

**THE  
COLLECTIVE**



# A Learning Ecosystem for South Africa

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# WHY AN ECOSYSTEM?



In Richfield, Utah, in Fishlake National Forest, there is a 13-million-pound giant called Pando, which means “I spread” in Latin. Pando is a mass of 47,000 identical aspen trees with a singular root system stretching over 106 acres. It is purportedly the largest living organism on earth. The most profound and awesome aspect of this massive organism is that all 47,000 aspens are connected by one root system. That single system is a complex set of highways that links every tree together.



A forest researcher named Suzanne Simard has written about these dense networks below ground. In a popular TED talk on the secret communication of trees, she sheds light on this whole “other world,” as she describes it, the “massive below ground communications network” of fungal highways that connect trees to one another.

Through mycorrhizal networks, Simard has been able to show how a paper birch can converse with a Douglas fir through their transfer back and forth of carbon, nitrogen, phosphorus, water, and even defense signals. Nutrients are traded back and forth in “a lively two-way conversation.”

Trees that might appear to be competing for resources are actually secretly coordinating in sophisticated ways invisible to us. What we can't see are the thousands of strands of fungal threads (mycelium) taking over the roots of trees and plants. “The web is so dense,” she explains, “that there can be hundreds of kilometers of mycelium under a single footstep. And not only that, that mycelium connects different individuals in the forest... and it works kind of like the Internet.”

The dense network of communication is deeply strategic. If a seedling is more shaded, more nutrients will be transferred to it to counteract barriers to growth. Trees even recognize their own kin—mother trees will send more nutrients to their seedlings and can increase seedling survival by up to four times. Simard summarizes, “underground there is this other world, a world of infinite biological pathways that connect trees and allow them to communicate and allow the forest to behave as though it's a single organism. It might remind you of a sort of intelligence.”



# THE IDEA IN BRIEF

That near intelligence is precisely the kind of communication and connectedness we must aspire to as we build new learning ecosystems for the future of work. If we translate the idea of a natural ecosystem as a community of interconnected, interacting organisms and their physical environment—a network of living and nonliving things—to a learning and work context, a Learning Ecosystem is a network of learners, learning providers, funders, education and workforce technologies, policies, policymakers, and employers.

Recasting our education-to-and-through-employment system as an ecosystem reflects the necessary interdependence of stakeholders in the system (learners, employers, education providers, governments, and more) with their environments (natural, technological, economic, cultural) and the dynamics of change within this web of interconnected living and nonliving things. It includes all learning providers and schools (both traditional and nontraditional) across the student life cycle. It is enabled by a multiplicity of financing solutions, content, software, hardware, data, and infrastructure.

The ecosystem is affected by a multitude of interest groups, often with competing missions, theories of action, and relationships to policy.

In an ecosystem, we have to think about growth or thriving as it relates not only to the sum total of resources but also to the scarcest resource, the limiting factor. An ecosystem grows and thrives by the health of its limiting factors. And in this particular value chain made up of millions of educators, learners, and employers and layers of local and national policies, the most critical contingent we must pay attention to are the people who are being left behind.

We are all connected, and if a large contingent of our citizenry is not thriving today, such as the millions of unemployed youth in South Africa, this affects and touches every other stakeholder in the ecosystem. By centering on and designing toward the needs of those who are struggling the most today, we can identify and solve for the pain points, barriers, and frictions that make a healthy and functioning learn and work ecosystem impossible today.



# FIVE GUIDING PRINCIPLES

**FOR ALL PEOPLE TO THRIVE IN THE WORK OF THE FUTURE, A LEARNING ECOSYSTEM MUST BE:**

## **01. NAVIGABLE.**

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People need a bird's-eye view of the current and future job market, including all the career pathways open to them based on their interests, skills, past training, and experiences. Learners need better information to navigate complex systems, and better assessments to help them make sense of their skills and experience and figure out how to translate and transfer their capabilities into better jobs.

## **02. SUPPORTIVE.**

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A supportive system recognizes that a person can't be successful in learning and work if they don't feel like the other aspects of their life are managed. For some of our most vulnerable learner populations, we know that the barriers to their success are often outside the classroom. Many will need to build confidence, defy their impostor syndrome, or gain access to mental health services. Job seekers need access to human advisers who can coach them and help them access wraparound support services. Better support services will foster the success of all working learners, from the beginning of their explorations all the way through their working lives and subsequent career transitions.

## **03. TARGETED.**

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Learners need access to a precise and relevant education tailored to their needs: the right skills, the right pathways, at the right time. They also need to know that the education they choose will be worth the investment—and clearly signal value to a prospective employer. More precise or targeted learning experiences must not only provide the knowledge but also the human and technical skills, professional networks, and hands-on practice that equip learners to be ready to work.

#### 04. INTEGRATED.

Working learners need the time, the funding, the confidence, and the resources to juggle education and training on top of their existing responsibilities. Learning opportunities should be integrated into life and work. More people will face multiple career transitions, demanding the acquisition and demonstration of new skills. And that transition experience needs to feel seamless to learners. A learning ecosystem will reduce education friction and make advancement achievable by offering better funding options and new opportunities to learn while earning.

#### 05. TRANSPARENT.

The hiring process must be transparent, open, and fair—and enable job seekers to prove their competence and skills. When skills become the primary currency of the job market, employers will no longer overlook qualified job seekers and connect with more diverse candidates who have proved they have what it takes for the work ahead.

# AN ECOSYSTEM LEARNING SYSTEM

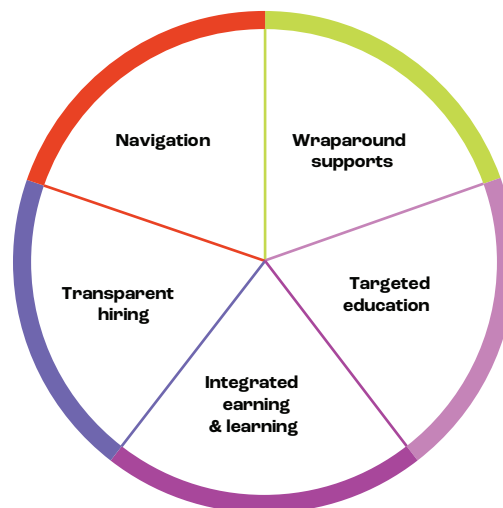
The connective tissue that unites the five guiding principles of a learning ecosystem is a more robust data infrastructure. Data integration is key to strengthening connections (that root system) between learners, employers, learning providers, funders, and policymakers in any given community.

An improved and more integrated data infrastructure will not only create a shared language, but it will also empower groups to move toward a common vision and integrate resources, solutions, and services to make each step along the working learner's journey a more easily navigable experience.

With no end in sight for the rapid changes in work ahead, we cannot continue to innovate in silos, piecing together fragmented resources or unscalable solutions that solve just one or a few aspects of the ecosystem. It will take collaboration and cohesion among all stakeholders in communities of all shapes and sizes across the country to knit together

various solutions and services for more working learners.

A learning ecosystem must pull together all five of these guiding principles to ensure that working learners' time and resources are spent making measurable progress toward their next career goal, rather than staying stuck, guessing at limited options or taking unwanted detours down dead-end paths.



# HOW TO LEVERAGE THIS FRAMEWORK

We can all think of more and other solutions that exist that touch one or more of these principles around better career navigation, wraparound supports, targeted education, integrated earning and learning, and transparent hiring.

One company cannot and most likely will not solve this through a single platform. Rather, if a solution can weave together some but not all of the principles of a better-functioning ecosystem, we must ask: Who are the partners to work with to ensure job seekers have what they need to advance? We can also invite more innovators to create solutions with the entire ecosystem in mind.

The work ahead entails piecing together existing but fragmented resources and solutions. Building a learning ecosystem requires a coalition of education providers,

nonprofits, for-profits, businesses, and government working together toward a common vision. Ideally, in the future, if we were to pull aside any random stranger and ask them, “How will you navigate your next job change?” that person would know exactly who to call, where to look, where to go, how to find the right supports and the training that would launch them into a better opportunity.

The doing will not come easily, but the opportunity is clear for us to stop innovating in silos and engage in real collaboration, better orchestration, and powerful public-private partnerships. Through an ecosystem-based approach, we can stitch together new and existing programs and solutions that can serve as engines of upward mobility for millions more people.

## ABOUT THE AUTHOR

Dr. Michelle R. Weise (pronounced W-ice) leads Rise & Design, an advisory service tailored for organisations seeking to design education and workforce strategies that will prepare working-age adults for the jobs of today and tomorrow.

She is the author of award-winning *Long-Life Learning: Preparing for Jobs that Don't Even Exist Yet*.

Thinkers50 named her one of 30 management and leadership thinkers in the world to watch in 2021.

Michelle is a former Fulbright Scholar and a graduate of Harvard and Stanford.

Michelle has a highly-regarded biography.

**[Learn more about her and her work here.](#)**