



using **E**vidence Inc.

Strengthening Research Institutions: Learning From Doing

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Executive Summary

The institutional capacity of research institutions in Africa remains relatively weak. This study explored what could be done to strengthen those capacities, in particular through understanding the views of African researchers on this question. Through a series of interviews and document reviews the study explores the options. The study was commissioned by the MasterCard Foundation to assist in its design efforts around its new strategy on the Changing Nature of Work in Africa. We found limited focus on the topic within the African research institutes – they had not been commissioned for such work.

This study takes a sustainability perspective on institutional capacities. That is, the focus is not on the success of capacity strengthening initiatives themselves, but on how the institution is positioned for sustainability over the long term.

What was clear from the interviews as well as the studies and evaluations we reviewed is that the question of institutional capacity cannot be divorced from the question of functional research capacities of its members. That said, some key points emerged around the limited opportunities for African research institutions to make their own choices and the lack of resources to support the activities and operations that make for strong institutions. We characterize these as the ‘4Ps’: People, Products, Processes, Property. Resources to build this mix are precious and are severely limited under current funding models in use by most research institutions in Africa. The constant turnover of staff (who often move to donor agencies or international NGOs), undermines the potential for many research organizations. As well, the short time frames and donor management of priorities have not led to strong African research institutions.

This study explores the mechanisms that are seen as valuable to strengthening research institutions as well as the models

‘Africa needs to be a player in the knowledge economy and for that research is essential.’

African Researcher



that have been in play. It does not recommend one model; rather, based on the perspectives of African researchers, it advocates a long-term perspective on building research institutions, and doing so in true partnership with those researchers. It recommends changing the policies that guide institutional strengthening initiatives.

The text was built out of the interviews that were conducted. The voices of African researchers are prominent in this study, voices that are too seldom heard in these discussions about capacity strengthening of African research institutions. If there were to be a single recommendation it is that these voices should be at the centre of any design effort. They will not always speak with one voice as there are many perspectives on how best to proceed. But with time and persistence a way forward will be identified and new approaches to institutional strengthening designed, tested, and improved.

Introduction - Purpose & Approach

This team was commissioned by the MasterCard Foundation to build an understanding of what works in building institutional capabilities in research institutions in Africa. In the words of the contract, 'to distill lessons and inform design of the Foundation's efforts to strengthen African leadership in research and convening, particularly related to the Changing Nature of Work (CNW). These lessons will include perspectives from African organizations that have participated in such programs. A secondary objective is to understand the history of prior efforts, as well as status of existing efforts to the research sector in Africa.' In conversations with the Foundation in the course of this assignment it became clear that the growing interest in institutional strengthening extends well beyond the research team; as a result, the findings here integrate a more general perspective on the experience of institutional strengthening and leadership strengthening in African institutions and organizations. A tertiary objective included in the assignment was to gather evidence on who is doing futures and foresight work in Africa, particularly efforts related to the Changing Nature of Work. The Foundation's interest in this field reflects the long view its strategy takes as well as the uncertainties that abound both in looking at the CNW on the continent as well as the opportunities for youth in Africa. This issue is treated separately because futures work of any kind in Africa is a relatively small but emerging field, largely unconnected with the research organizations that are the focus of most development assistance. While the focus here is on building institutional research capacity, functional research capacity is essential - strong research institutions can only be strong with effective and high-quality researchers and research. The paper will refer to a number of capacity building initiatives that may be useful adjuncts to any institutional

capacity strengthening that takes place. It is perhaps in this respect that the exploration on foresight work in Africa fits most closely with the focus on leadership and stronger research institutions. The ability to project and to imagine the future of work is largely absent in most research centres but given the rapid and dramatic changes underway in employment and economic development, a capacity for foresight is an under-recognized and under-used tool across the continent.

An important underlying assumption here is that strengthening institutions is not the same as building individual capacities. Strong institutions require individuals with the right capacities but more than that the systems, an enabling environment, and an organizational culture that promotes success. Programs that build individual capacity, while necessary, are not sufficient to the development of strong research institutions.

'We are trying to approach some African philanthropists because some of them are not investing in African research institutions but rather send their money to the biggest universities in America and Europe.'

African Researcher

Because a significant proportion of research carried out in Africa tends to follow donor-driven calls (Beaudry et al. 2018), we did not identify a clear focus on the Changing Nature of Work among the researchers and organizations with which we connected. The challenge was not one of interest but one of funding and control of the work. As the BFA Global report to the Foundation (2019) notes, while there is interest in CNW in the research community, *'there is not much activity on the continent that addresses the issue in a useful and coordinated manner (p. 16).'* Further they note, *'a common concern highlighted in interviews pertains to the framing of the Changing Nature of Work (CNW). The current narrative around CNW comes from the global north and does not account for the realities of African countries (p. 18).'* Most international agencies have carried out studies on the topic in Africa, but thus far, focus and conduct of research has not migrated significantly to the continent; international consultants remain the study leads and authors, and the agencies determine the focus.

The team did three things in conducting this assignment:

i. Interviews

We interviewed researchers and administrators of research in African organizations across the continent. We interviewed donors and implementers with long experience in the field as well as evaluators who have assessed research leadership and organizational strengthening efforts, in all about 65 interviews. Interview quotes are anonymized.

ii. Literature

We sought gray literature from those we interviewed and collected relevant reports and websites from a number of organizations and researchers who have published on these questions, in all 100+ documents have been collected and reviewed.

iii. Reflections

Four of the five team members have led African research organizations for long periods in their careers and so have long personal experience of many supports received by themselves and their organizations over time. We have integrated the team's reflections into this report as well.

To bring in the voice of researchers, quotes included in the report (*in italics*) are from African researchers unless otherwise identified. With his permission we have included quotes from the interviews carried out by Alex Ezeh for his project, *Strengthening Institutional Capacity for Research in Sub-Saharan Africa, Annex I (February 2019 version of the report)*.

There were no in-depth case studies carried out in this review. The objective was to bring African researcher voice to the discussion and that was achieved through interviews and dialogue.

'While the approaches outlined here may be difficult and challenging to implement, the alternatives which have driven much of the development practice in SSA over the past 50+ years, have failed Africa and its development partners woefully and the time is NOW for a new development practice in the region.'

Ezeh, Feb 2019, p 5



The lens through which we looked at the results of our exploration is sustainability – the logical outcome from success at institutional strengthening: what would success look like over the long-term, and therefore what is needed to achieve that success? By success we mean strong, well-functioning and sustainable research organizations nestled in an ecosystem that supports their contribution to national and regional development. We discuss this in more detail in the following section. Because of our orientation to development research (as distinct from basic research), this means organizations with strong research capacity, strong policy orientation, and strong management and governance systems. We recognize that strong basic research capacities are the bedrock on which a research ecosystem is built. At the same time capacity for development research is not limited to institutions that build capacity for and carry out development research.

There is no doubt that many programs and organizations that focus on strengthening organizations are highly regarded and have achieved some notable successes. At the same time, we are not seeing persistent change and growth. The question we should ask is whether there has been adequate focus on institutional strengthening, or an assumption that a greater supply of capacitated individuals will somehow lead to stronger institutions. So, while we will cite some examples of success, we present these with the caveat that they are by and large incomplete on their own and are part of the overall failure articulated by Ezeh. This is not about a wholesale rejection of what is going on now but about thinking through a mixed model that recognizes the limitations inherent in many approaches. The goal here is to make the case for an approach that interrogates the policies that drive institutional strengthening initiatives, adopts a long perspective and builds incrementally through learning and a persistent focus on building a strong institutional foundation for research.

Because our focus was on the views and perspectives of African researchers and their institutions we have not developed or followed up on the inventory of donor projects in this domain, except insofar as they were raised by interviewees.¹ Ezeh (2019) has done a thorough job of scanning the research landscape and outlining the very weak position of African researchers and African research institutions. This study is a logical follow up to that work, which notes the absence of African voice in thinking about options. Several African organizations are becoming increasingly important players, such as the [African Research Universities Alliance](#) (ARUA), and the [African Academy of Sciences](#) (AAS). Several, such as the Council for the Development of Social Science Research in Africa ([CODESRIA](#)), the [Association of African Universities](#) (AAU), and regional and topical research networks such RUFORUM: the [Regional Universities Forum for Capacity Building in Agriculture](#), some of which the Foundation already engages with, have been active for several decades. We return to these later when we look at models for institution and leadership strengthening.

In the approximately six weeks available to this team to identify, track down and interview relevant players, we have inevitably left some avenues un-explored. Some of these are noted in the following pages.

¹ There are many. UK Aid spends GBP 20 million through its Strengthening Research Institutions in Africa, much of it in collaboration with the Wellcome Trust, which is a major funder of research strengthening, including the strengthening of the institutional dimensions of research. IDRC, DANIDA and DFAT Australia have significant programs as well. Foundations such as Hewlett and Gates are already actively engaged with MCF on these issues. Other Foundations such as Packard, Ford, MacArthur place a premium on institutional strengthening. Examples drawn from these reflect the interviews with African researchers.

What do Strong (Research) Organizations Look Like?

As we have outlined in the introduction, while significant resources have been invested in capacity building in Africa, there is more that does not work than does; few efforts have succeeded in creating the change we want to see in the institutions that support development in Africa. That said, many interviewees have insights into the key elements of success and have experienced some approaches that show more promise than others. But the lacunae of positive examples to explore means that the terrain is both wide open and ripe for innovation.

'MasterCard has an opportunity to play a leadership role in addressing this problem differently.'

African Researcher

In order to answer the questions posed to this team we think it is important to look forward to what leading organizations should look like so that we have some benchmark against which to assess progress and the potential of various efforts. There is a vast literature on strong organizations. Some of it focuses on leadership, some on management, some on governance, some on business models. But the sum of it is that strong organizations have four key characteristics - the four Ps of people, products, processes and property.²

People

- They have leadership with a sustained vision which is regularly recalibrated and revamped for what the organization can deliver;
- They have highly trained technical staff to deliver on the mission; together these define the social capital of an institution;

'Strong leadership is crucial in research institutes. The typical leader spends a lot of time fighting battles. So strong leadership is key.'

African Researcher

² While many talk about the importance of the 3Ps, (e.g., Ciccarelli 2015, Khan 2004, Widjaja nd), we argue that the fourth P included here is too often assumed. Making it explicit is essential in the context of institutional strengthening.

Products

- They produce a high-quality product on time and in a manner suitable to their clients' needs;
- There is a demand for their product from a client with the resources to purchase;

Processes

- They have management systems in place for all aspects of the organization - HR, Finance, Communications, etc.;
- They have strong governance and oversight guiding the organization; and

'There has been a lack of persistence, meaning that researchers switch topics according to donor calls. Donor persistence in a domain is needed if research in that domain is to flourish.'

African Researcher

Property

- They have the intellectual, physical and financial resources to deliver, including the resources to learn and grow through internal research and ongoing staff capacity strengthening.

A sustainable institution is also one its employees and leaders are proud of, where they feel both valued and valuable.

How the characteristics manifest in different geographies, different topics and different organization types will vary but their presence is indicated both in the interviews we conducted and the literature we reviewed.

Very few African organizations sustain and strengthen these characteristics of strong organizations over time. Most are missing at least some of these and many are missing virtually all the characteristics. As Ezeh (2019) stresses, despite vast resources spent on capacity building in Africa,³ there is little show for it in

'The thing is for you to be very clear about what you need, what your mission is. The challenge is that when you are cash-starved, you tend to take everything because you see everything as bringing in an extra dollar. So you have to get out of the financial starvation so that you're able to stand on your own and say no.'

African Researcher

³ An Overseas Development Institute (ODI) study in 2007 (Jones et al.) approximates that \$400 million is spent by the major donors annually on research capacity building. If anything, this is an underestimation because of the limited coverage of the study as well as the challenge of obtaining accurate numbers.

terms of stronger institutions. This gap is expressed in many different ways by African researchers:

- i. Donors tend to drive the agenda and can be rigid in earmarking resources. This creates external-facing structures of accountability which leads organizations to focus on donor accountability and neglect their accountability to stakeholders closer to home. Donor audits tend to focus on the fiduciary aspects, neglecting the broader institutional issues that are core to institutional strengthening (the 4Ps outlined above);
- ii. Donors do not stay with an organization or issues long enough to build strong local organizations; (The most recent example of this is the decision of the Rockefeller Foundation to end funding to its high-profile climate change initiative, '100 Resilient Cities' after just six years; the withdrawal of Gates after Phase I of the Think Tank Initiative (TTI) is another);
- iii. Donors underfund most projects including most research projects (more about this crucial issue below), and are risk averse, creating a false sense of success;
- iv. By and large, Governments do not support building a local research ecosystem – this is seen as a resource question, but it is also an issue of demand and perception of the value of research for policy enhancement;
- v. North-South partnerships are exploited by the northern institutions;
- vi. The best people get poached by international organizations and agencies; and
- vii. Organizations follow the money and shift their 'specialty' to meet donor needs and interests. In the process they easily lose track of their own vision and mission as they work on the visions and missions of various donors. Donors conflate their own strategy with partners' strategies to the detriment of partner institutional development.

'Linking with stronger institutions in the North can work but it is often quite skewed and keeps the local institution weak.'

African Researcher

'Enthusiasm is quenched by the inefficiencies they meet. So researchers tend to shift to international organisations.'

African Researcher

Because a business model is key to determining choice in projects to strengthen organizations and institutions, defining your work in terms of how it contributes to stronger organizations is a powerful tool. This is about institutional strengthening for sustainability rather than for project achievement. This means asking some hard questions about project design and selection, addressing how the projects contribute to the long-term strength of the organizations under support.

The Sustainability Frame

Sustainability is described in various ways, from sustainability of an intervention to sustainability of a society. Here we refer to sustainability at the ecosystem level. Institutions have a life cycle (often a fairly long one where they are making a strong contribution to the system in which they operate.) Sridharan and Nakaima (2019) refer to

the sustainability of desired outcomes. In this case it means African research institutions that contribute effectively to policies and practices aimed at improving quality of life in Africa. This means shifting the policy function out of projects and policy advisors, back to the institutional level in countries. Policy is increasingly delivered by short-term programs, in part because institutions are weak. Sustainability calls for a locally-led and longer policy horizon than short-term programs can provide. The recognition of the need for institutional strengthening is a recognition of the importance of institutions for sustainable development. Without strong institutions, innovations and new policy directions will be extremely difficult to sustain. Here we examine what a foundation (or other intervenor) could do to contribute effectively to the ongoing development of sustainable institutions and sustainable societies. This is clearly evident in the challenges to achieving the Sustainable Development

'Practically, research is difficult to do in Africa. Resources are limited, institutions are weak, and many environments are fragile.'

African Researcher

Goals (SDGs). Whether you talk about poverty elimination, gender equality, quality education, or indeed any of the SDGs, strong institutions are essential to governance, the rule of law and economic development. Sustainability at the ecosystem level encompasses not only strengthening institutions but also addressing challenges in the enabling environment as well as in the demand for and use of evidence. In other words, it is a systemic issue. Addressing one element without due consideration for the other parts of the system will lead to short-term success but not long-term sustainability.

Projects are the principal mode of delivery of donor assistance and the primary model for many research institutes around the world. A project may be a small research activity; it may be a large organization-wide initiative such as the Think Tank Initiative. However large or small, most donor initiatives are treated as projects by the donor, one among a number of initiatives they support. Therefore, projects are an important element to understand and to use as a tool to build institutional strength. By definition, projects come to an end. They are impermanent and so the question of sustainability takes on increasing importance: how and in what ways can a project contribute to something that will endure well beyond the funding? Based on their research, if projects are to contribute to the sustainability of organizations, Sridharan and Nakaima (2019) identify three components to addressing sustainability in project design:

1. An explicit definition of the impact pathway from the outset of the project;
2. An explicit sustainability plan that defines the mechanisms that will contribute to sustainability; and
3. Clarity about how the project connects with the other organizational systems.

'The experience of [a research capacity strengthening institute] shows that it is really important to work closely with governments if you want to change the development discourse in Africa.'

African Researcher

These are considered through the lens of the research experience in Africa as expressed by our interviewees and the studies we have reviewed.

Impact Pathways

Clarity around how, and precisely to what, an activity is going to contribute is often left implicit. That can easily lead to a loss of direction and purpose and a focus on the success of the activity rather than on its overall impact on the change you want to create. An impact pathway is clear about where it wants to end up (i.e., an organization that exhibits the 4Ps); and it articulates an hypothesis about what needs to happen for an intervention to succeed. It assesses its own potential to contribute to those factors or considers how else these changes might be supported. It then assesses progress against this impact pathway and adjusts as often as necessary. In the case of one capacity building organization which has had good success in individual research capacity strengthening, it has had limited success at institutional strengthening. Interviewees who are implementing this project noted a clear desire to have an effect on the institutions where their trainees (all university faculty) worked, but probing questions made it clear that this was only ever a hope. It was never explicitly integrated into their model. Not surprisingly, there is little evidence of institutional uptake. As one interviewee noted, planning your exit from the beginning is essential if the progress made during the intervention is to have some chance of sticking. This is because developing an exit strategy pushes you to think about how the intervention will be institutionalized.

The impact pathway extends well beyond the project. Therefore, understanding the timeline of impact is a key part of the planning for sustainable impact. Additionally, an impact pathway needs to identify assumptions and knowledge gaps. Too often we assume that the results of a 'good' project will persist without actually setting anything in place

'There was insufficient intentionality in the exit strategy from the beginning [of a large institutional strengthening intervention]'.

TA Advisor

to help that happen, or to validate our assumption after the project has ended. Clarity about what we don't know is also important as we usually start an intervention with incomplete information; addressing the gaps that emerge helps us learn over time and address those gaps. The pathway should indicate how the intervention interacts with the rest of the institution; it should consider the post-funding environment from the design stage and whether and how the partners will sustain (and adapt) the results to the intervention. A sustainability orientation to thinking about impact also prompts one to identify interventions that address not only capabilities but also support for motivations and opportunities that are needed for building stronger institutions. In the end, a more detailed and thorough impact pathway will permit assessment of what resources are realistically needed – and then whether the plan needs to be revised to address the available resources.

Mechanisms

Mechanisms are not the same as activities. They are the devices you employ to enhance the likelihood that your activities will be successful. They reflect operating principles and criteria for action.

They are about building not only the capabilities but also the opportunities and motivations to create the behaviors strong institutions need.⁴ The guidance on mechanisms from the interviews was clear:

'A research culture is largely absent and urgently needed.'

African Researcher

Build on what is already there

An overwhelming number of interviewees strongly recommended not creating new institutions but rather, working with the existing organizations in some way.

⁴ This is the basis of the COM-B model to designing a theory of change (Mayne 2016): without motivations and opportunities, building capabilities alone will not lead to the behavioral changes we seek.

Take a whole systems approach

You may only work with part of a system but be clear on how that fits with the overall research ecosystem. A whole system focus means not just a focus on capacities but also on opportunities and threats in the enabling environment as well as the motivations and incentives that drive strong research institutions. In research on the Changing Nature of Work, this would imply looking beyond work itself to the social and technical implications new patterns and new employment would bring (we return to this later). In research institutes that means looking at research funding as well so that the institute can deliver results. A National Research Foundation (NRF) can be a driver that promotes and advocates for research funding. It is the organization that can promote funding for research through fulfillment of the commitment most African countries have made to spend 1% of GDP on research.

'If there is an NRF in place, they will fight to get that money [the 1% of GDP] because that is their budget to operate. As long as there is no structure [such as an NRF], there is no one to enforce the commitment.'

African Researcher

Work with winners

Success breeds success and strengthens a whole system. This does not have to contradict a philosophy to 'leave no one behind' if it is implemented well. Strong organizations that operate with principles of equity and inclusion can lift up a whole system and focus its development around a principled and equitable model.

'Strong science needs a strong national foundation.'

Donor

Governments are important players in building a research system

As one interviewee noted, over the past decade, some national governments have put in place funds to support research, noting, *'these are seed monies that could be increased in order to scale up research and ensure its sustainability.'* Senegal, Rwanda, and Kenya are examples of countries working on this. The next generation of the Ford Foundation BUILD program is likely to focus around links with government.

Don't distort the vision and mission of your partners

Organizations that are resource-starved have multiple agendas as one researcher put it and seek to fill the holes that donors are interested in filling. In that process they can lose their identity. Donors can make that problem worse by supporting institutions to go into new areas when they have not yet mastered the area they are in. A further distortion can occur when a regional organization displaces local capacity, or when an institution takes on roles that are not in their mandate. This has been a known problem for decades in development programming. In a study of institutions that had been the subject of evaluations in South Asia, [Bajaj \(1997\)](#) found that very positive evaluations often resulted in a rush of donors with differing mandates offering projects; the organizations felt pulled in multiple directions and felt a real loss of mission. This led to a weakening rather than strengthening of local institutions. Donors have a responsibility to not only identify strong institutions and strong leaders but also to ensure that the projects they promote will strengthen rather than weaken the institutions over time.

'You get people coming and saying, oh, we have this great project. We think you guys should do it. And that is where you have to really always define your mission very clearly... we have programs running that we should never clearly have taken up.'

African Researcher

Accompaniment and TA

Two points were important around institutional strengthening. It is most successful where there is strong and active accompaniment from the program. In looking at the successes and challenges of other institutional capacity building initiatives, BUILD recognized the importance of accompaniment. As noted elsewhere, it has to be deep and it has to be ongoing; it is much less successful where there is inadequate technical support and engagement from the program staff. So, while donor-led, the BUILD initiative has created a model with strong accompaniment and has built a team where every program officer is seen as a BUILD officer; it has become a central part of their work.

A second point raised is that theoretical capacity building is not as effective as learning through addressing real issues and real problems. Whether for research methods training, or building an institution, people and organizations are captured by real issues and learn more effectively from them. The incentives for learning are stronger, something that is well supported in the adult learning literature (see for example Reigeluth, ed. 1999).

'Change by doing not by training.'

African Researcher

Emotional and Intellectual Support

A number of interviewees, both in our research and that conducted by Alex Ezeh raised issues of trust and decision that they felt were reflective of a sometimes-difficult relationship with donors. Building trust is critical to progress and the ability to influence for change and growth. This signals the importance of a consultative approach to design choices as well as to implementation evaluation.

'They [donors] are much more likely to trust results coming out of [an American university] than coming out of a regional hospital in Jinja.'

African Researcher

Financial Support

One of the biggest challenges that organizations face and raise in many different ways is financing and the ability to make independent decisions about their work. It is tied to mission achievement, to research quality, to staff retention and to governance. It is also tied to completion of PhD programs. One professor noted that, *'many graduate students do not complete because they cannot afford to finance the research component,'* affecting both their own opportunities and the overall quality of the PhD program.

'A lot of funding is actually debilitating, corrosive.'

African Researcher

'They [donors] force us to have multiple agendas. We have to have our own agenda.'

African Researcher

In strengthening institutions and their ability to lead, the importance of sustained support was raised repeatedly. Some researchers and donors raised the question of core funding and overheads as two of the key challenges,

alongside the importance of a long time-frame for support. In addition, some donors are exploring Outcomes-Based Funding. Both core funding and overheads have been discussed and explored at length by researchers and donors. A number of initiatives have been undertaken and some experiments are underway. Below we treat each of these in some depth because of the central importance of an adequate resource base to build excellence.

'Institutional strengthening requires sustained and long-term funding from development partners.'

African Researcher

Before we do that, we stress that resources alone are insufficient. If nothing else changes, more resources won't matter. And if donors continue to manage resource tightly and on short time frames their contribution to organizational strengthening will be constrained.

Overheads

Most development funding organizations define overheads in project terms, that is, as the resources that are needed to cover the intangible costs that an organization cannot clearly identify and monetize but that are needed to complete the project – keeping the lights on, for example. Overheads can be viewed instead as part of the institutional strengthening mechanisms.

If your goal is long-term institutional strengthening, overheads can be viewed as a tool to achieve that. Successful firms of all kinds – industries, consulting, research – view overheads as more than the intangibles in a single activity, but as a resource base to strengthen the organization in multiple ways:

'Good ones [recipient institutions] are financially distressed.'

Donor

- so that it can afford an HR person or department;
- so that it can fund internal research on a new field it sees as holding high potential;

- for staff capacity building of various kinds – to cover the mentoring time of senior staff, to pay for short- and long-term training in new fields or new technologies that can improve the firm’s product and delivery;
- for facilities improvement; or
- for strengthening management systems, meeting new regulatory requirements, and so on.

‘You can pour in as much money as you like but if the institution is running like a civil service institution then it will not help.’
African Researcher

Overheads that contribute to the long-term viability of any organization are higher than 10-15% and help build a resource base for the organization’s needs for growth and development. This is true whether they are for-profit firms or not-for-profit organizations.⁵ For example, RTI, a large not-for-profit research institute in the US, which relies on research projects for its funding, spent \$12 million on staff training and internal research in 2013, an amount that has likely risen since that time. These activities are viewed by RTI as centrally important to maintaining and improving the institute’s ability to deliver high quality research and continue to grow its reputation. The Hewlett Foundation is now testing an approach through which they give overheads in the range of 25-30%. This is still low compared to the overheads often charged by universities and firms although there is no standard rate.

‘Organizations under-represent their real costs, either because they don’t know them or to respond to a donor requirement.’
Donor

⁵ Some private consulting firms (usually the already successful ones), have the option to build overheads into their rates. This is not an option for most African-led research institutes for several reasons. First, it creates an uneven playing field among institutes and funders will tend to go with the institutes that have not built overhead into their (by definition) cheaper rates. Second, where salaries are the base rate for researchers (such as professors and other researchers in public sector institutions), a separate rate for donor-funded research is not a viable option. Third, it is the donor community that has perpetuated the under-funding of research and research institutes and should think about addressing that in an equitable manner across the institutions it supports. Finally, the need is for institutional strengthening as the institutions do not yet have the profile and reputation that permit them to command higher rates.

Some patterns appear when we look at a range of rates. At the extreme [a Rand study](#) of construction industry overheads put the rate at 150-250%. Universities in Canada charge much lower rates than this, but also frequently receive other assistance towards capital costs. [Queen's University](#) posts a rate of 40% on research projects and 30% on clinical trials. [Simon Fraser University](#) posts multiple rates including 25% of direct costs on some projects and 62.9% on US Government contracts. [UOIT \(Ontario University of Technology\)](#) posts a wide range of rates: 40% of total direct costs on industry contracts; 20% on sponsored grants; 40% of total direct costs or 65% of total payroll costs on government contracts; and rates for contracts where the contractor holds the IP are unposted but indicated to be higher than other rates.

There are some exceptions with some research granting councils paying lower overhead rates. At the same time, as well as indirect cost programs (see for example, <https://www.queensu.ca/vpr/latest-federal-indirect-costs-program-outcomes-report-now-available>), Canada maintains a [Canada Foundation for Innovation](#) whose sole mandate is to support infrastructure needs of institutions engaged in research. Grants for infrastructure development come with grants for maintenance as well. Thus, the lower rates from research granting councils are subsidized through other mechanisms.

The [Academy in Finland](#) allows up to 80% overhead costs. The exception to that is full-time faculty for whom a maximum of 12.5% is allowable. This takes into account that Finnish university faculty are paid a competitive salary. Philanthropy California has also studied the Full Cost Model and continues to work on its development in their work. A number of reports and studies on the issue appear [here](#). A helpful [short article](#) on their site makes the point that, *'In an article in the Seattle Times, writer Melissa Allison provides a breakdown of the direct costs,*

indirect costs and profits for a small latte. She shows that only 25%-30% of the price you pay is for direct costs while the rest of your payment goes to cover marketing, administrative, and operating costs along with profits for the coffee shop.' The point here is that no organization can grow and become strong if it does not have a resource base that supports achieving that.

An important advantage of overheads is that they apply to all projects. In this sense, they build strengthening into everything that you support. A second advantage is that decisions around the use of overheads falls solely in the purview of the developing country partner. This responds to the frequent researcher complaint about the lack of control many institutions feel in the face of powerful donors. This is reflective of a feeling of a lack of trust.

Many donors argue there are risks in proceeding in this way. While this may be the case, it suggests 1) a strong argument for both presence – TA that is geographically close by and engaging on a regular basis with the partner; 2) a solid monitoring, evaluation and learning system around the institutional strengthening goals of the foundation; and 3) a well-thought out exit strategy.

Changing the donor mindset – and policies – on overheads is challenging but several foundations, with leadership from the Hewlett Foundation, are already engaged in the process and would welcome the engagement of others in what they see as a powerful change tool. As outlined above, there is no “correct” rate. A wide range of rates exists; the appropriate rate needs to be considered in context of what other supports are available for internal research, ongoing capacity strengthening as well as physical and organizational infrastructure development and maintenance and the nature of facilities and laboratories needed to fulfill the functions of any research centre. Embedding a new policy on overheads as an institutional strengthening mechanism

'You cannot resolve weak institutional capacity if you do not strengthen it and support it to develop its own models.'

African Researcher

fundamentally changes the calculus on what a reasonable overhead rate should be. Overheads that are built into rates charged may be an option for some private sector institutions (consultancy firms and think tanks), but for public institutions such as universities where researchers are salaried it is more problematic from a funder point of view. Hence, the need for consideration of overhead rates.

Core Support

A second area of some contention among donors is the concept of core support, sometimes called general operating support. The [BUILD](#) program is fully invested in testing core support. It provides five-year institutional strengthening grants that are 60% general operating support and 40% general operating support specifically earmarked for institutional strengthening activities. Learning from others, they have recognized that accompaniment by program staff is more than a once or twice a year meeting with intermittent phone calls in-between; it requires much more presence and engagement.

'Core funding and KSI have been instrumental with some partners in supporting a shift to a stronger policy orientation ... Interestingly three partners noted that KSI's support and approach helped them shift from a relatively ineffective confrontational approach with government to one of dialogue and negotiation.'

Carden & Nugroho 2017

Other donors have moved away from core support even though the majority of evaluations of core support programs have been overwhelmingly positive (see for example the TTI evaluation, Christopolos et al. 2019a & 2019b; also, a review by Carden & Nugroho for the Knowledge Sector Initiative in 2017.) Core funding provides opportunities for growth in new areas, opportunities to challenge institutes and opens up resources for expanding networks of support and exchange.

In principle, decisions around the use of core support are also controlled by the institution receiving the funds. In practice, they face limitations. The first is that they are reliant on the donor and as many have argued, donors move on to new programs with startling frequency and often

suddenly (APHRC had a 10-year commitment reduced to three years with about four months' notice (Ezeh interview)); donors don't tend to stay long enough or have the mechanisms in place to ensure they are leaving behind a sustainable institution. As well, donors have often under-resourced TA to institutional strengthening, both in terms of program staff and external expertise. Strong accompaniment and TA are seen as essential to success. If there is one area of identified weakness in the Think Tank Initiative (overall a very successful program, well appreciated by its African partners for its flexibility and responsiveness), it is the tendency to carry out capacity building as a one-size-fits-all program (Christopolos 2019a & 2019b).

Core support is more a programming choice than a policy decision in a foundation, so it is more subject to programmatic shifts than something embedded in policy. Seen as a short-term (five-ten year) measure and with solid intentionality on its accomplishments (and a clear time frame and exit strategy), core support can be a powerful tool to kick-start the organizational strengthening process. But it is not sustainable over the long term.

'Core funding also needs strong technical input from the implementing agency, to challenge the Policy Research Institutes and open up new areas of discussion and exploration with them.'

Carden & Nugroho 2017

Outcomes-Based Funding

Funding based on outcomes (or in the case of a capacity building project, all-in project funding) is another tool that some donors are discussing (Hearn 2015). It is not an approach brought up in any interviews. It requires significant skill in project design to be able to ensure that the project leaves resources behind equivalent to a proper overhead rate or core funding support. An organization needs strong leadership, strong technical and financial skills, and a reserve fund, already in place in order to make that commitment. All of this suggests that Outcomes-Based Funding is a tool for use (if at all) later in the institutional strengthening endeavour.

In sum, if we look at the state of research institutions against the 4Ps, we see significant gaps and challenges that are part of creating significant change in these institutions. See Figure 1.

Domain	Element	Status
People	Leadership with vision	<i>Donors drive the agenda</i>
	Skilled technical staff	<i>The best people get poached</i>
Products	High quality & timely	<i>Organizations follow the money not the vision Lack of persistence in funding</i>
	Demand and willingness to pay	<i>Governments are not engaged</i>
Processes	Strong management systems	<i>Institutions are weak</i>
	Strong governance systems	<i>There is exploitation by northern partners</i>
Property	Have the required physical resources	<i>Research is underfunded</i>
	Have the required financial resources	<i>Good institutions are financially distressed. Institutions are weak</i>

Figure 1: The state of African research institutions

A Systems Approach

While included as one of the mechanisms, a systems approach to strengthening research institutions merits its own consideration. The point is to achieve clarity on whether and how any initiative, large or small, supports and strengthens the research ecosystem of which it is a part. It is the shift from a project success focus to an ecosystem strengthening approach. In a systems approach, it is not the success of the project that matters (though solid execution is essential); rather it is about whether and how it contributes to strengthening the research ecosystem. Any project should

'A look at a research system could add significant value in countries ready for it ... Senegal is a leader in this area.'

Technical Advisor

reinforce the ecosystem rather than distort its functions. For example, the Changing Nature of Work has potential major impacts in a variety of ways and is affected by multiple changes. In addition to the frequently discussed technological changes brought on by the Fourth Industrial Revolution, climate change dramatically affects work, not only but especially in terms of agriculture. Migration, both voluntary migration in the search for employment or a shift from rural to urban life, as well as involuntary migration forced by conflict, persistent drought and flooding, ground water depletion and other issues, plays a key role as migration increases over the next several decades. In terms of the social impacts of the Changing Nature of Work, as urbanization continues and is likely reinforced by shifts in employment, traditional systems for the care of the elderly fall apart and new systems are needed to protect this population. These urgent and systemic issues suggest the need for an approach that permits not only research on CNW but on the system level influences and impacts would help address the systemic challenges that a major shift in work will affect.

Atela et al. (2018) note the importance of recognizing both the formal and informal aspects of a research system. Further, they note that it, *challenges the idea that the linear transfer, use and dissemination of research and other knowledge are the key mechanisms driving innovation and development impact*. In Local Knowledge Matters, Nugroho, Carden and Antlov (2018) describe the successful co-production of policy-relevant knowledge by partners in both formal and informal knowledge generation.

A systems approach will start with a co-mapping of the full system, against which progress can be measured. Research institutes will only be strong if they have a mandate to deliver as well as the research funds to attract excellence. It will also assist with situating interventions in terms of the level and degree to which they support strengthening that system. It will identify potential bottle necks – things that

cannot proceed without change in other aspects of the knowledge system (for example, getting local philanthropic support for research is unlikely in the absence of taxation legislation that favours contributions to research.) And it will identify potential distortions in the system.

Research institutions are one part of the knowledge system in a country. Higher education is another. Concretely, efforts to strengthen them need to be considered and designed in context of the state of that system. One way to think about a knowledge system is to look at its elements and their inter-connections (and sometimes tensions.) See Figure 2. The changing nature of work suggests profound changes in work over the next 10-20 years. Bringing a whole system perspective to the role of research institutions in the knowledge landscape increases the likelihood of effectively addressing those changes.

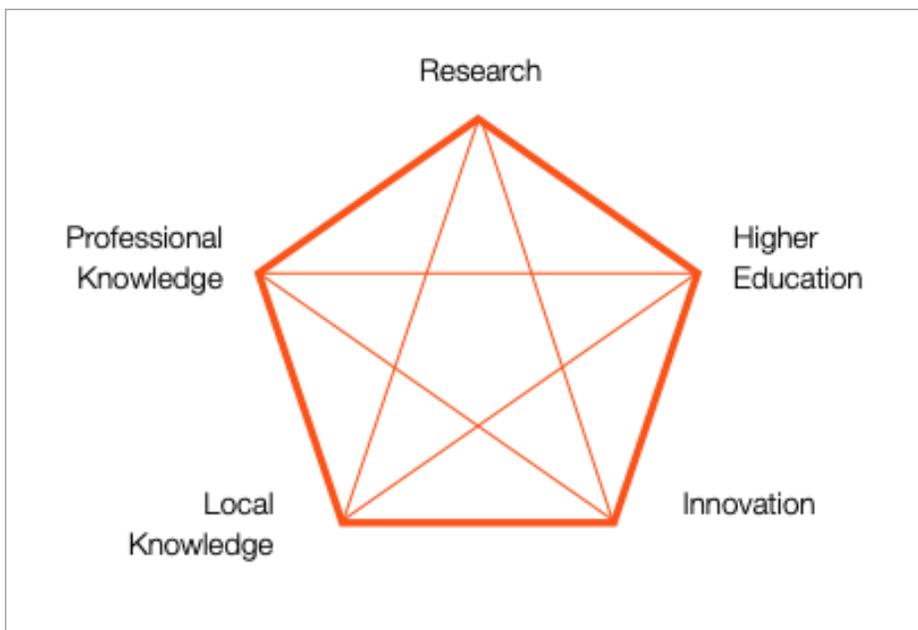


Figure 2: Components of a knowledge system.
Source: Pellini et al. 2019

Finally, assessing for ecosystem impact of an intervention is seldom done. As Jindra Cekan notes on [Valuing Voices](#), we often assume the mostly positive results of an intervention at close-out will be sustained but we seldom go back and assess whether or not that assumption holds over time. As she notes in an [article in](#) the Stanford Social Innovation Review (2015a), *donors often leave when the calendar tells them to*. To make matters worse, fully 99% of billions of dollars in development grants have no plans for post-project evaluation of what has remained or emerged. The projects may indeed have contributed to enhanced sustainability, but we do not actually know. If we are to truly do what is needed to achieve the Sustainable Development Goals, we need to know more about what has been sustained from previous efforts and design *for* sustainability rather than short-term results. This means tasking those with sustaining results being part of design, implementation, monitoring evaluation and learning, and even funding decisions. And we need to commit to evaluating progress not just at the end of the SDG period, but in the five-ten years following. Cekan [again](#) (2015b), *Learning what participants and partners could self-sustain after we left is actually all we should care about. They want to get beyond aid. Shouldn't we know if we are getting them there?* Ezeh's findings suggest we don't have it right yet, at least in terms of building the research institutions that Africa needs to support sustainable development.

Opportunities and Considerations

The interviews raised a number of points for consideration in determining what and how to support the strengthening of research institutions. Some of these have been alluded to above but are summarized below as key points to consider in the foundation's business model for institutional strengthening.

Partnerships?

Multi-partner initiatives have the advantage of bringing more resources and the potential for avoiding duplication of effort. At the same time, they generate debate amongst the donors in the partnership who might have different views of what is important. As a consequence, considerable resources can go into managing the consortium. This can mean a much longer start-up time as well as ongoing challenges. TTI experienced both of these as it grew to include multiple partners with different agendas and criteria. This slowed the development of some of its strategies significantly (first hand witnessing of TTI start-up and first few years); it also meant that when one significant donor chose to pull out, TTI had to manage the fall-out from a significant and sudden decline in resources. In contrast, Ford's BUILD program is internal to Ford and is driven by the Foundation's President. It is limited to the resources that Ford can provide but is not beholden in decisionmaking and management processes to any other donor partners. This means it can be more agile and responsive to the needs of its partners in the field. At the same time, it will always remain smaller.

'They are not paying enough attention to how much time is needed for development of a research system... They need support to put the structures in place.'

African Researcher

In contrast to the depiction of TTI above, a [review of the African Partnership for Higher Education](#) reported significant

progress as a result of the partnership. The Partnership of major US Foundations spent over USD 400 million in nine countries spread across 65 universities and colleges in Africa over its life (2000-2010). Its activities also brought other revenues to those schools and strengthened the universities through infrastructure support, leadership training, educational support (both through university scholarships in some institutions as well as through regional education networks), and support to the improvement of academic programs. This review was conducted at the end of the support, so it is not possible to speak to sustainability. A follow-up review in 2020 would be a useful way to assess sustainability of the efforts that were made.

What institutions?

Some of our interviewees felt strongly that the only way to really strengthen research capacity is to strengthen universities in their abilities to build a research culture, teach, carry out research and engage with the community.⁶ Others felt that think tanks are the logical starting point because of their strong focus on development policy and practice. There is no one correct answer, but there is a clear need to increase both the quality and quantity of researchers, as well as a need to use research to the benefit of development challenges. Leadership, good governance, the 4Ps, and funds to deliver high quality research are all crucial. In its model, MCF may want to consider how these directions meet

⁶ The [Presencing Institute](#) is one group advocating the evolution of the university of the 21st century towards one that goes beyond knowledge generation (research), knowledge dissemination (teaching), and community engagement, to one that also includes addressing social challenges as an active agent of change rather than as an 'ivory tower', set apart from and observing society (Scharmer 2019).

'NISER when it was embedded at the University of Ibadan had its high and low moments. NISER outside of the University of Ibadan system has also known high points and low points. Being inside or outside the university has not been the determinant factor in NISER's fluctuating fortunes. MISR - the Makerere Institute of Social Research - has never operated outside of the Makerere University framework in all of its history. From comparing favorably with NISER in its heyday, it soon became a simple donor-driven consultancy outfit, then went comatose, and is only struggling to be revived as a credible university research centre.'

African Researcher

research institutional needs in countries of focus as well as in building capacity for research on the Changing Nature of Work.

National and Regional support?

While some argue that the only viable approach to building strong research institutions is to work at the national level, others argue that the limited resource base in most African countries suggests the need for more regional institutional focus. Again, there is no right answer; it has a lot to do with the capacities and motivations of the national governments. Where there is interest in building a strong national research infrastructure, such as in Senegal, Kenya, and Rwanda, there is potential to supplement that effort in important ways. Where efforts are underway there is a need for added support. In poorer countries with lower potential to spend national resources on research (such as Malawi), linking with regional research efforts may be the better option.

This should not be seen as an either/or choice. Where there are strong regional capacity building and research entities, such as [CODESRIA](#), the [Partnership for African Social and Governance Research](#) (PASGR) and the [African Economic Research Consortium](#) (AERC), the Regional Universities Forum for Capacity Building in Agriculture ([RUFORUM](#)), and African Women in Agricultural Research and Development Program ([AWARD](#)), these can be used together with national ecosystem development to expand the pool of resources for building national research capacity. These regional programs focus largely on strengthening individual research capacities. This capacity strengthening needs to be coupled with a focus on building stronger institutional research capacity. In some cases, a regional orientation makes good sense. What is important is clarity of long-term vision of the support the Foundation provides, together with a recognition that strengthening individual research capacities is necessary but not sufficient to the development of robust research institutions.

Ecosystem Strengthening and Focusing on Policy Research Capacities?

A systems approach may also lead to a focus on the research system as a whole in a country. Governments that are making efforts in this direction may be open to enhancing their efforts with additional support. They are all prioritizing their research systems (in different ways to meet their socio-political contexts). Given the importance attached to working with government for long-term success in building sustainable research institutions, engaging with national systems may be fruitful ground for building strong research institutions. Governments have an opportunity to rethink the role of the university. The Science Granting Councils Initiative is exploring options in rethinking higher education and foundations could support that. See for example, Moja (2018).

Alternatively, many donors focus on policy research capacities – initiatives such as TTI were leaders in this area. The Hewlett Foundation remains actively engaged in this area through its new Evidence Informed Policy programming. The focus has shifted from strengthening the institutes to a focus on promoting evidence informed policy through policy-relevant capacity development in the research community – knowledge sharing workshops, leadership awards and conferences to bring together researchers and policy makers. This work is managed in partnership with the [African Institute for Development Policy \(AFIDEP\)](#) of the African Academy of Sciences.

Private Universities?

Some suggest that private universities such as Ashesi University with which you work in Ghana hold high potential. As a group, they are only now moving into the development of PhD programs and building a research portfolio. The Foundation could play an important role in building networks among the private universities and working with them to shape strong research programs over the next

fifteen years. Others see more merit in supporting public universities for the synergies that can be created with the national agenda and for the development of a truly national research system.

Models

From the interviews we conducted, we identified four main models in use for strengthening research institutions. The boundaries between these models are very porous and interventions shift across them at different stages of their life cycle. They all involve some elements of strengthening individual capacities (in research, management, leadership), and most include some elements of strengthening organizational capacities (systems of management and governance). The four models are:

1. Specialized Research Centres
2. Networks and Collective Efforts
3. National Research Ecosystems
4. Capacity Strengthening as an Entry Point

'The issue is not where they are placed, but whether they have the mandate and resources to do credible research.'

African Researcher

Specialized Research Centres

Specialized research centres bring the best researchers together to focus on an area of study or a problem. The African Public Health Research Centre (APHRC) is one strong example of a centre that carries out research on public health issues. It has an Africa-wide focus, includes staff from across the continent and is a fully operational research centre relying on winning research competitions for its resource base. It carries out many kinds of public health research much of which can be adapted for policy use across the continent.

A second example is Centres of Excellence. The World Bank supports [ACE I - African Centres of Excellence](#) in West Africa and ACE II, African Centres of Excellence in East and

Southern Africa. They build on existing strengths and serve as a concentration of resources to promote regional specialization. The [German Academic Exchange Service](#) (DAAD) supports building Centres of Excellence through twinning with German Research Centres. The [African Research Universities Alliance](#) is pursuing a goal to set up regional centres of excellence among its partner-members. It has established basic systems and requirements and is seeking funding on behalf of its members to support the Centres.

Specialized research centres have the advantage of consolidating resources on a topic. That not only reduces duplication, it gives the researchers a strong team with whom to work. Identifying and strengthening suitable centres would require field visits to the relevant centres in order to assess the potential and interest.

A limitation of this approach is that it does not build national strength in research but in fact may drain researchers away from a country to the regional home of the centre. This could be overcome but that requires action at the national level as well as in the specialized centre to promote the engagement of national governments and ensure the free flow of researchers between national research systems and Centres of Excellence.

Networks and Collective Efforts

Networks and collective efforts are alliances among researchers in a common field or wishing to address a common problem. They are not by definition permanent although some have taken on a character of permanence. They create the opportunity for isolated researchers to develop a network of colleagues. They also permit a specific problem of interest to a wide group to be addressed. They do not directly build institutional capacity. Rather they support building and exchange of knowledge among members. The members may then transfer that experience to the development of their home institutions, but this is not a given

unless it is addressed intentionally. If there is intentionality around linking the learning and knowledge sharing to home institutions, networks and collective efforts can be powerful tools.

The [African Economic Research Consortium](#) was launched in 1988 as a network to support African economists focused on policy research, who were widely dispersed across the continent with no professional 'home' to turn to for advice and support. They have carried out significant employment and youth related research. It has evolved into an organization with post graduate training, research funding, and global partnerships. It engages with universities as well as research centres and maintains strong programs on policy research and outreach. It supports high quality research as well as training. It is widely respected by researchers and donors alike. As a thirty-year old institution, it has evolved considerably and at various stages has gone through difficult periods. Its donors have by and large stayed with it and provided the financial and technical support it needed over the long term. At the same time, a recent evaluation of AERC observes that its apolitical approach to development economics means that African voices are not being heard in the important events of the day that affect Africa such as international trade, and Brexit, among other issues (conversation with report author).

Also included here would be regional and continental organizations such as CODESRIA (which promotes indigenizing social science research across the continent), RUFORUM, the Regional Universities Forum for Capacity Building in Agriculture, and [Peri Peri University](#) which is a collaboration of some 12 higher education institutions on managing disaster risk in Africa, and other topical fora.

A second type of collective action grouping is professional associations. In the research field this would include the African Research Universities Alliance ([ARUA](#)) and the African Association of

'Whenever I talk about higher education in the region, I make a distinction between universities that are embracing change and those that are not. I find that it forces debate at the universities.'

African Researcher

Universities ([AAU](#)). They can promote collective action and activities with their constituencies. In that sense they can be an important contributor to capacity strengthening across their constituency.

Networks and collective action groups do not house the researchers. Rather they are housed in research centres, be they national or regional. By providing resources for research and research strengthening they can be useful devices for supporting efforts at institutional strengthening. A strategy for using them effectively is an important consideration.

National Research Ecosystems

There are two ways in which capacity is built within national systems that have been raised. First is making institutional strengthening the primary focus of effort. BUILD, the institutional strengthening program of the Ford Foundation (described elsewhere) is a prime example of this approach. TTI was also an example – using a global platform to strengthen primarily country-specific think tanks. A third example is the [Science Granting Councils Initiative](#) which started as a program to strengthen the research funding capacities of granting councils but quickly evolved to include other dimensions of support to the councils. The starting point was a recognition of the importance of granting councils in building a stronger knowledge system. This program is led by the National Research Foundation of South Africa (NRF) and works to build NRFs in other African countries. An NRF has the potential to be a national voice and advocate for research funding. Often the choice of what part of a national ecosystem to strengthen is made by the donor. National level consultation is not usually an element of this approach, so the strengthening of the national ecosystem is dependent on the ability of the organization to engage in that way. The Partnership for Higher Education in Africa mentioned earlier is another example of a large-scale effort to strengthen an important element of a national research ecosystem. There is usually an implicit assumption that stronger institutions in the chosen sector or organization type

will lead to a stronger national system but not all efforts consider how their effort interacts with other parts of the research ecosystem – such as the enabling environment. As in the case of individual capacity building with the hope to create organizational change discussed earlier, intentionality is key here.

The second way to strengthen national research ecosystems would be to support countries that are actively engaged in this process. The Cité du Savoir in Senegal is a prime example where one could work with the government, higher education, and the research and innovation sectors around reinforcing a national process that is already underway. The Cité is described [here](#) in Presidential Decisions on Higher Education and Research (2013) along with a number of other initiatives to enhance the role of science and research in Senegalese society. The Cité is being built to promote a scientific culture, foster research and innovation, and build connections between research, higher education, innovation, the economy, and society. There is an emphasis on engaging with the private sector. Operating costs of the Cité will be included in the national budget (see also Diagne 2019). Kenya and Rwanda are also exploring similar approaches. [Konza City](#) in Kenya on the road between Nairobi and Mombasa is an effort in this direction. Some flags are raised [here](#). Kigali Innovation City in Rwanda is receiving more positive press [here](#) and [here](#). Kigali Innovation City is in early days of development but appears to have strong support both in Rwanda and more broadly. This approach is the most explicitly focused on strengthening the national system. Its success likely depends on whether and how public good is driving the enterprise.⁷ Rwanda's revision

⁷ The example we cite here is the Research Triangle Park in North Carolina. It was set up 50 years ago by a partnership of the Municipal and State governments with the universities in Raleigh Durham. They set it up to respond to a concern that all the young people were leaving the region because of limited opportunity offered by tobacco and cows. They started the Park by creating the Research Triangle Institute, as a research hub for the companies that came to the Park (such as IBM, some government research labs, among many others.) The tripartite group still serves as the Board of the Institute. The public good foundation of the Park and Institute is an important dimension to its success.

of its primary and secondary education systems with a goal to avoid another genocide is an example of a change driven by a public good. Whether and how that can be taken to the research level remains a question.

Capacity Strengthening as an Entry Point

A significant number of initiatives start with research or institutional capacity building. Many of the comments from researchers reflect both their positive and negative experiences of these efforts. In many cases, these are not explicitly linked to the research ecosystem but are identified on a supply basis by the funding agency. All are related to strengthening research and/or research institutions, with a greater or lesser degree of intentionality on building a research ecosystem. Rather they start from the point that research is seen as critical to economic development and therefore capacities to carry out, disseminate, and use research will lead to improved economic and social development. A shortcoming of the approach is that it is often supply-driven, short-term, and disconnected from other ecosystem development efforts.

A number of initiatives fall into this category such as the Council for the Development of Social Science Research in Africa ([CODESRIA](#)) which was established in 1973 and has provided support to strengthening social science research across the continent since that time. It does so through research competitions as well as support to regional and national groups involved in supporting social science research. CODESRIA is Africa-based; like most research organizations, the bulk of its support comes from international donors but it also has support from the Government of Senegal in terms of its housing as well as tax exoneration. The [African Capacity Building Foundation](#) was created by the World Bank but is now a specialized agency of the African Union. We were not able to interview anyone from ACBF but its role in capacity building should be considered as part of institutional strengthening. The institutional capacity strengthening

initiatives of the DFID's SRIA Initiative - [Strengthening Research Institutions in Africa](#), PASGR, the Wellcome Trust's [Building Strong Research Ecosystems in Africa and Asia](#) are also active. The [African Academy of Sciences](#) hosts the Alliance for Accelerating Excellence in Science in Africa. In partnership with the African Union Development Agency, the Alliance is funded by the Bill & Melinda Gates Foundation, the Wellcome Trust and DFID, UK. The laudable long-term aim is to shift the locus of science about Africa to the continent through strengthening research leadership, strengthening young researchers and some focus as well on strengthening research institutions. They also implement the Evidence Leaders in Africa program supported by the Hewlett Foundation. It is not clear how the Academy relates to or replaces the functions of national academies and regional and national capacity building programs.

[INASP](#), is a UK-based International NGO that promotes the importance of research for development through support for academic publishing as well as support to the research-to-policy interface. They are in the midst of a strategic shift which will likely place them more directly in the global south, so partnership possibilities become more attractive. The Packard Foundation maintains an [Organizational Effectiveness program](#) that is open to all its partners as an add-on to their programming in the main fields where the Foundation is active. Since its establishment in the 1980s, the program has offered short term grants of up to nine months. Based on demand from partners they are piloting two-year grants where the grantee chooses the focus and Packard provides support for consultants to assist the organization. The [Partnership for Economic Policy](#) is an international not-for-profit institution based in Nairobi that is building a global community of economists. It focuses on building capacity for local development solutions. It strengthens economic research capacity through training, research, accompaniment, focusing not only on research but its relevance to policy solutions. Its global reach brings

international perspectives of other regions to the African researchers, a significant advantage of a global approach.

Many capacity strengthening initiatives focus on some aspects of research quality, policy research, and institutional strengthening. They are potential devices to support an ecosystem strategy as a resource for build individual skills and enhancing networking for learning, both with others on the continent but also globally.

Cutting across the models, some programs are active in curriculum and graduate program development in support of African universities across the continent. For example, PASGR has developed a curriculum for a graduate program in public policy which is in use in a number of countries; AERC develops curriculum in economics.

Ultimately, the models are less important than how they are implemented: how long term is the intervention? How intentional is it in strengthening an institution or an ecosystem? Does it address the triumvirate of research capacity, policy capacity and institutional strengthening? Does it have an exit strategy? Who decides the shape and focus of the intervention? After this brief description of the models with some examples, we return to what works, what doesn't that suggest some possible directions.

'The one approach we are using at ARUA is giving the universities an incentive to reform. We admit to membership only universities that can provide evidence of change in attitudes to research and graduate training. Do their strategic plans suggest a progressive shift towards research? Do the strategic plans reflect greater inclusiveness in decision-making? Are they beginning to allocate more resources to research and graduate training? Is the university perceived to be progressive and embracing technology appropriately?'

African Researcher

What Works, What Doesn't, & Possible Next Steps

This section of the paper reviews what we have learned, primarily from the researchers but from additional sources as well. This suggests some options for consideration and discussion within the foundation.

Persist. This came up over and over. The success of AERC is measured in decades, not years. If you are not open to staying for ten or 20 years, should you begin?

Be intentional. Plan impact pathways for strong institutions, to help with choices. It is important to distinguish between the research commissioned for internal purposes by an organization, the research for which funding is provided to research institutions around their issues of concern, and the institutional strengthening support that is provided. Expecting any of these activities to do 'double duty' without clear intent and clear follow-up in place to achieve multiple aims will disappoint.

Know the context well. Consult widely. Government engagement is crucial to sustainable success. Consider how your interventions affect other parts of the system. For example, if you invest in regional institutions, are you considering the impact on national institutions? Is the intervention helping make them stronger or is it taking resources away from national development?

Consider multiple but connected interventions – different parts of the ecosystem need different things and affect each other differentially.

'If we focus on silos we will never get to stronger systems.'

Donor

'Multiple funders acknowledged that the desire for immediate results within very specific programmatic areas has led to problematic and sometimes damaging partnerships.'

Ezeh 2019: 21

'This circular problem regarding project-specific funding is beginning to be viewed as detrimental to funders' long-term goals since the benefits of local knowledge depend on giving them the freedom to think beyond us and our needs.'

Ezeh 2019: 24

Consider a significant national ecosystem intervention

where there is interest and a public good orientation. Be sure there is a national will and a public good orientation to the ecosystem conversation. By significant, we refer to the scale proposed by Ezeh (2019), of a multi-million-dollar commitment over at least ten years and longer if the situation warrants (i.e., good progress is evident, but sustainability is not yet in place.)

Bring institution building into everything that you do. One way to do that is through treating overheads as an institutional strengthening mechanism. Another way to do it is through an institutional strengthening program. Make all your officers institutional strengthening officers. Build their skills in this area.⁸

Pick winners (or promising organizations) and don't micromanage them. People and organizations learn when they try, succeed and sometimes fail, not when they are told what to do. At the same time, the phenomenon of becoming a 'donor darling' can be detrimental to an organization and can distort its mission. Often the winners have not yet been identified. Being on the ground gives the opportunity to meet and assess the potential of multiple organizations and identify future leaders and future leading organizations.

Use networks to bring common interests together for co-learning, perhaps across clusters of the countries in which the Foundation is active, perhaps across the disciplines involved in addressing the changing nature of work.

'Go with the best institutions. Focus on countries with the highest potential to start. Change by doing not training. There is a need for reinforcing activities not just research training or organizational capacity building.'
African Researcher

⁸ One tool which we did not explore but that merits attention going forward is the pursuit of an international accreditation of the financial and management systems of a research institution. This would go a long way to overcoming the concerns with institutional capacity to manage research. Standards such as those of the International Standards Organization are well respected globally and their application could be both a capacity strengthening exercise and a demonstration of capacities.

What doesn't work is in many respects the opposite of what does work: short-term, unconnected, supply driven interventions that don't have a long-term vision and intent to shift control and leadership to African institutions. Even relatively strong programs such as [Wellcome Trust's African Institutions Initiative](#) continue to struggle with staff retention, as well as finance and infrastructure shortfalls (Ezeh 2019). This reflects the importance of ongoing monitoring and reflection on programs to adapt to changes.

Strengthening research leadership in African institutions means putting Africans in charge of it and supporting weak institutions to make the transition to stronger ones. This is as much a good governance question as a strong leadership question. As long as programming decisions are largely controlled by the donors there is little incentive or even possibility for recipients to learn the skills they need to be in charge. Doubtless there are risks as the transition is taking place - organizations go through rough patches as they go from an idea of a few people to a thriving institution. This is a major shift in thinking to one which recognizes the public good function of research institutions and the role they play in building a nation-state.

Being explicit about taking the long view changes the power dynamic in donor-recipient relationships. It would strengthen the ability and opportunities for the Foundation to work in true partnership, rather than being seen as a short-term donor. This would further strengthen the incentives for program staff to focus on accompanying the Foundation's partners on their journey, operating as true co-learners; and it would further strengthen the Foundation's strong commitment to learning and its own evolution.

'I think primarily we are suffering from founder-owner syndrome... Meaning that institutions are founded, and they revolve around the personality that founded them; so it affects growth. It affects governance, it affects processes. You find that even when donors have consciously set up certain institutions - and there are classical examples of where people who were recruited to run an institution died, and his or her relatives think that institution belonged to him and went in to almost seize the assets of the institution. Until you are told, no, no, no, no. Your man was simply an executive director. This thing does not belong to him.'

African Researcher

Criteria

A wide range of options has been explored here. Making choices means the Foundation setting some criteria for deciding what gets funded and what does not. In order to define criteria, some basic questions need to be answered. Some will be straightforward; others will generate debate. It is in answering these questions that it is then possible to set some criteria. The questions are not necessarily either/or questions; rather they focus on identifying priorities.

1. Is the priority on regional or national institutional strengthening?
2. Will you pursue a singular thematic focus or pursue a core theme with associated minor themes?
3. What is your commitment horizon – five years, ten, or longer? And what are the implications for the scale of the program?
4. Will you prioritize institutional strengthening as a core support program, or integrate across all programming through enhanced overheads?
5. Do you intend to pursue close or distant monitoring?
6. How important is research, versus policy influence, versus advocacy?
7. Will you pick known stronger institutions to support or focus on identifying emerging leaders and emerging institutions?
8. Will you prioritize partnerships and if so, with local or international partners?
9. Will you integrate fund raising skills into your institutional strengthening initiatives?
10. Will you integrate functional research capacities into efforts at institutional capacity strengthening?

Each of these has implications for the sources and institutions you choose; with some sense of these, detailed criteria can be identified.

By Way of Beginning

By way of beginning – for this is meant to launch a discussion not end it, we have reflected here on some possible directions and foci for discussion, debate and reflection. The What Works section above outlines a number of possibilities. Above all, it suggests the needs for an intentional strategy with a long-term vision. This should be accompanied by a well-articulated monitoring, evaluation and learning strategy, as well as ongoing dialogue with grantees on the state of their institutions and progress towards leadership in their field. Be cautious about being too instrumental in the choices you make: what you think is important may not be the same starting point for your partners. Start where your partners are and work with them on what will make their institutions stronger – it is where that control has been given over that institutions have been truly successful. Returning to our title, Strengthening Research Institutions: Learning From Doing, it is abundantly clear from our interviews with African researchers that their best learning takes place not in the classroom but through engaging in the messy businesses of research and institutional strengthening.

As one of our interviewees said, *‘MasterCard has an opportunity to play a leadership role in addressing this problem differently.’* We hope the ideas and perspectives presented here contribute to realizing that opportunity.

‘How is Africa ever going to develop if it doesn't have its own set of very strong institutions? And you get to be strong by doing. And you can only do if you have the resources to do. You need all these other things to do it well. But you can't do it at all if you don't have the resources. You're not going to learn. You're not going to make your own mistakes if somebody else is controlling everything. So, there's that; long-term Africa needs these institutions in order to keep moving up. And it's not helping if we're not supporting those institutions.’

African Researcher

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The views expressed are those of the authors.

'Take risks, accept failure. The work we do is complicated, and we can only make progress if we accept that some things will fail spectacularly.'

Bley & Le

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Websites

Acronym	Name	Site
ACE I	Western and Central Africa Higher Education Centers of Excellence	https://ace.aau.org/
ACE II	Eastern and Southern Africa Higher Education Centers of Excellence	https://ace2.iucea.org/
AAS	African Academy of Sciences	https://aasciences.ac.ke/
AAU	Association of African Universities	https://www.aau.org/
ACBF	African Capacity Building Foundation	https://www.acbf-pact.org/
AERC	African Economic Research Consortium	https://aercafrica.org/
AFIDEP	African Institute for Development Policy	https://www.afidep.org/
ARUA	African Research Universities Alliance	http://arua.org.za/
AWARD	African Women in Agricultural Research and Development	https://awardfellowships.org/
BUILD	Ford Foundation, Building Networks and Institutions Program	https://www.fordfoundation.org/work/our-grants/building-institutions-and-networks/
CFI	Canada Foundation for Innovation	https://www.innovation.ca/

CODESRIA	Council for the Development of Social Science Research in Africa	https://www.codesria.org/
CRES	Consortium pour la Recherche Économique et Sociale	http://www.cres-sn.org/
CSEA	Centre for the Study of the Economies of Africa	http://cseaafrica.org/
DAAD	German Academic Exchange Service	https://www.daad.de/der-daad/unserere-aufgaben/entwicklungszusammenarbeit/foerderprogramme/hochschulen/infos/en/43833-african-excellence-centres-of-african-excellence/
INASP	International Network for the Availability of Scientific Publications	https://www.inasp.info/
I-IDEAS	International - IDEAS	https://www.idea.int/data-tools/country-view/104/40
Packard	David and Lucile Packard Foundation Organizational Effectiveness Program	https://www.packard.org/what-we-fund/organizational-effectiveness/
PASGR	Partnership for African Social and Governance Research	http://www.pasgr.org/
PEP	Partnership for Economic Policy	https://www.pep-net.org/
PeriPeri University	Partners Enhancing Resilience for People Exposed to Risk	https://www.riskreductionafrica.org/
Presencing Institute	Presencing Institute	https://www.presencing.org/
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture	https://www.ruforum.org/
TTI	Think Tank Initiative	http://www.thinktankinitiative.org/
Using Evidence	Using Evidence Inc.	https://usingevidence.com/
Value Voices	Valuing Voices	http://valuingvoices.com/
Wellcome Trust	Strengthening Research Institutions in Africa and Asia	https://wellcome.ac.uk/what-we-do/our-work/research-eco-systems-africa-and-asia

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Acronyms

AAS	African Academy of Sciences
AAU	Association of African Universities
ACBF	African Capacity Building Initiative
ACE I & II	African Centers of Excellence
ACET	African Centre for Economic Transformation, Ghana
AERC	African Economic Research Consortium
AFI	African Futures Institute
AFIDEP	African Institute for Development Policy
APHRC	African Public Health Research Centre
ARUA	African Research Universities Alliance
AU	African Union
AWARD	African Women in Agricultural Research and Development
BUILD	Building Institutions and Networks (Ford Foundation)
CNW	Changing Nature of Work
CODESRIA	Council for the Development of Social Science Research in Africa
DAAD	German Academic Exchange Service
DANIDA	Danish International Development Agency
DFAT	Department of Foreign Affairs and Trade (Australia)
DFID	Department for International Development, UK (also known as UK Aid)
FARA	Forum for Agricultural Research in Africa
GDP	Gross Domestic Product
GFAR	Global Forum for Agricultural Research
IDRC	International Development Research Centre (Canada)

INASP	International Network for the Availability of Scientific Publications
ISS	Institute for Security Studies, South Africa
KSI	Knowledge Sector Initiative (Indonesia)
MCF	MasterCard Foundation
MISR	Makerere Institute of Social Research
NGO	Non-Governmental Organization
NISER	Nigerian Institution of Social and Economic Research
NRF	National Research Foundation
ODI	Overseas Development Institute
OECD	Organization for Economic Cooperation and Development
Open AIR	Open African Innovation Research
PASGR	Partnership for African Social and Governance Research
RTI	Research Triangle Institute
RUFORUM	Regional Universities Forum for Capacity Building in Agriculture
SAIIA	South African Institute for International Affairs
SDGs	Sustainable Development Goals
SRIA	Strengthening Research Institutions in Africa (DFID)
SSA	Sub-Saharan Africa
TA	Technical Assistance
TTI	Think Tank Initiative
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UOIT	University of Ontario, Institute of Technology
WWF	World Wildlife Fund