



Building the Gigabit City: Brainzooming a Google Fiber Roadmap

Prepared by The Brainzooming Group

BUILDING THE GIGABIT CITY

Building the Gigabit City: Brainzooming a Google Fiber Roadmap

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SMCKC and Google Fiber - A Letter from Joe Cox, President of Social Media Club of Kansas City

November 10, 2011



When the news broke earlier this year with the story that Kansas City, KS, had been chosen as the first city to receive Google's ultra high speed Internet, it injected a lightning bolt's worth of buzz into our community.

I had received the news via my Twitter stream, which quickly filled with re-tweets and links to the video that Google released on YouTube that morning. Within minutes, the conversation online had reached a boiling point and was being aggregated by our members through Facebook and Twitter. It was a surreal moment to realize that our membership was sharing and asking for information on their own, utilizing the social networks and us as a platform. There was no waiting for what the media was saying or holding back for more instructions. They were seeking out what they needed and sharing what they had, separating signal from noise.

I watched the screen whirl with conversation, links, questions, and commentary. I sat back in my office chair hard enough to make it roll back a few inches and remember thinking . . . this is big.

Social Media Club of Kansas City is a young organization in the city. We've grown organically from our first meeting at the Westport First Watch in 2008 with six people around a table to the almost 2000 members that we have today, filling almost weekly events all around the metro. Social media may be what brought us all together, but it's how we have organized that has allowed us to grow so quickly. Instead of the leadership of the group dictating the direction that our group has taken, we've chosen to allow the membership to guide us through listening and gauging what conversations and topics that resonate the most with the community. Empowering our group has allowed us to do some amazing things in the last few years.

With Google Fiber, we could immediately see the interest level was through the roof. We decided to focus our monthly breakfast meeting on the topic, where we got to continue the conversation offline and it became even more clear that although we didn't have many details, that our group was thirsty for more information and already using their own unique perspectives and strengths to help fill in gaps in information.

Thanks to a new member, Stephanie Sharp, we were able to organize a mix of city officials to come speak to our group at Community America Ballpark before a T-Bones game to share with us the information that they had and to ask how SMCKC could help give a platform for the conversation to the rest of KC.

That's when Mike Brown from The Brainzooming Group came to us offering his company's expertise to help organize our voice into something the entire city could benefit from.

The output of this partnership is what you're reading now. Armed with a facilitator, our group was nimble enough to organize a daylong event that would enable us to leverage a membership that spans not only many different organizations and industries such as libraries, universities, non-profit and medical, but also small and big businesses throughout the metro such as H&R Block, AMC Theatres, Garmin, and Cerner help begin the larger conversation of what Google Fiber would mean to Kansas City.

Social Media has given SMCKC a voice and now we have something to collectively say. We've been given an incredible opportunity through Google Fiber and it's our responsibility to make sure that it's utilized to its fullest. We're the first city to receive Google Fiber to the home, but we won't be the last. It's up to us now to help create the path for years to come as fiber gets connected to households coast to coast.

What does access mean to the modern library? Suburban neighborhoods or the digital divide? How can it improve our daily lives and bring jobs to a slow economy? We don't have the answers, but what we're sharing w/ you today can sure energize the conversation and help educate the neighborhoods in this city of how they can improve their lives through this technology.

The output of that day is yours. It was critical to us that we shared what we had with Kansas City without asking anything in return. This document is yours to utilize in whatever way needed to bring focus and conversation to the Google Fiber initiative.

This isn't the end of the path for SMCKC and Google Fiber. We're committed because we have witnessed the power that online sharing and simple publishing has brought to our lives and can only imagine what the possibilities that this technology will bring.

I want to thank everyone involved in making this happen from our partnerships with The Brainzooming Group and the Kansas City Library, all of our sponsors and most of all, our brilliant members.

Joe Cox
President SMCKC

Moving Faster, by Aaron Deacon, SMCKC Events Chairperson



Building the Gigabit City. It's easy to focus on the Gigabit, the fiber-enabled speed that accelerates the online experience and brings the social web and the social real life increasingly closer together. But the City is the real transformative experiment here.

The experiment in Kansas City is not simply to lay fiber to the home but to have gigabit speed active—not just available—in a critical mass of households. It is widespread adoption of the ultra-fast web that marks the potential of this region to be a true lab of innovation.

“It's not our job to sell Google's service; we're here to do what's best for Kansas City.” I've heard that refrain within the community, and while I agree with the underlying sentiment, it also presents a false dichotomy. What's best for Kansas City is for the members of our community to recognize the unique opportunity gigabit speeds afford us, and for that recognition to be expressed in demand for service.

Is this simply a brilliant marketing ploy by a tech giant, to offer a product for which there is no market and ask the market to create itself? That may be the cynic's viewpoint; or as the cynic would have it, a realistic viewpoint. But what we need now are not cynics or sober “realists”—we need wild imaginations and creative optimists.

The challenge of translating “what does it mean?” for a whole metropolitan area is much larger than the challenge of laying the fiber. And the potential payoff in human infrastructure—if we can successfully answer that question—is greater than the physical infrastructure of a really thick pipe.

Imagine a Kansas City where conversations about distance education, smart grids, telemedicine, augmented reality, and Web 3.0 are not limited to the tech cognoscenti but become part of the vocabulary and expectation for most of our citizens. We have the unique opportunity to marry the hardware for a community of early adopters with the mind-frame of early adopters—but we need to focus on both pieces or the experiment fails.

As Fast Company's Bill Taylor said repeatedly at the 2011 FastKC luncheon, we have a tremendous opportunity to re-imagine Kansas City.

So we have some ideas now. Lots of ideas. Diverse ideas. The group gathered for our community brainstorm was not just tech specialists and IT engineers. As you read over the aggregated content from a day of intense discussion, you may ask, “What does that have to do with Google Fiber?” That's a great question, and it's the one we ask of you.

We are at a starting point, not a finish line. If we can make some of these ideas happen without Google Fiber, all the better. Let's do it. We know that technology moves forward and the world adapts to it. If we have creative, innovative, revolutionary ideas to pursue with today's technology, let's start working. Once the fiber is turned on, we can adapt. And we will, so long as we're prepared.

If you think an idea can be accomplished without gigabit speed, how could gigabit speed—to a whole community of households—make it better?

There were many recurrent themes throughout the day we spent together. We had conversations about regional cooperation, more effective governance, maximizing resources, providing new opportunities, and bridging the digital divide.

These are not technology problems; they're human problems. But we have the opportunity to use new technology to address them.

A big pipe means that we have the capacity to move big files, big data. Right now, the big files we all experience regularly are video. You'll see video and streaming applications prevalent in this report. But what else?

Some practical applications that demand faster speeds than a current typical broadband connection include:

Multiple, simultaneous streaming applications

Sure, you can stream video now, but as our household multitasking increases and our households become ever more connected, we'll need more bandwidth to fully utilize all the applications available to us. Some might run in the background. There might be four or five portals. And that's just thinking about the Internet. If you're using the same line to carry your phone, television, Internet, and possibly mobile data...that takes up a lot of bandwidth.

A mesh Wi-Fi network

A fiber backbone provides high-speed access at the end of the line, but it could also be used to support an accessible higher speed wireless Internet network that blankets the city. Such a network could go a long way toward bridging the digital divide and further democratizing technological advances.

Increased video quality

Video communication in the home lags far beyond video communication in the boardroom. There are some hardware obstacles here in addition to bandwidth, but look at the progression of image quality in home entertainment. From LED screens to digital signals to HD to 3D, the demand for clear, realistic video shows no sign of letting up. Compare that to the quality of your Skype chat.

Moving applications to the cloud

Cloud storage is becoming increasingly popular at current speeds, but limited bandwidth is part of the reason cloud applications have not become more prevalent. There are all sorts of reasons to have data intensive applications hosted in the cloud, but if it slows down your desktop experience, you're unlikely to adopt them. Moreover, cloud accessibility may allow some expensive, resource-consuming applications in graphic design, statistical analysis, or 3D modeling to be more widely available at a more accessible price.

A more immersive web experience

Think about what websites looked like when we were all on dial-up connections. Think about how much richer the content is now. Expect that richness to increase in our interactions with brands and media sites as much as our interactions with each other. Just as we broadcast our

lives via Twitter posts and status updates, look for rich, multimedia sharing to increase and for the social experience of the web to evolve to take advantage of it.

Exploring the third dimension

While everyone is familiar with 3D glasses that electronics manufacturers are now trying to sell into our living rooms, most 3D technology rests comfortably within a 2D video screen. But the technology for virtual holographic images is not far off. The amount of data required to transmit a high definition video image pales in comparison to what is required to transmit a hologram. These are the sort of files you don't yet have on your hard drive. But you will.

Interactive gaming and virtual reality

Two-way streaming of 3D images and holographic imaging hardware sounds like the stuff of science fiction, but gigabit speeds provide a possible path for transmitting these data. Once that happens, look for more activity in virtual worlds. Microsoft's Xbox Kinect already streams 3D positional data. As technology enables us to give motion inputs upstream and creates increasingly realistic holograms downstream, the required bandwidth will be immense. The ways that we interact with one another over the web will change dramatically. And the niche communities found in Second Life or World of Warcraft will find more mainstream expressions.

Is there some guesswork here? Sure. That's exactly what we're trying to do. But there are some things that we know.

The world is moving to higher speeds. "Do we really need a gig?" isn't really a relevant question. Processors get smaller. Storage capacity gets bigger. The amount of data grows. These trends have been operative since the first computer made its appearance in the middle of the 20th century.

The question for Kansas City is, "How do we move faster?"

Hearing the Voices of the Gigabit City - The Brainzooming Group



In the spirit of community efforts to generate ideas for how Google Fiber can change lives in Kansas City, The Brainzooming Group was excited to partner with Social Media Club of Kansas City to create “Building the Gigabit City,” a large-scale Google Fiber brainstorming session with a diverse cross-community group.

As Joe Cox mentioned in his introductory letter, this whole effort was inspired by a comment from Kansas City officials saying they were looking to organizations such as Social Media Club of Kansas City to bring forward ideas for what Google Fiber could mean for our community and economy.

Fittingly enough, that comment prompted the tweet that started the whole effort to hold a daylong Brainzooming event designed to consider needs and opportunities for seven different sub-communities within Kansas City.



The Brainzooming Group would offer pro bono ideation strategy session to #smckc relative to #GoogleFiber c: @JoeNormal

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Interactive Strategist for Muller Bressler + Brown and the President of the Social Media Club of KC. A passion for brand, influencer management and Dr. Who.

The Many Voices of Kansas City

As we compiled this report, we wanted to share the voices of the many passionate Kansas Citians who participated in Building the Gigabit City within this document. Rather than taking on the form of a typical strategic recap from The Brainzooming Group where we aim to share results with a single voice, here we've worked hard to maintain the vibrancy, insights, aspirations, and cautions of everyone who shared their perspectives in the effort. Just as the input was crowdsourced, the results are as well.

You'll get a sense of these voices from the community through the different structures and depths with which concepts and ideas are reported. They will come through in the Personal Perspectives offered by a number of individuals involved in the session.

Finally, you'll hear the range of voices in the ideas and concepts themselves. Rather than starting from scratch, Building the Gigabit City was designed to build upon the work and thinking that's already gone on in so many quarters about what Google Fiber could and should mean for Kansas City. Just as each participant brought individual knowledge, perspective, and experience to the session, you'll see some familiar ideas replayed and augmented. You'll also see some very new thinking about what the Gigabit City can be.

Getting the Most Value from the Report

At over one hundred pages, there is a tremendous amount of content in this document. Having spent several weeks compiling it, here are some thoughts on getting the most value from it based on your particular interests:

- To **understand the framework for the effort and how you can take action** on the results, review the Background Section.
- If you're focused on **broader Kansas City-based issues**, start with the Community Activities section, which addresses community, government, cultural, infrastructure, and various other opportunities within the metropolitan area.
- For treatment of **specific segments of the Kansas City community**, the Urban Core and Suburban sections address concepts on how Google Fiber could impact broad sections of the community.
- If **education** is your area of interest, specific sections address concepts for both Primary/Secondary Education and Higher Education.
- For an exploration of **opportunities and concepts related to healthcare and citizens with health and mobility issues**, Barb Murphy of The Brainzooming Group developed the work from the group focused on these topics so that it closely resembles the type of synthesis we'd complete in a report for our clients. As such, it provides a more integrated treatment of the concepts and their implications for the Gigabit City.
- For those outside the Kansas City area interested in ultra high-speed internet across communities globally, this work and our approach of actively involving a diverse group of citizens to brainstorm can serve as a blueprint for addressing the people and technological opportunities of many Gigabit Cities.

If you have questions on our approach to this work, please contact us at info@brainzooming.com.

Mike Brown, Barb Murphy, Barrett Sydnor
The Brainzooming Group
www.brainzooming.com

Sponsors & Supporters

Building the Gigabit City: Brainzooming a Google Fiber Roadmap was realized through the support of many sponsoring organizations. Our thanks go out to them.



A number of organizations donated staff member time to act as facilitators for the session. Thanks to Angie Davids (Two West), Natalie George (The Pert Group), Lisa Qualls (Fresh Id), Chris Reaburn (Service Encounters Onstage), Eileen O'Hara (O'Hara Marketing Services), Barb Murphy (The Brainzooming Group), and Chris Kuehl and Keith Prather (Armada Executive Intelligence) for their contributing time and expertise to facilitate the session.



O'Hara Marketing Services

Thanks also to Emily Gairns for her logistics support for the event, and to Mike Sherry, Executive Director at Midwest Center for Investigative Reporting, for his invaluable assistance in compiling the concepts shared in this report. We're also appreciative of the photography skills of Alex Bonham-Carter, and Chris Luckey (Adcuda) for his outstanding video production & editing of the event.

Invited Participants

We appreciate the time commitment, passion, and insights from the invited participants at the daylong October 3, 2011 Brainzooming session at the Kansas City Missouri Public Library.

Shane Adams
Jenn Bailey
Daniel Barickman
Jason Bedell
Michael Bollinger
Julie Brown
Roberta Brown
Mike Burke
Kerstin Burns
Mike Burns
Valerie Castillo
Jeff Chambers
Steven Chau
Josh Coleman
Casey Copeland
Brian Corn
Jauqui Craig
Jason Cupp
Nick Davis
Ann DeAngelo
Steve Dixon
Brody Dorland
Steve Fennel
Jordan
Andy Frank
Jeremy Fuksa
Jean Gleason
Laura Goede
Judy-Anne Goldman
Scott Gulbransen
Katie Heschmeyer

Ryan Hogue
Paula Holmquist
Jake Jacobson
Tom Jenkins
Gavin Johnston
Don Keeler
Brian Kelley
Bob King
Jon Kohrs
Greg Kratofil
John Kreicbergs
Simon Kuo
Mike Lammers
Mark Logan
Jonathan Mast
Jay Matlack
Katie McCaffrey
Jacob McDaniel
Katie McDonald
Jo Micheletto
Chad Milam
Martin Mini
Ramsey Mohsen
Justin Nolan
Mary Noulles
Craig Nulan
Sam Passer
Steven Potter
Greg Reid
Felicia Rice

Doug Richards
Julie Robinson
Kyle Rogers
Kelly Scanlon
Stephanie Sharp
Jacob Shepherd
Jeff Shipley
Angie Smith
Jeff Smith
Sarah Snyder
Matt Staub
Neil Steiner
Jon Stephens
Gina Stingley
Brock Strechman
Lee Tigue
Micah Tremain
Rick Usher
John Vandewalle
Jamie Vaters
Richard Ward
Allison Way
Doug Weinbrenner
George Weyrauch
Justin Whedon
David Windhausen
Sarah Wood
Melanie Woods
Amy Worley
Travis Wright



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To learn more about the brainstorming and innovation process behind Building the Gigabit City, visit brainzooming.com.

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A Community-Based Approach to Building the Gigabit City

From the start, we sought to be inclusive by addressing the broad community interests that will ultimately thrive in our Gigabit City. To do this, we selected the themes of **Living, Learning, and Leading** to organize the live brainstorming session. Associated sub-communities were organized within the three themes. We subsequently recruited more than eighty participants representing varying perspectives and levels of experience to participate in the brainstorming session.

Theme	Description	Sub-Communities	Facilitator
Living	Creating and strengthening connections within the community and improving living conditions throughout Kansas City.	Urban Core Residents	Lisa Qualls - Fresh ID
		Suburban Residents	Chris Reaburn - Service Encounters Onstage
Learning	Bettering the availability of knowledge resources and broadening/increasing educational attainment for all.	K-12 Families	Angie Davids - Two West
		Higher Ed Families	Natalie George - The Pert Group
		Library Patrons	Chris Kuehl - Armada Executive Intelligence
Leading	Catalyzing the skills and innovativeness of Kansas City's citizens to move the area ahead one person and family at a time.	Community Activities	Keith Prather - Armada Executive Intelligence
		Health and Mobility	Barb Murphy - The Brainzooming Group

Our goal, irrespective of the particular sub-community group, was to take the best advantage of the assembled expertise to imagine how ultra high-speed internet service can change lives in Kansas City. We used a series of exercises focused on:

- Identifying initial ideas participants brought to the brainstorming session
- Using needs and challenges within the sub-community to suggest ideas
- Pushing for extreme ideas related to speed, breadth, and impact
- Looking for cross-community applications

By bringing together a group of smart, interested, creative people and using these Brainzooming exercises, we generated hundreds of ideas and shaped potential concepts by the close of the day. The concepts, typically encompassing multiple ideas, included a description, a brief overview, and a listing of potential benefits for the target audience.

The in-person brainstorming session was enriched by input from individuals who completed an online survey before the event addressing needs, opportunities, and challenges for target audience groups along with offering ideas on how Google Fiber could change lives in the community. These responses provide a starting point for various exercises during the day.

This document addresses our collective commitment to provide open-source access to the concepts and ideas to anyone with the means and inclination to develop them – whether community-minded individuals or groups, entrepreneurs, small businesses, or big corporations.

We accomplished our objectives through a combination of participant brainpower, the energy from working collaboratively with a team, and a day designed to be both effective and efficient in imagining the possibilities Google Fiber can bring to Kansas City.

Brief video recaps of each of the groups' Gigabit City concepts delivered in a public forum at the end of the Building the Gigabit City session can be found at the gigabitcity.smckc.com website. (<http://gigabitcity.smckc.com/journal/2011/10/6/breakout-group-video-recaps.html>)



Taking Action

The output from the Google Fiber Gigabit City brainstorming effort The Brainzooming Group facilitated for Social Media Club of Kansas City provides a rich source for developing concepts, enhancing possibilities, and exploring a variety of opportunities the work suggests.

The Backdrop for Building the Gigabit City Brainstorming

The Brainzooming Group employed proven strategic thinking techniques to create the Building the Gigabit City brainstorming session. The Gigabit City session's design and the inputs leading into it heavily influenced the outputs. Because the session was primarily intended to generate ideas and concepts (with much less focus on evaluating them), the results need to be understood as:

- **Crowdsourced**

While specific groups and individuals were invited to the Building the Gigabit City brainstorming session. Some organizations sent alternative participants. Additional participants surfaced with strong interests in the topic and the Kansas City community; SMCKC included a number of them in the session. There were no parameters at all for participating in the online pre-survey. As a result, the output is considered qualitative (and does not provide definitive results).

- **Relatively Unfiltered**

Given that the session's overall objectives were to generate as many ideas as possible, the session design allocated disproportionately more time to brainstorming than evaluating ideas. While participants described potential concepts tied to their ideas, we did not attempt to formally evaluate ideas or concepts. *(Note: For clients, The Brainzooming Group typically narrows ideas to create a report with selected, recommended concepts. To demonstrate this type of strategic output, the Health and Mobility Challenged Group report is produced in this fashion.)*

- **Inputs, Not Outcomes**

Rather than final recommendations, the recap materials from the Google Fiber Gigabit City effort are not a destination. Rather, this report is a platform to advance thinking and the progress based on input from hundreds of people with varying perspective on how ultra high-speed internet capabilities can shape Kansas City and other communities also.

The report out documents a variety of outputs, including:

- **Needs and Opportunities** - A starting point for areas to address within specific community groups.
- **Possibilities** - Selected ideas generated before, during, and after the session.
- **Concepts** - Aggregations of multiple ideas along with deeper descriptions and highlights of their potential benefits.
- **Participant Perspectives** - Specific participants offering extended personal perspectives on Google Fiber and what it might mean for Kansas City.
- **Success Factors** - Elements that need to be in place and others that need to be avoided to further the successful use of ultra high-speed internet capabilities.

What Actions Can I Take with the Gigabit City Results?

At the heart of creating the Building the Gigabit City effort is the recognition that community support and action to change lives in Kansas City as a result of the Google Fiber roll out depends on every citizen knowing what they can do with the ideas and concepts shared in this report.

The following list highlights 11 next steps with the content in this document. We've listed them in order from things everyone can do (i.e., share the results with new audiences and ask questions) to actions suited for narrower audiences (i.e., securing support resources, implementing ideas):

- **Share** results with those who have not been exposed to them. This effort's success comes from getting the work to as wide an audience as possible who can advance the concepts.
- **Ask** for more information and insight. If you have questions or need deeper understanding on the topic, reach out for additional insights.
- **Combine** concepts and ideas to create newer or bigger opportunities. If a particular idea or concept does not really demand gigabit speeds, add something to the idea that ups the ante.
- **Diversify** concepts by soliciting additional input. Not everyone and every point of view was represented in "Building the Gigabit City," so incorporating additional variety to the ideas is a positive.
- **Simplify** the ideas while making them more revolutionary. We find the strongest—albeit rarest—concepts are incredibly simple yet still revolutionize a market. Move a potential concept in that direction!
- **Enrich** the concepts with greater technical depth. We focused primarily on concepts related to needs, opportunities, and challenges among various community groups. There are still many opportunities to dramatically incorporate technology in realizing the concepts.
- **Dissect** the concepts to narrow and exploit a hidden strength. You may see an opportunity within an idea or concept that is not getting due focus. Strip away the excess and build off the strong nugget you see.

- **Brainstorm** some more on the groups, concepts, and ideas we explored. There is always an opportunity to enhance previous thinking with additional smart, innovative perspectives.
- **Support** strong ideas with the tools you possess. Great ideas benefit from additional people, resources, and funding to bring them to life. Pick an idea yourself or collaborate with others to take action.
- **Solve** the underlying need an idea or concept is addressing by figuring out how to accomplish it. Successful innovation is all about actually making something positive happen.
- **Ignore** all these ideas and concepts in favor of moving ahead with your own ideas to exploit Google Fiber more effectively. If you do not see something that moves you to action in this report, generate your own ideas to develop.

What to prioritize?

Beyond these eleven potential next steps community members can put into action, there are opportunities to prioritize and rank ideas and concepts. The Brainzooming Group typically uses first pass prioritizations determining the impact of an idea versus the challenges or ease in implementing it. We also use a more comprehensive ranking methodology that allows an organization to make quick cost-benefit and strategic fit assessments in a collaborative manner.

The Gigabit City and its Community Activities

As originally defined, Community Activities encompassed a wide focus, including government, culture, infrastructure, and various other services within the metropolitan area.

Community Activity - Needs and Opportunities

Virtual Congregations

- Virtual forums to surface ideas; Virtual events; Increased diversity of creative inputs; Remote auditions for performers; Across-government (city, county, state) coordination of culture, civic, and governmental activities

Strengthening Non-profit Organizations

- Fund raising efficiency and effectiveness; Better coordination of support and outreach activities; Greater access to organizations and programs

Growing Audiences for Cultural Programs

- Broadcasting performances; Education and learning; Collaboration between arts organizations; Interactive scheduling and ticketing

New Ways of Audience Interaction and Collaboration

- Audience reviews; Interaction with performers; Audience content curation and programming; Audience generated content; Collaboration between remote artists

Development of Electronic Art Forms

- Support and tools for artists and performers; Collaborative opportunities for artists; Gaming/virtual-based entertainment

Creating a Virtual Theatre Company or a Completely Virtual Museum

- What does this concept suggest for opportunities?

Gigabit City Possibilities

While the effort focused on sub-communities within Kansas City, certain ideas addressed the overall metro area. This list underscores the broad potential impact of ultra high-speed internet access if we seize the opportunity to create a successful implementation effort.

Impact Area	Possibilities for the Entire Gigabit City
Access	<ul style="list-style-type: none"> • Make KCMO and KCKC free broadband wifi cities. Drives dramatic change in how business is conducted and services provided.
Business and Innovation	<ul style="list-style-type: none"> • Increase "homebrew" innovation via better resources • Lower costs to challenge incumbent participants in markets • Remote manufacturing in small shop formats • Doing numerous high-bandwidth multi-tasking assignments for micro-rewards • Getting KC business and output out quicker and faster • Startup environment attracts more business and more jobs • More creative minds in the city
Career and Success	<ul style="list-style-type: none"> • Expanding individual horizons via access • Job opportunities
Education	<ul style="list-style-type: none"> • Remote presentation of transformative discussions - local experts could come to your classroom or living room • Provide equal access to information and educational resources • Library access • Education opportunities • Increase school funding • UMKC prestige • 100% virtual classes • Distance education
Government and Community	<ul style="list-style-type: none"> • Make city services/staff available through high-speed connection • Internet voting • Better create a bi-state approach to running the metropolitan area (link KS and MO legislatures? city governments in the metro?) • Bring people together and build relationships which wouldn't otherwise happen • Faster KDOT • Digital neighborhood watch • Platform to share improvement ideas among communities and city, nation, and worldwide
Health	<ul style="list-style-type: none"> • Medical services/advice • Hospitals live stream for better health care access
Media	<ul style="list-style-type: none"> • Kansas City TV stations to stream local content • Opportunities for more video production to come to KC • KC-based streaming online media

Community Activities Possibilities

Impact Area	Possibilities for Community Activities in the Gigabit City
Connections	<ul style="list-style-type: none">• Further advanced social network among communities (The Well in SF about 20 years ago)
Culture	<ul style="list-style-type: none">• Streaming content from live events• Open two-way art exchanges• Holographic transport to museums around the world• Music studies• Global broadcast capabilities for cultural events around the globe
Economic Development	<ul style="list-style-type: none">• Attract film and television production
Education	<ul style="list-style-type: none">• Remote presentation of transformative discussions - local experts could come to your classroom or living room• Creating virtual arts in schools
Government	<ul style="list-style-type: none">• On-line access to Jackson County Public Records and Information• Greater public participation in debates about city issues• Stream public meetings• Improved online services from government
Infrastructure and Resources	<ul style="list-style-type: none">• Identify infrastructure issues in real time from the public• Allow the community to dispatch resources
Public Safety	<ul style="list-style-type: none">• Report crime and public issues more effectively
Regional Focus and Government	<ul style="list-style-type: none">• Pioneering a new public franchise for regional decision support• Cooperation at highest levels—opens communication, forces cooperation for rollout• Interactive polls on policies, elections, etc• Provide info to citizens—streaming meetings and content• Kansas needs MORENet• Ease of access to info

Possibilities for Celebrating Kansas City

These possibilities for using Google Fiber to celebrate, enhance, or even fix what makes us Kansas City includes a range of serious to fanciful ideas. Even the fanciful ones, however, provide intriguing jumping off points for more brainstorming on how Google Fiber can make an impact in a distinctively Kansas City way.

Impact Area	Possibilities for Community Activities in the Gigabit City
Creating an Online Gaming Hotbed in Kansas City	<ul style="list-style-type: none"> • Start-up hub for gaming companies. • KC: Gaming Convention hot spot. Create “the ultimate gaming environment.” • Create community gaming hubs. • Build your own game. • Crowdsourced gaming technology innovation. • Partner with casinos to bring out-of-town gamers from their VIP lists • More capacity = more/faster playing.
Enhance our Reputation as the City of Fountains	<ul style="list-style-type: none"> • “Sister City” interaction – virtually connect with other “fountain” cities. Reciprocating travel and tourism revenue. • Virtual “flow master” – design colors, lighting, height/spray for fountains. (Disney like experience) • GIS map of fountains and guided virtual tour.
Enrich the First Fridays Culture Experience	<ul style="list-style-type: none"> • Increased exposure + live streaming = bigger buzz around the event • Meet the Artists: interactive mapping and reporting/interview site • Connect historical info with current events = better cultural awareness • Enable personalization of the experience – “My First Friday” – and invite friends/family to participate live or virtually. • Integrate downtown restaurant experiences • Generate interest among area businesses to be part of the community • Create a KC artist community with connectedness among galleries • Highlight multimedia artists
Extending the Plaza Art Fair	<ul style="list-style-type: none"> • Real time virtual exhibits for remote artists • Improve e-commerce capabilities • Enable visitors to create digital art interactively (crowdsourced work of art) • Streaming tutorials: explanations of methods, tips, options, etc. • Real-time reviews. • Virtual auction capabilities. • Extend to virtual exhibits in outlying areas or those who are homebound. • Interactive workshops. • Maps and apps to guide patrons. • Real-time parking spot locator – reduce frustration factor. • Increase revenue with 24-hour virtual Arts Fair.

Impact Area	Possibilities for Community Activities in the Gigabit City
Making the Chiefs Better	<ul style="list-style-type: none">• Fan-assisted scouting of other teams and college players.• Create avatars and incorporate better or “what if” plays into broadcast.• Real-time self-evaluation of player performance on the sidelines via video.• Fantasy football stats in stadium = better attendance and more revenue• Helmet to helmet communication.• Make the Chiefs a virtual team.• Improve pre-game analysis with faster video streaming.• In-game stats analysis.• Apps for concession and restroom lines.• Reduce injury implications with virtual medical diagnostics/treatment plans - concussion / MRI / specialists• Improved injury diagnostic tools - Handheld MRI.• HUDL Software for football playbooks.• Increase fan engagement: in-stand replay review decisions.• Better bandwidth for fans at games.• Join community of fans at games when you can’t be there in person.
Making the Royals Better	<ul style="list-style-type: none">• Distributed scouting.• Crowdsourced team management or coaching.• Virtual swing analysis (send to remote swing coaches).• Real-time review & analysis of team performance .• Enhance fan engagement &enable real time fan feedback.• Remote revenue generation through virtual experience opportunities (extend fan base outside of KC area/region).• Get Google to buy the Royals.

Concepts for the Gigabit City and its Community Activities

The overarching theme for the Community Activities group was how to incorporate Google Fiber capabilities with the resources and talents currently in Kansas City to speed the entire community to global greatness. While there are strong resources throughout the metro, these concepts call on the entire community (business, government, nonprofits, education, business, citizens) to align more than ever before to showcase Kansas City globally across multiple dimensions - creativity, healthcare, quality of life, culture, and history.

Concept: Creating a Culture Cache Time Capsule

Audience: Kansas City Community - Residents and Visitors

Overview:

Augment present reality with significant, historical information combined with the personal histories of citizens and visitors to Kansas City.

Idea:

Create a communitywide multimedia time capsule available for viewing and new content creation throughout Kansas City. Not only will the time capsule have historical information available to support a virtual tour of any point in the city, it will support creation of holographic video reflections of residents and visitors on a real-time basis. Through the virtual time capsule system, future descendants of those participating will be able to see their ancestors as they were when they visited Kansas City's significant monuments and sites.

Potential Benefits:

- Encourages exploring the Kansas City community
- Promotes Kansas City to residents and visitors both
- Builds a brand for Kansas City by highlighting the past and present
- An application which engages the entire city

Concept: Kansas City as a Global Creativity Center

Audience: People in Kansas City, Reaching out to others outside Kansas City

Overview:

Develop our current creativity talents and resources, attract new ones, and showcase the creativity impact of Kansas City globally. Move Kansas City from the position of “look at us later” to “look at us now” with a creative impact that commands a global stage.

Idea:

Take advantage of current creativity resources within Kansas City (arts, advertising, museums, Hallmark, architecture, engineering, etc.) combined with the capability to Google Fiber to make them better known and experienced globally on a real-time basis to make Kansas City a Global Creativity Center. Specific activities would include:

- Making the arts accessible to new audiences
- Incorporating all aspects of the community, including nonprofits, business, and education
- Developing a culture and programs to be a creativity incubator with a global reach
- Exploit the capabilities inherent with Google Fiber to develop the apps, information and video sharing, hardware, and expertise to realize this global vision

Potential Benefits:

- Makes Kansas City a future-focused city.
- Unifying the community around a common idea and getting the entire city behind a concept.
- Attracting outside talent and attention to the resources for creativity in Kansas City.
- Stronger commercial and residential real estate market.

Concept: Health Center of the World

Audience: Healthcare providers, orgs, and patients

Overview:

Build upon Kansas City's current position as a leader in life sciences, its broad and representative population base, and the impact of Google Fiber to enable telemedicine to develop Kansas City as a Global Health Center.

Idea:

Use the capabilities associated with Google Fiber to conduct, collaborate, and share more medical research globally in addition to elevating Kansas City to be the healthiest city in the world. Efforts related to this would include:

- Dramatically increasing the environment and support for medical and life sciences testing
- A comprehensive online individual health monitoring, direction, and care database to improve health and extend lifespans
- Integrate the agricultural industry in the Midwest to improve healthy eating and lifestyles
- Connect all health care resources in Kansas City online to improve healthcare coverage
- Exploit Google Fiber capabilities and the medical expertise of the areas to create a telemedicine hub with a global reach

Potential Benefits:

Jobs and associated growth in healthcare and related industries

Better health and quality of life for Kansas City citizens

Concept: Comprehensive Personalized Community Events Calendar

Audience: Kansas City residents, visitors, nonprofits, and arts and culture organizations

Overview:

An event/activity calendar/connector that aggregates events, activities, and participant information comprehensively throughout the metropolitan area to manage schedules, provide personalized recommended activities, manage demand and timing for events, and promotes Kansas City as the world-class location for events.

Idea:

A comprehensive one-stop shop event calendar and activity connector that's online and completely available via mobile apps. The calendar and event platform will aggregate public and private events with multiple tags by type of activity, location, timing, venue capacity, and the ability to learn citizen event and entertainment preferences. The platform will support multiple applications including:

- Helping individuals and families find activities that fit their schedules, locations, interests, and social networks.
- Matches events with audiences to create stronger attendance at events.
- Allows proactive coordination and planning of future events among event creators and sponsors.
- Match individuals and families with nonprofit volunteer opportunities that extend beyond events.
- Immediate access for city visitors to the whole range of activities available near and far within the metro.

Potential Benefits:

- Helps residents feel more connected to the city, appreciating the range of activities and increasing participation rates.
- Visitors will be able to gain quick, easy access to targeted information of interest to them, irrespective of how well they know Kansas City.
- The Kansas City arts/culture/nonprofit community will realize greater awareness of themselves and their programs, easier engagement, and stronger attendance and participation from the community.

Concept: Kansas City Rebranding Campaign

Audience: Entire city

Overview:

Position Kansas City as an innovative, entrepreneurial city

Idea:

Utilize the Google Fiber project as a platform to brand our city as an innovative place. Create a culture that expects success. Civic pride; sales campaign for the city.

Potential Benefits:

- Reframe Kansas City in the minds of others; attract businesses and residential customers to the area.
- Utilize “Wild West” concepts in branding e.g. technology improvisation is the new jazz.

Concept: Kansas City as Destination of Data-intensive Broadcast Events

Audience: Kansas City community

Overview:

In a short period of time, establish Kansas City as the preferred destination for business, government and social events with worldwide reach.

Idea:

While Google Fiber makes it possible for many more worldwide users to access content broadcast from the Kansas city area than other metro areas. An analogy compared SXSW as an event currently held in Austin characterized as 100 people with straws trying to drink from a single glass vs. what it would look like in Kansas City as an alternative with 1,000 people drinking from an Olympic sized swimming pool.

Initial targets for location that would put KC “on the map” for data-intensive broadcast events included national political conventions, the annual Consumer Electronics show and SXSW.

Potential Benefits:

Communities:

- Kansas City reputation as a forward-thinking business community.
- Local business supported by an events and tradeshow industry.

A Participant Perspective

The Dilemma of Google's Gift, by William P. Mullins

As described in the Kansas City Business Journal (<http://www.bizjournals.com/kansascity/news/2011/09/20/mayors-pick-team-to-leverage-google.html?s=print>) Mayors James and Reardon appointed a Bi-state Innovations Team of 12 persons charged with coming up with ways the community can leverage the Google (Nasdaq: GOOG) project, slated to go live in both states in 2012, to improve things such as public services, education, economic development, the jobs market and standard of life.”

On October 3, a specific daylong effort took place to explore these possibilities. That evening the preliminary results were showcased at the Kansas City, MO, Central Library under the title “Building the Gigabit City – Brainstorming a Google Fiber Roadmap.” The Social Media Club of Kansas City sponsored the ideation session facilitated by The Brainzooming Group and other local marketing professionals. A photostream record of the day’s events can be found at (<http://www.flickr.com/photos/kclibrary/6211992319/in/photostream/>).

I attended the evening session with a friend and have been pondering my impressions since then. I want to be clear that I support the KC community stepping up to the opportunity that Google has proffered and I was impressed with the enthusiasm and dedication I observed at the Central Library. However, here I offer some reflections that elaborate on the vague feeling of unease I experienced on Monday night.

As Clayton Christensen, then of Stanford, elaborated in his 1997 classic, “The Innovator’s Dilemma” innovation is not a simple matter, particularly in any well-established enterprise. He distinguishes between two categories of innovation: sustaining and disruptive. Christensen examined the oft-noted problem that the more companies are good at what they do the harder they find it to create vastly different products from the ones they are familiar with. Why, he asked, do competent managers who are accustomed to making “rational” investment decisions become extremely adverse to asking their firms to “rock their own boat?”

I’ve reached a tentative conclusion that the Google gift to Kansas City can be seen to create an Innovator’s Dilemma in the same dynamic that Christensen highlights. From what can be understood about “disruptive innovations” it would seem reasonable to conjecture that the gigabyte pipe, with its 100X increase in bandwidth, is disruptive of some aspect of the social fabric of KC. A crucial question, for those anticipating this change and its impact is: What aspects of the status quo can we anticipate will be disrupted?

I suggest that the answer to that question is by no means obvious or the subject of ready agreement among all the diverse stakeholders who might want a say in the matter. Unlike going concerns, such as IBM trying to figure out how to proceed with personal

computers, Kansas City's gigabyte pipe is being introduced by an external agent as a philanthropic done-deed, not as a local commitment like the Kauffman Performing Arts Center or the Bloch Building at the Nelson-Atkins Museum.

In terms of finance and constructed capital, there would appear to be little risk to the Metro Community from the installation itself. It does not follow however, that this gift is risk-free. There is a challenge, given the absence of precedence that any "first-mover" faces, of anticipating where unanticipated consequences might be lurking. Given the absence of a proven roadmap, the provision of project risk management must be provided in the form of a robust governance process that can be relied upon to navigate through whatever obstacles emerge that few if any could have foreseen. This is not the sort of situation where "just go do" the obvious (i.e. familiar) is a prudent strategy.

Strategically, Google has indicated that it intends for the Community to develop locally notions of how the capability is to be employed. But how do we begin to think about what we are being asked to contribute? The past week's ideation effort at the Central Library involved some 80 interested parties in an all day effort and the evening report was made to well over 150 interested citizens. This event occurred because of the conjoined initiative of Mike Brown of local firm The Brainzooming Group and Aaron Deacon of the Social Media Club KC.

It seemed the primary objective of the Gigabit City was to jumpstart a deliberation process that would lead to a roadmap rather than to craft that roadmap. Judging by the enthusiasm in evidence Monday night, a lot of people felt this was a very worthwhile effort. While Mike Burke co-chair of the Bistate Innovations Team was there to indicate appreciation for this effort, neither that Team or the event sponsors provided more than a sketchy suggestion of next steps – by appearances on Monday the entire initiative is still in the formative stages from the local input perspective.

Coming back to the premise that adding this enormous increment of bandwidth – to as yet unspecified information channels – is a disruptive innovation in the Metro Communities shared watershed, some relevant perspective might include the following potential project boundary assumptions:

- There are significant social consequences that will flow from the presence of this added capability.
- The added bandwidth is not "equity neutral" – unless consciously managed the capability will either increase or decrease the baseline inequity metrics that mark the metro at present.
- Increased inequity is the default outcome as tech-savvy entrepreneurs are considerably better positioned and incentivized to exploit the capability with market-based initiatives than are disadvantaged parents looking to improve their engagement in school affairs.

- The architecture of the technology should follow not lead the applications – e.g. a central spine down Troost Avenue with East-West limbs and end-points in civic centers, schools, and other public accessible venues is quite different from a spine down Broadway with nodes driven by small business hubs.
- The applications will be guided by the civic vision of the architecture – not the other way around.
- Development should provide for learning from experience in a crawl, walk, run fashion – a ten-year plan with robust governance provisions is a sensible minimum.

These are just a sample of the kind of considerations that KC civic leaders would do well to promote going forward lest this experiment evolve in a one-sided fashion along familiar commercial lines. If the natural enthusiasm of the Gigabit City event was indicative, potential commercial beneficiaries will line up rapid to claim their “land grant.” Such an example of a “vacuum filling itself” could easily proceed, at a seemingly rapid pace, oblivious to the need to reverse the usual experience that more channels increase noise, dilute meaningful and often weak civic signals, and unwittingly promote polarization rather than harmony amidst respectful diversity.

Nothing in this brief assessment should be taken as the last word about the challenges the Kansas Cities face with this seeming opportunity. It can hopefully suggest a broad inquiry and promote the need to make an extra effort at the outset to assure inclusion of voices and perspectives beyond the enthusiastic “first movers.”

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The Urban Core in the Gigabit City

With the Urban Core group, we focused on areas of the community that, unfortunately, might be the easiest to under-serve with new ultra high-speed capabilities. There was significant input in the pre-survey and from secondary research that a robust Gigabit City would ensure access and benefits to all areas of the community.

Urban Core Citizens - Needs and Opportunities

Access to Jobs and Entrepreneurial Opportunities

- Job training options; Viable work at home/home entrepreneurial business models; Concerted hiring efforts from employers for urban core residents; Access to mentorship and coaching

Increased Interest in Urban Core

- Better visibility to issues as expressed directly by residents; Improved/stronger assistance resources; Urban areas rehabilitated and property value increases

Access to Resources to Take Advantage of Ultra High-speed Internet Capabilities

- Access to at-home computer hardware; Affordable internet service; Access to internet service (and hardware) in safe, healthy, accessible spaces; Mobile internet availability

Life and Economic Skills Learning

- Virtual access to strong remote education resources; Tailored education resources for urban audience needs; Education on using internet resources

Enhanced Public Safety

- Video 911 services; Street and in-home monitoring; Citizens expand role in monitoring neighborhoods; Stronger connections to police and fire departments; Access to medical and other remote resources for health and welfare

Neighborhood Unification and Advancement

- Regular two-way interaction with support resources; Improved creation and networking of community associations and organizations; Video meetings between and among community leadership

Urban Core Possibilities

This list of initial and early ideas for the urban core touched on how the Gigabit City will improve today's quality of life along with a clear path to improved future prospects for the community's urban core.

Impact Area	Possibilities for the Urban Core in the Gigabit City
Access	<ul style="list-style-type: none">• Use community centers to propagate access in low-income neighborhoods where people will not be able to afford in-home access• Ensuring hardware is available
Career and Success	<ul style="list-style-type: none">• Save/Spend/Give - financial planning basics• Programs which demonstrate and support develop of entrepreneurial ventures, especially demystifying success• Job opportunities - Awareness of opportunities outside the urban core
Education	<ul style="list-style-type: none">• Academic programming to extend the reach and quality of K-12 education in the metro. Students in the failing KCMSD could access curriculum from local and national schools to augment their programming.• Provide ESL online opportunities for all immigrants and refugees.• Education on the benefits, value, and upsides from ultra high-speed internet.• Clouds to provide textbooks to those who can't afford them• Library access
Government and Community	<ul style="list-style-type: none">• Bring city services online• Creating awareness for community and broader civic issues
Health	<ul style="list-style-type: none">• Tracking health, education and life satisfaction• Urban Core Citizens - Needs and Opportunities• Remote interpretation of lab results/diagnosis
Home	<ul style="list-style-type: none">• House values increase because of availability of Google Fiber
Work	<ul style="list-style-type: none">• VPN speeds for virtual workplaces

Urban Core Concepts for the Gigabit City

There was considerable consideration of using Google Fiber to connect entrepreneurs with the ideas, assistance, and venture capital needed to make a go of it. Other concepts include “virtual doctor,” making it easier for primary care physicians to volunteer in free clinics by using the Google Fiber bandwidth and capitalizing on Google Fiber to rebrand Kansas City in the eyes of the outside world as a technology hub as opposed to being a cow town. There was a distinct educational theme to make educational materials available in the cloud to give disadvantaged students access to materials and instruction they would otherwise not have – catchy concept idea of Schoogle.

Concept: Access to Access

Audience: Urban core families/communities

Overview:

Access to new capabilities and tools is often limited to those who can afford the tools that make access possible.

Idea:

Access to Access makes information available no matter where you are from the homes and neighborhoods people live in. Connect to homes using devices that can attach easily to existing low-tech tools like TV, games, and phones.

Potential Benefits:

- No dependence on an individual’s financial ability to fund the access.
- Information resources could be made available to young, old, poor, disadvantaged individuals.
- Access to Access creates a seamless connectivity that is not dependent upon traditional tools.

Concept: Let Your Fingers Do the Walking

Audience: Urban core

Overview:

Transportation options – alternative to cars.

Idea:

- Find real time transportation options via an easy app – what mode is fastest for trip.
- “Integrated app” – to reserve a bike that is nearby.

Potential Benefits:

- More mobile.
 - Less wait.
 - Affordable solution.
 - Uses current mass transit system more efficiently.
- 

Concept: Healthy Home in More Ways than One

Audience: Urban Core

Overview:

Sensors to identify potential fire/electrical/carbon monoxide hazards before tragedy strikes – linked to fire department for proactive monitoring.

Idea:

- Helps keep families safe; helps to educate families about their homes and how systems operate.
- Teaches people to be aware of changes in their environment.
- Helps fire department deploy resource.
- Multi-tenant buildings that are prevalent in the urban core and are often at high risk.

Potential Benefits:

- Safety.
- Minimizing risk for both families and first responders.
- Avoiding tragedy.

Concept: Doctor Next Door Program

Audience: Urban Core/Health

Overview:

Real-time, virtual access to healthcare professionals.

Idea:

Provide access by live streaming health data and analysis and audio from a general practitioner to free clinics. “Virtual doctors” allows a physician to “visit” clinics quickly and from their own practices. This can help reduce free clinic wait times and costs as only nurse practitioners and volunteers need to operate a clinic. Also allows for more clinics, reducing the issue of not being able to access a clinic.

Potential Benefits:

- Lowers wait times.
- Clinics accessible to all.
- More physicians able to volunteer.
- Lower clinic costs.
- Also allows for instant referrals – experts who can video into the clinic and address patient issues.

Concept: Entrepreneur Center or Schoogle

Audience: K-12 urban and suburban

Overview:

- Virtual access to information, resources, experts.
- Funding of best ideas through VCs/investors.
- Economic impact – how to fix it – teaching how to innovate/create.

Idea:

- Alerting students to what is possible – learning from success – mentorship with companies.

Potential Benefits:

- Innovative culture, urban/suburban connection point.
- Business engagement with the community and vice versa.
- Minimizes generational gap.
- Inspiring confidence, self-esteem, empowerment.

Concept: Provide Micro Loans for the Urban Core

Audience: Urban core families

Overview:

Micro-loans have helped build third world residents have individual successes by funding small economic initiatives with limited investment. Why not take the same concept using the Google Fiber network to create Individual Urban Zone entrepreneurs in our city rather than around the world.

Idea:

The ability to develop a “success” and “no fear” attitude for ideas that might otherwise never be able to get off the ground because they lack the education credentials or knowledge to seed, plant and grow an individual’s entrepreneurial dream/idea.

Potential Benefits:

- Self-help attitude, no hand-outs approach.
- A new framework for how to succeed regardless of your community or your circumstances.
- Can help to elevate individuals that may be homebound, lacking in education or missing infrastructure resources.
- This is about creating a new attitude that, “I can experience success on my own scale on my terms.”

Concept: Gigamarket

Audience: People with ideas, talent, or money

Overview:

Microfinancing and investment; decentralized workforce; tech start up and support

Idea:

- Provides startup capital (funds and human capital) by connecting investors with entrepreneurs. The crowd-sourced environment creates an environment for risk taking and greater use of technology. This liberates people from need for traditional jobs; fosters a move to a flexible, independent workforce.

Potential Benefits:

- Provides startup capital.
- Creates an alternative investment opportunity.
- Contributions could be big or small – microjobs concept.

The Suburbs in the Gigabit City

Although the suburbs may be viewed as primarily places where people live and community is formed, perceptions were voiced that neighborhood connections in the suburbs may not be as strong as imagined. With different characteristics and issues among its neighborhoods today, the Gigabit City is one where the ease with which we make global connections virtually is brought home to enhance the connections of those around the corner and around the city.

Suburban Citizens - Needs and Opportunities

Managing Family Activities

- Scheduling educational and family activities; Links to mobile resources; Managing latch-key kids; Greater use of gaming as a skill/learning tool; Access to real-time transportation planning for individuals and groups

Access to Cultural Opportunities

- Able to experience wider range of local cultural activities; Greater visibility to other areas in the metro; Greater variety of instruction for children in arts

Community Activism and Connections

- Greater civic roles; Interconnections with government; More effective bi-state government and coordination; Interactive participation in local government; Automate city service functions for an online environment

Home-based Businesses and Entrepreneurism

- Greater feasibility to work from home—whether as entrepreneurs or as part of a bigger firm; Enhanced collaboration and access to innovation for small businesses

Smarter, Media-rich Homes

- Better coordinated management of energy usage, outages, demand spikes; Stronger integration of communication and entertainment technologies; Links to personal/mobile devices; Video communication – uploading, streaming

Access to Medical Care

- Access to health services and remote screening and diagnosis; Quicker consultation for medical issues via video

Suburban Possibilities

This list of initial and early ideas for the suburbs within the Gigabit City will help create a better life/work balance and improve the quality of life for those in Suburban Areas.

Impact Area	Possibilities for the Suburban Areas in the Gigabit City
Access	<ul style="list-style-type: none">• Community-based global wi-fi• Bridging the speed: 25x/50x/100x• Better data storage• Scalability for speed factors
Career and Success	<ul style="list-style-type: none">• Home office-to-corporate connectivity• Save/Spend/Give - financial planning basics
Education	<ul style="list-style-type: none">• Live stream high school games, plays, etc.• Virtual field trips• Skype with thought leaders, experts
Government and Community	<ul style="list-style-type: none">• Bring city services online• Creating awareness for community and broader civic issues• Public “push” of info (Amber Alert, snow days)• New twist on telecommunity/close the gap within the KC community spread• Break down suburban isolation from other parts of the community and country• Upgrade and facilitate neighborhood watch programs• Ongoing, live updates on events, promotions, etc. in the neighborhood• Live streaming of urban activities (concerts, parades, etc.) to outlying neighborhoods
Health	<ul style="list-style-type: none">• Improve virtual interactions with global communications• Tracking health, education and life satisfaction• Eat - Find farmer's markets, grocery sales, coupons, etc. instead of relying on mass produced or fast food. Healthier eating.
Home	<ul style="list-style-type: none">• Remote interpretation of lab results/diagnosis• Smarter appliances - apply internet connections with bandwidth (also applies to service calls)• More bandwidth = faster with consumer-based decisions• Online grocery shopping• Shared community video or music library
Work	<ul style="list-style-type: none">• VPN speeds for virtual workplaces• Assist with travel time in commutes

Concepts for Suburban Areas in the Gigabit City

The emerging concepts for the suburban audience centered on a few core considerations. How can we better integrate our extended family members who live far away into the lives of our children? How do we create a more energy efficient lifestyle and increase the community's sustainability? How can we gain broader interest and involvement in city governance? When combined, the concepts are ultimately about creating a better sense of community in our suburbs.

Concept: It Takes a (Social) Village to Raise a Child

Audience: Suburban Areas

Overview:

A mentioned problem from suburban residents was how inefficient suburban families are in use of their resources. Often, community events such as school plays or club sports are attended by several families in the same neighborhood, each with their own automobile. The long lineups at local schools' student "pick-up" lanes attest to this. In this idea, Google Fiber acts as a strong backbone for a social "community sourcing" platform that allows participating community members visibility to the location of other neighborhood members for coordination of common activities for reduced overlap.

Idea:

Based around the axiom that "it takes a village to raise a child," this idea revolves around establishing strong neighborhood community use of social media, with resources and geolocation visible to the community network, all for the purpose of coordinating adult resources in the care of children. Neighborhood families use the network to coordinate use of their time and resources, for example, through facilitating ride-sharing for neighborhood kids not of driving age and coordinating adult chaperones for minor-attended events,

Potential Benefits:

Children:

- Children get broader exposure to a variety of people (adults) beyond their immediate family, learn valuable lessons from people other than their parents, meet other kids their own age, and get to take positive examples from/provide positive examples to other neighborhood children.

Families:

- Families are less dependent on one set of parents forced to choose between competing priorities.
- Families make better use of resources, costing less in the long run.

Communities:

- Neighborhoods and communities brought closer together through greater participation in the lives of their kids. The lack of community that suburban dwellers each identified as an issue is reduced through greater knowledge of, and participation in, the lives of other community members.
- Less traffic, less time spent on local roads to and from service providers.

Concept: Communities Linking With Like Communities

Audience: Suburban Areas

Overview:

In recognition that within communities there are small communities with special characteristics or needs. These communities often have a hard time finding adequate resources to meet their community needs, whether people or infrastructure related. An example of elementary school special needs education was cited, where often times there weren't enough teachers/transportation/facilities to make service convenient for all.

Idea:

Rather than spreading resources across communities, special communities from around the KC metro (and beyond?) could link with each other to share resources virtually, allowing for better, more effective use.

Potential Benefits:

Specialized Communities:

- More connection with like communities breeds shared understanding. Less separation of the service resources allows the communities to be better served.
- Less requirement for travel, easier access to services makes for more convenience for community members and their families.

Small business professionals:

- As Service providers get more contact with the specialized communities they serve, they become better at serving them.

Concept: Smart(er) City

Audience: Suburban Areas

Overview:

Current public service systems, such as road infrastructure, water, energy use, are extremely challenged. An example, Kansas City has the most freeway mileage per capita of any city in North America, yet gridlock still happens and infrastructure build continues. While cities like Dubuque, IA, have pioneered the smart city movement in partnership with local and national business (primarily IBM, see <http://www-03.ibm.com/press/us/en/pressrelease/28420.wss>) Google Fiber provides the community/business partnership the ability to process much more data and make ever better decisions about resource use and planning.

Idea:

Develop joint business community–municipal community efforts around sustainability and resource use in a city much larger than the 200,000 population of the current IBM projects, with the Google Fiber capability acting as the enabler. From the IBM-Dubuque release:

New technologies are capable of digitizing and connecting city systems, so they can sense, analyze and integrate data, and respond intelligently to the needs of citizens. IBM, the City of Dubuque, along with future partners will revitalize the city's systems to become smarter and more efficient in order to meet the city's vision for sustainability.

Potential Benefits:

Municipalities:

- Cities and neighborhoods can jointly plan for better resource use and future allocation, leading to a more efficient and effective, less costly, more sustainable metro area.
- Tax revenues currently allocated to infrastructure could be reallocated to other community priorities, or reduced.

Business:

- This is a significant business opportunity for technology providers, engineering and infrastructure companies, and service providers, and while there may be a lead sponsor to the program, such as an (IBM/Siemens/GE/Emerson) local businesses would need to do a majority of the developmental “heavy lifting.”

Citizens:

- Tax resources are either used more efficiently, for better productivity, or reduced.
- Shared resources (infrastructure and services) become more effective.

Concept: Biggest (Energy) Loser

Audience: Suburban Areas

Overview:

Demonstrate the commitment of the greater Kansas City area to sustainability by initiating a metro area “Biggest Loser” contest for resource use, using efficiency-improving applications and social media sharing as a way to spread and adopt energy use best practices.

Idea:

This idea relies on applications development that would allow for tracking of individual, community, and municipality-level energy use, as well as the ability to share via localized social media forum. The large amounts of interconnected data benefit from using Google Fiber as the means to share what is a civic improvement initiative. Rewards could be tangible (breaks on property/personal taxes, as example) and be granted on the basis of category (electricity, water, etc), percentage vs. total improvement, innovativeness of ideas, etc. Local engineering companies, such as a Black & Veatch, could be involved at base levels.

Potential Benefits:

Families:

- Families decrease costs of resource use, improve understanding of resource use and its impact, and potentially gain some additional reward.

Communities:

- Decreased resource use makes civic management more efficient from the demand side, allowing infrastructure resource allocations to be made in other areas with pressing need.
- After emerging as a leading city in technology, Kansas City follows up by emerging as a leading city in sustainability, building a reputation as “more west coast than the west coast.”

Concept: KC On Demand

Audience: Suburban Areas

Overview:

This is a “streaming media” idea, one where the greater Kansas City area dedicate resources to broadcast local events (concerts, stage, galleries etc.) in a way that pairs two strengths of the local community – best-for-a-city-of-its-size arts and entertainment venues and community and the Google Fiber network.

Idea:

The events calendar from the greater Kansas City area are brought into the home through content-rich media (likely video-based). Suburbanites unable to get to the area events (concerts at Sprint Center or Kauffman Center, openings at Nelson-Atkins or Plaza Art Fair as examples) can participate in a lower-commitment format, with less investment in terms of time and effort, likely at a reduced participation cost. The events would be produced for local consumption, but with awareness that the viewing could be expanded beyond the metro area

Potential Benefits:

Families:

- Families can participate in cultural events to a greater extent than before through easier access and use.

Kansas City Arts Community:

- Increased exposure expands the audience for Kansas City cultural events, identifies an additional revenue stream for events by introducing an additional price point for customer participation, and creates a local culture where commitment to the arts is supported to an even greater extent than it is today. Longer run, it may increase the affinity of artists and event teams to select Kansas City as their home location.

Concept: Better Civic Results Through Effective Participation

Audience: Suburban Areas

Overview:

A shared view of the group was that civic management and governance was generally less effective than it could be, and that a large reason for it was that too few people participate in local government, or the setting of local civic policy agendas – entirely because suburban families are too busy to get involved. They generally want or intend on participating, but are reluctant to the idea of taking their “one night off” and travelling to and from a local civic event (e.g., a Town Hall meeting of local government) to spend four hours sitting for the 15 minutes they really want to have their voice heard.

They would engage if they could do so with less investment of time and effort, and opt into the civic “conversations” they’re interested in. Ultimately, higher participation rates result in more local policy and governance that reflect the real needs and desire of the community.

Idea:

More “streaming media” in this idea, but not exclusively. Technology allows for the extension of the “town hall into the home” but also uses agenda-based alert systems to bring participants into the process based on their interests, letting them participate in civic governance on the issues that they are interested in, but opting out of those that they aren’t. Through two way interface, they are also able to cast votes that help set policy for their communities.

Potential Benefits:

Citizens:

- Citizens can take on more of an active voice in civic matters with less effort.

Communities:

- Governance that is more inclusive, more open, and accounts for a larger proportion of the community yields results that better reflect the needs and opinions of the community.

Concept: ESPNme

Audience: Suburban Areas

Overview:

A commonly mentioned challenge to suburban living was the idea that families have a difficult time involving more distant family members (particularly grandparents or separated parents that live out-of-area) in the lives of children. ESPNme is an idea that combines the explosion of social media with the expanded content sharing capabilities brought by Google Fiber to create narrowcast – family-dedicated content “channels” that let distant relatives participate on the lives of children to a greater extent than they do today.

Idea:

Two main components—each dependent on Google Fiber—make this work: The ability to capture, categorize/integrate, and rebroadcast large volumes of multiple media, such as video, pictures, and social media content (posts tweets, etc) allows for an integrated “production” of a community event for consumption by people not in attendance. For example, in an elementary school play or a little league baseball game, where parents are taking pictures and/or video, siblings are tweeting/Facebook posting, content would be brought to a shared platform (likely an outgrowth of a social media site) categorized and indexed for media type, location of the capture, time, and strung together as a single “produced” event that a family member could view either on demand or in (near to) real time, customizing their consumption experience based on the media type, angle, written content, etc.

Potential Benefits:

Families:

- Family members that need to juggle commitments can view events post, so as to not miss important events for children. Grandparents no living in area are a major beneficiary, as it is these types of events that today are almost exclusively relayed by phone.

Communities:

- Less traffic, less time spent on local roads to and from service providers.

Concept: My Appointments Come to Me

Audience: Suburban Areas

Overview:

A commonly mentioned challenge to suburban living was the idea that family members, particularly parents, quite often needed to be in two or more places at once and find themselves juggling priorities to do so. (This was in full evidence in that six members of the Suburban Living group had to leave at various times to meet other commitments both professional and family/personal.)

Idea:

This is a “streaming media” idea, but one where the suburban home becomes a multi-use service environment for professionals. Instead of catering to the professional service provider where a single car, carrying one or multiple family members to the provider’s place of business for service, the providers make virtual “house calls” to the customers homes, which become their virtual service environment.

For example, in separate rooms of the house, families could concurrently be consulting with a doctor or lawyer, taking a tutorial in a high-school subject, participating in out-of-school musical education, and taking a cooking class while preparing the family meal. The family spends no time in transit to and from appointments and no time waiting for appointments. Better still, parents don’t have to choose between commitments and the family can participate in more activities overall.

Potential Benefits:

Families:

- Families can travel less, spend more time together, and are able to participate in more of each other’s lives. By bringing multiple providers into the home, parents (family) can literally be in several places at once.

Small business professionals:

- Small businesses that rely on a geographic core as their customer base can expand beyond it, to other communities and perhaps even regions. The local word-of-mouth that comes from a good experience won’t be constrained by the practicality of distance for prospective customers.
- Targets for this would consist of community-based professional service providers: educators—school based or otherwise (music teachers as example), lawyers, doctors, interior decorators and contractors, personal financial advisors, to name a few.

Communities:

- Less traffic, less time spent on local roads to and from service providers.

A Participant Perspective

The New Value of Community in Suburban Kansas City, by Jason Cupp

As a life-long Kansas Citian, when I saw the news report some time ago that Google had awarded our community the first infrastructure for Gigabit speed internet, I was thoroughly excited. Instantly, I thought, “We sure have come a long way since logging onto the internet via a telephone modem and using AOL as the interface,” and the fact that hometown KC was going to get this uber-speed internet connection was proof positive that it could have a monumental impact on our community.

And a monumental impact it can have on our *community*.

I grew up in South Johnson County, and lived, for the most part, in the suburbs my entire life. Just recently, I made the trek across state lines and moved to Downtown Kansas City – the Crossroads District. I was not sure if I would thoroughly enjoy the urban lifestyle – living in a loft building, the noise of the trains going in and out Union Station, cars zooming down Grand Boulevard at all hours of the night, the random food trucks that can make an appearance like a flash mob in parking lots, or the people . . . the community . . . the urban tick of relationships.

I was completely wrong about all of my potential misconceptions of why not to like urban living. But what I was most wrong about was the sense of community that exists in the urban core of Downtown Kansas City. You see, I was somewhat apprehensive about the move simply because, while living in Overland Park, I did not know any of my neighbors. It was community-less. In fact, when I had people over and a handful of cars would be on the street, one particular neighbor would call the police on me – saying I was having a large, loud party. In fact, I was just hosting a family birthday party. True story.

When I moved downtown, I immediately felt a strong sense of community. Ironically, my neighbor next door offered me their wireless router password, because AT&T could not install my DSL for many weeks. It was the beginning of a great friendship that was not only with that neighbor, but all of my neighbors. We all have become good friends, and even traveled together recently to a wine event in California. It’s called community, and genuine community. I’ve often found myself thinking about why it was not the case in Overland Park.

When I was invited to join the brainstorm session for Gigabit City, I was eager to share my thoughts and experience of how the lightening fast speed internet could make an impact on my newfound community in Downtown KC. As is typical in my life, my expectations had to be adjusted. I was asked to serve on the suburban team, to help determine ways that the impact could be enveloped into suburbia. Initially, I was a bit confused, but then I remembered that I lived in Overland Park nearly my entire life and just recently moved downtown in the last few years, and I was known as a strong proponent of an urban lifestyle. I immediately realized my

charge – to share the difference between Suburban and Urban KC, and how Gigabit speed internet could assist in those differences.

The biggest, and most dynamic difference was clearly that of community.

I believe that each and every person desires an element of community in their life. They want friends. They desire to be close to family. They want to be known by their neighbors. To be waved at. To know that they can lean on others around them when they need something – even if that is simply to borrow an egg, or with deeper impact – borrow an ear to be listened to.

Gigabit City can contribute to community in a variety of different ways. Think of the impact that Facebook and Twitter have had on our lives. It makes a bigger world smaller, at the same time, making a smaller world bigger. I think of the impact that high speed internet can have on the way that neighborhoods can interact with one another – planning after-school groups for kids to study together, arranging virtual homes association meetings, having the ability to “attend” class even during a snow day. It can, with certain constraints, break down walls of anti-community. I have a lot of friends on Facebook and Twitter. Legitimate friends. Just last week, I attended a large conference out of town where many of those friends, that I interact with on those social medium platforms on a regular basis, were present. It was amazing to run into those friends at dinner, or while watching the World Series, and we had a connection that was different if we had not “talked” in the last year.

Granted, our social media connection does not ever take the place of a real, face-to-face relationship, but it did help us to know one another differently, and ultimately, better. My hope is that Gigabit City, while properly used, implemented and executed, can help break down the socially awkward feeling of being cooped up in a suburban home and not know my neighbors well enough to even say hello. I could see community events, school events, civic events, concerts, recitals, and other community-focused activities are easier to stream and interact with, that would all help contribute in a monumental way to an added sense of community.

Community is necessary, in my opinion, for a healthy life, lifestyle and satisfaction in who we are individually, as well as in a likeminded group, such as a family, neighborhood, workplace or school. My hope and desire is that, as we continue to embark on how Gigabit City can have impact in our city, one of the deepest impacts it can have is on the people who live here – and to give them the lifeblood of a healthy sense of belonging, community, and ultimately a family we call Kansas City.

Jason Cupp is a Kansas City based International Kolbe Certified Growth Consultant that travels constantly, but he always loves it when his plane touches down at Kansas City International Airport so he can experience the sense of community at his residence in the Crossroads District of Downtown KC. For more information on Jason, visit www.jasoncupp.com or follow him on Twitter @jasoncupp.

Special Focus: Public Safety in the Gigabit City

Public Safety Possibilities

Various groups touched on how ultra high-speed internet access could change public safety and law enforcement in the Gigabit City.

Impact Area	Possibilities for Public Safety in the Gigabit City
Collaboration	<ul style="list-style-type: none">• Increase collaboration (across geographic/ethnic boundaries)• Coordination among departments in various cities• Connecting police, FBI, firefighters, news channels, EMTs• High-speed access to national databases• Sending large info within districts
Enforcement	<ul style="list-style-type: none">• New home/house arrest technology capabilities• Voice activation computer
Training	<ul style="list-style-type: none">• Remote training for personnel• Vocational training/job creation
Investigation	<ul style="list-style-type: none">• Remote interviewing• Monitor social media networks• Real-time data transfers
Monitoring	<ul style="list-style-type: none">• CCTV in neighborhoods via IP• Cameras on every corner• Breed a reporting mindset• Real-time traffic cameras• Neighborhood watch social networks• FBI/Airport security• Facial recognition• Quicker info from license plates• Digital mugshots
Performance	<ul style="list-style-type: none">• Give superpowers
Rehabilitation	<ul style="list-style-type: none">• Prisoner re-education

Schools in the Gigabit City

In the Gigabit City, effective education of its youngest citizens is vital to paving the way for the area's success tomorrow and for generations to come. At the heart of the group's work was the idea of making vital learning resources widely available through the capabilities of Google Fiber.

Grade K through 12 - Needs and Opportunities

Improved Studying and Learning

- Homework assistance; Staying focused on studying and learning (managing online distractions, adult content); Studying/learning collaboration among students; More time for learning and homework

Greater Availability of Learning Resources

- Access to otherwise unavailable resources (textbooks, video); Lower cost educational resources delivered online; Contact with people/experts in diverse geographic areas; More robust school websites

Distance Learning

- Ability to “attend” school during illnesses or inclement weather; Access to knowledge and expertise not available in person; Teachers being able to teach from home or for multiple schools; Access to accredited schooling

Greater Breadth of Learning Opportunities

- Experiential laboratory opportunities; Ability to experience different places, peoples and learning opportunities; Applied learning opportunities; Learning content creation; Collaborative video classrooms

Education Attainment and Planning

- Access to standardized test prep resources; Exposure to advanced education options and planning; Financial planning for advanced education

Grade K through 12 Possibilities

The list of starting possibilities for K-12 students, families, and schools within the Gigabit City addressed ideas for improving interactivity in education, distributing learning resources to underserved areas, and shifting traditional educational structures and roles to take advantage of online learning.

Impact Area	Possibilities for the Suburban Areas in the Gigabit City
Attendance and Retention	<ul style="list-style-type: none">• Help keep kids in school?• Empowering kids to advance at their own speeds.• Attention getting/keeping effects and messages.
Curriculum	<ul style="list-style-type: none">• Academic programming to extend the reach and quality of K-12 education in the metro. Students in the failing KCMUSD could access curriculum from local and national schools to augment their programming.• Provide an extended, enriched online curriculum experience measured to state grade level equivalencies to assist teachers.• Incorporate “gamification” concepts into online learning systems.
Educational Resources	<ul style="list-style-type: none">• KCK and KCMO schools get access to online teaching tools/lectures that parents can view with their students.• Give each student a laptop or tablet.• Interactive mentoring - learning from experts.• Interactive learning.• Providing more varied perspectives.• The ability to host online courses.
Ties Between School and Home	<ul style="list-style-type: none">• Home schooling support.• Connections between school families—car pooling, social groups, tutoring, sports teams, etc.• In-home access to curriculum - review the day's lessons, even with video of lectures, linked-in enrichment access to online tutors.• Participate in classes from home while sick.• Home learning.

Grade K through 12 Education Concepts in the Gigabit City

One main concept was to use the power and speed of Google Fiber to create online classrooms and repositories for great teachers and best curriculum. This allows for individualized instruction, can help teachers earn certifications, and can make it easier for parents to keep up with what their student is doing at school, even providing video access to PTA meetings or school board meetings.

A lot of groups said the technology could be used to serve up specialized content to students based upon what they need to work on and what they are ready to learn. Google Fiber could also even turn the school day on its head – using streaming video to provide lectures at home in the evening and then have students do “homework” in class during the day with access to their teachers. The Google TV technology can also provide technology for individualized, personalized instruction. Another way to leverage Google technology is to use analytics in a unique way to track student achievement.

Concept: Kansas City Master School District

Audience: K-12

Overview:

Create the Kansas City Online K-12 District, which is comprised of a school master schedule across all districts, universities and colleges to provide day and night learning opportunities for K-12, higher education enrichment. Staff from any institution from anywhere in the world could contribute.

Idea:

Districts would share the burden of providing costly, advanced, low-enrollment courses. Districts could provide learning opportunities without time constrictions.

Potential Benefits:

- Provide learning opportunities to meet the needs of the whole community.

Concept: Cloudy Day Education or “Skoogle”

Audience: Urban core and K-12 schools

Overview:

School district cloud servers

Idea:

Cloud servers store books, curriculum and classroom information so students can access them. Provides inner city students the access to all the learning materials that are available in the suburbs. Green solution by reducing paper assignments.

Potential Benefits:

- Current educational tools; ability to review and return information; lowering material costs; elimination of paper waste; assistance for tutors and learning aides; libraries maintain large storehouses for digital books and materials.
- No more excuses for snow days – all the material is available virtually.

Concept: Re-tool the School Day

Audience: K-12

Overview:

Anytime learning, with class time used for individual attention and applied knowledge with the teacher. Homework becomes the time to view lectures. (See the Khan Academy for a model.)

Idea:

Identify master teachers within participating districts. Capture those teachers at work. Slot the offerings in a shared master schedule. Switch the way class work is done today – class time used for individual instruction on “homework” while lectures provided digitally for watching at home.

Potential Benefits:

- Access to curriculum and instruction.
- Takes better advantage of online tools to address student educational needs.

Concept: Just in Time Learning for Students

Audience: K-12

Overview:

Have a customized teacher experience for every child/student on a single student achievement platform

Idea:

Students are empowered to learn at their own pace in a “controlled” virtual environment and are mentored/managed by the school environment. An integrated school achievement platform enables “just in time learning” connecting every student with an input device (phone, tablet) to the teachers and administrators to achieve state requirements thru Google communication systems.

Potential Benefits:

- More from classroom teaching to classroom mentoring.
- Allow students to achieve their capacity and capability.
- All student scores in the KC area go up.
- Lower costs of educating students.
- Less administrative burden for teachers and administrators.

Concept: Student-centered Learning Framework

Audience: K-12

Overview:

Create a student-centered learning framework that offers quality, measureable content from different sources through dynamic, on-demand delivery.

Idea:

Kids and parents aren’t provided with any analysis of day to day performance and therefore do not know that a different course of action might be needed to help kids improve. Having more real-time data and analytics built into curriculum and content delivery mechanisms would prevent kids from falling behind.

Potential Benefits:

- Stronger student performance and retention.
- More active participation from parents in education.

Concept: Customized Teaching Experience

Audience: K-12

Overview:

Delivers customized teacher experience for each student based on student proficiencies

Idea:

Leveraging information and targeted modules, a student learns about himself or herself via browsing history, demographics, performance on pretests or quizzes as material is presented. Allows the ability for independent lessons to be served to a student.

Potential Benefits:

This type of customized experience reduces teaching students what they already know and focuses on teaching what the student is ready to learn.

Concept: iGoogle for Students

Audience: K-12

Overview:

A personal landing page for learners with content offered up based on courses and interests with relevant news and video content featured.

Idea:

An opportunity to let learners direct their learning through an overall construct developed by administrators/teachers. For example, if a student loves to read, but is not as excited about math, the iGoogle page would offer a book about two famous mathematicians. It would have different levels for different grades. Relevant news and video content would be added to the site.

Potential Benefits:

- Student feels in control.
- With choice, there is more engagement for students and they like school more.
- Students have opportunity to personalize the educational experience but still cover required curriculum.
- Accessible and cost effective.

Concept: Homework Help Desk

Audience: K-12

Overview:

Online support for students after school hours, plus access to recorded lectures and or content.

Idea:

With access to higher upstream and downstream bandwidth, interactions between teacher and student are no longer bound by classroom walls. Homework help desk is akin to a nurse hotline – an expert is on call to answer questions when they arise. If a student has trouble with homework, they log in to the school site and find live help to help with the problem. It follows the model used by IT help desks or customer service departments. Ideally, the teachers online would be specialized in the area of student in which the student has questions and would also have access to the lesson plans of the assigning teachers. Bandwidth would allow video chat in at least one direction, i.e., from the teacher.

Potential Benefits:

- Specialized, individualized help for students when they need it.
- Video helps with the interaction–videos of the teachers at a computer or white board.
- Help sessions can be recorded for teacher/student/parent review.

Concept: Study Hangouts for Students

Audience: K-12

Overview:

Google study groups – online study groups/hangouts

Idea:

These would provide a support system for kids outside of school to be able to ask questions and learn from peers, especially in situations where parents are not able to help. Study group requests could be sent out (through Google Hangouts) and facilitated by teachers if available.

International groups could also be held to cover fun geographic, culinary or cultural subject matter. Could be extra credit opportunities – teachers actively create/facilitate groups. Mashup: Google hardware, Talk, Maps, Hangouts, Translate, Voice

Potential Benefits:

- More interactive groups.
- Better learning environment.

Concept: Gamification of Education

Audience: K-12

Overview:

Education as play by providing game platforms at the level students are used to in the classroom.

Idea:

Taps into the relationship children have with online gaming to create engagement for learning. The scoring dimension can incent stronger student performance, application of knowledge, and retention.

Potential Benefits:

- Lower the barrier to entry.
 - Children learning from children.
 - A way to constantly modernize education.
 - Learning reinforcement.
 - Easy to update information.
- 

Concept: Private Channel TV in the Classroom

Audience: K-12

Overview:

Private channel (IPTV) for classroom delivery.

Idea:

As a support mechanism to extend the classroom, IPTV offers schools a unique opportunity to broadcast lessons and events. This inexpensive technology is accessible today and can leverage the benefits of the Google Fiber network and the Google TV infrastructure. Applicable uses: review, test prep, homework clarification and socialization.

Potential Benefits:

- Instant gratification for the young learner.

Concept: Dynamic Communication

Audience: K-12

Overview:

Through a merging of various touch points, the school system is able to communicate with families and students

Idea:

A messaging system sorted with only information relevant for their students, along with real-time video access to events. The real-time video accessible to all parents can include PTA meetings and school assemblies. Through the use of private channel TV (IPTV/GoogleTV), the school system is able to push real time alerts, such as board of education meetings allowing for virtual q&a.

Potential Benefits:

- Being able to more accurately assess the progress of your student.
- Addresses the lack of knowledge that families have about what occurs on a daily basis with their student.

Concept: Google Analytics for Education

Audience: K-12

Overview:

Track interests, strengths, and areas of improvement for teacher, parents and administrator use.

Idea:

There is an information gap between the school and the home: teachers have difficulty acquiring precise data for every student. Using a retrofit version of Google Analytics, students can track and share their personal progress as it related to their peers, their goals, and their levels of readiness.

Potential Benefits:

- An online, robust transcript is readily available.
- Helps students customize their programs of study.

Concept: Google Fiber University of Excellence

Audience: K-12

Overview:

Establish a single university of educators

Idea:

Providing cutting edge technology to educators to ensure that KC students get the maximum benefit Google Fiber has to offer. We envision the school as a progressive program that would widely provide levels of instruction from basic to advanced. These training programs would be at the forefront of continued development. Cutting edge training and certification for teachers.

Potential Benefits:

- Improve learning of students in KC schools so that can compete globally.
- Raising profile of KC as a hub of education innovation along with initiatives such as biosciences, Silicone Prairie, etc.
- Engagement of students.
- Improved efficiencies and empowering students to learn in a cost-effective environment.

Concept: Learning to Teach in the Google University

Audience: K-12

Overview:

Change education programs at the university level to incorporate Google technology.

Idea:

Universities would revise curricula to require education majors to take courses from Google University. The courses would be appropriate for K-6, 6-8 and 9-12. Graduate degrees for education would require courses from Google University that would be condensed and advanced.

Potential Benefits:

- Graduating teachers would be better prepared to meet the tech needs of their students.
- Graduates would not be spending their first years of teaching struggling to learn technology.
- Students would benefit by having better prepared teachers and would be more engaged in learning.

Concept: Economies of Scale for IT

Audience: K-12

Overview:

Every school district has its own IT department and textbook procurement. This fragmentation/duplication of expense and effort is highly inefficient and unsustainable.

Idea:

Using a MORGNet type model, IT and content can be commonly shared and supported across school systems.

Potential Benefits:

Massive cost reductions and tax savings.
Standardization of quality and continuity of education services.

Concept: Google Fiber Education Consortium

Audience: K-12

Overview:

Create a task force of educators, parents and students from urban and suburban school districts to brainstorm and share ideas about how Google Fiber can transform education in the KC region (much like what was done for Gigabit City, but on an ongoing basis).

Idea:

This group's purpose would be to identify ways to improve efficiency, access, engagement and performance across a broad spectrum of educational dimensions. The hope would be to break down barriers among schools and districts that would result in new ways of thinking about education and new centers of excellence for instruction. In essence, this group would be charged with creating a strategic roadmap for improving education through Google Fiber.

Potential Benefits:

- Maximize the Google investment/technology through developing tangible programs that improve education.
- Create a model that can potentially get funding from government and private industry to support new educational programs.
- Raise KC's national profile as a hub for educational innovation.
- Improve the quality of education – better outcomes for all KC-area students.

A Participant Perspective

Training the Educators, by Josephine Micheletto

I was thrilled to be a part of the Gigabit City discussions! Our K-12 group was a diverse representation with numerous ideas. I believe Kansas City has the ability to create a “Google University” where educators can access all the apps and technology Google has to offer. However, I strongly believe that **any** technology is useless without proper training. As a 20 yr. veteran of teaching Business subjects and computer applications, I have seen firsthand how teachers are given Smart Boards, Airliners, Ipads, etc. without any training and then instructed to incorporate those technologies into their curriculum.

Training for educators must begin at the University level. Education departments would need to rewrite their degree programs to incorporate Google apps. Google representatives would need to hold training sessions for college professors or send Google representatives to teach the apps. By teaching apps I do not mean a two or three-hour session. The trainers need to show teachers how to integrate those apps into their lesson plans. Teachers need to be given time to attend these classes and also time to rewrite lesson plans using the applications from Google. Districts would need to set aside funds for training by allowing teachers to attend classes and then time for planning. A motivator for those currently teaching might be a small stipend for attending classes during the summer. Monies that might be spent for subs during the year could be used to entice teachers to attend in the summer months so that classes would not be disrupted during the school year. Teachers should be given opportunities to learn these apps at least **one year prior** to implementation. They need to be comfortable using the apps in their personal life before they are required to incorporate them into their teaching.

I believe the future will see the Microsoft Office Suite disappear from the classrooms and corporations and will be replaced with Google Docs. Google has so much to offer but we need to understand that learning is not in a device or an app – technology is just a resource – but in the hands of well-trained teachers, it can facilitate high-quality learning. Our ultimate goal as educators is to increase the success of our students.

In the October issue of eSchool News, “A Blueprint for Ed-Tech Success,” professional development was defined as follows: “Professional development is one of the most crucial and frequently overlooked aspects of implementing a technology initiative. In fact, truly effective professional development goes well beyond a single training session and is ongoing, frequently reinforced, well-supported, and imbedded into the daily life of schools.”

Josephine Micheletto is a Computer Teacher at St. Ann Elementary School in Prairie Village, KS.

Higher Education in the Gigabit City

With access to robust online higher education experiences in smaller increments (because of lower time, geography, and educational program hurdles), opportunities are opened for life-long learning and peer-to-peer education across generations.

Higher Education - Needs and Opportunities

Improved Learning and Support Access

- 24-hour tutoring; Remote tutoring; Access to professors at off/extended hours; Staying focused on studying and learning (managing online distractions, adult content); Studying/learning collaboration among students

Distance and Collaborative Learning

- Access to remote universities and knowledge resources; Access to otherwise unavailable resources (textbooks, video); Attend class during illness, weather; Collaborate with students and educators at current and other higher ed institutions

Education Attainment and Planning

- Lower education costs; Sample new courses/degree programs at no cost; Opportunity for stronger family connection and support; Student-designed education paths

Adult Student Learning

- Doesn't have contiguous study time; Studying late at night; Limited access to teachers and classmates; Mentoring access

Non Traditional "Academic" Customer Service

- All hours enrollment and education advisement and support

Post-Degree Career Planning

- Career advancement options; Consider/plan for future schooling; Better long-term career visibility

Higher Education Possibilities

The list of initial and early possibilities for Gigabit City higher education opportunities was strongest for how faster speeds and broader bandwidth make the promises of online and distance learning a reality.

Impact Area	Possibilities for Higher Education in the Gigabit City
Educational Resource Availability	<ul style="list-style-type: none">• Connecting class rooms and labs across the country/world to each other• Allow students to sample courses before they buy - professors, classrooms, curriculum
Learning Horizons	<ul style="list-style-type: none">• Extend education through retirement• Teach basic skills to students can benefit from technology• Open school systems
Remote Delivery of Learning	<ul style="list-style-type: none">• Distance learning - webinars/seminars• Leverage education through Skype• Stream courses• Reach home bound students• Students enroll in video channels from higher education institutions.• Education.skype.com• Empower home schooling through co-teaching centers• Do more robust online assessments to determine what people already know
Technology Resources	<ul style="list-style-type: none">• Create classrooms with video production capabilities• Wi-fi availability• Implementation of new technology

Higher Education Concepts in the Gigabit City

A common theme among the groups was using the capacity of Google fiber to have a centralized repository of material for students to access, no matter where they were or what institution they attended. Students could have access to excellent teachers from way across town, on-line tutoring, classes for vocational training/certification, etc.

Another theme mentioned often was that the fiber network could allow for virtual mentoring between corporate executives and college students or between the college students and high school students. Flexibility was a key concept – students could work at their own pace, whenever, and however they wanted. Mentioned often was also sort of piggybacking on Google’s entrepreneurial spirit to infuse that same excitement among students to encourage entrepreneurship, growing the KC economy, keeping talent in the city, and making a name for Kansas City in the tech world.

Concept: Academic Earth

Audience: Higher education

Overview:

Having Google fiber in KC could be the catalyst to share data/resource in virtual classrooms for universities/high schools.

Idea:

A repository for all subject matter for classes. It gives students the ability to access anything that pertains to what they want to learn or specialize in.

Potential Benefits:

- Quickens learning on any subject.
- On demand learning.
- Knowledge is stored for availability.
- Training for new professors.

Concept: Inter school collaboration

Audience: Higher education

Overview:

Facilitates collaboration between schools. The ability to share ideas between urban and suburban cultures. Shared experience across learning platforms.

Idea:

Some students have access to resources that others do not. Institutions have different resources available. Students in the suburbs have access to more library, information resources. Schools have the ability to provide better field trips that could be virtualized and shared.

Potential Benefits:

- This will equalize the benefit to students in low-income areas with students in higher income areas.
- All institutions will have the same level of teaching.

Concept: Virtual Mentoring

Audience: Higher education

Overview:

Virtual mentoring program with student job shadowing.

Idea:

Student can take job aptitude test or have Q&A session with virtual mentors. There will be on-demand archive of material, video archives of training sessions. College alums can mentor freshmen and corporate executives can interact with juniors and seniors (enabled primarily in a virtual environment – video chat, etc. Builds competence and builds real-life experience – gives on-the-job training. Gets students acclimated to job culture (as much as possible on the virtual level). Gives students job experience.

Potential Benefits:

- Builds competence and real-life experience.
- Gets students acclimated to job culture/workplace culture.
- Potent tool for internships, temp-to-hire model for students.
- Gives students access to/exposure to different careers.
- Internship, temp to hire for students. Builds network. Gives access to/exposure to career
- Paid interns who are working on viable solutions
- Keep talent and brain trust in KC

Concept: Virtual Tutor/Collaborator

Audience: Higher education

Overview:

Create a specialized social network where local tutors are matched with area high school students that need one-on-one assistance. It can help high school students choose college majors.

Idea:

Learning gaps for high school kids and provides teaching/application to college kids. Addresses resource needs for both groups. Ability for one-to-many instruction i.e. music ensembles, art classes, history.

Potential Benefits:

- Collaboration.
- Recruitment.
- Knowledge share.
- High school kids get help, college kids get credit.

Concept: Ending/Killing the Semester

Audience: Higher education

Overview:

Google Fiber will give the speed and availability to students who can or want to finish a three-month course in two weeks or extend it to five months. No boundaries. The only limit is their desire and availability to learn and graduate.

Idea:

Some students learn and study at different speeds, levels, and comprehension. Create your own graduation date and educators can move kids quicker, teach more in same amount of time.

Potential Benefits:

- Graduate early.
- Extend classes.
- Not locked into dates and deadline.
- Measured on outcome, not time spent.

Concept: Student Business Incubator

Audience: Higher education

Overview:

Incubator for students – engaging students to come up with innovative business ideas that faculty and business owners/corporate interests can identify. KC corporations could put X amount into a fund as the students generate businesses, X amount goes back in to refill the fund—a business incubator.

Idea:

Continually introduce and grow new businesses in the KC area. A way to continually innovate. It incents students to think outside the box and become entrepreneurs.

Potential Benefits:

- Grow KC economy and keep talent in the city
- Put KC on the same page as Austin and San Francisco

Concept: Gamification of Real Life

Audience: Higher education

Overview:

Gamification on real-world jobs. Taking “The Sims” to the next level where you could learn real-life skills by watching videos and virtually interacting with games. In the program you could learn to be a plumber and gain points by watching videos and interacting with various aspects of the game.

Idea:

The ability to learn real-world skills by playing a game. Learning does not have to be boring. Some companies are already doing this. (*Reference works: Seth Priebatsch – Game Layer on top of the world; Jane McGonigal – Gaming can make a better world*)

Potential Benefits:

- Training in much more fun environment. Helps people learn more quickly

Concept: Hands on Vocational Training

Audience: Higher education

Overview:

Real world, real time instruction; HD video streaming; chat rooms; 3D schematics, etc.

Idea:

- On-the-job/real world examples and applications.
- Assessments, certifications and analytics.
- Hiring/recruitment tool.
- More online job/real world examples and applications

Potential Benefits:

- Real world.
- Shared experience.
- From a real person who DOES this every day.
- Get certifications.
- Recruitment based on performance.
- Interactive.

Concept: Crowd Computing

Audience: Higher education

Overview:

Using the SETI (Search for Entrepreneurial Intelligence) model, Tap CPUs accessing the Internet in a passive way (and possibly using game theory) to tackle medical research or scientific discovery. This aligns with the “bioscience corridor” designation and expands on what gamers did to solve HIV protein structure

Idea:

Reinforces altruistic behavior to join as a community to solve community problems. Positions us as international leader in med/science research. If KU Med had a problem, they could post it and all connected computers could apply their collective processing power to resolve it (DNA mapping, etc.)

Potential Benefits:

- Make KC a center for academic research.
- Solve real world problems w/o reinventing the wheel.
- Benefits humanity, potentially cure diseases.

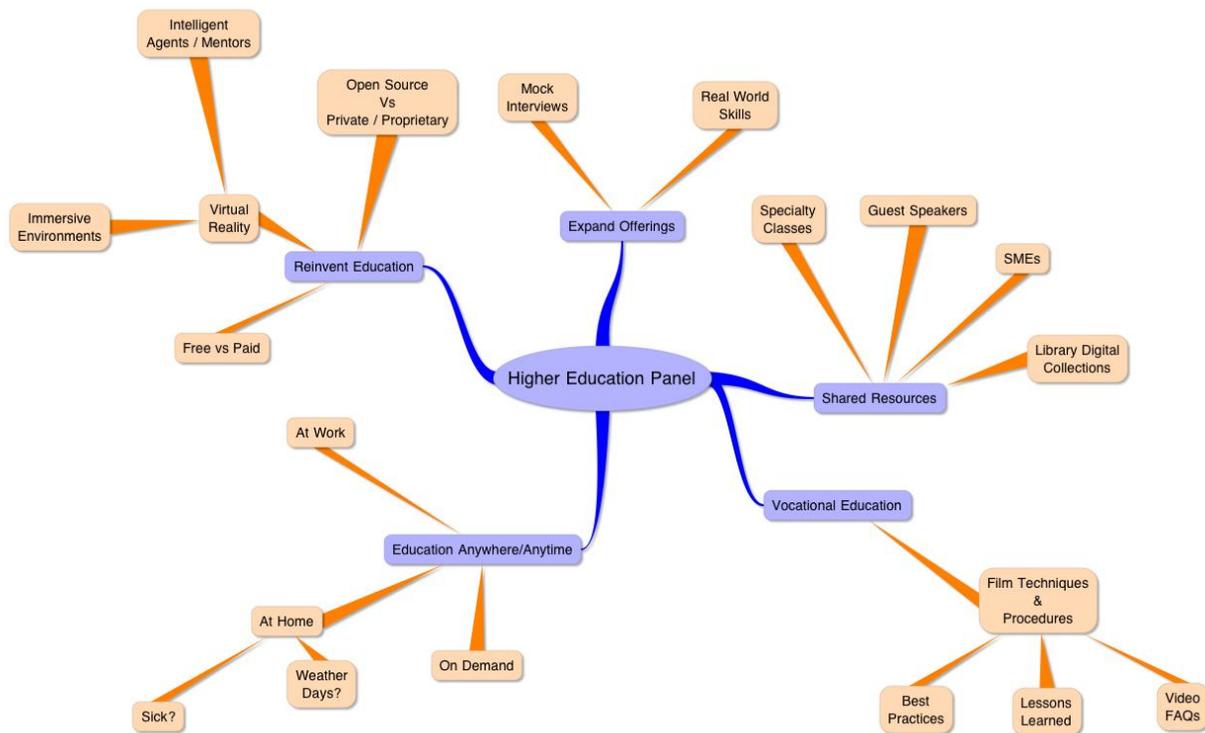
A Participant Perspective

Higher Education Panel by Bob King

Our panel focused on not just "doing things faster" but doing things differently. Assuming a current average 10 MB connection, Google Gigabit fiber will be 100 times faster. Rather than just do what we already do now faster, what new possibilities does that open up?

For example, imagine the possibilities of real-time, 360 degree, high definition video fully immersive all-sensory virtual conferencing! [provide comparison to Wii sensors, Xbox 360 Kinect, etc] (12 different "30-degree camera feeds"), directional audio, and so on.

Example: Build a classroom with a 360-degree camera in the center of the room, and student desks all around. The teacher could be present (directly under camera) or perhaps not. Some of the desks are physically occupied by students, the other positions may be filled by students connected remotely.



Expand Offerings - Mock Interviews, Real World Skills

Currently many students graduate with book knowledge, or technical skills, but lack real world experience, including making presentations, interacting with clients and participating in interviews. The improvements in bandwidth with Google fiber, combined with advances in natural language processing and virtual agents, would allow college graduates to experience these situations virtually prior to doing them for the first time.

Ability to perform as virtual interns would expand opportunities for students unable to assume the financial burden of travel, relocation, lodging and transportation expenses often associated with unpaid internships. Loosely borrowing from the crowdsourcing concept, multiple virtual interns could work against the same task or deliverable. The sponsor would then have a range of solutions to choose from.

Shared Resources - Guest Speakers, Specialty Classes, SMEs, Library Digital Collections

The large pipe would allow school districts (primary, secondary and higher education) with limited resources to make use of programs available in more affluent areas. An appearance by a nationally known guest speaker could be broadcast to multiple locations or recorded for future viewing via streaming technology. Often more advanced or specialty classes are not offered everywhere due to low demand (few students interested) or lack of someone to teach the class. Through virtual participation, interested students in areas not offering a specific subject could have the opportunity to receive that education via alternative methods.

With the continued migration towards electronic media, school districts and associations of higher education institutions could share the content of their digital libraries with each other.

Vocational Education - Film Techniques and Procedures, Video FAQs, Best Practices, Lessons Learned

Over the last two decades, increasing financial pressures have resulted in reducing or eliminating vocational education programs in many school systems. We will have increasing demand for professional trades and those jobs represent a solid opportunity for movement into middle class society. Using advanced video capture technology, a library could be constructed of the various work procedures. (e.g. film a plumber installing or repairing a garbage disposal) Recording that same procedure in different environments, with different models, over time would result in a very robust technical reference library. Those videos could also be used to identify best practices and develop lessons learned.

Imagine the benefit of a plumber in the field, confronting an unknown model with little or no documentation. Consulting a digital tablet and through the high speed Google fiber, reveals a video of the specific situation, along with the recommended solution.

Education Anywhere/Anytime - At Work, At Home (Weather Days, Sick), On Demand

Just like social media marketing is touted as "the relevant message, to a relevant recipient at a relevant time." we could reinvent education so that it's more of a just in time model. Rather than give everyone a general education in advance, we could move to more of a lifelong learning model. On the job and need to learn how to perform a statistical analysis? Pull out the e-learning tablet or your web browser and watch the lesson whenever needed.

The previously described options of virtual participation would also create opportunities to continue school in case of extended absence (too sick to attend school, but able to participate virtually) or on occasions where adverse weather precludes attending in person. Rather than have "snow days" in the winter, schools could instead have "virtual learning" days when a winter storm hits the area.

Reinvent Education - Open Source Vs Private/Proprietary, Virtual Reality (Intelligent Agents/Mentors, Immersive Environments), Free vs. Paid

As a society, we waste many resources on new editions of textbooks and other teaching materials. Much of what we teach has not changed, electricity still works the same way today as it did in 1990 or 1980. Following the Wikipedia crowdsourcing model, we could develop an open source knowledge base of general disciplines, making that information freely available to individuals and institutions of higher learning.

Those previously involved in that knowledge industry (creating and rewriting textbooks) could become candidates for the virtual education workforce. With the expansion of virtual education possibilities we will see a large demand for subject matter experts, mentors and sources of knowledge to assist in the development of robust intelligent agents.

Lastly, through introduction of a national service program (loosely akin to military service commitment) students could repay their education by acting as mentors and virtual teachers some time after entering the work force. It would vary from one profession to another, but perhaps after being in the work force for 2-3 years, they spend some amount of time each week for 1-2 years "giving back" by offering their experience educating those students pursuing the same profession.

Bob King is president and chief innovator at Thought Spray Solutions. King has over 25 years' experience using creative thinking skills and information technology applications to solve highly complex, time critical problems. He is currently teaching at the Joint Cyber Analysis Course (JCAC).

Libraries and their Patrons in the Gigabit City

Accelerating the move from primarily being repositories of physical learning assets, libraries in the Gigabit City will become data and service centers, providing access to learning and living resources patrons might not otherwise be able to access.

Library and Patron - Needs and Opportunities

Access to Distance/Remote Learning Assets

- Able to virtually visit great libraries globally

Adult Learning and Digital “Survival” Skills

- Instruction for patrons on digital research skills; Instruction on digital survival skills; Nice educational instruction; Tax preparation, job search resources, and other support services on a remote basis

Virtualization of Learning Resources

- Digital resources available from around the world; Downloading and curation of digital assets

Inter-library Connections

- Better coordination on resources acquisition among libraries; Collaborative offerings across libraries and learning institutions

Libraries as Learning Event and Broadcast Centers

- Instead of people coming to libraries, retrofit libraries to produce and push/distribute content to relevant audiences

Library Possibilities

Initial possibilities for libraries in the Gigabit City suggest a role as an online connector among schools, geographies, content creators, organizations, and other libraries.

Impact Area	Possibilities for Libraries in the Gigabit City
Access	<ul style="list-style-type: none">• Allow information seekers to have a video conference with a reference librarian• Greater access to streaming video• Extending library programs to rural libraries• Provide high-speed public information• Provide remote access to libraries
Content	<ul style="list-style-type: none">• Curate lectures, arts, performances• Feature live book readings• Package library content for people who don't know about it
Educational Resources	<ul style="list-style-type: none">• KCK and KCMO schools get access to online teaching tools/lectures that parents can view with their students• Home schooling support
Learning Horizons	<ul style="list-style-type: none">• Extend education through retirement
Library Focused	<ul style="list-style-type: none">• Instituting a library federation for the GIS Literacy Project• Convene sessions with other libraries of specific expertise
Services	<ul style="list-style-type: none">• Creating services in normal library spaces• Create a very robust online experience for remote library patrons• Bandwidth

Library Concepts in the Gigabit City

Leverage/build upon the library's traditional role as an information repository. Use the Google Fiber bandwidth to make large datasets available and also make the library a meeting space – both virtual and in person – for entrepreneurs and developers to cultivate ideas. Also, again building upon the library's traditional function, the availability of advanced datasets and high speed Internet helps bridge the digital divide that can put low-income families at a technological disadvantage.

Concept: Library as Data Center

Audience: Businesses, researchers

Overview:

- Small businesses and entrepreneurs support – hosted tools including software
- Bandwidth for larger datasets.
- Content repository.
- Development environment – open source community – for apps, etc.
- Data and analysis warehouse/data mining.

Idea:

- Provides access to datasets.
- Extend the idea as the library is a public space.
- Build a dataset-smart community.
- Allow App development on top of the data.
- A place to be creative, innovative with access to tools.

Potential Benefits:

- One-stop shop to all content in the community.
- Trustworthy data and content source.
- Equal opportunity in terms of access.
- Disseminate unique content about KC.
- Reducing cost for startup/tech businesses.
- Print books on demand.

Concept: Bridging the Digital Divide

Audience: Library

Overview:

- Wifi/digital/mobile.
- Satellite centers.
- Digital literacy education – hackathons.
- Online access is a necessity, not a luxury.

Idea:

- Means and skills to access the digital world.
- Provide knowledge content to help them use the tools.
- Instructional content.
- Easy access to digital content.

Potential Benefits:

- Access to cloud services.
- Employment opportunities.
- Instructional content – demonstration role.
- People begin to know each other thru building an online community.

Concept: Virtual Town Hall

Audience: Library

Overview:

- Content specific to local issues.
- Public telepresence rooms.
- Create tools to allow people to explore, analyze data and content.
- Virtual meeting rooms.

Idea:

- Easier to be informed and engaged in civic issues
- Convenience.
- Easy to organize in the community.
- Equal access.

Potential Benefits:

- Sense of community involvement.
- Faster resolution of decisions.
- Greater integration, greater participation.
- Maintain the republic.
- Enhance library role in the community.
- Greener city.

Concept: KC Local Content

Audience: KC community, Global community

Overview:

- Cultural performances, jazz history, academic content, regional history, event archive, KC art.
- Enhance local community to document and create content.
- Multimedia timeline of Kansas City.

Idea:

- Access to KC directed content that currently does not exist.
- Crowd sourced city history/archives removes the burden of few contributors bearing the full responsibility.
- Centralized KC data – Census, market data, housing data, economic data, etc.
- Relevant and current topics.

Potential Benefits:

- Focused content.
- Centralized source for broad content.
- Sourced from local experts.



Concept: Cultivate Reading Culture

Audience: General public

Overview:

Streaming story time, two-way interactive book reading, recommended reading lists, who's reading what, virtual book clubs, connecting home schoolers, writing workshops, book reviews.

Idea:

- Encourages reading and love of books.
- Provides access to storytelling – live and asynchronous.
- Provides readers as role models.
- Connects readers to one another.

Potential Benefits:

- Increase literacy.
- Increased employability and marketability.
- Increased sense of cultural connection.

A Participant Perspective

The Role of Libraries, by Simon Kuo

If literacy is a foundation of society, libraries have played an important role in ensuring access to knowledge for millions through decades of their existence. Google's Gigabit Fiber project can help expand the role that Kansas City libraries play in our community.

Libraries

Background

In William Gibson's bestselling book *Neuromancer*, society in the near future is data dependent. Business is conducted primarily online and the most precious asset of every business and institution is its data. In the last fifteen years, the world has made the transition from analog to digital, almost universally in the US, homes have become "wired" and the Internet has replaced television as the living room entertainment of choice. But we have yet to realize the full potential of a digital, ultra high speed broadband way of life.

The Google Fiber project in Kansas City represents a unique opportunity to develop new applications for this ultra high speed broadband world. Telecom companies have worked to increase data speeds within their territories for years, but those efforts have been slowed by the onerous cost of fiber deployment, especially to rural and therefore less population dense areas. The largest fiber network build out in the US to date has been Verizon's FIOS¹ effort. Planned to provide fiber to 18 million homes, it is estimated that the project has cost \$23 billion dollars to date. Verizon's fiber network build out ended in 2010 though additional capital expenditures will be required to bring fiber to new subscribers. And FIOS only provides speeds up to 50 Mbps downstream and 25 Mbps upstream², well short of Google's planned 1Gbps network. It is estimated that the per house cost to provide fiber can range from \$1350/home to \$8000/home³, depending upon the technology and network topology used. If companies deploying fiber charge customers \$50/month for fiber access, it would take from two years to 12 years just to recover the cost of the network build out with other costs like marketing and

¹ Enterprise Networking Planet. [Verizon Halts Further FIOS Expansion](http://www.enterprisenetworkingplanet.com/netsp/article.php/3873221/Verizon-Halts-Further-FIOS-Expansion.htm). March 26, 2010.
<http://www.enterprisenetworkingplanet.com/netsp/article.php/3873221/Verizon-Halts-Further-FIOS-Expansion.htm>.

² Enterprise Networking Planet. [Verizon Halts Further FIOS Expansion](http://www.enterprisenetworkingplanet.com/netsp/article.php/3873221/Verizon-Halts-Further-FIOS-Expansion.htm). March 26, 2010.
<http://www.enterprisenetworkingplanet.com/netsp/article.php/3873221/Verizon-Halts-Further-FIOS-Expansion.htm>.

³ Gigaom. [How Much Will Google's Fiber Network Cost?](http://gigaom.com/2010/02/11/google-fiber-network-cost/) February 11, 2010.
<http://gigaom.com/2010/02/11/google-fiber-network-cost/>

sales incentives still to be recouped. Given these poor economics, the Google plan should best be considered as a means to answer the questions: can the deployment of Gigabit fiber be self sustaining through the creation of new business models that it will enable and that can fund it? And what compelling things will we be able to do when ultra high speed broadband is everywhere?

Libraries and Gigabit Fiber

Throughout history, from the Great Library of Alexandria to Andrew Carnegie's work to build 1700 libraries in the United States at the turn of the 20th century, libraries have been one of the foundations of literacy in the western world⁴. They have evolved from simple collections of books during the pre-digital age to their current form as repositories of printed and digital content, including books, videos, music and even games. Libraries also have served as public meeting spaces; have provided patrons with access to computer and the Internet; and are staffed with Librarians who are research specialists and serve as curators of content. As publishing has moved into the digital age, so have libraries. Many are now experimenting with electronic books and ebook readers, among other technologies.

We propose that Google Fiber can help libraries extend their models in the digital content domain even as they evolve toward new models of operating. The chief type of information repository in the digital age is the data center. Data centers, coincidentally also require gigabit data connections. Thus we envision the future library as a specialized form of the data center. These Gigabit Libraries would manage servers that house digital content that would include books, music, videos as well as user generated content. There are great benefits to converting collections from physical books and magazines to electronic versions of the same. Books that require physical, printed form like certain folios and special collections can continue to exist as physical collections.

Considering that the total storage required for of all written works in the world in all languages has been estimated to be 50 Petabytes⁵, digital libraries have the opportunity to be comprehensive repositories of knowledge and can also focus on collecting other kinds of information, like user generated, local and cultural content. But even as space to store books is no longer a constraint for library collections, it would be unrealistic to expect that a given municipality's librarians would be able to manage all of this content, therefore focusing specific libraries on certain types of content would ensure a consistent level of knowledge management across all categories of knowledge.

⁴ History Magazine. History of the Library. March 2007. <http://www.history-magazine.com/libraries.html>

⁵ Mozyblog.com. How Much Is a Petabyte? July 2, 2009 <http://mozy.com/blog/misc/how-much-is-a-petabyte/>

Fewer physical books would mean less storage space required and portions of the large spaces of today's libraries could be converted to other public use facilities. These might include additional computer rooms to access digital information sources and video-conferencing enabled public meeting rooms for civic meetings, library functions and the like.

To support these digital collections we propose that content management and creation facilities would be needed within these Gigabit Libraries. This would include facilities to edit, manage and broadcast digital content of all types.

Libraries that have public meeting spaces that support the broadcasting of video content over the Internet would be useful "virtual town halls" for meetings on important civic issues. Today, city council meetings are held for a somewhat limited audience, in places and at times that discourage public participation. Few have the opportunity to routinely miss work in order to attend city government discussions on topics like public transportation. If these meetings could be held in the "virtual town hall" of the library and if these were supported by technology platforms that enabled citizens to submit input online, more people could be participants in these civic processes.

In addition traditional library activities like book clubs could be extended into the virtual space, enabling remote participation for readers who could not travel to library locations.

And this content and these activities would not simply be pushed blindly to the public. Since librarians are already trained to curate content, direct users and perform research, they could also work to edit and deliver this content to improve our knowledge of public issues and candidates for public office, leading to voters who could make better informed choices during elections.

With all of these tools, our libraries could also extend their mission. No longer relegated to only collecting what publishers print, Kansas City libraries could also work to collect new types of information like user generated regional content. In fact if a city-wide WiFi mesh network were also supported by Google Fiber, anyone could upload any content to the library to be catalogued and serve as part of a regional cultural information cache. For example, every jazz concert that is performed within the city could be captured, uploaded and catalogued, serving as a resource that tracks the evolution of Kansas City jazz through the decades. With the inclusion of geographic information, this content could be associated with, for example, public monuments, creating augmented reality experiences that would reinforce the city's role in cultural history.

Other services that our libraries could offer with the addition of hardware servers include online facilities for web hosting and application development. These activities would be a necessity to support new content development capabilities anyway; therefore providing public access application development "sandboxes" could serve to help stimulate economic

growth by providing low or no cost avenues for start ups. Business models that could include recouping cost in the form of royalties to businesses that generate revenue on library development platforms could help fund the libraries' core functions.

Simon Kuo is owner of Westside Studio and co-founder and managing partner at LightThread, LLC. Kuo is passionate about creating vision, strategy, and products for small and multi-billion dollar businesses. He is an experienced senior executive in high-tech and startups with biotech expertise.

Life for those with Health and Mobility Challenges in the Gigabit City

The Health & Mobility Group focused on how Google Fiber might enrich and simplify the lives of those with health and/or mobility challenges. Hundreds of healthcare and socialization related ideas were generated that when combined served as platforms for the concepts that are outlined in this section. Input from the pre-survey and secondary sources helped identify early needs and opportunities to jumpstart our brainstorming activity.

Health and Mobility Challenged Individuals - Needs and Opportunities

Access to Disability-Specific Resources

- Access to communication platforms; Remote learning and education; Advocacy resources; Computer hardware availability

Monitoring Health and Personal Security

- Healthcare tracking; Monitoring current health status; Disaster preparedness and notification; Monitor “at risk” home situations

Access to Health Services

- Interaction with providers; In-home care; Remote screening and diagnosis; Physical therapy

Availability of Support Services

- Dietician; Mentorship and coaching; Accountant and legal resources

Enhanced Community Involvement

- Access to community organizations and resources; Public transit accommodations

Virtual Access to the Community from the Home

- What does this concept suggest for opportunities?

Concepts and Implications for the Health and Mobility Challenged in the Gigabit City

While output from the other sessions remains in the more organic “crowd sourced” format, output for this session has been synthesized to demonstrate how nearly 300 individual ideas can be synthesized, combined and culled down to provide more succinctly strategic direction.

Because Barb Murphy, the facilitator for this session, is with The Brainzooming Group, the analysis process Brainzooming uses to synthesize ideation output was applied. The result is a more refined document reflective of actionable output typically produced by The Brainzooming Group.



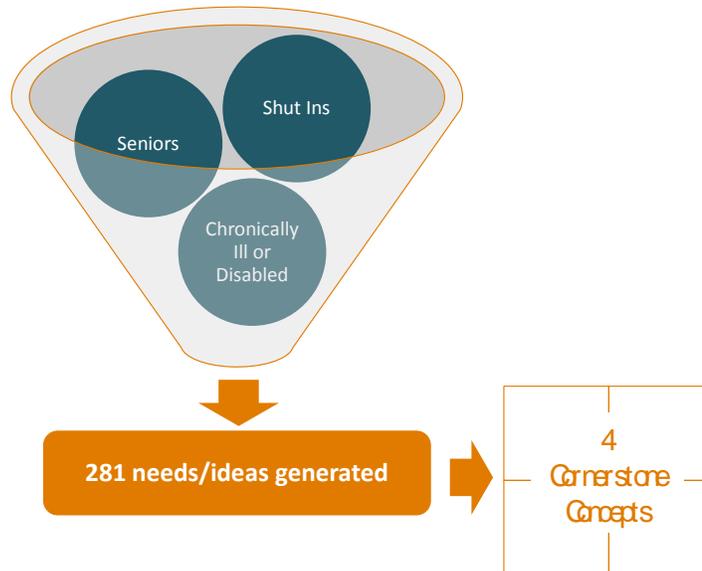
**Building the Gigabit City:
Brainstorming a Google Fiber Roadmap**

Health & Mobility Group
Brainstorming Session Output

Brainzooming


November 2011

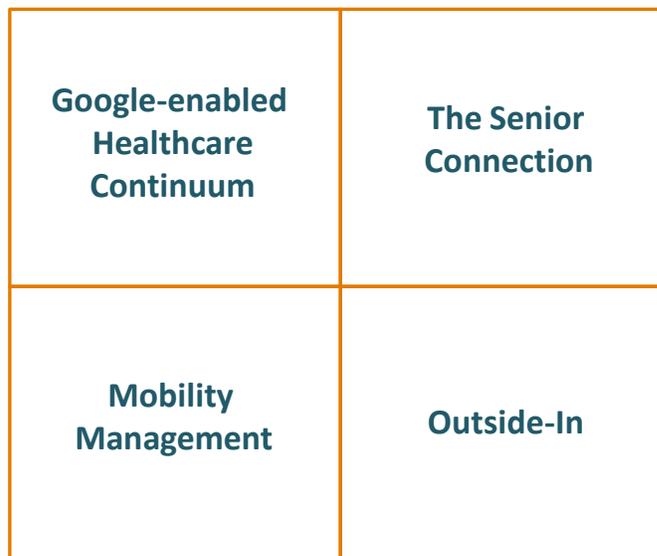
The needs/pain points of target audiences were considered....



Brainzooming

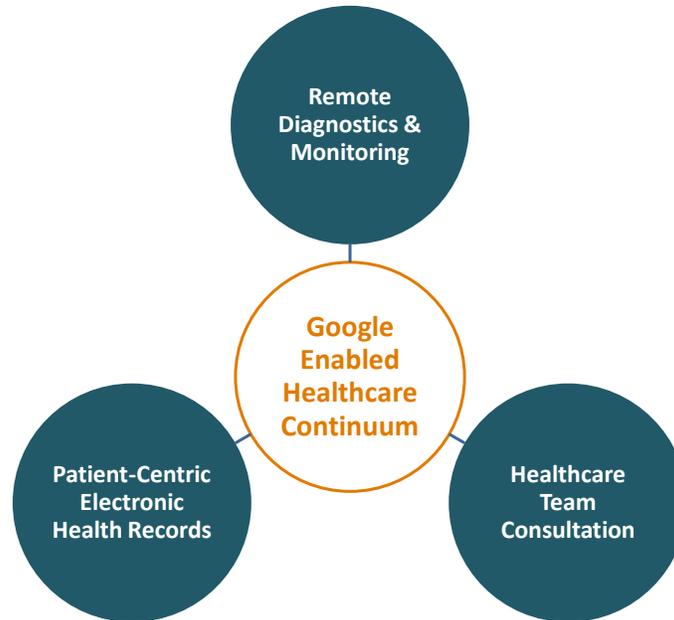
4 Cornerstone Concepts

Each with elements that benefit the others



Brainzooming

1 Concept, 3 Contributing Ideas



Brainzooming

Who would benefit most?

- ▣ Seniors living independently
- ▣ Shut ins / Residents with limited access to transportation
- ▣ Residents with complex healthcare needs/ multiple healthcare providers
- ▣ Caretakers and remote family members for the individuals identified above
- ▣ KC area residents simply desiring more control over their healthcare (general population)

Brainzooming

The Google Fiber Connection

Remote Diagnostics & Monitoring

Some telemedicine capabilities already exist today, but are limited to certain regions/geographies, physicians/healthcare systems and specific/less complicated medical needs.

Can Google Fiber enable transmittal more data and video, faster or in real time, thereby creating a higher level of comfort with the technology & outcomes among providers and patients?

BENEFITS FOR KANSAS CITY AREA:

- For those who are chronically or seriously ill, reduces number of office visits when treatment or reactions require follow ups/ consults.
- For those who have limited access to transportation or homebound, access to a broader range of physicians and care.
- Ability to detect health event before they happen.
- Enable ER and EMT early visibility to a situation before the cost of service and/or unnecessary stress on HC system is incurred.
- Less ER wait times in over saturated markets or in peak periods.

Brainzooming



The Google Fiber Connection

Healthcare Team Consultation

More and more specialists are involved in individual care – especially in serious or chronic illnesses – with a less significant “primary provider” role in total care.

Can Google Fiber , more effectively enable providers/resources that may never have worked together to do so in real time?

BENEFITS FOR KANSAS CITY AREA:

- Enables comprehensive care continuum – not just physicians, but therapists, home health providers, rehabilitation centers, social services, mental health, etc.
- For family or designated caregivers, enables real-time access to/involvement in treatment and care-related decisions and directives.
- Improves communications and reduces likelihood of mis-information that can lead to adverse outcomes between providers, patients and family members.

Brainzooming



The Google Fiber Connection

Patient-Centric Electronic Health Records

Growing use of and access to Electronic Medical Records today by healthcare systems and insurance providers but NOT patients.

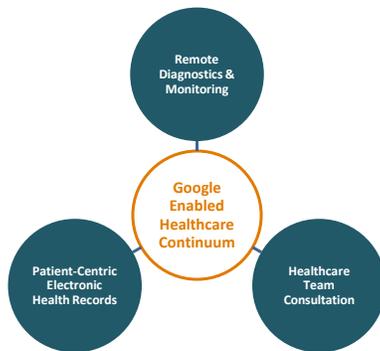
Can Google Fiber enable a patient accessible, technology so the patient can manage content and privacy settings of medical history and records?

BENEFITS FOR KANSAS CITY AREA:

- Allow patient to see where holes in history/content exist and manage to comprehensive information needed.
 - Facebook-like functionality to enable privacy/sharing settings.
 - Ability to input self-monitoring data (i.e., weight, BP, blood sugar levels, etc.)
- Reduces number of and costs associated with redundant procedures.
- Comprehensive medical history allows for earlier detection of potential problems and time from diagnosis to treatment/plan.
- Truly enables patients to become their own health advocates.
- Access for family members helping to manage care of parents, children or other seriously/chronically ill loved ones.
- Utilizes existing assets like The Caves for healthy data center environment.



Economic Development Implications



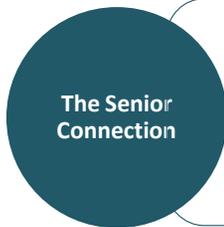
- Making Kansas City a destination for enabling healthcare technology businesses to develop the software and interfaces needed to support the continuum.
- A need for new liaison-like professionals whether at the insurance provider or private company level as well as the technology providers who connect them to enable Remote Diagnostics/Monitoring and Healthcare Team Consultation.
- Creating a centralized data center with opportunity to support Patient Centric EHC needs in communities other than Kansas City. Can Kansas City become the nation's data hub?
- User interface development for Patient Centric EHC non-medical users (consumers).



CONCEPT II: The Senior Connection
Enabling Contribution



The Google Fiber Connection



Social media provides wider visibility and enables conversation, but not full integration with family and community.

Can Google Fiber allow virtual participation in family gatherings, classrooms and/or workplaces to enable seniors to be involved and contribute in more satisfying ways?



Who would benefit most?

- ▣ Seniors
- ▣ Families of seniors
- ▣ Schools (pre-schools, elementary in particular)
- ▣ Non-profits and/or businesses in need of remote support

Brainzooming



I wish I could be a more integral part of my kids/grandkids lives. Technology today let's me see what's going on in their lives, but I still can't really participate.

Sometimes it feels like no one thinks I have much to contribute.

My grandkids have no idea how much I've done in my life!

I've lived a full life and have so much to share but it's hard to find ways to contribute.

"Pain Points"

I'm retired, but the cost of living keeps growing. I've got years of experience on the job, there must be employers who could benefit from my experience/knowledge..

It's easy to feel/get old in senior living communities. I need something to feel like I'm contributing.

Brainzooming



The Senior Connection

BENEFITS FOR KANSAS CITY AREA:

- Create a community that embraces and grows from their senior residents to attract retirees.
- Enable virtual workforce for non-profits and select businesses who have relevant roles for seniors.
- Grow student interest in history, reading and work/life balance through real-world examples and involvement.
- Increase/Improve family together time with virtual visits.
- Enable “chronicle” creation that could be used/accessed in schools, libraries and, of course, for family memories.

Brainzooming



Economic Development Implications



- Centralized needs/resource matching application development (matchmaker.com for senior experience and schools or virtual workforce)
- Video diary application development and centralized access providers
- Virtual visit application development with low-tech/simple user interface
- Senior community/housing innovation and development/expansion
- Leading edge College/University curriculum to advance “aging independently” research and resources

Brainzooming



CONCEPT III: Outside-In Enabling Community Involvement



The Google Fiber Connection

Outside-In

To truly experience attractions like the zoo, symphony, Renaissance Festival, art fair, you have to be there – watching video or reading about it just isn't the same.

Can Google Fiber enable real time access and participation in community events and attractions?



I really miss the places I used to love to visit...I wish I could experience them even though I can't physically get there.

I'm limited to community activities that I can access online or captured in television programming. I miss being a real part of the community.

"Pain Points"

By the time I get transportation to and from an event plus the help I need to navigate it, it gets really expensive.

I'd like to be more involved in community events, but my life is just too busy to attend them all in person.

I want to smell, taste and see it!



Who would benefit?

- ▣ Shut ins / Seniors – residents with limited access to transportation
- ▣ Disabled or Chronically Ill – those who can't or find it difficult to get out and about
- ▣ Caretakers and remote family members of the individuals identified above
- ▣ KC-area residents simply desiring more involvement in the community but don't always have the time to or funds to participate in person (general population)
- ▣ KC travel & tourism



Outside-In

BENEFITS FOR KANSAS CITY AREA:

- Increases attendance and revenue at community attraction/events through virtual visits.
- Takes social networking to next level with groups that can virtually experience an event together (build off gaming technology) to tag along with family/friends.
- Experience Innovation: Enable people to truly participate in and navigate an event or venue – see, taste, touch, smell – using robotics and navigation technologies.
- Extend virtualization capabilities to classroom/campus.

Brainzooming



Economic Development Implications



Outside-In

- Innovating a “Virtual Experience” City to enable connectivity for residents
- Stimulate travel and tourism opportunities by enabling non-residents to preview KC attractions to generate interest in visiting
- Leverage KC area engineering community and curriculum to develop “rent a robot” technology
- Build good will among target audience to grow non-profit funding opportunities

Brainzooming



CONCEPT IV: Mobility Management
A Virtual & Physical Transportation Network



The Google Fiber Connection



Not all problems can be solved remotely – each of these audiences have a need for in-person doctors or personal appointments.

Can Google Fiber enable a comprehensive connectivity point for both virtual and physical transport?



Who would benefit?

- ▣ Seniors living independently or in assist living communities
- ▣ Shut ins / Residents with limited access to transportation
- ▣ Residents with complex healthcare needs/ multiple healthcare providers
- ▣ Caretakers / family members for the individuals identified above
- ▣ Community transportation providers

Brainzooming



I don't know my way around the city as well anymore and it seems like my appointments are getting more and more spread out.

By the time I get transportation to and from an event plus the help I need to navigate it, it get's really expensive.

"Pain Points"

If someone knew my schedule and could just show up and take me to my appointments, it would take a lot of stress off me and my family.

I feel like such a burden. I know my family must be tired of being my taxi service, but they insist on taking me to appointments since they want to understand the outcome.

Brainzooming



Mobility Management

BENEFITS FOR KANSAS CITY AREA:

- Transportation innovation opportunity: With no real public transportation system, transportation options are limited to paid services and/or family members.
 - Managing virtual and in person appointments opens the door for a new kind of “Smart” transportation service in Kansas City.
 - Coordinating a Zip car concept and service transportation provision could fill the void and offer an “door-to-door” service business opportunity.
 - Create the “transportation pharmacy” – a system that monitors and provides the transportation you need when you need it.
- With its strong transportation and navigation technology “roots”, Kansas City is a treasure trove of talent and resources to create an integrated virtual & physical transportation prototype.



Economic Development Implications



- Centralized needs/resource matching application
- ZipCar franchise development using Four Square-like application
- Scheduling application development with low-tech/simple user interface
- Transportation infrastructure and dispatch center development



Catalyzing Economic Development in Kansas City



Concept-Driven Opportunities

▣ Own the data, own the opportunity!

- Create a centralized healthcare data hub by leveraging our existing resource (Caves) and data integration technology (Cerner) to build a healthy data repository environment.
- Build the infrastructure and case study to position KC as the resource to support the broader deployment of Google fiber in other communities.

▣ Exploding Kansas City's Healthcare Technology Position

- Create a Facebook-like application to enable patient-centric electronic medical record access and information sharing.
- Develop the in-home interfaces to enable broader adoption of/access to tele-medicine among "non-medical" users.

▣ A Needs-Based (not climate-based) Senior Living Mecca

- For those who want to plan retirement around communities offering a holistic support system for their senior years.
- Keep Seniors living independently longer than in other communities – lower cost of care.
- From the symphony to the zoo to the Renaissance Festival, grow community attraction or event attendance/revenue with "outside-in" concept with virtual experience technology.
- New "transportation" more personalized and comfortable than mass transportation alternatives.



Community Resources/Enablers*



* These relevant KC-area organizations were identified as those that might be resources or enablers for the Health & Mobility ideas generated. They have NOT been exposed to any of the ideas in this document and in no way does this list indicate interest or intent on their part.

Brainzooming



A Participant Perspective

It's Not Just About the Fiber: How Google Can Help Kansas City Seniors Remain Relevant and Continue to Connect in a Digital World, by Paula Holmquist

Intro:

Google has made a very smart decision to have Kansas City be the first metro to get their über-fast, high capacity Google Fiber, which will be 100 times faster than what currently exists. This is great news for KC!

We are a lucky city, but we have also been challenged to come up with uses for all this digital speed and digital storage space.

A Challenge:

How can Google possibly help the senior citizens in Kansas City with their mobility, when so many of them are not “on the grid” or not internet-savvy?

The Idea:

Google, Inc. is in the business of connecting people to relevance. So if we look at them as in this light, we see that “it's not all about the fiber.” Yes, Google Fiber is going to be spectacular. But can we invite Google to go a step further, and provide not only supersonic fiber, but to help us get our seniors feeling connected and relevant again? (Stick with me . . . there's something in it for Google, beyond having this project pay homage to their mission!)

This summary suggests we can create an opportunity for seniors, that includes places for them to go, things for them to participate in and ways to get there . . . all made possible with Google technology and Google, Inc.'s commitment to supporting seniors' connection and relevance.

There are thousands of elderly in the Kansas City who are vibrant and in good health, but who feel isolated, because their families have taken the car keys away! They want to continue to be active and engaged in the community, but public transportation isn't convenient enough and/or taxis are too expensive to get them to places where they want to go. This is not meant to be a personal taxi service, but a service that gets seniors to any number of specific designated places in the metro.

Let's create "Google Connect" . . . a service for seniors, that has three components:

- 1) **Google Transport:** A fleet of white hybrid cars wrapped with huge Google Connect logos, transporting seniors to Google Rooms for Google Elder Gathers.
- 2) **Google Rooms:** The physical places where Google Transport takes seniors, which are located in libraries, YMCA's, Community Centers, designated coffee shops and designated soda fountains. These rooms have large, flat-screen TV's with Skype-type technology, for virtual access to off-site people and places.
- 3) **Google Elder Gathers:** The activities that occur at the Google Rooms. Access to Music Halls, classrooms, forums, or any number of activities enriched when several people are gathered together, and wanting to connect to people or programs in remote locations, near and far.

The logistics of creating this service ran up the word count on my original white paper considerably, so I'll spare the details here. Please see the white paper, for more information. (Google technology/fiber and GPS tracking would be integrated into the transportation component of the process.)

What's In It for Google?

For Google to be interested in this project, they will need to see how they could benefit. Their business models are typically built around ways to handsomely monetize their efforts. Google Connect can't begin to make as much money as Google's existing products or services. But what it could do is make them very visible and present in the physical world. And open the door for them to gain trust and familiarity in front of a market that has been difficult to penetrate . . . the least internet-savvy generation.

Kansas City would, in effect, help Google "branch in" to a wise, knowledgeable segment.

Google, Inc. is a modern marvel, in terms of the growth they've experienced and the money they've made, given the short life of the company. But what many people don't realize is that the byproduct of the services they deliver is staggering valuable in itself. Google has access to an enormous amount of data, which they can aggregate, anonymize and mine to see trends and objectively research what people spend their time looking for or thinking about. It would seem that Google would relish the opportunity to engage with the 65+ population, since "that's where the growth is."

Maybe it isn't such a far fetch to think that Google would be interested in "Google Connect." After all, Google IS in the business of connecting people to relevance.

An Anecdote:

I speak from personal experience when I say that I know how seniors want to stay informed, connected and relevant in the community. My 80-year-old parents would agree with this statement, in spades! They are currently in relatively good health, but each of them has some limitations. My mother has severe scoliosis and osteoarthritis, and deals with chronic pain. My Dad suffers from some memory loss and was diagnosed with lymphocytic leukemia 18 months ago, has gone through six rounds of chemo, and has remained cancer-free since November of 2010. Yet, believe it or not, probably the hardest thing they've had to deal with in the last couple of years was when my sister and I had to take their car keys away!

So these experiences with my parents are the filter through which I sift the conversation about how Google could improve seniors' lives. A great deal of the discussion (in the Medical/Mobility session I attended at Building a Gigabit City: Brainstorming a Google Fiber Roadmap with SMCMC) was directed at alternative ways that Google Fiber could bring resources into the homes and apartments of the elderly. Doctor consultation and collaboration with specialists, visits with friends and family through virtual Skype-type interface, and other ideas, wherein resources and high-tech communication is brought "in" to the seniors.

The best idea, in my opinion, is quite the opposite.

How could Google Fiber get the elderly "out" of their homes and back into the community, where they have so much to contribute?

Wouldn't it be curious if Google were to help get seniors out of the house . . . instead of opting to bring the outside world to them?

Paula Holmquist is a recovering traditional media buyer who recently pulled her head out of the shifting sands and took the plunge into search engine marketing, all the while living life "in the middle" as she tries to help her parents age with grace and nurture her own family and community.

Keys to Building and Supporting the Gigabit City

Questions about what has to happen to build the Gigabit City and what its outcomes will be are asked frequently. We asked participants to speculate on expectations, success factors, and critical outcomes.

Expectations of the Gigabit City

Participants shared what excited them about Google Fiber coming to Kansas City. These responses provide a sense of the range of expectations from across the community for what the Gigabit City will be like.

Impact Area	Points of Excitement
Access	<ul style="list-style-type: none">• Urban availability.• Connectivity• Being omni-present• Global connections
Business Impact	<ul style="list-style-type: none">• Job productivity.• Business growth and job creation• Competitive business advantage• Innovation• Efficiencies• Economies of scale• More telecommuting (and less pollution)
Community	<ul style="list-style-type: none">• Opportunities for the arts community• Pride/unity in Kansas City• Residential growth• Could be one of the great cities in the USA• Differentiation of the city in national discussions• An enhanced national perception for Kansas City• Initiative to improve the city• Connecting with people• Better quality for city services• Crossing the digital divide• Democratization of internet access/info• Telepresence for business, families• Surrounded by innovation

Impact Area	Points of Excitement
Economic Development	<ul style="list-style-type: none">• Better able to attract national and international events and conventions• Attracting human capital from outside the area• Being a test bed for new ideas• Boosting small businesses• Brand new tech-based businesses• Making KC a technology hub• New jobs for people with disabilities• Overall economic impact - Silicon Prairie• Hiring and keeping local talent• More internet businesses/Silicon Prairie• Trying/beta testing new technology and infrastructure
Education	<ul style="list-style-type: none">• Education/tech student boom• Education - using schools more efficiently• Equalizing student opportunities• Giving learning access to more students• New opportunities for the area's children• Enhanced educational opportunities• Collaboration of knowledge
Healthcare	<ul style="list-style-type: none">• Telemedicine
What You Can Do	<ul style="list-style-type: none">• Better streaming of videos.• Video communication

Success Factors for the Gigabit City

Area	Critical Success Factor
Access and Use	<ul style="list-style-type: none">• Strong consumer adoption of the technology• Affordable service for average consumers• Consumer education on the technology and its benefits for all groups• Improvement in end point devices• An open market environment• Internet-connected delivered in all homes/public spaces• Wider reach of the capability in the metropolitan area• Offer attractive pricing to consumers while still making it a feasible business model• Computers and mobile devices so people can use the capability• Wireless to giga-hubs
Business Environment	<ul style="list-style-type: none">• Help existing companies implement and use the capability thoroughly• A startup and innovation culture in the metro area• Spurring business growth and leading to job creation• Local industry adoption - large corporations use it at a reasonable price• Applications that take full advantage of the service• Publicize new private uses of the capability
Community	<ul style="list-style-type: none">• Collaboration across the metropolitan area• Transparency and sharing of best practices• Open-minded attitudes• Policy changes• Creating an ongoing buzz about Google Fiber
Education and Training	<ul style="list-style-type: none">• Education and gigabit literacy among citizens• Raising the overall educational level of our local students and work force• Long-term commitment to training and support• Clear demonstrations of the capability
Resources and Infrastructure	<ul style="list-style-type: none">• Investment dollars• Sufficient supporting infrastructure - both technology and people

Keys to Developing and Enticing Kansas City Talent

One factor which received considerable attention from the group is developing current and attractive new technology and creative talent who can take great advantage of Google Fiber. Participants offered the following ideas:

Impact Area	Keys to Developing and Enticing Talent
Access	<ul style="list-style-type: none">• Prioritize fiber in places where investor are (Silicon Valley)• Municipal wi-fi• Cost of Google Fiber service? If inexpensive, that will entice people
Advantages	<ul style="list-style-type: none">• Cost of living (plus other incentives)• Emphasize the multicultural and big city feel• Marketing medical and biotech development that we currently have• Small with big city amenities• Market the city as a tech center
Economic Development	<ul style="list-style-type: none">• Foster a startup environment• Create interesting jobs• Develop more local talent• Fiber is the catalyst for new tech development• Create demand for new creative talent
Lifestyle	<ul style="list-style-type: none">• Arts, entertainment, fun• Singles scene - more for singles, not just families• Build great urban neighborhood that appeals to creatives• An improved urban core/more lively downtown• Stronger support for biking/walking
Incentives	<ul style="list-style-type: none">• Earnings tax waiver for new tech and creative jobs• Pay a bounty for every tech job brought to KC• Relocation package• Incentives for data center development• More business incubators• Tax incentives• No earnings tax• Specifically for enticing tech talent<ul style="list-style-type: none">○ Housing perks○ Direct access for free/reduced cost for business resources

Impact Area

Keys to Developing and Enticing Talent

Marketing Kansas City

- Stop being so humble
- Put Kansas City on display
- Tell our story better
- Show off our accomplishments
- Make our city more exciting through promoting the benefits here
- Promoting awareness of KC usage
- Communicate the benefits
- Demonstrate proven successes - to draw others here
- Marketing "Silicon Prairie" success stories
- Quality of living + tech opportunities = growth/sustainability
- Go to colleges and recruit talent to Kansas City
- Showcasing opportunities

Public Infrastructure

- Public transportation
- Better schools
- Air transportation is centralized
- Increase transportation options - advertise lack to traffic
- Invest in amenities/transit

Keys to Job Creation

Among the expected economic impacts from Google Fiber is job creation throughout the community. Building the Gigabit City participants also addressed what they expected would be necessary for job creation to result from the Google Fiber implementation.

Impact Area	Keys to Job Creation in the Gigabit City
Access	<ul style="list-style-type: none">• The capability needs to be easily accessible everywhere• There needs to be a reasonable price point for the service• Access to entrepreneurs and business owners• Access is better/faster so companies here can compete• Democratized access• Accessible technology (i.e., hardware)• Connectivity to homes• Distributed/virtualization technology• Function well as a product
Business Advantages in Kansas City	<ul style="list-style-type: none">• Increase productivity by leveraging the bandwidth• Increase productivity by decreasing commute times• Increase productivity by decreasing stress with increased work done• Increase focus/decrease distractions of "slow internet = what was I doing again?"• Local business solutions that leverage the impact of the increased bandwidth• Fiber must create opportunities that do not exist elsewhere• Tax credits (adoption)• Fast execution• Exclusivity of the capability• Government support
Delivering Impact to Kansas City	<ul style="list-style-type: none">• It has to improve the quality of life• It has to make the city attractive enough so businesses and people will want to move here• It has to enable diversity and support for multiple languages• It has to lower the cost of doing business

Impact Area	Keys to Job Creation in the Gigabit City
Economic Development	<ul style="list-style-type: none">• New companies more to the area• Business growth and development to create jobs• Investment in gigabit business ideas• Angel/Venture Capital funds• Leverage for growth of current business• Innovation/new business• IT/IS reinvestment• Local product/service provisioning• Create the "next internet"
Education	<ul style="list-style-type: none">• School system will need improvement• Vocational training• Good education• Richer job training for existing and unemployed job seekers• Certification (i.e. Google Fiber certified technicians)
Getting the Community Ready	<ul style="list-style-type: none">• Educate workforce on what Google Fibers means to them• Technical understanding of opportunity• Foster entrepreneur community growth
Marketing Kansas City	<ul style="list-style-type: none">• Global advertising to let the world know about the capability and the value of coming to Kansas City• Building awareness and advocacy• Geographic attraction to non-large businesses• More attractive for companies to move here for fiber (which creates jobs)• Good marketing (locally and nationally)• Getting people to move here• Prestige
Specific Talent/Capability Needs	<ul style="list-style-type: none">• Needs to improve research capabilities• Need for web developers• Data center development• More data = more server administrators
Worklife	<ul style="list-style-type: none">• Real time sharing about job sharing• Ability to work remotely/globally• Dramatically change the work industry• Incentivize and encourage a telecommuting culture

The Benefits and Challenges of Creating the Gigabit City in Kansas City

Kansas City was obviously selected to be the first location for Google Fiber because of a whole variety of incredible benefits. Participants provided input on some of the things that give the community its distinct character which will never change, irrespective of the Google Fiber introduction. While most of the characteristics identified are positives, the list includes some challenges to be addressed so they don't become stumbling blocks.

Impact Area	Things About Kansas City that Will Never Change
Community	<ul style="list-style-type: none">• Community pride• Commitment to the city• Diversity of people
Geography and Transportation	<ul style="list-style-type: none">• Geographic location• Cheap flights to the coasts
Lifestyle	<ul style="list-style-type: none">• Nice people• Quality of life - balance
Kansas City Icons	<ul style="list-style-type: none">• BBQ• Plaza architecture• Jazz• Steaks• World War I Museum
Popular Activities	<ul style="list-style-type: none">• Tailgaiting at Arrowhead• Theatre and arts community
Challenges within Kansas City	<ul style="list-style-type: none">• Skepticism• Inferiority complex• Sprawling nature of the community - Suburbanism• Racial boundaries and clashes• Cultural barriers

Getting Started in the Neighborhoods

Social Media Club of Kansas City is introducing its next Google Fiber effort called "Give Us a Gig" to help neighborhoods get involved in creating excitement and interest in Google Fiber as it rolls out.

As a result, we asked participants to share ideas for how neighborhoods throughout the community might get involved in the implementation efforts and show interest in being among the first Google Fiber neighborhoods.

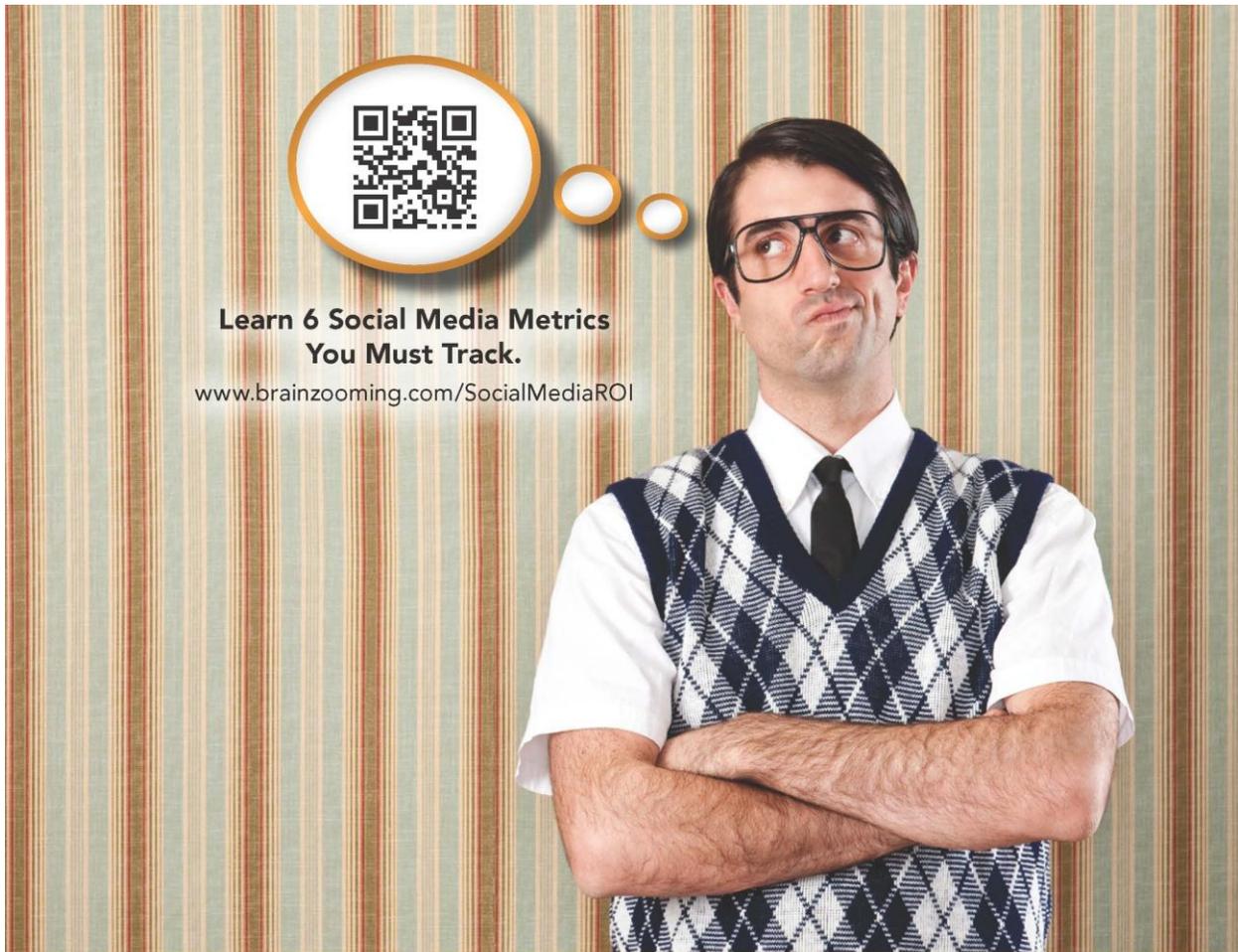
Showing Neighborhood Interest in Google Fiber

Impact Area	Ways a Neighborhood Could Show Their Interest in Being the First Google Fiber Neighborhood
Awareness	<ul style="list-style-type: none">• Put up signs saying "We support Google"• Promote the neighborhoods interest in new technology
Education	<ul style="list-style-type: none">• Train residents and local businesses in the value and how to exploit the capability
Messaging	<ul style="list-style-type: none">• Make a video with neighbors talking about their interest• Fiber will benefit each family
Neighborhood Outreach	<ul style="list-style-type: none">• Do door-to-door info groups• Solicit interest from local restaurants, cafes, and coffee shops• Create a neighborhood association• Talk to neighbors• Show the most interest through a neighborhood circle collaboration• Hold a block party• Hold a neighborhood wifi day• Undertake a neighborhood-wide brick and mortar project: crime reduction, energy efficiency, community center• Use Google+ hangouts to host neighborhood meetings• Hold a neighborhood forum to generate ideas and publicize the opportunity• Hold a campaign in conjunction with local schools• Pitch neighborhood programs to leverage the technology• Create a neighborhood incubator - facilitate people working from home

Impact Area	Ways a Neighborhood Could Show Their Interest in Being the First Google Fiber Neighborhood
Online	<ul style="list-style-type: none">• Create a website and social media presence• Create an online campaign - video, eblasts, Facebook/social media• Email/letter campaign• Swarm badges• Make a social networking push• Create a YouTube campaign• Develop a social media profile for the neighborhood and post updates and profiles on how Google• Crate a video to show your interest
Planning and Strategy	<ul style="list-style-type: none">• Hold a neighborhood planning meeting• Hold brainstorming session• Do market research on the neighborhood - demographics, opinions, etc.• Find strategic partners to work with the neighborhood• Demonstrate demand through a survey and building an online community• Demonstrate the need• Develop a growth/marketing strategy from the neighborhood level• Identify and share how the community would benefit• Document and demonstrate the need (i.e. what doesn't work right now?)
Resources	<ul style="list-style-type: none">• Identify funds to buy hardware to use the technology• Hold a fund raiser to provide the necessary technology to schools and nonprofits• Infrastructure/ability
Stunts	<ul style="list-style-type: none">• Change the neighborhood name to “Googlehood”• Get a celebrity spokesperson to make your case• Paint light posts in Google colors• Create public art/signage/sculptures around neighborhood interest• Write a song and do a video
Voice Interest	<ul style="list-style-type: none">• Petition the city government/lobby city hall/contact the city council• Raise your hand that you want Google Fiber• Submit an application• Ask for the opportunity to be first in your neighborhood

Additional Google Fiber Information:

- **Building the Gigabit City: Brainzooming a Google Fiber Roadmap (Free Download)** brainzooming.com/googlefiberkc
- **Building the Gigabit City website:** <http://gigabitcity.smckc.com/>
- **Building the Gigabit City press release:**
<http://www.pitchengine.com/thebrainzoominggroup/social-media-leaders-seek-kansas-citys-roadmap-to-gigabit-city/173549/>
- **Brainzooming Content on Google Fiber, including Matt Dunne (Google) video:**
<http://brainzooming.com/category/other-topics/google-fiber/>
- **Gigabit Challenge Contest:** <http://gigabitchallenge.com/>
- **Mayors' Bistate Innovations Team (MBIT) Website:** GoogleConnectsKC.com
- **KC Gig Ideas (Kauffman Foundation):** <http://www.kcgigideas.com/>
- **Broadband Leadership Summit (December 6-8, 2011)**
<http://broadbandleadershipsummit.com/>
- **Google website on Kansas City Google Fiber**
<http://www.google.com/fiber/kansascity/index.html>



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You're out there in social media — *or so you think*. You're on Twitter and Facebook, and have at least four squares a day, but it seems no one's following, liking, or ousting you?

You need The Brainzooming™ Group.

With our innovative strategic approach, **The Brainzooming Group** links your business objectives to six fundamentals for successful social media efforts. What's important to your audiences and your business will drive the opportunities where social media meaningfully contributes to results. *Stop talking to yourself. Have an engaging presence with people who really want to spend time with you! Start with us. Today!*

The Brainzooming™ Group

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