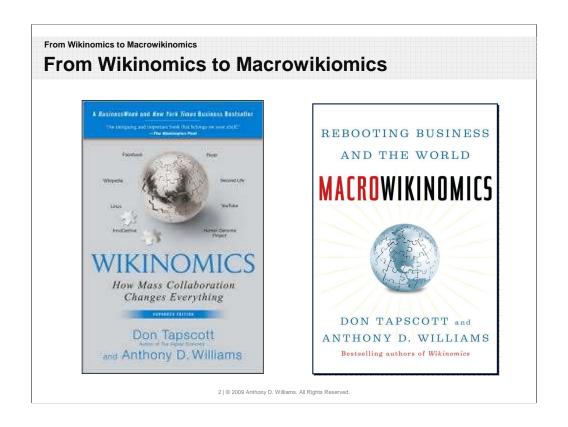
Macrowikinomics: Rebooting Government and the World

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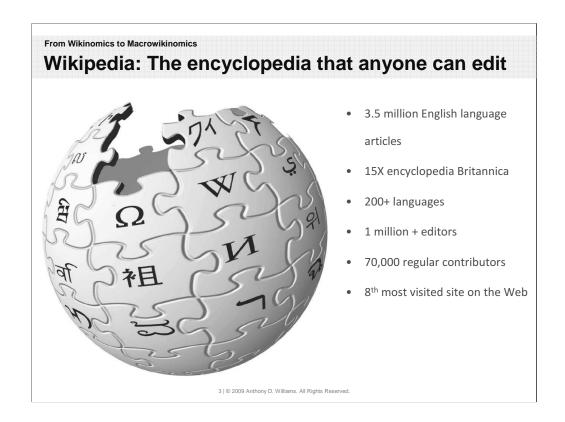


I started thinking differently about how businesses create value and succeed in a globally interconnected economy back in 2004. At that stage, we had got past all of the dot-com mania and we were beginning to observe how the Internet was driving historic changes in the real economy.

What **drives competitive advantage** in a global economy

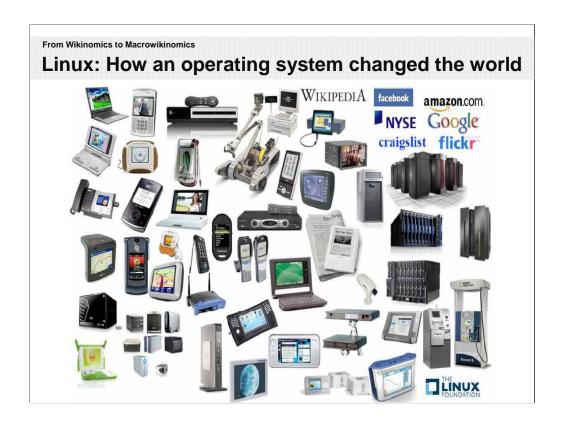
Hypothesis: Internet enables new models of innovation and value creation that are superior to the old industrial age models that dominated the 20th century.

Found a somewhat unexpected answer. The most innovative uses if technology...



First, there was Wikipedia, arguably the world's largest repository of human knowledge. It's about 15 times the size of Encyclopedia Britannica, but it's supported by about 10 full-time employees and millions of volunteer editors. In other words, most of its human capital was outside the boundaries of its organization and rather than fiercely protecting its IP, Wikipedia actively encourages user to edit and contribute.

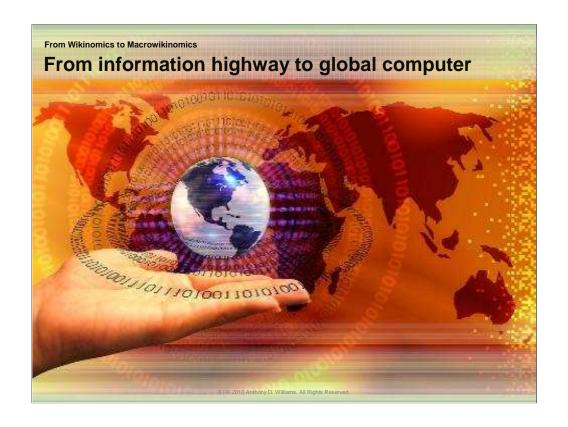
In theory, Wikipedia shouldn't exist at all. Who would have believed that millions of strangers could collectively build such an incredible resource. But it turns out that there are enough people in the world with some disposable time and some passion for a particular subject that when you provide them with a platform and bring them all together over the Internet, you get this constantly evolving knowledge base without the complex bureaucracy one finds in traditional publishing organizations.



And then there was Linux – a free, open source operating system that emerged from the hacker fringes to become one of the most ubiquitous operating systems in the world. Jim Zemlin of the Linux Foundation likes to say that every person in the modern world uses linux multiple times everyday, often without even knowing it. Think about it. Linux is running 80% of the world's web servers and runs in the background of hundreds of consumer products, including playstations, tivos and even some BMWs. In fact, in researching the new book we found out that Linux is running germany's air traffic control systems and even some nuclear power plants.

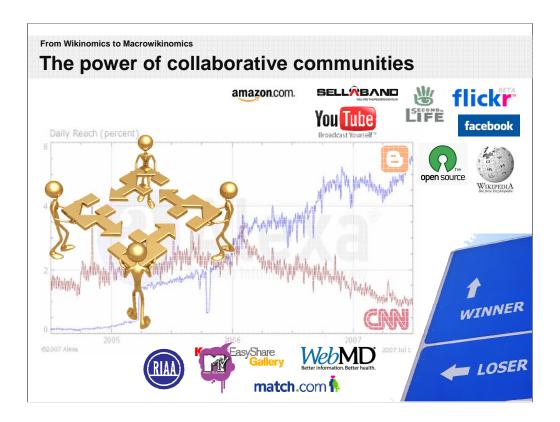
Like Wikipedia, Linux was not created by a traditional company. There are no traditional management structures, no paycheques, no corporate campuses or free haircuts. But don't be mistaken, there is plenty of economic value creation.

Recent estimates put the Linux economy at about \$50 billion annually – that's all of the consulting, hardware sales, and service contracts that Linux makes possible.



So having documented this powerful new models of value creation, we asked ourselves: what makes these new models of collaboration possible in the first place.

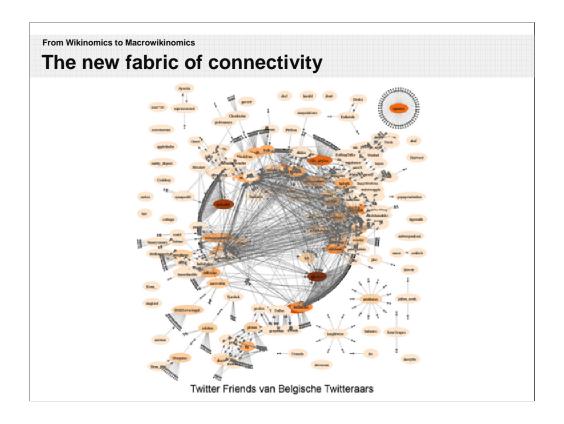
Most important is a deep change in the Web. First generation of the Web was about websites and publishing information. We had the information highway metaphor in which the Internet was akin to the cable system – a big pipe to for delivering content to passive users. That's now changed fundamentally -- we have gone through a cultural shift in how we use and think about the Internet. The Internet is more like a global computer that everyone programs. Uploading videos to YouTube, tagging photos on flickr, modifying a facebook profile or tweaking a Wikipedia entry, you are – in some small way -- programming the Web. You are contributing to this global fabric of knowledge and content. And when 2 billion users are doing this collectively, every second of every day, it adds up to a staggering rate of content creation.



Around 2006 we started to see deep changes in the media landscape as collaborative communities eclipsed their broadcast rivals



Not just a North American or European phenomenon. There are 5 billion wireless subscribers worldwide – this is becoming a global phenomenon. Hard to reach communities will have access. Was doing research on energy and found out that only 10% have access to a modern electrical grid but 97% can access a cell phone!



The Web has gotten a lot bigger. It's richer in content, more diverse in terms of voices, and more accessible to the masses.

Internet Users: nearly 1 billion users to nearly 2 billion.

Facebook: 100 million users now it has 500 million.

Twitter: becoming one of the dominant channels for spreading and discussing realtime news and information across the Web.

So the point is that the **Web now connects a whole lot more people in more useful ways**. And the result is that we have a **new fabric of connectivity** in society. it's really fundamentally changed the nature of human communities. It's not just about the people in your neighborhood or the people at work. Billions of people can connect and collaborate around any conceivable shared interest, goal or objective and they can do so in a heart beat. Not just a quantitative difference, but a qualitative difference.



Even people who live in countries like Iran where personal freedoms are curtailed can increasingly get the word out to a global community of sympathizers. The whole world was watching the brutal crackdown in the aftermath of the disrupted Iranian elections in 2009 thanks to rapid spread of news and photos uploaded by people on the ground.

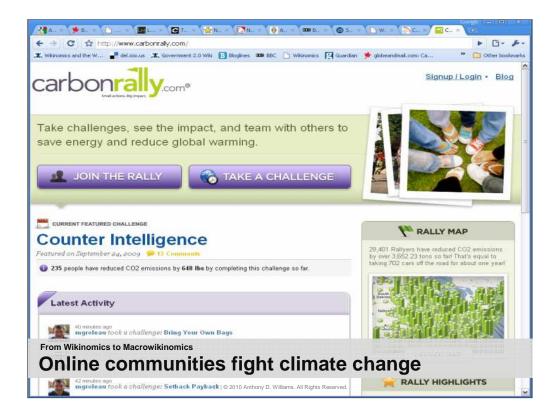
A few years after George Bush was calling Iran part of the axis of evil, we begin to see a different perspective of a youthful, reform oriented population that shares many of the ideals and aspirations that we do.



If you have a chronic condition, like cancer, diabetes or ALS, the worst thing is for you to be isolated. For women with breast cancer, isolation led to a 66% increase in mortality.

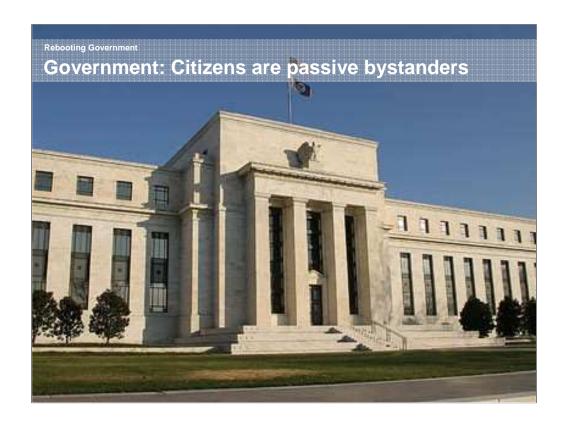
There is a latent workforce not engaged in healthcare. 30% of the population has a chronic disease and another 25% of the pop knows someone who is struggling with a long-term illness. Brining them together over the Internet, not only empowers patients to improve their personal conditions, it helps aggregate data for medical research.

A new model, patients take on greater ownership of their own health. They selforganize into patients communities and even contribute to medical knowledge.



Perhaps the most important application of mass collaboration is climate change. It's become pretty clear that we're not going to fix the problem with a few new regulations or a tax on carbon. We need deep and fundamental changes in the way we produce and consume that affect everything from industry to our daily routines. There was a pretty spectacular failure on the part of governments to move forward on the issue in Copenhagen in 2009. But thankfully, we're seeing the rise of citizen-led initiatives that could make a big difference.

Carbon Rally. 40K. People propose actions to reduce carbon emissions, the community chooses the best ideas to pursue as a team. Carbonrally tracks the collective impacts. Could become competitive. Microsoft versus Google. Harvard versus Yale. The EU Parliament versus the US Congress.



We have a broadcast model of government in which citizens are treated like passive bystanders. Only 26% of Americans say they are satisfied with the way their nation is being governed. It's the reason why we start to see movements like the Tea Party.

But think of the problem another way: we have a system where 95% of the populace is unengaged in addressing the key issues facing the nation. Like the patients with chronic conditions, we have a latent workforce that could be advancing solutions. The problem is that modern government institutions don't create room for genuine and meaningful citizen engagement.





So the challenge I want to put before us now is to suspend some of the assumptions we all hold about how your industry works and pretend, for a moment, that those rules and conventions no longer exists. If we want to be the disruptors rather than the disrupted, challenges your assumptions is absolutely key to seeing the world with fresh eyes and spotting opportunities for innovation.

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Rebooting Government

Models of Democracy

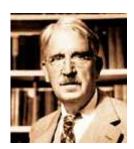


The private citizen today has come to feel rather like a deaf spectator in the back row, who ought to keep his mind on the mystery, but cannot manage to keep awake.

- Walter Lippmann

No government by experts in which the masses do not have the chance to inform the experts as to their needs can be anything but an oligarchy managed in the interests of the few.

- John Dewey



It's really about what kind of democracy we want to foster in the city.

There are long running philosophical and ideological debates about the nature of representative democracy and the appropriate role of the citizenry within it. Debates that continue today.

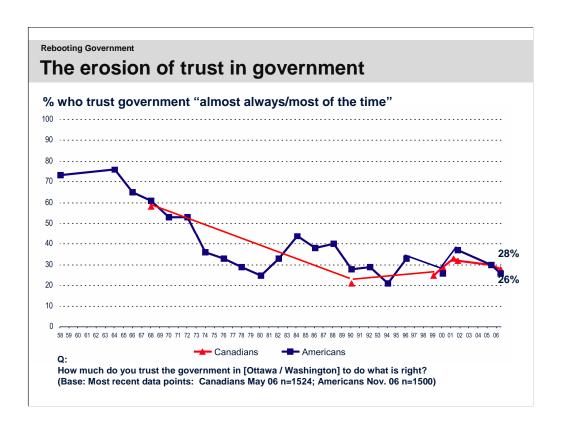
Walter Lippmann was quite sceptical of the capacity of the average citizen to add much to the process of governing, comparing the private citizen to a deaf spectator in the back row.

John Dewey was quite the opposite – suggesting that democracy quickly becomes oligarchy if the masses do not have a significant role to play.

Personally I lean toward Dewey's side but I do think there is an enormous challenges to

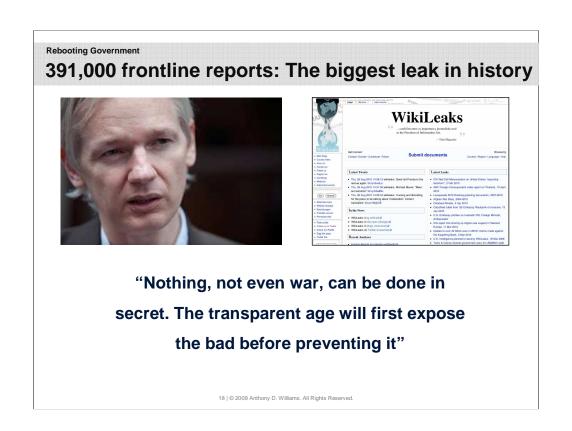
- 1. reintroduce civic responsibility into the lives of 21st century individuals
- 2. Create room for citizen engagement

Because at the moment we have an awful lot of deaf spectators



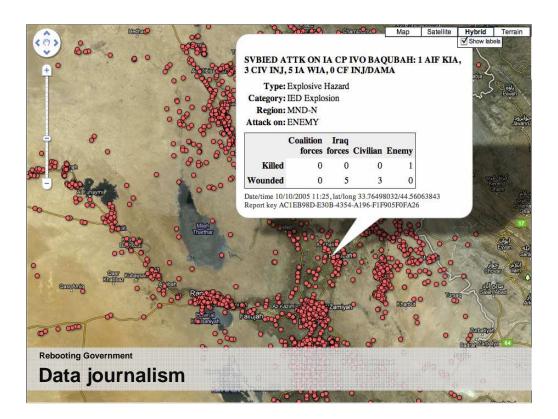


Slowly but surely, however, citizens are claiming broader roles in government. If you're concerned about government accountability, the tools available today are incredibly powerful. With a few clicks I can access to a vast array of government data, find out everything about my elected representatives – how they vote, who funds their campaigns, how they spend taxpayer dolllars.

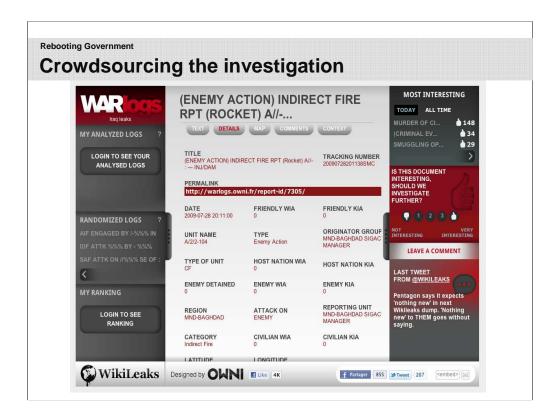


It turns out that nothing, not even war, can be done in secret. Just last week we saw the biggest leak of military secrets in history. 391,000 frontline reports from the Iraq war that detail some of the more unsavory details of the conflict.

No one knows for sure who the ultimate source of the leak is, but it was all made possible by one man and one network called WikiLeaks. On wikileaks, you can get access to hundreds of thousands of leaked classified documents. So even the most secretive and powerful organizations find it difficult to maintain secrets.



The granularity of the coverage was astounding. All 391,000 incident reports plotted on interactive maps, available for any interested party to browse. People in the news media are heralding this as a new form of data journalism or journalism in the raw. Journalists no longer just release "the story" – they release everything, including the data and invite their readers to help make sense of it.



In fact, wikileaks is doing just that. With a site where citizen journalists and analysts can do their own investigations, flagging documents that look interests and merit further review. Transparency on steroids.



These are examples of transparency being imposed on gov't, but what we're increasingly seeing are gov'ts who use transparency to enlist citizens and businesses as collaborators in solving challenges. Forward thinking gov't are seeking to harness the Web to reinvent the way the government solves problems.

An InnoCentive for government. NASA has a challenge to develop wireless power transmission. The DOE has a challenge to develop a 10W lightbulb that emits 60Watts worth of incandescent light. The Department of health and human services has a challenge to use existing health data about carcinogens and behavioural patterns to build an engaging web or mobile applications that will enable communities to prevent and control cancer.

After all, it stands to reason that the department of energy won't address all of the nations energy problems without the participation of scientists, businesses and households across the country. Posing a challenge is a good way to harness ideas and approaches that might not have otherwise emerged from within the DOE itself. Think of it as a new way to orchestrate capability.

Challenge.gov, major federal agencieslike the EPA the DOE and D of Edu have posted major public policy challenges and asked members of the public to contribute.



Smart governments can use the Web to enhance democracy and get their constituents more involved in the process of setting policies. In the run up the UN Habitat forum in 2005, for example, the gov't of Canada, the UN and IBM got together to facilitate a global dialogue on urban sustainability issues over a 72 hour period. They realized that they could probably come up with better solutions to issues like urban poverty and pollution if they involved the people most affected.

Over a three day period, they engaged:

40,000 participants

160 Countries

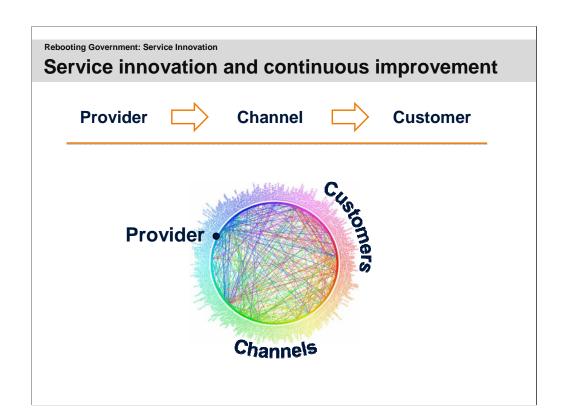
Mixing offline and online participation

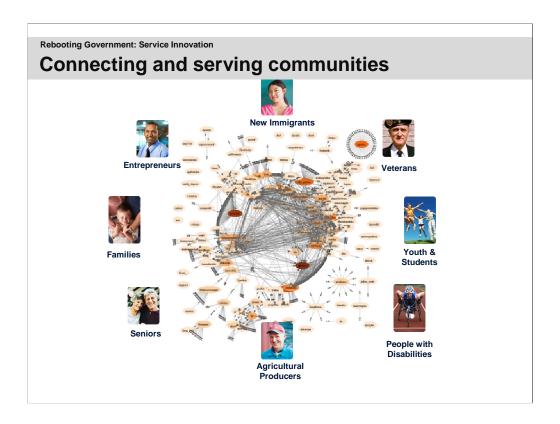
Producing 500 actionable ideasthat were consolidated into 73 proposals to address urban sustainability issues



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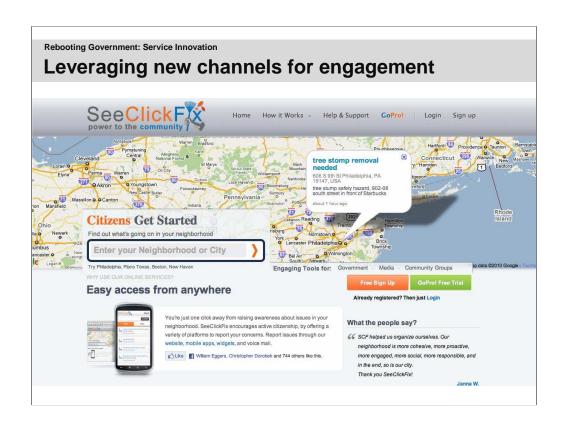
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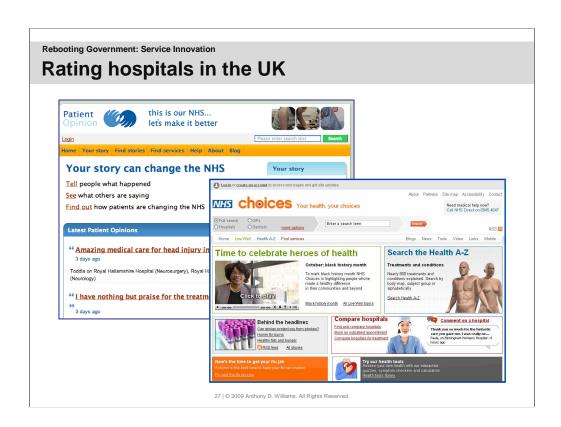




Rather than put out an open call, it makes sense to engage with specific communities.

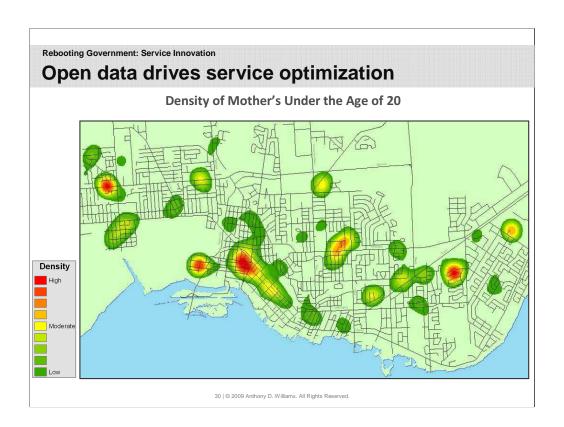
It's not what your country can do for you. It's what we can do together. There is evidently a lot of latent knowledge and skill within these communities. The levels of connectivity will be low in some and very high in others. How could citizens benefit from a richer connections with other people like them? How would the govt benefit from deeper engagement? Could we facilitate a greater emphasis on self-service or collaborative service? What role should government play in these communities?



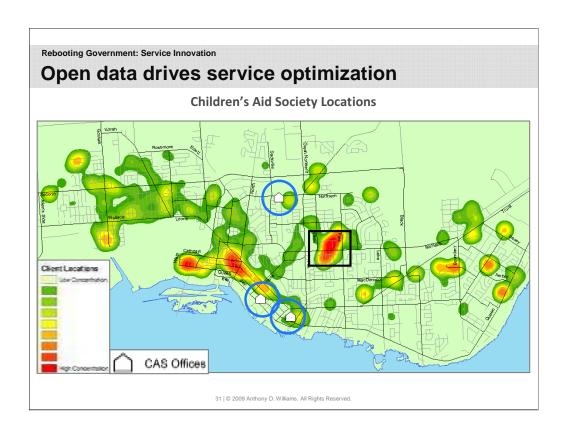




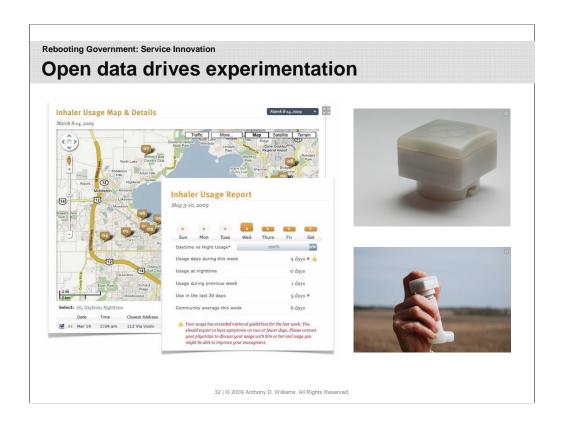




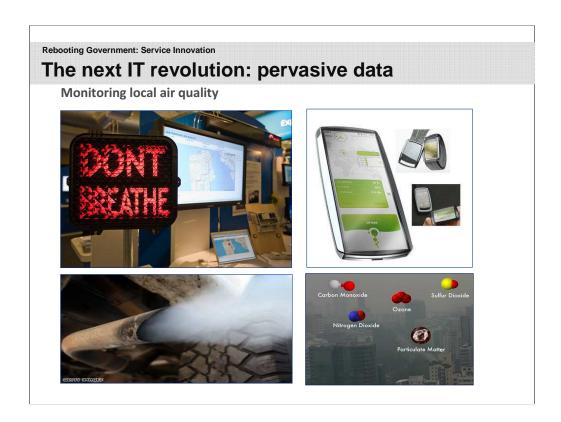
And similarly a map of teenage pregnancies . . .



Helps to prioritize the location of children's aid society locations



And there's lots of cool experiments taking place. Here's one from a non-profit group that is working on Asthma research. The little white device you see on the top right gets fitted to asthma inhaler. It includes a little GPS chip so that the incidents of asthma and the usage of inhalers can be tracked across the country in a way that was impossible before.



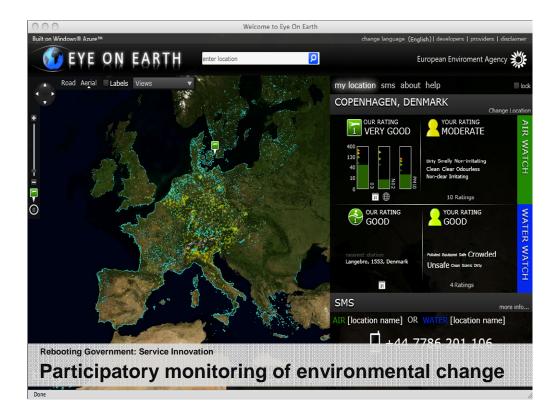
Then there's a group of Berkeley based researchers who are turning ordinary mobile phones into powerful personal measurement devices with tiny internet-connected sensors that are capable of detecting air pollution, assessing water quality and UV levels, and so many other wonderful things. Nokia already has a working model.



As a trial, they fitted street sweepers with wireless sensors that collect data as the sweepers move around the city.



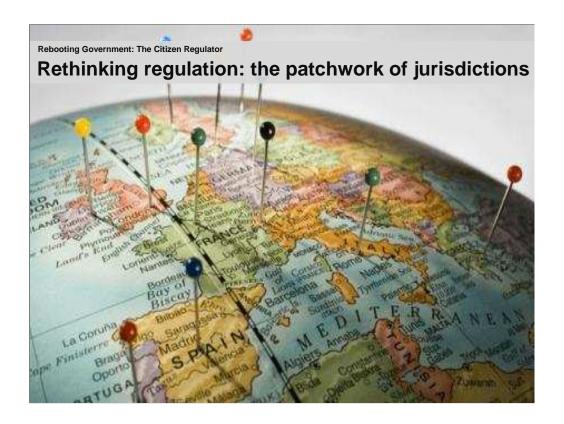
The data is aggregated on city maps and citizens who sign up for the service can get text messages giving them data about their immediate surroundings.





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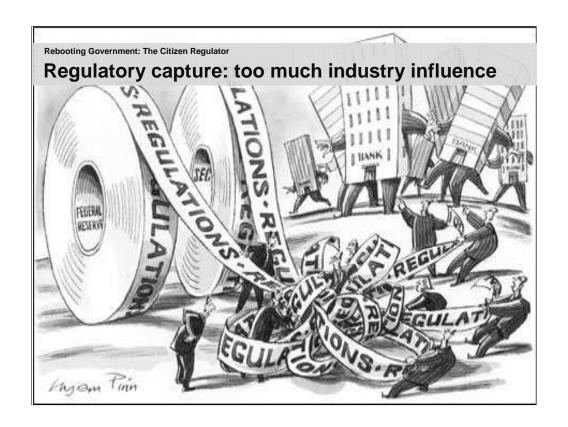
Patchwork of jurisdictions has long been an irritant to business. A global company operate 50+ countries simultaneously, but in many countries regulations may be devolved to sub-national jurisdictions, which multiplies the patchwork problem. It not simply a matter of having to comply with differing standards, it's the fact that the interface into the regulatory system tends to be highly fragmented. So within one jurisdiction you may be dealing with 4 or 5 key regulatory agencies, for the environment, finance, workplace health and safety, etc. So the system is not at all user-friendly.

Global companies typically get around this problem by adhering to the principle of world's best practice. They simply operate to the highest standards set internationally, regardless of where they operate. And in some cases the standards set by industry bodies are higher than those set by government. So for global players these problems can be overcome. For smaller companies seeking to expand internationally, the patchwork of jurisdictions presents a big barrier.



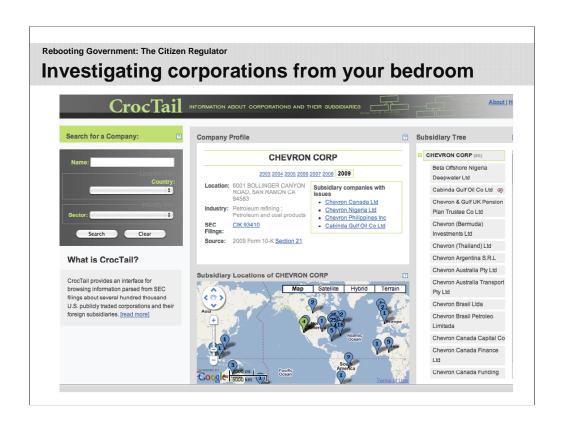
Broadly speaking, there are serious questions to be raised about whether regulatory agencies even have the capacity to enforce the regulations that do exist. Underfunded, inefficient, and out of step.

FDA is responsible for 80% of food safety – the Dept of Agriculture manages the other 20%. Within the two departments, there are over 10 different agencies responsible for regulation. And the FDA is underfunded, inefficient <u>and must also oversee drugs and medicine</u>. Only 1-2% of international food imports are inspected.



There is an empirically documented tendency for incestuous relationships to develop between regulators and regulated industries that can seriously compromise the effectiveness of the system. Economist like George Stigler and Sam Peltzman called this the problem of regulatory capture and suggested that in most instances a relatively small and concentrated group of industry lobbyists would almost always win out over the diffuse interests of consumers and taxpayers. You can cite endless examples, ranging from telecommunications to utilities to finance where the rules favor industry interests over the interests of consumers. If the recent financial crisis is not an example of this than I don't know what is.

The fundamental question is whether regulatory agencies are sufficiently independent.





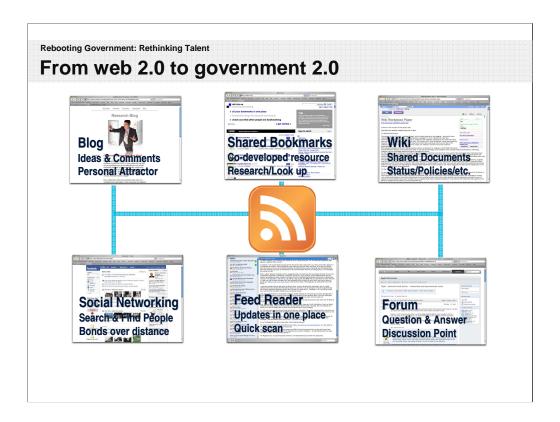






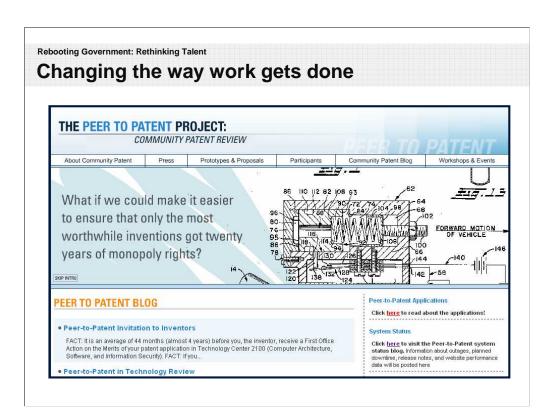
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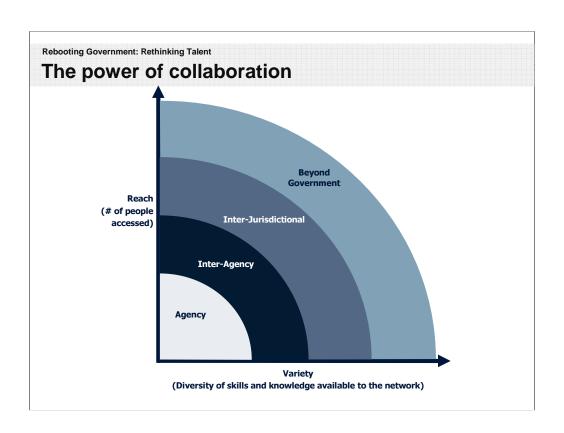
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We'll do that by embedding a whole suite of new collaboration tools that were popularized on the public internet that are now offer promising new ways to enable collaboration in the public sector.









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