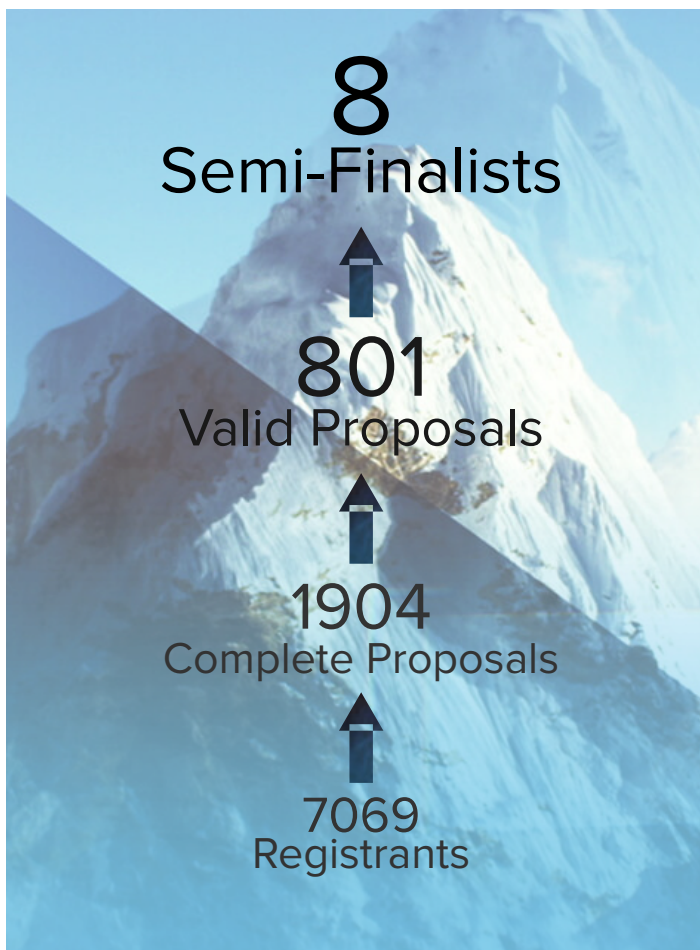




## 8 BOLD SOLUTIONS: 100&CHANGE SEMI-FINALISTS

*100&Change is a MacArthur Foundation competition for a \$100 million grant to fund a single proposal that promises real and measurable progress in solving a critical problem of our time.*



Some problems cannot be solved by grants of the size that foundations typically provide. By funding at a level far above what is typical in philanthropy, we can address problems and support solutions that are radically different in scale, scope, and complexity. \$100 million is a large enough sum to focus on a serious problem and its solution in a meaningful and lasting way. We hope that *100&Change* can inspire a conversation about solutions and about how we can solve some of our most significant problems.

The openness of the *100&Change* competition is a counterbalance to the Foundation's big bets that strive for transformational impact in areas identified by the Foundation's board and staff. We recognize that we do not know it all and have designed *100&Change* to be agnostic with respect to field or problem area.

We sought proposals that articulated both a problem and solution. Proposals were to address a meaningful problem and provide a solution that is verifiable, durable, and feasible.

We have designed a selection process that is fair, open, and transparent. In the first round, evaluation panels of external judges reviewed and scored proposals using a common rubric. Based on those reviews, eight semi-finalists were asked to provide further details about their proposals and to show engagement with targeted communities. From this group, a smaller number of finalists will be selected. These finalists will present their solutions at a live event. Selection of the final award recipient rests with MacArthur's Board of Directors.

## THE CARTER CENTER

### *Eliminating river blindness in Nigeria*



#### **The Problem**

River blindness affects an estimated 32.7 million people worldwide. Caused by a worm parasite that spreads via the bite of a black fly, the disease is most endemic in Nigeria. With its dense and growing population, roughly 50 million people in 40,000 communities in Nigeria are infected with or at risk of the disease.

River blindness causes devastating socio-economic repercussions in Africa, resulting in food insecurity, lack of

education for children who must care for blinded parents, intergenerational poverty, and social stigma.

#### **The Solution**

The Carter Center will eliminate transmission of river blindness disease in Nigeria, creating a model for the rest of Africa and the world.

In partnership with the Ministry of Health and local NGOs, the Center will work through community-directed

distribution systems to administer the drug ivermectin (Mectizan®, donated by Merck & Co.) once or twice per year. This medicine is proven to stop transmission of the condition.

The program will train community-level volunteers in the appropriate dosing and administration of the drug and to provide health education to families and neighbors, creating a sustainable, rudimentary healthcare infrastructure in remote communities.

Similar Carter Center projects have eliminated river blindness from four countries in the Americas and from parts of Uganda and Sudan. This project will bring these best practices to scale across Nigeria, demonstrating that eliminating river blindness is possible in even the largest and most challenging environments.

#### **Project Lead**

Dr. Frank Richards  
Director, River Blindness Elimination Program, Lymphatic Filariasis Elimination Program, and Schistosomiasis Control Program, The Carter Center

#### **Team Partner**

Nigerian Federal Ministry of Health

#### **Project Contact**

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## CATHOLIC RELIEF SERVICES

*Changing how society cares for children in orphanages*

### The Problem

Poverty, disease, and natural disasters have driven millions of children out of family care, with an estimated eight million now living in residential care centers, or orphanages, around the world. Residential care causes long-term negative effects on children's physical, intellectual, and psychosocial development. Well-meaning people donate millions of dollars to orphanages without realizing that 80 to 90 percent of these children have a living parent.

### The Solution

Catholic Relief Services, in partnership with Lumos and Maestral International, will change the way society cares for these children by reuniting them with supportive and nurturing families and transforming orphanages into family service providers. The partnership will prevent or slow down the number of new children entering residential care and strengthen families and caregivers so institutionalized children can be reintegrated into family care. Catholic Relief Services also intends to work closely with facility staff to identify and develop social service skills and outreach required to support children and families so they can stay together.



With the aim of taking this solution globally, Catholic Relief Services will first work in a number of developing countries where governments and civil society are dedicated to supporting family-based care. Catholic Relief Services will work with governments, community leaders, and orphanage staff to identify the best family-based option for each child, provide families with parenting skills and services, and help policymakers craft better policies that support family-based care.

The project will also engage donors to help them understand the challenges of residential care and encourage them to redirect their donations and resources to

serve vulnerable children in a way that supports family-based care.

### Project Lead

Shannon Senefeld  
Vice President of Program Impact and Quality Assurance, Catholic Relief Services

### Project Contact

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Senior Program Officer, Foundations and Corporate Engagement, Catholic Relief Services  
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## HARVESTPLUS

*Eliminating hidden hunger in Africa by fortifying staple crops*

### The Problem

More than two billion people globally — nearly one person in three — have daily diets that lack sufficient vitamins and minerals, such as vitamin A, iron, and zinc, which are essential to health. Known as “hidden hunger,” these deficiencies lead to blindness, stunting, cognitive impairment, disease, and death. The problem is most acute in rural areas, where 70 percent of the world’s poor live, and where farm families that primarily eat what they grow on small plots of land suffer the most from hidden hunger.

### The Solution

HarvestPlus will significantly expand an innovation its founder developed. “Biofortification” enriches staple foods through conventional plant breeding to provide a sustainable, farmer-controlled tool to fight malnutrition.

Naturally nutrient-rich varieties of corn, cassava, wheat, and other staples are enhanced to meet farmer demands for yield and price. These staples, which rural families already eat in large quantities, provide 25 to 100 percent of the daily requirements for vitamin A, iron, and zinc. Crops are selected for development based on local diets and growing



patterns, and new varieties are made available. Self-pollinated and hybrid varieties are developed to appeal to farmers, who can share seeds and planting materials. No extra water, fertilizer, or cooking time is required, and seed costs are the same as non-biofortified varieties.

With 20 million people already growing these biofortified crops, HarvestPlus plans to scale the introduction of these varieties regionally through three existing “hub countries” in Africa: Nigeria, Uganda, and Zambia. The expansion is expected to reach 1 billion people by 2030, allowing multiple African countries to become nutritionally self-sufficient and laying the groundwork to grow this work globally.

### Project Lead

Bev Postma  
Chief Executive Officer, HarvestPlus

### Project Contact

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Head of Communications, HarvestPlus  
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[www.ifpri.org](http://www.ifpri.org)



## HIMALAYAN CATARACT PROJECT

*Eliminating needless blindness in Nepal, Ethiopia, and Ghana*

### The Problem

Blindness afflicts more than 39 million people worldwide, 90 percent of whom live in developing countries. Yet 80 percent of global blindness is treatable or preventable.

Blindness magnifies poverty and poverty, in turn, perpetuates blindness. Inadequate eye care shortens lives, creates dependency on families and governments, reduces economic viability, and denies children education.

### The Solution

The Himalayan Cataract Project (HCP) will develop and deliver sustainable eye

care in Nepal, Ethiopia, and Ghana, creating an adaptable “train the trainer” model that can be replicated and scaled around the world.

HCP will invest in people and infrastructure, empowering local communities and enhancing local eye health care systems through training and new technology. The model takes into account geopolitical and cultural considerations in order to be most effective in each geographic setting.

By training community health providers, the HCP will deliver cataract surgery and permanent refractive correction—commonly known as laser surgery—

at low cost to more than 500,000 people. Sight-restoring cataract surgeries can be performed for as little as \$25.

Studies have shown a 400 percent return on every dollar invested in eliminating blindness. The project is expected to bring significant gains to the families, communities, and countries involved and to provide a model for curing blindness in the developing world.

### Team Lead

Geoffrey Tabin, MD  
Co-Founder & Chairman, Himalayan Cataract Project

### Team Partners

#### CLINICAL AND TRAINING:

Aravind Eye Care System, India  
Department of Ophthalmology & Global Medicine, Stanford University  
International Council of Ophthalmology, Magrabi – ICO Cameroon Eye Institute  
John A. Moran Eye Center, University of Utah  
Komfo Anokye Teaching Hospital, Ghana  
L V Prasad Eye Institute, India  
Menelik Hospital, Addis Ababa University  
Dept. Ophthalmology, Ethiopia  
Sight for Souls/ MCM Hospital, Ethiopia  
Tilganga Institute of Ophthalmology, Nepal

#### INDUSTRY:

Clarity Design  
Global Vision 2020  
Merge, an IBM Company

### Project Contact

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## HUMAN DIAGNOSIS PROJECT

*Providing virtual access to specialist medical care for underserved U.S. patients*

### The Problem

Nearly 30 million uninsured Americans rely on the nation's safety net system of roughly 1,300 public hospitals, community health centers, and free clinics to provide primary care services regardless of their ability to pay.

Yet, a critical gap remains: 91 percent of safety net clinics report difficulty obtaining specialty care for the uninsured, leading to sicker patients and increased ER visits and hospitalizations. For the one in ten Americans who lack health insurance and need specialty care, the options are limited: pay out of pocket or delay treatment.

### The Solution

Led by the Human Diagnosis Project, Specialty Net is an alliance of the nation's physician societies, licensing boards, and academic institutions that aims to close the specialty care gap for the nation's uninsured and underinsured.

Specialty Net is an open, online system that seeks to provide public health and safety net institutions low-cost access to specialty care expertise. Specialty Net will engage 100,000 volunteer specialists to provide electronic consultations to three million patients in the U.S. safety net system over the next five years. Researchers at Harvard Medical School, Johns Hopkins University, and the University of California, San Francisco, are currently validating the system's technology performance, cost, outcomes, and educational and training value.

Patients will receive the specialty care they need, without having to wait or pay out of pocket. Specialists will receive credits toward their medical education, ongoing licensing, and maintenance of certification requirements. Each patient helped will add to an online system that combines collective intelligence with



machine learning, helping to close the safety net specialty care gap and, ultimately, deliver this expertise globally.

### Project Lead

Jay Komarneni  
Founder & Chair of the Human Diagnosis Project

### Team Partners

American Board of Internal Medicine  
American Board of Medical Specialties  
American College of Physicians  
American Medical Association

### Project Contact:

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Founder & Chair of the Human Diagnosis Project  
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## INTERNET ARCHIVE

*Providing libraries and learners free digital access to four million books*

### The Problem

Surprisingly, in the digital age millions of books, representing a century of knowledge, are not accessible online to scholars, journalists, students, and the public. Stymied by costs, e-book restrictions, policy risks, and missing infrastructure, libraries have struggled to meet the digital demand. Also, access to libraries is neither universal nor equitable.

### The Solution

The Internet Archive will expand libraries' ability to deliver on their role as great equalizers, providing access to books and other resources to those who might not otherwise be able to afford them, regardless of geography.

The Internet Archive will enable libraries to unlock their analog collections for a new generation of learners, enabling free, long-term, public access to knowledge. The project will curate, digitize, and make available in digital form four million books to any library that owns the physical book.

The Internet Archive will start with the books most widely held and used in libraries and classrooms. The scale of the project will reduce digitization costs by 50 percent or more. The Internet Archive has prototyped this model for more than six years, digitizing 540,000 modern books originating from 100 partners and lending them to the public in a process that mirrors the way libraries traditionally lend physical books.

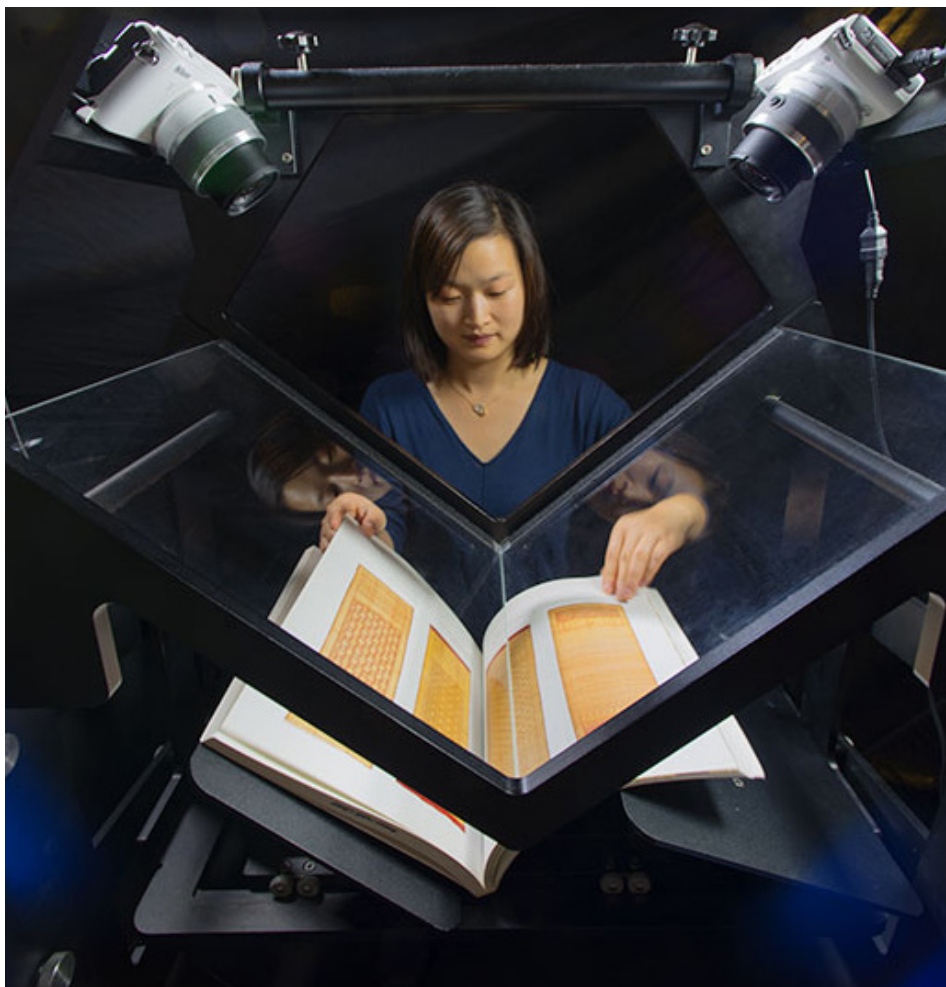
### Project Lead

Wendy Hanamura  
Director of Partnerships, Internet Archive

### Project Contact

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## RICE 360° INSTITUTE FOR GLOBAL HEALTH (RICE UNIVERSITY)

### *Improving newborn survival in Africa*

#### **The Problem**

Worldwide, 40 percent of childhood deaths occur in the first four weeks of life and global progress to improve newborn survival has been slow. In Africa, 85 percent of newborn deaths are due to pre-term birth, complications of labor and delivery, and infections. The vast majority could be prevented by ensuring access to affordable, lifesaving medical technologies that can withstand the harsh environment of resource-poor settings.

#### **The Solution**

Rice University aims to ensure that a baby born in Africa has the same chance of survival as a baby born in the United States. It will create and deploy a comprehensive set of Newborn Essential Solutions and Technologies (NEST) as effective as those used in high-resource settings, but that cost 10-100 times less. Designed to address the leading causes of newborn death, NEST will allow clinicians to provide quality newborn care in low-resource settings: keeping babies warm, helping them breathe, diagnosing infections, treating neonatal jaundice, managing labor and delivery, and other life-threatening conditions for small and sick babies.

Rice will also establish an education program in country to develop the next generation of health inventors and entrepreneurs. By nurturing an innovation ecosystem, Rice will bring new business models to other low-resource African markets. In six years, Rice will prevent 85 percent of neonatal deaths in Malawi, producing a sustainable roadmap for rapid adoption across the rest of Africa.

#### **Project Lead**

Rebecca Richards-Kortum  
Founder and Director, Rice 360° Institute for Global Health



#### **Team Partners**

University of Malawi College of Medicine  
University of Malawi Polytechnic  
London School of Hygiene and Tropical Medicine  
Northwestern Kellogg School of Management  
3rd Stone Design

#### **Project Contact**

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## SESAME WORKSHOP AND THE INTERNATIONAL RESCUE COMMITTEE

*Educating children displaced by conflict and persecution*

### The Problem

There are 12 million children under age eight who have been forcibly displaced from their homes by conflict and persecution, and that number is on the rise. These children face multiple adversities, including limited access to education and lower academic achievement, loss of loved ones, and violence — experiences that have a long-lasting, negative impact on their health and behavior. When children in crisis have opportunities to learn, they are better able to contribute to economic development in their home countries.

### The Solution

The International Rescue Committee and Sesame Workshop will develop and deliver multi-media content to meet the critical educational needs of children affected by conflict. The partnership will provide learning opportunities for refugee children, as well as their parents and caregivers, in Iraq, Jordan, Lebanon, and

Syria, enabling them to grow and thrive. The new educational content will feature the trusted and recognized Sesame Street Muppets—adapted to reflect and mitigate the adverse effects of experiences of refugee children and their parents. Multiple digital delivery platforms plus printed materials will be used to reach the largest possible number of children and their families. The project will tap extensive distribution networks reaching refugee and host communities via schools, community centers, social protection programs, and health clinics.

The initiative will create programs and culturally relevant content for children, as well as tools to help parents and caregivers more effectively engage with them to build resiliency and support learning. It will establish an evidence-based model that can be adapted and redeployed by other organizations to reach millions more children in crisis.

### Project Leads

Sherrie Westin  
Executive Vice President, Global Impact & Philanthropy, Sesame Workshop

Sarah Smith  
Senior Director, Education, International Rescue Committee

### Project Contacts

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## REFINING AND SCALING PROPOSALS

After the excitement of being selected as semi-finalists, each organization visited the MacArthur Foundation for a day to address initial feedback about its proposed solution, determine how to attract broader attention to its project, and think about how to further strengthen its proposal.

During the semi-finalist phase of *100&Change*, MacArthur is placing special emphasis on each proposal's quality, credibility, impact, and scale. While there is no generally accepted definition of scaling, the Foundation views it as expanding, adapting, and sustaining successful projects in a

geographic space, over time, to reach a greater number of people.

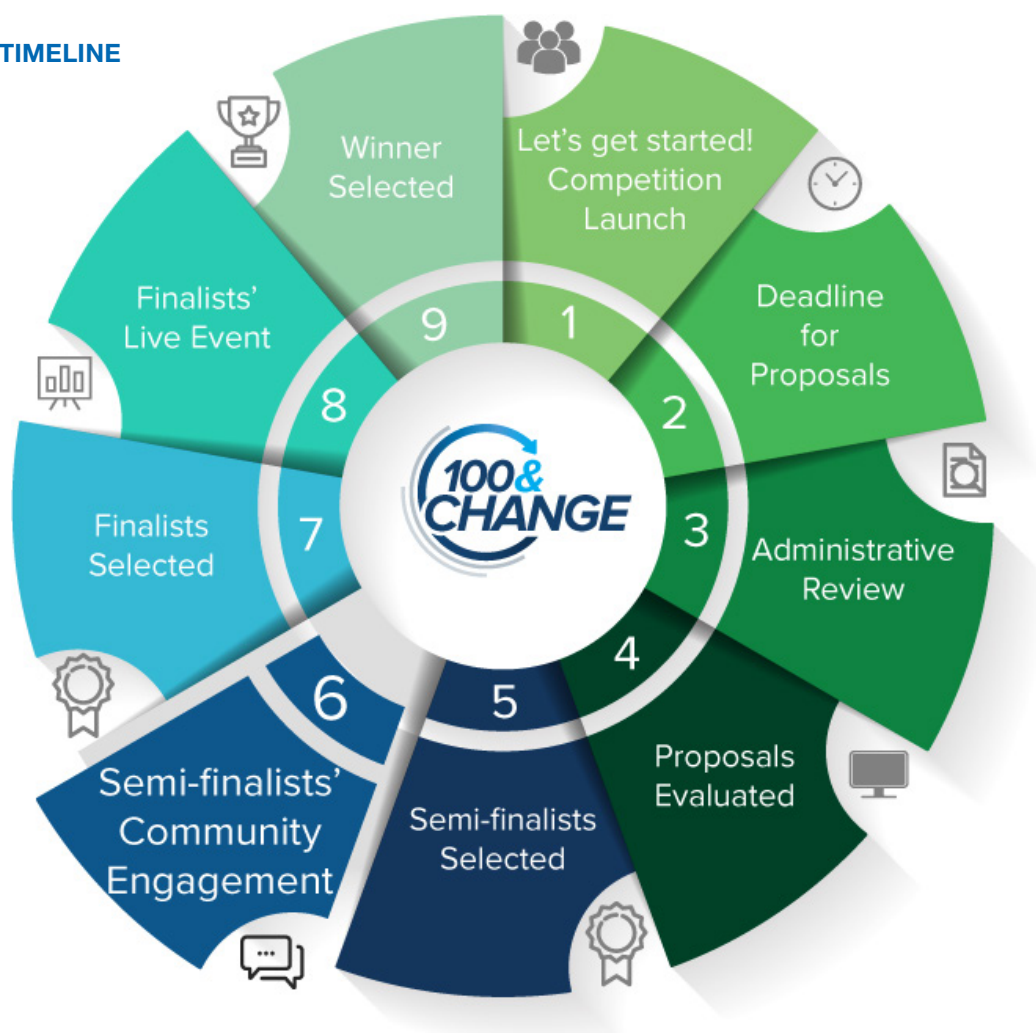
MacArthur enlisted the outside firm Management Systems International (MSI) to help the semi-finalists address technical and organizational capacity challenges and demonstrate authentic engagement with affected communities, including others who work in the same space and those who stand to lose.

Over the next several months, the eight semi-finalists will be asked to elaborate on their plans for reaching scale and for overcoming the challenges they are likely to face along the way. Their responses

will be informed by support from MSI and input from key partners and affected communities.

Based on in-person conversations with *100&Change* semi-finalists, they seem open to the idea that their proposals may change in response to constructive feedback during this phase of the competition. Whether they receive funding from MacArthur or other new support, MacArthur's goal is to see each of the eight semi-finalists emerge with the stronger and more compelling proposals that can make an even greater impact in the world.

### 100&CHANGE COMPETITION TIMELINE





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## FREQUENTLY ASKED QUESTIONS

### WHY IS MACARTHUR RUNNING A COMPETITION FOR A SINGLE \$100 MILLION GRANT?

We set out to do something bold and different. Most foundation grants are closer to \$100,000 than \$100 million. By funding *100&Change* at a level far above what is typical in philanthropy, we sought to address problems and support solutions that are radically different in scale, scope, and complexity.

We believe \$100 million can enable real progress toward a meaningful and lasting solution to a critical problem of our time. Increasingly, MacArthur is focused on “big bet” initiatives that strive for transformative change in areas of profound concern, such as climate change and criminal justice reform. But we do not know it all, and there are other significant issues. *100&Change* is a way to encourage and support ideas from any field.

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### WHAT MAKES 100&CHANGE DIFFERENT FROM OTHER PHILANTHROPIC COMPETITIONS?

What is unique about *100&Change* is its focus on problems and their solutions, and the requirement that proposals address both. It is also unique because no single field or problem area was designated, unlike some prizes and challenges. And proposals from all sectors were encouraged. The openness and transparency of the application process is also distinctive.

Applicants know exactly what they are being scored on and every applicant will receive meaningful feedback on their proposals from the judges. The process will provide vital feedback — and useful public exposure — to applicants, even if they do not ultimately receive the grant.

### HOW DID MACARTHUR CHOOSE JUDGES?

We considered three different models. The first was a crowdsourcing model. We liked the idea of people proposing which problems to solve and having a crowd vote whether a proposal is meaningful or compelling. But we did not want *100&Change* to turn into a popularity contest.

The second approach, was the specialists’ panel model, where we would define a field of work and then identify experts to evaluate applications. There was a sense, however, that experts in a certain field tend to struggle with new ideas that come from outside of their discipline.

What we realized is crowds provide a way to take more risks and innovate. And the wisdom of experts is important. So, we decided to create a crowd of wise experts. We referred to them as our “panel of wise heads.”

We ended up with an evaluation panel of judges that included 413 thinkers, visionaries, and experts in fields that included education, public health, impact investing, technology, the sciences, the arts, and human rights.

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### WHAT CRITERIA DID THE JUDGES CONSIDER WHEN EVALUATING PROPOSALS?

Rather than having our judges review submissions based on their field of expertise, we randomly assigned proposals and asked them to determine whether projects were meaningful, verifiable, feasible, and durable based on their broad knowledge. Each application was judged by a panel of five experts. Meaningful is the goal of the competition: tackle a significant problem that would really matter.

The second was verifiable. We wanted to know, will the solution work? We wanted to mitigate against the risk of picking a proposal that was completely untested or untried. We perceived a gap in the philanthropic field, a need for funding to take tested ideas to scale. Having evidence a proposal worked — at least once, somewhere and on some scale, was important to us.

The third was feasible. When it comes to feasibility, the kinds of questions we wanted judges to consider were: Does the team have the right expertise, capacity, and skills to deliver the proposed solution? Do the budget and project plan line up with realistic costs and tasks?

The last criteria, durable, is the one that sets *100&Change* apart. If we were focused on solving a problem, we didn’t want the solution to be temporary and transitory. We wanted whatever we chose to have a long-term impact.

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### WHAT HAPPENS TO ALL THE GOOD PROPOSALS THAT MACARTHUR DOES NOT FUND?

Applicants will learn how their proposal was evaluated and will receive comments and feedback from our expert panel of judges. That feedback might help strengthen proposals for future funding requests or even the next cycle of *100&Change*. Also, a public, searchable database of all the proposals will also be posted online later this year. That exposure could lead to other funding opportunities. MacArthur hopes this process will also engage the public and the philanthropic sector in a discussion about the best ways to bring about meaningful and measurable change to some of society’s biggest problems.

#### **ADDITIONAL RESOURCES**

**[www.100andchange.org](http://www.100andchange.org)**

**[www.macfound.org/8boldsolutions](http://www.macfound.org/8boldsolutions)**

**[www.macfound.org/perspectives-100change/](http://www.macfound.org/perspectives-100change/)**

#### **ABOUT THE 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; the strength and vitality of our headquarters city, Chicago.

**For more information or to sign-up for news and event updates, please visit [www.macfound.org](http://www.macfound.org).**

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