“Vision without execution is hallucination.” That is what Thomas Edison warned us.

Vision is a wondrous thing. It awakens our hopes and dreams. It gets us thinking beyond what is to thinking about what could and should be.

We often use goals to articulate a vision and galvanize the action needed to realize it. That is what President Kennedy did when he called for putting a man on the moon in a decade and bringing him safely back home. (Yes, the vision at that time was for a man, not a man or woman. Presumably, the vision would include a woman today.) That is also what the non-profit organization, Share Our Strength, is trying to do with its “No Kid Hungry” campaign. The U.S. Congress, too, often articulates goals and a vision for the country in the way it names the laws it passes, such as the No Child Left Behind, Clean Air, and Affordable Care Acts. State and local legislators do the same.

But, as Edison warned us, vision alone, even when articulated as a specific, challenging goal of the sort that research and experience tell us can be motivating, is not enough. To bring vision to life, it is essential to manage progress on it wisely. “Vision, without execution, is hallucination.”

My hope in coming here today is to excite you about the challenge of translating vision – the vision that we, the people, set for our government through our messy and imperfect but still functioning democratic processes – into a reality that makes people’s lives better and improves the condition of the world.

Let me be honest: translating vision to reality is a whole lot easier said than done. It requires not only hard work but also knowledge of what is likely to work better in which situations. It requires aptitude employing a broad set of skills to apply that knowledge. It also requires creative thinking and a readiness to experiment, and an ability to look objectively at the evidence to find ways to achieve beyond what current practice allows. And, in government, effective execution often requires thoughtful communication so the public can understand the why, what, and how of government action amidst often heated political debates about when and whether government should act.
Arguably, the execution challenge—or call it “delivery” or “implementation” or “public management” if you like—is more difficult in government than in the private sector.

One reason for this is that government organizations have far less control in choosing whom they will serve and the products they will produce.

Beyond that, I would argue that the delivery challenge is harder in government because, while all organizations now operate in a 24/7 media cycle, government faces a stronger negative media bias than do private firms. In the private sector, a market for good news exists. Plenty of investors want to read good-news stories about companies whose sales or profits are up or with indicators hinting of good things to come.

Little counterpart demand for good news exists in the public sector. When websites work well, planes land safely, oil spills don’t happen, and drinking water is safe, there is no news story. When government tries something and does not get it right or fails to prevent bad things from happening, that makes the news—and these stories often get broadcast over and over again. When government gets it right, however, and teen pregnancies or smoking rates drop or air and water quality improve or high school graduation rates increase, it is lucky if the story gets told in even one news cycle. The negative media bias is exacerbated by the fact that thousands of elected officials and candidates need news coverage to get elected or re-elected. They know that praising a government agency or official for a job well done is unlikely to grab the attention they need.

I hope this reality does not discourage, but rather excites those of you who want to make a difference in the world and who like a good challenge. If you care about purpose, if you are motivated by making a difference rather than making gobs of money (which I am guessing is true of most of you here), working in government is one of the best possible ways to have an impact. It won’t be easy, but it is incredibly rewarding. So, I urge you to sign on to become an entrepreneur in government.

That is my objective today: to get you excited about the many opportunities government offers you to be a purpose-focused entrepreneur. These opportunities abound in all parts of government, if you are willing to take them.

Whether you are a student or faculty member, a practitioner or researcher, it is my aim today to get the great minds in this room interested in the nitty-gritty (but intellectually exciting) challenges of high-quality government delivery. This is one of our primary objectives as the Volcker Alliance and one of the primary reasons why former Federal Reserve Chairman Paul Volcker, himself a government employee for more than 30 years, enlisted an exceptional board and launched the Alliance. We want to excite and engage you in great government delivery.

We know that there are many great thinkers—in schools such as the Ford School, in the media, and in think tanks—debating, researching, and teaching policy design. Too often, however, this debate is theoretical, without sufficient attention given to what it takes to put the theory into practice. If you debate climate change policy, for example, and compare the costs and benefits of
alternative policies such as cap-and-trade, taxes, and regulation but do not simultaneously consider and address the feasibility, cost, and skills needed to implement each option, you run a high risk of recommending an option unlikely to work in practice because the resources and skills needed to implement the option well don’t exist.

We also know that a tremendous amount of attention, especially in the media but also in academia, in parts of government, in the private sector, and in private homes, is given to politics, the realm of government where divergent values and interests get battled out. In recent years, the art and science of running and winning campaigns, most notably using data to identify key voters and running field operations that get those voters to vote, has advanced significantly, helping candidates and causes win elections.

Similar advancements are needed in government operations to accomplish more mission for the money and to strengthen trust in executive branch agencies.

So, I come here today with two objectives:

- First, to encourage you to become a public sector entrepreneur, improving the quality of people’s lives and the condition of the world;

- Second, to help you appreciate the value of adopting a specific approach to the way government works – an outcomes-focused, data-informed, transparent way of doing business. By that I mean, be clear about what it is you are trying to accomplish; articulate objectives in a way that means something to the public; figure out how to gauge progress on your goals; use data to find ways to do better; and communicate goals, progress, problems, strategies, and why those strategies were chosen in ways that not only build confidence in government but also enlist intelligence and assistance across and beyond government to accelerate progress on goals.

To entice you to this path in life, let me share with you a few stories about public sector entrepreneurs. These stories show how one person – asking the right questions, collecting and sharing data to get answers and refine the questions, and enlisting others in the effort – can make a huge difference.

**Local government: preventing fires and reducing emergency medical needs**

Let me start by telling you about Niels Tangherlini. Tangherlini is a captain in the San Francisco Fire Department and, as is the case with many firefighters, he does a lot of emergency medical response work.

Let me digress for a moment and note that firefighters today do not spend much time fighting fires; they spend far more time responding to medical emergencies. This is a great government success story.

In 1980, 30% of calls to fire departments pertained to fires. By 2013, only 4% did. The number of fires dropped nearly 60% nationwide in that period, freeing firefighters to deal with other
problems that might benefit from a geographically distributed response and prevention capacity, such as emergency medical needs and hazardous response.¹

How did the number of fires drop so precipitously? Counting. More specifically, counting unwanted incidents and noting their consequences, characteristics, and causes. Firefighters count every reported fire and note the human cost, the property cost, and probable contributing causes. This makes it possible to detect patterns (such as the most prevalent causes of serious fires); develop strategies to address them; test and assess the impact of the strategies; and ultimately reduce the number and seriousness of fires. This progress, in short, results from the discipline of outcomes-focused, data-informed, transparent decision-making and action that I mentioned earlier.

Firefighter Tangherlini took a similar outcomes-focused, data-rich approach to his work. In 2003, concerned about children in San Francisco dying for reasons linked to asthma, he learned that the city had one of the state's highest hospitalization rates for asthma among children. So he reached out to the Department of Public Health's Children Environmental Health section and the American Lung Association and he and a group of paramedics, together with a respiratory therapist from St. Luke's Hospital, worked with the mayor's Asthma Task Force to create the first EMS-based asthma outreach program in the nation, with paramedics visiting elementary schools to teach children how to deal with the effects of asthma.

Tangherlini also noticed that a small number of the people accounted for a large percentage of the city's emergency medical calls. One news story at the time reported that the San Francisco Fire Department transported about 200 people via ambulance four or more times in one year; 50 of them 10 or more times and 20 of them between 30 and 120 times. Some people refer to these individuals as “frequent flyers.”

Transporting these frequent flyers, many of whom have drug and alcohol abuse problems, not only costs a lot of money but could delay responding to a more critical emergency and cost someone their life. Worried about this possibility, in 2004, Tangherlini reached out to others in the Fire Department, the Department of Public Health, and the Department of Health and Human Services and together they created the Homeless Outreach and Medical, or HOME, team to try to help these high-frequency user avoid the need to call 911 by providing them more comprehensive social services and medical treatment.

Tangherlini’s idea may have sparked a “virtuous virus.” Hospitals in Denver and Washington D.C. sent paramedics to San Francisco to ride along on calls, the fire department in Memphis adopted the HOME Team approach, and, in the past few years, the National Governors Association started working with seven states to try to address and reduce problems of and costs associated with “frequent flyers.” Whether Tangherlini invented this idea or borrowed it, he certainly embraced an entrepreneurial approach to government.

¹ http://www.nfpa.org/research/reports-and-statistics/the-fire-service/fire-department-calls/fire-department-calls
Federal government: entrepreneurship in the biggest bureaucracies

Perhaps you are thinking that it is easier to be an entrepreneur in government at the local level. While local governments offer tremendous opportunity for entrepreneurship, such opportunities exist at all levels of government.

I first learned of the work of Niels Tangherlini from his brother, Dan, another great government entrepreneur. Like his brother, Dan started his public entrepreneurship efforts at the local level, working for the District of Columbia. I first met him when he was at the U.S. Department of the Treasury as the Assistant Secretary for Management. Dan was always looking for ways to save Treasury money and improve its services to the public. One way he did that was helping the IRS figure out how to accelerate electronic payments and receipts, saving the government hundreds of millions of dollars according to IRS estimates, but also making transactions far more convenient for many people.

Dan has since moved to head up the United States General Services Administration, GSA. GSA is often thought of as the biggest of bureaucracies – responsible for managing federal buildings, motor vehicle fleets, and many aspects of federal information technology and purchasing.

Dan takes a decidedly entrepreneurial approach to managing the work of GSA. For example, he created a team of tech experts at GSA he called 18F, because the GSA building is located at the corner of 18th and F Street. 18F talks about “hacking bureaucracy” to deliver better government web sites and IT, and describes its work this way: “We’re doers, recruited from the most innovative corners of industry and the public sector, who are passionate about driving efficiency, transparency, and savings for government agencies and the American people. We make easy things easy, and hard things possible.” Dan has also proposed trading old government buildings located in high-cost areas rather than selling them. He wants to do this to speed up real estate transactions, to avoid federal spending caps that may seem a good idea in principle but create serious impediments to innovation in practice.

State government: preventing wetlands loss in Massachusetts

So, I have told you about a local government and a federal government entrepreneur. Now let me turn to an example of entrepreneurship in state government.

A number of years ago, I ran the capital budget for the Commonwealth of Massachusetts. My deputy, Beth Storey, argued that we should approve a request from the state environmental agency to use capital dollars to map the wetlands of Massachusetts. In case you don’t know what a wetland is, wetlands include marshes, bogs, swamps and other lands that are neither dry nor bodies of water. These areas turn out to be valuable as filters, cleaning water as it moves from one area to another, and for flood control. Large amounts of wetlands loss can create serious problems. To prevent that problem, Massachusetts passed a law prohibiting construction in a wetland without a permit.

The state agency sought money from the capital budget to pay not just for high-resolution flyover photographs of the state but also for the time of people, experts, to review those
photographs carefully to look for wetlands markers and then to create the first-ever map of the
state’s wetlands.

I was dubious about this proposal, I must admit. Was this a legitimate capital project? Would it
produce long-term returns? Or was it one department’s effort to do an end-run around the
operating budget process, where it was unlikely to get funding?

I greatly respected my deputy’s intelligence and expertise in this area and she believed this
proposal made sense, so I reluctantly agreed. I’m glad I did. This capital investment has
delivered great returns to the state, and will continue to deliver far more returns in years to come.

With the capital appropriation that the state legislature approved, the Massachusetts Department
of Environmental Protection was able to map over 70 percent of the state’s wetlands in the late
1990s.

The cost and sophistication of photography and flyover technology have changed significantly
since the original photographs and maps. High-resolution digital photographs are very affordable
compared to the original cost. This makes the cost of each picture lower, and also makes it easier
to arrange more camera-carrying flyovers.

State officials realized they could use technology to compare more recent photographs with the
baseline ones, digitizing the original photographs and programming computers to detect the
presence of significant differences. Doing this, the state identified 850 acres of wetland loss. It
has successfully pursued a number of enforcement cases and, in some cases, ordered wetlands
restoration. Winning these cases proved much easier with before-and-after photos that show
construction on land clearly delineated as a wetland on the maps. I suspect developers are less
likely to construct illegally in wetland areas, too, knowing how easily the state can detect
wetland loss and win enforcement cases.

Consider the entrepreneurship involved here:

- After a law had passed prohibiting construction in wetlands in Massachusetts, some
  state employee came up with the idea of taking high-resolution photos across the state
  and hiring consultants to review them to create a wetlands map.
- Someone also came up with idea of asking for capital funds to bring this vision to
  life.
- Then, a few years later, another government entrepreneur, Cynthia Giles, was put in
  charge of the Massachusetts wetlands program. She and her staff realized they could
  use comparative photos from different time periods to identify wetlands loss and win
  enforcement cases against violators.
- Cynthia also realized she could use this information to assess how well she was
  allocating her limited resources. She realized that 80 percent of wetlands loss in the
  state was happening on unpermitted lands, but 90 percent of staff time was spent
  reviewing permit applications and inspecting permit holders, clearly a poor allocation
  of resources. Further, she and her staff realized that inspections they did from the road
had limited value because the photographs revealed that a high volume of the violations were out of road view.

Massachusetts now makes highly detailed wetland maps available online. This enables citizens and communities not just to track the health of their wetlands, but work to improve them.

Cynthia Giles is no longer in Massachusetts. She left to run the Rhode Island office of the Conservation Law Foundation and is now the head of compliance and enforcement at the U.S. Environmental Protection Agency, once again bringing an innovative mindset to the way the government does its business. Together with other public sector entrepreneurs in the agency, she is fighting to create a more outcome-focused, data-informed, transparent approach to environmental compliance and enforcement.

**International: cleaning up the air**

I have shared with you examples of government entrepreneurs at the local, state, and federal level. In some cases, I knew the names of the entrepreneurs. In others, I did not, but the fingerprints of an entrepreneurial mindset were evident.

Let me mention one other story of a government entrepreneur that I find intriguing. Some time in 2008, someone at the U.S. Embassy in Beijing took the initiative to install an air quality monitor on the Embassy and use Twitter to tweet hourly readings. The initial target audience for the Twitter feeds was Embassy staff and their families, who were worried about high pollution levels in Beijing. Tweeting about the hourly readings not only informed Embassy staff and their families, but also private American citizens residing and traveling in Beijing.

Installing the monitor was not mandated worldwide by the State Department in Washington. U.S. embassies in Shanghai and Guangchou have since installed twittering air quality monitors, but embassies in India have not, at least according to news stories. Who was this public sector entrepreneur who installed the monitor and decided to transmit its findings via Twitter? I don’t know, but I know that entrepreneur exists.

The Embassy’s actions may have catalyzed debate about air quality in China and action to improve it, possibly prompting the local government to install its own air monitors and report the readings to the public. The Mayor of Beijing set a public goal for 2014 to reduce air pollution by 5 percent. While the city did not meet the goal, it achieved a healthy 4 percent reduction, not an increase, and the Mayor recently announced a 5 percent reduction goal for 2015.

The government’s innovation also invited complementary private sector entrepreneurship. Someone developed an app that alerts the Chinese people when PM (particulate matter) 2.5 levels exceed a certain amount. Another app compares air quality readings from the U.S. embassy, which monitors PM 2.5, and from the Chinese local government, which monitors PM10.
What about you?

It is my hope that these examples inspire you to become a government entrepreneur — at the federal, state, local, or even the international level and perhaps at more than one.

If you want to make the world a better place and you are motivated by purpose and making a difference, government is a great place to do that. As with any large and even small businesses, government can be bureaucratic. The important thing to remember is that, if (and I hope when) you take a government job, you do not need to be. If you choose to be an entrepreneur in government, you can bring about important, significant, and needed change.

The individuals I have introduced you to today all saw a need or an opportunity and pursued it. They looked for data to inform their decisions, or they created it. That data took many forms – photos and maps in some cases and tallies of people or incidents in others, noting characteristics that revealed patterns of prevalence that informed priorities or identified root causes to try to influence. Many of these entrepreneurs also understood the value of communicating why, what, and how they were taking action so they could enlist the help and intelligence of others.

Let me make one final request of those of you in this room who have learned, or are teaching, objective evaluation methods. I have told stories today about entrepreneurs in government who saw a need and tried to address it. That is not enough, however. It is also important to ask, and answer: did the actions they took have the intended beneficial impact? If they did, how can they be done better to accomplish more mission for the money? We can no longer afford to treat evaluation and the government improvement process as separate enterprises. We need to link research and practice more closely. We need to integrate hypothesis formulation and testing into routine operations, bringing together performance measurement, quality management, and evaluation. We also need to learn better ways to replicate effective practices and achieve economies of scale in their delivery. I hope many of you will choose to be leaders doing that, both in and out of government.

I thank you for the opportunity to begin this conversation. We at The Volcker Alliance look forward to working with you to strengthen government’s capacity to deliver in more effective, trusted ways.