

GLOCALIZATION:

From Local to Global and Back Again



LEARNING REPORT

We
Robotics
THE POWER OF LOCAL

Flying
Labs

Glocalization: From Local to Global and Back Again

Learning Report

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THANK YOU

We would like to express our gratitude and appreciation to all Flying Labs as well as our funders and partners for their contributions that allow us to keep co-creating and improving our model.

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Words matter. In the landscape of sustainable development and social good, they shape our understanding, drive our actions, and ultimately pave the way for the future we envision.

As stewards of change, it is crucial that we remain open to taking a closer look at our linguistic choices, questioning their adequacy and noticing where they fall short. For example, isn't it interesting how a word dripping with meaning and beauty in one language often cannot be conveyed precisely in a different language? In Japanese, Kaizen (改善) means "change for the better" or "continuous improvement" – there is no direct translation in English that captures the word exactly.

How wonderful that language and the knowledge it communicates, much like human experience itself, is not static.

When we reflect on the words we use, we allow our languages to evolve alongside our growing understanding of the world and our roles within it. What's more, in today's world, interconnected through the power of technology, different languages meet every day, speak to each other, borrow from each other, and become important sources of knowledge for one another. Through this incredible convergence, not only do our respective languages broaden but so does our collective repository of knowledge. Now we find knowledge anywhere and everywhere, and we can share it for the good of all.

This – the value of diverse sources of knowledge – is at the heart of our work at WeRobotics and with the Flying Labs Network. It is about responsibly and sustainably localizing robotics technologies. The goal is to multiply solutions for development and aid, with local actors in the driver's seat. Drawing from more than half a decade of cumulative learning, we [published in 2022](#), the most detailed study to date on the localization success of our Inclusive Networks Model, which powers the global Flying Labs Network. In our report, we emphasize that the ultimate value of localization is not the project-level impact alone, but instead the expansion of locally-led practice.

Yet we are still learning, still challenging ourselves as we grow, still committed to continuous improvement. The lessons of the past year have led us to hold up to the light the concept of localization itself. Does it accurately present our way of working? Can our language evolve to match our evolving understanding? The word "localization" is multifaceted, assuming varied meanings depending on the context and the speaker. We recognize the wealth of diverse perspectives and solutions this broad term encapsulates, and in this report we aim to contribute our unique take on it, offering insights shaped by our experience.

I understand that there's a big gap between north and south or Bolivia and the other countries in the developing world. But there is useful knowledge that we have, and we have to share it when we get it. Sometimes the answers are here in Bolivia and we have to find them.

*René Salomón Vargas, Director,
Bolivia Flying Labs*

Glocalization: Start Local, Go Global... Then Return to Local

Localization as it is typically thought of moves in one direction at a time: global expertise flowing from privileged regions to areas with limited agency, power, or funding, but rich in local knowledge. The goal of localization is to create a synergy between global and local means, expertise, and knowledge to achieve meaningful and lasting development outcomes.

At first glance, the term localization appears fitting, emphasizing the importance of tailoring solutions to meet the unique needs of individual communities. However, as we delve deeper into the intricacies of our globalized world, it is evident that a more nuanced perspective is required. Our language, like our understanding, must evolve to encapsulate the dynamic, interdependent relationships between local and global forces.

So we're taking it a step further. Borrowing from the socioeconomic sphere, if we could describe how we work, we would call it "glocalization". A concept born from the fusion of localization and globalization, glocalization offers a more comprehensive lens through which to view the complex interplay of local

and global forces in the pursuit of sustainable development and positive social impact. As well, it accurately represents the full-circle directionality of our work. Glocalization allows for knowledge to flow from local regions to the global stage and back again, challenging the position of the global north as the norm while also acknowledging the power of reaching out across borders, into the global knowledge pot, and bringing home what would best serve the local community.

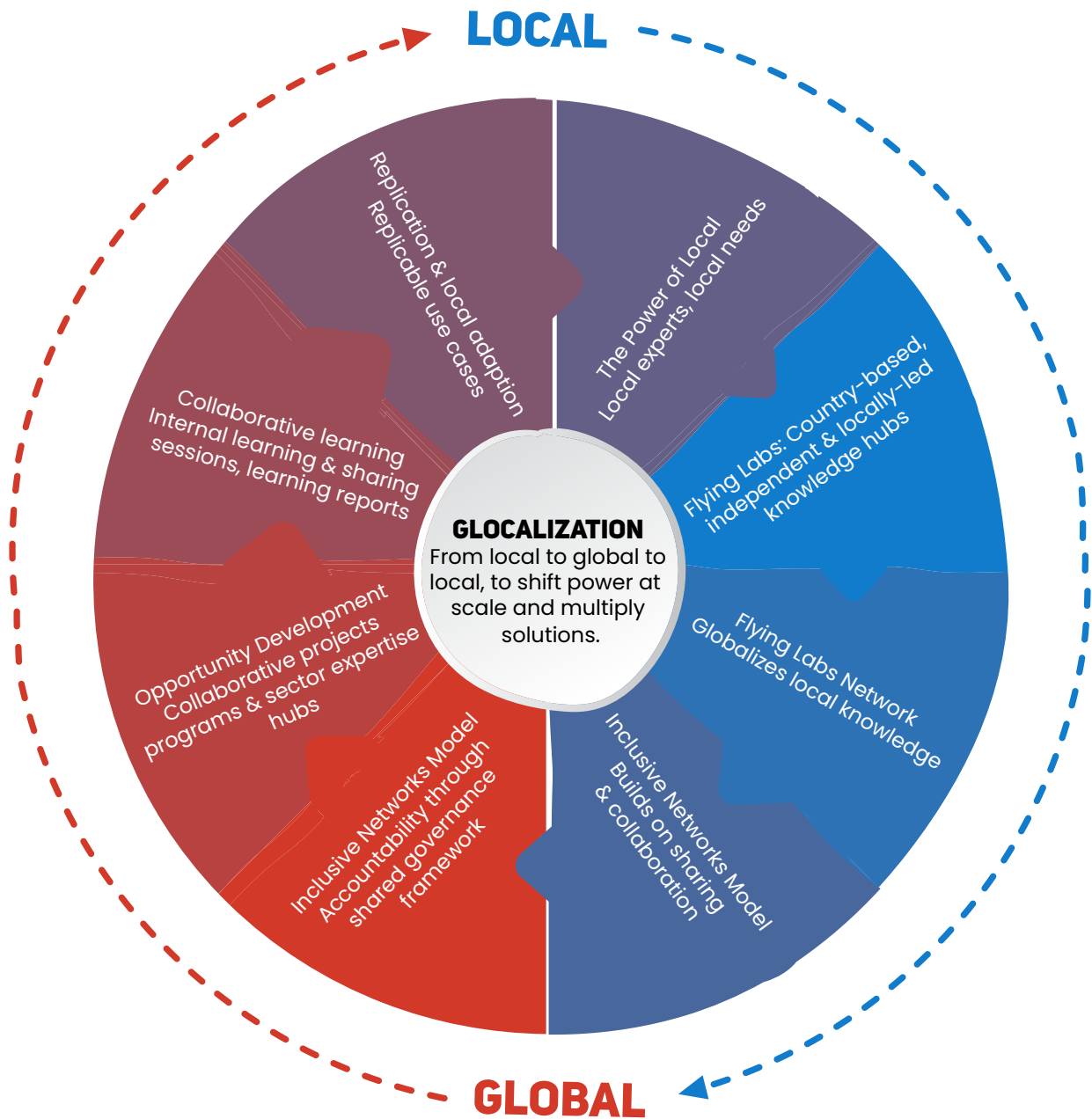
Imagine a scenario where a small community nestled in the heart of a rainforest is striving to preserve its unique biodiversity. Traditional localization strategies might involve crafting initiatives exclusively focused on the immediate needs of that community – perhaps sustainable agriculture or eco-tourism. While these efforts are undoubtedly valuable, glocalization encourages us to zoom out and recognize the broader context. The term itself invites us to be open to the idea that local factors not only shape community dynamics but also have far-reaching consequences that extend globally. Conversely, global influences shape the very fabric of our localities.

Last year during the retreat, Bolivia Flying Labs talked about the forest fires that happen in Bolivia and how they use drones to combat this challenge. Forest fires are not so common in Peru, but they mentioned that the ashes from their forest fires spread across the entire continent and cause damage to the whole Amazon. I didn't know that, and if I had not interacted with Bolivia Flying Labs, I might have never found out that their problem is also our problem. This is why the Network matters and why it is important to interact and collaborate with colleagues in different countries.

*Kimberly Rojas, Program Coordinator,
Peru Flying Labs*

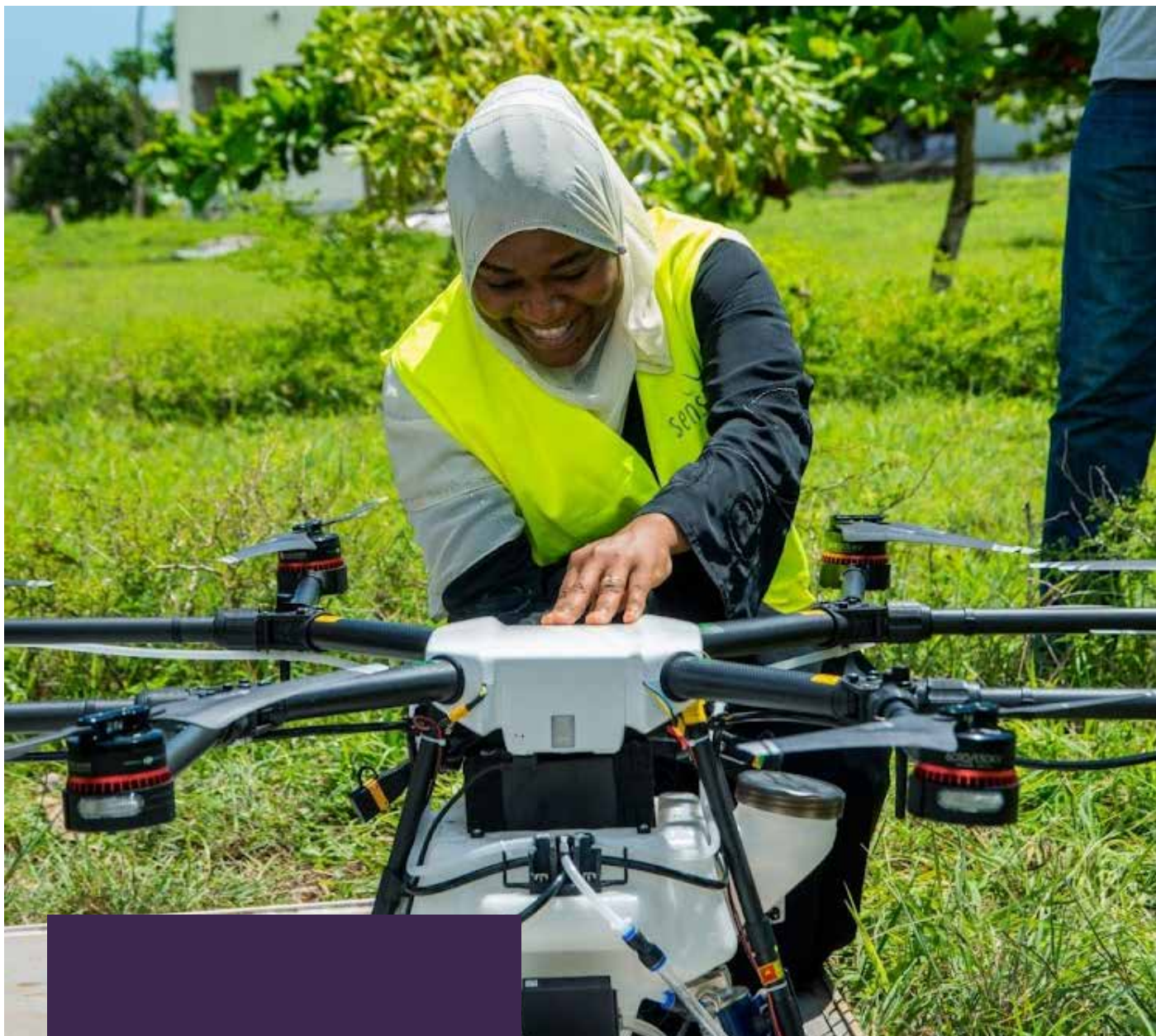


Our Full-Circle Approach



Our full circle begins at the local level. In all we do, we start with the power of local. This includes our [role and contributions](#) to the Flying Labs Network and our [“behind the scenes”](#) work that is driven by the needs expressed by the local experts of the Flying Labs. Hence, one could say, the first part of our work is about globalizing local expertise in drones, data, and AI. We do this through our Inclusive Networks Model, which clearly defines sharing and collaboration contributions for each Flying Labs on a yearly basis, allowing us to collect and “globalize local knowledge”. To address accountability for its decentralized setup, the model is complemented by a shared governance framework.

The second half of our circle moves from the global to the local sphere. Once again, our key values of sharing and collaboration play a vital role. After globalizing the highly diverse and locally relevant knowledge first, it can now flow back in the form of [replicable use cases](#), webinars, internal learning sessions, and individual south-to-south collaborations to just about any geography that faces the same or similar local challenges. Think of disaster response or disaster risk management for perennial floods. Or the use of drones for smallholder farming. These issues are tackled every day by numerous Flying Labs across the globe, and often, they will pick learnings from one another or collaborate for greater impact.



Agricultural use cases, specifically from Nigeria Flying Labs, have inspired us to create awareness in Namibia through drone in agriculture training and workshops.

*Virginie Uwimana,
Coordinator, Namibia
Flying Labs*

The [Drones in Mangrove Conservation at Flying Labs](#) report presents an inspiring demonstration of this local-global-local movement. Panama, Tanzania, and Pacific Flying Labs created knowledge by working in their localities, globalized it by collaborating across borders and sharing it in the report, thus allowing other Flying Labs to then localize it once more in their own contexts.

Glocalization, therefore, not only represents a shift in language but also a shift in mindset. It challenges us to think beyond geographical boundaries, fostering solutions that not only uplift individual communities but address the root causes of challenges on a global scale as well.

Why Our Local-Global-Local Approach is Effective

We deeply believe that our full-circle approach allows us to sustainably and responsibly multiply solutions, which is the reason why we co-created WeRobotics, the Flying Labs Network, and our localization model in the first place. This is our organization's DNA. Over the past 8 years, we have been able to extensively trial and test, learn, improve, and evolve our model. And this in a practical way, by co-creating a Network of local drone, data, and AI experts that spreads over 40+ countries in Africa, Latin America and Asia today. Here are our first-hand learnings on why taking the full-circle "local to global to local" directionality for localization is effective.

1 Starting locally allows us to tap into the diverse and deep knowledge from local experts first.

Through the model's bottom-up and need-based approach, the Flying Labs' work is fully aligned with local needs. Local experts also bring in the needed understanding of the places they work in, respecting local knowledge. They know what can and can't work. Additionally, being part of the community and having lived experience makes it easier to engage with stakeholders from a place of understanding the local norms. It makes the Flying Labs members relatable to the communities they work in as they have an implicit understanding of dos and don'ts. All of this allows them to build trust and inspire their local communities, including the youth, who are the problem-solvers of tomorrow.

We are quite efficient in that we are able to operate from planning to inception to data capture. We know who to call, the processes to go through, the people you need to talk to, etc. There is a cultural awareness. We know after certain hours, certain places are off bounds. It just makes us much more efficient in terms of operating.

Koinguma Baimba, Coordinator and Drone Pilot, Sierra Leone Flying Lab

You need to build an emotional connection with the community. If you don't, the people won't accept something new.

Ronald Beltrán Torrez, Project Manager, Bolivia Flying Labs

South Africa Flying Labs prides itself on relatability. We can put ourselves in the communities' shoes and become one. Being relatable and understanding of each other is how people open up and become more inviting than you would expect.

Boipelo Moraka, Drone Pilot and BVLOS, South Africa Flying Labs

One of the great things about localization is the opportunity to inspire. Especially here, where we might be someone's first experience with a drone.

Koinguma Baimba, Coordinator and Drone Pilot, Sierra Leone Flying Labs

② The model allows Flying Labs members to gain both local and global visibility.

The Flying Labs benefit from increased visibility that puts their work on a global platform, attracting more opportunities. Through their use cases, blog posts, webinars, story maps, and local capacity building events, they are able to document and tell the story of their work and its impact to a global and diverse audience. This enables them to attract partners that would otherwise not have known about their work. And when potential partners are connected to the Flying Labs, they are confident in their ability to deliver because a strict vetting process is part of the Network's model, as is adherence to both local and international standards.



We implemented a reforestation project in schools in Burkina Faso using drones to gather information for the monitoring and evaluation of the project. We collected some key indicators such as how many plants survived and so on. We wrote a blog post that was shared by WeRobotics. A week later an organization from the UK got in touch with us as they were keen to implement a reforestation project in Burkina Faso.

Claudel Guiella, IT Technician and Training Coordinator, Burkina Faso Flying Labs

WeRobotics acts as a bridge in a few ways. One is by introducing Flying Labs members to global opportunities. The second way is by bringing the Flying Labs together and making sure there is some form of standardization. They act as a guardian and a mentor, ensuring activities are happening on time, standards are met, and people are learning from each other.

Uttam Pudasaini, Executive Director, Nepal Flying Labs

3 Starting local allows for flexibility, enabling the Flying Labs to adapt to different contexts and dynamics.

The fact that the Flying Labs are autonomous gives them the flexibility and agility to set their own priorities. There is no “set agenda from headquarters” that determines what they should work on. The model allows them to work on what is most relevant to them, in their own unique contexts and fully based on their decisions.



A Flying Labs can have its own autonomous model on how it operates. As a company, there is no obligation that out of every project, you need to give certain money to the headquarters or anything of the sort. There is only a licensing fee that you need to pay for every year to WeRobotics. But other than that, for every project, you can run it autonomously.

Uttam Pudasaini, Executive Director, Nepal Flying Labs

WeRobotics are aware that our dynamics are different. So that helps us to be flexible and to relate to our situation. No one told us that we need to focus on disaster management, but these are the communities we knew were most affected.

Queen Ndlovu, Chief Executive Officer and Managing Director, South Africa Flying Labs

4 Local solutions are important for addressing global challenges.

Though the Flying Labs are working on issues that are particular to their communities, many of them are cross-cutting issues that are being faced globally. Many of the applications that Flying Labs implement can scale to different geographies. In such cases, local solutions can be used to solve global challenges such as forest fires, floods, droughts, deforestation, and last-mile medical deliveries, to name just a few.



As Bolivia Flying Labs, our CV is not only ours, but it's that of the whole Network and we can bring in experts from other countries in the Network.

Erika Lopez Coca, Coordinator, Bolivia Flying Labs

We have worked with indigenous communities across the region. And we are in a better position as we have already worked with indigenous communities in Panama. We can therefore scale up our program of building the capacity of women in indigenous communities to other countries in the region. They can become pilots in their own areas and become guardians of their communities.

Dania Montenegro, Coordinator, Panama Flying Labs

It is just phenomenal how much WeRobotics and Flying Labs as a collective has been able to generate in terms of knowledge, in terms of capacity, and how you can lean on that and call on that at any point in time. WeRobotics has done an amazing job in co-creating this space and helping to facilitate it by providing opportunities and an enabling, supportive environment. One of the key areas we are moving into is drones for disaster management and disaster risk reduction. This is based on our history, how we were established, and some of our experiences. We hosted a webinar last year on the topic and got to work with colleagues from Nepal and South Africa. Our webinar was attended by many Sierra Leonean professionals, governmental bodies, and agencies. Being able to collaborate with colleagues from various countries and having them bring their own knowledge added so much wealth to our webinar.

Koinguma Baimba, Coordinator and Drone Pilot, Sierra Leone Flying Labs



This company was looking for a service provider to meet their needs, not only as a technical expert operating drones, but as a trusted ally in social innovation to empower indigenous women in Guatemala. Flying Labs Panamá participated in the call for proposals with our methodology, Learn by Working on Projects, based on the STEAM framework. It was highly appreciated that our team was mostly women already doing in Panamá what they needed there. We had a workshop to prepare us on particular differences between the indigenous communities in Panama and Guatemala. It has been a two-way learning experience, full of discovery: Women training women, and in Spanish!

*Mitzi de Álvarez, Administrative Assistant,
Panama Flying Labs*

Collaboration makes it all possible. I remember when we hosted a webinar with the Zimbabwe Flying Labs. It showed how we can come together as Flying Labs and work on projects together.

*Meladi Nkadimeng, Media and
Communications, South Africa Flying
Labs*

5 Both local and global organizations have their unique value to provide.

By collaborating closely and in a way that decentralizes power, each party has the opportunity to bring in their core strengths and create value together. For example, it's easier for someone who is from a particular community or country to know about local expertise that might not be easy to find online or in books. Additionally, local experts are interested in building lasting relationships in the communities they are in as they are from there and plan to be engaged in processes from start to finish. This is not always the case with global actors working on one-off projects.

On the other hand, global actors can provide global visibility, access to opportunities, connections to global partners, share their specific expertises on global best practices, and more. They are well placed to take on support, facilitation, and connection roles. Hence the key tension lies, in essence, in two points.

a) The either/or mindset: local expertise or international/global expertise. Instead, we adopt a mindset of "and's", thinking about the unique roles and value of local and global expertises joining forces.

b) The distribution of power between the global and local actors and the structural inequities of the current systems that drive our collective work.



What Flying Labs are doing is introducing knowledge to their local communities. We don't come in with a mindset that we want to remove international expertise, but rather that since now we have a tool that is easily accessible, we can build from the ground up as we have people within each of these countries who understand the culture and the way of life for those they are working with. We understand our own problems and we get equipped with the right technology to work within our communities.

*Yussuf Said Yussuf, Co-lead,
Tanzania Flying Labs*

So instead of following that donor-driven approach, what is done in the Flying Labs context is to identify which companies are already doing drone activities in a certain geography and then tell them: We have a Network of dozens of other countries with organizations very similar to yours, and they are using drones for social good and impactful activities. Are you interested in joining our Network and learning from each other?

*Uttam Pudasaini, Executive Director, Nepal
Flying Labs*

An important connection comes from being able to speak our people's language, being able to explain, being able to really empathize with them when they express and share their challenges and also give them hope that look, we understand your challenges, we understand your constraints.

*Koinguma Baimba, Coordinator and
Drone Pilot, Sierra Leone Flying Labs*

As a global organization, it is easier for us to create global partnerships with leading technology companies and future Flying Labs clients such as the headquarters of INGOs. Many of them are based in the countries of our legal entities. Access to state-of-the-art technologies and valuable connections is an example of one specific value we can provide as a global organization to local experts.

*Sonja Betschart, Co-Founder
and Co-Pilot, WeRobotics*

Through our global networks drawn from working and interacting with various multilateral and cross-boundary stakeholders in various fields, we bridge the gap between local experts and global stakeholders. This linkage increases access to knowledge-sharing and funding opportunities as well as connecting the world to community-led interventions in drone technology for sustainable impact.

*Kenneth Ramah, Community
Coordinator and Technical Support,
WeRobotics*

WeRobotics and South Africa Flying Labs were really working together. Usually sponsors leave you alone, but WeRobotics went all out to support our team and that's why the project was a success

*Queen Ndlovu, Managing Director,
South Africa Flying Labs*



Our Next Step: To Contribute to Systems Change Through Glocalization



We have set ourselves a dual mission at WeRobotics:

First, to create a practical example of a new path on how to responsibly and sustainably localize emerging technologies for the aid and development sectors. Doing so allows us to create a practical and proven model and discover innumerable first-hand learnings and experiences. We decided on drones, data, and AI for data-analysis as our “example” as we have a strong passion for these technologies from a “power-shifting” perspective. Why? Imagine a technology that allows just about anyone to create their own geospatial data – a fascinating thought even a good 10 years after the first mainstream civil drone applications.

Second, to document our model, learnings, and experiences extensively and share them with other organizations that want to push their localization efforts a step further and/or try out a bottom-up and locally-led approach to localization.

Even as we continue to learn and improve our model – as we explore glocalization as a more suitable term than localization – today it is

well-defined and ready for adoption. On our journey, we have also learned that this model can be a fantastic fit for local social enterprises that want to scale their work to more geographies or take their work global. This is the reason why [the first organization to adopt our model](#) is not an international organization seeking to expand their localization approach but an African consortium building a new Sub-Saharan network of gender and AI experts.

One element that just about any actor in our sector agrees on today is this: Our systems need to change to tackle structural inequities and power balances – drastically and fast. Having a proven and practical solution – one of many, and one that keeps on expanding and growing both in reach and positive social impact – is a valuable contribution to the larger discussions on localization and shifting power as well as systems innovation and change.

If you are interested in exploring glocalization, or in learning more on how to [adopt our model](#) for your organization, or would like to support our continuous effort to grow the impact of this model and make it more available, reach out to us; we would love to start a discussion.

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