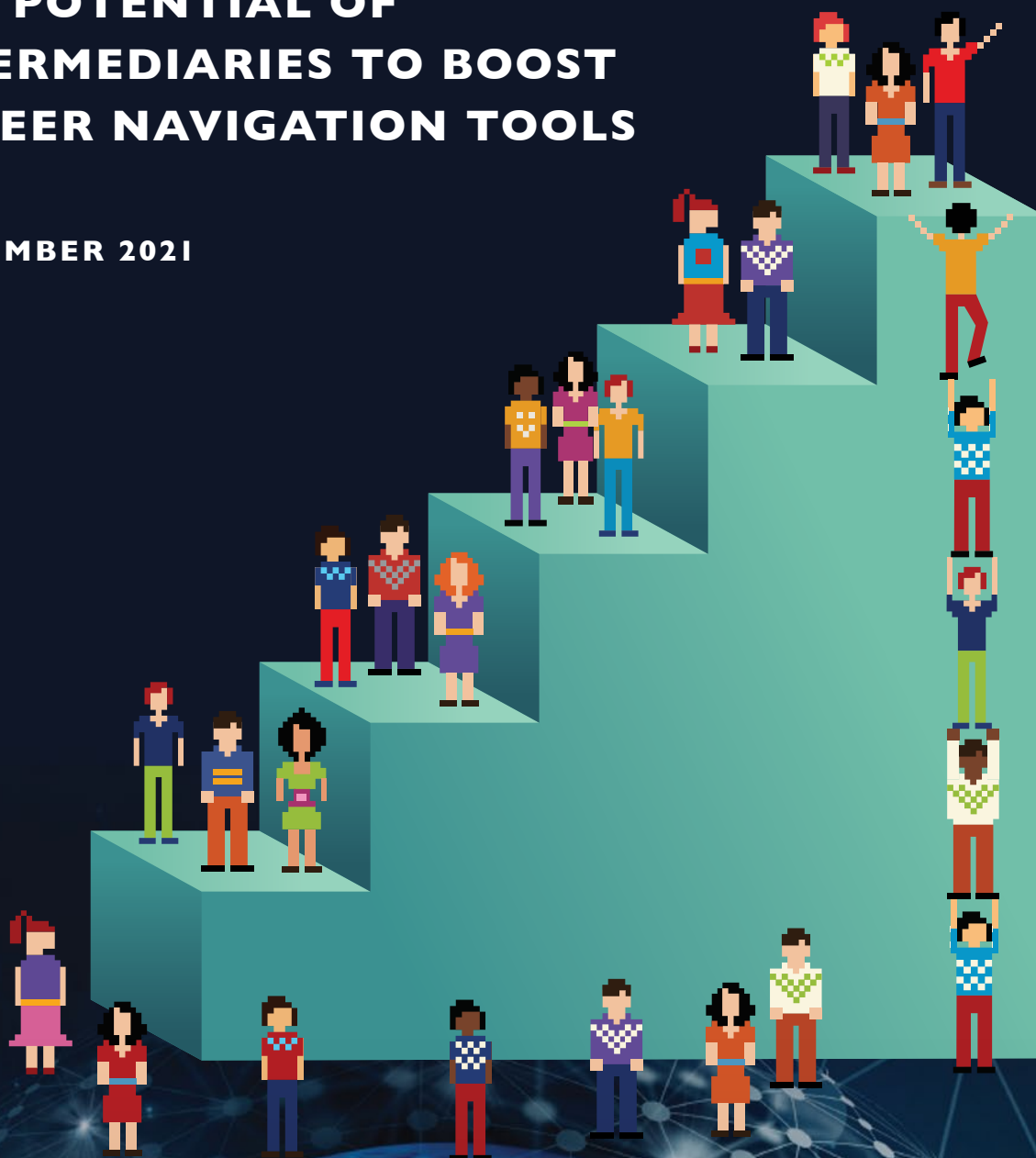


# IF YOU BUILD IT, WILL THEY COME?

**THE POTENTIAL OF  
INTERMEDIARIES TO BOOST  
CAREER NAVIGATION TOOLS**

SEPTEMBER 2021



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## ABOUT THIS BRIEF

*If you Build it, Will They Come?* explores the importance of intermediaries in the successful implementation and adoption of career navigation tools. This paper examines the adoption of new career navigation tools by intermediaries, arguing for the importance of uptake by these intermediaries, and focusing on both barriers to adoption of these tools by intermediaries and potential solutions. The report was produced by Sarah Torres Lugo, research associate at NCHEMS, Gina Johnson, senior associate at NCHEMS, and Patrick Lane, vice president for policy analysis and research at the Western Interstate Commission for Higher Education (WICHE). The views presented in this brief are those of the author and do not represent Schmidt Futures, Lumina Foundation, Walmart Foundation, or the Walton Family Foundation.

## ABOUT DATA FOR THE AMERICAN DREAM

Data for the American Dream (D4AD) is a consortium bringing together Schmidt Futures, Lumina Foundation, Walmart Foundation, and the Walton Family Foundation. D4AD initiatives in three states (Colorado, Michigan, and New Jersey) are aimed at supporting workers and jobseekers, particularly those who are un- or underemployed and experiencing structural racism and economic marginalization. D4AD is focused on creating tools and systems that provide more accessible, current and actionable information workers can use to identify career and training opportunities. D4AD initiatives work with both public and private agencies to engage workers and jobseekers and ensure that services and resources are flexible, responsive and designed to meet the needs of jobseekers.

The National Center for Higher Education Management Systems (NCHEMS) is the implementation partner of D4AD. NCHEMS is a private nonprofit organization whose mission is to improve strategic decision making in postsecondary education for states, systems, institutions, and workforce development organizations in the United States and abroad.



# INTRODUCTION

The history of the internet is littered with old, discarded tools, applications, and websites that promised great things for users but ultimately never lived up to their promise before suffering a slow and ignoble electronic demise. From AskJeeves to Altavista websites, many of these tools have become punchlines or fodder for nostalgic reminiscences of the “good old days” (that actually are not that old). Some surely were victims of poor design or a weak concept. Other abandoned products were technologically advanced with innovative ideas that might have gone on to a bright and sustainable future if they had gained a lasting foothold with a key audience.

The same is true of career navigation and education and training sites. The potential promise of applications and webtools to provide better linkages to jobs, career training, and educational opportunities is not new and has been a constant in recent times. Yet too many compelling ideas have foundered because they have failed to adequately capture the attention of the right users willing to discard familiar practices in favor of a new tool. Too often, these activities have resorted to the “Field of Dreams” theory of change—“if you build it, they will come”—focusing on tool development and the effort to compile data to the exclusion (at least relatively speaking) of an intentional and detailed plan to ensure the right users are prepared to actually adopt the end product.

One consistent theme of efforts to develop and deploy tools to inform the choice of education and training programs or careers is an underlying theory that if students, trainees, and jobseekers have better information about both career opportunities and skill development pathways, they can make optimal (for them) decisions. Much of the limited data and research on such tools shows that they tend to impact those individuals who already have numerous advantages and such tools have less success in positively impacting those individuals who could stand to benefit most.<sup>1</sup> A related (and not necessarily exclusive approach) is to provide data and information to intermediaries, organizations and individuals who work directly with jobseekers to help them navigate career opportunities (see pull-out box for a more complete definition), who can then use the information to help guide students, trainees, and jobseekers. Intermediaries are a crucial pathway to help individuals find the right training and education to access meaningful and sustaining careers. But addressing the barriers to adoption by intermediaries requires intentionality, planning, and commitment, just like efforts to boost adoption by jobseekers.

As states, communities, and the country as a whole look to emerge from the COVID-19 pandemic and the associated economic downturn, a key focus will be supporting individuals in obtaining the necessary education and training to attain stable, resilient careers that can weather future recessions. With the economic outlook sending somewhat contradictory signals in relatively high unemployment rates, apparently strong demand for workers, and uncertainty about long-term prospects, it can be a confusing time for those looking to re-skill or up-skill.

This paper will examine the adoption of new career navigation tools by intermediaries in detail, arguing for the importance of uptake by these intermediaries, and focusing on both barriers to adoption of these tools by intermediaries and potential solutions. Relying on existing research

on intermediaries, the adoption of technology in multiple sectors, and the use of technology in counseling and other education and training work, the paper will first describe how technology-based solutions have not (for now) been able to consistently demonstrate that simply making information available, either through an application or a website, will change individuals' outcomes for the better, particularly for individuals who are un- or underemployed and experiencing structural racism and economic marginalization. The paper then draws on a series of lessons from other sectors and from Data for the American Dream (D4AD), an initiative that provided grants to projects in three states aimed at supporting jobseekers through data-driven information and innovative job-search and training tools and supports, and ends with a series of recommendations.

## WHAT AND WHO ARE INTERMEDIARIES?

Intermediaries are a critical resource for individuals to be able to effectively navigate career options and the education and training necessary to reach their goals, so we begin with a clear definition of the role. For the purposes of this paper, we take a broad view of intermediaries as organizations and individuals who work directly with jobseekers to help them navigate job opportunities as well as the necessary training and education. They include American Job Centers, the key service point in the workforce training system with staff that work closely with individuals looking for new employment. Additionally, career centers at higher education institutions, particularly community colleges, would fall under this definition. Intermediaries can also be community-based organizations providing advice and guidance to jobseekers. Finally, they also include individuals who may or may not have a formally defined role relating to career navigation, but rather are in positions of trust and responsibility within communities; they include pastors, mentors, and others.

Whether an intermediary must include real human beings, or whether the technology can adequately fill this role on its own, is a more complicated question and one without an easy and definitive answer. Certainly technology helps individuals navigate career and training opportunities in myriad ways by providing career assessments, using algorithms to winnow search results based on interests and skills, and making connections to employers, training providers, and education opportunities.

But for the purposes of this paper, an intermediary must do more. While there is not a Turing test — a method of determining whether a machine can demonstrate human intelligence — for intermediaries, a technology-based navigator must be intentionally designed to help the jobseeker successfully navigate the many options and opportunities available by doing more than just filtering results. Based on our scans of existing technologies and platforms, we would not yet consider the existing bots, algorithm-based platforms, and chat assistants to meet our definition of “intermediary.” But given the pace of technological development, that could happen in the not-too-distant future.

A randomized experiment from Scotland shows some promise for virtual intermediaries, in which jobseekers using an enhanced platform that makes recommendations based on seekers' preferences and uses a range of survey data on pathways between jobs and how different skills may transfer led to better outcomes than a standard job search tool.<sup>2</sup>

# WHY FOCUS ON INTERMEDIARIES?

There is a broad range of tools now working to provide jobseekers with information about not just job openings, but also pathways to obtain the needed training and/or education required to obtain those jobs.

These tools are often premised on the idea that providing better and more complete information to jobseekers and those seeking education and training will necessarily lead to better outcomes — both for individuals and the labor market. Research on and evaluations of these types of tools show, however, a mixed record at getting individuals (particularly individuals who are un- or underemployed and experiencing structural racism and economic marginalization that the Data for the American Dream initiative focused on) to use these tools and act on the information they learn. Essentially, there is not a strong track record.

One example comes from the higher education sector, where the federal government has developed the College Scorecard as a consumer information tool. This website — run by the U.S. Department of Education — aims to provide students and their families information on a range of variables to help them make optimal postsecondary decisions.<sup>3</sup> Research on the College Scorecard found no evidence that it changed student behavior and recommended that it focus on making the data and information available to third-party intermediaries.<sup>4</sup> Other research has shown that these types of tools can change student behavior (in this specific case, sending institutions with higher reported student earnings more standardized test scores as an indication of interest), but this behavior change was concentrated among students from private schools, which tend to have much wealthier students, rather than prospective students from lower-income or racially under-represented backgrounds, adults, and other targeted populations.<sup>5</sup>

The promise and potential of websites and applications built on massive amounts of data are undeniable. And certainly, platforms built on employment, education, and training data held by government agencies, as well as those built on privately held data curated from publicly available sources are capable of providing accurate and actionable information. Yet, it is also undeniable that navigating and making full use of these tools is a highly complicated process. Further, it is difficult to find rigorous evaluations of these consumer information-focused tools to understand their impact in more detail. An analysis examining more than 150 tools for navigating career navigation products finds that among these different tools, there is not a sense of what really works in assisting the targeted populations.<sup>6</sup>

Additionally, research on underserved jobseekers worked to identify the barriers they face when seeking employment, but did not identify lack of data and information to be crucial.<sup>7</sup> This research instead identified three key needs for underserved jobseekers: social needs, such as connections and ties that can be valuable in job seeking; personal needs, such as being able to self-reflect on the job process and articulating their skills; and societal needs, such as child care and transportation.<sup>8</sup> Even after developing an online tool focused on these needs, researchers found that those jobseekers with limited digital fluency were not well served by the application.<sup>9</sup>

This makes clear that even a tool specially designed to meet the needs of individuals who are un- or underemployed and experiencing structural racism and economic marginalization may struggle to be adopted by the target population themselves.

Focusing development of these tools on intermediaries as well as individual users broadens the potential pathways of action. Access to job seeking tools, even well-designed ones that incorporate information on the skills and abilities required (and how to effectively get them) is not enough. Individuals who are un- or underemployed and experiencing structural racism and economic marginalization may need assistance in interpreting the information, articulating their own skills and abilities, and developing and implementing a plan. With most tools unable to bridge the three needs identified above, and with such tools requiring some level of access to technology and digital proficiency, intermediaries can provide an important additional path of action to assist the target population.

There are multiple potential pathways for action. One is through individual agency. The tool is built, made available, and some percentage of those who could potentially benefit from it are able to take advantage. Surveys of local workforce training center staff indicate that technology-based tools hold promise for serving jobseekers, but technological literacy remains an important barrier for jobseekers utilizing the services of such centers.<sup>10</sup>

The other pathway, which is likely more realistic — and potentially more effective — would operate through intermediaries. Neither pathway need be exclusive in developing a tool for jobseekers. But securing intermediary adoption can only make such a tool more beneficial to those looking for new careers (and the requisite education and training opportunities).

# BARRIERS TO ADOPTION BY INTERMEDIARIES

Ensuring broad adoption of these tools by intermediaries is a complex task — and one that rarely gets significant attention in the design and development phase. Identifying the potential barriers is a straightforward first step. Addressing them is more complicated.

**Lack of Attention to Intermediaries' Context and Needs.** The context in which intermediaries operate and their needs must be carefully considered. Intermediaries' use of the tool will likely differ depending on their specific role and organization, the tools and platforms they may use in their day-to-day work, processes they might be required to follow, and the ways in which they interact with jobseekers. It is important to clearly identify intermediaries and engage them in tool development, testing, and iteration.

**Time.** Any new technology-based tool requires some time for potential new users to adopt. But this is a luxury that few intermediaries are likely to have in abundance. Data on one group of potential intermediaries — career services staff at postsecondary institutions — show that those at community colleges have a median student-to-staff ratio of over 3,700 to 1.<sup>11</sup> Community colleges are much more likely to serve individuals from historically marginalized groups, and their ratios of students-to-staff far outstrip the other sectors of postsecondary education.<sup>12</sup>

One head of career services at a four-year institution sums up the problem as follows: “The problem with technology is that college students don't perceive that they have the time, nor do they have an interest in using all these different systems...the career services team members feel the same. We have to streamline the process for both students and staff—and focus on the strategic levers that ensure students use the tools and are genuinely engaged, motivated, and career-ready.”<sup>13</sup>

**Professional Development.** Surveys of the workforce training system indicate that most training centers regularly provide services to those seeking new employment by exploring career and training opportunities and labor market information through technological tools.<sup>14</sup> But other research indicates that staff at these centers — clearly playing the role of intermediaries — struggle to keep pace with the development of new technology. Adopting these tools have financial and time costs to become proficient, with professional development opportunities being limited.<sup>15</sup> Staff at workforce training centers identified a lack of professional development and training as a key barrier to adoption of new technological resources.<sup>16</sup>

**Costs.** While many platforms — particularly those developed by state agencies — may be free for users, including intermediaries, there still can be costs for professional development and training (as noted above), and maintaining appropriate hardware. Because of the lack of funded professional development opportunities, staff at workforce training centers report learning to use new tools on their own time, which greatly hinders adoption.<sup>17</sup>

**Differentiation of New Tools.** Most intermediaries are likely already using some technology-based tools for career exploration and identifying potential education and training pathways.<sup>18</sup> As an example, recent research investigating technology usage in the workforce training sector in eight states found all taking advantage of technology-based tools to assist jobseekers in identifying career opportunities and pathways. Among this proliferation of potential tools, identifying what works best — especially given the lack of solid evaluation and research noted above — can be a challenge for intermediaries, and a significant barrier to the adoption of new tools. Given the investment of time and money (especially for training and professional development) in tools currently being used, new tools must make a strong argument for their adoption to stand out from the pack.

**Habits and Uncertainty About Effectiveness.** The adoption of the new tool will likely also have to come at the expense of other resources and existing practices that the intermediaries have grown accustomed to using, and which they may believe work perfectly well for their purposes. New tools will have to “crowd out” existing ways of serving the target population by proving their effectiveness and adaptability to the intermediaries’ context.

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## LESSONS FROM OTHER SECTORS

Research on consumer information tools in other sectors provides further insights into adoption.

In healthcare, evidence suggests patients’ preferences for receiving information on treatments and degree of involvement in treatment decision-making varies with age, socioeconomic status, illness experience, and the gravity of the decision.<sup>19</sup> These findings highlight that there may be a need to match the use of consumer information tools to individual user preferences for receiving information on education, training, and career options as well as preferences for making decisions about next steps. That possible variation in preferences may translate into jobseekers desiring varying levels of access to information and intermediary support.

Research in application use by occupational therapists demonstrates the need to carefully consider preferences of potential users, providing detailed considerations that can be used by occupational therapists with clients to evaluate, and make decisions related to the selection of applications for practice. Grounded in the evidence-based occupational therapy framework, the proposed considerations allow the therapist to consider therapist, client and tool characteristics that are central to establishing whether a specific app is appropriate for use with a specific client. Other research describes potential barriers to application use by occupational therapists including availability of technology in the clinical practice setting, therapist training and education, therapist input into app development and an enhanced evidence base.<sup>20</sup>

A study of technology adoption across a broad range of government services in the United Kingdom found that technology does improve efficiency and effectiveness of intermediaries’ delivery of government services, but the technology needs to be tested iteratively with users to continue providing value.<sup>21</sup>



# LESSONS FROM D4AD GRANTEES' PURPOSEFUL PLANNING TO DRIVE USER ADOPTION

Data for the American Dream-funded initiatives in three states (Colorado, Michigan, and New Jersey) are aimed at supporting workers and jobseekers, particularly those who are un- or underemployed and experiencing structural racism and economic marginalization. D4AD is focused on creating tools and systems that provide more accessible, current and actionable information workers can use to identify career and training opportunities. D4AD initiatives work with both public and private agencies to engage workers and jobseekers and ensure that services and resources are flexible, responsive, and designed to meet the needs of jobseekers.

With user adoption and impact in mind, leaders of the initiatives considered the characteristics of their target populations. For example, they all decided to utilize user feedback from potential users in tool development, to add at least some partnerships with the intent of improving their ability to better serve specific target groups, integrate tools into existing infrastructures that potential users may already be familiar with, and partner with local organizations to devise and conduct outreach activities. The decisions initiative leaders made related to tool development and operations, partnerships, outreach, and sustainability with user adoption in mind are shared in this section with the intention to stimulate ideas for what similar initiatives might want to consider for increasing user adoption. They are gleaned from the process and implementation evaluation conducted by AIR and observations from the implementation partner, NCHEMS.<sup>22</sup>

**Tool Development and Operations.** The three initiatives adopted user-centric strategies in developing their tools, seeking to understand how to best serve jobseekers and some intermediaries. For example, the Michigan grantee team worked with frontline American Job Center workers at the pilot site to determine how best to integrate the tools into case managers' processes and to gather feedback on tool features, layout, and content via a cyclical feedback and tool upgrade loop. The New Jersey team employed human-centered design and short development sprints to gather feedback from jobseekers and career counselors and used the feedback to iterate on the tool. To better serve intermediaries, the Colorado team developed a feature that allows intermediaries to reconfigure available content in order to personalize recommended outcomes, goals, and steps to better meet those groups' specific needs.

**Partnerships.** All grantee teams considered user adoption and impact when forming partnerships. For example, the Colorado team continues to add new partners to expand content and user reach, most recently establishing a relationship with the Department of Corrections to support individuals leaving a corrections facility. Both the needs of individuals close to leaving the pilot corrections facility and intermediaries are being considered in the development of that content. The teams recognize that they must carefully consider potential partnerships and that once formed, partnerships require intentional and persistent attention to maximize their potential in driving adoption by individual users and intermediaries.

**Outreach.** D4AD grantees have also considered users when making decisions about efforts to generate awareness and engagement of their tool(s). All three teams are developing resources for intermediaries to help them become familiar with the new tools. For example, the Colorado team is utilizing a train-the-trainer model by relying on professionals working directly with specific target populations to train individual users on how to use the tool. The train-the-trainer model allows individual users to receive personalized guidance on how to use the tool to meet their specific needs.

Based on feedback from case managers at the pilot American Job Center, the Michigan team revised the sequence of rollouts of the case manager and jobseeker tools – instead of releasing the jobseeker tool statewide followed by the case manager tool in the pilot American Job Center, the team decided to roll out the case manager tool statewide first so that case managers could have time to become familiar with the tool and be better prepared to assist jobseekers with usage once the jobseeker tool became available.

Both the Michigan and New Jersey team hired local, external communications partners to develop outreach plans for their target populations. Michigan chose a firm in part due to the team's experience working with the pilot American Job Center. Given that many job centers are currently closed and in-person outreach through job centers is limited, an aspect of Michigan's outreach plan is to partner with local community-based organizations to distribute print materials. Outreach in New Jersey also shifted to take on more of a community-based approach with efforts to engage local faith-based and anti-poverty organizations, partly due to an understanding that not all jobseekers that could benefit from the tool are served by the state's job center services.

**Sustainability.** The grantees' plans and efforts to ensure continued progress around partnerships, tool development, and outreach efforts are closely linked with user adoption and the ability to demonstrate positive impact. All grantee teams have chosen to integrate their tools into existing infrastructure and build relationships with existing state entities, and view these decisions as means to foster sustainability. The Michigan and New Jersey teams are leveraging existing state job centers and staff, and the Colorado team is building relationships with K–12 schools, postsecondary education, and the Department of Corrections to increase adoption by individuals those agencies serve. The Michigan team incorporated the tools into existing data systems — the jobseeker tool has been incorporated into Pure Michigan Talent Connect (PMTTC) and the case manager tool was incorporated into the One-Stop Management Information System (OSMIS). The Michigan team's key to sustainability is integrating the tools into pre-existing processes and related funding streams.

**Next Steps.** Across grantee projects, grantees' next steps focus primarily on outreach, sustainability, and developing processes for cycles of continuous improvement for their tools. An important focus of those efforts will be on adoption of each of the respective tools by intermediaries, as well as integration of the tool into their workstreams. The Colorado team is focused on establishing funding to sustain the tool, enhancing capacity for project management, building out a comprehensive marketing plan, and moving into a cycle of continuous improvement. The New Jersey team plans to work with the Office of Innovation on user interface modernization, integrating the tool with other resources (such as the New Jersey Career Network, a companion tool?) and continuous user-centered tool development efforts. At the end of the grant period, Michigan was beginning the roll-out of its tools and planning to train case managers in its use. Similar to the other grantee teams, Michigan also plans to move into a cycle of continuous improvement that includes collecting feedback from users and case managers. Additionally, Michigan plans to engage Upjohn Institute for Employment Research to measure the effectiveness of its tools.

# CONCLUSION AND RECOMMENDATIONS

Data for the American Dream has helped spur the development and expansion of tools in three different states with great potential to benefit individuals who are un- or underemployed and experiencing structural racism and economic marginalization. With the environment of tools focused on career, education, and training navigation seemingly constantly expanding, ensuring that tools are actually making a difference in their lives of the population they intend to serve is crucial, but complex. While most publicly available tools in this category focus exclusively on the career explorer as the intended audience, developers must recognize that intermediaries are a vitally important audience as well.

The recommendations below are drawn from the work of the three D4AD grantees as well as research and evaluation on online tool development.

**I. Design with Multiple Potential Users in Mind.** Technology platforms designed for intermediaries may need to address different needs than those geared specifically for jobseekers. Also, needs will vary by type of intermediary. Understanding the needs and requirements, and how they may differ by user type, is an essential first step to building a product that can operate through both jobseeker and intermediary pathways. Ensuring that intermediaries are considered in plans for adoption from the earliest stages and are consulted in the iterative development process is a critical step.

**2. Data and Evaluation are Crucial.** As technology evolves and (hopefully improves) — and society becomes even more used to interacting directly with it — lessons drawn from previous applications and platforms may become dated. The next generation of applications and search websites may outperform previous ones through better technology, friendlier interfaces, or something else. But without robust data and information about how such platforms are being used and whether use of the tool produces better outcomes than existing resources and activities, it is impossible to tell if this technology is reaching the intended population and meeting their needs. Data and evaluation are also crucial for determining whether these platforms are producing equitable results and for ensuring sustainability. Both of these items are discussed in greater detail below. Considerations and planning for long-term data and evaluation should be part of the design and deployment of these tools.

For already existing systems, this means designing and carrying out evaluations to understand where they are working, how equitable they are, and where there are still gaps remaining. Obviously, well-designed evaluations can be expensive, but the cost of continued operation, both to those providing the tools and those using them is substantial as well.

**3. Provide Intuitive Professional Development.** Given the struggles to learn and adopt new technology and the limitations for intermediaries to fund professional development, new tools for career navigation must provide comprehensive and free professional development. As a complementary recommendation for the design item above, the platform must be designed in ways that intermediaries can quickly and easily become competent not just as users of the platform, but as guides in helping underserved populations that may have diverse levels of technology competence.

**4. Design for Sustainability.** Ultimately, any complex technological tool for navigating career, education, and training options built to access vast amounts of data will require maintenance and upkeep. For tools developed by public entities, that maintenance and upkeep can be expensive and difficult to support given the nature of public funding. One key to unlocking additional resources is to demonstrate the effectiveness of the tool, with data (both quantitative and qualitative) on how it helps users and intermediaries. Another strategy for sustainability is to build the tools within existing systems and with a network of partners. This can help spread the cost among multiple budgets and build broad-based support for the platform.

As far as building applications and webtools goes, existing research and experience as the implementation partner for the Data for the American Dream initiative discredits the “Field of Dreams” theory of change that “if you build it, they will come.” Instead, it is apparent that clearly defining potential users, carefully considering a variety of paths to engaging potential users, and integrating feedback from potential users and trusted intermediaries from the planning through outreach stages is critical for avoiding the pitfalls of tools, applications, and websites that promised great things for users but ultimately never lived up to their promises. “If you build it after taking into account their perspective and needs, provide plenty of supports for usage and adoption, and make sure there are plans to sustain it, they will come” doesn’t make for a good tagline in a movie, but it is certainly a more accurate way of looking at the development of these tools.

# Endnotes

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