
The foundation for an open source city

By Jason Hibbets

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www.theopensourcecity.com

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For the open source, open government, and
open data communities

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Reviews

Andrew Krzmarzick, Director of Community Engagement, GovLoop

Across the United States—and, indeed, around the world—there is a growing movement of citizens that are taking back their towns and cities. Powered by passion and propelled by innovative technology, “civic geeks” are combining good, old-fashioned in-person gatherings, with web-based tools to champion sustainable change initiatives.

This book shares the personal journey of one such citizen and, at the same time, reveals the collective energy and experience of thousands of ordinary, engaged Americans who are realizing just how powerful they can be when they band together in an open, collaborative way. Packed with personal examples and practical steps, you’ll discover both inspiration and information to launch the movement in your own city.

Guy Martin, Managing Principal Architect, Red Hat

We live in an age of tremendous technological progress, yet most government processes haven’t kept up with the pace of those advances. However, an increasing number of citizens have begun to step up to the plate and work for positive change in government. The success of open source in the commercial space has become their toolbox for change—change that can be realized in government by applying the methodologies that make open source so successful.

Jason Hibbets shares a wealth of knowledge learned from the passionate application of these principles in Raleigh, North Carolina. This book is part strategic, part tactical, and part emotional—a great blend of elements that can help any citizen understand how they can begin to make their own community more transparent, collaborative, and a better place to live.

Jen Wike, Editor and Content Strategist, GoTo Writer

There has never been such a clear and honest example of how open source can extend into a sector outside of software like the information provided in this book. Jason draws from real life experiences to explain the basics of the open source philosophy and the complexities of applying them in order to generate revolutionary changes to better society and our everyday lives through local government.

Here, the regular citizen *and* the dedicated city official have a place to come together and understand each other. There's no doubt that life after reading this book looks like newly laid plans for communication and collaboration between the two on comprehensive issues that take more than one body or group to solve. Our understanding now is that it takes an open, passionate community of doers and makers.

Introduction

Over the last two years, I found an interesting way to blend my passions for open source, my local Raleigh community, and civic participation. It comes in the form of open government. Along the way, I've found a great group of civic-minded geeks who share a similar passion and have stepped up to advocate for a more open government. My mission: to create a better citizen experience.

Today, the citizen experience for many individuals includes, but is not limited to, voting, lobbying, and complaining about "government." In the United States, the "government" includes citizens. For the people, by the people. But many of us let our busy lives and many times, politics, get in the way, distract us, or turn us off.

Think about your own experiences with government. How have you been disappointed? What could be better? How could your interactions be enhanced?

Our experience with government could be so much better. We have ideas on how to improve the communities we live in or fix a part of our government that isn't working correctly or efficiently. But do we have the tools, knowledge, time, information, or access needed to make these improvements?

Improving the citizen experience means that your interactions with government are more participatory and collaborative. And that starts with having a more transparent, open, and inviting government.

This book will explore Raleigh's path to what I call an "open source city" and how the open government movement in Raleigh has accelerated over the last two years with the passing of an open government resolution, two successful CityCamp Raleigh events, and the forming of a Code for America brigade.

First, I will define the elements of an open source city and demonstrate how Raleigh has applied those characteristics. We'll explore the open source culture, government policies, events, and economic development. Then we'll take a look at how open government is applied and some of the things I've learned through my travels.

This book draws on my open government experience and includes articles I've written and interviews conducted for opensource.com—an online publication and community exploring how the principles of the open source development model are applied to disciplines such as business, education, government, health, law, and life.

I've been employed by Red Hat since 2003, gaining ten years of open source experience. I've worked on opensource.com, described as a community service by Red Hat, since the project launched in January 2010. I have many roles at opensource.com including project manager, content curator, community manager, contributor, and lead administrator.

[Opensource.com](http://opensource.com) aspires to publish all of their content under Creative Commons, and there are a number of articles and interviews originally published there that I've incorporated into this book. This book itself would not be possible without Creative Commons—a set of licenses that grant copyright permissions for creative works like this.

The purpose of this book is to tell Raleigh's open source story and inspire others not only to participate, but to run with their ideas and improve our government. I want this story to be a catalyst for more open government, open data, and citizen participation, in Raleigh and beyond.

Chapter 1: Defining an open source city

Before we define the elements of an open source city, it's important to establish a baseline of knowledge. The concepts of open source, open government, and open data are new to many citizens. In order to make our government more transparent, participatory, and collaborative, we'll need to start by exploring these definitions.

What is open source?

Most people are familiar with open source in the software context. The Open Source Initiative (OSI),¹ a non-profit that maintains one definition of open source and a list of approved licenses, says that “open source doesn't just mean access to the source code.”² It then lists the criteria that open source software must adhere to.

Computer programs are generally written in a human-readable format called “source code.” But a computer can't use the source code directly; instead, these instructions have to be converted to a form that the computer understands, typically a sequence of 0s and 1s or binary code. When you purchase a software program like Microsoft Office, Adobe Reader, or Photoshop, what you get on the disk or electronic download is the code in the format a computer understands.

Source code is “open source” when the source code must be made available to anyone who wants to look at it and modify it. This allows programmers and developers the opportunity to review how the program is written and make any desired modifications, repairs, or enhancements.

Alternatively, a computer program where the source code is not made available is called “proprietary” or “closed” source. Programmers and developers are unable to see how the program is written and unable to freely make modifications, repairs, or enhancements. The owner or company who provided the program controls who has access and permission to modify the source.

A development model has formed around how open source software is

¹ <http://opensource.org/>

² <http://opensource.org/docs/osd>

created. Programmers from all over the world started to develop software by publicly providing their source code and collaborating with others who wanted to participate. The Internet made this type of collaboration easier and the open source development model became widely adopted.

For me, open source is more than just software development. It's a philosophy, a culture, and a framework for how to work collaboratively. The elements that have helped to define a successful development model—transparency, collaboration, rapid prototyping, meritocracy, and participation—are being applied to our everyday lives. Throughout the book, I'll refer to this concept as “the open source way.”

One analogy that resonates with people unfamiliar with open source is to compare it to a recipe. When you think about it, a recipe is just a list of ingredients and a set of instructions—in the software world, we call this source code. A recipe becomes open source when it's shared, modified, and improved.

Let's say your friend gives you a chocolate chip cookie recipe (sharing). You try out the recipe and like the cookies. But you *really* like chocolate chips and decide to double the amount of morsels when you make the next batch of cookies (modification). After cooking the new batch, you like the cookies so much that you share your updated recipe with other friends. Now, we have a recipe for double chocolate chip cookies (improvement).

Because the recipe is essentially open source, we are free to modify the source code (ingredients and instructions) to fit our needs and desires. This is why open source software has become so popular. It's the freedom to modify and improve software and give it back so that others can continue to improve it. And this constant improvement is what has led to so many innovations in the software industry and beyond.

The secret ingredient in open source³

Open source has a secret. It has to do with a common characteristic found across successful open source communities that sets them apart from

³ Adapted from 'The secret ingredient in open source,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/business/12/12/secret-ingredient-open-source>.

other types of communities.

For those that are new to open source, understanding the intricacies of how open source communities share, communicate, and govern themselves may take a while to understand. Each community is different, but there are a few commonalities between them that lay the foundation for a successful project. If you're just getting into open source software, be sure to read more about the different tools that organize communities of practice in *The Open Source Way* book.⁴

For those open source veterans out there, I think you'll agree that there is one ingredient in our communities that really makes us tick. It's not a single tool like GitHub⁵ or the way we have conversations on IRC (Internet relay chat) or mailing lists (such as Google groups or Yahoo! groups). It's something that each and every one of us brings to the table every day. The secret ingredient that really makes open source work is passion.

Here are a few examples that highlight my position.

What version of Linux do you use?

This was a simple, yet engaging question we asked on opensource.com, and it is by far the most successful poll on the site to date—with hundreds of votes and numerous comments.

Linux is an open source operating system created by engineers from all over the world from many different companies. It's an alternative to the proprietary operating systems created by Microsoft and Apple. A company, like Red Hat with Red Hat Enterprise Linux, or a community, like Debian with Debian GNU/Linux, gathers various open source computer programs together to create a Linux distribution. There is a very strong global community that creates, supports, and advocates for Linux and there are hundreds of versions of Linux-based operating systems available.⁶

4 <http://www.theopensourceway.org/book/index.html> This online resource is not only a great asset to help build or manage open source communities, it's an example of an open source community itself.

5 GitHub is an online repository and hosting service for hosting software programs.

6 For a chart showing the many, many of Linux distributions and their origin, visit <http://futurist.se/gldt/>.

I asked myself, why was this poll so successful? Why did this question invoke the reaction that it did? And my conclusion is that the Linux community is very passionate. And not only are they passionate, they are also advocates and ambassadors for the Linux project. Members of the open source community are proud of their accomplishments as well as the technology and software they use. It's natural for them to express this passion by telling the world about it.

An open culture fueled by passion

One of my passions is teaching Red Hat culture during Red Hat's new hire orientation. About every two weeks, we have a batch of new hires that join Red Hat and go through a two-day onboarding process. My goal is to share what it's like to work at Red Hat and explain how we collaborate and challenge each other so the best ideas rise to the top.

One of the exercises I do with each group is have them describe what they think of when we talk about Red Hat culture. I ask them to draw inspiration from their experience during the hiring process, including presentations during their orientation and the video highlighting Red Hat culture and current events we watch during my presentation. For the most part, I get very similar answers that include cultural characteristics like collaboration, openness, diversity, fun, and you guessed it, passion!

It's true, that in my time at Red Hat, I've worked with some of the most passionate people. From open source veterans who have lived the culture for years to newbies who are excited about working a different way. They are all eager to work in a collaborative environment where their contributions and ideas matter. And when I see the sparkle in their eyes and hear the passion in their voice, I know they're ready to be a part of an open source culture.

Being a part of something bigger than yourself

As we'll explore in Chapter 6, when I helped form a volunteer civic group in Raleigh, North Carolina, I encountered another group of passionate people. This group of citizen volunteers worked on a plan to deploy an existing application and technology created by Code for America for

Raleigh's Adopt-A-Shelter program at adoptashelter.raleighnc.gov. Code for America is a non-profit group focused on civic innovation that I'll explain more about later. The Adopt-A-Shelter project highlights almost 200 bus shelters that are available for adoption by citizens, businesses, and volunteer organizations in Raleigh.

Our brigade participated in the Code for America Race for Reuse campaign in 2012, however the city of Raleigh hadn't asked us to do this. As citizens, we saw an opportunity to improve our city and implement a technology front-end to an existing program offered by the city. It wasn't just about deploying a software application, it was about making our city and the citizen experience a little bit better, the open source way.

The same can be said for many open source communities. It's not about us as individuals. It's about the impact our contributions are making to create a positive difference in our world.

The secret's out

Businesses and organizations who don't inherently have a passionate community around what they do fail when they try to replicate the success seen in open source communities. Why? Because you can't force people to be passionate. You can't teach or train passion. It comes from the heart. It comes from what motivates people to contribute.

If passion is the secret ingredient to open source, then we've just started to scratch the surface on what we can accomplish. The open source way teaches us to be collaborative, transparent, and participatory. But it doesn't teach us to be passionate. That is what we ourselves bring to our communities of practice. The passion you bring is what makes the community great. And it's that passion that allows us to change the world the open source way.

Later, we'll take a look at how I discovered a passion for my local neighborhood, my Raleigh community, and eventually, the open government and open data movements. But first, let's take a look at open government and open data.

What is open government?

Open government means different things to different people. Is it about transparency, collaboration, or participation? Maybe it's a combination of all three? These characteristics are very familiar to open source advocates because they are essential to any open source community.⁷

Shortly after President Barack Obama took office in 2009, one of the first things the administration did was pass the open government initiative. On whitehouse.gov/open,⁸ President Obama and his administration stated the following:

"My administration is committed to creating an unprecedented level of openness in government. We will work together to ensure the public trust and establish a system of transparency, citizen participation, and collaboration. Openness will strengthen our democracy and promote efficiency and effectiveness in government."

If you consider government as a platform, and add to it the technologies of cloud computing, social media, and many others, enhancing the citizen experience has a bright future. The combination of technologies and collaboration with citizens is often referred to as Gov 2.0.

"Gov 2.0 is about using the new technologies at our disposal, primarily the Internet, to co-design the next era of democracy in collaboration with citizens. It is about a more transparent, accountable, engaged, participatory and responsive government approach to serving the needs of citizens."—Pia Waugh, a policy advisor and community leader for open government⁹

For me, open government is about citizen participation and creating a two-way dialog between citizens and government. True open government will occur when our government defaults to openness and citizens will have full participation in government decision-making. The ultimate goal is to have business, government, and citizens collaborate to improve our quality of life and create a better citizen experience. The open source way teaches us that rapid prototyping and incremental improvement will

⁷ <http://opensource.com/government/12/11/defining-open-government>

⁸ <http://www.whitehouse.gov/open>

⁹ <http://opensource.com/government/11/11/open-government-what-it-really>

allow the best ideas to rise to the top.

What is open data?

One of the best resources available to understand open data is the Open Data Handbook¹⁰ created by the Open Knowledge Foundation.¹¹ Here's how they define open data:

Open data is data that can be freely used, reused, and redistributed by anyone—subject only, at most, to the requirement to attribute and sharelike.

The full Open Definition¹² gives precise details as to what this means. To summarize the most important:

- **Availability and Access:** the data must be available as a whole and at no more than a reasonable reproduction cost, preferably by downloading over the Internet. The data must also be available in a convenient and modifiable form.
- **Reuse and Redistribution:** the data must be provided under terms that permit reuse and redistribution including the intermixing with other datasets.
- **Universal Participation:** everyone must be able to use, reuse, and redistribute—there should be no discrimination against fields of endeavor or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g. only in education), are not allowed.

If you're wondering why it is so important to be clear about what open means and why this definition is used, there's a simple answer: interoperability.

Interoperability denotes the ability of diverse systems and organizations to work together (inter-operate). In this case, it is

¹⁰ <http://opendatahandbook.org>

¹¹ <http://okfn.org/>

¹² <http://opendefinition.org/okd/>

the ability to inter-operate—or intermix—different datasets.

Interoperability is important because it allows for different components to work together. This ability to ‘plug together’ components is essential to building large, complex systems. Without interoperability this becomes near impossible—as evidenced in the most famous myth of the Tower of Babel where the inability to communicate (to inter-operate) resulted in the complete breakdown of the tower-building effort.¹³

Probably the biggest misnomer about open data is that it simply needs to be made available and accessible. Putting a PDF of information on a website is not open data. But extracting data from PDFs and collecting it into helpful data is an effort towards open data. The DocHive project was created by a group of local journalists here in Raleigh to do just that.¹⁴ In Chapter 3, we’ll see why adding visualization to open data is also an important component.

As you can see from the Open Knowledge Foundation definition, interoperability and open standards are essential to having true open data. Throughout the book, we’ll see how open data plays an important role in economic development efforts and how it can be an enabler for civic innovation.

The beginning of my citizen involvement

I’ve lived in Raleigh since 1996 when I attended North Carolina State University (NC State) to study Electrical Engineering. As a student living on campus, I was pretty oblivious to city government at the time. My closest interaction with government was my first time voting in the 1996 election. It wouldn’t be until after I graduated in 2000 that I would discover my passion for citizen involvement.

Paving the future

Several projects shaped my views and passion for citizen involvement.

¹³ Definition of “open data” from the Open Data Handbook, (c) 2010-2012, Open Knowledge Foundation. Used under a Creative Commons Attribution (Unported) v3.0 license, available at <http://opendatahandbook.org/en/what-is-open-data/index.html>.

¹⁴ Journalist from Raleigh Public Record creates open source solution to extract data from PDFs <http://opensource.com/business/13/2/open-source-app-for-journalists>

The first was a road project in my neighborhood. Shortly after my wife and I bought our first home, I was inspired to get a nearby road paved. A portion of Lineberry Drive was paved on one side and was gravel on the other for one-eighth of a mile, then completely gravel for the next mile. This road connected our neighborhood to a major thoroughfare, so I was determined to learn what needed to be done to accomplish this project and get rid of the gravel.

Safety was a major concern. Where the road was half paved and half gravel, motorists would take to the paved portion to avoid driving on the gravel. I witnessed many near collisions.

Over the course of the project, I met almost all the neighbors that lived on my street and in the surrounding area. I created an online petition, used a web log to document my work (this was before blogs were popular), and gathered support from the community. I worked with the North Carolina Department of Transportation (NCDOT), the City of Raleigh Public Works, and the property owners along the affected area.

One complication was ownership. Like many streets in Raleigh, it is a city road but state-maintained. I learned a lot about right-of-way acquisition and the NCDOT budget and prioritization process. More importantly, I learned how to work in a positive way with government agencies and that projects of this caliber require patience to accommodate the longer planning cycles agencies require.

During the course of the project, there was an opportunity to lower the speed limit on my street from 35 mph to 25 mph. I learned about the petition process, gathered the number of signatures needed, and got the speed limit reduced. This was a small victory during the course of the project and a big step towards improving the safety on my street. During big projects like this, it's important to have small wins to stay motivated.

1,317 days after I started the project, NCDOT crews were on the street paving the gravel road. Projects of this magnitude take time and perseverance. The dedication needed to see it through definitely tested my skills and patience. But, I enjoyed the experience and the ability to improve my community so much that I stuck with the whole 'citizen participation thing' and began down the path of civic leadership.

Starting a neighborhood watch program

Our neighborhood watch was another program that shaped my citizen involvement. This was one of the first ways I applied the open source philosophy to a non-software project.

Our group, the Pleasant Ridge & Ramsgate Community Watch,¹⁵ had our official start in March of 2003. Two neighbors and I co-founded the group and developed it into a non-profit organization focused on safety, awareness, and property value, helping to form a unified community.

For any crime prevention group, attendance and involvement spike when crimes occur and decline when things are going well. Our group was no different, but we borrowed a page from the open source playbook that involved community building—this was the difference between just another community watch and a passionate, consistent group.

Other neighborhood leaders and I used traditional community building methods such as going door-to-door to foster participation, but we also blended it with technology so we would have a two-way communication platform with members of the organization. We were transparent with our meeting agenda and notes. We posted meeting notes to our website and shared them on the mailing list before they were finalized, allowing members to improve the notes and add to them. All of this work helped build a community of trust.

Over the years, we saw peaks and valleys of participation, but consistently had new neighbors attend our quarterly meetings. Our other events grew in attendance. One strategy that worked for us was to have a variety of ways to bring our community together beyond meetings. We organized street clean-ups, watermelon festivals, a holiday cookie exchange, and community yard sales. We had some neighbors that never attended a meeting, but would participate in other events. This community building strategy was the key to our success.

Using an open source approach to build a neighborhood watch program proved to be a natural way for me to extend my knowledge of open

¹⁵ <http://pr-watch.org/>

source and apply it outside of software. At the time, I wasn't thinking about how open source could make my neighborhood better. Now that I've had time to look back on its effect, I can see the open source philosophy was a major influence that led to the success of establishing our organization.

Becoming an expert citizen

While helping build the neighborhood watch program and over the course of the Lineberry Drive project, I found a variety of ways to enhance my citizenship. I completed two programs that gave me core knowledge of local and state government.

In Spring 2005, I attended and completed the Raleigh Neighborhood College.¹⁶ It's a free program offered by the Community Services Department where participants interact with city officials and review a variety of tools and procedures to become involved in neighborhood and community organizations. By the time I finished the program, I had a deep understanding of different city departments and county operations. I also established contacts with key department heads that would later help with future community projects.

In May 2007, I graduated from Leadership North Carolina.¹⁷ It's a six month program that brings 50 leaders from the public, private, and non-profit sectors from across the state of North Carolina to learn about issues facing North Carolina. The program focuses on five areas: government, education, health and human services, environment, and economic development. By the end of the five sessions, I began to realize how complex state government is and how each of these areas are interrelated.

My Leadership North Carolina experience was truly unique. I met a variety of people in my class that I still have connections with. Some ran for elected positions, others now work for state government, and folks like me have returned to the private sector with instrumental knowledge and a vast network of engaged civic peers. The topics we covered were high quality, thought-provoking, and represented both challenges and opportunities the state of North Carolina is facing and will face in the

¹⁶ www.raleighnc.gov/neighbors/content/CommServices/Articles/NeighborhoodCollege.html

¹⁷ <http://leadershipnc.org/>

future.

In 2009, I lead a group of volunteers to review Raleigh's 2030 Comprehensive Plan. The comprehensive plan is a long-range policy document that establishes a vision for the city of Raleigh, provides policy guidance for growth and development, and contains action items directed to implement the vision.¹⁸ This was a great opportunity for me to apply the knowledge I gained in Raleigh Neighborhood College and Leadership North Carolina to something meaningful.

We established committees on different topics such as transportation, environment, and parks and recreation. Over the course of the public comment period, the group of volunteers submitted 53 recommendations on the land-use map as well as over 100 comments on the plan for our district in southwest Raleigh.

One way the city was gathering feedback was through a special portal powered by Limehouse Software. While the software itself wasn't open source, the process used open source elements. Citizens and planning professionals could submit comments on each section of the comprehensive plan. The city staff responded to each comment and made their responses public. This transparency was an early step towards open government for the City of Raleigh.

Getting involved in my Citizens Advisory Council

One of the most important organizations I became involved with over the last few years has been my local Citizens Advisory Council (CAC). Engaging with this group and finding like-minded people was a catalyst to my future involvement with the broader community, beyond my street. During the Lineberry Drive paving project, I started attending the monthly Southwest CAC meetings.

Citizens Advisory Councils act as a liaison between citizens and city government. CACs are the only advisory boards not appointed by the Raleigh City Council. Leaders are voted on by the members, as indicated

¹⁸ www.raleighnc.gov/business/content/PlanLongRange/Articles/2030ComprehensivePlan.html

in their by-laws. When I first got involved, there were 18 CACs around the city. It has since grown to 19 CACs and we can expect this number to increase, as the population of Wake County is set to double by 2030.¹⁹

In April of 2009, I took the reins as chair of the Southwest CAC. I did three things when I started. First, I was transparent with the group that I would only lead them for two years. Second, I set some achievable goals for the group that we could accomplish together. Third, I did a lot of listening and asked plenty for questions before making any changes to how the group was run.

Like my other involvements, I had a great experience leading the group. We achieved the goals we set and I made small, incremental changes that advanced the group in a new direction. Two things happened during my leadership tenure that refocused my passion and lead me to new interests.

First, I discovered the open government movement. This seems like a natural fit for a group like the CAC, but it was missing the technology component—which I'm passionate about. It's a shame that there isn't more technology interwoven into the CAC system. I tried to sprinkle in some technology while I was leading my CAC, but it wasn't supported like I had hoped.

Second, other interests and family obligations prevented me from dedicating the time needed to effectively lead the group towards the vision I had. But, I was able to successfully transition the leadership duties to other dedicated citizens, and I still regularly attend and participate in my CAC.

Raleigh has a unique benefit in citizen participation because of the CAC system. Each CAC operates independently, they are non-partisan, and they focus on issues important to their geographic area. The leadership of each CAC comes together forming the Raleigh Citizen Advisory Council (RCAC). Over the last four decades, the CACs have proven to be a keystone to citizen engagement in Raleigh.

¹⁹ <http://www.capitalareafriendsoftransit.org/files/SpeakersBureauPPT3Dec2011.pdf>

Blazing a trail for open data

Over the course of my community involvement, I would frequently attend city council meetings. At a City of Raleigh budget hearing in June 2005, I made a unique request that caught the attention of a few officials.

I asked for funding and resources to make the computer statistics system (COMPSTAT) used by the Raleigh Police Department for crime analysis to become a viable, real-time crime statistic tool for Raleigh citizens. I referenced a site I found called chicagocrime.org. The Chicago site showed crime data layered on Google maps. I thought Raleigh could do something similar.

In the following weeks, I met with representatives from the Raleigh Police Department to provide additional details about the idea. While I didn't provide technical guidance, I was passionate about providing user feedback and citizen expectations. A few months later, Raleigh launched its first version of public crime maps.

What I didn't realize at the time was that this was essentially an open data request. Before I knew about open government and open data, I was already blazing the trail for Raleigh to be an open source city.

What makes a city open source?²⁰

What qualities make a city "open source?" Is it technology, government policies, or innovations happening from the businesses community? Those are key characteristics. But really, it starts with the mindset of the people. It's taking the philosophy of open source and applying it to a culture of participation.

In January 2012, Red Hat, the world's leading provider of open source solutions and where I work, made an announcement to keep its global headquarters in Raleigh. With that news, the City of Raleigh appears poised to "establish a growing ecosystem of partners and providers around the open source leader and to bolster Raleigh's reputation as a

²⁰ Adapted from 'What makes a city open source?', (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/1/what-makes-city-open-source>.

leading open source community.”²¹

Of course, Raleigh isn't the only city on the open source bandwagon. Portland, Oregon, Montreal, Quebec, Canada, and others have been recognized for their strong open source communities. Montreal appears focused on becoming a hub for open source startup companies, whereas Portland is best known for open government, open data policies, and its support of OSCON (O'Reilly Open Source Conference)—one of the largest open source conferences in the world. What does it take for a city to be able to consider itself truly open source?

The City of Raleigh is prioritizing collaboration, transparency, and openness. Raleigh Mayor Nancy McFarlane said, "Open source is a philosophy that has had a widespread impact both in creating software and in creating culture. Collaboration, transparency, and openness represent the future of our business community—helping to foster a climate for innovation and business growth."

Creating an ecosystem that promotes transparency, participation, and collaboration in government goes beyond economic development and innovation. What is happening in Raleigh gets to the heart of what being an open source city is really about: community.

It's the citizen community in Raleigh that is working side-by-side with city officials to host open government conferences, deploy open source applications, and create policies that foster more openness. It's a partnership between citizens, elected officials, city staff, and businesses. And we'll explore a variety of stories that highlight these partnerships that are building the foundation for the world's first open source city.

The elements of an open source city

Now that we have a good understanding of open source, open government, and open data, let's take a look at how we can apply those concepts to a living, breathing city. Citizens probably have their most meaningful government interactions with their local municipality. It's also the form of government that impacts citizens the most, whether they

²¹ www.raleighnc.gov/news/content/CorNews/Articles/RedHatGlobalHeadquarters.html

realize it or not.

An open source city is a blend of open culture, open government policies, and economic development. I derived these characteristics based on my experiences. These characteristics can be applied to any city applying open source principles to their culture. Let's take a look at these characteristics in more detail.

Five characteristics of an open source city

1. Fostering a culture of citizen participation
2. Having an effective open government policy
3. Having an effective open data initiative
4. Promoting open source user groups and conferences
5. Being a hub for innovation and open source businesses

Probably one of the most difficult components of an open source city is to foster a culture of citizen participation. Governments try a variety of tactics from public meetings to online forums, but if citizens aren't engaged or don't care, then that outreach and collaboration falls flat on its face. Having citizen champions around certain causes can really help boost citizen participation and engagement.

Policy is another key component of an open source city. I've separated the open government policy from the open data initiative because they have different impacts and implications. These policies can go hand-in-hand, but sometimes, governments will start with one policy and then as they feel more comfortable with the concepts of open source and open government, the other policy will follow. Later in Chapter 3, we'll take a look at the blueprint used to pass an open government resolution for the City of Raleigh.

Participation comes in another form with user groups and conferences—like-minded people gathering around their passions. Just go to meetup.com and you'll discover a variety of groups gathering on just as many topics. User conferences, or "cons," gather different open source communities. Hosting these conferences and supporting user groups will boost your open source city credibility.

Finally, having an economic development strategy that includes open source companies can help foster innovation and create jobs. More and more cities are also seeing the advantages of having an open data policy tied to their startup community. Cities that can combine their open data policy with their economic development strategy can give a real boost to startups and other businesses. Being a hub for open source companies and a catalyst for open source startups can have a positive impact on the city's bottom line. More importantly, this feeds back in to culture and participation.

Throughout the rest of the book, we'll take a look at how these five principles are being actively applied in Raleigh, North Carolina and I'll incorporate other experiences from my open government adventures.

Chapter 2: Citizen participation and culture

In this chapter, we'll explore the culture of citizen participation in two parts. First, we'll look at how Raleigh started its first CityCamp event. Then, we'll take a deep dive into the culture of Raleigh and some of the activities that citizens are driving to create this participatory culture.

Part 1: CityCamp—The beginning

The open government movement in Raleigh started to accelerate in early 2011. I had the pleasure of doing a sit-down interview with then Raleigh mayor Charles Meeker. We talked about how Raleigh could be an open source city and explored a few ideas around open government. Here is the interview from February 2011 that started it all.

Raleigh, NC—The world's first open source city²²

I started pondering what qualities would define an open source city in late 2010 when my friend Tom Rabon planted the idea in my head. I was curious how the city I live in could attract other open source companies and be the world's hub for open source and a leader in open government. How could Raleigh be the open source capital of the world, similar to what Silicon Valley is to technology and Paris is to romance?

I think the answer can be found in both the government and the people. First, our government has to be willing to embrace the open source way of doing things. It needs to be transparent in its handling of business and foster citizen participation. Citizens need to be willing to participate and contribute their time and knowledge. Both need to embrace rapid prototyping to explore new ideas and innovative solutions.

But what sets Raleigh apart from other places? What makes Raleigh ready to be an open source city over New York, San Francisco, London,

²² Adapted from 'Raleigh, NC—the world's first open source city,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/2/raleigh-nc-worlds-first-open-source-city>.

Paris, Beijing? I sat down with Mayor Meeker to explore what makes a city open source.

Meeker was elected in 2001, served as mayor for ten years, and during that time, grew accustomed to the open source way. He did this primarily by learning about Red Hat and the open source development model. As an attorney, it's no surprise that Meeker understands the benefits of collaboration and shared knowledge. Let's find out why the City of Raleigh is ready to stake the claim as the world's first open source city.

What one big opportunity, outside of technology, has the best chance of being solved the open source way (i.e., through collaboration, transparency, sharing, meritocracy, rapid prototyping, community, etc.)?

The use of more energy efficient lighting is one area the City of Raleigh has focused on and where we are seeing returns. We are actively promoting and sharing our experiences with other municipalities, including testing how much electricity is being used and the quality of light being produced. Sharing this information is a big part of our experience.

The City of Raleigh has over 40 LED installations with an average savings of \$200k/year on electricity costs. The payback is typically 3-5 years (considering capital costs). It's a great option for remote parking. You can easily install a few solar panels and not have to add new lines and infrastructure. The possibility for cities around the world to adopt energy efficient lighting is a great opportunity—the City of Raleigh wants to be a part of that story and to be known as an early adopter. Spreading the word on LED lighting with the help of our partner, Cree, is important to us.

What are your thoughts on open government or gov 2.0, and what can the city of Raleigh do to have a more open and transparent government with its citizens?

First, all of our meetings are open to the public, with very few exceptions. The real challenge is to take advantage of the expertise that our citizens have to offer. There is a lot of great talent out there that can help solve real problems for the city.

One way is through new boards, like the new rail board we established, and how their advice and recommendations are handled by the city. Issues around stormwater and utility fees have allowed us to tap into the expertise of our citizens to lead to better solutions.

Rail is an area that will be ongoing for the next 3-4 years. We have many experienced individuals out there that are willing to share their knowledge and apply what they know to help formulate future decisions on rail.

Having the public see what we're doing and provide the right recommendations is an asset that is underutilized, but we have had success, such as when the stormwater management board made recommendations on how to better manage flooding. The City Council was able to use the expertise from the board to make better policies around stormwater management.

What qualities make a city open source?

Three things come to mind:

- Willingness to share
- Willingness to receive information
- The right attitude to be innovative, creative, and try new things

Citizens need to be willing to adapt for the future. Open source is a strategy we are using to move forward.

Why is Raleigh primed to be the world's first open source city?

Our citizens are ready for Raleigh to move forward and be more open source focused. The technology is successful. Raleigh is ready to be the worldwide hub for open source.

The advantage Raleigh has is around growth and jobs. We'd like to see the convention center host more open source focused conferences. We'd love to see a bunch of smaller Red Hat's, startup companies, and established companies, come to the area because we embrace open

source.

Partners are also a big part of the answer. The Convention Center, Visitor's Bureau, Chamber of Commerce, and other partners need to embrace open source and highlight it as part of our economic development strategy.

How do you use the open source way in your everyday life?

In the law firm I work at, I try to provide information to younger attorneys. Sort of a sharing of the trade secrets to help them succeed faster. And quite frankly, one of the hardest things for any person in public office to do is to listen. I've found that listening is 70-80% of the job. You have to fully understand what is going on in order to make an informed decision.

A CityCamp was born

Shortly after the above article exploring how Raleigh could be the open source hub of the world was published, the idea of organizing an open government-focused unconference in Raleigh was born on Twitter. An unconference is a participant-driven event where organizers plan the time, place, and other logistics, while the participants determine the agenda. Typically, attendees show up prepared not only to learn, but to share their knowledge.

A "CityCamp" is an international unconference series that brings together local government officials, municipal employees, experts, programmers, designers, citizens, and journalists to share perspectives and insights about their city. After a few tweets between myself (@jhibbets), CityCamp co-founder, Kevin Curry (@kmc Curry), Raleigh City Councilor, Bonner Gaylord (@bonnergaylord), and GovLoop.com (@govloop) in early March 2011, Councilor Gaylord and I were committed to organizing a CityCamp in Raleigh.

Gaylord is an elected City Councilor in Raleigh, but he was participating in CityCamp Raleigh because of his love of technology and desire to make our lives as citizens better. He and I knew that the burden was too much for one person to lead on their own, so we decided to co-chair the

planning committee together.

Eventually we defined CityCamp Raleigh as three days of talks, workshops, and hands-on problem solving, to reimagine the way the web, applications, technology, and participation will shape the future of our city.

Before going into the details of CityCamp Raleigh, our local version of this international series, it's important to take a step back and understand its origins. CityCamp co-founder, Kevin Curry, wrote the following article about how CityCamp got its start.

How CityCamp became an open source brand²³

CityCamp is an international unconference series and online community dedicated to innovation for municipal governments and community organizations. It didn't start out that way. CityCamp started as a one-off event, literally from a tweet. That event turned out to be a success beyond expectations. People came from all over the U.S., Canada, and the United Kingdom. For two days at the University of Illinois, Chicago Innovation Center, more than a hundred people worked through this fledgling idea of using the web as a platform for local government and community action. As it turned out, people had been practicing local "Gov 2.0" for years, but it seemed like little to nothing connected the community of practice that would soon form.

After the first CityCamp was over, there were scarce intentions of doing anything more. I had to get back to my company, Bridgeborn, and CityCamp co-founder, Jennifer Pahlka, was just about to launch Code for America. We encouraged participants to copy and learn from our event, just as we had done from others, and take CityCamp back to where they lived. In Washington, D.C., organizers did just that. D.C. has a vibrant network of social entrepreneurs, civic hacktivists, and grass roots organizers who know how to do unconferences. In fact, two D.C. events directly inspired and influenced CityCamp: TransparencyCamp and Government 2.0 Camp. But at the time, CityCamp D.C. was the only other event after the inaugural.

²³ Originally posted as "How CityCamp became an open source brand," ©2011 Kevin Curry, published under a Creative Commons Attribution ShareAlike 3.0 Unported license available at <http://opensource.com/government/11/5/how-citycamp-became-open-source-brand>.

Meanwhile, the online community of CityCamp thrived. The *#citycamp* hashtag was being used to link tweets, photographs, and blog posts to this propagating idea of CityCamp. Conversations continued on a public forum hosted by e-democracy.org. Eventually people were asking when the next CityCamp would happen. Others wrote me to ask if I could help them start CityCamp where they lived. As much as I wanted to, I really didn't have the time. Or, at least, I didn't know how I could. We invested many hours over three months and had major support from friends to pull off the first CityCamp. There was no way CityCamp would scale this way. What we needed was a pattern everyone could follow.

Once there was a vibrant network around CityCamp, uncovering that pattern was not too difficult. Our friends at iStrategyLabs had literally written the book on how they run unconferences, like PubMediaCamp. Our friends at O'Reilly Media shared their experience developing the popular Ignite series and pointed to TEDx as one model for creating a license around an event. Finally, GovFresh stepped in, offering to create a brand for CityCamp and provide some hosting. That's when it all clicked into place: CityCamp would become an "open source brand."

CityCamp is an "open source brand" that exists in the Creative Commons [meaning any community is able share, remix, and improve it]. Open source ensures that CityCamp is maintained as a pattern that is easily repeatable and for anyone to use. Branding ensures that the pattern is recognizable and that independent organizers don't misrepresent CityCamp. No one organization will own CityCamp. Instead it will be maintained by the CityCamp community supported by a cadre of local community organizers.

GovFresh founder, Luke Fretwell, and I worked furiously for weeks via Skype on content and syndication platforms, look-and-feel, messaging, instructions, goals, and simple rules. We created a WordPress theme and published it. We chose a Creative Commons license and put everything about CityCamp under that license.

Since we launched "CityCamp 2.0" on August 11, 2010, ten CityCamps have happened internationally and more are planned. These events have had significant impact on local government in host cities and beyond.

CityCamp London started the movement in the UK and immediately had a positive impact on the whole model. After London, the brand became "Stimulate. Participate. Collaborate. Repeat."

City of Brighton picked up on that model and hosted an event that streamed video of national and local officials engaged in panel discussions with participants. In Colorado, we published the Local Open Government Directive (LOGD) template, modeled after the Obama administration's Open Government Directive.²⁴ This is a document any municipality can use to draft open government policy. Cook County, Illinois recently cited the LOGD in its open government strategy. San Francisco has linked CityCamp with other organizations to promote the local Gov 2.0 movement in mayoral politics. There have been two CityCamps in Russia. The e-democracy forum has more than 350 members and is active daily. The Facebook page has 1,400 fans and @CityCamp has 1,700 followers on Twitter.

In short, open source was the best thing to happen for CityCamp. Open source helped CityCamp become something more than what it set out to be. Open source made CityCamp something that connects people who practice innovation in local government. Open source has meant that anyone can host a CityCamp by following the pattern. There have been innovations. There have been controversies. There have been failures. Each of these has been valuable for what it has taught. It has all made CityCamp better. Without open source, CityCamp would not have become what it is today or what it will be tomorrow.

Take action

CityCamp isn't just about meeting and talking, though these are important. CityCamp is also serious about taking action. Goal #4 is "Create outcomes that participants will act upon after the event is over." But you don't have to wait for a CityCamp to come to you. Here are four things you can do now if you like the idea of CityCamp and want to get involved:

- Join the online community hosted at e-democracy.org – forums.e-democracy.org/groups/citycamp
- Organize a Meetup – <http://www.meetup.com/GovLoop/>

²⁴ <http://opengovernmentinitiative.org/directive/v1/>

- Recommend CityCamp to your local elected officials
- Start-a-Camp – <http://citycamp.govfresh.com/start-a-camp/>

CityCamp celebrated its three-year anniversary in January 2013. Curry mentioned that ten camps had been held around the world in the above post. Since the inception of CityCamp, there have now been 32 independently organized camps in 23 cities across six countries and four continents.

Organizing CityCamp Raleigh

Now that you understand how the CityCamp movement got started, let's take a look at how the Raleigh event got organized. As I mentioned above, it started with Councilor Bonner Gaylord and me. The idea quickly spread to other community leaders and Citizen Advisory Council chairs. Our planning team grew each week. We came to call ourselves civic geeks. And while none of us were necessarily software programmers, each of us had a passion for open source, technology, and improving our government and community.

Organizing an unconference for a transparent city government²⁵

Organizing an unconference like CityCamp is easy if you have passionate people with the right talent, leaders with a strong vision, and the right organizational tools chosen by the team. Typically, it's a group of volunteers who come together and self-organize into a community of passion. This was the case for the first CityCamp Raleigh, held June 3-5, 2011.

The team that I helped organize did an awful lot of planning for an unconference. And we faced a big challenge from the start—none of us had ever been to a CityCamp, much less planned one. Furthermore, none of us had even been to an unconference. But the desire to improve our

²⁵ Adapted from 'CityCamp: Organizing an unconference for a transparent city government,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/6/citycamp-organizing-unconference-transparent-city-government>.

city with open government, open data, manageable transparency, and useful technology to bring together city employees, developers, and citizens to collaborate on solutions drove the planning team to a successful event.

Once the idea for hosting a CityCamp in Raleigh started on Twitter, it evolved into weekly meet-ups where the group started generating ideas for our first open government unconference. Other people saw it happening on Twitter and Facebook and wanted to join in. A small group researched other CityCamp events and consulted with the CityCamp founders. The group quickly grew from a handful of people to over a dozen. In late April, the group made a decision that CityCamp Raleigh was a go for June 3-5. Then the real work began.

We needed sponsors, speakers, a venue, and people to show up. Thanks to some awesome designers who volunteered to develop several concepts, we built a website using the open source CityCamp materials we customized for Raleigh. We started a presence on social media and shared our passion for open government and technology. We developed a project plan that set weekly milestones and kept us on track. In fact, we published the project plan and made it available for everyone to view, improve, and execute against.²⁶

One of the very early decisions made by the planning committee was how we would communicate—a critical part for any team. We were already communicating using a Google Group. Someone started a group on Facebook and suggested using that instead. The group consensus was to use Facebook as our primary communication tool.

I admit, I had my doubts about using a Facebook group. I'm comfortable using email to communicate with others, and I wasn't convinced Facebook would work. But I was willing to give our Facebook group a try. I saw that it worked, successfully, helping the planning committee in both collaborating and keeping us informed.

We used a combination of Facebook and Google Docs to work in subcommittees: marketing, sponsorship, speakers, and logistics. Our weekly meet-ups were a chance for the committees to report on what they completed and what their next tasks were. We also used the meet-

²⁶ <http://citycamprra.org/get-involved/project-plan-2011/>

up to brainstorm and get feedback on what the committees were doing.

As I reflected on this experience, I realized that opportunities like this don't come along very often. This was the start of a movement for more open government in Raleigh. It fit the culture. But there hadn't been an event like CityCamp to act as a catalyst for people to rally around. Now there was.

If you told me before we began that a small group of people could organize an unconference with more than 200 registrants, 20 sponsors and supporters, and 15 speakers, in fewer than 12 weeks, I'm not sure I would have believed you. But a community of passion for a more open and transparent government in Raleigh, North Carolina and the collaboration of individuals who are excited to be a part of this movement trumped all the challenges.

The unknowns of an unconference didn't stop us. The passion in our hearts made us believe.

That's how the planning committee came together and organized the first CityCamp Raleigh. But what happened in those three days of talks, workshops, and problem solving sessions? Let's take a look.

Creating a citizen movement for open government²⁷

The first CityCamp Raleigh started as a conversation about citizen engagement, but we realized that we could do more than just talk about it. Techies, govies, and citizens came together to identify, collaborate, and start creating solutions for our local government.

Over 225 people attended three days of collaboration, sharing, and encouraging openness in June 2011—focusing on improving access to data and solutions for local government. The event featured government and business panels on Friday, the unconference on Saturday, and a

²⁷ Adapted from 'Creating a citizen movement for open government,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/6/citycamp-raleigh-creating-citizen-movement-open-government>.

collaboration day/hackathon on Sunday.

Three themes emerged over the course of a weekend, all twists on open government:

- Create a citizen movement
- Eliminate email to improve feedback
- Create opportunities for citizens to collaborate with City staff

Create a citizen movement

The following conversation took place on the first day of CityCamp Raleigh (over Twitter, using the hashtag #ccral), and it resonated with me because events like CityCamp can influence citizen participation in government. The comments were both critical and encouraging:

@RogerTheGeek (Roger Austin) - Why I am not enthusiastic about #ccral as a geek citizen? The political landscape changes every election. All past work is flushed. Bummer²⁸

@adrielhampton (Adriel Hampton) - @RogerTheGeek You have to create a powerful movement that is community owned. That's how you beat political cycles. #ccral²⁹

Adriel is spot on. He also highlights one of the reasons why CityCamp Raleigh was successful—it was citizen-led. Passionate citizens came together to plan and execute this event. Now that it's over, it's transitioning into a movement. And it's still citizen-led.

We were fortunate to have City Councilor, Bonner Gaylord, co-chair the planning committee and Jonathan Minter, City of Raleigh IT director, on the planning committee. But we also had citizens with passion about making CityCamp more than a conversation. If it had been run by a City department, I don't think we would have pulled the three-day event off with less than 12 weeks of planning. The red tape would have been impossible to cut through.

²⁸ <https://twitter.com/RogerTheGeek/status/77060295750729728>

²⁹ <https://twitter.com/adrielhampton/status/77067717970116608>

Creating a citizen movement doesn't happen overnight. The potential that CityCamp Raleigh has to provide leadership and advocacy in the open source, open government, open data, and technology spaces is immeasurable. The future opportunities of this citizen-led movement will make a big impact on the direction the city takes with open data and could redefine citizen participation.

Eliminate email to improve feedback

We were fortunate to have CityCamp co-founder, Kevin Curry, attend the first day of CityCamp Raleigh. He posted an observation that highlights my next theme, how to get feedback on city initiatives. And it involves ditching your inbox to improve transparency.

@kmc Curry (Kevin Curry) - Interesting: both panels have raised the idea of abandoning email as a mode of interacting with local gov #ccra³⁰

Government isn't the only place where email has become a burden. Some people have already considered (or attempted) giving up their email.³¹ Just search #noemail on Twitter to see that conversation.

How are people ditching their email? By taking advantage of different social platforms and tools to communicate with the people they need to reach. By choosing the right tool for the right job and making sure everyone you want to know can still find you, communication is not interrupted—the theory is that it is made more efficient.

A few years ago, I had an opportunity to lead a group of citizens reviewing the draft of Raleigh's 2030 Comprehensive Plan. Remember, this is a planning document that outlines the growth areas and objectives for the city over the next 20 years. For this review, the Department of City Planning chose to use an online portal called Limehouse to collect comments and feedback.

While it's not open source, it was better than the alternative—emailing city staff. Email is not transparent. Sure, we can request all the comments

³⁰ <https://twitter.com/#!/kmc Curry/status/76727827084488704>

³¹ <http://opensource.com/life/11/5/noemail-why-are-some-technologys-early-adopters-abandoning-their-email>

collected be posted on a website somewhere, but that's not direct communication, nor is it timely. Someone has to compile and copy all that data. The portal seemed to be better alternative.

Limehouse was a central place where you could comment on individual paragraphs of the plan. Not only could you submit your comments, but you could see what others were saying. You could agree or disagree with those comments as well.

Using email to share feedback with local government only goes so far. It's a great tool for communication, but not so much for collaboration, sharing, and transparency in the public sector. Avoiding email for feedback might actually help city employees do their jobs. Instead of being stuck at their desk answering emails, they can use their skills more efficiently.

Create opportunities for citizens to collaborate with city staff

Another positive result was the engagement and collaboration between City staff and citizens. The dialogue between City employees and citizens was happening before CityCamp, but on a much smaller scale—usually one-on-one and about very specific issues. The collaborative atmosphere at CityCamp Raleigh allowed the dialogue to flourish between these stakeholders without the added burden of conflict, and without having to wait for an issue to occur.

In one session, the Editor of the local online publication, Raleigh Public Record, was explaining how it mapped out tornado damage from mid-April 2011 using City-provided data. What amazed me was that the Geographic Information Systems (GIS) manager from Raleigh, Colleen Sharpe, was sitting just a few seats down, and she was able to provide immediate additional insight.

Sharpe told us how the inspectors collected the data and how the GIS division was able to prepare the entire data set so it was usable and open. The GIS division made the disaster data available to the public very quickly—less than 48 hours after meeting the 72-hour Federal Emergency Management Agency (FEMA) deadline for damage assessment. This quick

turnaround is now a model for other municipalities who need to collect and publish data in this type of disaster scenario.

Getting tangible results

CityCamp Raleigh was a huge success. Not only was it a fulfilling experience for me personally, but a great team of people came together to get work done and share a positive experience with government planning. We all had something in common—we want our city to be a better place to live. And we want other people to share that passion.

If you want to be a part of a movement that has tangible results over the course of a weekend, host a CityCamp. Your local government leaders will thank you for it—especially if you invite them along for the ride.

Changing the culture of government³²

In the months after CityCamp Raleigh I had a chance to reflect on the major takeaways I learned by participating in the planning process. The value of using open communications and transparency immediately stood out to me. Using an open source approach led to an atmosphere of ownership and accountability that ultimately led to results. But how can we use this model to start changing the entrenched culture in some government agencies? Let's take a look.

Creating ownership, accountability, and results

The CityCamp Raleigh planning team created a collaborative culture through in-person meetings, social networks, and shared documentation. This was critical to our success. The level of transparency the team had was largely based on the notion of defaulting to open. Because each sub-committee could see what the other was working on and because there were inter-dependencies between each team, we had the natural side effect of accountability.

³² Adapted from 'Changing government culture the open source way,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/10/changing-government-culture-open-source-way>.

The accountability of our uber-level of transparency led to ownership. Our team members were committed and owned their individual tasks. When they said they were going to do something, they did it. When they got stuck, they asked for help. It was very unlikely that someone would show up to the next weekly meeting without completing his or her tasks.

And here's where it got interesting.

Our weekly meetings and asynchronous communications weren't just about reporting what we did. Our culture of transparency and accountability allowed people to be comfortable with sharing what they were going to work on. This key difference is what you can take back to your organization.

Stop telling your team what you did. Tell your team what you're going to do, and then deliver on it. How? The way I do this at my job is to publish an internal blog. It lists my key responsibilities and goals. I highlight what I'm focused on and include the key metrics from the previous week as lagging indicators. It's available for anyone in the organization to see, and anyone can call me out on something that may have slipped. But, I deliver on my goals, and this is one tactic that helps me be more transparent.

Applying transparency to government

CityCamp Raleigh was planned by volunteers with talents, passion, and commitment. The team had a shared purpose that guided and motivated us. But how do you apply this to your agency or organization?

Think of it this way: you have "paid volunteers" with talents, passion, and commitment. Your challenge is to define a shared purpose, discover your team members' talents, and direct their passion. Sprinkle in some of the tenets of the open source way like transparency, collaboration, and openness, and you'll start to see results.

It will take time to change entrenched cultures, but I think you'll find that open is a better way.

Part 2: The culture of Raleigh

One of the best parts about living in Raleigh is the ability to easily find like-minded people. The way that CityCamp Raleigh organizers came together is not unique. Other groups in Raleigh have been self-organizing around their passions for years. I'd like to highlight four of those groups.

The Triangle Wiki initiative got a jump start at CityCamp Raleigh and has continued to foster a community of passion and contributors. We call our region the "Triangle," and it includes the cities of Raleigh, Durham, and Chapel Hill. A wiki is an editable website or webpage created by a community of users to explain and detail a topic. We'll take a in-depth look at why Triangle Wiki got off to such a great start and why it continues to grow.

Unique to Raleigh is an event called SPARKcon that highlights local creative talent. It's fascinating to me that a transparent, open source planning process was used to conceive and plan this event. But it's no surprise that this is one reason it has been such a success.

Like many other cities, an event called BarCamp has been instrumental in bringing together a variety of user groups, people, and topics. We'll see why this unconference series has become so popular.

Finally, one of my favorite stories is about a project called Walk Your City. The idea behind Walk Your City is simple and has made an international splash. People fell in love with it and it sparked change. The project is changing the perception of distance for a car-centric population—encouraging them to be healthier by walking more.

Let's take a look at how the open source philosophy is applied to Triangle Wiki, SPARKcon, Barcamp, and Walk Your City. Collectively, these individual groups and events represent the culture of Raleigh and are building the foundation of an open source city. We'll start by exploring the origins of Triangle Wiki.

A wiki finds its tribe

This is a story about community building and finding like-minded people. It involves open source technology, but that's just a small part of the

story. I want to share with you how Triangle Wiki got started and why it's successful.

You'll often hear Triangle Wiki project lead, Reid Serozi, say that he found his tribe at CityCamp Raleigh. And what he means is that he found other like-minded, civic-minded geeks. Serozi was on the CityCamp Raleigh planning committee and helped the team execute a successful event. After the camp, his attention turned to Triangle Wiki.

LocalWiki is an open source content management platform that makes editing a webpage as easy as using Google Drive. Anyone can edit and contribute content to a LocalWiki. Think of it as a hyper-local version of Wikipedia without all the rules. Serozi pitched the idea of launching a pilot community of LocalWiki software in the Triangle to some people he met at CityCamp Raleigh.

The idea of capturing local knowledge on the Triangle Wiki appealed to the "tribe" that Serozi found. Over the course of a few months, this new community built content on popular topics such as parks, transportation, and neighborhoods. The wiki was by invitation only until there was enough content to create a good experience for future users.

While I wasn't involved in the core group during the incubation period, I did help organize an event with Serozi that would really put some momentum behind the Triangle Wiki project. We planned a content sprint that we called Triangle Wiki Day. It coincided with an event supported by Code for America called "Code Across America" that aimed to encourage communities to gather and engage in civic volunteering. The results were amazing. Here's what happened that day.

Triangle Wiki Day: An open source success in community building³³

Triangle Wiki Day was held on February 25, 2012. Around 50 people came together at Red Hat headquarters in Raleigh, North Carolina. The event was a soft launch of trianglewiki.org, an effort to document information

³³ Adapted from "LocalWiki project spawns open source communities," (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/2/localwiki-project-spawns-open-source-communities>.

about the Triangle region and increase collaboration and knowledge-sharing across the area. The wiki uses open source software, LocalWiki, as a content management platform. It includes wiki pages, images, and mapping.

The day started off with a brief presentation on how the Triangle Wiki project has roots in CityCamp Raleigh. It's also part of the larger open government movement and part of the Code Across America civic innovation week.

At-Large Raleigh City Councilor, Mary Ann Baldwin, gave a keynote at the event. She spoke briefly on the importance of collaborating on a project like Triangle Wiki and how events like this continue to be an authentic part of Raleigh's open source philosophy and open-minded communities. At-Large Raleigh City Councilor, Russ Stephenson, and Raleigh Planning Director, Mitchell Silver, were also in attendance.

Reid Serozi, Triangle Wiki project lead, provided the background on LocalWiki, showing a video from Philip Neustrom. Neustrom is one of the LocalWiki co-founders and worked extensively with daviswiki.org. Serozi walked the attendees through Wiki 101—teaching them how to register an account, create new pages, and edit existing pages. After that, the edit party began.

Right away, people started creating pages, collaborating with each other, and helping one another with wiki best practices, formatting, mapping, and more. The group made a lot of progress in just a few hours.

I spoke with Councilor Baldwin at the end of the day. She was a little intimidated at the start but is now comfortable making contributions on her own. She created several pages, practicing with a page about the Cotton Mill before contributing several pages mapping assets for Raleigh.

Serozi was pleased with the turnout and participation. His reaction on the day:

“As I was setting up for the Triangle Wiki Day event, there were so many unknowns. As the event started, I was pleasantly surprised to see all the seats taken, power strips full with dozens

of laptops ready to partake in an open content edit party. During the event and afterwards, it became pretty clear the efforts produced from Triangle Wiki Day will have a ripple effect within our community.”

What did this community accomplish? Here are a few of the results from Triangle Wiki Day:

- 633 page edits
- 100 maps
- 138 new photos added

Neustrom was watching from afar. He knows the wiki software he works on is just an enabler. “I think the Triangle Wiki Day was a spectacular success,” he said. “It really shows the true potential of this new form of collaborative local media.”

The next step for the Triangle Wiki is to capitalize on this event. “The challenge for everyone involved at this point is to continue the momentum and reach 1,000 pages by the March 14 public launch,” said Serozi.

More about LocalWiki from their co-founder

Neustrom wants LocalWiki to be more than a collaborative open source project. He feels that the freedom that this platform offers will be a key to getting people to share information and knowledge in the future:

“Right now we’re at point where it’s unclear how people in our local communities will get and share information in the future. And, more critically, many large corporations would like to be the gatekeeper of this local information. The LocalWiki movement represents a truly open alternative to an increasingly consolidated, closed-off local information ecology.

The civic world has focused a lot on the problem of open data—and open data is really important. But open data alone won’t satiate our communities’ information needs. We need tools and organizations that can really pull everything together and provide context, provide a more

qualitative take on local information. And I think LocalWiki is really well-positioned to help in this respect.”

Wikis are for everyone

The power of open source and collaboration were evident at Triangle Wiki Day. This project is about creating a community anyone with local knowledge can contribute to. It brings together people with different skill sets—ranging from tech-savvy know-how to photography, local history to hackers, and much more. You don't have to write code to add your knowledge to the wiki, you just need to click the edit button. After that, you're part of an open source community and a philosophy that is changing the world. And for the community of Raleigh, your adding your knowledge to an open source city.

Launching Triangle Wiki and beyond

You'll be glad to know Triangle Wiki successfully launched in mid-March 2012 with over 1,000 wiki pages. Since then, there have been several other content sprints and edit party events. The community continues to grow. It has a monthly newsletter and is adding new partners. I keep finding interesting uses for the wiki. I used Triangle Wiki to help organize a Creative Commons 10-year anniversary meet-up in December 2012. People continue to find new ways to use the wiki and maximize their contributions.

In late 2012, the group started an awareness campaign called *Edit your city*. Individuals from the Triangle Wiki community are creating *Edit your city* posters and taking pictures with them around the Triangle, then sharing them on social media. Citizens celebrated the news about the creation of a plan to turn the former Dorothea Dix mental health hospital campus into Dix Park by taking a group *Edit your city* photo³⁴ on the Dorothea Dix campus. Almost 50 people participated in the group photo on December 8, 2012.

³⁴ Photo by Leo Suarez: <http://www.flickr.com/photos/ralcon/8256222026/>

SPARKcon: Organizing creative talent with open source

SPARKcon is a showcase and celebration of the Triangle's creativity, talent, and ideas. It's an annual event held in September and seems to grow and expand each year. There are "SPARKs" of all shapes and sizes. Creative talent gathers around areas such as art, bazaar, circus, dance, design, fashion, film, geek, idea, music, poetry, theater, and wheel.

First, let's take a look at the open source process and see how SPARKcon got organized. Then, we'll see some of the history of SPARKcon and get a better understanding of how the event comes to life from SPARKconner, Aly Khalifa.

SPARKcon: Art, music, and success with open source process³⁵

Process over content. Aly Khalifa from Gamil Design and DesignBox used this mantra to instill open source roots at SPARKcon—an annual event that showcases, celebrates, and influences the creative momentum naturally found in North Carolina's Triangle region.

"I think at first it was hard for people to understand—it was hard for us to describe. Sometimes it was embarrassing—this commitment to process over content," said Khalifa. "Open source has been great for us—the idea that the community decides ultimately what the content is that gets generated. That's what we've been dedicated to, that same spirit. Now because there's other people doing it in different strata, it's been great. People are beginning to understand that we're dedicated towards process."

Beyond process, there's collaboration and cross-pollination. By allowing people with different interests and expertise to plan the individual content areas—they call them SPARKs—something bigger is created.

³⁵ Adapted from 'SPARKcon: Art, music, and success with open source process,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/life/12/3/sparkcon-art-music-and-success-open-source-process>.

”SPARKcon is definitely a bit on the open source platform because it allows us to bring in folks with smaller expertise to create something much bigger than we could, by programming or planning it all ourselves,” said Sara Powers from the Visual Arts Exchange.

SPARKcon: Igniting creative thinkers with open source³⁶

One way to celebrate the creativity of your community without falling into a rigid planning process is to use the open source methodology. By tapping into individuals’ passions, their willingness to collaborate and create a culture of transparency, you can light a spark that will inspire unpredictable—yet reproducible—results.

Founded in 2006 by Beth and Aly Khalifa and Designbox, SPARKcon aims to showcase, celebrate, and influence the creative talent in the Triangle. SPARKcon inspires community leaders by using an open source approach to organizing. Volunteers gather, plan, and share what they are working on for their individual SPARKs in order to produce a stellar four-day event.

I hadn’t witnessed anything like it before and was impressed when I attended SPARKcon for the first time in 2010. Think of it as a ‘creative potluck’ that takes themes like film, music, fashion, geeky topics, art, and more—and displays them through the work of volunteers who showcase their talents.

Naturally, the open source approach caught my attention. I caught up with Aly Khalifa, the owner of Gamil Design and recipient of a 2012 Eisenhower Fellowship, in this interview from September 2011. I wanted to learn more about SPARKcon, his ideas, and his reasons for participating.

Tell us why you think SPARKcon is a success and why it has grown over the last few years.

³⁶ Adapted from “SPARKcon: Igniting creative thinkers with open source,” (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/life/11/9/sparkcon-organizing-creative-thinkers-open-source>.

SPARKcon is an attempt to apply open source principles to create a talent dialogue and showcase. It has been stunning to see how a growing creative community has resonated with this approach. As a result, this all-volunteer event is made up of some of the area's top thinkers who can push the limits of their disciplines. Thus, each year has a fluctuation in which SPARKs come and go, and what they will program that year. SPARKcon is now seen by many as the one time a year to really do their most creative and collaborative work, contributing to an overall mission of fostering and highlighting local talent.

How do you incorporate open source into your planning process?

SPARKcon has been as innovative in its structure as it has been in its content. Using a system of networked programming cells, individual teams of volunteers form to create SPARKs for various content interests, like fashionSPARK or geekSPARK. These teams are mentored and coached to develop their vision and to structure their efforts for achieving them. Really, defining a SPARK is analogous to defining a word on Wikipedia: there are norms on how to do it, but the individual focus areas are highly individual and specific to those involved. The key here is to give people enough structure to be creative, but not too much to stifle ideas and predetermine results. This allows SPARKcon to stay fresh and directly reflect those motivated individuals embedded in their creative community.

How do you encourage Creative Commons or sharing of the creative assets from SPARKcon?

While SPARKcon has not yet adopted Creative Commons agreements (though we would welcome a volunteer to help us work through it!), we do have a policy of sharing assets. All talent showcased at SPARKcon requires a talent release agreement. This agreement stipulates a mutual fair-use agreement for all music, images, artwork, etc., that is captured or used at the event. For instance SPARKcon photographers are welcome to use their work commercially, while SPARKcon retains rights to use that same work for all direct SPARKcon needs. Requiring this agreement gives additional incentive for SPARKs to work with each other. For instance, fashionSPARK uses musicSPARK artists during their runway show,

knowing those artists are already covered by a SPARKcon release. These cross-pollinations seem to multiply each year, especially with more seasoned organizers who become inspired from these collaborations.

Transparency plays a key role in planning each SPARK. How do newcomers to SPARK planning embrace this level of openness?

Transparency is certainly a key ingredient of SPARKcon planning. Regular meetings are generally held in public venues like restaurants or coffee shops, with meeting schedules and notes published to the public SPARKcon webpage. The intent here is to allow any curious newcomer to quickly get up-to-date on what has been said in previous meetings, know who is involved, and where to go. This should give the newcomer a low threshold of stress to show up to a meeting and immediately get involved.

How can others replicate SPARKcon in their city?

We have had interest from various cities about how to replicate SPARKcon. As with other open source efforts, the SPARKcon model is truly a reflection of its community. To properly inject this system, it needs to find the right local catalysts who can open their mind and adopt a system that is not fully controllable. This would be contrary to the top-down working style of most event coordinators. However, given a group of five to seven committed folks who are tied into the creative community, some simple training and sharing of stories would be enough to make use of all of our public tools and get them on their way.

What I discovered from Khalifa is that SPARKcon is basically creativity mashed-up with an open source philosophy. If you are ever in Raleigh while SPARKcon is happening, I highly recommend checking it out. While you'll just experience the festival portion when attending, you can now appreciate how open source has influenced the planning process and given creative talent a structure without suffocating their ideas.

BarCamp: A technology-focused unconference³⁷

I attended my first BarCamp on Saturday, October 15, 2011. BarCamp is an unconference similar to CityCamp, but focused around technology. Wikipedia defines BarCamp as “an international network of user-generated conferences (or unconferences) primarily focused around technology and the Web. They are open, participatory workshop-events, the content of which is provided by participants.”³⁸

Essentially, BarCamp brings together people interested in a wide range of topics and technologies. Everyone that attends has the opportunity to teach, talk, learn, and participate.

A group of volunteers is essential to help organize the event. I learned this first-hand while planning CityCamp Raleigh. BarCampRDU is no different.³⁹

2011 was the sixth year that BarCampRDU was being held in the Triangle of North Carolina, and it was an exciting day of collaboration. Before the event, I caught up with one of the organizers to get a feel for how a successful event would look.

Organizer Jason Austin wants people to connect, learn, and explore potential startup companies:

“At the end of the day, I hope BarCampRDU inspires people to try something new. A new technology, a new venture, a new partnership. I see BarCampRDU as a way to connect with the technology community in the Triangle, while getting exposed to different technologies. Hopefully, that will spark the next startup!”

As I prepared for BarCampRDU, I took a glance at the session topics from 2010. Sessions included topics such as “Doing HTTP right,” “Running a user group,” “You too can make bubbly beverages,” “Lock picking,” and “Intro to

³⁷ Some of this section was originally published and adopted from 'BarCampRDU: Preparing for the unconference experience,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/10/barcamp-rdu-preparing-unconference-experience>.

³⁸ <http://en.wikipedia.org/wiki/BarCamp>

³⁹ <http://barcamp.org/w/page/401431/BarCampRDU>

iPhone development.” All of these topics were participant-driven and selected by attendees.

I was inspired enough to consider submitting a topic of my own: “Organizing the organizers.” In the Triangle region, there are a lot of different user and interest groups. CityCamp Raleigh has become one. Other technology focused groups include TriDUG (Triangle Drupal User Group), TriLUG (Triangle Linux User Group), TriJUG (Triangle Java User Group), groups for Ruby and PHP users, and many more. As an organizer for both CityCamp Raleigh and TriDUG, I know it takes time to organize a meeting, get presenters, and get people to show up. Imagine doing all that work to find out another group booked the same night.

Fast forward to the event. My session idea made it on the board and I had about 20 people attend. We discussed a few best practices and considered different ways that we could work together. Later in Chapter 4, I'll discuss an idea to help a group of organizers like this.

And that's the point of an event like BarCamp. It brings people together to collaborate, share ideas, share knowledge, and improve our communities. And while the BarCamp format isn't unique to the Triangle, we definitely embrace the style and use it to cross-pollinate different user groups from across the region. The business and user communities are supportive of efforts like this, a key ingredient to being an open source city, which we'll explore more in Chapter 4.

Walk Your City: Open source wayfinding⁴⁰

It's a two-second trip to visit walkyourcity.org. But before you head over there, you'll want to hear from Matt Tomasulo, founder of CityFabric and chief instigator of Walk Raleigh and Walk Your City. The Urban Times called Walk Your City “Open Source Guerrilla Wayfinding.”⁴¹ It's a simple idea of helping pedestrians overcome the hurdle of distance perception, and by doing so, promoting a healthier lifestyle.

⁴⁰ Adapted from “Open source wayfinding with Walk [Your City],” (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/life/12/4/open-source-wayfinding-walk-your-city>.

⁴¹ <http://www.theurbn.com/2012/04/walk-your-city-open-source-guerrilla-wayfinding/>

At the Triangle Wiki Day mentioned above, Tomasulo told me he wanted to take his Walk Raleigh idea global, and by using the principles of open source he found the perfect way to do so. The open source walking adventure is starting; Tomasulo managed a successful Kickstarter campaign and gathered support for the Walk Your City platform with more than \$11,000 in financial backing.

See how open source has influenced the Walk Your City project in this interview with Matt Tomasulo from April 2012.

Tell us about Walk Your City.

Walk Your City will be an easy-to-use platform (website) for anyone to create a similar sign(s) to those we made for the Walk Raleigh campaign. Wait, so what's Walk Raleigh? Walk Raleigh started as a group of 27 unsanctioned signs installed at three different intersections around downtown Raleigh. The signs are basic; they include an arrow, general destination, color, QR code,⁴² and text stating how many minutes by foot it is to walk to said destination (the destinations are made up of commercial areas, civic landmarks, and public open space).

Over the past two months, Walk Raleigh attracted local, national, and international attention, appearing in *The Atlantic*, on NPR (National Public Radio), and The BBC (British Broadcasting Corporation), among other media outlets. The wide range of media exposure generated many inquiries about adapting and producing this campaign elsewhere. We believe technology should not hold others back from recreating a similar project in their own city or town. This belief ultimately led us to develop the Walk Your City project as a tool to help facilitate conversations and services.

Why walking?

Beyond the obvious personal health benefits, with more and more pedestrians on the street, the healthier our places become socially, economically, and environmentally. We have found that one of the greatest obstacles with walking is actually public perception, which we hope to positively influence through Walk Your City.

⁴² Quick response code

Who is the audience?

Walk Your City is intended for cities and citizens alike. Our goal is for anyone to be able to produce and share one of these signs or network of signs with their street, block, or city community.

A lot of people have questioned why we need a platform like this because the signs are so basic. The signs are very basic, but a lot of planning, consideration, thought, and marrying of existing technologies helped to make these signs so simple. To create the 27 signs, it took us nearly a week. We hope to streamline the process and relinquish any technological hurdles that might prohibit someone like my father, in his late 60s, from creating his own walking campaign in a matter of clicks and a visit to the local sign shop.

Transparency and accessibility seem to be key principles to Walk Your City, why is that important to the project?

We believe everyone is a pedestrian (and really, everyone is every day—whether they realize it or not), and everyone walks (or is in a wheelchair—in which case they are still effectively a pedestrian). Walking, being a pedestrian, and having a healthy environment (socially, economically, and environmentally) to be a pedestrian in, should be an option for everyone.

Walk Raleigh has proven that simple interventions, sometimes by one person, can influence perception and change policy dramatically. We do not want to block any opportunity for this walking campaign (and movement, as some publications are calling it) to stop with us. We believe open and positive conversations about how we live can lead to good decisions in the future. We see these signs as a great tool to help cities experiment with new ideas and tactics of accommodating different transit choices and introducing new civic ideas with minimal risk. We do not believe that a project intended for the greater good should be limited to any one group, organization, or place.

Do you think other cities across the globe will replicate this project and contribute to it?

This project is a direct response to demand from other cities and

organizations wanting to adapt and incorporate the campaign into their own cities. Chattanooga, Tennessee and Durham, North Carolina are adopting the plan. Hoboken, New Jersey has incorporated the project into their comprehensive city signage and wayfinding plan. There are a number of health and advocacy organizations that want to help scale the project as well. Also, based on the overwhelming response we have already received, many citizens are already planning on ways to adopt this simple intervention into their hometown with the planned technology.

How will Walk Your City use open innovation and why did you choose to open source this project?

With our Walk Your City platform, anyone will be able to create signs using the same tools we used. We hope to develop a simple network to encourage people to participate in open dialogue about how they install, adapt, and change these signs to help integrate them into their own communities. By creating a large community around the signs and walking, we hope to develop new ways to promote healthy lifestyle choices in our cities. Very simply, the open source idea and way just makes sense. When dealing with an issue that impacts everyone, we believe everyone should have access to it.

Tell us about the Walk Your City Kickstarter campaign and what you hope to accomplish with it.

Kickstarter is an incredible online resource that has grown faster and lasted longer than many people expected. The concept of crowdfunding [crowdsourced funding] is now recognized by mainstream media as an acceptable and trustworthy practice. I chose to launch Walk Your City via Kickstarter because the platform is as successful of a publicity tool as it is a way to raise capital. The crowd literally votes with their dollars, mitigating risk and gaining real-time market validation if the idea proves worthy.

Walk Your City was featured at the top of Kickstarter's "Projects We Love" on Thursday, April 5, 2012. Within eight hours of the list being released, we hit our funding goal of \$5,800. Two days after reaching our goal, we were well ahead of our mark by over \$1000, and "backers" continued to

contribute. A new goal of \$10,000 and 600 backers was set for the remaining three weeks. The extra money will go toward adding more language options for the signs and developing a simple system of city pages for other cities to share their own campaigns and initiatives.

After the interview

I love the Walk Your City story because the concept is so simple and the idea spread rapidly. Using an open source approach is really one of the best ways to make this project more adaptable. By using an open source model, the project can scale to new heights and have a further reach beyond just Raleigh and other cities that have noticed the project, similar to the way Kevin Curry explained making CityCamp an open source brand.

I had lunch with Tomasulo in the weeks following our interview. He is very interested in using an open source approach and developing the technology that needs to be created for this project using an open source code base.

Like many entrepreneurs new to open source, it's sometimes difficult to understand any advantage that open source offers. I walked Tomasulo through a few scenarios and he immediately started to see how open source would benefit his approach. One of his toughest barriers is that he's not a programmer. And really, that just means that he's the business owner of the idea and not writing the code for the project. I don't think there's anything wrong with that. In fact, it's a trend that I'm starting to see more and more often here in Raleigh. The ideas that could be implemented using open source sometimes outweigh the development resources.

It's also interesting to note that technically the first Walk Raleigh signs violated the city sign ordinance and had to be removed. Tomasulo worked with Planning Director, Mitchell Silver, and the Department of City Planning to acquire the needed encroachment permits. The Walk Raleigh signs are now legal. They are a simple idea that the community has embraced, and that has caught the attention of policy makers and is now being incorporated into future pedestrian planning.

I see a tremendous opportunity for the Walk Your City project. When I attended CityCamp Kansas City, I learned about its future bike share program. I can see how Walk Your City would be beneficial and complementary to a bike share program. Or even a car share service, like ZipCar. Imagine returning your bike to a station or your car to a lot and having the Walk Your City wayfinding inform you of the nearest opportunities within walking distance. That would be cool.

There's something in the culture

Obviously, we 'put something in the water' to foster all this collaboration and participation, right? From the above examples, you can see how Raleigh's culture is influenced by the open source philosophy. My favorite part about these stories is that they are all citizen-led. While all of these are not directly related to open government, the characteristics of the people that lead these events speak to the culture that is embedded in Raleigh. And that translates very easily to citizen engagement and participation, which we'll explore in the next chapter.

Chapter 3: Open government and open data

Raleigh isn't the first city to pass an open government resolution and it won't be the last. However, with a solid open government and open data blueprint to execute against, Raleigh is certainly making great strides. Combine that with the open culture that exists in Raleigh, and I'm confident that Raleigh will soon be one of the leading cities in the open government movement.

If you want to get the attention of any elected official, even if they don't understand open source, just say the magic words: job creation. While it is a lot of work to explain the principles and values of open source, there is no guarantee that the light bulb will go off. Even if you use the recipe analogy described earlier, some folks will still not see the connection between having an open source government directive and how it relates to economic development. But we'll explore more about job creation and innovation in Chapter 5.

In this chapter, we'll take a look at what the city of Raleigh has accomplished over the last two years on both the open government and open data fronts. I'm very excited about the future, but first, let's take a look at what got us where we are today.

How to get your city to pass an open government policy⁴³

On February 7, 2012, the Raleigh City Council unanimously passed an Open Source Government Resolution, promoting the use of open source software and open data. The resolution includes language that puts open source software on the same playing field as proprietary software in the procurement process. It also establishes an open data catalog to house data available from the city.

While Raleigh isn't the first city to pass a policy promoting open

⁴³ Adapted from 'How to get your city to pass an open government policy,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/2/how-get-your-city-pass-open-government-policy>.

government, it may be the first to provide a blueprint that can help other cities pass their own open initiatives more quickly.

The biggest barrier to this is making sure elected officials know and understand what the open source philosophy is. And I'm not talking about how software gets made using the open source development model or the open source business or license structure. I'm talking about the fundamentals of open source: transparency, collaboration, meritocracy, and rapid prototyping. Sometimes public policy can lack even the basics—like sharing.

When the resolution was passed by the Raleigh City Council's Technology and Communications Committee two weeks before the policy was officially passed by the full council, open government advocates were excited but wanted to learn more. They wanted to know about the process that advanced the resolution and how other cities can replicate it.

I asked Councilor Bonner Gaylord, chair of the Technology and Communications Committee, about the process. I wanted to know what made it successful here—and what challenges they faced. In the spirit of open source, Gaylord was happy to share the story. And I hope his tale will help you advocate for open source in your municipality.

Why did Raleigh pursue an open government policy?

Raleigh is pursuing open source as an extension of the core ideal governmental structure of complete transparency and openness. Democratic republics, at their best, have always had open source paradigms at the core of their design. The organization chart of a democratic republic is: Citizens, who are at the top, hire elected officials.

Elected officials then hire staff to run everything. In this organizational structure, the citizens are the boss, and the boss should be able to see everything that happens within the organization. Outside of obvious (yet sometimes, not so obvious) areas, the government should be doing everything it can to be open and transparent, providing the citizens (their bosses) with as much information as possible.

Why should other cities do this?

Other cities should do this for many reasons such as:

- Proving to its citizen-bosses that it is doing its job and working hard in response to their needs.
- Opening up data and processes because, you never know, those citizen-bosses may be able to do something cool with it or make great suggestions.
- Opening up gives citizens a sense of ownership and welcome. They are more likely to be engaged and satisfied if they feel ownership and pride in that ownership.

How does a city start?

Just throw it out there... It doesn't matter if you are an elected official, citizen, or government staff. Put a resolution on the table and see where it goes from there.

Is buy-in from the IT department required?

There really needs to be buy-in from the IT department in order to proceed. If they aren't on board, then there is little likelihood of substantial progress. There are too many scary ways to frame open source [for people who aren't familiar with the way it works]. Armed with technical knowledge and a desire to scuttle the initiative, any IT department can quickly quash an open source initiative.

How did you explain what open source is to elected officials?

Put it into simple terms. A great analogy that was the 'A-ha!' moment for one local official was that of the cookie recipe. Everyone has seen grandma's cookie recipe that has been passed down over the years.

Well, would you rather have a cookie or that cookie recipe? Obviously, you'd rather have the recipe so you can make your own cookies, but further, you can tweak it, make it better, add walnuts... whatever!

That's what openness is all about.

Raleigh's open government resolution and roadmap⁴⁴

You'd probably like to see the actual resolution that Councilor Gaylord talked about—and there are numerous samples on the web.

If you're thinking about proposing a resolution in your own city, pick one—like this one from Raleigh—as a starting point, then tweak it based on what you understand your community needs. It helps to have a roadmap—or at least a few milestones mapping out the next steps. Know where you want to go next. It's great to get a resolution passed, but if you don't know where you are going, then it can really hinder making the resolution meaningful and having the desired impact.

Need some examples for your roadmap? I've also included the next steps that City of Raleigh CIO, Gail Roper, presented to the Raleigh City Council.

Open Source Government Resolution⁴⁵

RESOLUTION NO. (2011)

A RESOLUTION INDICATING THE INTENT OF THE CITY COUNCIL TO CREATE AN OPEN GOVERNMENT BY ENCOURAGING THE USE OF OPEN SOURCE SYSTEMS AND ENSURING OPEN ACCESS TO PUBLIC DATA

WHEREAS, the City of Raleigh is committed to using technology to foster open, transparent, and accessible government; and

WHEREAS, by sharing data freely, the City of Raleigh seeks to develop opportunities for economic development, commerce, increased investment and civic engagement; and

WHEREAS, the adoption of open standards improves transparency,

⁴⁴ Adapted from 'How to get your city to pass an open government policy,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/2/how-get-your-city-pass-open-government-policy>.

⁴⁵ www.raleighnc.gov/content/CorNews/Documents/OpenSourceSystemsResolution.pdf

access to public information, and improved coordination and efficiencies among organizations across the public, non-profit and private sectors; and

WHEREAS, open source standards harnesses the power of distributed peer review and transparency to create high-quality, secure and easily integrated software at an accelerated pace and lower cost; and

WHEREAS, the City of Raleigh seeks to encourage the ideal software community to develop software applications and tools to collect, organize and share public data in new and innovative ways that benefit both citizens and government;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RALEIGH:

Section 1. That the City of Raleigh Information Technology department will establish an open systems procurement policy that will include specifications in future Requests for Proposals (RFP) to encourage technology solutions with an open source licensing model which store and expose public data using industry-standard and open protocols.

Section 2. The City of Raleigh will establish an open data website at www.raleighnc.gov/open that will serve as an open data catalog of the data available from the City of Raleigh in open formats.

Roadmap of next steps⁴⁶

1. Open Data Next Steps: Staff Response
 - Continue to gain executive sponsorship
 - Define resource requirements
 - Establish governance model
2. Open Data Preparation
 - Establishment of the catalog
 - Policy creation for open data (how we determine what data can/will be published, prioritization, formats, internal process, business ownership, etc.)

⁴⁶ <http://www.raleighnc.gov/content/BoardsCommissions/Documents/TechnologyCommunications/2012/TC-Minutes-20120124.doc>

- Catalog product selection
 - Project implementation
 - Engagement with Raleigh's open data community
3. Open source
 - Create the internal procurement policy for evaluation and selection criteria for open source software
 - Create inventory of potential open source software and protocols
 - Create framework for Raleigh to participate as producer of open source software (licensing model, code repositories, etc.)
 4. Community Participation: Taking it to the streets
 - Citizen-led communities
 - Connection between youth-development programs and open government community
 - Connection between entrepreneurial community and open government community
 - Importance of broadband access for any of this to be useful

In April 2012, the City followed the passing of the open government resolution by allocating \$50,000 toward the open source data catalog.⁴⁷ In a way, it was a bold move, at least the way it was done. It was necessary to ensure the open data portal would become a reality.

Two City Councilors voted against making the open data initiative a priority in the council budget. From my understanding, it wasn't because of lack of support for the initiative, it was instead the way it was presented to the council.

Typically, the city manager will present the council with a budget to deliberate. In this situation, members of the Council instructed the City Manager to include this funding in the upcoming budget proposal. Essentially, the Council told the City Manager that this was a priority rather than the other way around. From my experience, this type of

⁴⁷ <http://www.raleighpublicrecord.org/news/city-council/2012/04/18/city-to-allocate-50000-for-open-source-data/>

prioritization had not happened at the Council table in over a decade. It was great to see our elected officials being supportive of such an important component needed to make Raleigh an open source city.

An open source city takes shape: online tools and data⁴⁸

Open government scored another victory when the City of Raleigh announced the Open Raleigh initiative on May 11, 2012.⁴⁹ Open Raleigh is an online repository with open data, web and mobile applications, and links to participatory tools and organizations. It's all part of Raleigh's open source strategy focusing on transparency, collaboration, and improved access to information. It's proof of the ongoing work for the open source resolution that the Raleigh City Council unanimously passed in February 2012.

As part of the Open Raleigh announcement, the city included an online feedback system: My Raleigh Ideas! It's a service the City uses to collaborate with the public to solicit ideas on future projects and topics. The City first used the feedback platform to help prioritize the data citizens might want in an open data portal and to solicit input for the open data policy.

You can't get much more open source than collaboratively creating your open data policy with citizens and other stakeholders. City staff "engage[d] with citizen groups, youth development programs, entrepreneurs, and businesses to create an open data policy," according to the Open Raleigh home page.⁵⁰

The city's open source strategy is an ongoing partnership with citizens. We have seen, through the actions of elected officials, City staff, and citizen groups like Citizens Advisory Councils, that gathering citizen input is part of Raleigh's open source culture.

The platform for Open Raleigh brings different software solutions together to solve multiple problems. It's a great strategy to make the

⁴⁸ Adapted from 'An open source city takes shape: Open, online tools and data,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/6/open-source-city-takes-shape-open-online-tools-and-data>.

⁴⁹ <http://www.raleighnc.gov/services/content/CorNews/Articles/OpenRaleigh.html>

⁵⁰ <http://www.raleighnc.gov/open>

platform more useful over time, rather than waiting to get all the pieces together at once. This is the *release early, release often* part of open source.

City governments shouldn't work to write code or solve problems that are already solved—it's redundant. Why reinvent the wheel when you can subscribe to a constant stream of updates or deploy a solution that has already solved the technological challenge at-hand? Rather, Raleigh is building a platform based on open standards and interchangeable components.

Government IT departments are deploying solutions that already fix these problems. In this specific example, the City of Raleigh is successfully piecing together different technologies and taking a strategic approach to create a comprehensive, robust open data solution. Let's take a look at the technical components of Open Raleigh that include products from ESRI, Socrata, Granicus, GovDelivery, and SeeClickFix.

ESRI and Socrata power the open data platform

The ESRI geoportal server is an open source product that enables discovery, use, and publishing of metadata for geospatial resources. It allows custom downloads of data using a map-based interface. ESRI is also used at the county and state level, which allows for seamless searching. Citizens, developers, and businesses can use almost 100 geospatial layers available through the geoportal.

The City of Raleigh announced their beta deployment of Socrata⁵¹ in March 2013. Socrata is a company that provides a Social Data Platform and other open data solutions for government organizations. The solution is being used to house other data sets and transform information assets such as geospatial data and unstructured content into consumable data. More importantly, it allows citizens and other users to create visualization of the data. This makes the data more user-friendly and more useful to average citizens who don't want to read tabular rows of data.

⁵¹ <http://www.midtownraleighnews.com/2013/03/16/24743/new-raleigh-website-to-improve.html>

With the beta launch, the data portal includes data sets for crime, fire incidents, some GIS data for building, communities, and parking, some financial data, and some permit data. The IT staff continues to work with other departments to validate data and to strategically add new data sets that are important to the Raleigh community.

Granicus powers citizen engagement

The MyRaleigh Ideas! crowdsourcing platform uses the Granicus CivicIdeas product. The City used the open data project as a test case for the tool. It first used MyRaleigh Ideas! to solicit feedback and determine which open data sets were a priority for the community. After the pilot, the platform was made available for other City departments to use for their citizen engagement needs.

GovDelivery makes email easy

GovDelivery helps government agencies create effective digital communications. Raleigh has deployed a successful email subscription solution called My Raleigh Subscriptions that allows citizens to opt-in to email updates from City departments of their choosing, like Parks & Rec, based on the GovDelivery solution. From my own personal experience, it has saved me a ton of duplicate emails from various City departments. Citizens can choose from a variety of topics ranging from alerts to newsletters, meeting agendas to news releases, event information to crime alerts, and much more.

SeeClickFix is the Open311 solution

SeeClickFix is a way for citizens to report non-emergency problems to the city such as potholes, graffiti, or broken sidewalks. Behind the scenes, SeeClickFix uses the Open311 standard that many cities use today, which is an effort to coordinate a standardized, open-access, read/write model for reporting non-emergency issues.

Citizens no longer need to hunt down a phone number or get bounced around from department to department. Once they see a problem, they can click to report it through a website or a mobile application; the city

will acknowledge the issue and channel it to the right department to get it fixed.

We'll do an in-depth case study of how SeeClickFix came to Raleigh later in this chapter.

The impact of Open Raleigh⁵²

Now that we've reviewed the technological components powering Open Raleigh, including ESRI, Socrata, Granicus, GovDelivery, and SeeClickFix, let's shift gears and see how this combination of tools is having an impact on Raleigh citizens. Because the successful use of open technology in government is no longer a simple one-way street, Raleigh is enhancing the citizen experience, using open ideas, and providing those ideas with even greater support. The combination of these tools is helping to provide Raleigh's government with a two-way platform solution that many open government visionaries talk about.

At heart, it's about collaboration. The City is following a roadmap that includes citizen input and feedback. For example, civic geeks helped define the first draft of the City's open data policy through the CivicIdeas solution. This means the work gets done, citizen needs are met, government needs are met, and the cost of doing the work is reasonable.

Fostering communities of passion, like CityCamp Raleigh, is also part of the strategy. City staff understands that the open source way is a partnership with citizens that is on-going.

The *release early, release often* process means that projects iterate quickly, and it doesn't take long to go from ideas to results. This encourages action, and keeps participants from losing interest. It didn't take long to get the first pieces of the open data portal deployed after the open source resolution was passed. In fact, the city implemented SeeClickFix and the ESRI geoportal before a formal open source policy was in place. GovDelivery and Granicus CivicIdeas were up and running within three months of the resolution being passed.

⁵² Adapted from 'An open source city takes shape: The impact of Open Raleigh,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/7/open-source-city-takes-shape-impact-open-raleigh>.

The open source mentality was already part of Raleigh's culture—even before a government directive was passed. Now that there is a policy, a roadmap, and an open data portal, Raleigh is on the fast-track to being the world's first open source city.

Open data: Meaningful, visual information

One of the most important parts of Raleigh's open data initiative is that it's not just about the data. The City staff working on the data policy and the open data portal have a full and complete understanding that presenting raw data sets only gets you halfway to your open data mission. Without visualization tools or a way for the average person to understand what the data means, the job is only half done. They also understand that providing the right data sets can help spur innovation and create new businesses—which is why they are spending a lot of time trying to understand which data is most important to our community.

I wanted to get a better understanding of how the city is defining open data and what the future holds for Raleigh's open data platform. I asked Jason Hare, Open Data Program Manager from the City of Raleigh Information Technology department, to share his thoughts. He provided some great insight for Raleigh's up-and-coming open data initiative.

How do you define open data?

Open data is the information infrastructure of the City of Raleigh. When we say "data as infrastructure" we are referring to open data. Open data, open government, and the freedom of information laws are related and have overlap, but are not the same thing. Open data follows cultural, ethical, and technical rules. Ultimately, open data is defined as data sets created by a government entity and made available to the public. The data sets that are released follow the Open Knowledge Foundation (OKFN) guidelines that govern the machine readability, structural issues, and ethical issues of the data released. Our resolution is based on the OKFN guidelines.

Why is it important that the city of Raleigh hired an open data manager?

The City of Raleigh wanted an open data manager to ensure that the open data program is developed in a way that is sustainable, transparent,

and accessible. Having an open data manager demonstrates Raleigh's commitment to the idea of "open" in regards to data-driven policy development and community engagement.

What is your vision for Raleigh's open data platform?

I am developing a white paper on that topic. The short answer is open data is the start of an acculturation process leading to a transparent and collaborative relationship between city government and citizens. Open data is a necessary but not sufficient effort in that acculturation process. Open Raleigh, as a brand, will emphasize data accessibility and information usability. We are not tying ourselves to a particular technology. We are building an infrastructure using several technologies to deliver information that is the narrative of the city.

What's the difference between providing an open data set and providing useful open data with visualization?

There is no transparency without data usability. Tabular rows of numbers and machine readable formats of GIS shape data and CSV's of budget numbers are going to be there for those that want to analyze the raw data themselves. For the other 99% of the rest of us, there will be visualizations that explain the numbers.

How can Raleigh be a leader in the open data space?

We build on the work of the pioneers of the open data community and take lessons learned. I have spoken with most of the leaders within the open data community, with several citizen groups within Raleigh, and most of the city government leaders. We will adhere to the emerging global data standard and the ethical standards of open data as put forth by OKFN.

We are developing our own principles that match the culture of our city. Open Raleigh will be different than most North American efforts. We are emphasizing engagement and interactivity with our data. It is important to me that the citizen experience is visually compelling and informative. Health, culture, law, economics, science, and education will all be open topics. Anything that affects the quality of life of our citizens will be

reflected in the data we share through Open Raleigh.

None of this happens overnight. We start with the infrastructure and build out. This will be an iterative experience. The open data manager will not be the final arbitrator of what Open Raleigh becomes. It will be the citizens and City working together in governance over Open Raleigh.

My job is to facilitate and make the experience a positive one for our citizens.

The influence and impact of SeeClickFix

See. Click. And fix your city problem. It's as easy as 1-2-3. One of the first citizen engagement technologies deployed in Raleigh was SeeClickFix.

SeeClickFix is a way for citizens to report non-emergency problems to the city such as potholes, graffiti, or broken sidewalks. It uses the Open311 standard that coordinates a standardized, open-access, read/write model for reporting non-emergency issues. I'm a frequent SeeClickFix user. I report issues using the mobile application and the website. I've had great success with the tool in getting those issues resolved in a timely manner.

If you're a software developer, think about SeeClickFix as a bug reporting tool for civic infrastructure. Let's take a look at how SeeClickFix believes in the power of technology and community, then explore how SeeClickFix was brought to Raleigh. First, an interview with SeeClickFix CEO and co-founder, Ben Berkowitz.

Fixing your community one click at a time⁵³

No matter where you live or how big your community is, you probably see a few things that could be improved. Maybe you don't know who to call or email. Perhaps you think someone else will report it (or already has). Those unknowns go away with a simple technology that eliminates anxiety and empowers everyday citizens to improve their community.

The concept is simple. You see a problem, then check the mobile

⁵³ Adapted from 'Fixing your community one click at a time,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/10/fixing-your-community-one-click-time>.

application or website to report it or see if someone else has reported it. Your local government reviews the report to see if it can be fixed or if it's already on their to-do list. SeeClickFix removes the barriers for local governments, making it easy to set up a problem-reporting platform for today's resource-constrained municipalities.

I've been a SeeClickFix user since January 2011. With more than 40 issues reported under my belt, I've earned the *City Fixer* badge. One of the best ways that I've seen SeeClickFix described is in an article by Bonner Gaylord called, *They should fix that*.⁵⁴ It highlights the essence of SeeClickFix: citizen empowerment. I included Gaylord's post in the next section to help explain how SeeClickFix was brought to Raleigh.

SeeClickFix believes in the power of technology and community. It focuses on four principles that just happen to coincide with the pillars of the open source way: transparency, collaboration, scale, and efficiency. The transparency of reporting issues leads to participation, which ultimately makes the community better.

I got a chance to catch up with Ben Berkowitz, SeeClickFix CEO and co-founder. I asked him about the role that SeeClickFix plays in the open government movement and how it helps strengthen communities.

Tell us how SeeClickFix works.

A concerned citizen sees an issue in their community and reports it to SeeClickFix through our main site, through our mobile applications, or through a SeeClickFix widget on a local government, media, or community group website. When a report is submitted, SeeClickFix displays the report publicly and alerts people in the area such as neighbors and people who can fix the problem. This is done through our watch area feature that is available to everyone. Governments receive notifications when they sign up for our services or when a citizen creates a watch area on their behalf using a public email address. Media outlets receive notifications about issues in their area when they partner with SeeClickFix to help broadcast citizen concerns to a larger audience. Community groups and other citizens are notified to help stay connected to the community, and to each other. The fixing of issues submitted to SeeClickFix is done by any one of these groups or by collaboration

54 <http://southwestraleigh.com/2011/04/they-should-fix-that/>

between some or all.

How does SeeClickFix fit into the open government and gov 2.0 movement?

SeeClickFix is the first and largest open government community ever, with 70 government clients, 800 media partners, and thousands of communities across six continents participating. Each day, we help bring open government to more citizens and more local governments through our platform.

What's more important, transparency or participation?

Both are equally important to SeeClickFix. The transparency of our platform allows more people to participate in the process because information is made available to everyone. Governments and other organizations work best when their actions and decisions are carried out in public. Citizens who take the time to report even minor issues and see them fixed are likely to get more engaged in their local communities. Transparency and participation go hand-in-hand with SeeClickFix.

What's your role in being a community builder?

SeeClickFix provides the technology, but it's the hard work of engaged communities that make our platform a powerful tool for community building and organizing. We recently added several community managers to our team to provide support to neighborhood associations and community groups around the world using SeeClickFix. Citizens have used SeeClickFix to do everything from cleaning up blight to installing more bike racks. SeeClickFix has even helped bring a full-service supermarket to a community that was once considered a 'food desert.'

How can someone bring SeeClickFix to their city?

Citizens can start by reporting issues and encouraging their neighbors and friends to do the same. If their local government does not receive alerts about issues reported to SeeClickFix, they can sign up their mayor, city manager, or public works department by creating watch areas using public email addresses for each official or department. Citizens can share

their issues with each other and advocate for the resolution of issues within their community. SeeClickFix users have attended city meetings to discuss or even demonstrate the benefits of using our platform in their community. People can get their local media outlets involved by asking them to implement our text and map widgets and report on issues being reported within the community, giving citizens a greater voice.

“They should fix that” by Bonner Gaylord⁵⁵

How many times have you said that to yourself in your neighborhood? Passing by that leaning street sign, broken sidewalk, pile of trash, pot hole, graffiti, or broken streetlight. What did you do next?

Did you expend the energy to start down a mental road thinking, “OK, it’s not a federal issue, maybe I could call the Department of Transportation? Or should I call the county? No, this is probably the city government. Yep, that’s it...I think.”

Seeds of doubt are sown as you consider next steps...

- Who do you actually call?
- What are the chances you are going to get to the right person?
- How many voicemails are you going to have to trade back and forth over?
- How many days in order to actually connect?
- Once you do find the right person, what are the chances they will clearly understand your concern?
- Even if they do understand the concern, what if they immediately spill their coffee after your conversation and forget about you forever?
- What if they quit that afternoon?
- How in the world will anyone be accountable for correcting this problem?

Kudos if you care about your community enough to have even thought

⁵⁵ “They should fix that,” (c) 2011 Bonner Gaylord, reprinted with permission, available at <http://southwestraleigh.com/2011/04/they-should-fix-that/>.

this far. It's draining to think about, so if you are like me, you decide that it would be far easier to just live with the problem. You then make a mental note to add this to your annual tax season rant that your significant other enjoys.

Guess what?

You don't have to go down that mental road. There is now a new road that you can take. It's called SeeClickFix and it answers or renders moot all of the issues above.

SeeClickFix allows you to *anonymously* report an issue that will then be posted on a webpage for all to see and emailed to the appropriate staff member within your government.

You don't have to find the right person. You don't have to wait until that person is at their desk. You don't have to worry about how clearly your message was received. You don't have to worry if you will be forgotten and you don't have to worry about accountability. You report it, and your government has made a commitment to openly respond, follow up, and be held accountable.

Check it out. The "they should fix that" road just got bypassed. See how easy it is for yourself.

How SeeClickFix came to Raleigh

With the first proposal to deploy SeeClickFix in Raleigh came resistance and blank stares at the City Council table. Eventually, the City would unanimously bring the SeeClickFix platform in.

Again, City Councilor Bonner Gaylord was a champion for open government. He was instrumental in bringing SeeClickFix to Raleigh. At first, his idea was met with reluctance from council and staff about the program. To prove it would work, he launched SeeClickFix in his own district. After a successful pilot program, he worked with a local media partner, WRAL, to fund its city-wide deployment.⁵⁶

⁵⁶ http://seeclickfix.blogspot.com/2012_08_01_archive.html

After presenting the success of the pilot program in his district, Gaylord had full support of the Council to deploy the application across the city. SeeClickFix was launched in January 2011 by WRAL and continues to enhance the citizen experience.

An open platform for the future

In 2012, Raleigh made strides in advancing open government and open data. It started by adopting a policy that formalized the existing open source culture. Citizens can now visit Open Raleigh as their starting point for open data, open source applications, and ways to get involved. The technical foundation for an open source city has been constructed. The plumbing for government as a platform has been installed by the Raleigh information technology team. Combine these efforts with the ingredients of a supportive, participatory citizen culture, and the opportunities to take open government to the next level have never been higher.

Chapter 4: Supporting user groups, conferences, and events

In Chapter 2, we talked about some of the user communities that help create the culture in Raleigh such as CityCamp Raleigh, Triangle Wiki, and SPARKcon. There are many other user groups throughout Raleigh and the Triangle region that focus on software development languages, open source software, open source communities, and other technologies related to web and mobile development.

A few user groups that have been active for a number of years include TriLUG (Triangle Linux User Group), TriDUG (Triangle Drupal User Group), TriJUG (Triangle Java User Group), and other groups around Android development, social media, and languages, like Ruby on Rails and PHP. These groups are all self-forming and operate individually. Some groups are more formal while others are very casual. The commonality between each group is that they are passionate about their interests.

Four ways Raleigh supports user groups

The user groups that meet in Raleigh are fortunate to have a supportive business and government community, as I'm sure many other cities do. While each group has different needs, there are several ways that businesses and other organizations are helping out. Let's take a look at four ways user groups are supported by their community.

1) Space: Finding a place to meet

Most user groups meet on a weekly, monthly, or quarterly basis. And before they can gather, they need a place to meet. Their needs vary. Sometimes they need a meeting room with audio and visual equipment. Other times, they just need a table and some chairs in a room. And for some groups, a table in a coffee shop or a restaurant with WiFi will meet their needs.

Regardless of what a user group's space needs are, there are many companies, restaurants, and other organizations that will make their meeting rooms, large tables, and other spaces available for these user

groups. Sometimes, the meeting space comes with extra perks. Some sponsoring companies and organizations provide food and beverages. Some restaurants will even give discounts, provide special menus, or include free food for groups who bring a crowd. Supportive organizations are, many times, just happy to have folks utilize their space.

This is the type of support that helps our user communities thrive. And now that they have a place to meet, they'll need content for their meetings.

2) Speakers: Finding experts for presentations

User groups are pretty good about coming up with their own agendas for their meetings and meet-ups. However, sometimes an expert speaker is needed or the group wants to cross-pollinate ideas and topics.

The Raleigh community is good about providing speakers to various meet-ups and different events. Experts are willing to give up their time to speak to various groups and share their expertise. Through my travels and from what I've seen online, other communities also excel at bringing top-notch speakers to their meet-ups. Every community should leverage their speaking assets and start to share as much knowledge as possible.

I've been to TriDUG meet-ups where local Drupal shops have sent their search engine optimization (SEO) experts to give a presentation. TriLUG, whose monthly meet-ups are hosted at Red Hat, bring in experts who keep up with the latest trends in Linux, on topics such as security or new features.

In addition to providing speakers from their own organizations, members of the Triangle business community are also great about tapping into their networks on behalf of user groups. If source matter experts are traveling in from out of town and the timing works out, sometimes they'll attend meet-ups and often they'll present on a topic.

For Raleigh in particular, it's easy to find speakers on a variety of topics because of our proximity to three world-class universities. North Carolina State University is in Raleigh while the University of North Carolina at Chapel Hill and Duke University are close-by, within the Triangle. With all

those professors and PhDs nearby, it can be easier than you think to find an expert on whatever topic is needed. Most communities have access to similar talent.

3) Promotion: Spreading the word about user groups and events

The marketing specialists and social media experts in the Raleigh and Triangle areas are very supportive of the user group communities and help out by promoting events. Social media has provided a boost and made it easier to promote user group activities. But the real accelerator is when different organizations, including local media, pitch in to promote the different events and meet-ups happening in the area. Events get posted in online community calendars, shared on social media, and articles and blog posts are written by reporters and various local bloggers, respectively—both before and after events. And it's the storytelling that happens after events that contribute to the overall story of Raleigh's open source culture.

Spreading the word about user group events and happenings is not limited to support from the business community. It's not uncommon for user groups to support each other. Well-organized event coordinators will reach out to other user groups that may be interested in their event. This type of in-network support is one of the things that strengthens user communities.

And it spreads even further throughout the community. The support/buy local movement doesn't just apply to small businesses and local agriculture anymore—it's been a long-standing tradition in many cities and towns to support local user groups. In fact, one could argue that the *support local* trend may have some of its roots in open source communities. Because the business community has been so supportive of the different user groups, it's an easy choice for user group members to reciprocate that mindset and action.

4) Money: Getting financial contributions and sponsorships

Raleigh is blessed to have so many successful technology companies and other businesses that are supportive of the various user groups and events. Getting this support is not easy, but when the event matches the

open source and technology missions of local organizations, the sponsorships add up.

When CityCamp Raleigh was putting together sponsorship opportunities, the planning committee was able to gather the financial support to host a frugal, yet successful event two years in a row. It matched giving opportunities with appropriate support levels and targeted organizations that fit the mission of the event.

A new movement that started in 2012 called Innovate Raleigh, which we'll look at in more detail in Chapter 5, aims to gather momentum and awareness around Raleigh's innovative efforts. Various stakeholders from the business community, education institutions, and other organizations quickly gathered around the effort. Consequently, financial support from these organizations helped to host a successful event that welcomed 175 community and business leaders during a half-day innovation summit.

A signature, open source technology conference

While Raleigh doesn't have a signature open source conference, like Portland has OSCON, our community is eager to host an event that fits with our culture, or grow an existing event right here at home. With Raleigh's convention center boasting more than 32,000 square feet of space and 20 meeting rooms, there is plenty of availability for hosting a top-quality, annual open source technology conference.⁵⁷

Raleigh hosted the WWW2010 Conference (W3C) in April 2010 that brought together open source, open standards, and open government leaders from all over the world. One of the featured panels involved advocates talking about open government and the world wide web.

The opening ceremony of WWW2010 included a plenary panel, "Open Government and the World Wide Web," offering perspectives from both sides of the Atlantic on the move to make data more open and accessible on the Web (data.gov and data.gov.uk). The panel features inventor of the World Wide Web, Sir Tim Berners-Lee; Archivist of the United States, David Ferriero; Professor James Hendler of RPI, who will moderate the

⁵⁷ <http://www.raleighconvention.com/about/facilities/meeting-rooms>

discussion; UNC professor and Director of iBiblio.org, Paul Jones; Andrew McLaughlin, Deputy U.S. Chief Technology Officer in the Executive Office of the President; and University of Southampton Professor Nigel Shadbolt, Director of the Web Science Trust and of the Web Foundation.⁵⁸

When you look at the companies that sponsored the W3C event, you'll notice the typical web-related technology giants that you'd expect. But if you take a closer look, you'll see the local business community stepping up and sponsoring the WWW2010 Conference. Lulu.com, iContact, LocalTechWire, WRAL, Raleigh Economic Development, Red Hat, and others. It's this type of support from local businesses that will make future events in Raleigh successful.

Hosting a FOSS fair the open source way

The Office of Information Technology at North Carolina State University, in cooperation with Red Hat, created the NCSU Open Source Initiative. Since 2009, as part of their support for the open source community, NC State has hosted an annual open source-focused event called the FOSS Fair. In the open source world, we refer to free and open source software as FOSS.

The FOSS Fair is an unconference style event similar to BarCamp. Think of the FOSS Fair as a specialized BarCamp for open source. The presentations are driven and delivered by the participants. Any topic related to free and open source software can be presented.

This event brings together open source advocates in a very casual setting, allowing participants to share their knowledge and passion. I attended my first FOSS Fair in 2012 and returned for my second in February 2013. I was more prepared, and not only did I learn a few things, I got a chance to share my knowledge, expertise, and passion about open source. I came prepared with three presentations, mostly non-technical in nature.

Remember, the talks that earn a speaking slot and get presented are chosen by the attendees. So, I went in with the mindset that it was perfectly alright if my talks weren't selected. To my surprise, all three

⁵⁸ <http://www2010.org/www/program/panels/index.html>

made it to the schedule for the day. And all three proved to be well attended. My presentations included *Path to the open source city, 10 ways to get started with open source [without writing any code]*, and *Creating an online community the open source way*. The presentations are available on the FOSS Fair wiki page.⁵⁹

It's events like this, that start small and grow organically, that contribute to the open source culture in Raleigh. There is no reason why an event such as the FOSS Fair could not grow into a signature part of the open source city brand in Raleigh.

Maker Faire and the DIY movement

Back in 2009, the Do It Yourself (DIY) movement in Raleigh took a step towards better sharing and started to organize fellow hobbyist who identify themselves as “makers.” While national in nature, the maker movement started to take hold in North Carolina with their first statewide gathering.

I would go as far as to say that makers are DIYers with an entrepreneurial spirit. Makers represent a key part of American innovation, and Raleigh's culture is in-line with this community-driven maker movement. Enough so to start their own Maker Faire North Carolina.

MakerFaire.com says that many makers are “hobbyists, enthusiasts, or students (amateurs!)—but they are also a wellspring of innovation, creating new products and producing value in the community. Some makers do become entrepreneurs and start companies.”⁶⁰

Maker Faire is a family-friendly showcase of invention, creativity, and resourcefulness—a show-and-tell, if you will, that highlights the open source principles of sharing, transparency, and collaboration. There are national and international Maker Faire events held around the world that attract thousands of people. That movement has gone local and Maker Faire events are also independently organized and operated under license from O'Reilly Media, such as the one hosted in Raleigh. Again, this is similar to the TEDx, Ignite, and CityCamp models that enable participants to organize a local community of passion under a well-known

⁵⁹ <https://opensource.ncsu.edu/FossFair2013>

⁶⁰ <http://makerfaire.com/be-a-maker.html>

brand.

Conceived as an annual event in October 2009, the first Maker Faire North Carolina event was held in April 2010. Attendance has grown from about 2,000 in the first year to an estimated 4,000 attendees in 2012.

“Open source is certainly a shaper of Maker Faire North Carolina and is as much a feeling as it is law. Most people are compelled to share, to be open, and willing to collaborate to improve. Maker Faire North Carolina provides those people with a mechanism for collaborating in the real world,” said Jon Danforth, founder of Maker Faire North Carolina.

The DIY and maker movements are examples of like-minded people discovering their passion and coming together to form a community of practice. The hobbyist who formed the maker movement found a way to collectively share their passion using open source principles to create a successful annual event hosted in North Carolina’s capital.

A playbook for user groups

An idea that’s worth exploring is one that could take the user groups planning experience to the next level. There is prime opportunity to create an open source playbook for user groups. What do I mean by this? Let me explain.

As a user group coordinator, I know we’re always looking for places to meet and people to speak. It would be great to have a playbook filled with local knowledge for coordinators. Here’s what this resource might look like.

First, we’d look at an online calendar to pick a date that wouldn’t conflict with other user groups or other major events that might attract the same audience. Then, we’d look at space needs.

The playbook would be similar to booking a hotel room. It would list meeting spaces available and coordinators would be able to input options such as number of attendees and select options regarding audio/visual equipment, private room or public/social space, WiFi, and food/beverages.

After an available space can be identified and reserved, potential

speakers would be the next component. Coordinators would be able to search a listing of past speakers and potential speakers by topics and availability. Do you see where I'm going with this?

This playbook would be a substantial resource for local user groups. The platform itself would be open source so that anyone could enhance and improve it. The playbook could potentially live somewhere like meetup.com—if it was willing to host and manage an open source project of this caliber. And I do think the code base for this needs to be open source for the playbook to be successful. That's the best way for it to be reused in other communities.

The real advantage comes from the communities that input data into the playbook. Just like they would enter information on a wiki page. It would take the effort of community organizers, local businesses, and organizations who have meeting space, and finally, speakers who are willing to share their expertise with the user groups.

A playbook like this for local user groups could be revolutionary.

A leader in open source

The support from the local community to foster user groups with space, speakers, promotion, and money is evident with the success of the various user communities in Raleigh. Furthermore, Raleigh user groups could unite to create a substantial resource in a game-changing playbook. The playbook could be used worldwide but would have its creative and innovative roots in Raleigh. It's a resource like this that would add to Raleigh's leadership in open source.

While Raleigh is looking to host a top-quality, annual open source technology conference, we have plenty of community-organized events already happening. SPARKcon, founded in 2006, is Raleigh's premier open source event. It's four days of awesome creativity that comes with a Do It Yourself spirit. SPARKcon has a steady stream of creative ideas on display from a very talented community.

And the other events in Raleigh add more to the mix. FOSS Fair started in 2009, Maker Faire North Carolina was first held in 2010, and CityCamp Raleigh joined the scene in 2011. Individually, these events highlight the

open source way by showcasing creativity, free and open source software, makers, and open government, respectively. Collectively, they bring together communities of passion and contribute to the story of Raleigh's open source brand.

Chapter 5: A hub for innovation fueled by open source

Creating jobs and fostering innovation is another component of the open source city brand. Finding ways to boost the startup community and support existing business clusters using open source principles can give any city a competitive advantage.

I'll first share some thoughts from James Sauls with Raleigh Economic Development on how open source can influence Raleigh's future technology and software clusters. Ironically, open source presents a challenge to the traditional economic development model.

Then, we'll talk with David Diaz, president and CEO of the Downtown Raleigh Alliance, about establishing a baseline for economic development efforts focused on downtown Raleigh. The Alliance is responsible for being a champion for downtown Raleigh, bringing together merchants, businesses, and the community to work with city government for a better downtown. And believe it or not, open source principles such as transparency and collaboration are key components to their strategy.

There is a strong effort afoot to promote Raleigh as a city of innovation. Being involved in some of those efforts, I agree that Raleigh has the foundation, but is missing a few key connections. We're really close though. One initiative we'll take a further look at in this chapter is Innovate Raleigh. We'll explore some of the ideas behind branding Raleigh as a city of innovation and how open source is a part of that discussion.

We'll also explore some of the efforts by NC State and how it has partnered with the City of Raleigh and other organizations to support the entrepreneurial community. Lastly, we'll take a look at some of the successful open source companies in Raleigh that are creating an open source hub in the business community.

How open source disrupts traditional economic development

Before, I always instinctively thought that open source would offer a competitive advantage to any community where an open source company had a strong presence. But because I've been in Raleigh for over 15 years and at Red Hat for over 10 years, my views are a little biased and skewed because of my environment.

It was eye-opening when I talked to James Sauls, Director of Raleigh Economic Development, a program sponsored by the Raleigh Chamber of Commerce to help support the city with its economic development strategy. I learned that the ideals of open source present a real challenge to developing a legitimate business cluster around open source. Let's see what Sauls had to say about the influence of open source in Raleigh.

What does open source mean to Raleigh Economic Development?

In the beginning we knew that it meant software. We had just successfully retained one of our most important headquarters, Red Hat, and we knew that they produced open source software. Through our ongoing relationship with them, we've learned that it means much more. It is not only software, but a culture that can help guide and shape individuals, communities, and corporations.

What is the purpose of the Raleigh Economic Development organization?

Raleigh Economic Development is a program of the Greater Raleigh Chamber of Commerce that is funded by the City of Raleigh and the private sector through a program called Competitive EDGE. The purpose for the program is to provide marketing, business recruitment, and business retention for the City of Raleigh. The main goals for the program are to market Raleigh's various initiatives, create new jobs, and increase the city's tax base.

What role does Raleigh Economic Development play in attracting businesses and talent to Raleigh?

Raleigh Economic Development is the lead partner to the City of Raleigh

for business recruitment. The community practices “cluster-based” recruitment. The clusters focus on IT/software, life sciences, medical devices, defense technologies, and clean technology.

The program travels to strategic tradeshows to meet with companies, meet with site location consultants, and perform direct business-to-business recruitment calls.

Would “open source” make a good technology cluster in Raleigh?

Yes, the challenge for us is to fully understand how to identify and promote “open source” so that it does not conflict with the thinking of the open source culture. In a traditional model, we would identify companies that operate in a cluster, identify the support resources available to those companies, and then make a claim as to why we are “the city for that cluster.” With open source, the challenge that we’ve experienced is that the culture does not promote itself as “the.” It’s more of a we. And that doesn’t fit our traditional model.

Another reason open source makes a good technology cluster for Raleigh is that it converges with many of our established clusters. It is a philosophy that the city has adopted and is using in its own operations.

What advantage does being an open source city mean from an economic development standpoint?

It certainly adds a brand to Raleigh that is consistent with where the global mindset is headed. A city that can promote itself as an “open” community will have a competitive advantage in recruiting companies and talent. Tomorrow’s talent is looking for cities that have an “open” culture. And Raleigh definitely has that going for it.

Open source develops the future of downtown Raleigh⁶¹

Can you revitalize a city and attract businesses using open source principles? David Diaz, president and CEO of the Downtown Raleigh

⁶¹ Adapted from ‘Open source develops the future of downtown Raleigh,’ (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/8/open-source-develops-future-downtown-raleigh>.

Alliance thinks so. In fact, I got a chance to sit down with Diaz to discuss how economic development organizations are interacting with their local and state government, citizens, businesses, and landlords. Diaz and his organization apply the principles of transparency, participation, and sharing to their economic development programs.

Let's explore how open source is applied to economic development, how his organization works with local government, and what the programs are the Downtown Raleigh Alliance has implemented.

What is the Downtown Raleigh Alliance, its mission, and its purpose for existing?

Downtown Raleigh Alliance was created in 1996 by a coalition of realtors, merchants, local government, and community advocates who live in downtown or are vested in downtown. It's well-known throughout the country that no single sector can revitalize a downtown on its own. Many governments have tried to lead a downtown revitalization on their own, but are faced with unwilling landlords, landlords that want to do more, an active and caring business community, and local governments leaders who don't have the passion.

We've brought together these groups with a shared vision: be the champion that can marshal the best resources of each sector for the common good. On a day-to-day basis, we are focused on delivering services that go beyond what local government can/won't do or providing individual things that they can/won't do. We have four programs that fill these voids: the ambassador program, economic development, branding, and public space management.⁶²

We also play a big role in advocacy—we have a close relationship with the City of Raleigh and do our best to balance that. However, we're also a critical friend of the City of Raleigh and often act as a mediator. We tell the merchants and business owners that we're not going to throw the City under the bus, but we will do our best to discourage them from supporting policies that harm downtown. We are always balancing the interest for the overall good of downtown.

⁶² <http://opensource.com/government/11/8/open-source-develops-future-downtown-raleigh#details>

How does the Downtown Raleigh Alliance work with local and state governments?

Our Board of Directors includes a City Council liaison, appointed officials, city and county managers, and two state delegates. It's unique for this type of organization to have state delegates, but it makes sense because we're also the state capital. They serve on the board and provide direction for the organization.

We are also a client of the City. We have a contract with public works to use our ambassadors to patrol parking garages. The city needed eyes and ears in the parking garages throughout downtown and our ambassadors were already trained to provide this type of service.

Another way we work with local government is with long-term planning for downtown. We work collaboratively with the Department of City Planning for the physical development of downtown. Back in 2003, the Livable Streets program was initiated. This type of program had a 5-10 year lifespan.

The planning process for Livable Streets was incredibly open to the public. A citizens task force was appointed to help guide the plan. The task force included individuals interested in transit, the transportation network, and how to make downtown more walkable—creating a better pedestrian environment.

We want people [that live] outside of Raleigh to weigh in on downtown Raleigh. We want it to be their downtown too. Raleigh has potential to be the state's downtown. Open source is the way that we can encourage stewardship and ownership of downtown to make it more resilient and successful.

How important is open source to local economic development efforts?

It's huge. Because one of the biggest challenges (in terms of attracting companies to downtown) is lack of good information. The more transparent we are with a prospect interest in attracting a new business, the more successful we tend to be. When we don't share information, they'll find out later. There is a perception of urban areas being more

dangerous, and our data helps to prove otherwise.

We are always trying to publish more information about downtown. We collect baseline data such as the number of residents and companies downtown, but also find information about the number of outdoor dining cafes. I think this make us unique.

In the branding downtown effort, open source has been invaluable. Focus groups helped shape the [award winning] You R Here brand. We conducted interviews with passionate folks about downtown, including elected officials, property owners, advocates, and also opened it up to others. We asked things such as “what do we need” and “what’s the essence?”

The people that were most passionate had the hardest time stepping away from it and couldn’t give us the insights that we eventually uncovered. The person with a loose association [to downtown] gave us better insight. This was an ah-ha moment. If you only involve the advocates, you don’t get the broader view. Participation from all made the information better.

Connecting the dots: Open source, government, and economic development⁶³

In the previous section we explored how open source is applied to economic development, how the Downtown Raleigh Alliance organization works with local government, and the programs it has implemented. Now, David Diaz tells us how influential the open source philosophy is to local leaders and how they educate government and business leaders about the power of open source. He also shares his experience with citizen participation and how he uses the open source way in his everyday life.

Do you think most local leaders view open source as important to

⁶³ Adapted from ‘Connecting the dots: Open source, government, and economic development,’ (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/8/connecting-dots-open-source-government-and-economic-development-part-2>.

economic development?

Yes. Most peoples' initial reaction would be that an economic developer has to keep information close to their chest. The only time you have to do that is when the client talks about it or there is a closed session with city council to close a deal. What economic developers worry about the most is a prospective client getting inaccurate information about their products (land sites, districts, etc.). It's crucial that they use an open source strategy so that the competition doesn't say bad things about them.

We are constantly talking about the products and sharing information. We are inherently supportive of the open source way—confidentiality is just a small part, but necessary in this business.

How do we educate government and business leaders about the power of the open source way?

We have got to support and create processes that are open, but lead to tangible results by virtue of the open source way. City Plaza [a central gathering place in downtown Raleigh] is a great example. Aly Khalifa at Design Box is not an urban designer or an engineer, but the city opened up the design process for the creation of the City Plaza. There are people like him that designed it because he was able to participate.

We also need to link the process to the success of a public place or a facility. If you just talk about the fact that City Plaza attracts over 100,000 people per year, people won't think about the design and realize how important citizen input was to the outcome. Governments have to connect the dots with the value of an open source process to what the community sees as success. We don't do enough of that. We need to talk more about an open process as a means to creating a great city.

But there are a few things that represent a challenge. Can you have an open process for an assisted living community in your neighborhood? Governments find it hard to embrace open source across the board when they know they're going to get hammered by neighbors who are likely to take a NIMBY (not-in-my-backyard) approach. They can see the writing on the wall. The challenge for open source is solving conflicting issues such

as neighbors versus developers.

Is there more citizen input in Raleigh than other places?

Absolutely. There is an inverse correlation to citizen participation and the level of technical work with a government project. This is evident in more of the complex stuff such as road projects, however it varies across departments. Raleigh sets the example in terms of allowing citizen input –it’s part of our culture already because the government here is reflective of the community.

I think citizen participation is more unique in Raleigh than in general. I’ve been really impressed by the amount of time that citizens in Raleigh spend understanding very technical and highly sophisticated issues. Many citizens here advocate in an informed way, rather than the reactionary, less thoughtful way that is often publicized.

In this context, I’m defining communities as a city of more than 420,000 residents. There aren’t too many cities of this size that bring that much [citizen participation] to government.

How do you apply the open source way in your everyday life?

While I’m not an elected official, my position is a public one. I’m frequently asked to comment on things related to my job. I work in an environment where I have to respond to the media and be open to the public about what’s happening in downtown and to downtown. In essence, I choose to be responsive to the public and very transparent in my responses.

Does this change your views on how open source can influence an economic development strategy? Before my interview with Diaz, I never thought about how critical transparency of information was to economic development. And while I had a good idea that citizens in Raleigh were active with feedback about their growing community, it’s nice to see someone who relocated to the area confirm how effective citizen participation has and continues to influence the future direction and development of Raleigh.

Hosting an innovation summit

In January 2012, the City of Raleigh partnered with the Raleigh Chamber of Commerce, NC State, and local businesses to host an innovation summit. The purpose of the summit was to bring business leaders, entrepreneurs, marketers, investors, city officials, and thought-leaders together for an afternoon of discovery. Open source was at the heart of how the organizers were looking to achieve consensus from those invited to participate in the first Innovate Raleigh Summit.

There were four main topics organizers focused on to kick off this initiative: funding, partnerships, branding, and space for an innovation center. The Summit started with two keynote speakers that helped set the stage for the day.

The first speaker was Tom Murphy, former mayor of Pittsburgh, Pennsylvania who helped revitalize his city through urban planning. He shared some of the success stories from Pittsburgh, but also discussed how other cities and regions are innovating in the United States and around the globe.

Murphy talked about Silicon Valley. He told attendees that Research Triangle Park (RTP) "enjoys the country's second-best [innovation] brand behind Silicon Valley. But you've lived off that brand for 20 years." Murphy was hinting that RTP has outlived the innovative research brand and its time to reposition itself in a global environment.

The next speaker was Mitchell Silver, City of Raleigh Planning Director. Silver highlighted some of the population trends and outlooks for the Research Triangle Park region. He stunned the crowd with his myth busters, sharing several misconceptions about the area, then showing the data behind the myth. For example, there is a perception that RTP doesn't have enough investors. In fact, as Silver pointed out, there are 101 different investors in 25 active venture capital companies.⁶⁴ Attendees were inspired and ready to collaborate.

After the keynotes, attendees split into four groups, each aligned to a topic area mentioned above. I led the brand group in a design thinking

⁶⁴ Center for Economic Development, p. 7, Innovate Raleigh report - <http://research.ncsu.edu/innovation/files/2012/02/Final-Innovate-Raleigh-report.pdf>

session—a structured brainstorming process that is creative, collaborative, and leads the group to a set of top answers based on group consensus.

The 40 participants in the room didn't know that the open source process they were using during the session was part of the lesson. We captured ideas, voted on them, and discussed the winners.

The session lasted for two hours. We split the room into four groups, each answering the same questions at their individual tables. I was curious if there would be an overlap of ideas across the groups, but to my surprise, there wasn't. There were some common themes, but there was a lot of diversity in the answers.

The design thinking process helped us create an atmosphere of trust, sharing, and collaboration. Not only was this effective for the branding group, but the other groups experienced similar results. In fact, the other three groups successfully used the design thinking process to reach similar conclusions. The transparency, openness, and sharing discovered through this exercise proved to the attendees that the power of using an open source approach can lead to the desired results.

At the end of the day, all the groups came back together and a spokesperson gave a summary of what happened in his or her session. The best part about the innovation summit wasn't that we came together and shared ideas, but that the real work would continue long after the lights went out.

After the event was over, a report was created about the day's progress and made openly available.⁶⁵ Monthly meet-ups helped to maintain a constant drumbeat and advocates continue to highlight innovative businesses and ideas happening in the community. You can also see a constant stream of updates by following the hashtag *#innovateral* on Twitter.

It was really powerful to see my local government partner with a major educational institution and the business community to host the Innovation Summit. And it wasn't just a one-off event where people came together to generate a bunch of ideas and then go home. After the event, ⁶⁵ <http://research.ncsu.edu/innovation/files/2012/02/Final-Innovate-Raleigh-report.pdf>

organizers developed a roadmap and created milestones for the future. The icing on the cake was using an open source approach as the foundation for the summit. It allowed the organizers to create a collaborative atmosphere that was inclusive for all attendees and advocates so they could share information and stories from the event.

A year after the innovation summit

The Innovate Raleigh Summit was the first domino to fall, adding real momentum and effort behind branding Raleigh as a city of innovation. It started a chain reaction of events and sparked the entrepreneurial community to join together. Part of the roadmap from the organizers was to host monthly meet-ups. We'll take a brief look at some of those meet-ups and some of the other dominoes that fell into place after the summit.

Without a "champion" behind the scenes, an initiative like Innovate Raleigh doesn't come together on its own. At-Large City Councilor, Mary-Ann Baldwin, was that champion for Innovate Raleigh. She spent a tremendous amount of time and effort bringing the event to fruition. She helped pull all the major players together to host the innovation summit and continues the effort by leading a steering committee that has continued to foster ideas generated from Innovate Raleigh. In full transparency, I participate as a member of the Innovate Raleigh steering committee.

Innovate Raleigh meet-ups

As I mentioned, one of the roles I played during the Innovate Raleigh Summit was to lead the brand breakout group in a design thinking session. After the event, I continued to participate in the Innovate Raleigh steering committee. I also assisted James Sauls, Director of Raleigh Economic Development, and Derrick Minor, then Director of Downtown Development with the Downtown Raleigh Alliance, with planning the monthly meet-ups.

During the Innovate Raleigh Summit planning, I was adamant about having at least one follow-up event for attendees and other interested folks to put on their calendar. It would serve two purposes. First, it would coincide with the deadline for the written report from the Summit.

Second, it would give an opportunity for the broader community to participate and learn more about Innovate Raleigh.

The first meet-up, held about a month after the Summit in February 2012, was a huge success. Over 100 people attended. The report (referenced above) was made available and as expected, the entrepreneurial community started to take notice.

In March 2012, Innovate Raleigh teamed up with Triangle Wiki to support the official launch of trianglewiki.org as part of the second meet-up. Subsequent meet-ups focused on topics such as fashion, space design, and talent attraction in April, May, and June, respectively. One of the final meet-ups, in July, highlighted the results from CityCamp Raleigh 2012 and included a demo from the winning team.

The formal meet-ups stopped halfway through the year. It wasn't because the attendees didn't enjoy the topics or the networking component. The formal planning of the meet-ups had achieved their goal. The community was starting to network on their own and host their own meet-ups. Mission accomplished.

Sparking connections in the air and on the ground

One of the top wish list items that came from the Innovate Raleigh Summit was for there to be a direct flight to and from Raleigh-Durham International Airport (RDU) and San Francisco International Airport (SFO). That wish came true in August 2012 when United Airlines began offering direct flights from RDU to SFO. I've been on this flight and it saved me hours of travel time. I was able to leave San Francisco at 2:00 pm Pacific Time and was back in Raleigh shortly after 10:00 pm Eastern Time. No connections, no layovers. Just a quick coast to coast flight and more time with my family.

The direct flight is expected to help business travelers like myself cut down on travel time, but also provide better connections between entrepreneurs and investors. The flight also connects Raleigh to a major west coast hub, which should assist in economic development opportunities in Asian markets.

Members from the Innovate Raleigh steering committee played a key role in working behind the scenes to make this happen. They coordinated research with local companies around travel habits and coordinated efforts with the appropriate airport authorities. The end result is something all travelers will benefit from.

The other major topic was to create a physical storefront to highlight the innovation happening in Raleigh—a place for people to create, connect, and collaborate. While Raleigh doesn't have that one central place to go to right now, we have seen a number of incubators and co-working spaces come together in the last two years.

A fashion incubator named Raleigh Emerging Designers Innovation Incubator (REDii) opened in May 2012. HUB Raleigh, a co-working space for entrepreneurs that brings its own global network, opened its doors in September 2012.

DesignBox, a co-working space for independent creative professionals, that helped create SPARKcon, has been around since 2003. Other co-working spaces include the Raleigh Forum and the Wilmoore Lofts. New co-working spaces in 2012 include LocalSense HQ and the Raleigh Foundry, which opened in July and August, respectively.

Compared to other cities like Denver, Colorado, there is an opportunity for Raleigh to grow its entrepreneurial and startup presence. The resources, entrepreneurs, and investors in Raleigh are physically spread out around the city and lack a central location. The idea behind having an innovation center in Raleigh is to have a central hub that would connect the various components of this innovative community.

While the concept of having an innovative storefront is still being flushed out by the Innovate Raleigh steering committee, the Council for Entrepreneurial Development (CED) and NC State have committed to creating an online resource. This digital storefront would be a guide for innovators, entrepreneurs, investors, and small business owners in the Triangle region. The Council for Entrepreneurial Development hired a dedicated person in the fall of 2012 to work on this project. And from what I understand, there is a strong desire to build this resource using

the open source methodology and open source technologies.

NC State feeds the innovative engine

What else, besides government initiatives, is fueling the need for more co-working and incubator space in Raleigh, and how does that relate to open source? Part of the answer lies in the universities and community colleges in the area. Primarily, NC State University has a variety of programs and partnerships that are feeding the economic development engine of Raleigh.

The Entrepreneurship Initiative at NC State⁶⁶ is focused on multidisciplinary participation between faculty, staff, industry, and students. The program is building a community to create an immersive entrepreneurial experience. One way it is accomplishing this is with an innovative meeting space called The Garage.

The Garage provides students a place to foster new ideas and work on their entrepreneurial endeavors. The Phase I facility was designed as a proof of concept with 2,000 sq. ft. of meeting rooms, lounge space, basic laboratory space, a wood working shop, and prototyping area. The University is planning a 20,000 sq. ft. facility for the Garage Phase II that will be the centerpiece of the Entrepreneurs Village on Centennial Campus, a living/learning community for students built on the theme of innovation and entrepreneurship.

The Office of Research, Innovation, and Economic Development⁶⁷ is leading the innovative efforts at NC State. It is responsible for bringing partners together with researchers to create a culture of innovation. It supported and partnered with Innovate Raleigh to plan and host the innovation summit. It also hosts information about Innovate Raleigh on its website.

In 2012, NC State announced the NC State Fast 15,⁶⁸ a program to help double the number of startups launched by NC State faculty and students. The NC State Fast 15 is a portfolio of the fifteen most compelling business opportunities across the university. The program provides mentoring by experienced entrepreneurs, business launch

⁶⁶ <http://ei.ncsu.edu/>

⁶⁷ <http://research.ncsu.edu/>

⁶⁸ <http://research.ncsu.edu/ott/for-entrepreneurs/nc-state-fast-15/>

planning, and assistance in attracting interest from potential investors.

These are just a few examples of some of the efforts from NC State. The university definitely sees the value in fostering entrepreneurship by providing programs, such as the NC State Fast 15, and physical space for innovation, such as The Garage. Its efforts like these and establishing key, collaborative partnerships in Raleigh, that contribute to it being an open source city and a city of innovation.

Open source: A pillar of an innovative brand

Raleigh is well-known for being the “City of Oaks.” But that brand doesn’t do much for our economic development efforts. Being a “city of innovation,” however, does resonate with startups and businesses looking to relocate or expand and organizations looking to host events.

Innovation and open source seem to go hand-in-hand in Raleigh. The culture is influencing innovative ideas, but more importantly, how those ideas are coming to fruition.

I’ve been talking a lot about the idea of an open source city brand, but haven’t explained the larger concept of brand itself. There are two definitions I use when I think of branding:

1. A brand is a promise.
2. A brand is what your customers, or citizens in this case, say it is.

Raleigh would be unsuccessful in claiming the open source city brand if it didn’t have the proof points and stories to back it up. This book establishes the relevance of the actions taken by citizens, government, businesses, and other organizations highlighting the various components of Raleigh’s open source city brand.

I have focused the last few sections on economic development and entrepreneurship—drivers of innovation in any community. What makes Raleigh different is the fact that the open source way influences how decisions are being made, what information is being shared, and how we can collaborate across industry clusters.

Raleigh’s effort to brand itself as a city of innovation does not compete

with the open source city brand. In fact, they compliment each other very nicely.

When I led the branding session at the Innovate Raleigh Summit in January 2012, I told the attendees the following: *The challenge we have is how to brand Raleigh as a city of innovation without saying we're innovative.* I described the following framework to the participants to provide a visual aid for this branding effort.

Picture the Greek Parthenon. Envision innovation as the roof, the overarching brand if you will, and the supporting concepts and clusters that support the brand as the pillars. Some of those pillars would be existing and future clusters. Technology, smart energy, fashion, life sciences, biotech, textiles, and microbrewing would be a few that would support Raleigh as an innovative city.

Before, I thought that open source was one of those supporting pillars. But, as I further developed the concept, I realized that open source was the foundation. In Raleigh, the open source way is embedded in our culture and therefore permeates through each supporting pillar to create our brand of innovation. Each cluster supporting the innovation brand is influenced by the open source way.

A hub of open source companies

Being a hub for open source companies and a catalyst for open source startups is a competitive advantage for Raleigh. Red Hat has its global headquarters in downtown Raleigh. Having its workforce participate in local community events, causes, and organizations has shaped the community and influenced the culture to accept open source as a better way to approach life and business.

While Red Hat is a large, publicly traded company, there are other open source companies and remote workers of open source companies in the Raleigh area that also contribute to the culture.

Lulu⁶⁹ is an open publishing company based in Raleigh, founded by Bob Young, a co-founder of Red Hat. Lulu has built a self-publishing platform that allows authors and other creators to self-publish hardcover books,

⁶⁹ <http://www.lulu.com/us/en/about>

eBooks, photo books, calendars, and more. Authors maintain all the rights to their work and take 80 percent of their profit. Lulu is blazing an open source trail in the publishing industry.

New Kind⁷⁰ is a consulting company in Raleigh that sprinkles in parts of a communications and design agency to build and cultivate communities. Essentially, it is a community catalyst that relies on the open source way to help organizations solve problems and engage communities. Open source and community building are essential to its work.

I know most of the team at New Kind. I've either worked with them in past roles at Red Hat or on new initiatives within the Raleigh community. This is a company that is proving that open source can be applied outside of the technology industry.

Axial Exchange is a healthcare technology startup aiming to enhance communications between the hospital, its patients, and their providers. Its team includes former Red Hat associates that are applying open source principles to innovate the exchange of health information.

Another company that has ties to Raleigh is Alfresco. It provides an open source, enterprise content management solution. While it doesn't have office space in Raleigh, several of Alfresco's key leadership positions—including Chief Marketing Officer, VP Customer Services, and General Counsel—are filled by people who live in the Raleigh area and previously worked at Red Hat.

rPath was another Raleigh company in the open source technology sector. It provided an automation platform for deploying and updating software stacks across a variety of technology environments. It developed an open source package management and configuration tool called Canary. Similar to other Raleigh companies, rPath had ties to Red Hat employees. It was acquired by the SAS Institute in November 2012.⁷¹

These are just a few examples of companies in the Raleigh area that have ties to open source. It's interesting to see the principles of open source being applied outside of the traditional software industry. In the above sampling, we have illustrated open source applied to self-publishing,

⁷⁰ <http://newkind.com/home/our-story/>

⁷¹ <http://www.sas.com/news/preleases/rpath-asset-acquisition.html>

healthcare, and community building. And while all of these examples have ties back to Red Hat, it speaks volumes about the impact Red Hat culture, and consequently open source culture, has had on influencing the citizens in the Raleigh and Research Triangle communities.

Raleigh is primed to see future open source companies rise to solve 21st century problems and explore disruptive business models where open source principles can show their strengths. Companies looking to utilize the competitive advantages of open source should consider Raleigh as a future destination for their business. And for open source cities like Raleigh, the migration of people moving to the area is an indicator that the innovative efforts happening here aren't going unnoticed.

Chapter 6: The principles of being an open source city in action

Now that we've explored the five characteristics of an open source city—fostering a culture of citizen participation, developing an effective open government policy, implementing an effective open data initiative, promoting open source user groups and conferences, and providing hubs for innovation and open source businesses—we're going to leave the confines of Raleigh to see how other organizations and cities are applying the principles of open source to their governments.

In part one, we'll take a look at Code for America, an amazing organization pushing the open government movement. In part two, we'll take a tour of a few CityCamp events from around the United States. Then, in part three, we'll bring it back around to the capital of North Carolina to take a look at CityCamp Raleigh and how it's evolving into something more than just a weekend event.

Part 1: Code for America

Code for America⁷² helps governments work better for everyone by mobilizing citizen participation and using the power of the web. It was founded in 2009 and held its inaugural fellowship in 2011 with 19 fellows and three cities.⁷³

Code for America builds open source applications and communities by satisfying an unmet civic need. It's often described as a "Peace corp for civic minded geeks."⁷⁴ Cities apply each year to partner with Code for America. After the selection process, tech-savvy fellows are assigned to cities to build an open source application of the city's choosing.

Adopta is a web application that encourages citizens to adopt civic infrastructure, such as fire hydrants, storm drains, and trees. It's similar to adopt-a-highway or adopt-a-stream programs where citizens gather to do roadside or stream clean-ups.

⁷² <http://codeforamerica.org/>

⁷³ http://codeforamerica.org/wp-content/uploads/2012/11/2012-11_PressPacket.pdf

⁷⁴ <http://www.good.is/posts/part-peace-corps-part-venture-capital-code-for-america-s-plan-for-public-innovation>

⁷⁵ <http://online.wsj.com/article/SB10000872396390444270404577605622944527722.html>

The Adopta application was built for Boston, Massachusetts and started as Adopt-A-Hydrant. Citizens are able to adopt a fire hydrant using the web application and are responsible for clearing out the hydrant after snow storms.

The Adopta code has been repurposed in other cities around the United States. In Chicago, Illinois, the application was used for citizens to adopt sidewalks. Adopters are responsible for clearing sidewalks after snow and ice storms. In Honolulu, Hawaii, Adopta allows citizens to adopt sirens to help with monthly tsunami siren testing.

How can cities take advantage of these existing, open source applications and bring them to their citizens? The Code for America Brigade program is building open source communities and helping to deploy existing civic applications. By increasing the adoption of these applications, more cities will be using open source. The communities around the civic applications will grow. Ideally, cities become networked through open source communities and the applications will be enhanced and improved.

Let's find out more about the amazing work and leadership of Code for America.

Hacking on code and culture: Failure as validated learning⁷⁶

As you've been able to see, open source is about much more than the code—it's about the culture. This culture that many open source communities embrace is entrenched in organizations like Code for America. That was obvious as I listened during the opening day of the Code for America Summit in San Francisco, California, in early October 2012.

Jennifer Pahlka, founder and executive director of Code for America, started off the conference with a call to action, "Beliefs aren't enough, we have to act."

⁷⁶ Adapted from 'Hacking on code and culture: Failure as validated learning,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/10/hacking-code-and-culture>.

One of those actions was announced during her keynote. Code for America announced a new peer network for cities. Why? Because "networks do what individuals can't." The program aims to connect change agents in local government around big ideas and make government more engaging for citizens.

Tim O'Reilly took the stage with Eric Ries, author of *The Lean Startup* and a newly-announced Code for America board member. They talked mostly about the book and how the principles outlined in the book can be applied to government. The model of a startup and the concept of failure were the two hot topics.

Ries defines a startup as a human institution. The size of the institution doesn't matter and the sector doesn't matter either. While Ries never considered government a sector, the idea of applying his concepts about startups to government has made it all the way to The White House.

Do you live in a culture where failure is not an option? Ries says that if you are, you are lying to your team or organization. O'Reilly and Ries went back and forth about how much and how often "government" could fail. Ries summarized failure as validated learning. And governments can fail safely as long as there is strong executive leadership and sponsorship.

David Eaves, the master of ceremony for the day, really summarized things for me when he said:

"Code for America is not really about hacking code—it's about hacking culture."

This mindset highlights the power of open source communities, like Code for America. As Palhka said, "Everyone in this room is one of the founders of this movement." I would elaborate that: *Everyone who chooses to participate is part of the solution and the movement.*

Other good quotes from the conference:

- "Building the wrong things efficiently is not a good use of time."
— Eric Ries

- "We're all here to collectively figure out the right thing to do." – Jennifer Palhka
- [Code for America is] "a hack on the government procurement system." – Tim O'Reilly

What does open government mean to you?⁷⁷

You'll remember from Chapter 1 that open government means different things to different people. The most common characteristics associated with the open government movement are transparency, collaboration, and participation. When Tim O'Reilly speaks about open government, he talks about his vision for government as a platform.

O'Reilly talks about the components of web 2.0: cloud computing, social media, and much more. Particularly, the goods and services that government could produce. He focuses on the ability of the marketplace to deliver on big data supplied by the government; think about how the National Oceanic and Atmospheric Administration (NOAA) provides forecast data to weather organizations around the world—free of charge.⁷⁸

While at the Code for America Summit, I had the chance to find out how others on the front lines of the open government movement define open government. I asked several participants what it means to them—their answers proved to be diverse, yet like-minded.

Forest Frizzell, Deputy Director City of Honolulu

"It's being open, inclusive, and collaborative with citizens so they feel comfortable with what government is doing. So that citizens want to be part of the solution. It's also about driving efficiencies from the governments. We do things based on tradition, not law and policy. The open government process is a vehicle to fix that."

⁷⁷ Adapted from "What does open government mean to you?," (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/11/defining-open-government>.

⁷⁸ <http://opensource.com/government/11/10/surfing-open-data-wave>

Jen Palhka, Founder and Executive Director of Code for America

"It's not just about being open so that we can hold government accountable. It's symbolically opening the door so that it's inviting for citizens."

Eugene Kim, Cofounder of Groupaya

"Ultimately, open government is about engagement and transparency. It doesn't require technology. It's something that people are already practicing. Seeing a situation where people can practice government in a practical way. And we need those good stories about government."

Brian Gryth, Founder and President of OpenColorado

"It's the way our government is suppose to work. It's democracy in action. It's a government that is responsive to its people. It allows people to be more involved. Transparency builds trust. It builds a window that allows citizens to see what their government is doing. It's building community and it's what the founders believed in. It's realizing the constitution."

Abhi Nemani, Director of Strategy and Communications at Code for America

"Governments that work like the Internet. Networked. Generative. And reflective of who we are."

Jason Lally, Director of the Decision Lab for PlaceMatters

"Open government means the re-establishment of trust in democratic values. Today, we hear a lot of noise in politics. The open government approach is non-partisan and it's really about connecting people back to their communities. That means people will be connected with each other. And that's exciting!"

Cyd Harrell, advisor to Code for America

"I think of it in slightly different terms. A government is for citizens and it

must deliver a cycle of trust so that citizens can participate in government. There are three design values that are part of this: respect, participation, and unity. The important one is unity, because it brings citizens and government back on the same side.”

Even though advocates of open government define it differently, the mission is constant throughout: open government is about empowerment.

Send in the brigade

Over the years, Code for America has built an arsenal of open source, civic applications for partner cities. One of the major challenges it faces is the adoption and reuse of those applications in other cities. That’s where the Code for America Brigade program comes in; it helps organize civic geeks and hackers locally to reuse and deploy civic software.

Volunteer teams, called brigades, are forming in cities around the United States. They are getting organized and hosting meet-ups and other events to promote their causes and make their cities a better place through civic hacking. Code for America is supporting this effort with its brigade program. One way it accelerated the adoption of a few select applications was through its Race for Reuse campaign.

Race for reuse gives open source projects a second wind⁷⁹

The Code for America Brigade launched Race for Reuse in October 2012. It’s a different kind of contest that aims to increase adoption of existing open source projects. The goal isn’t to build something brand new—it’s to encourage brigades across the United States to stand up and support existing open source projects. One of the more difficult parts of deploying an open source application is building the user community around the projects and getting citizens engaged—and that’s what this campaign aims to address.

⁷⁹ Adapted from ‘Contest aims to give open source projects a second wind,’ (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/10/accelerating-open-source-project-adoption>.

There are four applications that brigades could use in the contest:

- Adopta - a web application that encourages citizens to "adopt" civic infrastructure, examples previously mentioned include fire hydrants and sidewalks.
- LocalWiki - a platform for building community information hubs; LocalWikis are websites about a place written by the people of that place. (For example, Raleigh has Triangle Wiki.)
- Shareabouts - a mapping tool to gather crowdsourced public input; used to collect suggested locations and comments in a social, engaging process.
- Textizen - a feedback tool for the mobile age, using texting or short message service (SMS), that allows citizens or government officials to organize a poll for a city and publish results in public.

The campaign challenged brigades in 28 cities to launch one of the four featured applications in their city by November 6, 2012. We'll take a look at some of the results in just a bit. But first, back to Raleigh to see how we got our Brigade up and running.

Starting a Raleigh Code for America Brigade

CityCamp Raleigh hosted a meet-up on October 24, 2012 to showcase a few projects and announce our Code for America Brigade. CityCamp Raleigh is evolving into something more than an annual event and a Code for America Brigade seems like a natural progression for us.

The brigade decided to organize using a co-captain model. Fellow civic geeks Chad Foley and Reid Serozi joined me to lead this effort, and we formalized our commitment with an official charter outlining our goals for the year. We plan on hosting monthly meet-ups and participating in two to three annual events with CityCamp Raleigh being the primary event. We also wanted to deploy an existing Code for America application in Raleigh and the Race for Reuse campaign was a perfect opportunity.

The Raleigh brigade selected the Adopta application because it would provide a technical front-end to an existing city program already in place for adopting bus shelters. Here is an excerpt from the press release

announcing the Adopt-A-Shelter application in Raleigh from November 13, 2012.⁸⁰

Citizens interested in maintaining and monitoring their favorite City of Raleigh bus shelter now have a helping hand: the Adopt-A-Shelter interactive web application. Adopt-A-Shelter instantly displays the adoption status of all city bus shelters. Code for Raleigh, a recently formed Code for America brigade in Raleigh that includes volunteers from CityCamp Raleigh, deployed the application for use in Raleigh.

Code for Raleigh advocates for existing applications and technology created by Code for America, a national non-profit focused on improving government through technology. Code for Raleigh has recently deployed an Adopt-A-Shelter application at adoptashelter.raleighnc.gov highlighting 184 shelters available for adoption in Raleigh. Citizens can easily sign up for a one-year commitment to help keep Raleigh bus shelters clean for Capital Area Transit (CAT) riders.

“It’s an interactive way for residents to see which bus shelters have been adopted,” said David Eatman, the City’s transit administrator. “We are delighted that citizens from Code for Raleigh have stepped up to offer this technical resource to encourage participation in this City program.”

Code for Raleigh recently entered their Adopt-A-Shelter application in a Code for America Race for Reuse campaign. Only five weeks remain to promote the project and increase the adoption rate. Code for Raleigh hopes to have 20 new shelters adopted by December 6, 2012 to meet their success criteria.

The Raleigh Adopt-A-Shelter program began in September 2012. Citizens who adopt a bus shelter are required to help maintain the shelter by removing trash in and around the shelter area on a monthly basis. Adopters are provided with trash bags, disposable gloves, and safety vests to assist in removing trash around their adopted shelters. The volunteers are also asked to report any vandalism or suspicious activity

⁸⁰ <http://citycampreal.org/2012/11/raleigh-code-for-america-brigade-launches-adopt-a-shelter-web-application/>

and notify city staff of any maintenance issues. Citizens who adopt bus shelters are asked to make a one-year commitment.

Getting the Adopta application installed was probably the easiest part. And Chad Foley deserves a major shout-out for getting that accomplished. What I learned by participating in the Race for Reuse campaign was that when it's all said and done, this is an awareness issue. Most citizens and businesses don't know about the program, but citizens, organizations, and businesses are more than willing to adopt a bus shelter once they know they can.

Raleigh Brigade presents at city council⁸¹

On the evening of December 4, 2012 Chad Foley, Reid Serozi, and I presented an update to the Raleigh City Council on the Raleigh Code for America Brigade Race for Reuse campaign. One of the highlights of the evening was conducting a demo of the Adopt-A-Shelter application. The main highlight, however, was the challenge issued by Councilor Crowder to Councilor Gaylord that ultimately helped drive awareness around this effort.

The council was very enthusiastic about the Adopta application. The public challenge between Councilors Crowder and Gaylord was to get at least four new adoptions by the end of the week in their respective districts. At-Large Councilor Baldwin also agreed to adopt a new bus shelter not visible in the application yet, that is located in her neighborhood. Jokingly, Councilor Crowder claimed Councilor Baldwin for his team.

As presenters, our strategy was to make sure the Council was familiar with Code for America, the brigade program, and the Race for Reuse campaign. We kept it very high level, used analogies, such as Code for America is like Teach for America, but for local municipalities. Then we went into details about our goals, did a demo of the application, and most importantly, we publicly thanked all of the City staff who helped. This was important to do because this campaign was more than just Foley, Serozi, and myself. City staff really stepped up to the plate to make this successful. Remember, this is a partnership.

⁸¹ <http://citycampra.org/2012/12/council-challenge-issued-for-bus-shelter-adoption/>

We also showed the City Council where we were in the campaign. At the time of the presentation, we had six new bus shelter adoptions through the application since it launched. During the question and comment period, things got exciting. Councilors wanted to explore the application, had questions about new bus shelters, and expressed their appreciation. We needed to have 14 shelters adopted in three days to meet our campaign goal. And from what I could tell, Raleigh's City Council was amped to help meet that goal and help with awareness.

Race for Reuse results

The results were tallied up in mid-December of 2012 by Code for America.⁸² In total, there were 31 civic applications deployed (reused) in 28 cities. The most popular application was LocalWiki, a project that Raleigh launched in March of 2012 under the Triangle Wiki name. As we learned through our experience, the engagement part is the biggest hurdle. And by that, I mean, making citizens aware of the project and getting them to use it.

During the Code for America campaign, LocalWiki was deployed in 10 cities and had more than 2,000 new pages created by more than 400 new contributors.

Grand prizes were awarded to Anchorage, Alaska for deploying the Adopt-A-Hydrant application and fostering 142 adoptions. Toledo, Ohio was also a grand prize winner for deploying its LocalWiki project called ToledoWiki—which netted almost 90 new contributors.

How did Raleigh fare in this friendly contest? We received an engagement award for the Adopt-A-Shelter application and surpassed our goal of 20 adoptions with 26 new adopted shelters.

Other engagement award winners included two more LocalWiki project deployments, one in Baltimore, Maryland called “B'MORE Pipeline” and another other in Kansas City, Missouri called “wikiKC.”

The grand prize was a block party sponsored by Code for America for each winning city and a year of free hosting for their application. Engagement award winners got a year of free hosting to help sustain

⁸² <http://codeforamerica.org/2012/12/13/announcing-winners-of-the-race-for-reuse/>

their effort.

Why engagement days matter

One reason why many communities participating in the Race for Reuse campaign were successful was because of engagement days—a day or evening set aside for the community to come together and work on the project.

In Raleigh, we called our engagement day for the campaign a Civic-a-thon. Our brigade wanted to include citizens of all specialties, even if that meant not a single ounce of technical know-how. We provided other ways to engage people, such as creating Triangle Wiki pages or, in one case, submitting a design for a bus shelter adoption advertisement. We realized that solutions can come from any and all citizens: sometimes they just need to be engaged the right way.

Similar to Triangle Wiki Day, other communities hosted content sprints or write-a-thons to teach people about LocalWiki and populate their wikis with local knowledge. Tech-focused engagement days that are primarily focused on code development are called hackathons. Communities that host hackathons are doing the good kind of hacking. It's part of their civic duty.

Beyond the Race for Reuse campaign, engagement events are being hosted all over the world. Open government-focused unconferences such as CityCamp, TransparencyCamp, and Government 2.0 Camp are other examples of engagement days.

The Sunlight Foundation⁸³ started TransparencyCamp in 2009 as a way of bridging communities interested in open government. The Sunlight Foundation is a nonpartisan, nonprofit based in Washington, DC, working to increase government transparency through technology.

The first TransparencyCamp was held at George Washington University and drew around 100 participants. Attendees discussed the challenges involved in creating and implementing transparency policies in the United States government. Those conversations led to “TransparencyCamp West,” held later in 2009, co-hosted by Google in Mountain View,

⁸³ <http://sunlightfoundation.com/>

California. For more details on the origins of TransparencyCamp and the rationale for running the event, check out its how-to guide⁸⁴ and bring one to your city.

More recent work by the Sunlight Foundation includes responding to the wave of open data policies and open government directives taking root at the local level and beyond. In 2012, they published a series of *Open Data Policy Guidelines*,⁸⁵ which they hope to evolve as they continue to engage with government officials, civic hackers, civil society advocates, and others.

The Sunlight Foundation has been an inspiration to both Code for America and CityCamp. Jen Pahlka and Kevin Curry have cited TransparencyCamp as the inspirational catalyst for their projects.

I've been most involved with the CityCamp movement as an organizer for two CityCamps in Raleigh and as an attendee and speaker at numerous CityCamps across the United States. Next, I'd like to share my thoughts from my CityCamp experiences, which have been a true inspiration for me.

84 <http://transparencycamp.org/how-to/>

85 <http://sunlightfoundation.com/policy/opendata/>

Part 2: CityCamp tour and best practices

CityCamp is a great way to start the engagement process with different stakeholders including citizens, city staff, elected officials, journalists, and many others. It's also a great way to generate ideas about problems your city is facing and explore potential solutions.

I'd like to take you on a tour of my other CityCamp experiences. Through my job at Red Hat, I've had the opportunity to travel to CityCamp events in Denver, Honolulu, and Kansas City. I met some amazing people along the way. I learned about their communities and documented some best practices for future organizers.

CityCamp Colorado

There is a strong open government and open data movement in Colorado, thanks to the folks at Open Colorado.⁸⁶ They've hosted three CityCamp events over the last three years and I was able to attend the camps in 2011 and 2012. We'll first take a look at some of the key take-aways from the second CityCamp Colorado held in 2011. Then I'll explain how the community is sharing its technical expertise by giving back, with news from their third CityCamp held in 2012.

First, it's important to mention that attendees at the first CityCamp Colorado created a local Open Government Directive.⁸⁷ It's a template for other municipalities to use, modeled after the Obama Administration's Open Government Directive.⁸⁸ It highlights the work that can be accomplished when like-minded civic geeks come together for a common cause. Progress is made and then shared for others to use. That's one of the major benefits of the open source model.

Enhancing access to government⁸⁹

More than 70 people gathered to participate in, learn about, and advance the open government movement at the 2011 CityCamp Colorado event. It

⁸⁶ <http://opencolorado.org/>

⁸⁷ <http://opengovernmentinitiative.org/>

⁸⁸ <http://www.whitehouse.gov/open>

⁸⁹ Adapted from 'The power shift effect of open government,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/11/power-shift-effect-open-government>.

started off with Tom Downey and Stephanie O'Malley from the City of Denver setting the stage for the day's theme: Enhancing access to government.

Tom Downey, Director of Excise and Licensing for the City and County of Denver, is excited about the adoption of open government. He said the beauty of a movement like CityCamp is that the organizational structure is flat (without much hierarchy), decisions are made democratically, and things can get done and move forward.

Downey's day-to-day functions include working with a variety of licenses for the City and County of Denver, ranging from medical marijuana permits to liquor licenses and even managing parking zones—all of which run on an all-paper system. The Department of Excise and Licensing has no online license system, not even for payments. Downey said it hurts the city when their Department doesn't operate how consumers are used to doing business.

By moving to an online system where the license process is digitized and payments can be made online, it will make Denver better, faster, and more transparent. For licensees, it will make it easier to do business with the City and County. For concerned citizens, the process will be more open and transparent, allowing them to see who is applying for licenses, where they are in the process, and if there are any restrictions on them. They can do this now, but they have to physically go to the office and look at the paper copy, creating a barrier as well as wasting time and money for both citizens and City employees.

"What are we doing to create an atmosphere of *It's easy to do business with Denver?*" asked Downey. His Department wants to put documents online and allow people to search information and applications, pay fines, and renew applications. This will create a more open government and a better business atmosphere. While simply going online isn't necessarily a huge advance towards open government, it *is* a first step to ensuring future efforts are more in line with open government initiatives.

While doing this will save money, another savings comes in a different form—it takes the burden off of the staff. They can now shift priorities to work on strategic projects and provide better customer service instead of

looking for paper copies of a license. Downey said it will also make the information more accessible and shifts the power to neighborhoods.

Downey also spoke briefly about improvements to its notification process for permit applications. Previously, this process was hard to implement using the GIS system because the law required notices be given within a five-block radius, which was not a natural formula for the system. The GIS system could create a circle with a five-block radius, but Denver's complicated city block structure meant that not all stakeholders were getting notifications as specified by the ordinance. His department worked with the GIS division to improve the system and citizens affected are now getting the required notifications. Moving these applications online will improve the system further, by creating transparency and allowing all citizens to review applications, not just those impacted or as required by the law.

How is open government starting to advance in Colorado? "It's all these little things that build into something that is tremendous," said Downey. As the City starts to web-enable the filing of briefs and improve the notification system, it makes progress.

It's not one major innovation or process change that's going to one day make our government more open. It's building on individual improvements one at a time that shifts the power to the people.

Combating duplication with open government⁹⁰

After Tom Downey talked about enhancing access to government, Deputy Chief of Staff Stephanie O'Malley for Denver Mayor Michael Hancock explained the importance of citizens knowing how to find government information. This mentality is a directive that she works to achieve everyday, and the Mayor of Denver is dedicated to transparency and openness, believing citizens should know what's happening in their city.

⁹⁰ Adapted from 'Combating duplication with open government,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/11/combating-duplication-open-government>.

One of the most obvious challenges for Denver is its budget limitations. O'Malley mentioned that the IT Department has more than \$10 million in requests, both internal and external, but can fund only \$2 million. The City realizes that data is very powerful, and like other cities, it struggles with how to respond to the volume of requests with limited resources. The decisions made are based on the priorities of the Mayor and maximizing the return on investment.

One of Denver's biggest challenges is duplication. Not only is there duplication in the work of the City agencies, who want to do great things, but it also applies to municipalities in surrounding areas. O'Malley sees an opportunity to break down the silos and consolidate efforts, both internally and across the region. She also sees an opportunity for regional collaboration. "Cities need to be more willing to share information and not put up barriers to it," she said. Based on the participants who were at CityCamp Colorado, Denver County is primed to take advantage of regional collaboration.

O'Malley thinks the transition to open source solutions and more open government initiatives will make data more accessible. The power of a regional open government is an untapped opportunity, but change takes time and effort. "Folks are accustomed to doing business in a more tech-savvy way," she said. "It will take a lot of conversation and it will take time. That's why we're here today."

CityCamp is a great way to get stakeholders from different municipalities talking about issues they face and exploring potential solutions. There is too much duplicated effort between federal, state, county, city, and town municipal districts around the United States and perhaps around the world. We need more regional collaboration to save taxpayer dollars and development time and effort.

Open government techies give back with technology and expertise⁹¹

Smaller governments, typically those in rural towns, usually don't have the IT capacity to foster serious innovation in citizen participation like governments in larger cities do. OpenColorado and Colorado Code for Communities⁹² shared their technical knowledge and expertise to create a hosted service platform that provides open data using different web and mobile applications.

OpenColorado announces Adopt-A-City program

The news of a new Adopt-A-City program was made during the third annual CityCamp Colorado event that was held on October 26, 2012 in Denver. To kick off the program, the goal was set to adopt at least two cities in Colorado over the next year and stand-up infrastructure that will encourage citizen engagement.

"What we're looking to do is give back to the rural communities. The ones that grow our food, drill for our oil, and power our cities," said Brian Gryth, President and Co-founder of Open Colorado. "It's time for us to give back to those cities with our expertise and technology."

Code for Communities builds a human-driven platform

Colorado Code for Communities, a Code for America Brigade in Denver, has big plans for 2013. It wants to deploy eight software applications by the end of the year, such as Adopta, add 400 new datasets to opencolorado.org by September, and get two regional communities in Colorado to pass an open government directive.

"Code for Communities is about building a human-driven platform that can exist independent of any one person or organization," said Jason Lally, Colorado Code for Communities Brigade captain and Director of the

⁹¹ Adapted from 'Opengov techies give back with apps and expertise,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/10/opengov-techies-give-back-apps-expertise>.

⁹² <http://codeforcommunities.org/>

Decision Lab at Placematters. "Technology is not an end but a means to solving community problems in the 21st century. The only way we're successful is if this effort is owned by many partners and individuals."

Endpoint.co and OpenBike demos

Demonstrations were given at CityCamp Colorado of other applications developed at the Code for Communities hackathon prior to this event. First was endpoint.co, a data normalization system that provides information about the characteristics of a neighborhood. The purpose is to integrate information such as crime data, demographics, and other available open data for easy user consumption. "We take big data and make it simple to use," said William Golde, endpoint.co evangelist.

The OpenBike application, currently under development, was introduced by developer Michael Lockwitz. He is creating the platform to solve an absence-of-information problem for the biking community. It's an interactive biking platform combining quantitative, open data with qualitative, user-provided data for characteristics such as safeness, beauty, and difficulty of routes.

There are many other lofty, yet achievable goals set by Colorado Code for Communities and I for one, look forward to seeing how they continue to share their open source and open data knowledge and expertise across Colorado and beyond.

CityCamp Honolulu

It's time to head to the island of Oahu, Hawaii to see the impact of open government in the "Aloha State." I first want to share with you an interview I did with Forest Frizzell, Deputy Director of Honolulu's Department of Information Technology, in preparation for CityCamp Honolulu. It provides some background information and highlights some of the efforts happening in the City and County of Honolulu.

As you'll discover, Honolulu used CityCamp, in part, to foster ideas for its Code for America fellowship. I thought this was a brilliant way to engage citizens in preparation for the Code for America project, which later developed an interactive question and answer platform for citizens called

Honolulu Answers.⁹³

Then, I'll give you a recap of CityCamp Honolulu and share some of the themes that emerged as well as next steps. I was very impressed with the amount of open government activity, how engaged the citizens were, and the knowledgeable IT staff that's making a lot of this happen. Let's take a look at CityCamp Honolulu.

The Aloha State and open government⁹⁴

Before the CityCamp Honolulu event began, a conversation had already started on the City's idea forum, sparking almost 50 ideas ranging from creating a mobile application for bus routes to displaying City tax revenue and spending trends. It was great to see the community interact before the event, suggesting topics that are important to them and taking the first step towards identifying things they could work on at the camp.

Also in advance of the big day, I got a chance to catch up with one of the organizers, Forest Frizzell, Deputy Director of Honolulu's Department of Information Technology. I met with Frizzell soon after they announced CityCamp Honolulu, and we discussed the intricacies of how much planning goes into an unconference. In my interview with Frizzell, he provided the landscape for open government in Honolulu, what they hoped to achieve with their CityCamp, and much more.

What does open government currently look like for the City of Honolulu?

We made a concerted effort in 2011 to come up with ideas on how to be a more open government. The low-hanging fruit for us was posting all of our financial information. Citizens of Honolulu can download our budgets in line item, .csv⁹⁵ form. We have a fully integrated ERP (Enterprise Resource Planning) system, so generating these reports was something that could be done relatively quickly. We also posted all financial disclosure statements for appointed officials.

⁹³ <http://answers.honolulu.gov/>

⁹⁴ Adapted from 'Showing aloha through open government,' (c) 2011 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/11/showing-aloha-through-open-government>.

⁹⁵ Comma-separated values

Simultaneously, we started talking to our departments about opening up Twitter and Facebook accounts. Adding social media as a medium took some getting used to, but there are a number of Departments that have done a great job with these accounts. The City hosted the Asia Pacific Economic Cooperation (APEC) meetings here in Honolulu in 2011. With 21 dignitaries from Pacific Rim countries, including Russia, China, and the United States, road closures in an already congested city were a troublesome thought. With the help of Twitter, Facebook, and Nixle [a notification service used by law enforcement] we rapidly got the word out about road closures and kept people out of traffic.

Next we're doing a pilot project with City Sourced, a mobile/web application that allows citizens to take pictures of things like potholes or broken street lights and report them.

What do the organizers hope to accomplish at CityCamp Honolulu?

We hope to leverage the CityCamp experience for a few things. The first is to let the public know we are serious in wanting to hear back from them about how we can leverage technology to make it convenient for them to work with government or be more active in their communities. We also want to get our local developer community more involved with helping us create citizen-focused applications.

The idea of government data as a platform is a new concept and one that is going to take time to fully understand and get buy-in from the public on. I believe once we can show a tangible application like real-time bus arrivals or an application that shows refuse pick-up times for neighborhoods, people will start to fully understand the concept of open data.

Finally, Honolulu was selected as a 2012 Code for America city. CityCamp will be an excellent way for us to crowdsource and have a large amount of discussed and vetted ideas and suggestions for that engagement.

How can the average citizen participate at CityCamp Honolulu?

The first way would be to simply sign up and attend. We want to spread

the message that CityCamp isn't just for the developers of Honolulu, but also civic groups, designers, users of government services, and forward-thinking people. You don't have to be a computer expert to realize that if one could reserve a campsite online instead of coming to city hall to stand in line, that would be a much more efficient use of time. The voice of the average citizen is a very important piece to this initiative.

What has been the biggest surprise so far, as you help plan and organize CityCamp Honolulu?

The tremendous amount of support from the CityCamp group has been overwhelming. We didn't have to create our camp from the ground up, rather just tweak it here and there for our needs. I've also been energized by the amount of community enthusiasm this has generated. We've been able to pull together some quality sponsors in a short amount of time, which speaks volumes for how ready people are to talk about this subject. We've also had a number of community members step up and offer assistance in planning the event.

As you can see, Honolulu's open government initiatives are off to a great start. Now that you understand a little bit more about the efforts underway in the City and County of Honolulu, let's see what happened at their CityCamp.

Restoring trust in government⁹⁶

The theme that emerged from the first CityCamp Honolulu was restoring citizen confidence in their government. In a very collaborative and participatory atmosphere, organizers looked to citizens to generate ideas for the City of Honolulu's Code for America project and to harness the power of *design thinking* to rapidly prototype ten topics generated during the unconference.

Design thinking refers to the methods and processes for investigating ill-defined problems, acquiring information, analyzing knowledge, and

⁹⁶ Adapted from 'Restoring trust in government,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/11/12/restoring-trust-government>.

positing solutions in the design and planning fields.⁹⁷ It's brainstorming with a structured process. Design thinking allows a massive amount of ideas to be generated in a short amount of time, while also ensuring that the best ideas rise to the top.

Government panel and first break out sessions

Burt Lum, a CityCamp Honolulu organizer, kicked off the day and kept participants on track during the event. Lum provided a brief introduction about what to expect. The day started with a government panel to provide an update on current and future initiatives in the City and County of Honolulu. The panel included Gordon Bruce, CIO of the City and County of Honolulu, Forest Frizzell, Deputy Director of the Department of Information Technology, and Doug Chin, Managing Director for the City of Honolulu.

Frizzell shared a timeline that highlighted initiatives that have already happened, such as Can Do Honolulu,⁹⁸ an online portal for citizens. The timeline then showed the CityCamp event and a 24-hour hackathon scheduled for January 2012. The momentum from these events would feed the Code for America kickoff in February 2012 and an anticipated Open 311 project also in 2012.

Bruce talked about the vision to create a smarter citizen. He said if government IT can present a clear vision that improves services, saves money, and manages IT costs, the results would lead to engaged citizens who participate in their government.

Bruce also touched on the Office of Information Practices' open data policy. If it gets a request for open data, it produces the data set and opens it to the public. "If media X comes in and asks for data, instead of just giving it to the media, we're going to give it to the public. We'll get it on the Can Do site," Bruce stated.

"It's a real change in how we think and how we do things," he said. It's this type of shift in mentality that is making real progress in open government. More IT departments should take note and look to establish similar policies to provide open data to citizens in this manner.

⁹⁷ http://en.wikipedia.org/wiki/Design_thinking

⁹⁸ <http://can-do.honolulu.gov/>

After the panel, attendees transitioned into unconference mode. Voting for the day's sessions concluded, and the first five sessions were announced. Participants moved to the breakout rooms and started to collaborate on their chosen topics. I attended and participated in a session about S.W.E.E.T.S.: Surf, Weather, Emergencies, Events, Traffic, and Services. The idea was to create one platform that brings all of the City and County departments together. It would leverage real-time, location-based data to keep citizens informed on what's happening right now.

Business panel and second break out sessions

After a short lunch break, the second panel of the day provided perspectives from outside of Hawaii. I joined a panel with Alissa Black, former Government Relations Director at Code for America, and Steve Bretches, a consultant at IBM. Our goal was to provide insight to the audience about what we're seeing around the rest of North America and beyond.

Black highlighted Code for America projects like Change By Us, Classtalk, and Where's My School Bus.⁹⁹ Bretches helped to draw comparisons between technology and the people who use it. "It's not about technology, it's about the cooperation with the government, community, and businesses," claimed Bretches.

I added lessons we could learn from the open source world, such as creating a participatory and inviting environment that would lead to a culture of transparency and accountability. I also provided examples of what's happening at other CityCamps.

The second round of sessions started. I jumped in and moderated a session on making the City of Honolulu's budget more transparent. The participants and I made an outline of what is currently available from the city and drafted action steps to explore how an open budget would be citizen-friendly by prototyping several use cases and scenarios.

Design thinking

The final charge for the day was to begin prototyping the top ten ideas.

⁹⁹ <http://codeforamerica.org/projects/>

The organizers prepared a brief introduction by showing a video from NYU Wagner on design thinking for public policy and social impact. Participants broke into ten different groups and began to prototype the ideas from the day, which included:

- S.W.E.E.T.S.: Surf, Weather, Emergencies, Events, Traffic, and Services (real-time city information)
- Adopt-A-Node (wifi)
- Real-time bus arrival
- Standard API
- Expand online service
- Trash to treasure
- Pay for parking/find a parking spot application
- Map a bike lane/find a bike route application
- City tax revenue/spending trends (transparent budget)
- City reminders

Each team drilled down into their topic. Some came up with action plans, others developed design mock-ups. All the teams shared their prototypes by presenting to the larger group.

A successful CityCamp

CityCamp Honolulu was a huge success. Frizzell reacted at the end of the day, "I'm overwhelmed. I can't believe how many people showed. Today was a huge success. We got a ton of ideas that we could act on—that we could develop in-house or in partnership with the local development community. CityCamp was so useful, and we inspired a lot of people."

I was inspired by the attendees, ideas, and the participants at CityCamp Honolulu too. In closing, organizer Frizzell charged CityCampers with a mission. He challenged the community to help transition the CityCamp event from an emotional movement into a reality. "How do we inspire people to become involved?" he asked.

Frizzell proclaimed, "It's not about the app, it's not about the open data, it's about people taking a more active roll in their community."

What can a CityCamp do for your community? As Frizzell pointed out, it's a movement that can engage your local community. I'll add that CityCamp can restore trust in government. The activities and projects from the CityCamp movement are re-engaging citizens who think they don't have a voice in government. It's giving people a reason to participate, rather than just criticizing the status quo.

CityCamp Kansas City

Now we'll head out to the midwest, to Kansas City, where I presented and first started to explore the concepts of an open source city and gather feedback from new audiences.

First I'd like to share an interview with CityCamp Kansas City organizer Jase Wilson, a civic entrepreneur and CEO of Luminopolis.

Kansas City explores open government, civic life, and innovation¹⁰⁰

I wanted to learn more about the open government movement in the Kansas City metro area before attending their CityCamp. I got a chance to interview Jase Wilson, one of the main organizers for CityCamp Kansas City, to understand what they hope to accomplish.

Tell us about CityCamp Kansas City.

CityCamp Kansas City is just the Kansas City metro area installment of the immensely successful CityCamp series started by Kevin Curry and advanced by innovative cities like Raleigh. Ours is pretty open-ended—participants submitted presentation ideas and proposed the outline of the day. At the 50,000 foot level, the theme that emerged is about civic life and innovation.

What do the organizers hope to accomplish with CityCamp Kansas City?

¹⁰⁰ Adapted from 'Kansas City explores open government, civic life, and innovation,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/4/kansas-city-explores-civic-life-and-innovation>.

If we can help facilitate just one collaboration between our region's 110+ local government organizations and the programmers, citizens, and community leaders, then the event is a success. We want to bring awareness to the significance of open source, open data, and open collaboration to attendees and motivate them to share the same with their networks. With our hackathon, we hope to demonstrate what is possible when you bring those things to bear in civic matters.

We also want to expose attendees to a few innovative lines of thinking from other parts of the country and highlight some of the excellent work already happening in small pockets around our region, so others can get inspired and join in on the civic innovation already taking root.

What can attendees expect from the event?

As an unconference, the question might be what the event expects from attendees. A few things:

- Discover—There's a spectrum of topics and activities lined up. Most attendees will come away knowing something they didn't already know.
- Discuss—The topics and activities aren't universally hashed out or agreed upon. Attendees will hear certain lines of thinking, but they'll have ample opportunity to deliberate among themselves regarding their own perspectives.
- Do—After an enlightening morning of speaker-led sessions and a lunch break around the neighborhood, attendees will take part in a mini-hackathon for Bike Walk KC.

How did the organizers get local officials involved?

We're blessed with a developing new wave of open-minded local officials who are genuinely interested in better serving their constituents despite having fewer resources. We haven't had to do anything special. Social media, a few emails, posts on certain listservs¹⁰¹, and most importantly, word of mouth, have netted dozens of local officials from throughout the metro area. Landing a couple of the livelier local officials as speakers—the mayors of Kansas City, Missouri and Kansas City, Kansas—probably helped

¹⁰¹ Listservs are another term to describe a mailing list, such as Google Groups or Yahoo! Groups.

lend credibility to the event for others.

What's the open government vibe in the Kansas City metro area?

Emerging, but gathering momentum in pleasing and unexpected ways. The open government vibe is definitely growing faster than this time last year. For instance, we helped Kansas City, Missouri and Kansas City, Kansas apply jointly for the Code for America 2013 application cycle. The amount of new enthusiasm that came out of that small exercise proved the movement is underway here. We suspect that between the pent-up demand for open government and all of the incredible citizens, leadership, and entrepreneurial resources already based here, we might even someday be a leader. CityCamp Kansas City hopes to be a catalyst.

Sharing the open source journey with Kansas City¹⁰²

The first CityCamp Kansas City, held on April 28, 2012, was productive, collaborative, and eye-opening. The morning was overflowing with open source knowledge, the sharing of ideas, and expert talks. The event started with 14 lightning talks—a ton of information crammed into individual five-minute talks.

More than 150 attendees learned about the Google Fiber initiative, spatial city mapping, SeeClickFix, Bike Walk KC, Open Missouri, and much more. Then I got to share open source stories from Raleigh, North Carolina in my presentation, "How open source is changing citizen engagement." Based on the initial feedback from a few folks, it was inspiring and "sparked the individual/collective imagination."¹⁰³

My story was about a journey—a journey I call the path to the open source city.

¹⁰² Adapted from 'Sharing the open source journey with Kansas City,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/4/sharing-open-source-journey-kansas-city>.

¹⁰³ <https://twitter.com/mrjerryjonesjr/status/196285903252103168>

In my presentation, I started by sharing my experience of interviewing former Raleigh Mayor Charles Meeker about open government. I spoke about how the publication of the interview led to CityCamp Raleigh, the start of a citizen movement, and a thirst for open government.

I shared many of the stories I've already outlined in previous chapters. The stories about Innovate Raleigh, SPARKcon, Walk Your City, and Triangle Wiki. It was during this presentation that I shared the first iteration of the characteristics of an open source city, the ideas you see here in this book. The original concepts were:

- Creating a hub of open source companies
- Attracting major open source conferences and continuing to support the many open source-focused user groups
- Amplifying the culture of open source that already exists
- Advancing the open government movement

Sharing these stories with other cities and states is a great way to highlight how individual events are part of a larger initiative. More importantly, I got to show off the power of open source and how it's changing the world. Take an idea, build on it, make it better, and share it. That's the open source way.

CityCamp and unconference best practices

As you can see, I've learned about open government through my CityCamp experiences. One way to give back to any open source community is to capture the stories. And that's what I've done along my journey.

Another way to give back is to help others. Through my role as a CityCamp Raleigh organizer, I've offered my time to help other CityCamp organizers along the way. I've always agreed not to plan their conference for them but to assist them and get their camps started faster.

Helping other organizers typically involves a short, 30-minute conference call walking them through how we organized Raleigh and answer any

questions. Eventually, I documented some of those best practices as a resource for future organizers. Let's take a look at what I learned.

Best practices for organizing a successful CityCamp¹⁰⁴

If you're thinking about planning a CityCamp, begin by reviewing the 'start a camp' page at citycamp.govfresh.com.¹⁰⁵ Then, implement these tips:

1. **Generate ideas before the camp.** Participating in an unconference like CityCamp is new to many people, especially when you include varied participants: citizens, municipal workers, developers, designers, elected officials, and anyone else interested in participating. You can overcome these barriers by gathering problems citizens face and generating ideas for solving them before your conference starts. This helps people make the connection between open government and how they can participate. It also gives people a reason to attend and allows the organizers to invite key stakeholders from their local government. Most groups are doing this online using technology such as User Voice¹⁰⁶ or Google Moderator,¹⁰⁷ which includes a voting feature. The key here is to make sure there are ideas populated on the forum when people visit. Have your planning group generate at least 3-5 ideas before you announce it. Also, make sure users who visit can build on those ideas.
2. **Pair municipal staff with ideas.** Now that you've got some ideas before your camp starts, invite key stakeholders to participate. If you have an idea with community interest and a high number of votes, show this momentum to a department or agency that can foster the idea and make real progress. It is important that municipal staff participate, because they have access to data or internal knowledge about barriers that will need to be overcome or other plans that need to be considered. You'll find that the staff often wants to help out and is happy to

¹⁰⁴ Adapted from 'Five essential elements of an open government unconference,' (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/1/five-essential-elements-open-government-unconference>.

¹⁰⁵ <http://citycamp.govfresh.com/>

¹⁰⁶ <http://www.uservice.com/>

¹⁰⁷ <http://www.google.com/moderator/>

engage with CityCampers because you are working together towards a common goal. As a team working towards the same goals, any 'us versus them' mentality goes away. It also helps to create accountability on the government side, as well as a level of excitement—new people working on something new to them, with (hopefully) new and creative approaches. I have found that if you don't have access to municipal staff, your ideas can potentially stall and progress will take longer.

3. **Document. Document. Document.** It may sound like a simple, and therefore, trivial thing to do, but my number one piece of advice: Don't let documentation become an afterthought. CityCamp Honolulu hooked up with University of Hawaii journalism students who helped to document each breakout session. These summaries are now posted on its wiki.¹⁰⁸ This has two major benefits. First, ideas and sessions are documented for people that cannot attend camp in person. This lets them participate later and serves as a reference for those who were there. Second, the involvement of students helps boost energy and increases the familiarity with a lot of the technologies, tools, and processes. In most major universities, students are coming in contact with some form of open source. Students are more likely to be users of social media and web-based collaboration tools. They are tomorrow's leaders—and it's important to invite and include them in your camp.
4. **Bring in an outside perspective.** At each camp that I've attended, there have been attendees from out-of-town. This was extremely valuable for CityCamp Raleigh, because it helped generate different ideas and build on what's happening at other camps in other cities. This cross-pollination of ideas is powerful and, as more camps start up, this will be more important. At CityCamp Honolulu, I was one of a handful of people providing that outside perspective. I found myself helping the organizers, brainstorming with attendees, moderating sessions, and sitting for a panel. If you're attending a CityCamp—whether near or far—be prepared to play multiple roles.
5. **Have an action plan after the camp.** You'll have a great time at your CityCamp event. It will be even better if attendees have something to look forward to at the end. Whatever you decide to do, I think it's important to establish a cadence—a regular

¹⁰⁸ <http://citycampnhl.wikispaces.com/>

repeated event or engagement—that keeps the community coming back together. There are a variety of ways to do this.

Before the end of your camp, host a session to organize the next steps. Get folks who want to help advance your local movement generate ideas to keep things moving. This will help you get new folks on your planning committee and, in the long-term, prevent burnout.

- CityCamp San Francisco participates in Third Thursdays, a monthly meet-up series. They also held a hackathon that brought together developers and other creative professionals. The goal was to build applications that deliver valuable resources to the community.
- CityCamp Colorado helped create a local Open Government Directive at their first camp. At their 2011 camp, they explored ways to help further the adoption of the directive. In other words, have your camp work on a project that extends beyond your unconference to keep campers motivated and engaged.
- CityCamp Raleigh has been hosting quarterly meet-ups and started TriangleWiki. The wiki project allows both developers and citizens to contribute to a common knowledge platform and is a great way to get non-developers involved.
- CityCamp Honolulu laid out a timeline at the start of its camp. They planned a hackathon and held their camp in preparation for their Code for America project that started after the camp. Organizers Forest Frizzell and Burt Lum have also committed to monthly meet-ups. Having a road map is important to show campers the journey you plan on taking.

These best practices can help others bring a successful CityCamp to their city.

Part 3: Evolving CityCamp Raleigh

As I've reflected on my CityCamp experiences, I've realized what a catalyst the first CityCamp event was for Raleigh. Over 200 people, lots of ideas, and an engaged city council, city staff, and citizens. We accelerated a citizen-led, open government movement back in 2011 and it was time to regain that momentum in 2012.

It should be no surprise that the team of volunteers who organized the first CityCamp Raleigh in 2011 were back for more in the sequel event in 2012. We evolved the camp, learning from our past experiences about what worked, what didn't work, and how we could take it to the next level.

In this section, we'll take a look at the second CityCamp Raleigh event, then I'll share some thoughts about the winning team and its mobile application called RGreenway. Finally, we'll explore how the CityCamp Raleigh organizers are evolving the group to meet the changing needs of citizens and our government.

What government officials learned from doing it the open source way¹⁰⁹

What started with a unanimous vote by Raleigh City Council to adopt an open source resolution became a long-term commitment to the open source way. How many of you have had an elected official attend a citizen-led event? Probably some of you. But how many of you have had your entire city or town council attend an unconference?

All of the Raleigh City Council members—including the Mayor—attended some or all of CityCamp Raleigh 2012. Their attendance wasn't a requirement—and it wasn't a political drive-by. It was genuine and natural. And some of them got knee-deep in the "code," while competing in the civic hackathon.

This marked the first time in CityCamp history when all elected officials from the local municipality attended a camp. It may also be the first time

¹⁰⁹ Some of this section was originally published and adopted from "What open source can teach government officials," (c) 2012 opensource.com, published under a Creative Commons Attribution-ShareAlike 3.0 Unported license, available at <http://opensource.com/government/12/6/what-open-source-can-teach-government-officials>.

multiple elected officials actively participated and competed in a civic hackthon. Raleigh's Mayor was on a team exploring how community health scoring could be applied to urban planning.

"My favorite part of CityCamp Raleigh was seeing how many people devoted their thoughts and time—it goes a long way," said Mayor Nancy McFarlane. "I saw the collaboration of open source first-hand. The efforts this weekend are making our city better."

Having the Mayor and the entire City Council attend CityCamp Raleigh exemplifies their commitment to open source. Not only did they unanimously pass an open government directive in February 2012, they attended and participated in CityCamp.

CityCamp Raleigh took place June 1-3. On Friday, June 1, CityCampers enjoyed a government perspectives panel, a business perspective panel, and several lightning talks. Runtime Expectations, a live technology/development talkshow on CodebassRadio, recorded all the talks.¹¹⁰

Saturday, June 2, was the CityCamp unconference, where attendees pitched ideas, groups refined those ideas during sessions, and teams formed around the best ideas. The civic hackathon occurred Sunday, June 3, and one team walked away with a \$5,000 (USD) prize.

When citizens call the public meeting

The elected officials jumped right in and something magical happened. Citizens were looking to solve problems and the elected officials were part of the solution—an equal citizen at the same table. "That's unusual," said CityCamp co-founder Kevin Curry.

"Normally, Council seeks citizen input by calling a public meeting or workshop," Curry said. "Usually it's in the middle of the day in some obscure government building you'd never otherwise go to. In Raleigh, they flipped that whole dynamic around. The Mayor and all Councilors came because citizens sought government input to solving citizens' own problems."

¹¹⁰ <http://blog.runtimeexpectations.com/rte/2012/06/04/runtime-expectations-25-citycamp-raleigh/>

Other open government advocates will inevitably ask me how to replicate this success—how to get their elected officials more involved in citizen movements—but I'm not sure what to tell them. Here's the best answer I have: establish an open source culture—not an easy thing to do. It takes time. Obviously, the first step is to invite officials to events and teach them the open source way. It's up to them to make the commitment and get involved.

What happened at the unconference?

Groups pitched more than 30 ideas, workshops, and projects at Saturday's unconference. Only 25 of the ideas made it to "the grid"—the unconference agenda created on-the-fly based on votes from CityCampers.

After organizers set the agenda, attendees were off and running. One City Councilor pitched an idea for community health scoring that attracted more than 20 people to the session; they formed a team that eventually competed in the civic hackathon.

During the unconference, attendees documented as many sessions as they could on the Triangle Wiki workshops page.¹¹¹ Although the Triangle Wiki project wasn't pitched at last year's camp, it is one of the major success stories that came out of CityCamp Raleigh.

"CityCamp validated how important and valuable open content is to the community," said Reid Serozi, a CityCamp Raleigh organizer and Triangle Wiki enthusiast. "Almost every final CityCamp idea had incorporated a stream of content from Triangle Wiki."

By the end of the unconference, ten teams had submitted the required form to compete for the \$5,000 prize. The team project ideas looked like this:

- Triangle search—an open source search engine to help find useful local information from local sources
- You've been towed—a towing alert system

¹¹¹ https://trianglewiki.org/CityCamp_Raleigh_2012_Workshops

- Priority 1—an early stage plan to standardize and encourage open use and access by city government
- RGreenway—a mobile application that would show maps of the Capital Area Greenway Trail System (a group of multi-purpose paths in Raleigh), allowing people to know where they are and how to connect to other trails
- Community health score—a way to calculate the community's health impact for urban planning
- CitySeek Raleigh—a mobile game that encourages users to explore interesting sites in Raleigh
- Welcome to RDU—a citizen-powered site that seeks to connect people in the Triangle with events, business, and brands
- Augmented reality pictures—an application that provides a window to the past, matching the photographer's position to the way it used to look
- QR code all the things—an application to generate QR codes for TriangleWiki pages
- Raleigh retold—an application to allow the user to tell the story of the neighborhood by collecting audio, video, and other multimedia

Thoughts on the winning team

All ten presentations were amazing; the ideas were solid. As a judge, I can attest that it was hard to pick a winner. But in the end, one team stood above the rest. Perhaps it was the simplicity of the idea. Or maybe it was the fact that the team combined available City GIS data with other assets that made a better user experience to create something many citizens in Raleigh love and use frequently: our greenways.

The winning team presented the "RGreenway" application. The maps were already available, and the problem it solved was simple: How does a user connect to other trails and provide feedback to the city while they are using the greenway? The team included other components like parking maps and integrated SeeClickFix, so greenway users could report non-emergency issues like graffiti, downed tree limbs, or a broken park bench.

In the weeks and months after CityCamp Raleigh 2012, the winning team

has continued to develop its idea and released a functional mobile application for iPhone and Android platforms. I'm really proud of the efforts from Lorena Akins, Patrick Gravinese, Brad Johnson, Eric Majewicz, David Matthews, and Traci Tillis. They came together at CityCamp Raleigh and created a wonderful resource for our community. A resource that is helping to "create America's smartest park."¹¹²

Key take-aways from CityCamp Raleigh

One thing that impressed me was the attendance of students from NC State's Design Graphics Lab.¹¹³ Three of the four teams that came from NC State placed in the top five. One of our goals as organizers was to include more students and youth. We accomplished that goal by engaging students who were prepared to participate in CityCamp.

Another satisfying part of the weekend was the number of mentions and references to the Triangle Wiki. Attendees used the Triangle Wiki to document their sessions and projects, and organizers are using it to track the future progress of all the teams.

Compared to last year, we had more participants and better ideas. We had more teams pitch ideas. We have more momentum to keep the projects moving forward, improving, and becoming a reality.

When your entire City Council shows up to your unconference, it indicates their strong commitment to open source and open government. Seeing this happen was very fulfilling for me as an organizer. And just as importantly, it makes more of a difference when attendees recognize the significance of this.

Raleigh is definitely accelerating on its path to becoming an open source city. Open source is changing the world. In Raleigh, it's happening one elected official at a time. Citizens are shaping the open government movement because it means something to them. Open government and open source are part of our culture.

On the flip side, there are few things that could be improved. As

¹¹² <http://rgreenway.com/>

¹¹³ <http://designgraphics.ncsu.edu/>

CityCamp organizers, I think we could have done a better job at fostering more of the top ideas and the RGreenway project after the event. Mentors are an important part of the process and we need to incorporate that in the future.

Naturally, organizers of events like this are exhausted afterwards, but it is important to schedule appropriate follow-up meetings and conversations with the winning teams and other groups who want to continue developing their ideas. While organizers lose a little wind in their sails from the final push to host an event, teams that generate awesome ideas like RGreenway and a community health score are just gaining momentum.

In fact, the community health score team was re-branded as CityShape and entered the Mayors Challenge offered by Bloomberg Philanthropies. We'll take a more detailed look at CityShape in Chapter 7. Thankfully, both RGreenway and CityShape have continued to progress.

The CityCamp Raleigh organizers are looking at new ways to organize and evolve the organization. And I've already hinted that the Code for America Brigade seems like a natural progression for our evolution. We'll take a look at that next.

Transitioning to the future

CityCamp Raleigh has been very successful as a catalyst for the open government movement in Raleigh and CityCamp Raleigh is evolving into something more than an annual three-day, open source event. The organizers have tried a few things such as meet-ups and blogging to extend CityCamp from an annual event to the pulse of open government in Raleigh throughout the year. Those efforts have had varying success.

When I first learned about the Code for America Brigade program, it seemed like a natural progression for our CityCamp. One of the challenges that the CityCamp Raleigh planning team faced was to attract more coders to the event. We've always been inclusive of all citizens, but we struggled with coders. I imagine that the Triangle area has a lot of technical expertise and coders who are interested in government, though

tapping into that talent for civic hacking has proved difficult. We haven't found an enticing way to attract them to our civic hacking events.

The brigade captains decided to explore the route of naming our group, *Code for Raleigh*; attempting to address the need to attract more coders to our civic hacking cause, while modeling the naming after other brigades around the country. And we seemed to have found some success during the Race for Reuse campaign after deploying the Adopt-A-Shelter application. Three volunteer coders joined the brigade and started looking at the Adopta code-base. We made a list of enhancements and are organizing the brigade to work together and move forward.

The CityCamp Raleigh planning team agrees that we're at a transition point. The idea that the Code for Raleigh Brigade was the way to organize may not be the right fit for Raleigh. Our dilemma is choosing between having an over-arching organization, keeping with the brigade, or using a modified model based on what has worked over the last two years. Keep in mind, we're just a group of volunteers following our passion.

The planning team is exploring several options. One idea is to create another layer that brings everything together under a single organization. Essentially, it would be the same group of people, but repurposed as an umbrella organization that would be responsible for planning the annual CityCamp event, supporting the Code for Raleigh Brigade and the Triangle Wiki project, and mentoring initiatives such as RGreenway, CityShape, and future projects. Naturally, all of these fall under the open government movement and have been spawned by the CityCamp event, but there isn't an existing group that focuses on all of these efforts.

The best part about this transition is that it's happening because we are successful. Whatever we decide will be a good decision. We have a very smart group of people on the planning team and I'm positive that we will find the right path for moving forward and making progress.

Another exciting development happened in February 2013 at the Cary Open Data Day¹¹⁴ event. The Raleigh Brigade captains presented to over 80 attendees about our brigade and how to organize their own brigade.

¹¹⁴ https://trianglewiki.org/Open_data_day_2013

There were citizens and elected officials from surrounding towns in the Raleigh-metro area including Cary, Morrisville, and Durham. Each location is interested in forming a Code for America Brigade. The real opportunity in front of us is to unite by forming a Code for America Division and work collaboratively across the Triangle region.

Chapter 7: The future for an open source city

The future for Raleigh as an open source city is very promising. We have a strong, participatory culture that is both leading and adding value to the open source, open government, and open data movements happening across the globe. Our elected officials and city staff, particularly the IT staff, are committed to open source and understand the value of open data. This makes the economic future of Raleigh ripe for new businesses and entrepreneurs with ideas that spark innovation.

If Raleigh continues to foster passionate user groups, there is no reason why Raleigh won't continue to be a great place to live, work, learn, and play. Our user communities come together because of the passion they have for their groups. Those user groups and other organizations choose to host conferences and gatherings in the Raleigh area because of the quality venues and the attention the events get from the local community and beyond.

But what else does the future hold for Raleigh as an open source city? First, I want to include a brief conversation with Raleigh CIO Gail Roper. Then, I'd like to focus on a few projects that are currently developing and could have a real impact on the culture and, consequently, the development of Raleigh's open source brand.

Raleigh: A completely open global city

Gail Roper, City of Raleigh CIO, is an advocate for closing the digital divide and has a renewed focus on community in her role as a CIO. Her insights and thoughts on the future are critical to understanding Raleigh's future as an open source city. Let's see what she has to say.

What makes Open Raleigh such an important initiative?

Information and data have become important to decision making and predictive analysis. The focus on government openness and community enablement is enhanced by making data consumable by both citizens and city government. Open Raleigh promotes systems that can drive down

operating costs and improve opportunities to share across jurisdictions. Open Raleigh puts emphasis on access to the Internet and standards that make data available to the public. It has the potential to drive economic development, entrepreneurship, and education.

What was the most difficult part of getting the open source resolution passed in Raleigh?

The most challenging aspect is community awareness and the education and clarification of objectives. Defining the concepts around open source, open data, and open government in a way that reflects the inherent benefits caused us to rethink our messaging. Recruiting and hiring individuals with the skills to support the development of knowledge sharing data models was also challenging.

What's been your biggest surprise since launching Open Raleigh?

I am surprised and pleased by the culture of the open data, open source, and even the open network community. It brings together the science of technology and the desire to share in ways that improve the quality of knowledge in the community. I believe it is life changing because it removes barriers to information. We want Raleigh to be the most open digital city in the United States. That means that we need to focus on all aspects of providing our citizens with systems that support their participation in the digital economy. I was also surprised and elated to receive the support of City of Raleigh leadership, our Mayor and City Council, and the business community.

Where is Raleigh on the open government roadmap and what can citizens look forward to in 2013?

We have been focused on recruiting an open data program manager to drive strategic efforts and a team of open source professionals that have a passion for their work and the value they can bring to the city. The culture of open source platforms is becoming embedded in our decision making process. We are establishing open data priorities routinely as we continuously improve our open data portal. We are developing team concepts around the information architecture that will continue to support the development of a collaboration portal, data warehousing, and

the integration with legacy systems as the industry evolves.

What does the future hold for Raleigh as an open source city?

We are promoting Raleigh as a completely open global city. We want to find innovative ways to promote economic growth through technology infrastructure advancement, promoting youth-based technology initiatives, open knowledge thinking, and open source innovation. We want to edge out on our adoption of open source innovation and be known as an early adopters in the open source space with the help of our private sector partners. Raleigh is ready for this kind of innovation and we are eager to roll out our roadmap in a strategically innovative fashion. The first and second quarter of 2013 will reveal additional innovative solutions in the area of open source and open data initiatives that are citizen-facing. We know that to be a global open source city, we have to drive innovation and change the culture in our organization as well.

CityShape: A healthier community through open data

One of the most interesting topics at CityCamp Raleigh 2012 came from the community health score team, now known as CityShape. They presented an intriguing concept around urban planning and a healthier community. At-Large City Councilor Russ Stephenson pitched the idea at CityCamp Raleigh. He advocated for a healthier Raleigh through urban design and open data. Partnered with Raleigh Mayor Nancy McFarlane, a group of citizens gathered around the idea for the majority of the day and formed a team around the concept of planning a better city and making incremental improvements by computing a community health score.

The team presented their concept during the final competition. Even though it didn't come away with the grand prize, the idea was good enough to enter in the Mayors Challenge offered by Bloomberg Philanthropies.

The Mayors Challenge¹¹⁵ was announced on June 13, 2012, and 1,300 mayors from U.S. cities with more than 30,000 residents were invited to compete.

¹¹⁵ <http://www.mikebloomberg.com/index.cfm?objectid=E6252953-C29C-7CA2-FF1B236C9B691A89>

The challenge is a competition to “inspire American cities to generate innovative ideas that solve major challenges and improve city life.”

While the topic is very complex, the idea is to improve the overall health of our community through design, based on open data. Imagine blending existing information like Walk Score and Bike Score and integrating it with GIS mapping to create a smarter way to improve the health of our citizens.

A SeeClickFix-style community sourcing feature would allow individuals, neighborhoods, and city-sponsored planning groups to build a database of healthful community strengths and weaknesses. Heat maps and other visualizations would combine the GIS and community data into a common visual language used by citizens, planners, and elected leaders to make informed decisions about future development.

This type of information could help city officials and developers determine where to locate and build community centers, sidewalks, or bike lanes. Alternatively, this could also lead to things such as a bike share program. And what if we couple that bike share program with Walk Raleigh wayfinding? The possibilities are endless.

Mayor McFarlane officially signed up the City of Raleigh for the Mayors Challenge in July 2012 with the CityShape project. While Raleigh didn't make the final cut, the idea continues to evolve within the group that gathered at CityCamp Raleigh in June 2012.

I think the CityShape idea has potential to be a candidate for the future Code for America fellowship. If Raleigh was chosen to be a Code for America city with this concept, the fellowship would develop the idea as an open source application and it could be redeployed in cities around the United States. This idea could change the way our future cities are developed (physically) and make citizens healthier. CityShape could get both our cities and citizens in shape with open data. This is one way an open source city like Raleigh could affect the future and have a positive impact on society.

An urban farm with open source roots

One initiative that has also begun to contribute to a healthier Raleigh community is the local food movement. Raleigh City Farm¹¹⁶ is leveraging the *light resource model* to shrink the process and time it takes for fresh produce to arrive on your dinner plate. The model involves growing and storing food locally and delivering it to markets for local consumption.

Raleigh City Farm is an urban farm startup and a social enterprise. Officially a non-profit, it uses a hybrid model to blend a for-profit mentality to fund the organization without depending on grants and donations for funding. Funding will come from the sale of produce as well as workshops offered to the community.

Raleigh City Farm is one large plot of land planned by a lead farmer and cared for by committed volunteers. The farm is 1.3 acres located in downtown Raleigh. It provides a great rural connection for those living in an urban environment. More importantly, they are growing fresh produce for the community.

Ryan Finch, general manager at Raleigh City Farm, gave a TedXRaleigh talk in November of 2012 about urban farming.¹¹⁷ Finch is excited and very passionate about urban farming and the local food movement. She stressed the importance of community—a topic that starts to focus on the components of the open source way. “Farms are not produce, they’re people,” Finch stated in her talk. She attributed Raleigh City Farm’s early success to partnerships, volunteers, and the community.

When the farm was getting started, a nearby university helped with storage and still cuts the grass on the one acre farm. A local bike shop helps with food delivery. Nearby restaurants purchase the fresh produce grown on the farm. Even the popular food truck movement is noticing the demand for fresh, locally grown produce; the LoMo Market food truck is somewhat of a ‘mobile farmer’s market’, delivering fresh goods, including produce from Raleigh City Farm.

Collaboration is another key open source attribute that Finch is focused

¹¹⁶ <http://raleighcityfarm.com/>

¹¹⁷ <http://www.youtube.com/watch?v=GL2f268nMoo>

on with Raleigh City Farm. They are looking for ways to collaborate with others through local food projects, educational events, speaking engagements, farm tours, and volunteer opportunities. They also plan to document and share some of their educational endeavors.

In the open source world, we often talk about the power of community. Raleigh City Farm is taking an open source approach to building a community and becoming a community hub. The farm is even contributing to redevelopment efforts. A restaurant, bakery, and a few local artisans are looking to move close to the farm into an empty strip mall. The partnerships mentioned above and the support from the local community and volunteers are helping this type of community-supported agriculture grow to new heights.

The new RFP: Request for partnership

If you're familiar with any type of government procurement process, it usually involves an RFP—a request for proposal. With declining revenues and limited resources, the approach to partnerships and getting work done may change in the future. I think the traditional RFP process may start to change and adapt to become a request for *partnership*.

I envision a future where city, town, and county governments will start to pool their money and resources for IT projects. Why build a new data portal, ERP platform, or any other project that is specific for just one government entity? We're wasting taxpayer dollars by duplicating these efforts because of political boundaries. And many times, these projects have similar requirements. It's all about control, but as citizens, we need to start recognizing this waste and encourage our government to start looking for partnerships in IT rather than duplicating the same systems over and over.

Open source offers a great solution to this duplication. If one city, town, or county deploys an open source solution, then other towns can reuse that project. Eventually, we can have open source development and support communities around these projects. Look at how the private sector develops and uses open source. Resources from a variety of companies create projects like Linux. No one company owns Linux, but there is a strong community around it. There is no reason why our government shouldn't replicate the open source process and break down

the traditional political barriers that are driving up IT costs for innovative projects.

A future where our government entities are looking to partner with one another would not only save taxpayer dollars, but it would help enhance the citizen experience. Cities and towns with limited IT resources could take advantage of open source solutions already deployed. This is what the Code for America Brigade program is looking to accomplish with citizen-led brigades. Now, we just need some of our elected officials and IT departments to realize the advantage of the new RFP and discover those partnerships that will reshape the government IT landscape.

What's next for Raleigh?

As City of Raleigh CIO Gail Roper said, "We are promoting Raleigh as a completely open global city." There are a number of IT initiatives on tap for 2013 and beyond. I think we'll see dramatic advancement to Raleigh's open data portal and begin to see civic innovation from the private sector.

There is the potential to host CityCamp North Carolina in Raleigh. The team from CityCamp Raleigh has already started the conversation about what this event might look like. We envision an event that would be two-fold. First, we would teach the CityCamp model to attendees so that they could replicate an unconference in their city or town to generate ideas, foster collaboration, and motivate citizens to get involved in their government. Second, we could start to address statewide issues with agencies and departments through citizen-led discussions. This is one way the *request for partnership* concept could start to break down barriers and form open source communities across the state.

Open data will play a bigger role. A regional 'data-palooza' event that stems from the federal data.gov initiative is coming to Raleigh in 2013. It will be interesting to see how that plays out at the local level, but even more so, how citizens and companies will use and advance different data sets made available under this initiative.

It will also be exciting to see SPARKcon, Maker Faire, CityCamp, and other events continue and evolve. Open source has played a key role in how those communities of passion have come together to share their

knowledge and collaborate with like-minded people.

Additionally, 2013 is an election year for Raleigh City Council. While we don't know who will be running for re-election and who will win those seats, one thing is certain: in the future, our City Council seats will be filled with different officials from those who were at CityCamp Raleigh last year. Some of those in elected positions will not understand the benefits of open source and may not even support more openness in government. That's why it's important for movements like this to be citizen-led and citizen-driven. In order to survive election cycles, citizens are the ones who must step up and reshape our government. If open government and open data are important to creating a better citizen experience, then we as citizens must take the reins and not let these movements fail when the next election occurs. It's the only way we can make progress for more openness.

At this point, I think it's fair to say that Raleigh is an open source city. Looking at the culture, government policies, support of user groups and events, and economic development efforts, the foundation has come together. The path to the open source city brand has been blazed, the foundation established, and the future to build on that foundation as a city of innovation opened, making Raleigh a leader in fostering the open source way and promoting more openness in government.

There's one thing I want you to remember from this collection of stories. Open source is changing the world. And if you want to be a part of that change, all you have to do is participate.

What will you do to transform your community into an open source city?

Acknowledgments

I've met a lot of awesome people along this journey, the path to the open source city, as I've come to call it. And the first person I need to recognize is my wife, Merri Beth, whom without her love and support, my community involvement and writing this book would not have been possible. Thank you, I love you.

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Last, but not least, thank you for reading. I hope this collection of stories has inspired you to make a difference.

In February 2013, I launched an IndieGogo crowdfunding campaign¹¹⁸ called *Open source all the cities* to generate awareness for the book and to help raise money to get the first 500 copies printed. I was overwhelmed by the amount of support and would like to thank each contributor by acknowledging them below.

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¹¹⁸ <http://igg.me/at/opensourcecity/x/2452834>

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References

I wanted to include a list of people and references covering the open government and open data movements to help get you started on your own mission.

- David Eaves is a public policy entrepreneur, open government activist, and negotiation expert advising government officials on open government and open data - <http://eaves.ca/>
- Luke Fretwell is the Co-founder of GovFresh, which features public servant innovators, civic entrepreneurs and the ideas and technology changing the way government works - <http://govfresh.com/>
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- Steve Ressler is the Founder and President of GovLoop, a social network connecting over 60,000 federal, state, and local government innovators - <http://www.govloop.com/>

- Center for Effective Government (formerly OMB Watch) - <http://www.foreffectivegov.org/>
- CityCamp - <http://citycamp.govfresh.com/>
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