

B-7061: Data-driven Reskilling Markets

Prepare Americans for the Future of Work



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Overview

We use machine learning and Artificial Intelligence to transform government administrative data into scientifically-valid measures of Return-on-Investment (ROI) to labor and reskilling programs. We deliver these metrics straight to workers and job counselors through a user-centric web- and mobile-app to empower informed decisions. Informed decisions prompt training programs to innovate and add value, creating a virtuous cycle of data-driven improvement and positive impact. The result is improved employment and economic opportunity for all workers per dollar spent on training.

Description

Even before the COVID-19 pandemic, 39 million American workers were predicted to lose their jobs to automation. In the last 4 weeks alone, 30 million Americans have filed for unemployment. Now, more than ever, we need an effective market for jobs training and reskilling.

However, as everyday Americans struggle to reskill and prepare themselves for new jobs, they must rely on word-of-mouth information to help them choose reskilling programs. The data needed to guide them towards effective programs are locked up in decades-old government systems. Meanwhile, state leaders face the current economic crisis with minimal data insights to guide their policy investments. Billions of federal and state dollars and scarce time and money from struggling families are invested in reskilling programs with no evidence of effectiveness. It's no wonder we face a persistent skills gap with this inefficient and poorly-incentivized system.

Our team partners with state and local government to use data, science, and technology to create the tools and metrics needed to foster an effective, data-driven reskilling market to benefit all Americans.

Our project is called Data for Opportunity in Occupation Reskilling Solution (DOORS). We are working with states across the country to unlock the power of these data, measure which reskilling programs work, and put that information in the hands of the people.

To create ROI metrics with administrative data, we designed a secure, cloud-based *Research Data Lake* (RDL) environment which houses administrative data and optimizes them for rapid insights. Metrics can be quickly developed, put into practice by policy makers, and delivered directly to the public through web and mobile apps. Our approach is sustainable, increasing government's capacity to implement data-driven policy, partner with researchers to measure what works, and continually iterate and improve.

Workers and job counselors will use our metrics to make informed decisions. Policy leaders will rely on our metrics to fund effective program expansion. Training programs will use them to innovate and measure success. DOORS will catalyze the reskilling market, opening new doors to employment and economic opportunity for all Americans.

Differentiators

"I want to see if [a program] is worth it. I cannot spend valuable time on something that will not benefit me in the end." — *Training program seeker.*

"This will make us more credible. People will like us better if we have data [and] can answer their questions with confidence." — *State job training counselor.*

DOORS delivers an end-to-end solution to actually deliver scientifically-valid ROI measures into the hands of American workers who need them and will use them going forward. By forging and incorporating key partnerships throughout our process, DOORS produces science that will actually

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be used by the American people to make their lives better. DOORS partners include tech and finance industry leaders and four state partners who serve a combined population of 23 million Americans who are committed to using DOORS to deliver a reskilling ecosystem that effectively and efficiently up-skills their workforce for the future of work.

Scott Jensen, the Rhode Island Director of Labor and Training, said: “*This partnership is helping us fully leverage our data to make better use of Federal funds, help workers re-enter the workforce, and measure the impact of workforce development programs to prepare all workers for in-demand jobs.*” Rhode Island has already been able to produce ROI measures for its leading jobs program, and in partnership with our team leveraged DOORS to spin up an emergency COVID-19 benefits system [in just 10 days](#) using the RDL to deliver Pandemic Unemployment Assistance to 30,000+ Rhode Islanders. It was one of the [first in the nation](#) to deliver these benefits to people in crisis.

DOORS is open-source and scalable to any U.S. state or local government. Ten states have expressed interest in implementing DOORS to date. DOORS is efficient and self-sustaining. Government learns the value of technology and science as we invest in their capacity to own and manage DOORS going forward, increasing evidence-based policy capacity and impact long-term.

Road Map

With Phase II funding, we will:

- Launch a fully-functional RDL for partners in four states and ROI measures by Q1, 2021.
- Measure the impact on demand for and effectiveness of training programs by Q1, 2022.
- Launch dashboards and evaluation tools for government partners to measure continual improvement by Q1, 2022.
- Launch the full, productionized open-source system for any state or local government to adopt by July 1, 2022.

Partnerships

Public partners:

Colorado Dept. of Higher Education; Rhode Island Office of the Governor and Dept. of Labor and Training; Virginia Offices of the Governor and Secretary of Administration; Washington Employment Security Dept.

Non-profit partners:

- *Research Improving People’s Lives (lead institution)*: In Phase I, developed ROI measures; built technology and data resources. In Phase II, scaling across states.
- *The Centers for Civic Impact at Johns Hopkins University*: In Phase II, training government to use the ROI measures.
- *Ideas42*: In Phase II, designing training for the web- and mobile-tool.
- *The National Bureau of Economic Research*: In Phase II, bringing together academics, policy makers, and industry to share learnings.

Private and technology partners:

- *Amazon Web Services (AWS)*: Donating technical expertise and cloud environment.
- *Facebook Research*: Donating technical expertise to integrate ROI measures into social media platforms.
- *Maycomb Capital*: Donating performance to quickly expand effective reskilling programs.

Intellectual Property

We are an open-source platform that may incorporate some proprietary software for cloud computing, which is a traditional business relationship bound by terms and conditions. There are multiple competitors in the market for cloud computing. Our system can run on any of them. The RDL is open-source and can be run for free. The code to produce the ROI measures and app will be freely available, and the measures will be publicly available through an API.