RELEASE: Report: Key to Solving Robot Jobs Threat Is In Our Agricultural Past

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Washington, DC -- According to a new report by Makers All, if we keep obsessing about whether robots and AI will put millions of people out of work, we're going to miss a once-in-a-century opportunity. In the next 20 years, not only robots and AI but also augmented and virtual reality, digital fabrication, and other emerging tech will create an abundance of wealth. If we can give communities the power to shape this technology and the impact it has on them, we can create an economy that works for all.

How do we do it? By taking a lesson from our agricultural past.

Robots and AI threaten to shatter the link between wealth and broad prosperity: new industries may not create enough good jobs. But if we can put everyday people in the driver's seat, if we can train millions of adults from Harlem to Harlan County to become developers and designers, they can capture a big enough slice of emerging tech's wealth to help revitalize our communities.

The idea of training millions of adults to master a complex technological skill might seem like wishful thinking. It's not. We've done it before, with Extension Services.

In the late 19th and early 20th century, the US faced a similarly daunting challenge. How could we ensure millions of farmers mastered the basics of soil science and other complex knowledge and practices that made up modern agriculture? After several failed efforts, the US created Extension Services, a massive community-oriented program that:

- Collaborated with communities to make modern farming techniques and tools much more accessible.
- Embedded Extension agents in every agricultural county, helping farmers leverage the power of community and peer-oriented learning to spread modern agricultural practices.

Using the lessons of Extension Services, the report argues we can truly democratize emerging tech using the following three strategies:

- **Smooth the Learning Curve**. Today, coding can be painfully hard to learn. We need to do for emerging tech what Extension Services did for ag tech: redesign it so it's easier for everyday adults to learn. To do so, we should apply "user experience" (UX) design -- a mainstay of modern web design -- to the world of programming via community-oriented coding UX.
- **Develop an Ecosystem of Community-Oriented Support**. We need to transform our current piecemeal approach to training and support so it harnesses the power of community and operates on the scale that Extension Services did. As we do so, we also need to build a better bridge between training and work.
- **Integrate Tech Training and Civic Engagement Training**. In the next 20 years, emerging tech will upend some of our core assumptions about how markets work, creating opportunities to reshape the rules of the road so our economy works for everyone. But if we want all communities to have a seat at the table, we must learn from the experience of the 1960s Civil Rights Movement's

Citizenship Schools, whose approach overcomes some of Extension Services' limitations, and teach both the technical and the civic engagement skills needed to truly participate.

Equally importantly, the report argues, we must change our mindset. Why does the idea of training millions of people in emerging tech coding seem like wishful thinking? Because just like the first attempts to revolutionize agricultural training, our solutions so far aren't up to the challenge. For example:

- Most community-based tech training efforts can only get funding for a fraction of the resources they need.
- Unlike Extension Services, our current efforts aren't accountable at the scale we need. We don't regularly ask, are we transforming every community?

"The tech world prides itself on being insanely ambitious, and yet the reason we're failing so many communities is that we aren't being ambitious enough," said Anders Schneiderman, director of Makers All. "That's the main lesson of Extension Services. If Apple's coders learned a thing or two from apple growers, we'd all be better off."

"The key to unlocking our future is in our past," said Schneiderman. "If we can do for emerging tech what we did for agriculture, we can help communities from Harlem to Harlan County gain the power they need to shape their destinies. It won't solve all the economic problems created by robots and AI; not everyone is going to become a programmer or designer. But it can serve as one critical foundation for rebuilding our communities and making them whole."

The report is based in part on Schneiderman's experience as a sociologist turned techie, with over 30 years of experience as a software project manager, coder, and adult tech trainer working in labor unions, corporations, nonprofits, and government.

For more information about the report:

- Toolkit: a web-based version of the report that's designed to make it easier to skim the report and do a deeper dive on the points you think will most interest your readers
- Executive summary (PDF)
- Full report (PDF)