

The Challenge of Mass Innovation

For the majority of people, broadband's economic benefits may depend more on usability and usefulness than on bandwidth.

By Frank Odasz / Lone Eagle Consulting

Time is the most finite resource of all. People are willing to pay for services that save time instead of wasting it. But for low-income populations, a super-fast broadband network may not save as much time as a slower but smarter “public benefits network.”

Gigacities have not yet had much economic impact on low-income populations, and few digital inclusion programs offer scalable solutions to help average folks learn to earn online. Stimulating high-tech startups hasn't proven to create large numbers of jobs, and the jobs created will likely be only for those with high-level technical skills. Connecting the unemployed online to the local job service isn't much of an innovation when it means ignoring or missing booming opportunities for entry-level digital entrepreneurship.

Can broadband be a solution for low-income Americans? Maybe low-tech, high-imagination jobs that proliferate in large numbers from the bottom up can outperform the top-down, high-tech efforts.

MOBILE LEARNING

The most scalable educational solution is distance learning, especially if it is delivered on mobile devices. As of 2014, more online purchasing is done via mobile devices than via PCs. Mobile devices outsell PCs four to one. Pundits are predicting the death of the PC. Mobile devices are quickly becoming smaller, faster, increasingly integrated, interconnected, more powerful and essential to daily functionality.

Apple has more than a million apps, and in 2012, it paid \$12 billion in commissions to



third-party app developers. New forms of entry-level digital entrepreneurship are popping up all over. Anyone can become a developer and create apps without learning to code, publish e-books without a publisher and much more. Creating and maintaining free websites via iPhones and iPads is now possible, enabling ever-easier “create and share” community capacity-building opportunities.

For several years, 2 billion people have had Internet access – so that many of those with a bent toward self-directed learning and innovative entrepreneurship have already created a global boom in innovations, learning continually from one another globally and giving the rest of us the opportunity to use, copy, modify, mash up or morph their innovations into something new. New microsatellites and other technologies will help get the remaining 5 billion online within five to 10 years.

The smartphone applications booming in Africa already provide insights into what kinds

Video Games for Impact and Financial Independence



of solutions are most scalable globally. For example, a low-cost mobile money transfer application is providing the first banking service available to most Kenyans. According to *The Economist*, the application has increased Kenya's GDP by as much as 25 percent.

However, best practices for keeping everyone up to the same level of progress are missing, and elected leaders often make decisions about how economic development is likely to occur without knowledge of what have already proven to be inevitable major trends. Top-down policy makers have to learn to partner meaningfully with bottom-up innovators and pay close attention to what citizens are proving as the best solutions for utilization.

Social media marketing outperforms other forms of e-marketing, and scalable entrepreneurship innovations demonstrate that the "sharing economy" – now up to \$100 billion per year – is something to take seriously. Airbnb.com allows anyone with a spare couch to instantly open a bed and breakfast in any of 190 countries. Uber.com and Lyft.com allow anyone with a vehicle to become a taxi driver, all mediated with secure transactions from smartphones.

And then there is the emerging "Caring Economy" cited by Google's CEO. Twenty-eight percent of new jobs

are expected to be in the health care industry, and new health monitoring apps for the booming senior population offer opportunities to reduce the trillions of dollars in overspending on health care.

The Alaska Native tradition of creative adaptation is alive and well in

the village of Metlakatla, on Annette Island, Alaska, as Tsimshian youth, even in elementary grades, are learning to innovate with robotics, drones, 2D/3D printers, e-publishing and digital entrepreneurship.

Although their community is growing, most of the 65 southwestern Alaska villages with ARRA-funded microwave broadband (GCI's TERRA Project) continue to suffer from youth out-migration because no one has yet stepped up to provide the vision and solutions for their creative adaptation. However, in Metlakatla, the NTIA/Connect Alaska/SBI Innovation Incubator project is preparing the youth to launch a global MOOC (massive open online course). They are learning to teach the world how Alaska Native values of generosity and trusted mutual support have come full circle, aided by powerful new tools for sharing, and are now being continually reinvented by digital Natives of all ages. The Annette Island School District has quietly become a model for all Native and rural school districts.

In another project, the Cook Inlet Tribal Council partnered with

RESOURCE GUIDE

Annette Island School District Innovation Incubator (work in progress):
<http://aisdk12.org/innovationincubator/open-invitation/>

List of entry-level digital entrepreneurship innovations:
<http://lone-eagles.com/opportunities.htm>
 Three-minute video walk-through:
www.screencast.com/t/pOjDQvSt04v

Service for creating apps without coding:
<http://workaphome.com/>

Upper One Games (Cook Inlet Tribal Council):
<http://neveralonegame.com/>
 The first Alaska Native global video gaming business

Resources for e-publishing and entrepreneurship:
<http://lone-eagles.com/digitizing-alaska.htm>
 Six-minute video walk-through:
www.screencast.com/t/4mLxDmzysM

Personal assessment guide – readiness for self-directed learning:
<http://lone-eagles.com/academy-info-diet.htm>

Creating and running a global business is possible with only a few Mbps of bandwidth and minimal or no capital.

E-Line Media, an entertainment and educational publisher based in New York City, to create an Alaska Native video gaming company that will sell educational games to a global market. Using imagery inspired by Alaska Native cultures, the games bring the world of traditional stories alive. Even if the gaming company does not create much youth employment, it will create interest in broader, more scalable, digital entrepreneurship opportunities.

Citizens without a predilection toward education are unlikely to make the choice to self-educate and seek out

entrepreneurial innovations without an opportunity literacy effort, peer encouragement and social recognition for their participation in a trusted, mutual support, local network – but, with such support, they can do it. These efforts show that creating and running a global business is possible with only a few Mbps of bandwidth and minimal or no capital. Thousands have already proven this.

GETTING READY FOR THE GIGABIT FUTURE

Will we all need far faster speeds sooner than we think? Most likely, but the

few who have a gigabit when most others don't won't have many others to connect to at that speed. One killer app would be life-size telepresence for meeting with loved ones – but, at present, it would make more sense to locate telepresence facilities in community anchor institutions (CAIs) than in homes. CAIs could begin to raise awareness for what inevitably is coming, and they could dramatically accelerate the arrival of these new applications by providing experiential opportunity literacy innovations.

Innovation leadership in the U.S. is happening at the grass roots, and billions whose dire needs should morally be a priority to address are coming online. The emerging impacts of crowdsourcing, crowdfunding and peer mentoring, which offer the potential for everyone to be both learner and teacher, consumer and producer, all the time, are both subtle and blatant.

Yet this is still very much a culture of silos that resists the politics of transparency in which truth is honored as fundamental to American values. If the U.S. is to be globally competitive, it will have to lead with a demonstration of honest values that can inspire all the world's people and be adopted as their own. As William Gibson once said, the future has already arrived – it's just not evenly distributed yet. ❖

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