

“Power Tools for Progress”

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Good afternoon. My motivation for speaking at this conference is the growing number of collaborations between the Obama Administration and the foundation community. A number of foundations are supporting research and field-building activities that are not only creating new and better tools for effective philanthropy and social change – but are also informing and shaping government policy. I’m very interested in exploring how the foundation community and the Administration might work together to develop new and improved tools for addressing the “grand challenges” of the 21st century.

The Importance of “Tools” for Getting Things Done

I want to begin my remarks by making five arguments.

First, getting things done requires that people and organizations create a coherent relationship between ends and means. Foundations or policy-makers may have goals such as reducing poverty, improving education, creating jobs, strengthening democracy at home or abroad, or accelerating the transition to a low-carbon economy. But they also have to decide how they are going to achieve these goals. Ideally, these judgments about how to achieve a given goal would be informed by evidence, as opposed to fads or personal taste.

Second, creating and synthesizing knowledge about different strategies for achieving societal goals has a high payoff. As Archimedes put it, “Give me a long enough lever and a place to stand, and I will move the earth.” Targeted investments in knowledge creation can help us create entirely new levers, or make better use of our existing levers. Developing more and better strategies for social change can increase the chances that we have the right tool or combination of tools for the right job.

Third, many of the problems we face are not going to be solved by government, firms, philanthropists, and civil society operating in isolation from each other – but will require multi-sector collaborations. As President Obama has observed, “we need all hands on deck.” That means the people involved in designing, launching and sustaining these collaborations should be familiar with the repertoire of capabilities and tactics that are at the disposal of government, the private sector, and civil society.

There is also the huge and often untapped opportunity for the sectors to learn from each other. For example, consumer Internet companies have developed the ability to conduct rapid low-cost experimentation which continually improves their products and services. The Administration is interested in whether these approaches could be applied to education or other public services. Imagine if we could develop online courses that got better the more students used them? Researchers at Carnegie Mellon University are seeking to do just that. By capturing the data

generated by students interacting with online course material, they are providing [continuous feedback to students, teachers, course designers, and educational researchers](#).

Forth, investments in knowledge-creation and field-building are clearly [public goods](#). That means that the social payoffs from this investment are higher than the gains that flow to any single organization, and individual organizations will systematically under-invest in these kinds of activities.

Finally, if you accept my premise that these investments have a high payoff and that individual foundations may under-invest – the foundation community should launch a concerted effort to do more in this area. Since these investments could also improve the quality of policy-making, I would be very interested in working with the foundation community to identify an appropriate role for the federal government as convener and catalyst. The ultimate product of this collaboration would be a bigger toolbox for solving societal problems and a better understanding of how and under what circumstances one should use a particular tactic or combination of tactics to achieve a particular outcome.

Another metaphor in addition to a “toolbox” that I think is instructive is what architect Christopher Alexander calls a “[pattern language](#).” His [1977 book](#) provided 253 methods for constructing beautiful and practical designs at every scale, from cities, neighborhoods, gardens, buildings, rooms, and furniture. Each pattern represented his best hypothesis as to what arrangement of the physical environment will work to solve a particular problem in a particular context. The patterns also link to each other, creating a pattern language. This idea has also been embraced by the software engineering community, which has created repositories of reusable solutions to commonly occurring problems in software design. What if we could collaborate to create a “pattern language” for improving the human condition – a Wikipedia for Good?

Power Tools for Progress

To make my argument more concrete, I’d like to provide three examples of how foundation investments have created new “tools” and also informed government policy - Advanced Market Commitments, prizes and challenges, and impact investing.

Last December, children in developing countries began to receive a vaccine that will prevent them from dying of diseases such as pneumonia and bacterial meningitis. This happened because five countries and the Gates Foundation pledged to the pharmaceutical industry – “If you manufacture this vaccine in volume, we will subsidize the purchase price for developing countries.” This is known as an “[Advance Market Commitment](#)” – which is a guaranteed purchase order for a product or service that doesn’t exist yet. This first AMC could save the lives of 7 million children over the next 20 years.

The proposal for Advance Market Commitments was first made by Harvard economist Michael Kremer to stimulate private sector investment in innovations that will be under-supplied by the market, such as vaccines for diseases of the poor. In 2005, foundations supported the creation of a [detailed proposal](#) by the Center for Global Development which described how an Advance

Market Commitments might be structured, and in 2009, the first AMC was launched, with \$1.5 billion in funding. Given the success of the first AMC, governments are now considering creating an AMC for developing country agriculture. This is a great case study for how creating a results-oriented solution to an important problem – the market failure associated with the development of vaccines for diseases of the poor – can mobilize public and private investment.

The second example I'd like to offer is the growing use of prizes by foundations, the private sector, and government agencies. Although there are a number of different types of prizes, one important distinction is between “incentive” prizes that reward teams to accomplish a specific future goal, and “recognition” prizes such as the Nobel Prize which reward scientists for something they've already done. My focus today will be on incentive prizes.

The Obama Administration has embraced the use of [prizes and challenges](#) for a number of reasons. Prizes allow a sponsor to pay only for results, stimulate investment that is 5-10 times larger than the size of the prize, and set an ambitious goal without specifying in advance the best way to accomplish the goal or picking the team that has the best chance of succeeding. They also allow a sponsor to harness the expertise of a much broader range of potential problem solvers. As Bill Joy, one of the founders of Sun Microsystems put it, “No matter who you are, most of the smart people work for someone else.” Increasing the diversity and number of problem-solvers can have enormous payoffs. Research by [Karim Lakhani](#) at the Harvard Business School has confirmed that prizes allow someone with deep expertise in domain A to easily solve a problem in domain B because they are aware that an analogous problem has already been solved.

Incentive prizes are not a new idea. The British Parliament sponsored a prize for the discovery of a new technique to measure longitude because of the number of ships they were losing at sea. Napoleon offered a prize for a new technique to preserve food for his army, a method which is still being used today. Charles Lindbergh made the first trans-Atlantic flight in response to a \$25,000 prize offered by a New York hotel owner using a single-engine design that challenged the conventional wisdom at the time and that never would have passed peer review.

Philanthropists and foundations have played a critical role in the recent renaissance of prizes. With support from the Ansari family, the [X Prize Foundation](#) offered a \$10 million dollar prize for the first team to build a spacecraft capable of reaching an altitude of 100 kilometers carrying the equivalent of 3 people, and repeating that feat twice within two weeks. The X Prize Foundation has also organized prizes to accelerate the development of privately-funded lunar rovers, cars that get more than 100 miles per gallon and are fun to drive, the tricorder from Star Trek for rapid diagnosis of disease, and better technologies for cleaning up oil spills.

The Templeton Foundation sponsored a [seminal study](#) on prizes and challenges by McKinsey and gave McKinsey permission to publish it. The study made an important contribution to the field by providing a rich taxonomy of the different types of prizes, criteria for when to use prizes, case studies, and guidelines for managing the entire life-cycle of a prize – from design and execution to maximizing the long-term impact of a prize. The McKinsey study also helped to inform a [memo](#) that the Office of Management and Budget sent to all agencies in March 2010, and legislation that the Congress passed in December 2010. This [legislation](#) gives all agencies

legal authority to sponsor prizes of \$50 million, and the ability to collaborate with non-profit organizations and the private sector. The Office of Science and Technology Policy is currently working with agencies across the government to encourage them to experiment with prizes and challenges.

The Joyce Foundation is playing a vital role in increasing the role of prizes in addressing societal challenges such as education, training, and workforce development. For example, they took the lead in mobilizing the funding for the [Aspen Prize for Community College Excellence](#). This prize was announced by President Obama last year, and will encourage community colleges to make improvements in student workforce outcomes and completion rates.

A third area where leadership from foundations is informing government policy is impact investing. Impact investments aim to solve social or environmental challenges while generating a profit. The Rockefeller Foundation is interested in supporting the emergence of an impact investing industry that could mobilize hundreds of billions of dollars to increase the energy efficiency of commercial buildings or improve the lives of the poor. The Foundation believes that realizing this vision will require an infrastructure to efficiently identify, vet and monitor impact investments. That's why they have funded research on impact investing by the [Monitor Institute](#) and initiatives such as the [Global Impact Investing Network](#), which is developing a common framework for measuring the social and environmental impact of investments.

The Administration is also interested in encouraging the growth of impact investing. For example, the Small Business Administration recently announced that it would provide [\\$1 billion](#) to catalyze additional private sector impact investing in low and moderate-income communities and in sectors addressing national priorities such as clean energy and education. The Domestic Policy Council has been leading an inter-agency effort to identify ways in which policy-makers could remove barriers to the growth of impact investing. Some states are experimenting with new corporate structures for companies that wish to pursue social and environmental goals in addition to financial goals.

The Way Ahead

I hope I've persuaded you that investment to create new tools and improve our understanding how to use existing tools can have a big impact – and that the payoff from additional investment could be high. I'd like to conclude by outlining the elements of an agenda that builds on these insights.

Develop and Share Case Studies

Foundations and their partners could start by capturing, sharing, and organizing the lessons that they've learned from using, supporting or observing particularly effective tactics. Currently, a lot of this information is tacit. It's in the heads of program managers and practitioners, but is not widely available. That's why I think there would be value in supporting a number of freely available case studies that illustrate and highlight different approaches to achieving societal goals.

For example, the ClimateWorks Foundation has significantly increased vehicle efficiency around the world by providing sustained [technical assistance](#) and sharing of best practices to policy-makers in the ten largest motor vehicle markets.

The Markle Foundation has shaped policy on the contentious issue of [sharing information for national security and law enforcement](#) by developing a consensus that involved former government officials, industry, and the privacy and civil liberties community.

The Myelin Repair Foundation has changed the way that multiple sclerosis research is conducted by requiring their grantees to continuously share their research results, including the experiments that didn't work and therefore would ordinarily never be published.

The Howard Hughes Medical Institute has demonstrated the value of betting on individuals and giving them the freedom and the autonomy to explore high-risk, high-return research.

Organizations such as Malaria No More and the UN Foundation have dramatically increased the resources devoted to fighting malaria by identifying a concrete action that everyone could take – donating \$10 to purchase a [bed net](#). This motivated and inspired action at all levels – individuals buying one or becoming an active fundraiser, large organizations such as churches mobilizing their members, and governments increasing their investment in malaria treatment and prevention through bilateral and multilateral programs.

MIT's [Poverty Action Lab](#) has increased the resources devoted to particular interventions in developing countries such as school-based deworming by conducting randomized controlled trials and demonstrating that these interventions work and are highly cost-effective.

I'm sure the people in this room could generate hundreds of ideas for case studies that, if well-organized, would be an invaluable resource for the social sector and for policy-makers. [I'm including a longer list of examples as an appendix.]

Of course, just because these tactics are successful in a particular time, place and context does not mean that we can draw universally applicable “lessons learned” from these experiences, but I think they can generate useful hypotheses. Also, all organizations are understandably more interested in talking about their successes than their failures. This might lead us to pay more attention to the one instance in which a particular tactic was successful, not realizing that it was a failure on ten other occasions.

Developing and Supporting a Research/Field-Building Agenda

In addition to these case studies, the foundation community could also develop and fund a research agenda that addresses questions that are likely to be of broad interest to the social sector.

A number of different communities do this. For example, under the auspices of the National Academy of Science, the astronomy community agrees on the investments that will have the biggest impact on the field. The semiconductor industry identifies the technical challenges that

need to be addressed over the next 10 years to allow the industry to continue to double the performance of computer chips every 12-18 months. Hard problems which are beyond the time horizons of individual firms are tackled by [university-based centers of excellence](#) that are jointly funded by government and industry. If companies like Intel, IBM and Texas Instruments can define and fund an agenda for pre-competitive research – perhaps foundations can as well.

I believe that there are many research questions or areas for investment in field-building that are worthy of support. In the interests of stimulating debate and discussion – let me suggest three.

First, how might we improve our ability to design, launch and sustain high-impact multi-sector collaborations? Answering this question might require developing a series of case studies of successful and unsuccessful partnerships, creating a cadre of people across government, industry, and civil society that develop the knowledge and skills to do this well, and creating institutions that can serve as incubators for these collaborations – “do tanks” as opposed to “think tanks.”

Today, we have hundreds of business plan competitions that encourage teams to generate ideas for new businesses. The best ideas often get media attention, venture or angel backing, free professional services, and experienced mentors. Why can’t we do the same for plans that would involve establishing an ambitious goal, and identifying the “dream team” of public and private actors that would have the resources and expertise to achieve this goal?

What would convince more companies to get involved in achieving societal goals not just through corporate philanthropy, but in ways that create “[shared value](#)” and that take advantage of their R&D, products and services, employee skills, and marketing, distribution, and supply chains? How might impact investors enable firms to discover and fund projects that have high social returns, but may not meet their internal hurdle rate?

Second, what are the opportunities to encourage [mass collaboration](#) that addresses major societal challenges? We’ve already seen the collaborative construction of the world’s largest encyclopedia, the creation of open source software that dominates key markets, and citizen scientists making meaningful contributions in fields such as astronomy and protein folding. What are the other opportunities to leverage the small efforts of the many as opposed to the large efforts of the few?

Third, what can we learn from efforts across different sectors to scale and replicate successful models? How should one balance fidelity to the original model with the need to adapt it to local conditions? What role can intermediaries play in scaling successful models? This is a topic that the Administration is interested in because we are committed to scaling interventions that work. The Department of Education’s [Invest in Innovation](#) program, for example, provides small grants for new ideas worth trying, medium-sized grants to validate promising approaches, and large grants to scale-up interventions that have been rigorously evaluated.

I’m confident that if you put your mind to it, the foundation community could develop and fund a compelling research agenda that would increase the effectiveness of philanthropy, inform government policy, and expand the toolbox available to individuals and organizations committed

to improving the human condition. Foundations could jointly fund research, or identify a list of important topics and pursue a “divide and conquer” approach.

Empowering the Next Generation of Changemakers

The last suggestion that I’d like to make is that the foundation community should support the development of what the Hewlett Foundation has called [Open Educational Resources](#) that is based on the case studies and research that I have called for. Prior to joining the Obama White House, I spent seven years at UC Berkeley. Many Berkeley students were interested in tackling some of the grand challenges of the 21st century, such as accelerating the transition to a low-carbon economy or providing safe drinking water to low-income families in developing countries. With seed funding from the Omidyar Network, I was able to provide small grants to Berkeley students with “[big ideas](#).” I quickly discovered that these students could do amazing things with modest resources – often for no more than the cost of a plane ticket.

I think that universities could be doing a lot more to inspire and empower students to tackle grand challenges, and to help them launch careers as effective change-makers. Foundation research and case studies could be an invaluable resource for these students.

If there is any interest on your part in pursuing any of these ideas – or preferably better and more realistic approaches that the foundation community generates – I’d be delighted to work with you. Thanks for listening.

Appendix: Examples of High-Impact Foundation and Non-Profit Tactics

1. Betting on individuals (MacArthur “Genius” Awards, Ashoka, Echoing Green, Skoll)
2. Evidence-based policy (MIT Poverty Action Lab, Coalition for Evidence-Based Policy, International Initiative for Impact Evaluation, Cochrane Collaboration)
3. Deep technical assistance (ClimateWorks support of NGOs that work closely with developing countries, provide deep and sustained technical assistance to developing country governments by trusted non-profits on low-carbon growth strategies)
4. Social marketing, behavioral change communication
5. Research and development (Gates Foundation Grand Challenges, Green Revolution)
6. Scaling and replication (formation of [National Math and Science Initiative](#) to replicate UTeach – which is increasing number of high quality math and science teachers)
7. Impact investing
8. Design thinking
9. Developing consensus among stakeholders (Markle Foundation commissions on information sharing for national security – involving both national security and civil rights community)
10. Prizes
11. Curricular reform for professionals (Carnegie-sponsored “Flexner” report on medical education)
12. Creation of a new discipline (Rockefeller – molecular biology; Whitaker – bioengineering)
13. Leadership development
14. Networks
15. Information, transparency, disclosure, ratings, “report cards”
16. Capacity building/organizational development

17. Transformation of markets (Clinton Foundation efforts to drive market for anti-retrovirals from “jewelry store” (low volume, high-margin) to “grocery store” (high volume, low margin))