

**The Majority of Localization
Efforts Have Failed.**

THIS ONE CONTINUES TO SHINE.

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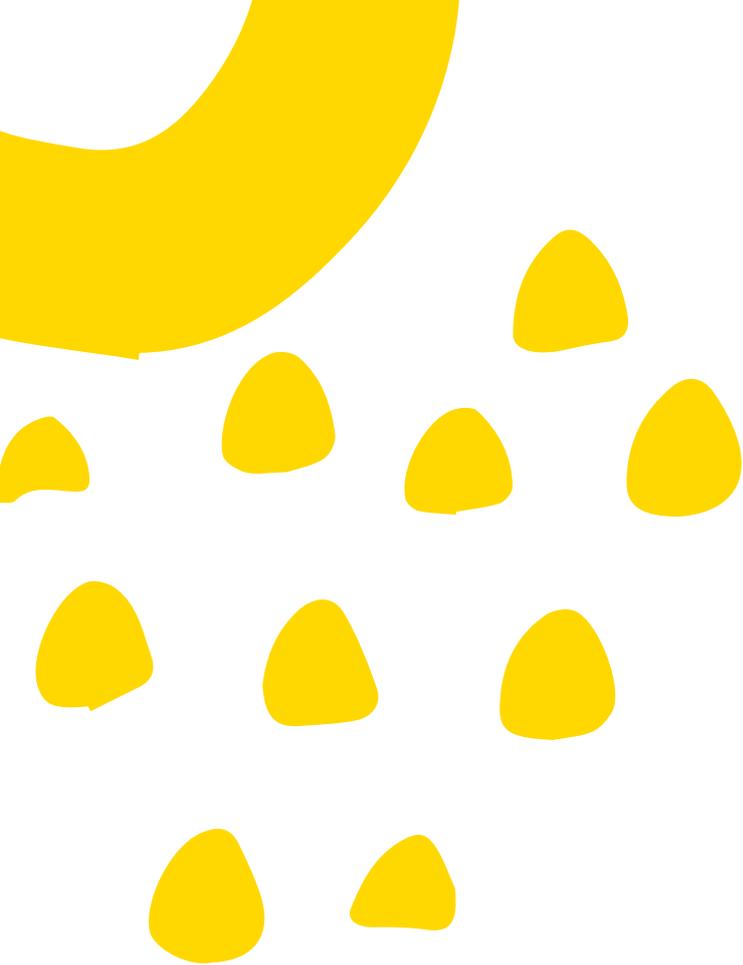
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ACKNOWLEDGEMENTS

Our sincerest thanks and gratitude to all local experts and their local partners across the 30+ countries of the Flying Labs Network. Thanks to their agency, determination, expertise, ways of being, and good humor, the network continues to thrive and expand locally-led practice. We also wish to thank our essential funding partners who have supported Flying Labs and WeRobotics since 2016. These include (in alphabetical order): The Autodesk Foundation, Fondation Botnar, Hewlett Foundation, Inter-American Development Bank, Jansen PrimeSteps Foundation, Rockefeller Foundation, Save the Children Sweden and the Twilio Foundation. In addition, the authors of this report have directly

benefited from the valuable feedback and detailed peer-review provided on earlier drafts of this report, particularly from the following individuals (in alphabetical order): Maia King, Alex Martins and Truls Neubeck. We have also benefited from feedback provided by three additional reviewers who have kindly requested to remain anonymous. In addition, we've received equally valuable input from the following 3 members of the WeRobotics Board of Directors: Arbie Baguios, Catherine Saurais and Andrew Schroeder .

This report has been published in March 2022 and will be updated with feedback and new elements over time.

EXECUTIVE SUMMARY

The vast majority of localization efforts have failed. The purpose of this study is not to unpack the reasons for these failures (others already have), but rather to celebrate the demonstrated success of a lesser-known localization model that offers a more effective way forward. We do this not to pat ourselves on the back but in the hopes that our practical approach, learnings, and yes failures, will be of value to others who seek to shift power by expanding locally-led action.

The effectiveness and sustainability of our model is evidenced by the 5-year operational track-record of the Flying Labs Network, which uses the model to enable and expand locally-led practice. Flying Labs are independent knowledge hubs led by proximate leaders and hosted by local organizations in 30+ countries in Africa, Asia, Latin America, Central America and the South Pacific. Flying Labs are co-created and enabled by proximate leaders and WeRobotics, a not-for-profit organization based in the Global North. These demand-driven knowledge hubs combine local expertise and priorities with emerging technologies to drive positive social impact across multiple sectors. In doing so, they directly expand the space for locally-led practice.

The model that powers the Flying Labs Network is called the Inclusive Networks Model. The word “networks” here is plural because this model represents a network of networks. WeRobotics and Flying Labs first launched the model in 2016, and it continues to evolve and improve through active co-creation. In this report, we apply an independent, outside lens to analyze the Inclusive Networks Model and to share our most important learnings in a structured manner. More specifically, we apply a holistic localization framework published by the Overseas Development Institute (ODI) to frame and query the evidence base we have collected during the course of co-creating

and implementing the Inclusive Networks Model over a period of 5+ years. The ODI framework allows us to delve into resource flows, agency, ways of being, decision-making, priorities, knowledge creation, relationships, delivery, directionality of localization, and last but not least the question “Who is local?” Doing so enables us to clearly and comprehensively demonstrate the success of the Inclusive Networks Model along with some of the tensions that surface through said model.

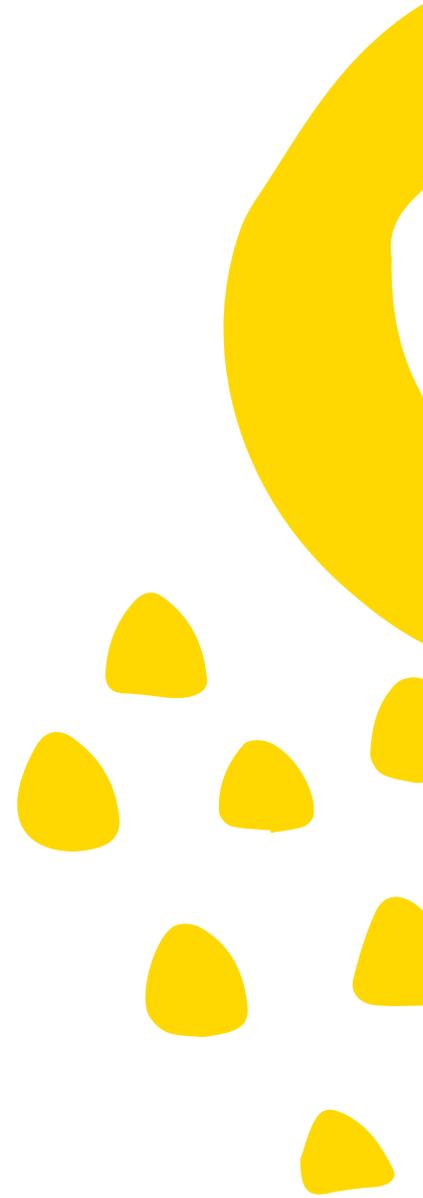
The report emphasizes that the ultimate value of localization does not stem from project-level impact alone, such as the effectiveness of an aid or development project. Instead, the ultimate value of localization is to expand locally-led practice. One way to do this, as demonstrated by the Inclusive Networks Model, is to shift power with proximate leaders. This explains how our co-created model redefines what it means to be an expert. It enables a far more holistic understanding of agency and power, one that derives first and foremost from local expertise and lived experience, rather than foreign technical expertise, money or special connections. In parallel, we continue to take concrete steps to enable the coordination and support of the Flying Labs Network to also become entirely locally-led. This report outlines how Flying Labs and WeRobotics are working together to deliver this important feature of Inclusive Networks. In sum, while effective social good projects are of course an important and positive component of localization, they are not the endgame of localization.

This explains why the endgame of WeRobotics is to enable other like-minded international organizations to massively expand the space for locally-led practice. How? By adopting and adapting the Inclusive Networks Model. As this comprehensive study shows, we seek to drive the adoption of the model at

scale to collectively expand the power of proximate leaders and local organizations with said leaders and organizations. And we want to take this a step further to try and contribute to sustainable systems change. International non-governmental organizations (INGOs) like WeRobotics must also reduce their own “Power Footprint” while they partner with proximate leaders to expand the space for locally-led practice. The power footprint is the amount of authority, control and influence that an organization is able to exert as a result of that organization’s history and current activities. Every organization has some level of power. Power is essential to drive change. That said, a significant concentration of power can ultimately undermine the intended change. But the power footprints of international organizations are rarely measured or assessed even though they exacerbate the systemic social injustice that continues to plague the international social good industry.

Instead, what does get measured is the impact of individual social good projects, which are considered successful even when they expand the power footprints of INGOs. As noted in this study, however, the ultimate value of localization is first and foremost the expansion of locally-led practice. And while there is growing support and interest in localization efforts, models and pledges, it is unclear which of these activities actually do drive a shift in power. In fact, localization activities that don’t reduce the power footprint of INGOs may ultimately be more symbolic than real. This explains why, in addition to the Inclusive Networks Model, we’re co-creating a pathway to establish internationally agreed metrics to measure, track, benchmark and reduce the power footprint of INGOs.

In sum, WeRobotics is combining the Inclusive Networks Model with the Power Footprint Model to contribute to sustainable systems change. These models are deeply rooted in the demonstrated success of the Flying Labs Network over the course of 5+ years, as documented in this study. We are one of many, and invite other like-minded organizations to join us on this journey.



INTRODUCTION

Localization seeks to promote and support locally-led action to improve the positive impact of humanitarian action. International organizations in the humanitarian sector have sought to use localization to better engage local and national actors in all phases of humanitarian action.¹ This engagement was formally endorsed as a priority during the World Humanitarian Summit (WHS) in 2016.² Since then, the development sector has also adopted “localization” as a priority, as have other social good sectors.³ Recent independent evaluations, however, clearly show that the vast majority of localization efforts have consistently failed over the past half-decade.⁴

The purpose of this study is not to unpack the reasons for these failures (others already have), but rather to shed light on a lesser-known localization model that offers a more effective way forward. This localization model is called the Inclusive Networks Model. The word “networks” here is plural because this model represents a network of networks. The effectiveness of this model is demonstrated by the Flying Labs Network, which uses said model to support and expand locally-led action. Both the model and the operational

network were first launched in 2016 by WeRobotics and three local organizations in Nepal, Tanzania, and Peru.⁵ WeRobotics is a nonprofit organization registered in Switzerland and the US, while Flying Labs are independent, locally-led knowledge hubs that combine local expertise with emerging technologies to accelerate locally-led social impact.⁶

Today, Flying Labs are operational in 30+ countries across Africa, Asia, Latin America, Central America and the South Pacific. Together, they enable and expand the space for locally-led practice across multiple sectors, such as humanitarian aid, sustainable development, public health and nature conservation, for example. The localization model used by Flying Labs continues to be co-created by WeRobotics and the 200+ proximate leaders within the Flying Labs Network.

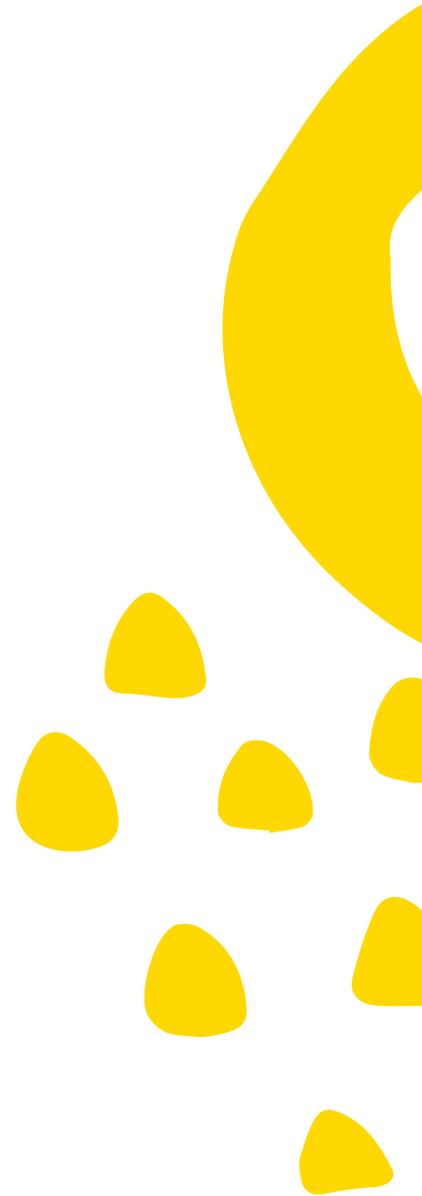
The co-creation of the Inclusive Networks Model, and its co-implementation in the form of individual Flying Labs and the Flying Labs Network, has enabled WeRobotics to become a more impactful, local-first organization over the past 5+ years, shifting both



power and essential resources with more than 30 local organizations across a growing number of countries and sectors.⁷

Furthermore, by carefully documenting this process of localization, Flying Labs and WeRobotics have co-created an inclusive and replicable model that stands to expand locally-led practice even further. This fully operational model is described in greater detail in subsequent sections and can be adapted and adopted by other organizations that seek to increase their impact by expanding the space for locally-led practice

In this study, we first introduce ourselves and explain the timing for this study. Next, we briefly summarize a new localization framework that serves to inform a structured analysis of localization efforts. We apply this analytical framework in full to the Inclusive Networks Model to provide a holistic overview and critical analysis of said model. In conclusion, we highlight the practical steps that other organizations can take to adapt the Inclusive Networks Model to expand the space for locally-led practice.



WHO ARE WE? WHY NOW?

“

By shifting power with local experts and organizations, we're redefining what it means to be an expert and reimagining the purpose of international nonprofit organizations (INGOs).

WeRobotics is a social impact organization that brings together local experts, communities and activists to offer a practical alternative to systems dominated by foreign-led and top-down interventions.⁸ By shifting power with local experts and organizations, we're redefining what it means to be an expert and reimagining the purpose of international nonprofit organizations (INGOs). We're doing this by co-creating an inclusive and sustainable network of proximate leaders, and in the process, building an effective localization model that expands locally-led efforts in response to pressing challenges.⁹ This network is called the Flying Labs Network, and the localization model is called the Inclusive Networks Model.

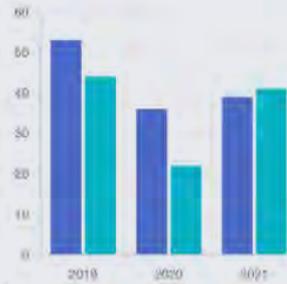
Flying Labs are independent and locally-led knowledge hubs that are hosted and run by local non-profit, for-profit and/or academic local organizations in 30+ countries across Africa, Asia, Latin America and beyond.¹⁰ They combine their expertise with emerging technologies to tackle pressing challenges in partnership with other local organizations. In the process, they expand the space for locally-led practice. Flying Labs work across multiple sectors including humanitarian action, sustainable development, public health,



Social Good Projects & Trainings

Flying Labs implement a wide array of applications and research/pilot projects across key social good sectors with local and international partners.

Since 2019, Flying Labs have implemented **128 impactful and innovative projects** and organised **107 trainings locally**.



Professionals Trained

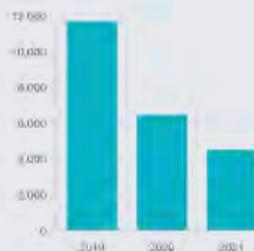
Flying Labs organize professional drone, data and certification trainings for individuals and a wide array of local partners.

In total, Flying Labs have **trained 2,746 professionals locally** on integrating drones sustainably into their work since 2019.



External Knowledge Sharing

Flying Labs share their experience locally by organising and participating in workshops, events, community engagement sessions, conferences and more formats. Local stakeholders range from government officials to professionals of both non-profit and commercial organisations to community members including elders and youth.



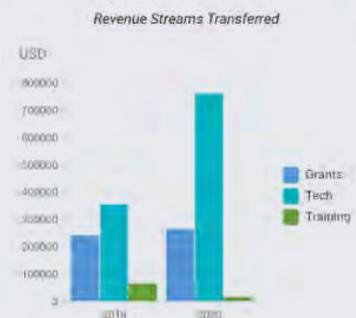
Over **22,700 local stakeholders** have been engaged since 2019.

Value Transferred

We transferred **38% of our revenue** directly to the Flying Labs network in 2020, up from 23% in 2019.

This puts us above the aspirational 25% benchmark set by the **Grand Bargain** and **Charter4Change**.

Note: **only 2.1%** of international humanitarian aid goes to local NGOs.



A glance at some of our impact over the years
(Find updated numbers under werobotics.org/impact and flyinglabs.org/impact)

agriculture, nature conservation, climate change adaptation, and youth education (STEM). Together, Flying Labs seek to accelerate locally-led progress towards the Sustainable Development Goals (SDGs).¹¹

Flying Labs have had demonstrated positive impact on locally-led practice over the past 5+ years.¹² Like other organizations, we (Flying Labs and WeRobotics) also did our best to cope with the significant stress and anxiety brought on by the worst pandemic in 100 years.¹³ We sought to adapt as best we could to the many COVID-related restrictions in our countries such as the sudden and/or extended lockdowns. Flying Labs did this by shifting to hybrid and/or fully virtual engagement. WeRobotics has always had a virtual setup and pivoted to focus more on remote co-creation, model development and training, for example.

Despite the global crisis, the Flying Labs Network still grew by 27% during the pandemic. All of this growth continues to be entirely driven by local demand.¹⁴

Flying Labs have implemented over 130 impactful, locally-led projects since 2019.¹⁵ What's more, they are often the first in their countries to lead these kinds of projects and training. Following the health and safety measures required by relevant authorities, Flying Labs organized more than 90 locally-led training sessions to expand local expertise during this time. As a result, they've trained over 2,700 experts on how to accelerate their own social good projects since 2019. In addition, they engaged over 22,700 stakeholders during this

time, and organized more than 70 locally-led youth/STEM projects. We're also excited to note that close to one third (32%) of all Flying Labs activities are joint projects and training sessions between 2 or more Flying Labs. The Inclusive Networks Model thus acts as an important multiplier for direct "South-to-South" collaboration and capacity strengthening.

Meanwhile, WeRobotics transferred a total of 346 opportunities to Flying Labs between 2019 and 2021 alone; the kinds of opportunities that typically go to foreign experts, companies and/or organizations based in the Global North.¹⁶ In addition, WeRobotics transferred 38% of its revenue directly to local hosting organizations across the Flying Labs Network in 2020 (amidst a raging pandemic), up from 23% of total revenue transferred to local organizations hosting Flying Labs in 2019.¹⁷ In contrast, only 5% of funding from international organizations reached national/local actors directly in 2020, which is nowhere close to the 25% target promoted by the Grand Bargain and the Charter for Change.¹⁸

Flying Labs and WeRobotics use the highly collaborative Flying Labs Network to enable the exchange of knowledge, mutual mentorship, opportunities, technical resources, organizational resources, financial resources, and decision making. In doing so, Flying Labs and WeRobotics have co-created a lived, applicable, proven and scalable model that other organizations can adopt and adapt to localize their efforts across multiple sectors.

Why are we writing this report now? We didn't exactly have time early on to formally write up this model and document the evidence in more academic and policy-centric language. Why? Because the majority of our time over the past 5+ years has been spent co-creating and implementing the Inclusive Networks Model in the form of the Flying Labs Network. One distinct advantage of writing the report today compared to half-a-decade ago is that we can now draw on more than 5 years of first-hand, operational experience, learnings, evidence, data, and impact with local organizations in 30+ countries.

In other words, the reason this report is so comprehensive is thanks to the expansive evidence-base that we are able to draw on.

In sum, this model is neither an academic model nor a theoretical exercise, but rather a lived and practical model with a strong evidence base that is fully grounded in locally-led practice. Like others, we see the goal of localization as the shift of power with local actors.¹⁹ To this end, the ultimate value of localization does not stem from project-level impact alone, such as the effectiveness of an aid project, "but in shifting the power from international to local actors."²⁰ Effective social good projects are of course an important and positive component of localization, but we maintain that they are not the end-goal of localization.²¹

"Close to one third of all Flying Labs activities are joint projects and training sessions between 2 or more Flying Labs."

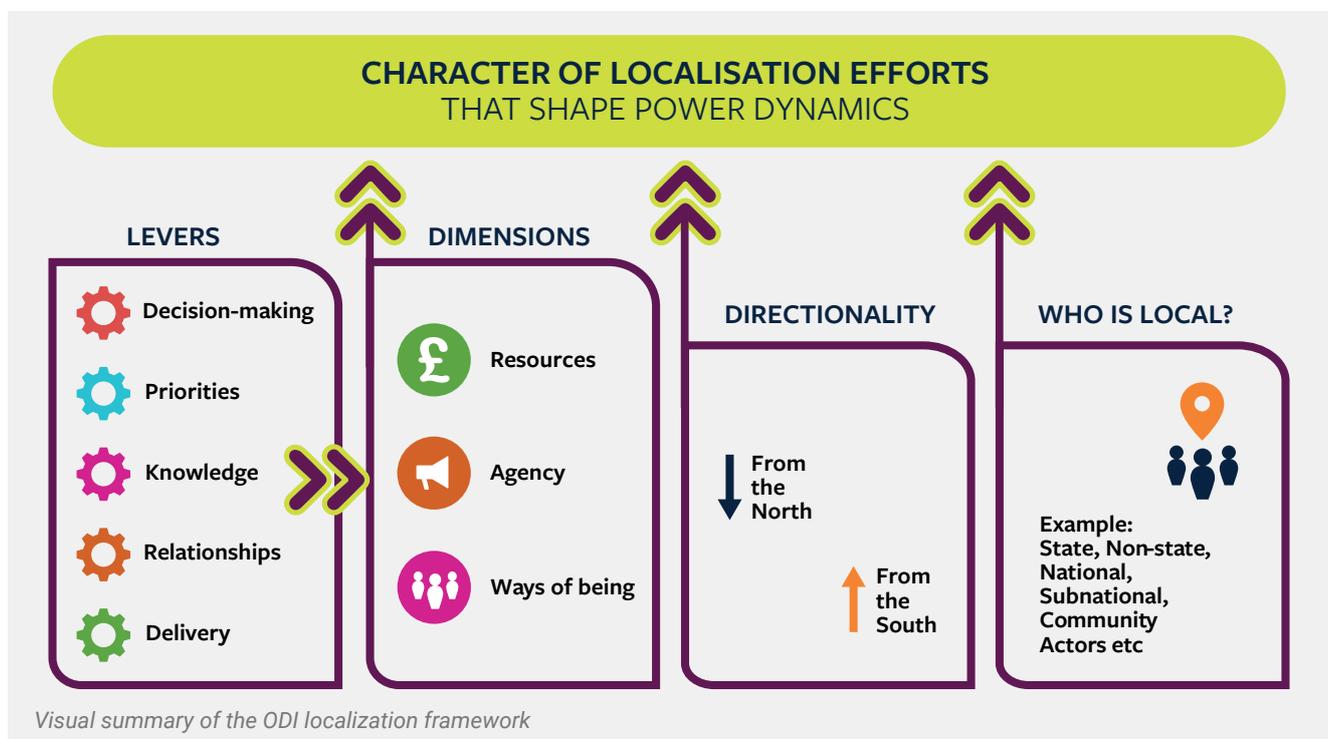
HOW TO FRAME AND ANALYZE LOCALIZATION

The purpose of this section is to provide a brief overview of the new localization framework proposed by the Overseas Development Institute (ODI).²² We then apply this framework to the Inclusive Networks Model in the subsequent sections. This enables us to analyze and assess the model in a structured manner using an independent framework.

Multiple analytical frameworks and monitoring tools for localization have been developed since the 2016 World Humanitarian Summit (WHS).²³ The purpose of this study is not to evaluate these analytical frameworks (others already have), but to use an existing analytical framework to analyze the Inclusive Networks Model. Using a formal framework to do this offers a more transparent, and objective way to analyze our model. More specifically, we selected the new analytical framework proposed in the 2021 ODI report entitled, "Localization as the Journey Towards Locally Led Practice," to analyze our Inclusive Networks Model.²⁴ ODI is an independent, global think

tank that seeks to inspire people to act on injustice and inequality. They do this through research, convening and influencing, with the aim of generating ideas that matter for people and the planet.²⁵

We selected ODI's analytical framework for several reasons. The authors of the framework drew on both the literature and insights from empirical work and consultations.²⁶ We were introduced to this new framework when we participated in one of the two consultations organized around the report, which included over 100 participants who were primarily from the Global South. In addition, the ODI framework is also based on the prior analysis of 28 existing approaches to localization. Last but not least, the framework takes a more holistic approach than others, which is important because the Inclusive Networks Model also takes a holistic approach.



The ODI framework thus offers a grounded and credible methodology to analyze the process of localization and its end-goal: locally-led practice.²⁷ The framework is summarized in greater detail in the Annex. The next

section describes the genesis and endgame of the Inclusive Networks Model while subsequent sections directly apply the ODI framework to the model.

TOWARDS THE *INCLUSIVE* NETWORKS MODEL

Flying Labs are hosted and coordinated by existing local organizations, including nonprofits, universities, and/or local startups. This is one of three central features of the Inclusive Networks Model. All three features of Inclusive Networks are defined below.

- 1. They bring together a diverse and large group of existing and locally-owned organizations committed to a common goal/purpose (in the case of the Flying Labs Network, the common denominator is “Drones & Data for Social Good Applications”);**
- 2. They are enabled by a decentralized power structure and shared governance model;**
- 3. They focus on growing and learning collectively through open collaboration, contribution and sharing.**

In sum, joining the Flying Labs Network enables local organizations to gain more visibility and credibility, and to access a range of demand-driven resources and opportunities.²⁸

Nepal Flying Labs was the first Flying Labs. It was launched with the Nepali social enterprise Naxa in September 2015. WeRobotics was formally established in December 2015. We began to co-create the Flying Labs Model in a more dedicated manner in June 2016, thanks

to a startup grant from the Rockefeller Foundation. The purpose of this grant was to co-create an appropriate and ethical localization model for locally-led social good applications of emerging technologies. To co-create this Inclusive Networks Model, WeRobotics first co-created two additional Flying Labs with local organizations in Tanzania and Peru. This enabled WeRobotics and all 3 Flying Labs to document and share relevant learnings across different geographies, cultures, languages, ecosystems, and regulations. Together, we iterated on the model for a total of 18 months, until January 2018. During this time, Nepal, Tanzania, and Peru Flying Labs each led and enabled multiple locally-led projects,

Nepal moves to limit drone flights following earthquake

Drone operators will need permission from the country's aviation authority following complaints in affected areas



Nepali Government clamps down on foreign pilots

including post-disaster damage assessments in Nepal, environmental protection in Tanzania, and medical drone deliveries in Peru.²⁹

WeRobotics also developed sector-specific programs during the first 18 months to facilitate knowledge-exchange and mutual capacity strengthening opportunities with and between Flying Labs. These programs are referred to as: AidRobotics (Humanitarian Aid), DevRobotics (Sustainable Development), HealthRobotics (Public Health), EcoRobotics

(Environment, Nature Conservation and Agriculture), BizRobotics (Social Entrepreneurship), and, most recently, YouthRobotics (STEM/Education).³⁰ Sector-based programs are launched in response to Flying Labs priorities, which are informed by local interests and demand. Equally importantly, these programs enable Flying Labs to strengthen the capacity of other local, national, and international stakeholders in their countries. In other words, Flying Labs and WeRobotics use these programs to create enabling environments for a wider range of relevant stakeholders in different sectors.

In addition to launching these programs, WeRobotics also secured formal technology partnerships with leading hardware, software, and data companies to accelerate the transfer of relevant technology and technical know-how from industry to Flying Labs. The number of technology partners has since quadrupled.³¹

In March 2018, after having co-created the operational foundation for our joint localization model, and given the growing demand from proximate leaders and local organizations to launch their own Flying Labs, we opened up the Flying Labs Network model to all. More specifically, we introduced an “Affiliation Model” to enable other local organizations in Africa, Asia, Latin America, and beyond to join the Flying Labs Network.³² This affiliation model is now known as the “Local Model”, which is an essential element of Inclusive Networks.³³

It is important to note that organizations that join the network are already financially independent and have demonstrated expertise. Flying Labs are therefore hosted and coordinated by established local organizations that already have their own clients, revenue streams, and priorities.³⁴ Local organizations join the Flying Labs Network for a host of reasons. According to Nepal Flying Labs, joining the network gives local organizations “an opportunity to access global resources and connections with a wide range of experts and organizations across the entire globe, enabling them to stay fully updated on the latest opportunities and best practices.”³⁵

In 2020, the Local Model was complemented by the “Global Model”, which is another key element of Inclusive Networks. It serves as a shared governance model that enables members of the network to formally define and

self-evaluate their strengths and progress towards their own priorities along with their overall contributions to the network. In short, the Global Model offers a roadmap for success and a self-accountability mechanism for individual Flying Labs and the overall network. It is important to note that this second model was requested by multiple Flying Labs who noted that the Local Model was insufficient to help them plan their paths to success. The Global Model was co-created by Flying Labs and WeRobotics in 2020 and is now being used by all Flying Labs. Both the Local and Global models are publicly available on the Flying Labs website, and are regularly refined based on joint learnings with Flying Labs. Naturally, a number of these joint learnings are the direct result of our own failures over the years.³⁶

WeRobotics has been serving as the primary incubator, enabler and facilitator of the Flying Labs Network since 2016. In July 2020, the Flying Council was co-created with 9 Flying Labs to develop a detailed but practical roadmap for the launch of an independent legal entity to formalize the Flying Labs Network. In time, this new legal entity will become the primary enabler and facilitator of said network, with WeRobotics taking a back seat.³⁷ The new entity, referred to internally as FL.org, will have its own executive management team from Africa, Asia, and/or Latin America. This team will take the network to the next level by formalizing the initiative. Once funding for this transition is secured, the Flying Council estimates that it will take 3 years to complete the transition. It is worth noting that in February 2022, Nepal Flying Labs, a member of the Flying Council, requested a full convening of the Council to plan the strategy for 2022. In other words, this request didn’t come from WeRobotics because Flying Labs are the ones driving this process.



APPLYING THE ODI *FRAMEWORK TO OUR* LOCALIZATION MODEL

In this section, we apply the localization framework described in the Annex to the Inclusive Networks Model. We begin with the “**3 Dimensions of Localization**”, then move on to the “**5 Levers of Localization**”, and conclude with the “**Directionality of Localization**” and the question, “**Who is local?**” We include multiple real-world examples from WeRobotics and multiple Flying Labs since they embody the Inclusive Networks Model.

THE 3 DIMENSIONS OF LOCALIZATION

1. Resources

In 2019, WeRobotics transferred 23% of the organization’s total funding to local organizations across the Flying Labs Network. In 2020, this transfer increased to 38% of total funding. This funding came from grants secured by WeRobotics and they were transferred to Flying Labs in the form of sub-grants and micro-grants. These were conditional on the successful and timely implementation of the grant-funded project(s). Reporting was simplified and kept to an absolute minimum. Separate from these transfers, WeRobotics also secured USD \$341,000 more in contracts for Flying Labs and local organizations in 2019 and 2020. WeRobotics did not take any commission on these contracts, which included contracts with the World Bank, for example. As per standard practice, all funds were transferred directly from WeRobotics to local organizations, i.e., without intermediaries.

In contrast, only 4.7% of funding from international organizations reached national/local actors directly in 2020, which is nowhere close to the 25% target promoted by the Grand Bargain and the Charter for Change.³⁸

WeRobotics does not exclude any Flying Labs from access to funding. Open calls for funding opportunities are shared across the network. When funding opportunities focus on one or more specific countries, they are directly communicated to the Flying Labs in these countries. Flying Labs and WeRobotics often partner on joint grant proposals.³⁹ In October 2021, for example, South Africa Flying Labs accepted an invitation from WeRobotics to partner on a joint proposal to support a new STEM program primarily oriented to girls.

From Queen Ndlovu, Managing Director of South Africa Flying Labs:

“As a woman, this program is very close to my heart at South Africa Flying Labs. I am passionate about empowering young girls and women to tackle social challenges. We are looking forward to receiving a positive outcome out of this funding application... ..because it would really empower our young girls to have a voice and have various career options for economic growth.”⁴⁰

Virginie and Charles from Namibia Flying Labs note that one of:

“WeRobotics' recent microgrant call-for-proposals gave us an opportunity to address the issue of rapidly growing informal settlements, a top priority for us. We used aerial imagery and successive shack density analysis of one such local community. With the very high economic, social and environmental costs of informal growth and unplanned urban development, it was of utmost importance for us to provoke urgency in the promotion of sustainable growth by means of sharing with the Local Authority our data outputs that were geared towards amending the existing town plan so as to accommodate the target community by providing services such as clean water and sanitation, around the existing dwellings, with minimal displacement of the inhabitants.”⁴¹

Nepal Flying Labs had the opportunity to present their expertise at WeRobotics Global 2017, an international conference organized by WeRobotics to bring together experts from Flying Labs with foreign experts. The presentation by Nepal Flying Labs led to a conversation and direct collaboration between Flying Labs and a foreign expert from an international public health organization. Nepal Flying Labs and WeRobotics subsequently worked on a successful project proposal, which led to the first ever medical drone delivery project in Nepal, spearheaded by Nepal Flying Labs with technical support from WeRobotics.



Tanzania Flying Labs sharing their expertise

To cite one final example from a different part of the world, Panama Flying Labs is hosted and run by the Universidad Tecnológica de Panama (UTP).⁴² In January 2018, UTP received a major 3-year grant from the Inter-American Development Bank (IADB) to develop at least ten social innovation solutions based on robotics technologies that have positive social and environmental impact. The grant also included direct support to 30 local entrepreneurs in 10 tech-driven enterprises. “WeRobotics supported UTP directly by co-writing the technical proposal that secured these resources. In addition, WeRobotics supported our development and implementation year by year of our operational plan and activities based on our own priorities.”⁴³



2. Agency

Celebrating and promoting local agency is a key feature of the Inclusive Networks Model and thus the Flying Labs Network. In November 2017, for example, a local educational organization that went on to host their own Flying Labs in Asia sent the following note to WeRobotics:

“In the whole time I have been here we have had a steady stream of organizations and individuals, often highly paid [international] consultants, you name it. People coming through with grand visions with the mind to help [the region] and solve its problems and some with condescending neo-colonial attitudes and delusions of grandeur.

One by one they all disappear and leave no lasting impact and in fact, sometimes the opposite. [...] In the meantime many of us live and work the [sic] region doing the best we can with our resources. You and WeRobotics have been the first, and I mean the first organization to make a genuine connection for collaboration as equals and provide resources to back it. [...] May I say thank you for this.”⁴⁴

Flying Labs pursue their own priorities and projects. They decide how to staff themselves, how to manage their own time, who to partner with and when, which sectors to work in, and which activities to prioritize. They identify their own areas of interest and lead the search for solutions to key challenges that are of importance to them. An independent audit of the Flying Labs Network in 2020 found that “80% of the Flying Labs interviewed

commented that this autonomy was desirable as they have the freedom to target [the] greatest need.”⁴⁵

At times, Flying Labs will reach out to other partners including WeRobotics for input on how best to pursue their priorities. In 2016, for example, Peru Flying Labs reached out to WeRobotics to convey their strong interest in improving public health access through medical drone delivery. This resulted in mutual capacity strengthening projects on cargo drones and the operational use of drone delivery with the Peruvian Ministry of Health and local partners in the Amazon Rainforest.⁴⁶ In 2019, to cite another example, Tanzania Flying Labs was keen to start using underwater drones for environmental projects. In response, WeRobotics put them in touch with the Flying Labs team in Fiji, who had already used underwater drones for the protection of marine life.⁴⁷ In sum, Flying Labs actively make their own decisions when it comes to both domestic and international actors.

One of WeRobotics’ priorities as an incubator and enabler of the Flying Labs Network is “Opportunity Transfer”. This refers to rerouting projects and funding opportunities that typically go to organizations in the Global North by transferring them to local organizations in the Global South. Note that this is always done in concert with the local organizations in the Flying Labs Network. In other words, these local organizations are never required to take on any opportunities that result from these potential transfers. WeRobotics checks in with local organizations in the network before pursuing a possible transfer opportunity. Additionally, WeRobotics seeks to stay up-to-date on their key priorities in order to identify potential opportunities of interest to said local organizations. These priorities and interests are communicated through regular 1-on-1 calls with Flying Labs, Regional Flying Labs Calls, and Flying Labs Retreats.⁴⁸

An early example of opportunity transfer in action was when WeRobotics was alerted to a food security project in Tanzania. The international organization leading this project was about to hire a drone company from the United Kingdom to monitor crops in very rural areas of Tanzania during an extended period of time. The international organization didn’t think of looking for



Peru Flying Labs sharing their expertise with the local community

local drone experts to contract the work to because it had never occurred to them that the kind of drone expertise required for this project was available locally. At the same time, it was obvious to WeRobotics that the foreign drone company had never worked in Tanzania before. None of their staff spoke Swahili and none had any previous experience working with the Tanzania Civil Aviation Authority (TCAA).

WeRobotics thus reached out to Tanzania Flying Labs to ask whether this potential project might be of interest. Following a positive response from Tanzania Flying Labs, WeRobotics spoke with the international organization to advocate on behalf of the Flying Labs. WeRobotics made it clear that Tanzania Flying Labs had fully qualified and experienced Tanzanian drone pilots who could lead the project directly and also get started much sooner. The international organization ended up contracting Tanzania Flying Labs instead of the British drone company.⁴⁹ Much to the delight of the international organization, they were able to extend the duration of the project because the original budget had included multiple international trips; money that could now go to local drone pilots to carry out drone flights for a longer period.

WeRobotics and Flying Labs have found that in many opportunity-transfer cases, the hiring organization is perfectly aware that local drone experts exist, but they still contract Americans, Europeans or Australians instead. Hiring organizations often believe that Western experts are more trustworthy, experienced and qualified. There are multiple problems with this belief. First, this belief is very often driven by racism. It is discriminatory and devalues the agency of local experts. At best, this belief is the product of colossal ignorance and laziness. Most of the time, unsurprisingly, those who discriminate against local experts by hiring Western experts are themselves Westerners.⁵⁰

WeRobotics and Flying Labs have also witnessed how governments and national organizations in the Global South discriminate against local experts and organizations. Taken together, this discrimination comes from all sides. It is often flagged by local organizations as an important motivation for joining and staying in the Flying Labs Network. Local experts don't only want their agency to be recognized, they want their agency to be valued and celebrated. By being connected to WeRobotics, a Western organization that promotes local agency and expertise, local organizations in the



Flying Labs Network gain more credibility and visibility. They also gain access to opportunity transfers enabled through WeRobotics.

To be clear, local agency should not need the agency of a Western organization in order for local expertise to be valued. Local agency must be valued for its own sake. The executive director of a social enterprise in Asia that hosts a Flying Labs noted the stark difference in her ability to secure meetings with government officials before versus after her organization had joined the Flying Labs Network. Many of the doors that had previously been closed to her, were all of a sudden open when she became affiliated with the network.

“But I’m still the same person! I haven’t changed. I haven’t become any wiser or more experienced. All that changed was that I was now part of an international network backed by WeRobotics, a Western organization.”⁵¹

It’s important to note that the majority of projects led by Flying Labs are secured by local organizations themselves, independently of opportunity transfer efforts.

Needless to say, we must end the widespread discrimination faced by so many local expert and organizations. One way to counter this systematic exclusion is by expanding the space for locally-led practice to demonstrate the power of local expertise and local agency. Localization models like the Inclusive Networks Model are doing this through the Flying Labs Network. In the process, Flying Labs and WeRobotics are helping to change the discourse and shift the narrative around what it means to be an expert. While the majority of hiring organizations only look at agency through the lens of technical expertise, we advocate for intersectionality, a more holistic understanding of agency and power, one that derives first and foremost from local expertise, ways of being and lived experience, rather than technical expertise, money and discrimination.



India Flying Labs running disaster management training

During the in-person Flying Labs Retreat in early 2019, Senegal Flying Labs requested that the Flying Labs Network put together a strong public Charter on the network’s stance with respect to inclusion, localization, and local priorities. The purpose was to clearly demonstrate the local agency, expertise, and priorities of Flying Labs and their hosting organizations. All the local organizations present at the retreat agreed that this was an important priority. Together, they requested that WeRobotics facilitate the drafting of this advocacy document.⁵² The “Flying Labs Charter on Equal Opportunity” was subsequently published in June 2019, with all local organizations in the network signing on as official signatories.⁵³ We share this example to illustrate another way that Flying Labs express their agency. The decision to create this Charter was entirely theirs.

Another example of the primacy of local agency within the Flying Labs Network relates to the co-creation of the very first Flying Labs in 2015: Nepal Flying Labs. The co-founders of WeRobotics had mistakenly assumed that the local university hosting the new Flying Labs would want to take a “FabLab” or “MakerFair” approach for their own Flying Labs. That is, they figured that Nepal Flying Labs would first want to gain the technical skills needed to build more locally-made drones. After all, the university’s School of Engineering was where Nepal Flying Labs was first hosted, and they already had a very strong track-record in engineering.



These misplaced assumptions were quickly corrected by the new coordinating team at Nepal Flying Labs. They stated that their number one priority was to gain access to highly reliable and mature drone technology in order to quickly begin offering services and running projects right away. As such, they were not interested in a FabLab-type approach.

WeRobotics thus made an immediate course correction and arranged for Nepal Flying Labs to receive a donation and transfer of the most reliable quadcopter drones available at the time. WeRobotics had already established a formal partnership and in-kind support with the leading drone manufacturer in the industry, which facilitated this transfer. Drones as a technology were still very new in 2015, which explains why very few social impact organizations had any direct links with leading drone providers. WeRobotics was thus able to exercise its own agency, largely derived from being a Western-based and tech-savvy organization, to coordinate this collaboration with a powerful, Chinese-based drone company worth billions of dollars. This technology transfer was combined with hands-on mutual capacity building as part of Nepal Flying Labs' first project with WeRobotics, which took place in September 2015.⁵⁴ The project focused on creating high resolution maps to inform local recovery and reconstruction efforts following the devastating earthquake that struck Nepal months earlier.

In sum, full respect for the agency of local organizations, and thus Flying Labs, was firmly enshrined from the very start of the journey.

Local organizations across the Flying Labs Network continue to use WeRobotics' agency when they need to raise the visibility of their own agency. Fun fact: Panama Flying Labs is co-hosted with a FabLab.





3. Ways of Being

“You [WeRobotics] don’t want to define us, or how we should be to be successful. You encourage us to be however we want to be and are so open to learn from all of us.”⁵⁵

Erika Lopez Coca, Bolivia Flying Labs

Flying Labs can be hosted by a range of different local organizations including local nonprofits, universities, companies, etc. Some Flying Labs, like India Flying Labs, are coordinated by a consortium, which is a scenario that is proving particularly effective.⁵⁶ To this end, local organizations are never asked to change their organizational identity or legal status, nor to “hide” the identity of their hosting organization – quite on the contrary, since the success of Flying Labs is directly dependent on the success of the hosting organization(s) and vice versa.⁵⁷

This explains why Flying Labs regularly co-brand their projects by adding the logos of their hosting organizations with their Flying Labs logos. This practice of co-branding was first started by Peru Flying Labs, and has since been adopted by most Flying Labs across the network. For example, India Flying Labs courses, conferences and educational platforms are co-branded with Caerobotics, the Indian social enterprises that hosts India Flying Labs.

The success of Flying Labs is necessarily dependent on the local expertise and knowledge of the hosting organizations and that of their local partners. As such, local and indigenous systems are especially important, and thus recognized, respected, and used.⁵⁸ This is also true of local cultures, meanings, values, and local ways of working. As noted by Panama Flying Labs, “We understand the local idiosyncrasies of local communities by using local languages and the empathy of being a local. We as Flying Labs, as locals, understand the best way of engagement with local communities based on different



The team leading South Africa Flying Labs



scenarios. We as locals understand their ways of being because many of us come from these communities, or neighboring communities. This is another valuable feature of the Flying Labs Model, it respects everyone's ways of being."⁵⁹ Meanwhile, in India, "the vastness and diversity of the country explains why India Flying Labs always goes hyper-local to identify partners for its UAV Task Force. This enables local experts who know the local language and culture to be the one responding to local emergencies, supporting local government and first responders."⁶⁰

To cite an entirely different example, "Cultural Celebrations" are always one of the highlights of the Flying Labs Retreats. Queen Ndlovu from South Africa Flying Labs shared this following the most recent (virtual) Retreat:

"It was such an exciting experience to share our South African culture during the Flying Labs Retreat. The use of 11 official languages wearing our traditional gear and dancing to a local song that became a global hit was awesomeness. Same with seeing other Flying Labs proudly demonstrating their beautiful culture. It was insightful and fun. The most fulfilling culture for me at Flying Labs and WeRobotics is the culture of smart people characterized by humility, togetherness, kindness and genuinely believing in the power of giving and sharing and transforming the lives of the local communities using tech. It is a home away from home."⁶¹



THE 5 LEVERS OF LOCALIZATION

Next, we apply the “5 Levers of Localization” to the Inclusive Networks Model, which is exemplified by the Flying Labs Network.

“It is liberating to know that even though we are part of WeRobotics and the Flying Labs Network, we are still encouraged to make our own decisions in terms of who we bring on board as partners, what kind of programmes we are pursuing, and the beneficiaries concerned. Having provided us with the freedom to choose, the WeRobotics team is still open to provide further advice and technical expertise should we require it. This is an out of this world relationship, hands-on, accessible and very responsive. As South Africa Flying Labs, we decide who the partners are and the programmes we execute irrespective of some of the partners being introduced by WeRobotics. [...] I was negotiating an MOU with some foreign tech start up, and they wanted to impose staff on us. In confidence I said: ‘Unfortunately, as Flying Labs, we don’t embrace such agreements that are imposed on us.’ Thank God they then changed their tone. It is all about Shifting the Power!”

Queen Ndlovu, South Africa Flying Labs.⁶²

As noted above, Flying Labs make their own decisions on priorities, team setup, organizational structure, partners, projects, goals and more. In addition, their hosting organizations make their own decisions on funding allocations and on how to define and evaluate success/results.⁶³ This often sounds “too good to be true” to some detractors.

Take the experience of Tanzania Flying Labs, for example, which was the second Flying Labs to join the network. From the outset, they faced a coordinated disinformation campaign instigated by a small number of fellow Tanzanians. This campaign sought to deliberately mischaracterize Flying Labs and the role of WeRobotics within the Flying Labs Network. They repeatedly painted a false picture of WeRobotics as the “Commander in Chief” of Tanzania Flying Labs. They disseminated these false accusations on social media and at high profile international conferences because they had enjoyed a monopoly of drone services in Tanzania, and were intent on keeping their power.⁶⁴

As noted by Tanzania Flying Labs, “These accusations are flatly wrong and completely false. We, Tanzania Flying Labs, decide on every aspect of our work and our projects. We decide who to work with, and under what conditions, how we execute our activities, and much, much more. What WeRobotics does for us, and all other Flying Labs, is to get us greater visibility and credibility, to help us become more visible to other international partners who want to work in our countries. WeRobotics also acts as our advocate, promoting our capability and expertise, regardless of who we chose to partner with. When we seek advice, we don’t only go to WeRobotics, we go to any of the other Flying Labs directly, and whenever we want.”⁶⁵



Kenya Flying Labs notes that the “independence of the Flying Labs Model allows us to create, innovate and have the freedom to make our own choices based on local circumstances. This is the core of our localization model. Kenya Flying Labs set out on this journey about 4 years ago, and this distinct approach has allowed us to partner and connect with other organizations on various projects, completely independently from WeRobotics. The exposure provided by WeRobotics through its vast networks is what is propelling individual Flying Labs around the globe towards achieving their own goals and aspirations. Indeed, we are one of the few organizations in Kenya that have a Remote Operator Certificate (ROC), this permit allows companies in Kenya to operate drones legally, it’s a very lengthy process and without the preparation and support from WeRobotics we wouldn’t have managed to gain it. The decision to seek the certificate in the first place was 100% ours.”⁶⁶

Decision-making on who joins the Flying Labs Network is a shared responsibility. WeRobotics and relevant Flying Labs evaluate new applications to join the Flying Labs Network. By relevant, we mean Flying Labs that are in the same region from which an application is received. The subsequent evaluations carried out by relevant Flying Labs and WeRobotics include the review of written applications and the running of multiple interviews. One recent example is Pakistan Flying Labs, one of the newest



Kenya Flying Labs engaging with local youth

Flying Labs to join the network. They were encouraged to join the Network by Nepal Flying Labs and were subsequently interviewed and evaluated by India Flying

Labs. The final decision as to whether a prospective Flying Labs can join the network is made jointly by the relevant Flying Labs and WeRobotics. In the future, this responsibility will be carried out entirely by Flying Labs and FL.org (more on the latter below).⁶⁷

Perhaps the best way to demonstrate the genuine independence of Flying Labs is by emphasizing that Flying Labs have made multiple decisions over the years that WeRobotics has not agreed with. These differences in opinions, which have come up over the past half-decade, included concerns on the selection of projects and partners. To be more specific, these concerns were typically due to perceived operational and/or reputational risks around specific projects and/or partners that were deemed problematic. These became somewhat more prominent during the first wave of the COVID-19 pandemic in 2020.⁶⁸

In such situations, WeRobotics communicates its concerns to relevant Flying Labs in writing and through one or more calls. Likewise, Flying Labs clearly explain their rational and motivations for pursuing a given project and/or partner. Throughout these communications, WeRobotics makes it clear that the decision is ultimately up to Flying Labs. It’s worth noting that in all such situations to date, Flying Labs have still proceeded with their original decisions. At times, they did so without changing their approach. At other times, they modified their strategy to mitigate the issues raised by WeRobotics. Either way, WeRobotics has never vetoed or blocked any Flying Labs projects or partners despite having reservations in certain cases.⁶⁹

One cannot have it both ways with the Inclusive Networks Model. Either partners or members of the network are truly independent and locally-led, in which case they are at liberty to make decisions that don’t agree with the network’s enabling organization, or their freedom and decision-making is curtailed.

It may be worth spelling out that the need to follow certain guidelines is not a North/South issue but rather has to do with network accountability and thus reputation, which is essential to the membership of any and all networks. If the process of localization is enabled through a network approach, then there will



inevitably be shared need for accountability and hence network governance. As the next section will explain, the objectives and criteria of network governance for a localization model needs to be fully defined by local organizations rather than international organizations. Some refer to this as “localizing localization” through genuine co-creation. In our case, this means that the local organization in the Flying Labs Network defines the objectives and criteria for governance and accountability rather than WeRobotics.

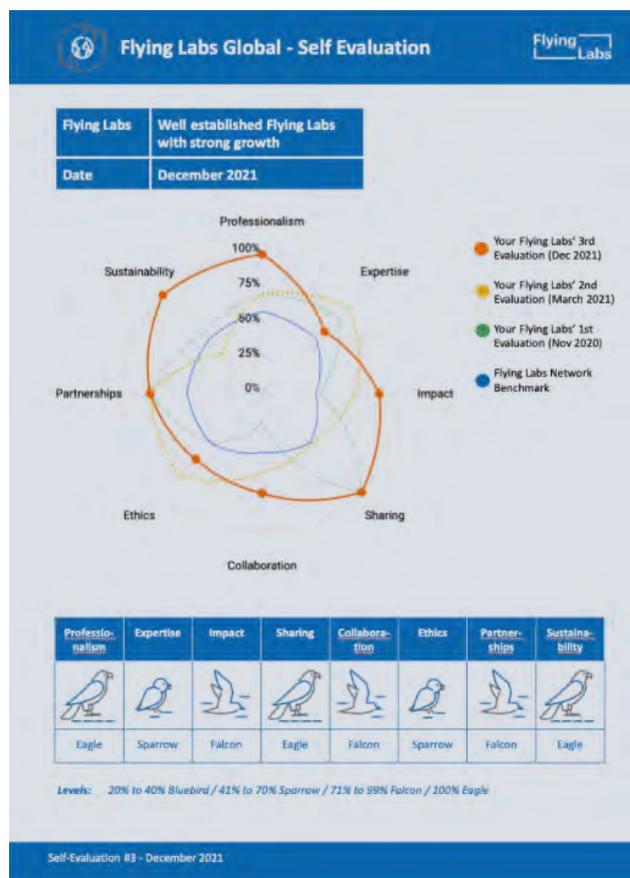
THE 5 LEVERS OF LOCALIZATION

The Flying Labs Network represents a living and scalable example of locally-led practice. Individual Flying Labs craft and implement their own priorities based on their own preferences. It is important to recall that each Flying Labs is hosted by locally owned and managed organizations with their own priorities already in place. These entities co-create their own Flying Labs and join the network motivated by their own interests, enabling them to pursue their priorities through new opportunities.

An essential component of any inclusive network is the governance and self-improvement model (in our case the “Global Model”).⁷⁰ The Global Model gives Flying Labs the opportunity to define their own priorities and definitions of success, and to self-evaluate their progress towards these priorities. The second goal of the Global Model is to evaluate the contributions of individual Flying Labs to the overall network. As such, if one Flying Labs finds itself falling behind on one of their top priorities or contributions, then they are able to connect with other Flying Labs that have already met this priority in order to learn directly from them. This new model was actively requested by a growing number of Flying Labs in 2019 and 2020. They rightly noted that the “Local Model” was insufficient to ensure the continued success, accountability and scalability of a distributed network like the Flying Labs Network. WeRobotics thus facilitated an extended co-creation process with 10 Flying Labs to enable them to develop the Global Model over the course of 6 months.

The 10 Flying Labs, who were all fully compensated for their co-creation time, applied their working model to their own Flying Labs first before introducing the model to the other 20+ Flying Labs.⁷¹ These remaining Flying Labs subsequently applied the model themselves, with support from the 10 “first-movers” and WeRobotics. Flying Labs now apply this model to their own Flying Labs every 12 months to take a snapshot of their own progress based on their priorities.⁷² These snapshots provide clear evidence of Flying Labs’ own priorities

and preferences. By combining the snapshots from all Flying Labs, the priorities and progress of the Flying Labs Network as a whole can be benchmarked and also used by WeRobotics to identify its own priorities and roadmap as the primary enabler of the network.

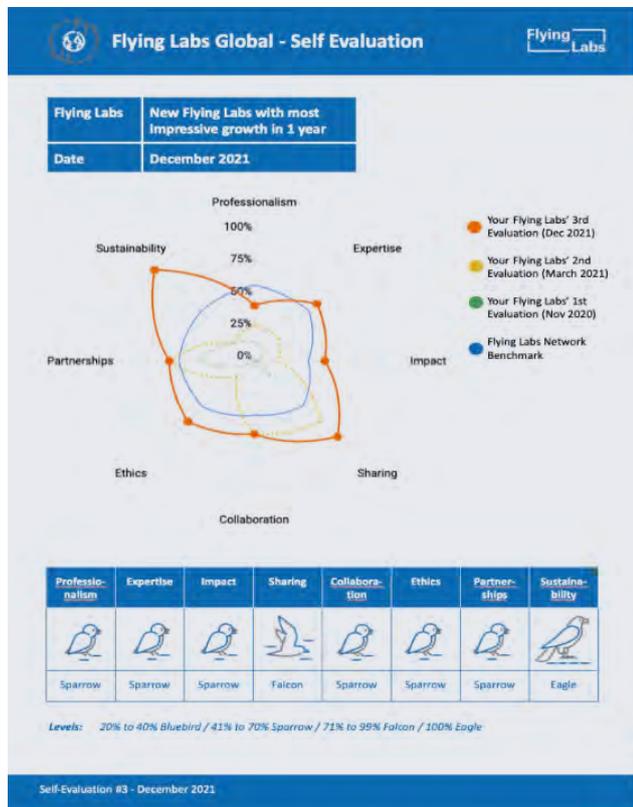


Sample results of Flying Labs Self-Evaluations

Precision Aerial, the host and coordinator of Zimbabwe Flying Labs, joined the network right before the first network-wide application of the Global Model. Through their individual evaluation and goals discussions, Precision Aerial team members were able to identify key criteria that allowed them to grow a strong Flying Labs from the very beginning. The second application of the

Global Model 6 months later allowed Precision Aerial to benchmark and evaluate their Flying Labs’ progress and

to expand their goals. The third evaluation in December 2021 captured the impressive growth of Zimbabwe Flying Labs in only 14 months, allowing the team to have their investments recognized and celebrated.



Another example showing the centrality of Flying Labs’ priorities within the network is when WeRobotics had to significantly expand and diversify its capacity strengthening activities to include non-technology trainings and resources. This was a direct response to explicit requests made by a growing number of local organizations in the Flying Labs Network. It led to the creation of dedicated learning sessions and resources on organizational development, project management, client and stakeholder engagement, development of business models and value propositions, project budget creation and more.⁷³

This section on Priorities has thus far focused on the priorities defined by Flying Labs. We now turn to those priorities defined by WeRobotics. For example, WeRobotics is largely responsible for defining its own endgame, and thus its organizational priorities on systems change.⁷⁴ More specifically, WeRobotics has been formulating and driving three systems change strategies since 2020. These 3 strategies, which are described in more detail below, are: Inclusive Networks, Inclusive Leadership, and Inclusive Power.⁷⁵ Very early versions of these strategies were pro-actively discussed with Flying Labs to invite their candid feedback. This was done on multiple occasions, e.g., during no fewer than 3 Flying Labs Retreats in 2020 and 2021, as well as through multiple meetings of the Flying Labs Working Group on Shift the Power.⁷⁶



INCLUSIVE NETWORKS. This strategy seeks to enable other organizations to adapt and adopt the Inclusive Networks Model that powers the Flying Labs Network. As the application of the Inclusive Networks Model by other organizations goes beyond the scope of interest of virtually all Flying Labs, WeRobotics is pursuing this strategy largely independently from the Flying Labs Network. At the time of writing, WeRobotics expects to formally partner with multiple organizations in 2022 to directly inform their application of the model to their own organizations, programs and/or networks.

INCLUSIVE LEADERSHIP. This has to do with formalizing the Flying Labs Network by taking the final necessary step towards localization. As it currently stands, the Flying Labs Network is an initiative, a flagship program incubated and enabled by WeRobotics. While WeRobotics has served as the incubator and primary enabler of this network-based initiative for the past 5 years, we believe that a more locally-led enabler is essential to facilitate the network’s success and sustainability in the future. WeRobotics began to discuss with Flying Labs in early 2020 the idea of co-creating FL.org as its own independent legal entity with its own executive leadership team from Africa, Asia and/or Latin America serving as the primary enabler of the Flying Labs Network. After several promising discussions, WeRobotics openly invited Flying Labs to form a Flying Council, which would take the lead in co-creating the roadmap to launch the new entity. The Flying Council has since co-created this roadmap along with the transition plan to shift key responsibilities away from WeRobotics. The Flying Council and WeRobotics are now starting to fundraise for this initiative.⁷⁷

INCLUSIVE POWER. As demonstrated by the Flying Labs Network, the Inclusive Networks Model serves to expand the “Power Footprint” of local organizations. By power, we mean the authority, control and influence of local organizations. Power is important to effect change. Every organization has power. Some have too much. WeRobotics has learned first-hand over the years that expanding the power footprints of local organizations is not enough to shift the power. International organizations (including WeRobotics) must also actively reduce their own power footprints. As such, the “Inclusive Power” strategy seeks to measure the “Power Footprint” of international organizations, starting with WeRobotics. The plan is to co-create practical metrics that can be used to measure the excess power that international organizations have when compared to local organizations.⁷⁸ Multiple Flying Labs have provided essential feedback on early concept notes and also expressed a strong interest in participating in the co-creation of the power footprint metrics. WeRobotics is now starting to fundraise for this initiative.



How WeRobotics seeks to contribute to systems change

While the Flying Council and multiple Flying Labs have been actively consulted more than once on all three of these strategies, WeRobotics is the entity making the final executive decisions on 2 of the 3 strategies: Inclusive Networks and Inclusive Power. The Inclusive Leadership strategy is co-lead with and by the Flying Council, which comprises representatives from 9 local organizations in the Flying Labs Network.

Last but not least, WeRobotics is implementing a Holacracy-inspired model across its own organization.⁷⁹ Holacracy is a method of decentralized management and organizational governance, which aims to distribute authority and decision-making through a collection of self-organizing teams rather than being vested in a management hierarchy.⁸⁰ This decentralized approach gives individuals and teams the freedom they enjoy while enabling everyone to remain aligned to the organization’s purpose. One reason why WeRobotics has invested a significant amount of time to adopt this model is because they believe that such a model may eventually be of value to the future entity FL.org. If that does indeed come to pass, then WeRobotics will already be well versed in Holacracy by having first experimented with and applied the model to itself.



THE 5 LEVERS OF LOCALIZATION

“If one Flying Labs grows in knowledge and experience, we all do. [...] I can be learning about using drone technology for medical delivery from Cameroon, Chile, and Dominican Republic Flying Labs, or for disaster countermeasures from Japan, Philippines, Nepal, and Senegal Flying Labs.”

Erika Lopez Coca, Bolivia Flying Labs⁸¹

Flying Labs share their own knowledge with each other and with WeRobotics through multiple, dedicated channels.⁸² WeRobotics does the same. One such channel is the Knowledge Sharing Platform that Flying Labs have decided to call WeShare.⁸³ This platform enables Flying Labs to generate and share their own use-cases on specific operational projects and trainings that they have led. In these use-cases, Flying Labs use a basic template to document their methods, processes and the lessons they have learned first-hand along with their latest best practices. This knowledge, generated directly by Flying Labs, is then used by other Flying Labs to inform their own projects and trainings. In addition, Flying Labs are also encouraged to produce other resources including workflows, guidelines, etc. These are just two of several ways that Flying Labs generate and share their local knowledge across the network by Flying Labs.

WeShare currently hosts over 60 individual projects and training use-cases produced by Flying Labs.⁸⁴ These include use-cases on how to train partners on the use of drones for environmental protection (produced by Sierra Leone Flying Labs); how to use drones and AI to count the number of birds in a nature reserve (by Senegal Flying Labs); how to use drones and GIS analysis to measure the socio-ecological impact of marine protected areas (by Tanzania Flying Labs); how to use drones and GIS analysis to identify safe location areas for climate



Zimbabwe Flying Labs sharing their expertise

refugees (by Panama Flying Labs); and how to map refugee settlements for infrastructure planning and development (by Uganda Flying Labs). These diverse use-cases are easily searchable on WeShare, and new use-cases are added on a quarterly basis. Needless to say, a dedicated Knowledge Sharing Platform is an essential element of the Inclusive Networks Model.

The Flying Labs Global Model discussed earlier also serves as another example of the extent to which each Flying Labs has feedback loops and how monitoring and evaluation works across the network. In addition, Flying Labs share their local knowledge with each other through Regional Calls, Retreats, dedicated Webinars and blog



posts. They also partner with each other on joint projects and trainings to accelerate the exchange of knowledge and transfer of skills.

In 2019, for example, Papua New Guinea Flying Labs teamed up with WeRobotics to run an in-person, week-long public health project with local and national stakeholders. WeRobotics recruited the Flying Labs in Fiji and India as key partners to lead the hands-on technical training for the projects.⁸⁵ In 2020, Senegal Flying Labs had a time-sensitive request: they needed a new kind of highly-specialized technical training in order to support a locally-led environmental project.⁸⁶ So they turned to Tanzania Flying Labs since the latter has extensive experience in precisely the new technical skills sought by Senegal Flying Labs. Tanzania Flying Labs duly shared their knowledge with the team in Dakar and ran a practical technical training entirely remotely (due to COVID-19 restrictions), which was the first of its kind.⁸⁷ In 2021, Fiji Flying Labs did the same for Papua New Guinea Flying Labs.

Kenya Flying Labs has also “benefited from financial and technical resources enabled by WeRobotics for a range of activities that have gone a long way to enabling our Flying Labs to grow exponentially in just 2 years. Mutual capacity strengthening through key sector programs including EcoRobotics, AidRobotics, HealthRobotics and YouthRobotics remain our greatest takeaway from WeRobotics. All Flying Labs need local capacity and competence as drone pilots, data analysts and ethical drone operators within the communities they work for by following strict Standard Operating Procedures that ensure professionalism within the sector.”⁸⁸

Other than mutual capacity strengthening, the team at Kenya Flying Labs notes that “some of the projects supported by WeRobotics have included flood modeling within a dam in Kenya as a strategy towards turning data into action as well as training two certified pilots and drone data analysts. We have also benefited from exchange programs within Flying Labs, within East Africa such as Tanzania Flying Labs, which has extended a number of training and support to us. We are currently working together on a traffic management project as well as a YouthRobotics program that will see 60 children trained.

This program will also train trainers within Kenya Flying Labs to continue with the program in our country.”⁸⁹

In addition to enabling and offering sector-based training opportunities, WeRobotics has also trained numerous Flying Labs on a range of methodologies and best practices in order to prioritize the deep local knowledge of Flying Labs and their local partners. This includes co-creation methodologies as well as frameworks on how to develop strong business models and value propositions. In 2018, for example, WeRobotics and Panama Flying Labs co-ran a series of co-creation workshops with local and national stakeholders using design thinking principles.⁹⁰ This enabled Panama Flying Labs to learn about an important design thinking tool in a very practical and applied way.



Design thinking workshops at Panama Flying Labs

The sector-focused co-creation workshops typically begin with local experts presenting the main challenges they are currently encountering first-hand in their sector of expertise, such as humanitarian aid, public health or environmental protection. Next, these experts together with Panama Flying Labs and WeRobotics define if and how drones, data, AI and robotics can add value and/or propose new solutions, leading to a list of qualified ideas. These discussions are often based on how other experts in other countries have used their own domain expertise and emerging technologies (such as drones and AI) to tackle identical or very similar projects. The local experts then identify their 3 - 5 top priorities and create a very practical roadmap to apply these technologies, by identifying exactly:



Where in the country the first projects would be led; Who the essential stakeholders are along with their specific roles; and How the project would then be implemented. Since then, Panama Flying Labs has led its own Co-Creation workshops completely independently from WeRobotics

WeRobotics has carried out these types of joint workshops with numerous Flying Labs and other local/national stakeholders over the past 5+ years. Namely in Nepal, Tanzania, Peru, Fiji, Papua New Guinea, Senegal, India, Dominican Republic, Myanmar and Malawi, for example. In short, the local knowledge of Flying Labs and their local partners is what counts in understanding the local context, including in identifying the problem and developing solutions.

In closing, WeRobotics also runs learning sessions, working groups, online and in-person trainings, Flying Labs Retreats, the WeRobotics Global conference and a webinar series where Flying Labs can connect with foreign experts who are developing new technologies and/or methodologies relevant to the work of Flying Labs.

“All your [WeRobotics] efforts with the retreats, the webinars, WeShare [knowledge sharing platform], Slack, constant communication, you should get more credit for it [...]. I keep trying to find more hours in a day to learn more from all the resources you have provided.”

Erika Lopez Coca, Bolivia Flying Labs⁹¹

Our joint localization efforts are evaluated through well-defined metrics which are listed on the impact pages of both Flying Labs and WeRobotics.⁹²



THE 5 LEVERS OF LOCALIZATION

Next, we turn to the nature, quality and origins of the numerous relationships and partnerships that the growing ecosystem co-created by WeRobotics and Flying Labs.

“Increasing our growth and positive impact does not necessarily mean increasing our staff. None of our Flying Labs have 50 staff or 50 drones for that matter. Our focus since the beginning has always been to co-create Flying Labs as institutions that focus on partnerships and collaborations. Many of our Flying Labs when they receive any new opportunities, they either collaborate with companies they have incubated or they team up with partners of their host organizations. Not growing in terms of size has also helped Flying Labs remain sustainable because the lower the Human Resources, the easier it becomes thanks to fewer admin expenses. Partnerships are thus key to our long-term sustainability.”

Uttam Pudasaini, Nepal Flying Labs

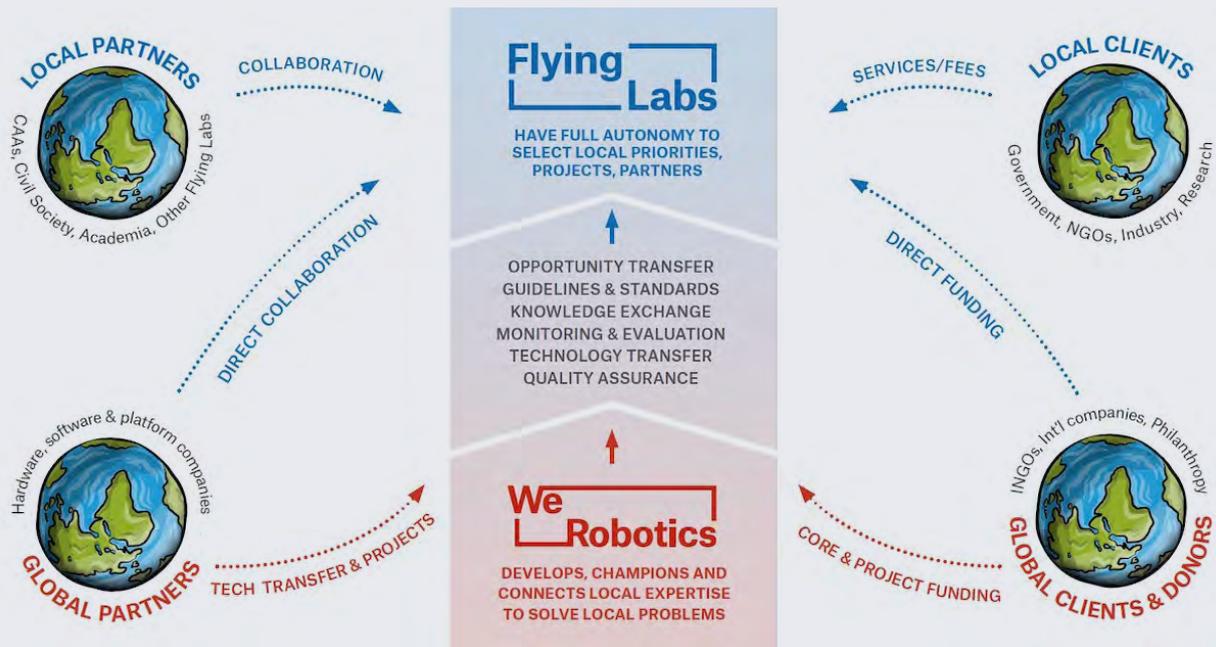
Flying Labs and WeRobotics are connected to a diverse ecosystem of partners. In this section, we review the relationship between: Flying Labs and WeRobotics; Flying Labs in the Flying Labs Network; Flying Labs and their own local, national clients and international partners; WeRobotics and their own international partners; Flying Labs and donors; and WeRobotics and donors. It’s worth emphasizing that the quality of relationships is ultimately more important than the type of relationship.

The relationships between Flying Labs, the Flying Labs Network and WeRobotics have caused some confusion in the past.⁹³ As noted above, Flying Labs are hosted by locally owned and operated legal entities. To date, only 3 hosting organizations (out of 30+) subsequently decided (on their own initiative) to create a separate legal entity for their Flying Labs.⁹⁴ Together, Flying Labs form the Flying Labs Network. WeRobotics serves as the primary enabler of the Flying Labs Network and has formal license agreements with the hosting organizations of every Flying Labs in order to officialize the partnership and streamline collaboration opportunities and subcontracting. At present, the Flying Labs Network is not yet its own legal entity. That said, as described earlier vis-a-vis Inclusive Leadership, this is expected to change in the coming years.

When a new Flying Labs joins the Network, they are given a yearly license to operate their Flying Labs. The decision to award a license is made by relevant Flying Labs and WeRobotics. The license itself is issued by WeRobotics, although this will be done by FL.org in the



RELATIONSHIPS



The relationship between Flying Labs and WeRobotics

future. When Flying Labs are awarded a license, they sign a license agreement that explains the responsibilities and expectations of Flying Labs.⁹⁵ These include carrying out at least three relevant activities (trainings, projects, etc.) per year, blogging about them and presenting them to fellow Flying Labs, contributing use-cases to WeShare, and participating in both Regional Calls and Flying Labs Retreats. The onboarding process for new Flying Labs also includes a contribution to the Flying Labs Fund. This contribution subsequently becomes an annual contribution. At present, Flying Labs contribute either USD 500 or USD 750 per year depending on whether the hosting organization has a nonprofit or for profit status. Note that 100% of contributions made to the Flying Labs Fund go right back to Flying Labs in the form of microgrants, technology transfers, online trainings, subsidized travel etc. Queen Ndlovu from South Africa Flying Labs states that "WeRobotics walks the talk unlike some organizations, [and] the annual contribution to the Flying Labs Fund is nothing compared to all we get, [...] the generous knowledge we receive from WeRobotics and other Flying Labs."⁹⁶

Flying Labs can leave the network at any time and for whichever reason. In this case, the license is once again made publicly available, which means that other local organizations can apply to hold the license. This happened

with the Flying Labs in Fiji, for example. The hosting organization felt they had gained all the value there was to gain from being part of the Flying Labs Network after 2 years.⁹⁷ Other examples of local organizations departing the network include those that previously ran Flying Labs in Benin and Zambia. Each of these Flying Labs are now hosted and coordinated by new local organizations.⁹⁸ The cases of Burkina Faso Flying Labs and La Réunion Flying Labs are somewhat different. Due to multiple challenges, the hosting organizations in these countries were unable to carry out relevant projects and activities for an extended period of time. They therefore decided that opening up the license to others was the best course of action.

At present, WeRobotics can unilaterally rescind licenses if hosting organizations violate their Flying Labs license agreement and related policies. This could happen, for example, if Flying Labs were to break national laws, behave unethically or dangerously, etc. WeRobotics has only had to do this once since 2015, which led them to develop a formal process for offboarding Flying Labs in these situations.

In terms of donors and clients, Flying Labs & WeRobotics cultivate these relationships both independently and in some cases together. Senegal Flying Labs, for example,



is currently establishing an independent and direct relationship with the Japan International Cooperation Agency (JICA) completely independently of WeRobotics. Individual Flying Labs thus determine their own relationships with their own stakeholders, including with local and national government, universities, industry, local communities and international organizations. Note that Flying Labs are strongly encouraged to carry out community engagement activities ahead of any projects. A dedicated Code of Conduct and online training exists to inform these community engagement activities.⁹⁹

To cite another example, Kenya Flying Labs has connected directly with various organizations and clients to explore engagement opportunities over the years. “One such organization is World Vision Kenya for whom Kenya Flying Labs is undertaking an ecological restoration project.¹⁰⁰ Kenya Flying Labs has already mapped 9 villages in Tana River County, creating high-resolution maps that “World Vision is using to identify with high precision the areas that require rehabilitation. The next phase of the project will use a seeder drone developed with WeRobotics to drop seedballs in hard-to-reach areas within the 9 villages initially mapped.”¹⁰¹

WeRobotics also establishes strategic partnerships with a range of international organizations so as to drive new opportunities to local organizations in the Flying Labs Network. For example, WeRobotics forged an organizational partnership with the World Food Program (WFP), which has resulted in new operational projects for Flying Labs in the Dominican Republic, Peru and Nepal over the years.¹⁰² Other WeRobotics partnerships specifically forged to support Flying Labs include the World Bank and the World Health Organization (WHO), to name a few.

WeRobotics is also crafting key relationships with industry to accelerate the transfer of relevant technologies and technical know-how from key companies to Flying Labs. More specifically, WeRobotics establishes formal partnership agreements with a wide range of companies and startups in the drones, robotics, data and AI sectors. These technology partnerships are established in response to new or ongoing priorities of Flying Labs. Technology partners either offer their technical platforms and know-how for free or at a



Nepal Flying Labs training the United Nations

significant discount. Where and when appropriate, they also provide formal training and technical support.

The drone company Skydio, for example, is a recent addition to the Flying Labs Network.¹⁰³ Their technology is of particular interest to Flying Labs because it is significantly more autonomous than any other drone platform on the market. This enables Flying Labs to offer new services based on new use-cases that can only work with Skydio technology, giving Flying Labs a first-mover advantage in their countries. (No doubt other drone companies will catch up and offer more advanced autonomy in the near future). Shortly after Skydio joined as a formal technology partner of the Flying Labs Network, they donated multiple drones to Namibia and Nepal Flying Labs as these labs had pitched the most compelling projects and use-cases for the Skydio platform. Namibia Flying Labs is using the Skydio drones to assess the integrity of water towers at public hospitals while Nepal Flying Labs is using the technology to capture high resolution data of local heritage sites. It’s worth noting that this is the first time ever that Skydio drones are being used in Namibia and Nepal, thus giving the Flying Labs there a distinct first-mover advantage.¹⁰⁴

Formal partnerships with technology companies are only explored when more than 10% of Flying Labs express written interest in a particular company following a formal webinar presentation by said company. In one recent example, Flying Labs turned down a partnership with a particular drone company as only 2 Flying Labs had expressed interest. WeRobotics connected those 2 Flying Labs directly with the company in order for them to explore bilateral partnership opportunities.



Note that neither Flying Labs nor WeRobotics are in any way obligated to use the technical solutions offered by these formal technology partners. They are free to use technologies that compete directly with those offered through technology partners. In one case, a prospective technology partner initially requested that their partnership agreement with the Flying Labs Network be exclusive, i.e., that Flying Labs could only partner with their drone company vis-a-vis medical drone delivery projects. Needless to say, this was a deal breaker. The company ultimately relented and withdrew their exclusivity clause following pressure from WeRobotics.

Flying Labs are also free to set up their own partnerships with companies. Take the case of Senegal Flying Labs, for example. They established their own formal and bilateral partnership with a South Korean drone company. In another example, the Coordinator of Côte d'Ivoire Flying Labs traveled to China multiple times to establish technology partnerships with drone companies there. Meanwhile, Tanzania Flying Labs has acquired underwater drones directly from a company that WeRobotics had not previously been in touch with.

“South Africa Flying Labs wouldn’t have been exposed to global tech for good agencies in such a short space of time if our Flying Labs was not associated with the Flying Labs brand. It is humbling that we were able to attract significant humanitarian agencies and startups such as WFP, UNICEF and Dosson. Consequently, our local partners are now availing some time to hear us out for possible partnerships unlike before.”¹⁰⁵

Queen Ndlovu, South Africa Flying Labs

In terms of the roles that each partner has in the localization effort, Flying Labs serve as an enabler for local partners and ecosystems in their own countries, much in the same way as WeRobotics serves as an

enabler for the Flying Labs Network. This is what local organizations sign up for when they join the network. As such, Flying Labs are co-created to strengthen local capacity and opportunities around the locally-led use of emerging technologies for positive social change. How they do this, with which partners and across which sectors is entirely up to Flying Labs. Joining the Flying Labs Network is purely voluntary and thus demand driven. WeRobotics does not tell local organizations to join the network, nor does it actively recruit new Flying Labs. As such, local organizations join the network because they see value and seek to become an enabler in their own countries and regions. They subsequently decide for themselves how best to do this.



Engaging with local communities in Zanzibar

One way that Flying Labs and WeRobotics enable other local partners and ecosystems is through WeRobotics’ sector-based programs. These programs enable Flying Labs to strengthen the capacity of local, national and international stakeholders across different sectors by offering a range of professional, sector-based trainings. Flying Labs have led 107 such professional trainings across multiple sectors since 2019.¹⁰⁶

Flying Labs thus represent a living example of an Inclusive Network that supports local organizations to expand their locally-led practice across multiple sectors. This locally-led practice serves to shift the power with local organizations and create more sustainable impact.



The role of WeRobotics in this respect is to co-create and co-iterate on the Inclusive Networks Model that powers the Flying Labs Network and to contribute to the Network's enabling environment. In terms of systems change, as described above, WeRobotics is also serving as a co-implementer of the Inclusive Leadership and Inclusive Power strategies.



THE 5 LEVERS OF LOCALIZATION

Local organizations that host and coordinate their own Flying Labs already have their own clients and funding streams when they join the Flying Labs Network. These continue, and indeed expand, thanks in part to joining the network. As noted above, WeRobotics also works on “Opportunity Transfer” by driving new or more opportunities to Flying Labs and thus their hosting organizations. In some cases, WeRobotics secures a new grant with or on behalf Flying Labs. Depending on donor requirements, the subsequent funding either goes straight to Flying Labs or goes to WeRobotics, which then subcontracts Flying Labs accordingly.¹⁰⁷ WeRobotics always encourages the former approach over the latter. Alas, this is not always an option depending on the donor or client in question, or due to other limitations such as financial transactions when a consortium of Flying Labs are part of a single multi-country grant.

In one particularly instructive case, WeRobotics and a given Flying Labs had secured the renewal of an important grant from the development agency of a country in the Global North. For many months, WeRobotics subsequently lobbied the development agency to have this third and final year of operational funding go directly to the hosting organization, a legitimate and well-known organization in the region. The agency perceived this as a financial risk however, and refused to route the funding to the hosting organization. The founders of WeRobotics therefore explicitly offered to have WeRobotics shoulder the financial risk in order to shield the development agency from any negative repercussions. The funding agency still refused to route the approved funding to the local organization. As a result of this impasse, the organization hosting the Flying Labs turned down the donor funding.

In contrast, in the case of Panama Flying Labs, WeRobotics did a considerable amount of the heavy lifting to secure a 3-year grant from the Inter-American Development Bank (IADB) to co-create the Flying

Labs in Panama. One hundred percent of this funding subsequently went to Panama Flying Labs, which then sub-contracted WeRobotics to carry out a number of deliverables. This is WeRobotics’ preferred route vis-a-vis the transfer of resources.

When new grant opportunities present themselves, WeRobotics will share these with all relevant Flying Labs and will encourage them to apply. If they do, WeRobotics seeks to support their grant applications by reviewing their drafts and providing suggestions. In other cases, after consulting with relevant Flying Labs, WeRobotics will do the heavy lifting on behalf of a consortium of Flying Labs by taking the lead in the grant writing and application. The latter was how Flying Labs and WeRobotics secured a 3-year grant from Fondation Botnar in 2021. This grant focuses on expanding the expertise, mutual capacity and impact of STEM projects across the Flying Labs Network.

In terms of localization activities, members of the Flying Council are compensated for their time by WeRobotics. This was necessarily the case vis-a-vis the co-creation of the Global Model, for example. Flying Labs and/or WeRobotics are currently fundraising for the other systems change initiatives, Inclusive Leadership and Inclusive Power, which means these are not yet operational and cannot yet be evaluated.

THE *DIRECTIONALITY* OF LOCALIZATION

This refers to the “**source of localization efforts, which can either be from the Global North or the Global South,**” although most localization efforts are not this binary. With this in mind, what is the directionality of localization in the Flying Labs Network and at WeRobotics?



Mutual capacity building in Nepal

The three co-founders of WeRobotics founded the nonprofit organization to counter the top-down and techno-centric approach of international social good projects. They believed that one of the best ways to do this was to work directly with and for proximate leaders and their local organizations. This belief was based on the

founders' own professional experience prior to launching WeRobotics. Together, they developed an initial blueprint for the Flying Labs Model in 2015. They subsequently secured funding from the Rockefeller Foundation in 2016 to apply this blueprint, with the goal of co-creating an effective localization model, i.e., the Inclusive Networks

Model. Needless to say, the operational model that drives the Flying Labs Network today looks very different from the initial blueprint drafted in 2015. Why? Because the operational model – the Inclusive Networks Model – was and continues to be co-created with and by local organizations in 30+ countries across Africa, Asia, Latin America, and beyond. In contrast, the initial theoretical blueprint itself was conceived by 3 foreigners from the Global North sitting in the US and Switzerland.

It is clear that the very initial impetus for WeRobotics and the idea of a Flying Labs Network originally came from the organization’s co-founders in early 2015, i.e., clearly from the Global North. At the same time, the basis of the Flying Labs idea was not formed within a vacuum. Rather, it was informed by the direct combination of two parallel factors. The co-founders each witnessed the myriad of problems enabled by systems that are dominated by foreign-led, top-down and techno-centric approaches. They witnessed this over the course of many years through their own work and research, and are themselves a product of these systems. The second factor that informed the idea of an alternative approach was the result of direct asks and demands from specific Global South partners and colleagues with whom the co-founders had previously worked. In sum, the co-founders of WeRobotics drafted the initial Flying Labs blueprint in response to what they saw as the systematic exclusion of local experts, along with the growing demand for inclusion as directly expressed by their partners and colleagues in the Global South. As such, the genesis of the Flying Labs idea is perhaps best described as the product of similar mindsets, values, learnings and informal exchanges between multiple individuals in the North and South, just like this report.

It should not come as a surprise, therefore, that the operational Flying Labs Network was a joint effort from the very moment that the first Flying Labs joined the network in September 2015 since the idea itself was the product of North-South interactions. This is exactly when the initial blueprint began to change and evolve. It is also important to recall that WeRobotics’ endgame as a nonprofit is not the Flying Labs Network per se, but rather the systems change strategies described above.¹⁰⁸ In time, the Flying Labs Network will be enabled by an independent legal entity firmly rooted in the Global

South, not WeRobotics. Will it be accurate and useful in the future to describe this latter path as “reverse directionality”?



The original Flying Labs team in Fiji

Still, what is the directionality of localization when it comes to WeRobotics and Flying Labs? At the risk of answering a question with another, perhaps the directionality of our shared story is more nuanced than a dichotomous variable can offer? The initial conditions clearly started with an initial blueprint ideated by Western founders in the Global North. We could leave it there since directionality seems to require giving one and only one group credit for the source of localization efforts. But no person is an island. We come from and are based in over 40+ countries in Africa, Asia, South Pacific, Latin America, Central America, Europe, and North America. Half of the core team members of WeRobotics identify as Black, Indigenous or People of Color (BIPOC). More than half of WeRobotics’ own Board of Directors also identify as BIPOC. As such, the resulting Flying Labs Network, and the Inclusive Networks Model that underpins it, continue to be shaped by a cosmopolitan network of experts in 40+ countries. This is by design. We deeply believe that “[m]any challenges today require learning that brings people together across different practices, different institutions, different goals, different cultures, different loyalties.”¹⁰⁹



WHO IS LOCAL?

The fourth and final pillar in the localization framework relates to the question of who is considered local? To date, WeRobotics has defined what constitutes a local actor, i.e., the kind of entity that can formally host their own Flying Labs. WeRobotics's definition is intentionally broad to enable any qualified, locally-owned, locally-managed and legally registered non-profit, for-profit, or academic organization (or a combination thereof) to host and coordinate their own Flying Labs.¹¹⁰ WeRobotics defines "locally owned" as an entity owned by one or more individuals who are from the country in which the entity is incorporated. Likewise, "locally managed" is defined as an entity that is managed by individuals who are from and fully based in the country in which said entity is incorporated.¹¹¹

WeRobotics has made 4 exceptions to the above definition of "local organization" over the past 5+ years. The Managing Director of Senegal Flying Labs, for example, is originally Béninois but is based full time in Senegal where he has been living and working for decades. Another example is Madagascar Flying Labs, which is hosted by a French-Malagasy company. The founder of this company, Aerial Metric, is a French national although he has lived in Madagascar for well over 20 years (and remained in Madagascar throughout the pandemic).

Ultimately, moving forward, the definition of local will be up to the executive leadership of the new legal entity (FL.org) to determine whether they wish to redefine this definition of local actor.

OPEN DISCUSSION ON THE FRAMEWORK AND MODEL

An open discussion on the model we've presented must necessarily include (and ideally start) with a transparent account of the tensions that we have experienced first-hand throughout the co-creation and implementation of the Inclusive Networks Model.¹¹² We therefore begin this section by describing some of the more difficult tensions that we encountered and continue to manage.

One tension that surfaces from time to time relates to cases when Flying Labs are hosted by just one organization, particularly when that hosting organization is a local company or startup. Such a setup can easily create the perception that other companies (competitors) in the same country are not able, permitted or encouraged to join and benefit as members of the Flying Labs. This single-company setup also runs the risk of a Flying Labs simply serving as the singular extension of a company, i.e., purely a marketing ploy. However, one of the mandates of Flying Labs is to serve as an enabler to a wide cross-section of stakeholders in-country, i.e., to create enabling environments, and to enable more local

experts to gain the professional skills and experience to lead projects themselves. In this way, therefore, a company that hosts a Flying Labs has the mandate of creating its own local and national competition. This can obviously create some tensions.

The way we've managed this tension is two-fold. First, by openly communicating this tension to new companies that plan to apply to host their country's Flying Labs. This gives the applicant the opportunity to reconsider whether the Flying Labs Network is the right fit for them. On our side, we emphasize that no one single company can take on all possible projects within a country, and that instead of competing with others, there may be far more value to their company if they proactively form strategic partnerships based on trust and collaboration. Some companies have not shared this vision, others have. It often comes down to mindset.



Entrepreneurship workshop in East Africa

The second way we've managed this tension is by recommending that new Flying Labs be hosted and coordinated by more than just one company or entity from the get-go. This has led to notable improvements in newer Flying Labs. Unfortunately, this does not solve the tension that exists when an older Flying Labs continues to be led only by one company that brings a more competitive mindset to the Flying Labs Network. A deeper tension can occur when a hosting company in one country has commercial interests and contracts in neighboring countries where Flying Labs are operational. It is quite reasonable for these neighboring Flying Labs to expect the company in question to engage them as partners on some of these projects. We've experienced one such case first-hand where the company in question refuses to partner with relevant Flying Labs. As a consequence of this tension, those Flying Labs are no longer sharing information openly through the network for fear that this company will use this information to secure more contracts in their country.

To say that this situation is suboptimal is an understatement. WeRobotics has engaged this company multiple times but continues to make little progress. They have therefore asked the affected Flying Labs in the neighboring countries for advice on how to remedy this situation. These Flying Labs have proposed a good solution, which they themselves are best placed to communicate and implement. It remains to be seen if this solution resolves the existing tension.

A related tension surfaces when Flying Labs carry out projects in countries where no Flying Labs exist. When this happens, these projects are clearly not locally-led. A more accurate term would be "regionally-led". But if the goal of the Flying Labs Network and WeRobotics is to enable and expand locally-led action, then doesn't regionally-led action stand in direct contradiction to this goal? We don't have an immediate solution to remedy this tension. What we can say is that in some cases, these regionally-led projects have been a particularly useful way to inform local experts in those countries about the Flying Labs Network and how to join.

Another tension relates to the Global Model, the Flying Labs Network's shared governance model based on periodic self-evaluations of each Flying Labs. The model includes 8 key objectives measured through

several dozen specific criteria, all co-created with Flying Labs in 2020. During the co-creation process, the test phase and throughout the 3 evaluation rounds since its implementation by all Flying Labs, it has become evident that some Flying Labs struggle more with the concept of openly evaluating their strengths and contributions than others. This tension is born out of a variety of factors including: culture, fear of losing face, past experiences of the team members with evaluation/governance mechanisms, and accepting the fact that scores demonstrate a specific situation at a specific moment and can both increase and decrease over time, for example.

The pandemic has heightened this tension because the majority of Flying Labs have had to scale back their plans and activities as a result of coronavirus. This has necessarily led to some lower scores. As a result, a few Flying Labs recently voiced their sense of discouragement during a Regional Call in January 2022. As a result, other Flying Labs jumped in to reassure their fellow Flying Labs coordinators. They shared their thoughts, emotions and experiences, along the lines of, "We have all been struggling due to the pandemic; the past 2 years have been really hard; this year will be better; it is really understandable that we are all exhausted; we must take care of ourselves and wellbeing; we're all over achievers, why don't we just focus on simply normal achieving where and when we can, and then celebrate our achievements?" Those Flying Labs coordinators who had felt disheartened expressed their thanks for the encouragement, and one of them invited all of us to her country for the next in-person Flying Labs Retreat. This drew smiles and enthusiasm from all on the call.

There are of course multiple other tensions to share, both past and present. We plan to write these up in a separate report and to share this widely as they are central to our collective learning. We also plan to host a webinar specifically on the topic of tensions. The final point we want to make on this topic is that tensions will always exist. What's important is how we go about managing them that matters most. This is also where shared values become important. These shared values ultimately ensure that these tensions remain manageable and solvable, enabling the Flying Labs Network to continue thriving.



Engaging with local representatives and communities

While the localization framework from ODI was an insightful way to analyze and frame the Inclusive Networks Model, it is also true that one can use this analysis to test the ODI framework itself. One learning we have from this is that the framework (along with similar reports on localization) may at times give the impression that the world is composed of a hegemon and multiple subjects. The hegemon is the Global North. The subjects are the various communities of the Global South. The North is the bearer of modernist universalism. The South has multitudinous "ways of being" which have been colonized by this modernist universalism. But reality is historically more complicated, and far more *interesting* than this.¹¹³ Small towns in the Global North, for example, may not be any more or less the bearers of colonial modernity than villages in the Global South.

This is why some of us are concerned that the word "local" itself may be starting to bear far too much weight. It cannot sustain this weight. After all, it is possible to identify counter examples where local experts, proximate leaders and local communities in both the Global North and South are either ineffective on their own terms, or examples where "locality" itself is something that some locals are trying to get out of. Locality is not only important because of location or scale per se. It is also important as a means to correct for disparities, power divides, and limited ideas, and it requires contextualization through networks and cosmopolitan engagements.

We encountered a number of additional challenges when applying the ODI framework. There are key elements of the Inclusive Networks Model that seem to go somewhat beyond the framework. This point was emphasized most notably by Naxa, the social enterprise that hosts Nepal Flying Labs. Naxa recommends the creation of an additional dimension or lever within the framework that caters to "Opportunities, Visibility and Marketing." They argue that these factors represent a significant advantage in terms of the diversity of the Flying Labs Network. "Flying Labs can pitch their ideas and concepts to experts in more than 30 countries at once. If such a network like this one didn't exist, it would be very difficult for local experts in the Global South to share about their work, expertise, services and products to potential partners in so many countries. Our network brings a lot of new opportunities, and also helps Flying Labs and the hosting organization to scale up and expand their business outside of their country."¹¹⁴

This point is backed by a host of evidence. At the time of writing, for example, Nepal Flying Labs (hence Naxa) is being contracted directly by the World Food Program (WFP) to carry out in-person regional training on the use of drones in humanitarian action. This opportunity was actively pursued by WeRobotics for a 6-month period on behalf of Nepal Flying Labs. Note that the funding from WFP will go directly to Nepal Flying Labs, i.e., the money won't go through WeRobotics. Other examples include WeRobotics contracting a founding member of India Flying Labs to lead the technical operations for a joint project with Papua New Guinea Flying Labs and the Center for Disease Control (CDC). This founding member, Redwing Labs, is an Indian startup drone startup that focuses on cargo delivery. This project was implemented in early 2019, at a time when getting flight permissions for identical projects in India was impossible due to regulatory impediments. The fact that Redwing was able to join a medical drone delivery project elsewhere in Asia thanks to the Flying Labs Network gave them a significant advantage after they returned to India. At one point in 2021, Redwing was carrying out over 600 drone deliveries per week in India.¹¹⁵

Another important feature of the Inclusive Networks Model that goes beyond the localization framework proposed by ODI is exemplified by the BizRobotics Program at WeRobotics.¹¹⁶ This program seeks to expand the number of locally-owned and locally-managed businesses that offer professional drones services across different sectors. The ultimate purpose is to enable more locally-led projects and thus reduce the need for foreign-led projects. WeRobotics has thus far run this 8-month program with Flying Labs in Nepal, Tanzania, Senegal, and Panama, which has resulted in the incubation of 11 local drone businesses. These businesses have since run several dozen locally-led projects with local, national and international partners in their countries.

“The BizRobotics Program by WeRobotics, first introduced during the early days of the Flying Labs Network, was a unique business incubation program,” notes Nepal Flying Labs.¹¹⁷ “In any country where technologies like drones are in a very early stage, just co-creating a local entity like a Flying Labs and giving them all the support is not going to be enough. Sometimes, you need to contribute and work together with the Flying Labs to actively co-create the entire ecosystem, working closely with other local actors. When Nepal Flying Labs was established in September 2015, there were no private companies in Nepal dedicated to the drone sector. WeRobotics came up with an idea of organizing a dedicated business mentorship program and hence organized a 6-month long business incubation program together with Nepal Flying Labs. To our surprise, more than 100 youths submitted their ideas and 4 companies were selected as the finalists. Today, 2 of these 4 drone companies are amongst the leading drone-based service providers in Nepal.”¹¹⁸

One of these startups is called DroNepal.¹¹⁹ When WeRobotics identified a potential project opportunity in Nepal through the HealthRobotics Program, Nepal Flying Labs was particularly keen to jump at the opportunity but noted that they would want to bring on DroNepal for the most important technical operations.¹²⁰ In other words, by teaming up, Nepal Flying Labs and DroNepal offered greater capacity and expertise than they would have had by going at it alone. What’s more, given that the project focused on the use of drones to deliver patient samples



Entrepreneurship workshop in Nepal

for rapid TB testing, this offered both Nepal Flying Labs and DroNepal to expand their expertise and services beyond the use of drones for data collection. It is also worth noting this drone delivery project was the very first project of its kind in Nepal and subsequently won a high-profile international award of excellence.¹²¹

By working together, Nepal Flying Labs and the businesses they incubated with WeRobotics helped to “create a positive ecosystem around the responsible use of drones for positive social impact in Nepal. In other words, the BizRobotics Program not only serves to create more business opportunities around drone technology, but also enables entities like Flying Labs to co-create an ecosystem that favors the positive use of such new technologies in general.”¹²² In sum, BizRobotics has successfully strengthened and expanded mutual capacity and expertise in Nepal, Tanzania, Senegal, and Panama.¹²³ What’s more, the program has enabled new locally-owned businesses to grow, which has also created meaningful jobs.

The analysis in this report suggests that the model, while certainly not perfect by any means, has nevertheless shown notable success in expanding locally-led practice as defined by local experts and local organizations. As far as we can gather, there appear to be very few practical localization efforts out there that have transitioned from theory to practice, let alone been co-created and co-implemented in 30+ countries across 5 continents for more than half-a-decade now, not to mention efforts that have co-created replicable models backed by a strong evidence-base.

While the Flying Labs Network is not WeRobotics' endgame, it is a vital part of the journey towards systems change. WeRobotics is now actively pursuing its systems change efforts using the Inclusive Networks, Inclusive Leadership, and Inclusive Power strategies. As discussed above, the inclusive model seeks to enable other organizations to adapt and adopt the Inclusive Networks Model, i.e., the co-created model that powers the Flying Labs Network.

More specifically, the purpose of our inclusive model is to enable other organizations and networks to shift power with their local partners, and thereby help to enlarge the overall space for locally-led action. Organizations can adopt the inclusive model to redefine their roles and to identify their added value in supporting local experts, organizations, ownership and practice.¹²⁴ The model enables international organizations to reinforce rather than replace, displace or undermine local experts and organizations.¹²⁵ According to Nepal Flying Labs, the oldest Flying Labs in the network, organizations that seek to adapt and adopt the Inclusive Networks model must be ready to accept that not every member of the network will be equally active at any given time. They must also understand that "an enabler entity is absolutely required to continually keep pushing the network. You need to constantly push, struggle, and remind yourself to get easy things done. And be ready to accept diversity."¹²⁶

In sum, we believe that this practical model can enable international organizations to become more impactful by reimagining and reinventing themselves; by pivoting towards a genuine, local-first approach. To this end, we have already developed a concept note that provides interested partners with a practical overview on how to adapt and adopt this model.

This of course opens up a host of important questions and challenges, however. For example, can others really become more successful by adopting the Inclusive Networks Model? How much of the model can be adapted? What factors might derail the adoption or success of the model? How much do the "initial conditions" of the enabling organization matter to the subsequent success of the model? How important are values and mindsets when driving the successful adoption of the inclusive model? We hope to shed some light and concrete

insights on these questions in 2022 as we plan to begin work with a number of organizations to enable them to adopt and adapt the model. In the meantime, we reiterate our open invitation for constructive feedback and also very much welcome input on the above questions on the adaptability of the Inclusive Model.

CONCLUSION

We're using this report to invite constructive feedback on the Inclusive Networks Model as exemplified by the Flying Labs Network. We seek to use this feedback to further improve the model and network. We're also keen to receive this feedback given the growing interest from other organizations who wish to adapt and adopt the Inclusive Networks Model and Power Footprint Models for their own purposes.

The inclusive model has enabled the Flying Labs Network and WeRobotics to successfully expand the space for locally-led practice during the course of the past 5+ years. This has also enabled WeRobotics to reduce its own power footprint as an INGO. The success of this inclusive model is documented by the large evidence-base generated by-and-with 200+ proximate leaders and 30+ local organizations in Africa, Asia, Latin America, Central America and the South Pacific over more than half-a-decade. This study used an independent and holistic analytical framework to frame, query and share the rich base of evidence that Flying Labs and WeRobotics have created over the years. In doing so, we have demonstrated why the collective approach we've taken continues to shine.

Now suppose that another "forward-thinking INGO wanted to support their work through localization," that is, by working with proximate leaders and local organizations, rather than through direct implementation. What would that look like? This question is posed by Arbie Baguios, a localization expert and co-author of the ODI report.¹²⁷ Baguios does not answer the question per se as he argues that the agency of these proximate leaders and local organizations would inevitably be encroached upon by the INGO due to the very nature of the international humanitarian system as it currently stands. As such, said INGO would also be unable to fully respect local ways of being. In other words, given the current system, INGOs may be incapable of fulfilling "the radical localization that local actors imagined prior to the World Humanitarian Summit."

Baguios therefore introduces 3 different types of localization, instrumental, decentralizing and progressive to differentiate between the more "radical" imaginings of localization and more mainstream imaginings. Instrumental localization is when "there is only mostly resource transfer," while decentralizing localization can be understood as "a transfer of resources and a reduction, to a certain extent, on the encroachment of local agency." In contrast, progressive localization is one that "transfers a significant amount of resources, does not encroach on the agency of local actors to a high degree, and respects local actors' ways of being." The progressive approach is "firmly in the direction of genuinely supporting local solutions. The locus of power is shifted to local actors to address [...] problems in their own terms," and in "ways that are relevant and appropriate to their context [...]" Baguios adds that this type of localization is exceedingly rare within the international humanitarian architecture and its institutional context.

Rare does not mean non-existent, however. The Inclusive Network Model, as embodied by the Flying Labs Network is a practical, operational and successful example of progressive localization. We also believe that this model can be replicated. So to answer Baguios's question, *What would that look like?*, it would look something like the Inclusive Network Model, adapted and adopted based on local context, agency and ways of being. Ultimately, this answer has no need to resort to theoretical concepts of localization, or approaches that remain largely untested. Quite on the contrary, the Inclusive Network Model already exists in reality and independently of any theory, discourse, webinar or conference on localization. This answer sits on 5+ years of operational experience with 200+ proximate leaders and local organizations in 30+ countries.

This answer also passes the “Power Footprint Test” since WeRobotics has been able to reduce its own power footprint while expanding the power footprints of local organizations in the Global South by co-creating and enabling the Flying Labs Network with proximate leaders.

This report outlined how we are combining the Inclusive Networks Model with the Power Footprint Model to make a contribution to sustainable systems change. These models and the ideas behind them are deeply rooted in the demonstrated success of the Flying Labs Network based on evidence documented in this study. We are now ready to work with other like-minded organizations and networks to enable the adoption of the Inclusive Networks Model. We also seek fellow travelers to co-create the “Power Footprint Model”. There are of course a number of very interesting questions to address along the way, as noted in this report, which is precisely why we’re keen to get started. So please do get in touch to explore the use of this model for your own work. In sum, this report is a direct call to INGOs, donors and local organizations to shift power with proximate leaders at a massive scale. We are one of many, and invite other like-minded organizations to join us on this journey to systems change. The time is now.

ENDNOTES

- ¹ We recognize that the term “localization” is imperfect and far from self-explanatory. We actively invite recommendations for more appropriate language.
- ² “Localization.” OCHA, January 18, 2019. <https://www.unocha.org/lebanon/localization>.
- ³ “From the Ground up: Local Partners Improve Health Care.” World Health Organization. World Health Organization, April 17, 2018. <https://www.who.int/health-cluster/news-and-events/news/localization/en/>; Librarian, IntraHealth. “Localization of Health Systems in Low- and Middle-Income Countries in Response to Long-Term Increases in Energy Prices.” HRH Global Resource Center. Accessed October 23, 2021. <https://www.hrhresourcecenter.org/node/5597.html>; Rep. Social and Solidarity Economy for the SDGs: Spotlight on the Social Economy in Seoul. Geneva: United Nations Research Institute for Social Development, 2018.
- ⁴ “Localisation Re-Imagined: Localising the Sector vs Supporting Local Solutions.” ALNAP, February 11, 2020. <https://www.alnap.org/localisation-re-imagined-localising-the-sector-vs-supporting-local-solutions>; V Metcalfe-Hough et al., “The Grand Bargain at Five Years: an Independent Review” (London: ODI, 2021); “Global Humanitarian Assistance Report 2021,” Development Initiatives, 2021, <https://devinit.org/resources/global-humanitarian-assistance-report-2021/#downloads>.
- ⁵ The Nepali organization is a social enterprise while the Peruvian one is a for-profit company. In Tanzania, a non-profit organization was incorporated several years later to host and coordinate Tanzania Flying Labs. During the first several years, the team at Tanzania Flying Labs ran their Flying Labs as independent consultants. Taken together, these organizations are local in that they are locally-owned and locally-managed. They operate at the local level in specific communities and also across multiple parts of their countries, including at the central level. These operations are demand-driven and said demand comes from a range of partners including local, national and international organizations.
- ⁶ See WeRobotics.org and FlyingLabs.org.
- ⁷ See WeRobotics.org/impact. WeRobotics could not have been anywhere near as impactful if it had sought to lead the projects spearheaded by local organizations across the Flying Labs Network.
- ⁸ We recognize that the term “local expert” is imperfect, and are considering the use of “proximate leaders” as a possibly more appropriate term. By local expert, we mean an expert from the country in question and based in said country. In very rare cases, this requirement is relaxed when the expert in question is not from said country but has been living in said country for many years, and is from the same region. In terms of WeRobotics, the core team includes 10 individuals, part-time consultants and interns (plus an engineering team dedicated to specific projects). The core team of 10 is composed of 6 women and 4 men. Half of the core team identifies as Black, Indigenous or Persons of Color (BIPOC) and the other half as White. Core team nationalities include American, Australian, Fijian, Kenyan, Mongolian, Polish, Singaporean and Swiss. Current intern nationalities include Nigerian, Zambian and Zimbabwean.
- ⁹ While the model presented here has been operational for more than 5 years and shown to be particularly effective (as documented in this report), the model itself has been overlooked in all formal reports and studies on localization published in the past half-decade. The model has also been overlooked in high-level conferences, workshops and webinars on localization and the formal Grand Bargain process. It should be noted that the model (and the corresponding operational network) presented here are both public and have been the feature of some 300 blog posts written since 2019 by Flying Labs and WeRobotics, the co-creators of said model and network. The reason why this model is not included in formal publications and conferences may be due to the following. The model is first being applied operationally in the context of locally-led social good applications of drones and robotics. As such, WeRobotics is often perceived as a “tech nonprofit” rather than a social justice organization (the two are in no way incompatible). This emphasis on technology is potentially distracting from the focus on the underlying localization model. What’s more, this application of drones and robotics is not solely limited to humanitarian aid and global development. It is far broader, spanning across more than half-dozen sectors. This more diffuse approach may also explain why the underlying localization model does not appear on the radar of traditional humanitarian organizations and their mainstream reports on localization or the formal Grand Bargain process. Last but not least, the underlying model has not previously been presented in a formal and integrated manner using more academic frameworks and academic language. Taken together, these reasons may potentially explain why the model and network presented here have remained largely “invisible” to organizations and donors in the formal “localization community.” A recent example of this invisibility is the comprehensive report on localization published by the Overseas Development Institute (ODI) in October 2021. The report includes a review no new fewer than 28 localization efforts around the world. The inclusive model and operational network presented here is not included in this report. ODI Report: Arbie Baguios et al., “Are We There Yet? Localisation as the Journey towards Locally Led Practice” (London: ODI, 2021).
- ¹⁰ By local organization, we mean a locally-owned and locally-managed entity that is legally registered in the country in which it operates.

- ¹¹ Flying Labs are especially engaged in accelerating locally-led progress towards SDGs 2, 3, 4, 5, 6, 8, 9, 10, 11, 14 and 15.
- ¹² See FlyingLabs.org/impact
- ¹³ One way we did this was by introducing new bi-annual virtual Flying Labs Retreats, which included sessions led by Flying Labs on wellbeing and mental health. The Retreats also included several dozen cultural celebrations led by Flying Labs and WeRobotics. "The Flying Labs Retreat: Good for the Soul," WeRobotics Blog, August 3, 2020, <https://blog.werobotics.org/2020/08/03/the-flying-labs-retreat-good-for-the-soul>. See also this dedicated focus on our joint COVID response: <https://werobotics.org/covid>.
- ¹⁴ More specifically, the Flying Labs Network grew from 26 to 33 Flying Labs between March 2020 and February 2022.
- ¹⁵ See FlyingLabs.org/impact (the page will be updated with 2022 activities during Q2).
- ¹⁶ See [WeRobotics.org/impact](https://werobotics.org/impact) (the page will be updated with 2022 activities during Q2).
- ¹⁷ We are currently running the figures for 2021.
- ¹⁸ "Localisation Re-Imagined: Localising the Sector vs Supporting Local Solutions," ALNAP, February 11, 2020, <https://www.alnap.org/localisation-re-imagined-localising-the-sector-vs-supporting-local-solutions>.; ODI, "The Grand Bargain at Five Years".
- ¹⁹ Arbie Baguios et al., "Are We There Yet? Localisation as the Journey towards Locally Led Practice" (London: ODI, 2021).
- ²⁰ Arbie Baguios et al., "Are We There Yet? Localisation as the Journey towards Locally Led Practice" (London: ODI, 2021).
- ²¹ "Do Social Good Organizations Have an Endgame?," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/06/28/do-social-good-organizations-have-an-endgame>.
- ²² Arbie Baguios et al., "Are We There Yet? Localisation as the Journey towards Locally Led Practice" (London: ODI, 2021).
- ²³ Andy Featherstone, "Localisation Performance Measurement Framework" (Network for Empowered Aid Response, 2019).; "Measuring Localisation: Framework and Tools," Humanitarian Advisory Group, September 12, 2021, <https://humanitarianadvisorygroup.org/insight/measuring-localisation-framework-and-tools/>.; Plan International, "Localisation of Humanitarian Action," ALNAP, February 15, 2021, <https://www.alnap.org/help-library/localisation-of-humanitarian-action>.; "Pathways to Localisation: A Framework towards Locally Led Humanitarian Response in Partnership-Based Action [EN/AR/Ne] - World," ReliefWeb, 2019, <https://reliefweb.int/report/world/pathways-localisation-framework-towards-locally-led-humanitarian-response-partnership>.; "Localisation Performance Measurement Framework," Resource Centre (NEAR, June 16, 2020), <https://resourcecentre.savethechildren.net/library/localisation-performance-measurement-framework>.; "Localising the Response: World Humanitarian Summit Putting Policy into Practice" (Paris: OECD, 2017).; V Barbelet, "As Local as Possible, as International as Necessary: Understanding Capacity and Complementarity in Humanitarian Action" (London: ODI, 2018).; "Accelerating Localisation through Partnerships Research - Global Report" (Christian Aid, 2020).; "A Review of UNICEF's Approach to Localization in Humanitarian Action" (New York, NY: UNICEF, 2019).
- ²⁴ Arbie Baguios et al., "Are We There Yet? Localisation as the Journey towards Locally Led Practice" (London: ODI, 2021).
- ²⁵ See <https://odi.org/en/about/>
- ²⁶ Disclaimer: Arbie Baguios, one of the authors of the ODI report, joined the Board of Directors of WeRobotics in January 2021.
- ²⁷ That being said, one could argue that this report could just as well be written without having to resort to a formal analytical framework such as the one presented in the ODI report. Fact is, we tried doing so but found ourselves going down on too many "rabbit holes". An independent analytical framework provides a helpful way to frame and communicate our learnings in a more structured manner. At the same time, we want to be clear that we are not making the following argument: Our Inclusive Networks Model works because it happens to fit a specific analytical framework. This is not the purpose or motivation driving this study.
- ²⁸ See Value Proposition for Flying Labs: <https://werobotics.org/wp-content/uploads/2020/10/Flying-Labs-Value-Proposition-August-2021.pdf>
- ²⁹ "The Future of Hazard & Vulnerability Mapping in Nepal," WeRobotics Blog, June 14, 2018, <https://blog.werobotics.org/2017/04/19/the-future-of-hazard-vulnerability-mapping-in-nepal>.; "Preventing Coastal Oil Pollution in Zanzibar Using Drones," WeRobotics Blog, June 14, 2018, <https://blog.werobotics.org/2017/11/26/preventing-coastal-oil-pollution-in-zanzibar-using-drones>.; "Cargo Drones Deliver in the Amazon Rainforest," WeRobotics Blog, June 14, 2018, <https://blog.werobotics.org/2017/02/13/cargo-drones-amazon-rainforest/>.
- ³⁰ "Enabling Environment," WeRobotics, August 12, 2021, <https://werobotics.org/enabling-environment>.
- ³¹ The full list of our partners, including the technology partners of Flying Labs and WeRobotics, is listed here: <https://werobotics.org/donors-partners>

- ³² The Affiliation Model was originally based on the TEDx model.
- ³³ See <https://flyinglabs.org/wp-content/uploads/2020/02/Affiliate-Flying-Labs-Program-Live-Documents-1.pdf?x79371>
- ³⁴ More specifically, existing local organizations that have demonstrated expertise join the network by co-creating their Flying Labs through our Affiliation Model. They subsequently receive an annual license to lead their Flying Labs. Ideally, a consortium of diverse local organizations team up to co-create their Flying Labs. While a Flying Labs license is held by one existing local legal entity, others join as formal coordinators of the Flying Labs through formal partnership agreements. Financial sustainability is typically the product of fees-for-service to local (80+%) and international (20% or less) clients.
- ³⁵ Comment shared by Uttam Pudasaini from Nepal Flying Labs with WeRobotics co-founder Patrick Meier on Saturday, November 20, 2021.
- ³⁶ "Failing Forward at Werobotics," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/07/26/failing-forward-at-werobotics/>.
- ³⁷ The Flying Council is currently composed of self-elected representatives from 9 Flying Labs. See "Shifting the Power: Why We're Co-Creating an Independent .Org with Local Experts," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2020/07/27/shifting-power-fl-org>.
- ³⁸ "Localisation Re-Imagined: Localising the Sector vs Supporting Local Solutions," ALNAP, February 11, 2020, <https://www.alnap.org/localisation-re-imagined-localising-the-sector-vs-supporting-local-solutions>; ODI, "The Grand Bargain at Five Years".
- ³⁹ Donors define the time frames for funded projects, and requirements around how the funding can be used to implement said projects.
- ⁴⁰ Email sent by Queen Ndlovu, South Africa Flying Labs, to WeRobotics co-founder Patrick Meier on Tuesday, November 16th, 2021.
- ⁴¹ Email sent by Charles Kamba and Viriginie Uwimana, Namibia Flying Labs, to WeRobotics co-founder Patrick Meier on Thursday, November 25th, 2021.
- ⁴² This is expected to change in 2022 when Panama Flying Labs spins out of the university and gets hosted by Cobot Labs, with the university continuing to serve as one of the official partners of Panama Flying Labs.
- ⁴³ Email sent by Dania Montenegro, Panama Flying Labs, to WeRobotics co-founder Patrick Meier on Tuesday, November 16th, 2021.
- ⁴⁴ Email sent to WeRobotics co-founder Patrick Meier on Thursday, November 16th, 2017. The emphasis on "and I mean the first" is original and not added by the authors of this article.
- ⁴⁵ Bai, Hefei et al. (2020). "Supporting the Power of 'Local' in a Global Network of Robotics Solutions." School of International and Public Affairs (SIPA), Columbia University.
- ⁴⁶ WeRobotics Blog, "Cargo Drones Deliver in the Amazon Rainforest".
- ⁴⁷ "Underwater Drones: Lessons Learned from the South Pacific," WeRobotics Blog, April 20, 2021, <https://blog.werobotics.org/2018/03/28/underwater-drones-lessons/>; "Underwater Drones: Lessons from East Africa," Flying Labs Blog, September 1, 2021, <https://blog.flyinglabs.org/2021/09/01/underwater-drones-lessons-from-east-africa>.
- ⁴⁸ Keep in mind that Flying Labs are hosted by existing local organizations, and that the latter may be at full capacity when a new opportunity presents itself for their Flying Labs.
- ⁴⁹ "Tanzania Drone Pilots Team up with IFPRI and Local Smallholder Farms," WeRobotics Blog, June 14, 2018, <https://blog.werobotics.org/2018/04/10/tanzania-drone-pilots-team-up-with-ifpri-and-local-smallholder-farms>.
- ⁵⁰ This acts as a negative feedback loop: further diminishing local expertise and opportunities by exporting "higher-end" requirements or capabilities outside of the country thereby preventing these skills from being developed locally.
- ⁵¹ Comment made by the Coordinator of a new Flying Labs during the 2017 Flying Labs Retreat on June 1, 2017.
- ⁵² The main reasons why local organizations requested that WeRobotics take the lead on this was simply a question of bandwidth and urgency. They felt that WeRobotics might have more time to produce a first draft more quickly. Note that local organizations across the Flying Labs Network regularly task WeRobotics to produce specific documents, templates, etc.
- ⁵³ "Drone Charter on Equal Opportunity Advocates for Local Expertise," WeRobotics Blog, June 21, 2019, <https://blog.werobotics.org/2019/06/04/drone-charter-on-equal-opportunity-advocates-for-local-expertise>.
- ⁵⁴ WeRobotics did not yet exist when this project was implemented in September 2015. The organization was only incorporated months later, in December 2015. "Video: Crisis Mapping Nepal with Aerial Robotics," iRevolutions, November 14, 2015, <https://iRevolutions.org/2015/11/04/crisis-mapping-nepal-aerial-robotics>.
- ⁵⁵ Email sent by Erika Lopez Coca to WeRobotics co-founder Patrick Meier on Sunday, November 14th, 2021.
- ⁵⁶ We are currently initiating an analysis on various setups of Flying Labs to study various setups and levels of sustainability. We already know that the most sustainable Flying Labs are those who take a consortium approach and work closely with

many partners. A consortium in the case of Flying Labs will typically include a university, a social enterprise and/or non-profit, and in some cases a government partner as well.

- ⁵⁷ This has not been a major challenge. In very few cases, when hosting organizations implement a Flying Labs project and only use their organization's affiliation when communicating on said project, this reduces the visibility of the Flying Labs Network, which can make it more challenging for WeRobotics to fundraise for and with Flying Labs. We overcome this challenge by communicating the importance of "co-branding" and "co-marketing", i.e., that they can use both the brands (e.g., logos) of their hosting organization and of their Flying Labs when engaged and communicating on Flying Labs related projects.
- ⁵⁸ We have collectively implemented a number of organizational practices and procedures to gather quality feedback. We have defined feedback loops with Flying Labs that allow us to discuss local and indigenous systems and how this is important in helping us support Flying Labs. For example, we organize individual check-in calls with Flying Labs every 2 months. We also organize annual license renewal calls and Flying Labs Global Model evaluations calls, which serve as important feedback loops. We are also assessing demand from Flying Labs for a dedicated working group focused on indigenous systems.
- ⁵⁹ Comment shared by Dania Montenegro, Panama Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021.
- ⁶⁰ Comment shared by Dr. Ruchi Saxena, India Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021.
- ⁶¹ Email sent by Queen Ndlovu to WeRobotics co-founder Patrick Meier on Tuesday, November 16th, 2021.
- ⁶² Emails sent by Queen Ndlovu to WeRobotics co-founder Patrick Meier on Wednesday, August 25th and Tuesday, November 16, 2021.
- ⁶³ This is largely informed by the Flying Labs "Global Model", a governance and self-evaluation model co-created with and by Flying Labs. See the section below on Priorities for a more detailed overview of the Global Model. In addition, the joint program "Turning Data Into Action" has produced a framework and toolkit to define and evaluate success/results. Naturally, when projects are financed by donors, both Flying Labs and WeRobotics are typically subject to monitoring and evaluation indicators required by said donors.
- ⁶⁴ It's worth noting that WeRobotics faced a similar disinformation campaign instigated by individuals within a powerful UN agency. Due to lack of oversight within this UN agency, these individuals were able to (ab)use their power for years in an attempt to discredit WeRobotics. What was their motivation? They perceived WeRobotics to be a possible competitor, one that could potentially take funding and the limelight away from them. WeRobotics ultimately had to escalate this serious matter all the way to the UN Ombudsman to have the case formally investigated and corrective action taken.
- ⁶⁵ Emails sent by Yussuf Said Yussuf to WeRobotics co-founder Patrick Meier on Wednesday, August 25th and Tuesday, November 16, 2021.
- ⁶⁶ Comment shared by Cleopa Otieno, Kenya Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021.
- ⁶⁷ If an application to join the Flying Labs Network does not meet the stated minimum requirements, then the application is turned down. If this is primarily due to lack of relevant experience and expertise, then the applicant is provided with a set of concrete recommendations on how to strengthen their expertise. With this, the applicant is formally invited to apply again in at least 6 months. One recent example comes from an organization in Brazil which had little to no experience working with drone technology. As such, they were advised to gain more experience by taking drone certification trainings available in Brazil and to consider taking the online trainings available through Flying Labs and WeRobotics. Next, it was recommended that they team up on appropriate projects with local organizations to expand their first hand experience.
- ⁶⁸ "Drones and the Coronavirus: Do These Applications Make Sense? (Updated)," WeRobotics Blog, June 1, 2020, <https://blog.werobotics.org/2020/04/09/drones-coronavirus-no-sense.>; "So You're Thinking of Using Drones in Response to COVID-19? Why?," WeRobotics Blog, April 10, 2020, <https://blog.werobotics.org/2020/03/30/thinking-of-using-drones-covid-19-why.>; "Drones, Data Protection and the COVID-19 Response," WeRobotics Blog, March 30, 2020, <https://blog.werobotics.org/2020/03/30/drones-data-protection-covid.>
- ⁶⁹ This is ultimately about mindset and letting go of control. There are no other specific steps we take or practices that we follow to promote local agency aside from what is described here in the main text.
- ⁷⁰ "Flying High with the Flying Labs Global Model," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2020/12/31/flying-high-with-the-flying-labs-global-model.>
- ⁷¹ WeRobotics always compensates Flying Labs for their dedicated work on improving the Flying Labs Network and related models. WeRobotics draws on its own savings to do this when the work is not covered by an existing grant.
- ⁷² We are currently organizing the third round of self-evaluations. After this round, we shift to a 12-month cycle aligned with Flying Labs' license renewal dates. That said, Flying Labs can request more frequent self-evaluations if they prefer.
- ⁷³ "Shifting the Power: So Much More Goes on behind the Scenes," WeRobotics Blog, October 21, 2021, <https://blog.werobotics.org/2020/07/22/shifting-power-behind-the-scenes.>

- ⁷⁴ "Do Social Good Organizations Have an Endgame?," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/06/28/do-social-good-organizations-have-an-endgame/>; "The Future of Werobotics: We're Just Getting Started," WeRobotics Blog, March 1, 2021, <https://blog.werobotics.org/2021/03/01/the-future-of-werobotics-were-just-getting-started/>.
- ⁷⁵ See werobotics.org/shiftthepower
- ⁷⁶ "Going Far, Together: Insights from the Flying Labs Retreat," WeRobotics Blog, February 12, 2021, <https://blog.werobotics.org/2021/02/12/going-far-together-in-2021-insights-from-the-flying-labs-retreat/>; "The Flying Labs Retreat: Good for the Soul," WeRobotics Blog, August 3, 2020, <https://blog.werobotics.org/2020/08/03/the-flying-labs-retreat-good-for-the-soul/>.
- ⁷⁷ "Flying Council Members Share Insights from the Road to FlyingLabs.org," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/01/08/flying-council-members-share-insights-from-the-road-to-flyinglabs-org/>.
- ⁷⁸ "What Is the Power Footprint of International Organizations?," WeRobotics Blog, October 11, 2021, <https://blog.werobotics.org/2021/10/10/power-footprint-ingos/>.
- ⁷⁹ See <https://www.holacracy.org/explore>
- ⁸⁰ See en.wikipedia.org/wiki/Holacracy
- ⁸¹ Email sent by Erika Lopez Coca to WeRobotics co-founder Patrick Meier on Sunday, November 14th, 2021.
- ⁸² Sharing and collaboration are the two most important values of the Flying Labs Network, and are also important key differentiators from other networks or initiatives. This explains why we have made this one of the key characteristics of the "Inclusive Network Model". Without this, the network won't be successful.
- ⁸³ WeRobotics was not in favor of calling the Knowledge Sharing Platform WeShare because this sounds more like the brand name of a WeRobotics product rather than a Flying Labs product. The matter was put for a vote and Flying Labs decided on WeShare.
- ⁸⁴ These use-cases will be hosted on Flying Labs websites and thus all made public by Q2 2022.
- ⁸⁵ "Building Cargo Drone Expertise in Papua New Guinea," WeRobotics Blog, July 12, 2019, <https://blog.werobotics.org/2019/02/25/building-cargo-drone-expertise-in-papua-new-guinea/>.
- ⁸⁶ "Mapping the Salt Lands of Loul Sessene with Senegal Flying Labs," WeRobotics Blog, August 12, 2021, <https://blog.werobotics.org/2020/06/17/mapping-the-salt-lands-of-loul-sessene-with-senegal-flying-labs/>.
- ⁸⁷ "For the First Time, Flying Labs Conduct Fully Remote Drone Training during COVID-19," WeRobotics Blog, July 29, 2020, <https://blog.werobotics.org/2020/07/29/first-remote-drone-training/>.
- ⁸⁸ Comment shared by Cleopa Otieno, Kenya Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021.
- ⁸⁹ Comment shared by Cleopa Otieno, Kenya Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021. It is worth noting that there is also an aspiration around South-North collaboration as well where we see evidence of this local expertise also shaping the development of common standards, approaches, policies, etc. To cite just one example, the local expertise of Flying Labs was sought out and directly included in a dedicated internal report by the World Bank entitled: "Unmanned Aerial Vehicle Operation: Guide to Practitioners."
- ⁹⁰ "First Drone Workshop Paves the Way for Future Social Impact Projects in Panama," WeRobotics Blog, October 16, 2018, <https://blog.werobotics.org/2018/10/16/first-drone-workshop-paves-the-way-for-future-social-impact-projects-in-panama/>.
- ⁹¹ Email sent by Erika Lopez Coca to WeRobotics co-founder Patrick Meier on Sunday, November 14th, 2021.
- ⁹² See FlyingLabs.org/impact and Werobotics.org/impact.
- ⁹³ "Failing Forward at Werobotics," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/07/26/failing-forward-at-werobotics/>.
- ⁹⁴ At present, hosting organizations in the following countries have set up a legal entity for their Flying Labs: Benin, Kenya, Nepal, Namibia, and Tanzania. The hosting organizations for India, Senegal and South Africa Flying Labs are considering the pro's and con's of setting up their own legal entities in 2022.
- ⁹⁵ "Welcome to the Flying Labs Network," Affiliate Flying Labs Program (WeRobotics, August 1, 2020), <https://flyinglabs.org/wp-content/uploads/2020/02/Affiliate-Flying-Labs-Program-Live-Documents-1.pdf?x79371>.
- ⁹⁶ Slack message shared on Monday, November 15, 2021, and email sent by Queen Ndlovu to WeRobotics co-founder Patrick Meier on Tuesday, November 16th, 2021.
- ⁹⁷ "South Pacific Flying Labs Is Moving to Papua New Guinea," WeRobotics Blog, April 20, 2021, <https://blog.werobotics.org/2021/01/19/south-pacific-flying-labs-is-moving-to-papua-new-guinea/>.
- ⁹⁸ "Fiji Flying Labs," Flying Labs, May 25, 2021, <https://flyinglabs.org/fiji>.

- ⁹⁹ "Drone Code of Conduct for Social Good," WeRobotics, March 17, 2021, <https://werobotics.org/codeofconduct>.; "Community Engagement Online Course," WeRobotics, September 28, 2020, <https://werobotics.org/community-engagement-online-course>.
- ¹⁰⁰ "Drones Are Helping Large-Scale Reforestation Efforts in Kenya," Flying Labs Blog, July 7, 2021, <https://blog.flyinglabs.org/2021/07/07/drones-are-helping-large-scale-reforestation-efforts-in-kenya/>.
- ¹⁰¹ Comment shared by Cleopa Otieno, Kenya Flying Labs, with WeRobotics co-founder Patrick Meier on Sunday, November 21st, 2021.
- ¹⁰² See for example: "Back to the Future: Drones in Humanitarian Action," WeRobotics Blog, November 14, 2019, <https://blog.werobotics.org/2019/11/12/back-to-the-future-drones-in-humanitarian-action>.
- ¹⁰³ "Skydio Joins the Flying Labs Network as a Technology Partner," WeRobotics Blog, March 23, 2021, <https://blog.werobotics.org/2021/03/23/skydio-joins-the-flying-labs-network-as-a-technology-partner>. The full list of our partners, including the technology partners of Flying Labs and WeRobotics, is listed here: <https://werobotics.org/donors-partners>
- ¹⁰⁴ What's in it for technology partners? The value proposition includes having their technologies used in meaningful and impactful ways by highly knowledgeable local experts. These projects often generate multimedia assets that are of interest to these partners. In addition, they value feedback from Flying Labs vis-a-vis the performance of their platforms in different contexts and geographies.
- ¹⁰⁵ Email sent by Queen Ndlovu to WeRobotics co-founder Patrick Meier on Tuesday, November 16, 2021.
- ¹⁰⁶ "Our Impact," Flying Labs, July 27, 2021, <https://flyinglabs.org/impact/>.
- ¹⁰⁷ Subcontracts are fully aligned to the contracts we sign in terms of reporting, payment schedules, evaluation, etc. All budgets are also created together with Flying Labs, based on pre-established guidelines to cost, etc.
- ¹⁰⁸ "Do Social Good Organizations Have an Endgame?," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/06/28/do-social-good-organizations-have-an-endgame>.; "The Future of Werobotics: We're Just Getting Started," WeRobotics Blog, March 1, 2021, <https://blog.werobotics.org/2021/03/01/the-future-of-werobotics-were-just-getting-started>.
- ¹⁰⁹ E Wenger-Trayner and B Wenger-Trayner, "Systems Convening: A Crucial Form of Leadership for the 21st Century" (Sesimbra, Portugal: Social Learning Lab, 2021).
- ¹¹⁰ This does mean, however, that non-legal entities cannot host/coordinate a Flying Labs. That said, they can still become a formal partner of an existing Flying Labs. This decision is made entirely by Flying Labs.
- ¹¹¹ WeRobotics has made just 4 exceptions to the above definition of "local organization" over the past 5+ years. The Managing Director of Senegal Flying Labs, for example, is originally Béninois but is based full time in Senegal where he has been living and working for decades. Another example is Madagascar Flying Labs, which is hosted by a French-Malagasy company. The founder of this company, Aerial Metric, is a French national although he has lived in Madagascar for well over 20 years (and remained in Madagascar throughout the pandemic).
- ¹¹² While related, failures are often distinct from tensions. To read about our biggest failures, please see: "Failing Forward at Werobotics," WeRobotics Blog, August 19, 2021, <https://blog.werobotics.org/2021/07/26/failing-forward-at-werobotics/>.
- ¹¹³ David Graeber and David Wengrow, *The Dawn of Everything* (London: Penguin Books Ltd, 2022).
- ¹¹⁴ Email sent by Uttam Pudasaini to WeRobotics co-founder Patrick Meier on Saturday, November 20, 2021.
- ¹¹⁵ Video call with Rishabh Gupta from Redwing Lab on Thursday, November 18, 2021.
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- ¹¹⁷ Email sent by Uttam Pudasaini to WeRobotics co-founder Patrick Meier on Saturday, November 20, 2021.
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- ¹¹⁹ "How We Benefited from the Business Incubation," WeRobotics Blog, June 17, 2018, <https://blog.werobotics.org/2017/07/06/how-we-benefited-from-the-business-incubation>.; "From Dream Team to Big Dreams: Dronepal's Continued Success Story," WeRobotics Blog, February 16, 2019, <https://blog.werobotics.org/2019/02/16/from-dream-team-to-big-dreams-dronepals-continued-success-story>.
- ¹²⁰ "How Locally-Led Cargo Drone Deliveries in Nepal Can Improve Health Outcomes," WeRobotics Blog, February 11, 2020, <https://blog.werobotics.org/2019/10/09/how-locally-led-cargo-drone-deliveries-in-nepal-can-improve-health-outcomes>.
- ¹²¹ "Nepal Flying Labs for Drone Optimized Therapy System WINS AUVSI XCELLENCE Humanitarian Award 2020," WeRobotics Blog, November 12, 2020, <https://blog.werobotics.org/2020/10/30/nepal-flying-labs-for-drone-optimized-therapy-system-wins-auvsi-xcellence-humanitarian-award-2020>.
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¹²⁴ Veronique Barbelet, John Bryant, and Alexandra Spencer, “Local Humanitarian Action during Covid-19” (London: ODI, 2021).

¹²⁵ Veronique Barbelet, John Bryant, and Alexandra Spencer, “Local Humanitarian Action during Covid-19” (London: ODI, 2021).

¹²⁶ Email sent by Uttam Pudasaini to WeRobotics co-founder Patrick Meier on Saturday, November 20, 2021.

¹²⁷ This question is posed by Arbie Baguios, co-author of the ODI report and Board Member of WeRobotics. The quotes that follow are used with permission from a forthcoming article by Baguios entitled “Localization Re-Imagined: Power, Purpose and Progressive Localization.”

¹²⁸ Arbie Baguios et al., “Are We There Yet? Localisation as the Journey towards Locally Led Practice” (London: ODI, 2021).

ANNEX: THE ODI LOCALIZATION FRAMEWORK

The authors of the framework introduce and define four pillars of localization:

- *Pillar I:* Combines the three dimensions of localization: Resources, Agency and Ways of Being;
- *Pillar II:* Comprises the five levers of localization: Decision Making, Priorities, Knowledge, Relationships, and Delivery.
- *Pillar III:* Relates to the Directionality of Localization.
- *Pillar IV:* Asks the question “Who is Local”?

The authors propose that the ideal localization effort, “which leads to genuinely locally-led practice, is one that sufficiently transfers resources to local actors, does not encroach on local actor’s agency, and respects local actors’ ways of being.” These constitute the 3 dimensions of localization, or Pillar 1. The “Resources” dimension relates to the quantity and quality of funding while “Agency” is understood as “the ability of national/local actors to identify their problems and priorities, and design/implement their own solutions.” Ways of Being “brings a decolonial lens to localization” by rendering explicit the impact of Western biases.

As for Pillar 2, if an organization wishes to improve their localization effort, “they can do so by tweaking the levers of localization.” It is important to note that these levers “do not neatly correspond to a particular dimension” of localization; “the dimensions are more than simply the sum of all levers.” The “Decision-making” lever has to do with who gets to make which kinds of decisions. While similar to the dimension of “Agency,” it is clear that “Decision-making” is intended to have a more specific focus. As such, one could argue that decision-making is a subset of agency. The two levers, “Priorities” and

“Knowledge,” related to whose priorities and knowledge are favored. Meanwhile, the “Relationships” lever relates to the kind and quality of relationships between stakeholders, and how those relationships are defined. The “Delivery” lever is similar to “Resources” although more focused on who is implementing the project, and the financial transfer.

These 5 levers are the interventions that keep the process or journey of localization on track to make sure we reach our intended destination: genuine locally-led practice. In sum, “whether or not resources are sufficiently transferred to local actors, whether or not their agency is encroached upon, and whether or not their ways of being are respected are an outcome of the different configurations of these levers.”

The third pillar relates to the “directionality” of localization, which refers to “the source of localization efforts, which can be either from the Global North or the Global South.” The authors of the ODI framework understand that this binary approach does not adequately capture most localization efforts since these often fall somewhere in between. “Nevertheless, by drawing attention to localization’s directionality,” we “honor our commitment to equity” and “raise a key question: Can localization efforts themselves be localized?” And if so, how?

The fourth and final pillar relates to the crucial question: Who is considered local? In other words, how does one define “being local”, and who is considered to have local knowledge? Who has the power to define who is local? Who is the direct recipient of the localisation effort, and what is the extent of their involvement?

In addition to these pillars, the authors of the ODI report have identified four distinct but overlapping purposes pursued by the organizations engaged in localization. The three dimensions from Pillar 1 described above “cut across each of these purposes, though several

stand out as particularly relevant.”¹²⁸ The four purposes that stand out are: Movement-building and collective advocacy; Shifting the quality of funding to the Global South; Knowledge creation and sharing; and Supporting proximate leadership.

Our evidence-based study shows that the Flying Labs Network and WeRobotics are successfully building solidarity across the Global South while connecting a wide range of stakeholders from the Global South and North to advocate for reforming existing practices. The joint study also demonstrates that we are actively convening proximate leaders, and creating online portals to share documentation, reports, research findings and promote exchanges and discussion. Together, we are also co-creating alternative intermediary structures that prioritize proximate leadership. This too is presented in detail in our comprehensive study.



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