

This supplement was produced by *Stanford Social Innovation Review* for the **JOHN D. AND CATHERINE T. MACARTHUR FOUNDATION**

inding, unding, nd caling

pectives on
ge awards,
en competitions,
d new directions
philanthropy

2 Seeking Both Problems and Solutions
By Jeff Ubois

4 The Promise of Incentive Prizes
Jeff Ubois Interviews Thomas Kalil

7 A Competition with Many Winners
By Kristen Molyneaux

- 16 The Need to Double Down**
By Michael Feigelson & Elvira Thissen
- 18 Doing Competitions the Right Way**
By Rochelle Alpert & Joshua Mintz
- 21 Making Better Big Bets**
By Heather McLeod Grant & Alexa Cortés Culwell

Seeking Both Problems and Solutions

BY JEFF UBOIS

Over the last three years, thousands of applicants, project judges, individual funders, and foundation staff have contributed time, money, attention, and work toward the John D. and Catherine T. MacArthur Foundation's 100&Change, a global competition seeking bold solutions to the critical problems of our time.

While the most visible result of these efforts is the MacArthur board's decision to give \$145 million in awards to four organizations, including a \$100 million grant to Sesame Workshop and the International Rescue Committee, 100&Change has also unlocked millions of dollars in additional funds from other sources; highlighted other promising solutions to important global problems; and developed some new approaches to knowledge production, collaboration, and decision making in philanthropy.

As the 100&Change team at MacArthur—and the broader nonprofit community of which it is a part—prepares for the next open call for proposals, scheduled for early 2019, we are taking time now to summarize, reflect on, and share what we and others have learned from the first round of grants. To do this, we've invited commentary from a number of partners, MacArthur staff, and others with critical, instructive perspectives.

CONTRIBUTORS

The authors in this supplement address a broad set of issues. Though each piece speaks for itself, they are best understood in relation to each other, as they represent different viewpoints on a few cross-cutting themes.

The changes in philanthropic practices and possibilities resulting from a trend toward large grants, the potential uses and abuses of open calls and open challenges, and strategies to help foundations become more open to new ideas are addressed in "Making Better Big Bets," by Heather McLeod Grant and Alexa Cortés Culwell; "The Promise of Incentive Prizes," in which Thomas Kalil of Schmidt Futures answers questions; and "An Open-Data Approach to Transform Grantmaking," by Bradford K. Smith, president of the Foundation Center.

Observations from other funders, who are focused on early-stage innovation and on field-shaping and field-building, are provided by Carol Dahl of The Lemelson Foundation in "The Vital Role of Early-Innovation Funders" and by Michael Feigelson and Elvira Thissen of the Bernard van Leer Foundation in The Hague, the Netherlands, in "The Need to Double Down." Both of these foundations supported 100&Change grantees before MacArthur did, providing them with a close view of the effect that 100&Change had on recipients. (Note: We've also conducted an extensive set of interviews and surveys with 100&Change applicants—some anonymized and others fully attributed—and we've highlighted applicant perspectives in other venues, particularly the 100&Change website. We have not done so for this supplement, as even invitations to past and potentially future applicants can seem coercive.)

For funders considering whether to run a competition, detailed advice on managing large competitions and cohorts of grantees, as well as on the

JEFF UBOIS is senior program officer for 100&Change.

legal issues associated with competitions, are provided in "A Competition with Many Winners," by Kristen Molyneux of the MacArthur Foundation, and in "Doing Competitions the Right Way," by Rochelle Alpert of Morgan, Lewis & Bockius LLP and Joshua Mintz of the MacArthur Foundation.

BACKGROUND

As noted by the authors of this supplement, 100&Change is driven by a complex set of opportunities and needs facing the world, the field of philanthropy, and the MacArthur Foundation itself.

There is growing recognition among foundation boards and staff that to meet emerging global challenges, philanthropy will need to greatly increase its effectiveness and the scale of the efforts it supports. The current array of projects backed by philanthropy simply may not be sufficient to meet the current set of global challenges.

Resources are a significant challenge. For effective nongovernmental organizations addressing global problems, funding at the level typically provided by private foundations is insufficient to address more than a tiny fraction of their beneficiaries. Sometimes, a single large award is needed to create lasting change, and as others have noted, capital in the quantities required to support "transition to scale"—mezzanine funding—is generally unavailable from US foundations.

The emergence of new donors presents some opportunities for those seeking larger grants. Since 2010, more than 180 billionaires from 22 countries have taken the Giving Pledge and committed to giving more than half of their wealth—estimated at more than \$990 billion—to philanthropy or charitable causes. If creating a pipeline of vetted opportunities and projects can unlock more of this wealth more quickly, the world will be better for it.

Still, as Foundation Center President Brad Smith notes, most foundations resist or reject unsolicited proposals. Too many operate using opaque processes, refrain from publishing what they learn, and find it hard to work together with other funders, even when addressing global problems far too big for any single foundation to tackle alone.

100&Change aims to address these and other issues by opening the MacArthur Foundation to new possibilities and supporting the best of these possibilities with much larger awards.

CHOICES AND CONTEXT

The final shape of the competition reflected these concerns, as well as a series of decisions and trade-offs taking into account important goals and viable alternatives.

Throughout the process, we received generous help and advice from peer foundations and other funders. Some are contributing to this supplement, and others, particularly the Bill & Melinda Gates Foundation, were generous with time and insights. We found that our peers were also helpful in confronting early-stage unknowns: Would we find anything that met the criteria we had in mind? What information would our board require

to make a decision? What was the right balance between focus and openness—i.e., how restrictive might the criteria be?

In hindsight, several decisions ended up shaping the entire process. For funding organizations thinking about making large (over \$10 million) awards, engaging in donor collaboration, or managing open competitive calls, it's worth considering some of these big takeaways.

The first was scale and timing, and the decision to make one \$100 million award rather than a handful of smaller grants. A staged pipeline of projects, in which the best-performing projects are awarded increasingly larger amounts of funding, is a more typical approach to large-scale funding. But we found that it is possible to assemble this

virtually by tapping the entire nonprofit sector. And while many global problems of significance require decades to address, we looked for immediate needs that could be addressed in a more or less permanent way.

A second decision had to do with focus. Prizes can focus attention on an issue, identify new approaches to a known problem, or identify a cohort of organizations working on an issue. Often, it is assumed that the funder has expertise in the problem being addressed. MacArthur's decision to instead open the call to both problems and solutions, whatever their source, reflected the recognition that the most pressing problems of our time, and the best solutions to them, might not be known to us.

So unlike the vast majority of open competitions, 100&Change was and is athenatic. Applicants were not restricted to a particular domain or approach but were instead allowed to define both the problem and the solution, provided that both fit within broad selection criteria. (See "Criteria for 100&Change Applicants" on this page.)

A third set of decisions had to do with the reviewing and decision process. How could we best ensure that the process was open, fair, and transparent? This involved striking a balance between different possibilities. For example, confidential reviews can increase candor and lead to smart decisions, but they also conflict with our commitment to an open process. Similarly, the strict application of administrative requirements tends toward fairness, but it can also lead to otherwise unqualified applications moving on to judges, with good ideas occasionally failing to advance due to fixable technicalities.

We also sought to balance decision authority and influence between outside judges (who looked at all qualifying proposals), outside expert reviewers (who looked at high-scoring proposals), foundation staff (who worked with both sets of reviewers, as well as applicants), and MacArthur's board (which made the final determination). To help do this, we normalized the scores awarded to applications according to whether they had been judged by relatively optimistic or skeptical individuals. (More on this at www.100andchange.org/fairness.) In the end, though, the choice of awards rested with the MacArthur Foundation's board.

The fourth set of decisions concerned managing different groups of applicants, and the reuse of applicant data by third parties. Going into

Criteria for 100&Change Applicants

MEANINGFUL. Is the proposal bold? Does it seek to solve an important and urgent problem? Will the proposed solution significantly improve the condition of the target beneficiaries and result in broad public benefit?

VERIFIABLE. Does the proposal present evidence that the solution has previously yielded practical and concrete results? Does the proposed solution rely on existing methodology, technology, and/or provable science?

FEASIBLE. Does the team have the skills, capacity, and experience to deliver the proposed solution? Do the budget and project plan align with a realistic understanding of the costs and tasks to implement the proposed solution?

DURABLE. Does the team propose a solution that has staying power? Is there a plan in place to support the resolution of the problem, including any need for ongoing support, if necessary?

the project, our focus was finding a single proposal, but over time, that broadened to include other groups of applicants as we sought multiple benefits to participation, even if there would be only one \$100 million grant.

In order to provide value to multiple applicants, we took two approaches. First, we procured training, technical assistance, and consulting advice for the eight semifinalists. This effort involved MacArthur Foundation assigned program staff as well as a number of consulting organizations, including Management Systems International, which provided planning assistance related to scaling; Bridgespan, which provided strategic feedback on pitching big ideas to donors; Mobility International USA and Access Living provided extensive feedback to semifinalists (and the MacArthur Foundation) on how

proposals could be more inclusive of people with disabilities.

Second, we promoted the top 200 applications through other partnerships, including the Center for High Impact Philanthropy (see "Selecting a Pool of Bold Ideas," by Anne Ferola and Lindsay Kijewski), the Foundation Center, and Charity Navigator. These efforts resulted in additional funding—mostly modest grants from individual donors—awarded to nearly 40 different organizations.

Although our main focus was on the needs of those organizations that became semifinalists, we also worked hard to ensure that participants were turned down respectfully and clearly. Not everyone was satisfied with the explanation received, yet the time and cost allocated to working with those who did not advance was immense.

Along the way, we also noted a number of surprises.

The first was the number of collaborations that were sparked between lead applications and their partners. These weren't merely handshake agreements; all told, we received more than 700 memoranda of understanding and learned that many eventually led to collaboration even in the absence of direct financial support.

The second was how awareness of the program resonated differently in different sectors. Although we actively promoted the project and received applications from more than 80 countries, certain types of programs and applicants may still have been underrepresented.

A third surprise was how the applications we collected were used by other organizations. We didn't initially intend to become a publisher, or to encourage others to reevaluate, re-rank, and in some cases identify organizations worth funding. But the knowledge and ideas contributed by 100&Change applicants turned out to have a readership elsewhere.

FUTURE PLANS

We will be announcing the next round of 100&Change in early 2019. It will involve more intense collaboration with other donors, better collection and redistribution of knowledge, increased support for 100&Change applicants. We are exploring an expansion of the 100&Change platform to offer services for other philanthropists who wish to run their own competitions. ❌

The Promise of Incentive Prizes

Jeff Ubois interviews **Thomas Kalil** of Schmidt Futures (a philanthropic initiative founded by Eric and Wendy Schmidt) about how calls to solve big problems through competitions can, when done right, galvanize innovation.

How did you first get interested in the role that incentive prizes can play in stimulating innovation?

In the late 1990s, I was working for President Bill Clinton on his National Economic Council and happened to read a book called *Longitude*. This book described a series of prizes offered by the British Parliament in the 18th century to encourage the development of methods for precisely measuring the longitude of a ship at sea. The British Parliament was motivated to pass this legislation because of some tragic maritime disasters and the need for increased navigational accuracy to complete longer ocean voyages.

I thought this was a really interesting idea and was able to get the National Academy of Engineering to do a study on prizes. This study made an important distinction between “recognition” and “inducement” prizes. Recognition prizes—like the Nobel Prize—provide rewards to people for something they have already accomplished. Inducement prizes are designed to encourage individuals or teams to accomplish a specific goal that no one has achieved yet.

I was also able to help get DARPA the authority to support incentive prizes. Beginning in 2004, DARPA used this authority to advance the development of self-driving cars. A team led by Sebastian Thrun, then director of Stanford University’s Artificial Intelligence Laboratory (SAIL), won the competition in 2005, and Google recruited Thrun to lead their self-driving car effort.

What did you do to advance the government’s use of incentive prizes when you joined the Obama administration?

THOMAS KALIL is chief innovation officer for Schmidt Futures. He was the deputy director for technology and innovation for the White House Office of Science and Technology Policy and senior advisor for science, technology, and innovation for the National Economic Council.



I was able to work with Congress to pass legislation in 2010 that gave every federal agency the authority to support incentive prizes of up to \$50 million. Prior to the passage of this legislation, Congress had given DARPA and NASA prize authority, so other agencies assumed that that implied that they didn’t have prize authority.

I also recruited a series of experts in open innovation to the Office of Science and Technology Policy, including Robynn Steffen from Yale Law School, Cristin Dorgelo from the XPRIZE Foundation, and Jenn Gustetic from NASA. They built a vibrant community of practice of federal program managers that were experimenting with incentive prizes and worked with the General Services Administration to launch Challenge.gov—a one-stop shop for federal prizes and challenges.

This was part of a broader effort within President Barack Obama’s Strategy for American Innovation that we called the “innovation tool kit” that included dozens of different approaches to solving problems—including open data, citizen science, human-centered design, evidence-based grantmaking, and multisector collaborations.

What is the argument for increased use of incentive prizes?

I am a strong believer in Joy’s Law: “No matter who you are, most of the smartest people work for someone else.” So you are usually going to be better off if you make it easier for people outside the boundaries of your organization to know (a) what problems you are trying to solve and (b) how they can get involved.

PHOTOGRAPH COURTESY OF THOMAS KALIL

I also believe that a well-designed incentive prize can enable the sponsor to:

- Set a goal without having to decide in advance which team or approach is most likely to be successful
- Pay only for results
- Leverage investment that can exceed the value of the prize purse
- Shine a spotlight on a problem
- Encourage fresh approaches by reaching beyond the “usual suspects”
- Change people’s views about what is possible

Having said that, it is not always the right approach to solve a given problem, and it is certainly not a substitute for more traditional funding mechanisms, such as grants or contracts.

Prizes have been criticized for pulling more time and energy from a field than they return to it. Were there any specific situations from your time in the White House when you argued against issuing a challenge of some kind?

There were definitely instances where:

- Agencies had not thought hard enough about the problem statement or the victory conditions.
- The amount of money they had for the prize purse was inadequate, given the resources required to solve the problem.
- The agencies were really running a traditional grant competition but just calling it a prize competition.
- They had not thought about what they would do after the competition in the “post-award” phase.

How did the government’s use of incentive prizes evolve?

As of July 2018, agencies have sponsored more than 840 incentive prizes. Over time, agencies became willing to sponsor prizes that are larger, more ambitious, and more important.

For example, DARPA is sponsoring a \$10 million prize for a team that can launch payloads to orbit, with no prior knowledge of the payload, destination orbit, or launch site, and accomplish that goal twice within days. This could dramatically expand access to space, with important applications in Earth observation and global communications.

The National Institutes of Health is funding a \$20 million prize competition to improve the diagnostic technology needed to rapidly identify antibiotic-resistant bacteria and to distinguish

between bacterial and viral infections. This is an area where innovation is desperately needed. The British government has estimated that by 2050 the cost of failing to address antimicrobial resistance could be \$100 trillion and 10 million casualties every year.

Some agencies began to explore a broader set of tools called “market shaping” for accelerating the development of innovations that have a high social return and a low private return. For example, drug companies have little or no incentive to develop vaccines for poor people.

In an initiative that will save the lives of seven million poor children in developing countries over the next 20 years, five countries and the Bill & Melinda Gates Foundation pledged to purchase millions of doses of a safe and effective vaccine against pneumococcal diseases such as bacterial pneumonia.

This is called an advance market commitment, which is essentially a purchase order for a product that doesn’t yet exist. Some government agencies are using milestone payments, which provide companies with payments for intermediate progress toward a given goal.

I think it is unfortunate that the government is accustomed to making financial commitments that are contingent on failure but views making financial commitments that are contingent on success as exotic. The federal government has more than \$2 trillion in loan guarantees on its balance sheet (financial commitments contingent on failure, such as bankruptcy), but hardly any financial commitments that are contingent on success, such as advance market commitments, milestone payments, incentive prizes, or “pay for success” contracts.

Ideally, more organizations and sectors would have the capacity to (1) identify unmet needs, (2) develop performance-based specifications for effective solutions to those problems, and (3) provide the incentives where needed that would motivate teams to develop these solutions.

You were also active in the Obama administration’s efforts to identify and pursue “Grand Challenges.” How are they different from incentive prizes?

A Grand Challenge is an ambitious but achievable goal that can help address some major economic, societal, or scientific problem, and that also has the potential to capture the public’s imagination.

Historical examples include President John F. Kennedy’s decision to put astronauts on the

moon, and the Human Genome Project. This project not only sequenced the human genome but drove down the cost of doing so from \$100 million to \$1,000.

The Obama administration launched several Grand Challenges. For example, the BRAIN Initiative is designed to dramatically increase our understanding of how the brain encodes and processes information by developing the tools needed to study the brain in action. The US Department of Energy supported SunShot, an initiative to make solar energy as cheap as coal by the end of the decade. USAID is supporting several Grand Challenges for Development, including one to reduce newborn and maternal mortality in the first 48 hours after birth.

A Grand Challenge is an ambitious but achievable goal (the “what”), and an incentive

The 100&Change model empowered nonprofits, universities, and social enterprises to pursue more ambitious goals, which is the essence of moon-shot thinking.

prize is a particular tactic for solving problems and promoting innovation (the “how”).

To what extent did the Obama administration use Grand Challenges to stimulate partnerships?

To achieve the goals of the BRAIN Initiative, President Obama explicitly called for an “all hands on deck” effort that involved not only government agencies, but companies, research universities, foundations, nonprofits, and patient groups. For example, the Kavli Foundation played a critical role in the agenda-setting that led to the BRAIN Initiative, and the Kavli Foundation, the Allen Institute for Brain Science, and the Howard Hughes Medical Institute made significant commitments to support research that would advance the goals of the BRAIN Initiative.

Why do you think there is a case for a more systematic effort to identify Grand Challenges?

In general, I would like to see a “moon-shot culture”—where more individuals and organizations are involved in the identification and pursuit of ambitious goals.

I think it is particularly powerful to link the attainment of a compelling goal with a “why now” story. In some cases, something has changed about the world (e.g., technological progress,

fundamental scientific advance, institutional or business model innovation) that makes the previously impossible possible.

Done right, combining the ambitious goal with a “why now” story can create a positive self-fulfilling prophecy. As President Kennedy observed, “By defining our goal more clearly, by making it seem more manageable and less remote, we can help all peoples to see it, to draw hope from it, and to move irresistibly towards it.”

The first step would be a more concerted effort to identify goal statements that have these characteristics in a broad range of domains—such as health, education, economic and social mobility, energy and climate, sustainability, science and technology, the future of space exploration, etc. The second step would be to identify the coalitions of companies, research universities, nonprofits, foundations, investors, government agencies, and other actors that would have the ability to achieve these goals.

An exercise like this would be timely, given the growing number of wealthy families that have signed the Giving Pledge. Some of them may be looking for an ambitious goal that they can embrace, in the same way that Bill Gates wants to eradicate polio and Yuri Milner wants to send a spacecraft to another star.

Formulating goal statements is hard! Were there some things you learned about how to do that effectively that you can share?

One of our partners on innovation was Steve Blank, a serial entrepreneur who worked with the National Science Foundation on the development of the curriculum for its Innovation Corps (I-Corps) program based on the “lean startup” methodology. Steve and his colleagues also created a course called Hacking for Defense, which encouraged agencies in the Department of Defense to describe problems they had that could be tackled by multidisciplinary teams of graduate students. He found that the agencies needed feedback on their problem statements—often because their original formulations were overly prescriptive. They not only described the problem but also outlined the technical approach that they thought would be necessary to solve it. One pedagogical resource that Steve created is an annotated set of problem statements with descriptions of what makes them good or bad.

Another dimension that is hard to get right is the “too hard versus too easy.” There have been some large-scale incentive prizes that failed because industry was making more

progress than people expected, and the prize was overtaken by events.

I think that people who do a lot of problem definition have developed some useful heuristics. For example, Schmidt Futures is supporting a project by Karim Lakhani and the Laboratory for Innovation Science at Harvard University to capture and share their “lessons learned” from working with many different types of scientists on open innovation.

Does an emphasis on moon shots narrow the range of potential participants?

Absolutely not. Some universities are empowering students to organize their research, coursework, service-learning, international experiences, and entrepreneurial activities around one of the Grand Challenges identified by the National Academy of Engineering. I’d like to see more universities allow students to “major in a discipline but minor in a problem.” Faculty, students, and practitioners could identify the coursework and experiential learning that would position students to become changemakers and make a contribution to an important problem at home or abroad.

Researchers are also developing tools that enable individuals to get involved in really challenging scientific problems, such as mapping the brain.

“Minor in a problem” is useful for both institutions and individuals, and for the rapid learning that is necessary to do prize administration well. Did you find prizes reorganized expertise or produced new knowledge in the federal system in useful ways?

Civil servants that used open innovation often learned that reaching beyond the “usual suspects” definitely had value. For example, USAID supported a Grand Challenge on Ebola to develop better protective equipment for health-care workers that are treating infected patients. The team of the winning entry included a wedding dress designer! They figured out how a health worker could easily remove the suit without the contaminated exterior ever touching the wearer’s skin, while making the suit cooler and lighter.

What do you see as the similarities and differences between the work that you have done on incentive prizes and Grand Challenges, and the growing interest in “big bet” philanthropy, as exemplified by MacArthur’s 100&Change program?

I definitely see a strong connection between Grand Challenges and big bet philanthropy, given the focus on making measurable progress

on an important goal, such as improving the early childhood education of Syrian refugees or reducing newborn mortality in Africa. I think the 100&Change model empowered nonprofits, universities, and social enterprises to pursue more ambitious goals, which is the essence of moon-shot thinking.

Someone once observed that if private capital markets worked the way that philanthropy does, when FedEx talked to private investors, they’d be told, “I’m willing to provide 10 percent of what you need, but only if you use it to buy delivery trucks in Detroit.” I think it is more useful for philanthropists to ask partners, “What would you think is needed to accomplish your goals? What would you do if you weren’t limited by the resources currently under your control?”

There are also some important differences. In most cases, government-initiated Grand Challenges started with a definition of the problem (e.g., make solar energy cheaper than coal), as opposed to the open-ended call that MacArthur issued.

Are there areas where you think that these approaches (incentive prizes, market-shaping, Grand Challenges, big bets) are underutilized?

There are certainly classes of problems that both the private sector and the government underinvest in.

For example, the private sector tends to underinvest in solutions for problems faced by low-income communities because of their low purchasing power. Silicon Valley venture capitalists are not throwing money at startups that are trying to help the 36 million adults in the United States that are reading at the third-grade level or below.

It’s also the case that the US government makes significant investments to harness science, technology, and innovation for some national goals (national security, health, space, energy, basic science) but not others (e.g., promoting economic and social mobility, reducing the intergenerational transmission of poverty).

An interesting thought experiment would be to imagine that one of the agencies with the responsibility for promoting economic and social mobility had a research arm like DARPA. What goals would it set? How might it use incentive prizes and big bets to achieve them? For example, if the Department of Labor had a research and innovation arm, it might seek to reduce the time for non-college-educated workers to gain an in-demand technical skill from years to months, leveraging advances in AI-based digital tutors that model the one-on-one interaction between an expert and a novice. ☒

A Competition with Many Winners

100&Change sought to add value to participants by helping to raise the profile of a variety of meaningful solutions.

BY KRISTEN MOLYNEAUX

From the outset of our inaugural 100&Change, we recognized that a competition is inherently biased toward thinking of one organization as a “winner.” However, that was not how we at the MacArthur Foundation defined success nor how we designed our competition. Instead, we set out to raise the profile of meaningful and impactful solutions to our world’s most pressing problems, using the competition as a mechanism for surfacing those solutions. Every step of the way, we tried to build an application process that would bring added value to all participants whether they were ultimately selected for the award or not.

While we had notions of what that meant at the beginning of the process, we did not fully understand what that would mean until we were in the thick of the competition. Some of this uncertainty was due to the challenge of running a large-scale competition for the first time and our natural learning curve; the other was because we chose to use a design-build philosophy throughout our process. The design-build process enabled us to outline what we planned to do and afforded us the flexibility to adapt based on our real-time learnings. This provided the team with opportunities to adapt to what we were hearing from participants in terms of what was working, what was not working, and what we could do to strengthen the process. All of these elements came together as we worked to build a competition that added value to participants, maintained rigor, and provided the foundation with the kind of information it needed in order to make such a bold award.

The guiding values for our inaugural 100&Change focused on openness, transparency, and ensuring value-add to participants.

KRISTEN MOLYNEAUX is senior program officer for 100&Change at the MacArthur Foundation.

In order to set expectations from the outset, we provided all applicants with a transparent process, clear criteria, and the timeline for the competition. Over the course of the competition, we have written and spoken frequently about the ways that we held ourselves accountable to our values of openness and transparency. However, we have spent less time discussing the added value for participants. Here, we will discuss those elements and provide greater insight into how we conceptualized participant value-add throughout the competition.

LEARNING TO SCALE

From the outset, we recognized that a yearlong competitive process would be time-consuming and intense for teams. As part of the semifinalist phase, we built additional activities into our timeline that went beyond asking teams to simply revise their proposals. These activities included applicants’ authentic engagement with their communities of interest as well as stakeholders of their proposed project. In an effort to increase awareness of their work and to respond to questions from the broader public, MacArthur also asked that all semifinalist teams hold live internet events on Facebook Live or Reddit Ask Me Anything. Teams were also asked to share learnings on our 100&Change Perspectives blog. Technical tasks were required of each team, such as responding to reviewer feedback, working to make their proposals more inclusive of people with disabilities, hosting site visits for MacArthur staff, and participating in meetings with our board of directors.

Our focus throughout this process was on helping teams build stronger proposals that would enable them to thoughtfully scale their work to their ambitions and reasonably deploy a large philanthropic award. From our traditional grantmaking experience, we recognize that many

organizations struggle with scaling successful interventions, and while many assume these struggles are due to resource constraints alone, it is also true that many organizations simply lack a clear plan for adapting to the unforeseen barriers that can arise during the scaling process. In an effort to mitigate these challenges, we decided to focus extensively on supporting teams to develop a scaling plan.

“While there is no generally accepted definition of scaling,” writes Larry Cooley, president emeritus and senior advisor for Management Systems International (MSI), “we view it as expanding, adapting, and sustaining successful projects in a geographic space, over time, to reach a greater number of people.”

While all barriers and challenges to successful scaling cannot be planned in full, there are ways for organizations to better prepare themselves for scaling activities and to think critically about the types of partnerships, resources, and plans that they need in order to increase their chances of success. To help our semifinalists build robust scaling plans, we enlisted the help of MSI, a US-based development firm that has a long history of providing support to organizations that are scaling interventions. Over the course of six months, MSI worked individually with each semifinalist team to help them build scalability plans and act as a critical friend and thought partner. From these activities, we hoped that all eight teams would walk away with a compelling, strong revised proposal with a built-in scaling plan that could inspire a broad set of donors.

During this same time, MacArthur staff conducted site visits of 100&Change semifinalist teams and commissioned technical reviews of their initial and revised proposals from field-

level experts and experts on the inclusivity of people with disabilities. These experts provided teams with extensive feedback on where gaps remained in their plans and provided insights on the strengths and weaknesses of the proposed approach. All of this feedback was given to participants to continue to strengthen their proposals and incorporate feedback received.

In tandem, our legal team continued its own due diligence to identify any work proposed in sanctioned countries, review legal structures and memorandums of understanding, and conduct background checks on key personnel associated with each of the proposals. In addition, our financial and impact-investment teams assessed the financial standing of each organization. Neither analysis focused on disqualifying teams; rather, they sought to better understand and identify areas worth targeting for additional support should the team become an award recipient.

All teams were also required to identify an external evaluator to serve as a partner over the five-year grant period. The purpose of this evaluator was to help teams identify areas where they needed to change course or adapt their work as well as track impact over time. Each evaluation plan was reviewed by the foundation's evaluation team, and another layer of feedback was provided on how semifinalists could work to strengthen their overall evaluation structure.

The extensive due diligence of our six-month semifinalist phase produced a set of proposals that had been extensively vetted, iterated, improved, and strengthened over time. It represented an achievement that boosted each participant's confidence. "If you had asked me in December 2016 if I felt we would have been able to execute on our initial proposal, I would have said yes, but I would have been a bit unsure if we could do it," a member of one of the semifinalist teams said. "Today, six months later, I know that we can execute on this plan."

In September 2017, our board selected four finalists from our eight semifinalists, and we entered what we called "Phase III" of the competition. During this time, the teams focused mostly on preparing for the Finalists Live event in December, after which the board would make its decision. We did not want our finalist event to focus solely on the board's decision-making process; instead, we wanted to highlight and promote the work of all the semifinalists and finalists for other potential donors. Although

we intended to pick just one team for the award, we were committed to helping each team try to find funding for their solutions.

To learn how to increase their donor base and better understand the needs of donors looking to make larger philanthropic contributions, the finalists and semifinalists attended the Big Bettable workshop, held by The Bridgespan Group, which focused on pitching big ideas. The two-and-a-half-day session focused on how to break proposals into smaller pieces that would provide donors with clear investment opportunities while also tying those opportunities to impact.

In the end, we have had varying success with this part of the process and are rethinking how

The whole 100&Change process has demonstrated that inspiring donors and the public does not come from a single proposal, a single interaction, or a single idea.

we can build the next application to support this type of staged investment approach and provide active opportunities to bring donors along in our process. However, this event, coupled with many additional fundraising activities since the 100&Change announcement, has led to broad general interest and significant (more than \$50 million to our semifinalists after 2018) follow-on funding from other donors.

THE TOP 200

While working with our eight semifinalists, we also started to realize that there was a wealth of interest from other donors and high-net-worth individuals in the types of organizations that surfaced through our competition process. It was not until we started talking to donors about the more than 1,900 applications from various sectors all around the world that we fully realized the treasure trove of information we were sitting on. A new purpose for our 100&Change process was born: We began to focus on finding ways to better connect big ideas to philanthropists, donors, and intermediaries looking to make larger "big bets" for social impact.

Over the course of the same yearlong process that the semifinalists and finalists were working to refine their proposals, we partnered with several agencies to create new ways to profile and highlight the many high-quality ideas we

received. During this time, we embarked on four significant activities to try to bring greater visibility to these proposals:

- We identified the top 200 scoring proposals and published them in a publicly accessible interactive directory.
- Our partner Charity Navigator identified the 37 organizations already on its highly rated charities list and promoted them as "Charities with Bold Solutions."
- The Center for High Impact Philanthropy at the University of Pennsylvania published a guide titled *Bold Ideas for Philanthropists to Drive Social Change*, which highlighted 16 proposals as "Best Bets" and promoted 81 organizations in total.
- We started the 100&Change Solutions Bank, a publicly accessible, searchable database that is a repository of all the proposals we received.

This work has been fruitful for a subset of organizations, particularly those from within the Top 200 list. While not every organization has received funding through this process, many organizations have found creative ways to use their Top 200 designation to interest new donors or to incorporate the feedback they received from judges to build stronger proposals that they presented to existing donors. In both cases, for some organizations, this has led to increases in grant dollars received.

Today, we continue the fundraising work we started during the 100&Change process. We are helping to support several donor collaboratives that have formed around many of our finalists and have linked semifinalists to donors and other competitions. In addition, we continue to promote the work of all Top 200 applications and, where possible, are tracking where these organizations have received interest from donors. Some applicants received direct funding from judges who were part of the competition, some saw an uptick in direct contributions through Charity Navigator's Web pages, and others are still seeking ways to best take advantage of the various designations and profiles that 100&Change provided.

The 100&Change competition, with all of its learnings, has demonstrated that inspiring donors and the public does not come from a single proposal, a single interaction, or a single idea. Rather, each of the steps outlined here provides an opportunity to forge new relationships and strengthen existing connections by presenting a clear narrative of where you are trying to go and how you plan to get there. ✕

Selecting a Pool of Bold Ideas

How the University of Pennsylvania's Center for High Impact Philanthropy winnowed 100&Change's Top 200 Entries

BY ANNE FEROLA & LINDSAY KIJEWSKI

Thousands of applicants from around the world responded to the MacArthur Foundation's open call for \$100 million proposals. These ideas represented a rich collection of potential solutions for significant social and environmental problems. But while most of the attention was focused on 100&Change's lone \$100 million grant, the University of Pennsylvania's Center for High Impact Philanthropy (CHIP) saw broader opportunity: With a database of more than 1,900 solutions to the world's most pressing challenges, how could the visibility and opportunity associated with a project as enormous as 100&Change be useful beyond a single prizewinner?

MacArthur asked CHIP to evaluate the top 200 proposals (as determined by MacArthur's judges), highlighting those that our team felt had the greatest potential to create meaningful impact. The result is our guide, "Bold Ideas for Philanthropists to Drive Social Change." It includes 81 opportunities organized in various ways (e.g., by geography or cause area), as well as 11 "Best Bets"—those proposals that truly stood out based on our team's rigorous analysis.

CHIP believes that the experience of reviewing large numbers of diverse proposals helps new philanthropists learn how to think about opportunities and risks. Indeed, inviting talented and committed students to be a part of this process is one of the best ways to advance the field of philanthropy, by training the next generation of thoughtful donors.

Our 100&Change analysis differed from CHIP's standard research process in that it was based solely on what was presented to MacArthur and the comments of 100&Change judges; our analysts did not conduct additional due diligence to validate claims made by the applicants. The

MacArthur Foundation provided CHIP with the complete text of each application, along with a database that included their judges' scores and comments. Because the purpose of the project was to identify additional opportunities beyond those selected by MacArthur, we did not evaluate the foundation's semifinalists, which left us with 192 total prospects. CHIP's team narrowed this pool through a series of four phases that took place between June and October 2017.

Phase 1: Social Impact | The first phase of our analysis focused on two overarching questions:

- Does this proposed solution address CHIP's understanding of social impact—i.e., a *meaningful improvement in the lives of intended beneficiaries*?
- What is the scope of positive change that could be achieved with the project's success?

Each application was reviewed by two researchers on the project team, who considered the problem it was trying to solve, who would benefit from the solution, and to what degree those lives could be improved if it were successful.

It was at this point that we chose to exclude scientific and medical R&D from our analysis. In reviewing those submissions, we realized that a fair assessment of their strength required a level of technical expertise that we did not have, and thus they could not be properly evaluated.

Eighty-one applications stood out for the clarity of their social impact goals and the logic of their proposed solutions; these are included in our "Bold Ideas" guide. This pool offers a wide array of high-quality opportunities for donors, but we didn't stop there.

Phase 2: Theory of Change | In consultation with CHIP senior staff, the team constructed detailed logic models and theories of change for each of the 81 projects. This process identified any gaps in logic or assumptions made on the trajectory from inputs to impact. We reviewed the evidence

offered in the applications to assess whether the assumptions seemed reasonable and, in turn, completed one more step in the process of evaluating each project's potential for success.

Phase 3: Tactics and Risk/Reward | To narrow the field even further, the team looked at the finer points of the applications, comparing their scale with that of proposals we commonly see in this philanthropic arena. The differences presented some interesting insights and challenges for the team to grapple with. Did the level of risk seem appropriate? Were the implementation strategies sound? Did the implementers have the infrastructure to support such a dramatic influx of funding, and was there any potential for the projects to sustain themselves without a grant of this size from MacArthur? It was at this stage that the 100&Change judges' comments were also considered, helping to guard against any biases our team may have had. After incorporating these additional perspectives, the team was ready to present its top 24 proposals to CHIP's panel of experts.

Phase 4: Selection and Vetting | The team presented the final submissions to an assembly of CHIP senior staff, analysts, fellows, and experienced funders with expertise ranging from community development and public health to education and impact investing. This distinguished panel chose 11 projects that they felt had the greatest potential for impact. These proposals then passed a final round of vetting with area-specific experts from the University of Pennsylvania and were recognized as our best bets in the guide.

This final group represents a wide cross-section of global funding opportunities, offering a variety of strategies from large-scale expansion of proven programs to higher-risk/higher-reward innovation plays.

One of our biggest takeaways was the importance of communicating solutions in a way that is understandable to a wide variety of stakeholders in order to gain the broad support—philanthropic and otherwise—that such solutions deserve.

We continue to consider the best ways to share the information we have synthesized. Our hope is that by distilling the information into guidance that can be understood and tailored for interested individuals, we help move the billions in uncommitted philanthropic capital now sitting on the sidelines into active use to generate the real-world changes we all seek. ✕

View and download our guide, "Bold Ideas for Philanthropists to Drive Social Change," at <https://www.impact.upenn.edu/100-and-change-bold-ideas/>.

ANNE FEROLA is director of education and strategic partnerships at the Center for High Impact Philanthropy at the University of Pennsylvania. She oversees the center's key relationships with institutional funders, individual donors, and nonprofit practitioners, and directed CHIP's 100&Change analysis.

LINDSAY KIJEWSKI was a 2017 Lipman Family Prize fellow at the University of Pennsylvania and served on the project team for CHIP's 100&Change analysis.

An Open-Data Approach to Transform Grantmaking

Proposals for grants can offer a wealth of ideas and information to the nonprofit community, if foundations take the right steps.

BY **BRADFORD K. SMITH**

Traditional grantmaking, whereby individual groups or people apply for pools of funding through a linear, all-or-nothing process, is inefficient, wasteful, and opaque to applicants and other outsiders. What if nonprofit proposals could come from a wider pool of candidates and be easily screened, mined for ideas, linked to related information, and shared with the world? In MacArthur's 100&Change competition, Foundation Center saw an opportunity to explore how philanthropy's grantmaking process could be transformed in a way that would focus the field on generating and sharing knowledge, rather than simply getting and giving grants.

GRANTMAKING TODAY

In the United States, foundations receive a tax exemption on their investment income in exchange for contributing to the public good. Some fulfill that role by maintaining one or more program areas and inviting the public—in the form of nonprofits—to apply for grants. The rationale for that open approach is that no matter how knowledgeable a donor, staff, and consultants may be, the best ideas may come in over the transom.

Nevertheless, of the more than 87,000 active independent, community, and corporate foundations in the United States, 70 percent do not accept unsolicited proposals. Together they represent 41 percent of total assets and 38 percent of annual giving in the nation. More than \$27 billion of the \$71 billion distributed every year by foundations is not up for grabs—you need an invitation.

Many donors keep their doors closed for fear they will be overwhelmed with proposals, which would require a costly infrastructure to evaluate. Proposal review is indeed labor-intensive, and tens of thousands of small foundations have

BRADFORD K. SMITH is president of the Foundation Center.

little or no staff and limited budgets. But this argument makes less sense for larger foundations with highly qualified professional staff and significant operating budgets. Despite that, 41 percent of the roughly 1,200 largest US foundations, accounting for more than \$600 billion in assets, do not accept unsolicited proposals.

Other grantmakers say that they don't want to waste the valuable time of nonprofits, who might invest in preparing proposals that have little chance of approval. It is true that the majority of all proposals fail to get funded. When I worked at the Ford Foundation in the 1990s, I remember counting more than 144,000 requests in a year in which we made fewer than 2,000 grants. That pattern is repeated throughout the sector: Nonprofits and foundations invest enormous effort in preparing and reviewing proposals through time-consuming processes in which most of the data, analysis, and insights generated in the process are simply discarded.

In fact, this counterproductive process is actually becoming worse as foundations increasingly turn to prize philanthropy to spur innovation and emphasize branding. The best thing about prize competitions is that they are open to all; the pitfall is that the funnel is even narrower, producing only one or a handful of awards at the end.

Foundation Center, the leading source of information about philanthropy worldwide, is at the crossroads of foundations and their nonprofit partners. We maintain years of in-depth data about grantmaking and provide tools and training to help the grant seekers find funding. From nonprofits, we frequently hear such questions as: "How do I get a grant from a foundation that doesn't accept unsolicited

proposals?" "Why do foundations request so much information?" "What do foundations do with all that information?" Questions like these have a way of focusing the mind. It is increasingly difficult to provide suitable answers in an age when technology has transformed the ways in which we find, consume, supply, and process

We turned a team of 25 data scientists, coders, and designers loose on the entire set of 1,871 proposals and 1,700 videos that were submitted to the competition.

information in most every other realm of our lives. For several years, Foundation Center has worked to improve knowledge-sharing practices of foundations. But a recent collaboration with the MacArthur Foundation gave us the opportunity to experiment with opening up the grantmaking process itself.

"THE SOLUTIONS BANK"

Grants of the size of the 100&Change project—\$100 million—are extremely rare in philanthropy. Only four of this size were made in all of 2016. It is rarer still to make such a gift through a competitive process. Because 100&Change was designed by the MacArthur Foundation as a competition and as an open-application process, the foundation decided to share all the proposals with other foundations, nonprofits, researchers, and the public at large.

Sharing presents practical problems, since merely posting thousands of PDFs on a website is not an effective way to transmit knowledge. Moreover, the application process requested some confidential information.



In 2017, with MacArthur support, we turned a team of 25 data scientists, coders, and designers loose on the entire set of 1,871 proposals and 1,700 accompanying videos that were submitted to the 100&Change competition. The result was the Solutions Bank, a free online resource allowing users to explore proposals by subject, population served, strategy, and relationship to one or more of the United Nations' 17 Sustainable Development Goals.

The bank's largest volume of proposals are in categories such as economic opportunity, energy and environment, and health, but subjects range from agriculture to transportation. The "population served" field includes age groups, ethnic and racial groups, social and economic status, and other categories. "Geographic area served" includes regions, subregions, countries, and cities, and also broad domains such as oceans and space. Users can search with keywords or maps, or by choosing criteria from drop-down menus.

For example, searching "oceans" generates a list of 57 proposals, including Northeastern

University's mariculture project to grow sustainable, healthy animal protein. The system displays the core elements of the application along with accompanying videos, links to related proposals (such as Kepley BioSystems Inc.'s synthetic bait project), relevant research (such as a study on the depletion of forage fish stocks), and links to foundations that have funded the university in the past.

Linking information in this way turns the entire body of proposals and videos into knowledge that can be used by other foundations looking for "shovel ready" grant proposals to expand a current program area or launch a new one, or to create another prize competition. By including information about who currently funds 100&Change applicants, the site is also intended to be useful for nonprofits and other organizations seeking their own funding.

BUILDING THE BANK

Foundation Center has a long history of collecting, cleaning, and coding data about philanthropy and applying data science to make

sense of raw information. In 1960, it published its first print directory, including information on some 5,200 American foundations. In the following years, Foundation Center developed a grant classification system that evolved into the Philanthropy Classification System, a taxonomy of more than 1,300 terms to categorize a grant's subject, population served, approach strategy, transaction type, and organization type. These entries are coded by location using GeoNames, an open database of more than 11 million geographic place names.

In 2016, Foundation Center began using a database of more than one million hand-coded foundation grants to train computers to do the coding process on their own through machine learning, an approach that uses statistical techniques to give computer systems the ability to "learn" by progressively improving performance on a specific data-driven task such as classification, without being explicitly programmed. Once the system was able to classify grants at 90 percent accuracy—the target we had established—we applied it to

Foundation Center's entire store of content, including some five million grants, blogs, research reports, and news digests. These were all coded according to the Philanthropy Classification System, and their content was indexed to search engines utilized in different Foundation Center products and services. Further refinements permitted auto-coding to multiple classification systems, including the Sustainable Development Goals and the Organisation for Economic Co-operation and Development (OECD) system that categorizes global foreign aid expenditures. Through this effort, Foundation Center makes it possible to show how foundations and governments are mobilizing to conserve oceans, support human rights, or address virtually any other global challenge.

We applied this technology to the 100&Change proposals so that users could search them in the ways described above. But the diversity of the proposals meant that the process was not as easy as we had anticipated. Approximately 800 met all of the application criteria and could

be easily machine-coded. The remainder did not adhere closely to the format, had missing information, or were otherwise difficult to classify or assess. After the automated system did the initial pass, we had to review all of the coding the old-fashioned way—by hand. Still, correcting the coding of thousands of pages of text is faster and more efficient than reading and coding every page.

As an experiment, we also coded some 1,700 videos that accompanied the proposals. After dividing each video into one-second slices, we used image recognition software to identify every object in each frame ("person," "books," "desk," "plant," "bird," "mountain," etc.). Audio transcription software translated spoken dialogue from each video into text. We then applied the same coding technology that we'd used on the written proposals to this text derived from the images and audio tracks. To our surprise, we found that this video analysis added little new information. We included only some video features in the final version of the Solutions Bank site, such as thumbnails showing images and terms such as "sea life," "earth," or "grass."

THE GREAT POTENTIAL

This process demonstrated that using machine learning to rapidly digest large volumes of proposals has enormous potential. The Solutions

Bank allows users to fully explore all the knowledge contained in the entire body of proposals, not just the \$100 million winner and finalists.

Foundation Center also had access to the MacArthur Foundation's scores for the 800 proposals that met all the application criteria. We used this confidential information to try to relate proposal features to the judges' scores. However, this set was far too small; machine learning requires very large data sets to achieve acceptable levels of accuracy (regarding classification) and mitigate against bias. Nevertheless, the group of 800 complete proposals provided us glimpses of topics and beneficiary groups (such as children) that were more likely to garner higher scores. These findings, though

Today, America's foundations are like black holes, absorbing enormous quantities of knowledge while reflecting back almost none. This situation could change.

far from conclusive, were encouraging enough to convince us that, with a larger training set of 4,000 or more complete proposals, it would be possible to make far more accurate predictions.

Our results were similar with video content—and somewhat predictable. The main images identified by the software were "person" and "desk," and those tended to receive lower scores than others featuring, for example, "wildlife." In part, this was due to the MacArthur Foundation's guidance to applicants, which recommended a low-cost, simple approach to video production. One could argue that you don't need machine learning to prove that videos showing what a project will actually accomplish are more effective than those featuring a talking head. However, despite the widespread availability of technology for shooting and editing video, many applicants still find video production a challenge.

In the short term, we see immediate ways to improve future iterations of MacArthur's 100&Change competition. Auto-coding all proposals at the outset, for example, could make it far easier to assign the right proposal to the right reviewer by subject, geography, or other criteria. This more careful targeting would use the valuable time of those outside readers more efficiently and could also improve the accuracy (and reliability) of their scoring. Similarly, the analysis of 1,817 proposals contained in the Solutions Bank could help future recruitment of

outside readers by ensuring that their expertise is appropriate to the likely content of proposals.

But the greatest potential of these experiments lies in finding new ways to encourage foundations to accept unsolicited grant proposals, whether in the form of prize competitions, as requests for proposals (RFPs), or via the usual grantmaking process. With larger numbers of quality grant proposals in text or video form, it should be possible to construct statistically reliable training sets that could in turn make it possible to automate the first wave of eligibility screening. This would enable smaller foundations to process and review more applications, by making it quicker, easier, and less expensive to reject the larger number of proposals that do not fit priorities or criteria. Precious staff time could instead be reserved for analyzing the far smaller number of those that do meet those basic requirements.

Furthermore, to the extent that foundations are willing to accept unsolicited proposals and do so in open processes like 100&Change, the proposals themselves will become a valuable outcome of the grant process. These can be made available to funders wishing to benefit from the ideas, organizations, insights, and creativity—or who might want to provide support. Grant proposals need not be treated as unique works of art: There is no reason why one funder shouldn't accept or even fund a proposal originally submitted to another.

The MacArthur Foundation has heard from numerous government, foundation, and nonprofit users that are among the more than 1,300 users that explore the Solutions Bank each month. Further research will show whether funders will identify promising proposals and potential grantee partners through such an open platform. As the number of open grant competitions grows, multiple Solutions Banks could be built by subject area, geography, beneficiary group, or other criteria, as long as the privacy and intellectual property of the applicants were properly protected. The proposals within each could be treated as living documents that organizations could continually update with new information, retaining the spirit of openness that lies at the heart of 100&Change.

Today, America's foundations are like black holes, absorbing enormous quantities of knowledge while reflecting back almost none. The laboratory created by MacArthur's 100&Change suggests that this situation could change. Armed with abundant resources, fueled by the hope and creativity of millions of nonprofits, and powered by technology, foundations can become sources rather than sinks of information, radiating knowledge and valuable insights to the entire nonprofit community. ✕

The Vital Role of Early-Innovation Funders

At The Lemelson Foundation, we seek to foster inventions that will have social impact and improve lives. But our support for early-stage innovation could not succeed without a trusted network of grantees and partners.

BY CAROL DAHL

In 2006, two engineering professors from Rice University visited the neonatal ward in Queen Elizabeth Central Hospital in Malawi and witnessed the grave challenge that many premature infants face. These infants were struggling to breathe because of respiratory distress syndrome (RDS), a breathing disorder that affects newborns. In Malawi, RDS is a dangerous condition with only a 25 percent chance of survival. But in the United States and other high-resource countries, it is easily treated with a breathing device called a bubble-CPAP, which provides continuous positive airway pressure to the infants and enables them to breathe normally.

The key challenge was that existing devices were too expensive for hospitals and clinics in Malawi and were not designed to withstand the harsher physical conditions in African health-care settings. After inevitably breaking down, these devices ended up in equipment graveyards along with stacks of other well-meaning donations not suited to the local environment.

So the professors, Rebecca Richards-Kortum and Maria Oden, returned to Rice with a mission. They engaged their undergraduate students to work with the nurses and doctors in Malawi on a design challenge to create a more affordable and durable bubble-CPAP. The prototype they came up with used a plastic shoebox from Target and two fish-tank pumps. It had a fraction of the cost of a standard bubble-CPAP but proved just as effective at saving infants' lives. The joint team from Rice and Malawi perfected the device and called it "Pumani," a Malawian word meaning "breathe restfully."

Eight years later, that one prototype has grown into an ambitious initiative called NEST (Newborn Essential Solutions and Technologies),

CAROL DAHL is executive director of The Lemelson Foundation.

to address not only RDS but also the other preventable causes of newborn mortality in Africa. The Rice 360° Institute for Global Health (Rice 360°) team is also working with African universities to help create a sustainable pipeline of inventors and engineers to solve local and regional health challenges. The Lemelson Foundation was there at the earliest stage, providing support when it was still just an inspired idea—that undergraduate engineering students could be part of creating products to have real social impact in the world. Starting with one small grant through our longtime partner VentureWell, we were part of an ecosystem of upstream funders that helped Rice 360° develop their idea from a college course into a scalable program that in 2017 was awarded a \$15 million grant from the MacArthur Foundation's 100&Change competition. NEST is now on track to receive more than \$60 million in new funding.

Innovative initiatives are often most in need of support during that crucial early stage, but that is also when they pose the most risk for investment by governments or the market. Philanthropic and corporate social responsibility capital is available to help support scaled implementation of the most promising projects, but there is a shared responsibility for both upstream and downstream funders to manage related risks.

Through 23 years of grantmaking, we have learned along with our grantees how to help incubate invention-based social entrepreneurs to reach the point where they are ready to scale through large awards from downstream funders. We have found that it takes more than great ideas and visionary, dedicated leaders. It takes well-aligned partners committed to learning together. It takes patient and strategic support to help them refine their approach and

build institutional capacity. It requires starting small and infusing the right kind of funding at the right time to help grow their efforts. And it takes an ecosystem of funders who bring their specific strengths and resources to bear at different stages along the pathway.

INVENTING AN ECOSYSTEM

Prolific inventor Jerome Lemelson and his wife, Dorothy, founded The Lemelson Foundation more than two decades ago. Since that time, the foundation has helped grantees in both the United States and developing countries launch more than a thousand invention-based businesses and initiatives following a philosophy we call "impact inventing": creating new products that have positive social impact, are environmentally responsible, and are financially self-sustaining.

The foundation is small in staff but large in ambition. Our goal is to create and support a more vibrant invention ecosystem focused on problems that are worth solving, leading to products that make a real difference in people's lives. Rather than open solicitations or running competitions, we employ a different approach as a moderate-sized, early-stage funder. After setting our strategic direction, we rely on a network of trusted grantees and partners on the ground to seek out promising opportunities for our work. Sometimes, when we find that those partners do not yet exist, we help create them.

This was the case with VentureWell, one of our earliest grantees. VentureWell is an NGO that supports early-stage inventors and entrepreneurs. In the early 1990s, Jerome Lemelson recognized that there was a real lack of support at the university level to help foster invention-based entrepreneurs. Seeing that there was no organization in this role, he set out to create one.



He formulated a vision for higher education to engage students in inventing meaningful solutions with market potential, which led to the creation of the National Collegiate Inventors and Innovators Alliance (NCIIA). NCIIA supported the success of student invention teams, so that these teams could advance promising ideas through entrepreneurship.

NCIIA was founded at Hampshire College in 1995 and was incubated as an autonomous program by a consortium of five colleges. In 2001, NCIIA became an independent 501(c)(3). With our continued support, it developed effective approaches to incubating student-led, invention-based enterprises that could be self-sustaining, scalable, and attractive to downstream investors. However, 15 years into this work, we realized that reliance on our funding put NCIIA at risk of functionally becoming a subsidiary of the foundation. We also recognized that they had value to offer way beyond what we could support on our own.

Working with Phil Weilerstein, NCIIA's leader, we supported the development of a broader focus and the diversification of funding sources. Providing introductions and even cofunding projects with new funders helped NCIIA solidify sustainable funding through other partnerships. Eventually, The Lemelson Foundation's stable support level decreased from 80 percent of NCIIA's annual funding to just one-fifth of their current \$15 million annual budget.

NCIIA evolved into VentureWell, and the organization continues to be a close partner of the foundation and now enjoys rapid and sustained growth with a robust and diverse funding stream. At the outset, it was solely focused on the United States, but now it has global reach, with significant grants from the US Department of State, USAID, the Bill & Melinda Gates Foundation, the Kauffman Foundation, and many others. VentureWell's programs have reached tens of thousands of students and faculty, and it has supported the creation of more than 600 invention-based companies with social impact that have raised close to \$1 billion in additional investment.

For us, this formative experience was a lesson in patience, rethinking organizational structure when necessary, and supporting capacity building. It also taught us that a diversity of funders is key to taking an organization to the next level. Now, VentureWell is a major partner in the startup ecosystem, helping to position additional ventures for funding to scale.

INCUBATING INDIA'S SOCIAL ENTERPRISES

While VentureWell helped promote impact inventing in the United States, The Lemelson Foundation knew that a crucial component to addressing the world's most pressing problems involved supporting invention in the developing world. In 2002, we developed a strategic

Kinnos, a health-care company started by Columbia University students mentored by VentureWell, developed a disinfectant solution in response to the 2014 Ebola outbreak.

approach using recognition and mentoring programs (RAMPs) to foster inventors in developing countries. The RAMPs would allow us to identify key projects through

recognition awards, and link them to mentoring to grow their ideas and business models. We went looking for partners that could help us achieve this work, and in India we found Villgro.

Villgro started as the vision of Indian social entrepreneur Paul Basil, who used a venture capital investment model to support small-scale farmers who had developed agricultural innovations that were cheaper than traditional tools and were designed to work in low-resource settings. In 2004, we helped Basil with a grant of \$100,000 to expand his startup through a RAMP model. But we learned over time that there were gaps in our original vision. Recognition awards and mentoring alone were not having a large enough impact on the growth of invention-based social enterprises in India.

So we worked with Villgro to provide targeted resources throughout this process, rather than large infusions of money that they were not yet equipped to deploy effectively. This included funding a review to look at Villgro's organizational and financial structure, and support for building capacity based on that input to enable continued learning and experimentation. We also provided different types of funding as needed to establish a successful model. Villgro discovered that they needed equity money to

support companies suited for investment and scaling up, arguing that companies needed to move beyond grant funding because it is considered a deterrent to downstream investors. The Lemelson Foundation became an anchor partner for starting the Menterra Social Impact Fund along with other foundations and India-based angel investors. Working together, the Menterra Fund and Villgro now provide the capital for early-stage impact inventors and entrepreneurs throughout India.

Villgro evolved into the premier incubator of social enterprises in India. It has cultivated nearly 150 innovators, who have raised more than \$18 million in follow-on investments—11 times the initial funding it received. Their social enterprises have created 4,000 jobs and have helped incubate life-improving products that have reached nearly 20 million people.

CREATING A PIPELINE OF GLOBAL HEALTH INVENTORS

The lessons we learned as an early-stage funder for VentureWell in the United States and Villgro in India informed our growing partnership with the Rice 360° team as their vision expanded, their impact grew, and new funders came on board.

Richards-Kortum and Oden's initial program grant from VentureWell allowed them to create a hands-on engineering education program at Rice called Beyond Traditional Borders. With additional funding from the Howard Hughes Medical Institute, this course evolved into the Rice 360° Institute for Global Health, which launched the first bubble-CPAP prototype (i.e., Pumani). An additional grant of \$10,000 from VentureWell was used to partner with a product design firm to build a more refined version of Pumani, and VentureWell's Xcelerator training program then helped prepare them for the next stage of scaling. Cross-cultural collaboration was key to their work from the beginning. They developed their design by working closely with the University of Malawi College of Medicine and Malawi-based pediatricians Liz Molyneux and Kondwani Kawaza, as well as the neonatal nurses who would be using the device.

In 2013, a global innovation award from another one of our longtime grantees and partners, the Lemelson-MIT program, enabled the Rice team to build capacity by constructing a new infant ward at Queen Elizabeth Central Hospital as an innovation hub in Malawi to introduce and test their technologies. Rice 360° received one of the first Saving Lives at Birth grants from USAID to conduct the clinical trials needed to drive investor interest in their

bubble-CPAP. After proving its success, they worked with the Malawi Ministry of Health to make Pumani available in all of the country's hospitals at one-tenth the price of comparable systems in the United States.

But their story does not end there. Richards-Kortum and Oden recognized a larger problem: Every year, 1.1 million babies die throughout sub-Saharan Africa for a variety of reasons. Seventy-five percent of those deaths are preventable with technologies that have been available in high-income countries for over 50 years, but most of these technologies are not suitable for use in Africa. Their goal for Rice 360° was to tackle the key mortality causes with a suite of low-cost, rugged devices similar to Pumani. This vision underpins their NEST program—17 complementary devices intended to provide high-quality, comprehensive care for preemies and full-term newborns in Africa.

In 2014, Rice 360° came to us with an idea to make their work more sustainable by increasing local innovation capacity in Africa. The partnership between innovators in Malawi and at Rice gave rise to the notion of introducing the design-based bioengineering approach to engineering students in Malawi. The Lemelson Foundation provided seed funding to launch a program that would offer design-based bioengineering education for students at the Malawi Polytechnic school at the University of Malawi. The long-term goal is to harness the power of local invention and entrepreneurship, as well as create a sustainable pipeline of biomedical engineers required to support the introduction of new technologies to African health-care institutions. Malawi Polytechnic and Rice University students now participate in a bidirectional exchange, learning from each other as they invent and innovate.

Here, the pathway from idea to impact started small, with targeted and incremental funding for achievable goals. But Rice 360° was engaged throughout the process with a collaborating ecosystem of upstream funders, building capacity and organizational structure along the way. All this led to a point where Rice 360° and their NEST technology was poised to compete in the 100&Change program and go to scale with the support of the MacArthur Foundation, The Lemelson Foundation, and other funders.

THE ROLE OF UPSTREAM FUNDERS IN SUPPORTING SUSTAINABLE DEVELOPMENT

Upstream funders play a critical role in building a pipeline of organizations that have the

capacity to absorb large grants and deliver on the promise of both scale and impact. As early funders, we must be willing to take initial risks to support innovation and invention at these beginning stages. And while those risks are high, the rewards can be great, both for the organizations and for the social impact they can generate.

Through our experiences with VentureWell, Villgro, and Rice 360°, we now have perspective on how early-stage funders can help create this pipeline. First and foremost, start small with metered funding. Although large amounts of money early on might seem attractive to many grantees and funders, it can be detrimental to organizations that have not yet found their organizational foothold and the optimal model to scale their efforts. Next, take the time and expense to build relationships based on trust with grantees that are also aligned with the core capacity of each partner. Be iterative; accept risk and, especially, failure. Showing a grantee that you are in it for the long haul helps both sides create transparency. And finally, be confident in the long-term goals you are trying to achieve, and unafraid to change course or organizational structure in service of those goals.

Also key for early funders: Know your limits. We cannot (and should not) always take an organization to the next stage. Dependence on one funding stream can ultimately limit the potential to achieve maximum scale and impact. Different sources of support play different roles along the pathway. In the end, you have to prepare your grantees to tap into the larger ecosystem and build relationships with follow-on funders.

Relationship-building requires engagement with the entire ecosystem of partners needed to take an organization from idea to impact. By proactively collaborating with early funders, downstream funders will have a greater opportunity to identify and cultivate successful projects ready to grow to scale. Downstream funders also have a responsibility to help their grantees build capacity and prepare for the funding cliff that naturally occurs when large award programs come to a close.

Ultimately, whatever our role in this funding ecosystem, we all share the same goal: creating projects for social impact that no longer rely solely on philanthropic support. Such enterprises must develop the capacity to become self-sustaining through government funding or market mechanisms so that their work for public good becomes woven into our social fabric. That is the true pathway to sustainable development. ✕

The Need to Double Down

Big bets can make a big difference, but only if they catalyze interest and follow-up investment in the problems they seek to address.

BY **MICHAEL FEIGELSON & ELVIRA THISSEN**

Even before the 100&Change deadline for applications had passed, the Bernard van Leer Foundation launched a response to the Syrian crisis with grants to the International Rescue Committee (IRC) and Sesame Workshop. Foundation Executive Director Michael Feigelson and Representative Refugee Response Elvira Thissen thus had an intimate view of the 100&Change process and its effect on Sesame Street, the IRC, and funders supporting young children affected by the Syrian war and other crises around the world.

Sesame Seeds was created to restore hope for a generation of children growing up amid violent conflict. The program's selection as the \$100 million recipient of 100&Change also offers an opportunity to place the needs of the youngest refugees on the humanitarian map everywhere. However, this will happen only if the grant can motivate old and new donors alike to invest more. This is not a given. In fact, the opposite could happen. Additional philanthropic investment can make a meaningful difference, but it means that now—more than ever—foundations need to step up, dream big, and take risks.

THE WORLD BEFORE 100&CHANGE

Our foundation has been focused on early childhood development since 1964. For the first three-plus decades, it was a lonely endeavor. The widespread belief that babies live in a buzz of confusion made it hard to convince policy makers and philanthropists to invest. Today, evidence from neuroscience, public health, education, and economics has demonstrated that babies and toddlers are anything but con-

fused. When surrounded by supportive families and communities, they can process information and learn faster than any other group of human beings. Every second, their brains make one million new neural connections setting the foundation for a lifetime of learning and health.

As this evidence has emerged, there has been a flood of interest. Early childhood development is now central to the United Nations' 17 Sustainable Development Goals. From Singapore to Chile, Bangladesh to Germany, South Africa to Mozambique, countries are prioritizing early childhood. World Bank investments in babies and toddlers more than doubled between 2012 and 2017. At the G20 summit this December in Buenos Aires, we will hopefully see a declaration supporting early-years investment signed by the leaders of the world's most powerful economies.

And yet, when we launched a new initiative focused on Syrian refugees at the end of 2016, it felt like going back in time. Despite approximately 811,000 Syrian children under the age of 5 living in neighboring countries, early childhood development was getting very little attention. Critical services for pregnant women, babies, and toddlers—health care, food, water, shelter, and sanitation—remained significantly underfunded. Some preschool education was starting to be provided, but support for maternal mental health, parent coaching, and childcare was limited to small pilots, most of which were running out of funding. As the strategy was developed for No Lost Generation—an ambitious advocacy platform focused on children affected by conflict in the region—no one articulated the need for goals explicitly focused on babies, toddlers, and their families.

AN INITIAL LEAP OF FAITH

Building on our experiences working in Colombia with displaced communities, in refugee camps on the Thailand-Myanmar border, and in Central

America through the civil wars of the 1990s, we launched our Syria response initiative with initial grants—cofunded by the Open Society Foundations—to the IRC and Sesame Workshop. In parallel, we began an effort—now known as the Moving Minds Alliance—to organize a group of foundations to work together to build the case for early childhood development in crisis contexts. (Members of the Moving Minds Alliance include the Open Society Foundations, the ELMA Philanthropies, Comic Relief, the Vitol Foundation, the Jacobs Foundation, Porticus, and the Bernard van Leer Foundation.)

In the background, our Sesame Street and IRC colleagues submitted their application and slowly progressed through the 100&Change application process. We wrote letters and reviewed iterations of their proposal. We cheered them on as they ran a marathon in Amman, Jordan, in support of the project. We knew the chance of winning was remote and viewed the process as useful learning while we searched for ways to bring their pilot programs to greater numbers of children and families.

Then they found themselves in the final four. Suddenly, it seemed real.

Days before they made their final pitch in Chicago, we had a board meeting in which we recommended a new grant of nearly €900,000 (\$1,050,000) to the IRC to follow up on the initial pilot project. The discussion with trustees centered on the fact that there was no confirmed cofinancing and our funding could cover only about half of the project cost. We decided to take the risk. Within a few weeks, the MacArthur Foundation made its announcement. This changed the conversation.

THREE STAGES OF RESPONSE

Stage 1: Elation. A week before the announcement, we had conversations with colleagues at

MICHAEL FEIGELSON (@mfeigelson1) is executive director of the Bernard van Leer Foundation.

ELVIRA THISSEN is representative refugee response at the Bernard van Leer Foundation and leads the foundation's work with young children and families affected by crisis. She also chairs the steering group of the Moving Minds Alliance.

the IRC that indicated they already knew the outcome but could not tell us. The giggling and giddy tone of the conversations, however, raised our hopes. For the first time, we were fully and unabashedly expecting them to win.

The formal announcement of Sesame Seeds receiving the \$100 million grant was followed by a flurry of e-mails from across the world. *Sesame Street*'s photogenic Muppets began to make appearances in places like *Foreign Policy*, *The New York Times*, and *Mashable*. Each publication found a different angle. Some focused on the potential long-term benefits of the program to societal cohesion. Others highlighted how this grant would help make sure a generation did not lose out on critical years of education.

Conversations with major humanitarian agencies and donors began to require less introduction. It was noticeably easier to explain why we were focused on this issue and to describe what kinds of projects we wanted to promote.

We were elated. It felt like years of progress in a matter of months.

Stage 2: Fear. One of the things that inspired us to support Sesame Workshop and the IRC early on was that they were willing to announce their unique, bold partnership without any confirmed funding. Fear of failure often inhibits the ability to dream, and especially to share bold, ambitious dreams with others. We found their audacity compelling.

The implementation of dreams, however, is an entirely different matter.

After the award, the reality of the implementation challenges became increasingly apparent. The fact that the grant represented the largest-ever injection of funds into this kind of project in a crisis setting added to the pressure. If this was going to be a transformative example for the humanitarian sector, success in delivery had to be the number one priority.

Another major concern was that the announcement would crowd out as many stakeholders as it would inspire to join. Would the prize push foundations with smaller budgets away? Would it help or hinder collaboration with other implementing agencies needed for success? Would it give the impression that the issue was now mainstream, therefore pushing away funders with the kind of risk capital that the field would still need for years to come?

Stage 3: Recalibration. There is an optical effect in experimental psychology called the Ebbinghaus illusion that demonstrates how context affects our perception of size. At first, the 100&Change announcement seemed

enormous given the absence of early childhood projects of this scale in humanitarian settings. Media coverage, coupled with the unprecedented nature of the award, magnified the sense of size, which led to the initial elation and subsequent feelings of fear.

But, from a coldly objective perspective, the grant is not *that* big. One hundred million dollars over five years, funding work in Syria, Iraq, Jordan, and Lebanon, is equivalent to \$5 million per year per country. Taking this one step further, we estimate that worldwide there are 22 million children under the age of 5 and five million pregnant women in need of humanitarian support and protection. Yet, in 2016, only one-third of active humanitarian response plans worldwide mentioned early childhood development as an explicit priority. This is despite the fact that globally the average length of protracted displacement is 20 years.

The more we zoom out, the smaller the award looks. So can \$100 million actually shift the humanitarian landscape? The answer: Obviously not. But that is the wrong question to ask. The right question? How do we capitalize on the energy brought forward by 100&Change to help shift the humanitarian landscape and raise the kind of capital needed such that this kind of project becomes the expectation in all humanitarian response, not a reason for celebration?

The process of recalibration has accelerated our thinking, resulting in three takeaways:

- **Stay close.** The first priority for all those wanting to see the youngest refugees better served is to ensure that Sesame Seeds succeeds. To their credit, the MacArthur Foundation staff will be the first to recognize that its grant is only a first step, and it has also reminded us that the grant does not come with a full-fledged engagement in the field of early childhood development or humanitarian assistance. Other funders will need to step in as unforeseen challenges and opportunities emerge. Several already have (Bezos Family Foundation, The ELMA Relief Foundation).
- **Set more ambitious goals.** When we started, we might have envisioned this as success—a large new donor committing to a project of this size. Instead, we have been forced to think bigger. First, there is great risk in leaning too heavily on one seminal example—we need more. Second, the energy created by 100&Change can inspire others to make similar commitments, but that energy will not last forever.

As a result, we have begun to ask how we might use our relatively modest capital to help mobilize the resources to stand up early childhood initiatives of a similar scale in crisis settings across the world.

- **Build a shared story.** Like all people, the families affected by disaster and conflict are concerned with shelter, food, health care, and security. We need to make sure these needs are met every day. But like all people, they long for more. They want their children to get a fair start in life. They want to have some control over their lives. They want their children to thrive. They want their children to experience joy. Sesame Seeds—and the similar projects we hope will follow—can provide the basis for describing what the humanitarian response of the future should look like. As these stories emerge, we need to repeat them so frequently that no one can remember when they were exceptional. Part of our recalibration may mean shifting more of our time and money to the task of helping build and tell this shared story—one that is not about a specific project or organization, but about a wave of unstoppable change occurring across the world.

THE HIDDEN VALUE OF 100&CHANGE: HELPING PEOPLE DREAM BIG AND THINK DIFFERENTLY

The value of large grants depends on the size of the problem and the maturity of the field. That is what determines how big an Ebbinghaus illusion \$100 million can create.

Sometimes \$100 million might actually solve a problem once and for all.

In other cases, \$100 million might be enough to remove a well-defined obstacle that would allow for the rest of the system to function more effectively.

In this case, we have a large, seemingly intractable, global problem that few have attempted to tackle. It will not be solved quickly or easily—and certainly not for \$100 million. However, what the award can and has done is help people dream big and think differently.

Leaders from Sesame Workshop and the IRC indicated that without the promise of the prize, they would never have spent the time to think through what an early childhood project of this scale would look like. Today, they are wondering whether a bold vision combined with a clear plan might drive the funding instead of the other way around.

We are of course biased, but—in our opinion—this kind of help is a great value for the money. ☒

Doing Competitions the Right Way

The legal and logistical challenges to hosting a competition are surmountable, but they require proper planning and due diligence.

BY ROCHELLE ALPERT & JOSHUA MINTZ

When the MacArthur Foundation launched the 100&Change competition, the idea was to attract a range of innovative solutions to a serious social problem. Although fairly straightforward on its surface—the winner would receive a \$100 million grant to enable real progress toward a meaningful and lasting solution to a critical problem of our time—the reality was far more complex. A successfully run competition, which minimizes risk to the sponsoring organization while meeting a variety of objectives, takes planning, a substantial investment of time and resources, as well as meticulous and detailed execution to pull off successfully.

MacArthur's decision to run such a competition assumes that reaching out to experts in a variety of disciplines can bring new approaches to seemingly intractable problems. While hardly a new concept with regard to philanthropy, competitions continue to generate substantial interest for the philanthropic community. The reasons are manifold, but they include the growing interest in innovation and disruption, the goal of highlighting and teaching issues of concern, achieving greater brand awareness—including attracting new supporters and talent—and/or multiplying the value of the sponsor's funding for the organization's area of interest.

THE DOWNSIDE

Every competition is different, but there are certain issues that every competition by a nonprofit organization needs to consider and likely address.

Notwithstanding the allure of competitions, their benefits must be weighed against the burdens they place on sponsors, entrants,

and organizers. Two initial questions to ask: Is a competition the right approach for the issue at hand, and will it attract entrants of value to your organization? If the answer is yes, subsequent planning should consider what types of entries you want to attract and how best to entice them through outreach and publicity. Some organizations may assume that they can attract quality entrants, and even reputable persons from outside to serve as judges, simply by offering a competition, but that is rarely the case. A successful competition will normally engage many applicants, but to have a handful of winners, or even a single qualified winner, entrants will likely need to spend time and resources without any compensation, which will dissuade at least some from participating. (The same can be said for external judges.)

At the outset, it's also critical to decide whether and how you are going to assess the value of the competition to your organization. Success may be defined through objective or subjective assessments, depending on your goal(s) for the competition. If your chief aim is to enhance your organization's brand or increase awareness of a particular issue, that result may depend on subjective assessment. But if your goal is to attract a new and effective solution to a problem or to increase donations for solving the problem, the success of the competition may be readily measured through an objective assessment of some type extending beyond the end of the contest. A competition might even require an objective measurement of the proposed entries before a prize is even awarded. For example, the competition could require that measurable goals be met through the entrants' solution before the prize is awarded.

Ultimately, every organization wants a competition to enhance its reputation in the

community, while investing with finite resources. That said, there are many pitfalls to avoid here: Embarking on a competition requires perseverance, creativity, and a significant investment of time and money to ensure that all foreseeable issues, including legal ones, can be addressed. Picking the right consultants for the competition's design and execution is essential, so that entries are forthcoming and are judged fairly in accord with the rules.

Nonprofits, much like businesses, need to avoid the specter of unhappy entrants claiming that an organization ran afoul of its own rules. The best way to avoid bad publicity—whether from a failed competition; disgruntled winners; or unhappy losers who sound off on social media, civil or government lawsuits, and so on—is to treat all entrants equally and apply the rules fairly. You have to think of your rules as forming a “contract” with all entrants. Address at the outset as many issues as you can imagine might arise in creating and administering the competition, and establish procedures for how any such conflicts will be resolved. Ultimately, following the rules as written constitutes your best defense against disputes or criticism.

You also need to address the particular idiosyncrasies of various awards. For example, if a trip is the prize, you must address any issues that may arise from the travel and define the expenses to be covered. Likewise, if a car is the prize, you must require entrants to be of driving age, to be licensed, to have insurance, and to pay any vehicle transfer fees.

Before you publicly announce plans for a competition, leave sufficient lead time for addressing the development of procedures for implementing the rules of the competition. At this stage, it's also worth examining both practical and policy issues associated with the competition, including:

ROCHELLE ALPERT is partner at Morgan, Lewis & Bockius, LLC.

JOSHUA MINTZ is vice president, general counsel, and secretary at the MacArthur Foundation.



- Who will be responsible for developing the rules governing entrants' interactions with your organization
- How you will make sure the rules are unambiguous and adhered to throughout the competition (including addressing any abuses that you may or may not foresee, such as any conflicts from entries by organizations, entities, or people with whom the organization has a prior existing relationship)
- Eligibility standards and confirmation of the compliance with eligibility standards of the winning entrants
- How you will announce winning entrants, and how you will celebrate or use winning entries

The MacArthur Foundation was starting from scratch. We recruited a cross-disciplinary team from across the organization led by Cecilia Conrad, managing director of the MacArthur Fellows. We tried to consider all relevant issues and were keenly aware of the reputational risks associated with this effort. We retained

Common Pool, an experienced firm that had managed a number of other competitions. We also retained a consultant to help us evaluate the program and conduct the next round more effectively. We based the process on values that were nonnegotiable: openness; transparency; attention to diversity, equity, and inclusion; and the commitment to provide benefit to all applicants.

LEGAL ISSUES

Before launching a competition, sponsors should carefully consider the range of legal issues that might arise and formulate plans to address them thoroughly. Different styles of competition and methodology will raise different issues, so experienced counsel is critical.

Nonprofits that sponsor a competition—particularly private foundations—require special consideration under the law. Some of these concerns include:

- Ensuring that the prize serves your charitable purpose
- Avoiding more than incidental private

benefit to third-party interests as part of the project that might be funded through the competition

- Avoiding the use of proceeds for lobbying or intervention in political campaigns
- Avoiding self-dealing under private foundation rules
- Avoiding excess business holdings
- Adhering to the rules regarding grants to individuals, including prizes and awards

In addition to specific rules that apply to the sponsor as a nonprofit, there are general legal issues that should be addressed, including those that vary depending on the structure of the competition. For example, is it based on chance or skill? Sweepstakes are based on chance and have one set of legal parameters, while skill-based competitions must adhere to another. (It is easy to find yourself inadvertently in the realm of chance if you do not craft your skill competition carefully.) In the United States, generally speaking, only governmental entities have the right to run chance competitions with consideration (e.g.,

lotteries), and each state has its own rules that apply to organizations, including nonprofits.

To complicate matters further, each country has its own set of governing requirements. Thus proceed with caution with an international competition. They are many obstacles to running a worldwide event, particularly when you also have to follow US nonprofit requirements. For competitions limited to entities or residents of the United States, you will need to consider the requirements in both federal and state laws.

In short, an appropriate characterization of the competition is important in determining the nature of the laws that will apply to it. For example, if results are determined by random drawing or by a public vote on the Internet, your competition may fall within federal and state legal prohibitions on lotteries, if it is determined that the competition involves chance and monetary—or in some cases nonmonetary—consideration. Consequently, to avoid being classified as a lottery, a competition that requires an investment of significant time to craft a winning entry and/or any payment of money should also avoid the element of chance to minimize legal risk.

You can avoid the consideration issue by providing for an alternative means of entry that does not require consideration. For example, if one way of entering your competition is to raise donations for the organization, you can avoid the element of consideration, if qualifying entries can also be made without raising any money. To be successful with this type of structure, you need to treat all entries the same. For example, entries that raise donations will have just as much chance to win as entries that do not. Providing extra chances to those who actually raise funds for the organization versus those who enter through an alternative means of entry will not suffice to eliminate consideration, since the two types of entrants are not treated equally.

Alternatively, you can avoid being classified as a “lottery” by eliminating any element of chance in the competition. This can be accomplished by specifically defining selection criteria and a selection process that includes competent judges who assist the selection based on the predefined criteria. If the criteria are not used to choose the winning entry, your competition could be challenged as an illegal lottery. In short, risk exists if the odds of winning depend on the number of participants, not the content of the entries, as evaluated by qualified judges. This element must be carefully assessed in the structure of the competition.

Of course, any changes made mid-competition must be done, if at all, with care, explained

carefully to all involved, and made only after considering how potential changes may disadvantage entrants. If a clarification puts certain entrants at a disadvantage or materially changes the rules midstream, some entrants may cry foul. The guiding principle should always be to treat all entrants equally.

MacArthur was careful in preparing its rules, terms, and conditions. (See rules at www.100andchange.org.) Yet we still learned valuable lessons that will inform similar future efforts. An important lesson is to secure an unbiased third party to review the rules and flag any ambiguities.

PRIVACY AND INTELLECTUAL PROPERTY

Other important elements to consider when creating a competition include privacy and intellectual property, both of which create risks for the sponsor. The importance of each of these depends, of course, on the nature of the competition.

One area fraught with potential problems is the collection, storage, and maintenance of

MacArthur’s approach to these issues embraces the foundation’s core values: Intellectual property rights should be used for the public good and distributed widely.

personal information and other data that may be obtained from entries. Understanding and adhering to applicable laws is critical. The sponsor must clearly disclose how information will be treated, shared, stored, protected, and disposed of. The differences in state laws must be considered. Generally the sponsor should seek to meet the most rigorous standards.

In addition, if the competition is open to entrants outside the United States, data collection must comply with the requirements of all relevant countries. This, in turn, may generate conflicting requirements. For example, if the award is greater than \$600, then the sponsor may need to report the award to the Internal Revenue Service, which requires the taxpayer’s identification number. But requesting this type of information from an individual outside the United States may violate the privacy requirements of other countries.

Intellectual property rights fall into multiple categories for the sponsor. The clearance and protection of the sponsor’s own intellectual

property in the competition, such as the competition’s name and content shared with entrants in the competition, must, of course, be addressed.

To the extent that the entry incorporates intellectual property of the entrant and others, such issues must be addressed in the rules, so that the sponsor is protected from any liability for misuse of the entrant’s intellectual property or that of third parties. The rules must state who will own the entries submitted and what rights the sponsor may have to the ideas contained in the entries and/or the resulting solutions. Requiring the entrant either not to use third-party content or to disclose such use and obtain consent from the third party is critical for protecting the sponsor. Likewise, ownership of the winning entry or entries must be carefully considered both according to intellectual property norms and under the rules governing the sponsoring organization’s nonprofit status.

Lastly, the sponsor needs to consider any future liability arising from implementing ideas that may appear in the entries submitted. Like movie studios that receive unsolicited scripts, the sponsor should consider specifying in the rules that entries should not include proprietary information or trade secrets, so that the sponsor limits future liability for any alleged misuse of an entry.

The MacArthur Foundation’s approach to these issues embraced the foundation’s core values: Intellectual property rights should be used for the public good and distributed widely at little or no cost. Moreover, MacArthur decided to advance the entrants’ ideas through a website dedicated to featuring the submissions, so that other organizations might support them.

If done right, competitions can be valuable tools to enhance the impact of a philanthropic organization and its entrants. Organizations wishing to embark on this journey would be well served to seek the advice of experienced consultants and legal counsel to help chart the right course. In furtherance of the MacArthur Foundation’s mission and culture, its representatives are available to discuss the lessons learned from 100&Change with other philanthropic organizations. We maintain a series of blog posts capturing some of these lessons, we are also conducting a series of webinars, and our website provides contact information for members of the 100&Change team at www.macfound.org/100andchange/. ☒

Making Better Big Bets

Philanthropy is poised for a grand transformation, but it will require a lot of investment, capacity building, and experimentation to get it right.

BY HEATHER MCLEOD GRANT & ALEXA CORTÉS CULWELL

It has become cliché to say that the United States is entering a new gilded age of philanthropy—one that could make the original era of the early 1900s seem unambitious by comparison. The question being asked now is, will this philanthropy actually create greater impact on important problems, or will it be mere charity that reinforces an increasingly tenuous status quo?

The stakes have never been higher. The well-known Giving Pledge (where billionaires commit to donate at least half of their wealth while living) now boasts more than 180 families and \$800 billion in capital. Additionally, the next few decades will see a massive intergenerational transfer of wealth, as baby boomers pass up to \$30 trillion on to heirs, some of which will end up in foundations and donor-advised funds (DAFs). And thousands of recently minted centa- and deca-millionaires are also eager to give back and “make a difference”—total giving in the United States exceeded \$410 billion in 2017. The amount of private capital available for philanthropy has never been greater.

The problem is, the philanthropy “marketplace” isn’t set up to support effective deployment of these assets, and new donors face a number of internal and external barriers to giving. Despite decades of strategic philanthropy, social innovation, and conversations about growth and scale, the sector still lacks efficient mechanisms for matching resources with needs at the magnitude required to create lasting social change. This creates a compelling opportunity to rethink the next decade of philanthropy and build a better giving marketplace—one that motivates donors to deploy resources more effectively to solve meaningful problems.

HEATHER MCLEOD GRANT and ALEXA CORTÉS CULWELL are the cofounders of Open Impact, a strategic advisory firm partnering with social change leaders and philanthropists to envision, design, and accelerate their impact. They both have more than 25 years of experience in social change and philanthropy. Heather is coauthor of the best-selling *Forces for Good*, and together they authored *“The Giving Code: Silicon Valley Nonprofits and Philanthropy”*; they are frequent contributors to *Stanford Social Innovation Review*.

FROM SMALL, SAFE, AND SCATTERED GIVING ...

The critique of the status quo goes something like this: On the capital supply side, much philanthropy is short-term, too small, overly restricted, detached from end-user needs, fragmented, and risk-averse, and doesn’t address root causes or systems change. (This is why safe bets like universities and hospitals receive so much funding.) The interests of donors direct giving, rather than market demand or real needs; and most donors don’t initially know how to give effectively. Additionally, because of federal policies, philanthropic capital is allowed to accrue in foundation endowments and DAFs faster than it is given away. Today, there are literally billions, if not trillions, of philanthropic dollars not being put to use.

On the demand side—because of how funding is structured, and because there are few barriers to entry, mergers, or failures—the nonprofit sector is highly fragmented and anemic. Hundreds of thousands of small groups struggle to survive and are unable to provide solutions at scale. They don’t have the “virtuous capital” needed to invest in the talent, systems, or growth that would allow them to eventually achieve an “end game” or hand off their solutions to government or private markets. In fact, fewer than 1 percent of nonprofits boast a budget over \$50 million, a number that pales in comparison with those of large companies.

This presents the sector with a Catch-22: Like their for-profit counterparts, nonprofits and their causes can’t grow without a large infusion of more flexible capital—but donors are skittish about funding groups that appear ineffective precisely because they are capital starved. We are hardly the first ones to note these dynamics: A number of sector leaders have been chipping away at this problem for several decades. Now, however, global challenges such as climate change, income inequality, immigration and refugees, and the very future of liberal democracy are becoming more dire. Not to mention

that philanthropy itself is provoking a backlash, with several recent books launching critiques of current giving and questioning whether donors will act against their own self-interest for the greater good. What, exactly, is to be done?

...TO BIGGER, BETTER, SMARTER, FASTER GIVING

How can the sector help distribute more philanthropy, more effectively and more quickly, to solve more problems? A recent article in *Stanford Social Innovation Review (SSIR)* by The Bridgespan Group made the case for “big bet” philanthropy—grants of \$10 million and up going to a single organization or cause. The authors analyzed large grants over the past decade and illustrated how critical this infusion was to scaling solutions; they also outlined barriers to big bets, including lack of donor trust and deal flow. We want to build on their thinking and provide some ideas for how to overcome these barriers.

At Open Impact, our experience advising nonprofits, foundations, and new donors—and conducting related research—may offer some insights. While we don’t have all the answers, we do have hypotheses about how to improve philanthropy’s performance as a sector, and we’re eager to dialogue with others. For starters, we believe that more giving in larger amounts is necessary but not sufficient. Rather, the sector needs more strategic giving that builds on existing knowledge, assets, and ecosystems, and that aims to solve underlying structural issues and problems. As a sector, we’ve invested decades—and trillions of dollars—in social innovation, experimentation, and learning. There is no reason to start from scratch.

The sector needs to give new donors the tools that will help them succeed and motivate them to think more expansively about where and how to deploy their capital. Likewise, established foundations of all ages, issue areas, and sizes need to share their knowledge and networks with these new donors. We also believe that

more sophisticated intermediaries are needed to broker connections between new capital and existing organizations, movements, and solutions. In other words, our sector needs to cultivate a more robust philanthropic ecosystem and build a truly functioning social change marketplace. This won't be easy, but it might just be worth it.

WHAT DO NEW DONORS NEED?

To start, it is worth considering what new donors need to be successful. We know from our research into Silicon Valley philanthropy that new donors struggle to give effectively and that the market is not structured well to help them. Donors' business experience doesn't always translate to solving market failures or complex social and environmental challenges, and many of them are busy with careers, families, and running companies. They have little time to focus on their giving or to learn all that it takes to be an effective philanthropist. Consequently, they either end up reinventing the wheel or making safe choices with limited impact. Giving money to an alma mater, a private school, or an elite institution is both less risky and far less complicated than creating an effective portfolio on climate change, income inequality, immigration, or homelessness, for example.

Most new donors need time, experience, and trust to scale their giving. By the time a major donor is ready to make a big bet of \$10 million or more, they've usually been engaged in philanthropy for at least five to 10 years. In our experience, donors need this time to discover what issues they care about, what approaches to take, and what outcomes they hope to achieve. Most donors learn by doing: making small grants, building confidence, and then scaling up. Very rarely does a donor start out with a \$10 million gift—let alone \$100 million. Savvy fundraisers have known this for a long time, which is why they invest so much in donor cultivation. As a field, we should consider ways to make this learning curve less steep.

Donors also need more and better information about how philanthropy and social change works—and how it can be very different from business, requiring different mind-sets, tools, and approaches. To make sure their big bet is also a smart bet, donors need to understand which strategies will help create change—whether scaling up individual organizations, investing in networks and collective impact, funding movements and advocacy, or building field capacity, to name just a few approaches. They also need feedback loops, and ways of measuring their impact, to know if their grantmaking is working and to motivate them to give more.

Once these donors have identified what they care about and how to measure success, they need deal flow. To scale up their giving, donors need a pipeline of “shovel ready” deals that are large enough to absorb significant capital. Unfortunately, finding these proven organizations or causes is difficult, because of structural dynamics noted earlier. Indeed, the sector will likely need to invest in intensive capacity building to help a subset of successful nonprofits (or leaders and movements) become more big bet ready. Many new donors also need ways to outsource some of their giving—especially if they have significant wealth; if they can't “build” it themselves, they should at least be able to “buy” solutions.

Because these are complex challenges and the sector is so fragmented, donors often need trusted guides to help them with the process of learning how to be an effective philanthropist—and to motivate them to have more impact with their wealth. Whether wealth managers, family office staff, philanthropic advisors, or other brokers, we think the role of intermediaries has never been more important. In fact, we think the larger social sector and established foundations have an important role to play in motivating and guiding these donors as well.

AN ASSET-BASED DEVELOPMENT APPROACH

As it turns out, many of the things new donors need to give “bigger, better, and faster” already exist in the sector—from information, to opportunities to experiment and learn, to actual deal flow. Unfortunately, these assets are hard for individuals from outside the social sector to find or access. In fact, existing foundations, if properly organized, could help build a more robust philanthropy marketplace by sharing their knowledge and networks, and helping new donors to experiment, learn, and scale up. If the sector can connect existing assets with new money, it might just be a winning combination.

After all, foundations and nonprofits have spent decades researching and experimenting with social change across every issue imaginable—from early childhood development to climate change to prison reform. They have been an R&D lab for society. Unfortunately, most of this information is contained in private reports, buried on websites, or held in the form of tacit knowledge by seasoned grantmakers and experts. And while there is much published on social change and philanthropy—books, SSIR articles, white papers—it is not written or distributed in a way that reaches new donors. The sector needs a more successful approach

to knowledge management and marketing, taking new donors' needs into consideration.

In addition to knowledge, donors need trusted places to give and learn. Luckily, existing foundations already have pipelines of proven, vetted, and diverse grantees. In some cases, these institutions are looking for exit strategies for their grants, creating a win-win opportunity. Established foundations should explore ways to open their portfolios to new donors: through sidecar funds, by sharing their due diligence and reporting, or by acting as a “philanthropy concierge” to curate specific investment opportunities for new donors. A few foundations have begun experimenting with this approach, including the MacArthur Foundation, which has worked with the Foundation Center to create a Solutions Bank of its proposals from the 100&Change competition.

EMERGING MODELS FOR CAPITAL AGGREGATION

Relatedly, the field needs more high-quality intermediaries to help match more capital with the innovations, organizations, and leaders that need funding to scale. In the for-profit sector, there is a whole ecosystem of financial-service organizations and products that match investor capital with opportunities, each with a variety of risk/reward profiles: angel investing, venture capital funds, hedge funds, private equity, investment banks, mutual funds, individual stocks, curated portfolios, etc. Importantly, the social sector has begun experimenting with new approaches to capital aggregation and matching financial resources to needs. Here are a few intermediary models that we know from our work, and which are important to build upon:

- **Established foundations.** In 2002, the Pew Charitable Trusts made a counterintuitive move when—despite being one of the largest private foundations, with billions of dollars in assets—it converted to a nonprofit in order to raise additional capital from donors to fund its mission of being a global research and policy organization. While bold, this decision has so far paid off. In 2017, the Pew fundraising team raised \$41 million from outside donors, and \$429 million in 2016. Their unrestricted assets, beyond their endowment, grew by almost \$95 million in the past few years.
- **Venture philanthropy funds.** Over the last two decades, venture philanthropy funds such as New Profit, Draper Richards Kaplan (DRK), Venture Philanthropy Partners, the Robin Hood Foundation,



and Tipping Point have experimented with aggregating funding from individual donors, then re-granting to specific nonprofits and holding them accountable for results. These funds often focus on a specific issue (e.g., youth or poverty) or on funding social entrepreneurs with ideas across many issues. Even though most of their grants are less than \$1 million, these funds provide a scalable model for aggregating capital from new donors and getting traction on an issue.

- **Donor collaboratives.** An emerging breed of capital aggregation funds like Blue Meridian are similar to venture philanthropy funds but operate at a larger scale. They often aggregate more capital, fund more advanced nonprofits, make larger grants, and provide additional value to investors, such as grant coordination. A few examples include The Rockefeller Foundation's Co-Impact, started by the founding director of the Giving Pledge; Blue Meridian Partners, which was launched out of the Edna McConnell Clark Foundation to aggregate capital for youth-serving organizations; ClimateWorks, in the climate change space; and the Energy Foundation, which was an early aggregator launched in 1991.
- **Prize philanthropy.** In this case, one foundation or entity conducts a com-

petition—either explicitly focused on a prize, or via sorting through thousands of applicants to pick “winners”—and uses this process to then attract funding from other donors. In the case of MacArthur's 100&Change or the Skoll Foundation awards, the competition creates a marketplace for vetting ideas and then leverages the resulting pipeline to attract additional capital. This model borrows from for-profit markets, where competition helps the best ideas rise to the top and attract more funding. Both Race to the Top and the Social Innovation Fund under the Obama administration were good examples of this approach in government.

- **Pitch sessions.** The Audacious Project is an example of this form of big bet giving, which is similar to prize philanthropy but ends with an in-person pitch session to donors. Cosponsored by TED and Virgin Unite among others, this model uses a professional team to vet hundreds of applicants and pick finalist nonprofits. Then, interested billionaire philanthropists gather for the final pitch, where social entrepreneurs present their pre-vetted solutions, and donors can decide what they want to fund and at what amount. Several other organizations—from SOCAP to the Social Impact Exchange to Battery Powered in San

Francisco—have experimented with this pitch model on a smaller scale.

BUILDING A BETTER GIVING MARKETPLACE

In conclusion, we think that reinventing philanthropy for a new era—and for greater impact—will require leveraging the assets of traditional foundations, bolstering nonprofit capacity, building more connective infrastructure, and experimenting with new models of capital aggregation. We believe that a new generation of donors is poised to drive enormous changes in philanthropy and that the established sector has a chance to be transformed as a result. With record growth in the number and scale of private foundations, DAFs, impact investing, and mission-oriented LLCs, donors are seeking new ways to organize their efforts and accelerate their impact. Established foundations can be part of the solution—if they want to be.

The big questions remain: Will traditional foundations, with little internal incentive to change, reimagine their roles and use their knowledge and networks to drive greater impact? And will newly wealthy donors put their money where their mouth is, and use their funds to change underlying structures and systems for the benefit of all? We hope so—in fact, we think the future depends on it. ✕

References for this article are provided in the online version.

MacArthur Foundation

The **John D. and Catherine T. MacArthur Foundation** supports creative people, effective institutions, and influential networks building a more just, verdant, and peaceful world. MacArthur is placing a few big bets that truly significant progress is possible on some of the world's most pressing social challenges, including over-incarceration, global climate change, nuclear risk, and significantly increasing financial capital for the social sector. In addition to the MacArthur Fellows Program, the Foundation continues its historic commitments to the role of journalism in a responsible and responsive democracy, as well as the strength and vitality of our headquarters city, Chicago.

MacArthur is one of the nation's largest independent foundations. Organizations supported by the Foundation work in about 50 countries. In addition to Chicago, MacArthur has offices in India, Mexico, and Nigeria.