly polarized between a localized sales/marketing approach and something akin to a visioning approach that sees the global context and generational shift as demanding a wholesale makeover in how we build rural capacity – starting with youth. A third perspective to emerge around the leadership issue, however, stemmed from the articulation of Axia's accomplishments in stewarding the education portfolio within the SuperNet, as well as its sketch of its Fibre Forward initiative as ultimately a long-term play. Overall, a balanced discussion was achieved.

Where the sessions ultimately came together, however, was in the general consensus around needs and requirements that keyed primarily on public awareness and advocacy roles for any enduring agency that might emerge from the symposium. These ideas are further itemized in the closing plenary summary that follows.

Closing Plenary Summary (summarized by Mark Wolfe, PhD)

Participants closed the symposium by spending some time honing the finer points of the preceding days' discussions before outlining clear recommendations and expectation for follow up action. These can be summarized in point form as follows (including notes on updates on Van Horne Institute action since November):

Creating a representative, go-forward body or agency.

- <u>Play operational roles</u> – including the self-selecting of symposium attendees and other stakeholders interested in evolving the mandate and structure of any representative group of influence in the area of rural broadband development and policy. To that end, the Centre for Information and Communication (CIC) within the Van Horne Institute has struck a small executive planning committee that has been meeting weekly to put a working strategy in place to structure and make operational a go-forward plan for realizing the recommendations and expectation arising from symposium. This has included meeting with the CRTC (at their request) and making contact with an expanding array of potential champions in industry, government, communities and the research community.

- <u>Seek seed funding</u> – a primary focus of the executive planning committee is the securing of the all-important sponsorship and other funding sources to build the base capacity in whatever group eventually emerges, while also getting some community-based projects in play.

- <u>Partnerships/collaboration</u> – as above, the executive planning committee, *which is working on a strictly volunteer basis*, is prioritizing the attracting and mobilizing of partnerships and resources that will allow any representative group that emerges to respond with a level of understanding and sophistication as is warranted by the levels of complexity in our rapidly shifting broadband environments.

Key roles and activities of the go-forward body

- <u>Harvest input and share information going forward</u> – in addition to the summarizing and writing of this report, symposium attendees have been kept abreast of developments (and delays) through email updates.

- <u>Key target areas of focus</u> – once properly funded and organized, the representative body needs to focus on eight target areas of priority:

    - *Youth* – the symposium heard loud and clear the importance of not just engaging but formally enrolling members of this key demographic. In that spirit and to those ends, the CIC within the Van

Horne Institute has subsequently added two standing members from this demographic to help inform and drive activities across our research and policy interest areas, including post-symposium activities.

- o **Technical community** – conversations are already taking place with Cybera, Axia and others as we go forward, although symposium attendees from this community are encouraged to reach out to us and not wait to be invited to be engaged.

- o **Communication** – once the go-forward body is fully resourced and enabled, a comprehensive communication strategy will be put into play.

- o **Best practices** – likewise, resources and capacity will allow the go-forward body to be a center of gravity and influence, drawing on the symposium community and beyond in harvesting and articulating best practices information and counsel.

- o **Research** – playing directly to the strengths of the CIC and the Van Horne Institute at large, funded capacity will allow us to undertake the kinds and qualities of research that symposium participants themselves articulated as critical for making the case for rural broadband and in order to drive the vision forward.

- o **Extend the portal** – leveraging and expanding the existing *Digital Futures* portal makes sense and is a short walk once direction and funding are in place.

- o **Education and awareness** – many symposium participants identified this activity as mission-critical, and funded capacity would allow this undertaking in terms first and foremost of a mapping exercise to fully articulate – visually and textually – the overall complexity of the rural broadband story in Alberta and Canada. This includes public awareness of policy, the state of the system, the "why" and bigger picture contexts, and case studies to validate and make real the opportunities and challenges at play in the rural broadband context.

- o **Overall strategy** – again, the volunteer executive planning committee is meeting regularly and with determination to lay the groundwork for a go-forward body, starting with the kinds of funding proposals that must build in clear articulation of founding principles and methods that will in essence be the overall strategy to be communicated in depth to all stakeholders.

Overall Symposium Summary

The Alberta Digital Futures Symposium did what all symposia are supposed to do: raise as many questions and issues as they hope and/or purport to answer. This report is a snapshot overview of most of the key points of discussion to emerge in the open engagement of experts and interested parties over the two days. Audio files containing the complete interaction of all sessions and special presentations will be made available to participants and the general public in due course. These will appear shortly on either the Alberta Digital Futures web portal an/or an alternate streaming service TBA, and participants are encouraged to revisit sections of particular importance to them. (Note: Participants wishing to augment this report with further information, clarifications and/or corrections are encouraged to do so by directly contacting the person responsible for summarizing that section. For technical and socio-economic comments/suggestions, please email Dr. Linda Vennard at vennard@ucalgary.ca; for governance and leadership, contact Dr. Mark Wolfe at mwolfe@ucalgary.ca.

Most importantly, the symposium demonstrated clear support for a follow-up initiative aimed at creating the conditions for the formation and mobilization of a representative body or "community of communities." In addition to acting upon and working toward the goals, challenges and objectives as identified above, it might also behoove this body to evolve in scope and influence in order that the national and international context fall increasingly in its purview. This makes sense given some of the key external factors identified at the symposium outset as driving the larger overall need for next generation digital strategies – factors precisely involving generational shift, advanced mobility technology and culture, and an increasingly interconnected smart-device world.

On behalf of our esteemed colleagues, graduate students, and symposium supporters, we would like to thank all participants and the generously enabling donations of Axia NetMedia, the Department of Communication & Culture at the University of Calgary, the Van Horne Institute and the Social Sciences and Humanities Research Council for making this event a resounding success.