# # Getting Started

If you agree with some or all of the vision laid out in this report and you want to try it out in the real world, where do you begin? Start from where you are.

Social change is a team sport; if you're going to succeed, you'll need to form a group. Perhaps you could start with people you know from church, your union, where you work, places you volunteer, or your friends. If you have the kind of contacts to do something more ambitious such as convening people from across your community, go for it -- but it isn't necessary to get started.

Then begin having discussions, asking questions, figuring out what you agree on and don't, what you know and don't know, and educating yourselves. And start small, but keep your eye on the prize. Bringing about a transformation on the scale that's necessary is about a dance between big goals and little steps, about dreaming big without ever letting your group's ambitious goals overwhelm you.

When you first get started, there are 3 steps your group will need to take: envision, map out the terrain, and start learning by doing. Odds are you'll end up cycling through these steps more than once.

## 1) Envision

- What would your community or region look like in 10 or 20 years if you succeeded? What would it feel like?

- Roughly how many people in your community would need to work in emerging tech to improve the overall economic opportunities in your community? And how would you know that enough people had found a home in emerging tech to make a real different in your community or region? This is a crucial step. Too many people who want to democratize tech will count how many individuals they're reaching but will never take a hard look at whether they are having a major impact on specific communities.

## 2) Map

- What groups or individuals are already attempting to make tech more accessible in your community? For example: community groups, tech activist meetups, colleges and universities, vocational education efforts, sympathetic local or state politicians, people inside tech companies who care about empowering people with tech. Are there any existing efforts your group should join?

- If you're from a thriving middle-class community, are there nearby communities who are looking for help? If there are opportunities to help out, it's extremely important to enter into these communities with respect and more than a little humility; from Harlem to Harlan County, nobody likes well-meaning but patronizing outsiders.

- What else can you plug into nationally -- e.g., churches, unions, and other national networks of civic organizations?

- Does your community have enough resources or the right resources to help democratize emerging tech? For example, what kind of support do the groups who are already trying to democratize tech have and what do they need?

- How inclusive are your efforts? And if they aren't inclusive enough, are there networks in your community you could partner with in your efforts to become more inclusive?

- What major obstacles does your community face, such as lack of broadband access or literacy issues? When and how can your group attempt to make some progress overcoming these obstacles without bogging down the entire project?

## 3) Try

- What is the smallest step your group can take to get your feet wet and start testing out your ideas and assumptions?

- Once your group has gotten your feet wet, how can you keep taking incremental steps that move you forward without feeling overwhelmed?

- How do you get comfortable with the fact that this process inevitably involves trial and error? How does your group build a culture of being open and honest about your mistakes so you can learn from them?

## Some Initial Issues You May Encounter

**- \_\_Don't Sweat What You Don't Know, Ask for Help\_\_.** As soon as you start this journey, you're going to run into issues that you don't know how to address. That's perfectly normal; just track down some help. For example:

**- \_\_Job Stats\_\_**. For the question of how many people need to end up getting jobs to make enough of a difference in a community, odds are there are people who work for your state who are responsible for making projections of what the "workforce" of your state will look like in the future. There are also probably academics who have wrestled with this issue. And there may be some national policy shops who have experts who would be happy to come up with a rough estimate. To find and connect with them, start by searching online or asking librarians at your local library.

**- \_\_Emerging Tech Coding\_\_**. If no one in your initial group is fluent with emerging tech, odds are there are people in your community who are experts and who would be happy to help you figure out how to get started. Just make sure to follow the example in Part 3 and use your group's experience learning the tech to ask, what would the tech look like if it were designed from the ground up to be accessible for people like you?

**- \_\_Civic Engagement\_\_.** Many of the ideas in this report will be familiar to community organizers and others who are experts in community-based strategies (including some extension agents). If your group doesn't include anyone who has these civic skills, there are certainly people in your community who do and would be happy to share them. As your group begins to learn the basics of civic engagement, you should think about how these ideas and skills could be incorporated into tech trainings.

**- \_\_Community Networks\_\_**. If you hope to help nearby communities, odds are there are people you can connect with in your community who may not be knowledgeable about tech but who are knowledgeable about those communities' networks and have some contacts in those communities.

**- \_\_Focus on Diversity From the Jump\_\_.** One of the painful lessons of tech is that if a starting group is mostly white, male, and middle class, odds are it's going to stay that way as it grows. If your group has diversity issues, it's critical that you focus on becoming more inclusive from the very beginning.

## Setting Goals Without Setting Ourselves Up

Setting goals is critical to success -- especially when you're dealing with a problem where the solution may require orders of magnitude more resources than are currently engaged. Your group also needs goals so you have a very rough idea of how far you are along the path to success.

But it's easy to get tripped up by goals. A few thoughts on how to set goals that make your work easier rather than harder:

**- \_\_At the very Beginning, Numbers Matter Less\_\_.** Don't focus too much on numbers at the very beginning; otherwise you'll end up feeling so overwhelmed you give up. Realistically, you've probably got 8-10 years to hit your most ambitious goals. The point of asking these questions now isn't so you'll worry about nailing your numbers right away, it's to ensure you take advantage of the luxury of having that much time.

**- \_\_How Many Zeros?\_\_** Similarly, exact numbers aren't important early on. What you need to know is, are enough people getting trained and either getting good paying jobs or creating small businesses to boost your community's economy, or does your community need to train 10 times or 100 times as many people?

**- \_\_Track Diversity\_\_**. As the tech world has demonstrated, if organizations don't track their diversity they aren't likely to improve it. Once you're starting to make progress, make sure you think through how you will break down your goals by race, gender, income, urban vs. rural, etc. to ensure that everyone in your region will have a fair shot at jobs and co-ops/small business opportunities in emerging tech.

**- \_\_Don't Juke the Stats\_\_.** As soon as stats are treated like grades, institutions will get creative in figuring out how to manipulate the numbers so it looks like they are succeeding -- what the TV show *The Wire* called "juking the stats." So if politicians or funders start hammering on exactly how many jobs should be created and setting unrealistic expectations, push back hard.

## Expanding Your Efforts

Once your group has made some progress, you'll need an iterative approach that helps you stay on course:

**- \_\_Expand the Circle\_\_**. As your project begins to rack up some small successes, what other parts of the community do you want to invite to become partners? Or you may do the reverse -- for example, develop some proofs of concept that will help others wrap their heads around what you are trying to accomplish, then bring in more facets of the community and encourage them to assume leadership roles.

**- \_\_Stay Inclusive\_\_**. How do you ensure that as you grow all facets of your community are represented?

**\_\_Develop Leaders\_\_**. As Part 3's overview of Citizenship Schools demonstrated, identifying and training new leaders is a crucial part of building a vibrant grassroots movement. As you grow, you'll need to start incorporating leadership development into your plans if you haven't already.

## Scaling Up

As crucial as local action is, at some point efforts in individual communities won't be enough. If we want to ensure that no communities will be left behind and that every community will have the resources it needs to succeed, we will need to develop something similar to Extension Services for emerging tech.

We can't know in advance what the right solution will be -- for example, whether it can be funded primarily through private means, a balance of public and private, or through largely public means as was required for agriculture. The only way we'll know what works and what doesn't is through experimentation. But regardless of the details of the solution, one thing is clear: we will need a solution that's up to the scale of the problem.

To create the equivalent of Extension Services, we will also need to build a national network for civic action -- a project that Makers All, which sponsored this report, hopes to facilitate. Part of what such an effort will require is building connections between community experiments and creating dialogues across communities so we can organically develop the solution. But it will also require that communities work together to bring pressure on government, large tech companies, and other large institutions so they mobilize the resources necessary to ensure every community shares in the opportunities and abundance created by emerging tech.

As we attempt to mobilize these resources, one of the advantages we have over some other civic efforts is that we may be able to mobilize the self-interest of one of the biggest players: the tech world. Although there will undoubtedly be resistance in some parts of the tech world to truly democratizing emerging tech, in the long run it's a no-brainer:

- If we succeed, we will greatly expand both the pool of talented people and the market opportunities in emerging tech. Big tech companies will have a smaller slice of the pie, but the pie will be much, much bigger.

- And if we don't succeed? What's behind Door Number 2 is too scary to contemplate, but it'll undoubtedly include some version of "peasants with pitchforks" bent on destroying the Frankenstein of robots/AI they see as a threat to their community.

The need for bold action isn't news to anyone in the tech world -- that's why discussion of radical ideas like Universal Basic Income are now commonplace. The issue isn't whether we need to act, it's what the right action is. This shared understanding in tech doesn't mean action on the scale we need is inevitable, but it greatly improves the odds of success.

# Special Considerations

## The Role of Tech Companies

Although tech companies will need to be involved in community-wide efforts, they also have a distinct role to play. If you work for a tech company that wants to make the tech you develop more accessible, here's what you and other people at your company can do.

**\_\_Building Relationships to Develop Community-Oriented UX\_\_**

The first thing you'll want to do is to start exploring how to implement community-oriented UX.

- If you work in a large company, odds are there already community groups that your company has a relationship with -- e.g., community groups your company has given grants or donations or groups where some of your staff volunteer. Using these pre-existing relationships, you can see if these groups might be interested in building a partnership.

- There's a good chance your community partners aren't familiar with community-oriented UX, so you'll need to explain what you're trying to do and why. But if the group has trainers who are skilled at training folks in the community to use tech, there's a good chance that once they understand what you're trying to do and why, they'll be interested in at least trying a short experiment.

There are 2 keys to making this partnership work:

**- \_\_Pick the Right Tech\_\_**. If you have more than one framework/library/etc. to choose from, pick the tech that's easier to make accessible. Right now, for example, if you're developing tools in augmented and virtual reality, these are a pretty safe bet.

**- \_\_Find The Right Partner\_\_**. It may be that the community groups you already work with aren't ready to make the leap. Or it may be that they aren't a good fit right now -- e.g., they just don't have the time given their other priorities. There may be other community groups you haven't worked with who make more sense as partners -- perhaps even groups that haven't traditionally engaged in tech training but have a lot of capacity and experience training in other areas.

Once you've figured out the right Tech and the right partner(s), you want to start your collaboration with a pilot project. The goal of the pilot is to get your feet wet and start learning how to do community-oriented UX in a way that works for everyone involved. If you're ready, it also might be worth considering using these first baby steps as a chance to begin conversations about the possibility of hiring one or more community groups as community-oriented UX consultants in an ongoing basis once they've gained some expertise.

**\_\_Small Startups\_\_**

For small startups, the situation is more complicated. Most startups don't have the kind of resources that a larger shop has -- and there's a good chance they don't have any relationships in the community to start from. But it's still worth exploring to see if there are ways you can build a partnership.

**\_\_Be Flexible\_\_**

All of the above is meant only as a guide; you'll need to adapt it to your circumstances. For example, it may take some time before you'll figure out the right community partners. In the meantime, there's no reason you couldn't start working on smoothing the learning curve. In the experience of this report's author, many emerging tech frameworks, etc. have glaring UX shortfalls -- issues where anyone with experience teaching coding to non-techie adults could point out a number of problems that could be fixed even before you start using formal UX techniques.

## Using Economic Leverage To Help Others

Although making the wealth of emerging tech accessible in every community is a critical part of confronting the robots/AI employment threat, it isn't the only issue we'll need to address. One pressing concern is that even if huge numbers of jobs aren't eliminated, too many of the remaining jobs may not pay well. For example:

**- \_\_The Paradox of [Automation's Last Mile](** https://hbr.org/2017/01/the-humans-working-behind-the-ai-curtain **)\_\_**. Researchers Mary Gray and Siddharth Suri have shown that for every round where AI automates away work, humans play a critical role in developing or cleaning up the data needed to train AI and handling the behind-the-scenes work that AI can't yet manage (e.g., responding to a customer complaint). Most of this "[ghost work]( https://ghostwork.info/)" can be done by just about anyone, so it rarely pays well.

**- \_\_Care Work\_\_**. It's not clear if robots will be able to take care of children or the elderly, but even if they could, we might not them want to. But care work has never paid well because it's been considered "women's work."

Given that people who obtain full-time jobs or create small businesses/co-ops in emerging tech will be in an economically advantageous position, over the long run we will need to see if there are ways they can use their position to help people who end up in lower paying jobs. Sometimes this may simply be a matter of supporting their organizing efforts. Other times it may involve helping them to bring the economic benefits of emerging tech into their jobs. For example:

- Pushing companies to develop the emerging tech home care aides use so that it enables some home care aides to become power users, gaining more skill and making it easier to advocate for better pay

- Helping organized nursing home aides gain a say on the direction of efforts to automate their work so their jobs become less physically demanding and more mentally and emotionally fulfilling over time

It's unrealistic to expect this kind of support early on -- emerging tech activists will already have their hands full. But as they dream about when their efforts could lead 20 years from now, it's worth at least beginning to ask questions about how successes with emerging tech might be leveraged to help all people in their community.

# 

# Forging Bonds Between Communities

Although this report is focused on using the opportunities of emerging tech to help communities heal themselves, this work might also provide an opening to heal the divides across communities.

We live in an era where much of our politics are polarized -- and in a democracy that’s necessary at times. But in such a polarized time, we also need ways to rebuild the bonds between us.

There are few better ways of reforging our bonds than in the crucible of working together. Working together and learning from one another is an efficient and effective means of operating. But if our work is structured properly, it can also build connections among people and communities that have a deep and profound effect on how we see others and how we see ourselves.

In short, as we work together, helping one another as we struggle for a better future for all of our communities, black and white, rural and urban, red state and blue, we may also find our way to rediscovering our common humanity.