



PHOTO: GRACE KARGOBAI

Radical Inclusion

*Sierra Leone's **David Sengeh** is taking an inclusive approach to digitalizing the country's education system and economy*

DAVID MOININA SENGEH tries to see the beauty in everyday things—a challenge under the circumstances of the past year. In his dual roles as Sierra Leone's minister of basic and senior secondary education and chief innovation officer, he is motivated by the magic of a simple line of code for a government application and novel ways of reaching students during the COVID-19 pandemic.

The pandemic has driven the government to find innovative ways to use technology to manage the health crisis, provide aid to families, and support remote learning for the country's large public education system.

In this interview with F&D's Adam Behsudi, Sengeh—who holds a PhD in biomedical engineering from the Massachusetts Institute of Technology—discusses how his country has found new ways to meet the challenge of the past year.

F&D: Tell us about Sierra Leone's digital innovation strategy launched last year and the progress made.

DS: The government is using the National Innovation and Digital Strategy to inform not just how it implements innovation across government but also how it supports the medium-term national development plan—the road map that drives our budget and sets priorities for ministries, departments, and agencies. The objective of the Directorate of Science, Technology, and Innovation (DSTI) is to ensure government delivery of the national development plan and design of an innovation ecosystem. At the core of this effort is total digitalization. Digital identity, a digital economy, and digital governance really drive what we do and how we get involved. With COVID-19, the strategy is going full speed ahead.

F&D: How specifically have technology and innovation helped respond to the pandemic?

DS: In a couple of ways—information dissemination for one. An app and mobile phone solutions—text messaging—are available to our citizens to access and share information, and for COVID testing and health self-assessment. An online travel portal allows us to track passengers who've been tested. We have a quarantine app to manage monitoring of service delivery to quarantine facilities and homes, and we have been synchronizing the districts' health information systems. Our application programming interfaces use the data we collect to build dashboards for decision makers. During lockdowns, drones monitored and evaluated compliance with stay-at-home orders. Anonymized call data records and surveys help us understand the effects of government policies.

F&D: Can you explain how your two roles dovetail?

DS: In my role as chief innovation officer I lead the DSTI, whose job is to spur and coordinate innovation in government, and I advise the president on technology and innovation across the board. Education is the government's flagship program. Some 22 percent of our budget is devoted to education. Thirty percent of the population is receiving free public education. We added 9 percent more students to the total in-school population between 2018 and 2020. The country's 11,400 schools employ about 80,000 teachers. A lot of the work we coordinate is school subsidies. We pay tuition for every student in government and government-assisted

school as well as exam fees for all students. Providing effective and efficient education services including learning materials and school meal programs requires data and digitalization. So as the lead on basic education, it helps that I am also chief innovation officer. The two roles are deeply intertwined and very much priorities of the government.

The DSTI leads the national COVID emergency response center's ICT and data effort. I sit on the presidential task force for COVID. On the education side, we set up an emergency education task force. Whether it's education or COVID, the messages are the same, and technology plays a critical role.

F&D: Has the pandemic accelerated the education divide in Sierra Leone? What steps are you taking to address a growing divide, especially as it relates to girls and women?

DS: In Sierra Leone we closed schools the day we recorded our first COVID-19 case; we then made plans to revamp our radio teaching program, which was initially launched during the 2014 Ebola crisis. The radio teaching program kick-started one week after schools closed. During the COVID-19 pandemic school closures we expanded and extended its reach to nearly all districts by working with community radio stations and procuring new radio transmitters. When schools finally reopened in July 2020 for examination classes, we brought back over 450,000 students for in-class learning and supported them via radio and online instruction. In many parts of the country we provided physical materials and books along with teaching support. Recently, we launched an SMS and USSD accessible dictionary. Many people take dictionaries for granted, but not everyone here has access to one. Some 87 percent of our people, however, do have mobile connectivity.

The pandemic has made us think about how to be more inclusive in our provision of services. We have a policy called radical inclusion, which means that we will ensure that every child—regardless of family origin, location, gender, or disability—is educated. To that point, we overturned a ban on pregnant girls going to school. We saw during Ebola there were a lot of girls who got pregnant and were excluded from school. We didn't want to leave those girls out of school again this time.

F&D: Every crisis is also an opportunity. How has this crisis spurred positive change in health care, social support, education, or other areas?

DS: As a government we have expanded and revamped our social welfare base. During the pandemic, we've provided lots of direct support—cash—to women in particular, including direct cash transfers in various informal sectors. And the support is ongoing.

People with disabilities and vulnerable groups are getting new consideration and are being taken into account. Within the health care system, we have published information and expanded ways that facilities can make more beds available. A new travel portal system is in place at airports and borders. Under our epidemic control system, we can connect with people entering the country by air and land. These are all investments in a more robust health system.

F&D: What lessons from this pandemic have been most important for you as a policymaker? As a father?

DS: When we build solutions in normal times, we're not usually leading with inclusion. We're not thinking about everyone. But in an emergency, solutions must include all people, because everyone is vulnerable. The key lesson is that solutions should work for everyone, not just in emergencies. I think that's really important.

We haven't always considered the labor and the loss of time that stay-at-home parents face when juggling childcare and other responsibilities. This period has helped us see that, and as a father, I have newfound appreciation for them.

F&D: You are a prolific musician with a recently released album. What inspires you, and what do you hope to convey?

DS: The album is called *Love Notes to Salone*. I think it's really about my love for Salone [the Krio word for Sierra Leone] and public service. I listen to a lot of music, which inspires me, and I hope to inspire others as well. It's music written for young people, for people who must have hope. "Dear Salone" is how it opens—the song is a love letter to Sierra Leone that talks about the country's history and its future. It also talks about the love and power of young people. The song helps us think about our power in a really nice way.

I say things in my songs that maybe people consider political, but it's how I feel; it's art. People can interpret it how they want. Once you create a work of art, it's not really yours anymore. **FD**

This interview has been edited for length and clarity.