

NCC Pittsburgh '18 As Prepared for Delivery

The Secret to Smart Policies About Smart Cities

***Blair Levin
Brookings Metropolitan Project***

***Next Century Cities Conference
Pittsburgh, PA
July 25, 2018***

Thanks.

I want to talk about the secret to smart policies about smart cities.

I can summarize my idea in one word. Learning.

That's right.

I'm going to go out on a limb and advocate learning.

Pretty original, right?

Actually, in today's climate, it's more radical than you think.

Consider the following press release from FCC Chair Pai and House Commerce Chairman Walden on a recent trip they took to rural Oregon.

[Here's their report](#) on what they learned:

“Local officials told us how the lack of high-speed broadband access is hurting the economy and even makes some residents less optimistic about the future. Rural health care providers told us how important telemedicine was in rural towns, and demonstrated how they use broadband to connect patients with doctors online, without patients needing to drive long distances to an office or hospital...Local law enforcement, first responders, and 911 dispatchers told us that next-generation networks, not the legacy infrastructure of today's public safety system, will help them carry out vital emergency service operations, helping them save lives.”

My question: did the FCC Chair and Chair of the House Communications Committee have to spend taxpayer money flying cross-country to learn that rural government officials, health care providers and first responders need better connectivity?

Really?

They didn't already know that?

We either have to believe that:

- a. The Chairmen, after decades of being around these issues, were unbelievably blind and/or stupid; or
- b. They only went to find out what they already believed.

Again, going out on a limb here—I say b.

I don't want to make fun of the Chairman Pai.

Actually, that's not true. Heck, I always make fun of Chairmen, including those I worked for. I regard it as a critical part of my job, whatever that is.

And one big thing Pai and I have in common is that we both think he's hilarious.

We just think it for different reasons.

I mean, I don't *just* want to make fun of the Chairman.

All the Commissioners and lots of others in DC take taxpayer-funded trips to learn what they already believe.

They return with the same narrative and the same bumper strip solutions they had before they took the trip.

I have read hundreds of press releases like the one I just quoted.

I have never read one that answered this question: what did you learn that changed your point of view?

So when I say that learning as a tool to accelerate our path to smart cities is revolutionary, believe me—that is not what is going on most of the time in DC.

We do spin and flip-flops and walk backs and some think we do treason but we don't do learning.

Serious point: all learning is about the destruction of existing habits of pattern recognition and the creation of new ones.

Confirmation bias is the enemy of learning. Because if you see the same thing when the facts change then you are not learning.

Sadly, this lack of learning characterizes the current relationship between the FCC and cities.

That relationship today largely centers on different visions of how our country should approach deploying 5G networks, which some at the FCC have said is key to smart cities.

This is the third speech in the last couple months I've given on the topic. The first two--which I will summarize rather than repeat—discuss how the current Federal Communications Commission (FCC) has curiously interpreted its statutory mandate to dramatically reduce its regulatory powers over [broadcasters](#), [ISPs](#), [telephone companies](#), [cable companies](#), and [wireless companies](#), while simultaneously asserting new authority to regulate prices and micromanage one set of enterprises: local governments.

A major tactic in the FCC's effort to regulate cities is through its Broadband Deployment Advisory Committee (BDAC) process. The [stated, and worthy, goals](#) of the BDAC are to accelerate and broaden deployment of next-generation broadband networks and reduce the digital divide.

However the BDAC suffers from significant failures of design and execution. The failures are three fold.

First, the BDAC did not have a balanced membership that could have led to a real consensus between stakeholders.

Second, the BDAC started from the false assumption that industry does not have the leverage to negotiate the deals it needs to make investments in new networks, an assumption the industry acknowledges is false.

Third, BDAC did not understand how to use a negotiating process to create value for both sides, by focusing on how each can give up on something small to get something big. Instead, it primarily focused on forcing cities to give carriers what the carriers wanted.

But underlying these three failures is a failure to learn anything.

Let's step back and look at the big picture.

The FCC says that 5G represents a critical junction; that our future economic growth and national security require that we lead the world in 5G.

I, being a Wall Street guy, wonder whether that is true.

After all, [according to the Bain study](#), 53% of “executives at large mobile operators believe there are no compelling near term business cases for 5G.”

Curiously, no one at the FCC defines the metric for leadership.

Do they mean leadership in operating systems, chips, or applications? If so, how is it that no one on Wall Street is pegging the value of Apple, Google, Intel, Qualcomm, Facebook or Amazon to United States 5G deployment?

Do they mean speed or price? Then they should notice that while the FCC leadership says we won in 4G, we don't come close to leading the world in those categories.

But let's for the sake of argument assume that it is true that millions of jobs, hundreds of billions of investment and our national security are dependent on accelerating a mobile network upgrade.

I am skeptical, but I could be wrong. The Bain study does a good job of making the case it is true.

That 's a big deal. You would assume that the FCC would be debating big ideas.

But they aren't.

The process began with a point of view that narrowed the range of acceptable answers. The BDAC charter describes its mission this way: "to make recommendations to the Commission on how to accelerate the deployment of broadband by reducing and/or removing regulatory barriers to infrastructure investment."

Consistent with that narrow thinking, a key FCC official admitted that the FCC didn't really care about what cities thought, [saying](#), "[W]e didn't want to choose someone from, say, a municipality that needs a blueprint, because they're not going to be the ones to help design that blueprint."

So its not surprising that the primary solutions they studied were ones where the federal government forces cities to transfer wealth to large private enterprises and in which the private enterprises are not obligated to do anything

But if the problem is so big and important, why did they limit themselves to only considering municipal regulatory barriers?

Why, for example, didn't they have a public hearing with the National Security Council Generals who proposed a national 5G network?

My first reaction is that it's not a good idea but I sure as heck would like to know why the Generals did. I think we could learn something from them.

By the way, I know that the generals were concerned with the Chinese equipment companies establishing a monopoly by virtue of scale, forcing our carriers to buy their products and creating a national security risk.

Fair point, but that raises a question about what are we doing with ZTE?

Moreover, if the problem is scale in the global market, it raises a question about what is going on in the rest of the world, where, based on my travels to developing countries, the Chinese are everywhere. We have a lot of advantages, particularly with companies like Qualcomm and Intel, and our operating systems and applications providers.

But is there a national strategy on trade to make sure we keep that edge?

Nope. Quite the opposite.

Does the FCC have any wisdom to offer our national government?

Nope. Quite the opposite.

Back to 5G in the United States, While FCC officials express great concern about the threat of China deploying 5G faster than the U.S., they seem ignorant of [China's network sharing policies](#). That blindness infected the BDAC framework.

If the FCC wants to reduce costs, why didn't it call up the McKinsey consultants who wrote a [recent McKinsey report](#) that demonstrated that network sharing could save 40% of the cost of deployment, a figure far larger than the potential savings involved with the BDAC recommendations. We could learn something.

Why didn't the FCC consider a program to have the federal government incent cities with financial incentives to build out dark fiber as Lincoln, Nebraska has done which has [facilitated 5G deployment](#) in that city through deals with providers like Verizon.

Why didn't the FCC have a public debate over [Chairman Wheeler's proposal](#) to reform business data service obligations to lower the cost of 5G backhaul? There are a lot of questions and issues with the proposal but it certainly would have accelerated 5G deployments as it addresses the real cost problem—the lack of ubiquitous high capacity wired networks.

By the way, T-Mobile and Sprint are attempting to justify their merger on the grounds that reducing the number of national competitors in mobile is necessary to build out a 5G network. I am not going to address whether that merger will or should be approved. I will only note that if Chairman Wheeler's proposal had been adopted, they could not have justified the merger on those grounds.

I am going to confess something that people in DC never do. I have no idea if any of these ideas should be adopted. I see problems with each of them that suggest they may not be the path to progress.

But I do know two things. First, they are solutions that have the merit of being as big as the problem the FCC officials describe.

And second, if the 5G challenge is what they said it is, the FCC's solution will not get this country where it needs to be.

The alleged size of the challenge and the size of the solution are not consistent.

If a doctor diagnoses you as having stage 4 cancer, he or she doesn't recommend aspirin.

But if the doctor stopped learning science at age 8, maybe he or she would.

The FCC's willful ignorance of a range of answers is not limited to what options it considered.

Did they notice that somehow over [400,000 small cells](#) have already been deployed and that wireless companies have been striking deals to locate small cells without their help?

One proof point demonstrating the ability of carriers to work things out with cities without federal interference involves the carriers and San Jose. They were antagonists in the BDAC process, with the carriers supportive and the Mayor of San Jose, one of two big city representatives, [resigning](#) and blasting the process.

But those parties were [able to negotiate terms](#) that all thought fair and allow the companies to begin 5G deployments. Notably, the deals [include](#) having the companies contributing to a digital inclusion initiative and helping the city pay for accelerated permitting.

Commissioner Rosenworcel, to her credit, [praised the deal](#) as a potential model that other cities could follow.

This, of course, undercuts the fundamental premise of BDAC, that cities can't be trusted to look out after their own interests and therefore some unelected bureaucrats—who, by the way have spent their entire professional careers inside the Beltway—have to micromanage duly elected Mayors and Councils.

So the companies tried to salvage the situation by claiming that San Jose was a unique situation so it's not a model.

AT&T, for example, wrote “The final agreements, which are not yet complete, are intricate, interdependent on each other, and unique to San Jose’s circumstances. The agreement with San Jose was nonetheless reached because it was necessary given the network usage in the area and the population density that is served there.

Think about that for a second.

The industry and the FCC want to create a one-size fits all approach that eliminates local choice for thousands of cities.

But when confronted by a successful negotiation in which both sides got more than they gave, they say, wait a minute, that is a unique situation that does not fit into a one size fits all box.

I think a lot of cities would, like San Jose, want to find a path that in their unique circumstances, both facilitates deployment and helps bridge the digital divide.

But if San Jose is unique, doesn’t that suggest the premise of BDAC preemption—that construction and rights of way management should be standardized and federalized—is flawed?

It doesn’t seem to me the companies salvaged BDAC.

As a logical matter, they savaged it.

In my first two speeches, I criticized the FCC and BDAC and have heard from neither, not that I expected to.

But it has lead to some good conversations with folks in industry who disagree with my analysis.

I advocated a city-by-city approach, as occurred with Google Fiber. This led, by the way, to an increase in investment that has resulted in about 30% of homes in the United States now having a gigabit option. The FCC’s primary (though not only) role, in my opinion, should be to gather facts and be an expert, data-driven, evangelist for best practices, demonstrating but not dictating to elected local officials those policies that will lead to eliminating bandwidth as a constraint to economic growth and social progress.

My industry friends objected that this would take too long.

It’s a fair point, if industry was building everywhere at once. But they are not. Indeed, the deployment will likely be slow and targeted.

For example, Verizon went from [having 11 test cities](#) in 2017 to [announcing a launch of three to five cities](#) in 2018. AT&T initially announced it would only be building out to [a dozen cities](#) in 2018, though they apparently [added](#) three more last week. That pace is actually slower than the pace by which it upgraded in response to Google Fiber. By the way, the cities they added were cities where they built out fiber to respond to Google Fiber, showing another benefit of the Google Fiber initiative.

Moreover, that pace provides plenty of leverage for the companies and plenty of time to study what does and does not work.

A second criticism is that I ignored how the companies' capital budgets are constrained and, the industry argues, if permit fees come down everywhere, we will get broad based deployment.

This argument is reflected by a Commissioner who said that we have to lower the price of access in every community on the theory that if a company saves money in market A, they will immediately spend that money in market B. And therefore, that would give every community "a fair shot at 5G."

I'm sorry. I work on Wall Street. That is not how capital allocation works. Not even close.

If a company gets extra profits in market A, what makes the FCC believe they will spend it in market B?

The FCC has not offered a single bit of evidence to support its argument.

I, on the other hand, can provide clear proof of what telecom companies do when they get some extra cash. The tax bill gave them billions of dollars, far more than they will get from the FCC regulating permitting and rights of way prices.

So what did they do with it? In the general market, we didn't see a huge new inflow of capital expenditures but we did see record [stock buy backs](#), dividends and [mergers](#).

That is true for telecom companies as well. As one can see with [Verizon's own statements](#), stock-buy backs, debt reduction, or dividend support are [probably higher priorities](#) than investments in 5G networks. AT&T, also a big winner, is, of course, focused on debt reduction reflecting the cost of the DirecTV and Time-Warner Entertainment. And it's interesting to note that when company executives discussed the company's future in the recent trial, all of the discussion was about investing in data platforms, not next generation network facilities.

To be clear, I am not opposed to those companies doing what is in their best interests. But let's be honest and admit that nothing the FCC is doing will change those priorities.

Indeed, nothing the FCC has said has reflected that they have learned anything from actual corporate behavior and incentives.

Let me add that I find it odd that FCC officials claim that they have to regulate local government fees to provide local governments a "fair shot."

As one rather angry local official said to me, "what the hell is fair about the federal government taking money that we want to spend on cops and forcing us to subsidize big carrier access to public rights of ways?"

So, because the FCC and BDAC decided it knew the answers from the start and didn't want to learn anything, they came up with an answer that will not accomplish the goal of accelerating deployment.

Rather, the primary outcome will be to transfer wealth from the public to private enterprises with a framework in which industry gets all the benefits with no obligations and municipalities get all the costs and no guaranteed benefits.

That is a harsh assessment and I hope I am wrong. But a sober analysis leads to no other conclusion.

I don't mean to argue that BDAC is 100% wrong.

I think it is good that the process recommended that the Commission adopt a one-touch make ready rule. For a variety of reasons, articulated in Chapter 6, and particularly in recommendations 6.2 and 6.3 of the United States National Broadband Plan, I think it valuable for the FCC to articulate a national policy that lowers the cost of pole access—not by reducing fees but by reducing the input costs to making poles ready for new attachments.

Speaking of the National Broadband Plan—and for the second time in this speech I'm revealing my fundamental stupidity---when I took the assignment of running the effort to develop a national broadband plan, I would have never thought that there would be a recommendation about one touch make ready. I didn't know what it was.

But the idea, like all the ideas, came out of the 30 public workshops and 40 public notices we held. They were designed to teach our team something new.

And they did.

Another example of my ignorance is a project I am working on to develop a plan to connect all refugees to the internet.

Without going into details, I will simply say I co-wrote a piece proposing that such a plan be written. Then some folks like the World Bank decided to fund some friends and I to write it. The final product will bear little resemblance to the article because it turns out that my original thesis—that the problem was just like the problems we addressed in the US National Broadband Plan—was only 50% right.

Which is another way of saying, I was 50% wrong.

Again, a big shocker here—if you actually study something it turns out to be different than you thought before you actually studied the problem.

And that brings us back to the promise of a smart city.

After all, what we mean by a smart city is one that learns.

It is not a city that suddenly, one day, does everything better.

It is a city that learns a little bit every day.

Overtime, that learning leads to the destruction of previous conclusions and the construction of new insights and improved practices.

The city is a commons that we share, a commons we hope can be wiser about traffic, trash pickup, energy use, land use, schools, parks, and many other activities.

Smart cities represent a huge economic opportunity. McKinsey [estimates](#) the market opportunity of the municipal use of the Internet of Things to be between \$930 Billion to 1.7 Trillion by 2025.

Moreover, smart cities represent a huge social opportunity to improve the delivery of all kinds of public goods and services.

Smart cities would benefit from, though is not dependent on, upgraded communications networks.

We don't know yet the optimal way to make our cities smarter. But we see in cities an earnest effort to figure it out, without pre-judgment.

We see all around the world, mayors, council members, staffers, coming to conferences not to confirm what they already believe but to humbly and openly obtain information they need to improve their community.

As we want our cities to become smart, we also want them to become wise. As a 2014 and [2016 White House report](#) discussed, big data carries with it all kinds of opportunities to improve our economy and society but also, “the potential of encoding discrimination in automated decisions”—that is, that discrimination may “be the inadvertent outcome of the way big data technologies are structured and used.” That is, while the data can help improve the operations of our commons, data alone carries the danger of reinforcing existing patterns that reflect historic wrongs and unfairness.

We have a lot of work to do and a lot to learn to achieve the outcomes we desire.

But I trust cities can do that learning in ways the FCC has shown itself incapable of doing.

Let me close with how I started the first of the three speeches.

The most significant meta-theme about governance in the United States today is that the federal government is dysfunctional and disrespected, but that local governments are responsive, pro-active, effective and respected in building communities that improve the lives of their residents.

I see that not just in the press, such as David Brooks’ New York Times column last week on [The Localist Revolution](#), popular books, such as Ben Hecht’s new book on [“Reclaiming the American Dream”](#) and academic writings, as well as in my own experience in dealing with the federal and scores of local governments.

It also shows up in the polling data. More than two-thirds of members of both parties [express trust](#) in local governments while the number of Americans expressing trust in the federal government is [below 20%](#).

This causes me to believe, both as a philosophical and practical matter, that a key to moving this country forward is to give local governments more authority and freedom.

The idea was summed up best by conservative thinker Yuval Levin in his book, *Fractured Republic*. He wrote “The absence of easy answers is precisely a reason to empower a multiplicity of problem-solvers throughout our society, rather than hoping that one problem-solver in Washington gets it right.

Empowering that multiplicity of problem solvers is what this conference and Next Century Cities is all about.

Good luck and don’t let the FCC get in your way.