Civic Tech and Data Collaborative Demonstration Cities: Boston

Connecting Youth to Summer Jobs:   
A Data-Driven Approach to Job Matching

The [Civic Tech and Data Collaborative (CTDC)](https://www.livingcities.org/work/civic-tech-and-data-collaborative) is a joint initiative of Living Cities, Code for America and the National Neighborhood Indicators Partnership, supported by a grant from the John D. and Catherine T. MacArthur Foundation.

## Project Overview

The Boston CTDC will improve how the City of Boston connects young people to employment by advancing the application and job matching processes for the city’s SuccessLink program. The project is a partnership of the Metropolitan Area Planning Council (MAPC, the regional planning agency), the City of Boston’s departments of Youth Engagement and Employment (DYEE) and of Innovation & Technology (DoIT), local volunteer-based civic technologists (Code for Boston), the Boston Foundation, and faculty researchers at MIT. Local financial support is provided by BNY Mellon. Started in June 2015, the project will run through July 2017.

Each year, roughly 8,000 young people, ages 15 to 18, apply for summer employment through the DYEE’s SuccessLink program. Boston Mayor Marty Walsh set a city-wide goal to increase the number of youth job applicants to 10,000 annually, and also seeks to increase the success rate of youth job placement. The partners of the Boston CTDC believe that implementing a more efficient job matching infrastructure will help to achieve these goals by saving staff time, placing more young people in summer jobs, and creating better long-term opportunities for youth.

## What’s happening now?

To date, the Boston team developed and implemented a new algorithm matching youth to jobs in the summer of 2016. Only 200 jobs will be matched using the new back-end process and the results will be used for evaluation against the traditionally matched jobs. The new matching algorithm balances a variety of factors including applicant interest, transit access, and commute time.Twelve youth hired through the city’s Youth Jobs program participated in weekly meetings throughout the process to influence the matching algorithm’s development, most significantly lending their perspective to the youth interest score component.

The second phase of the Youth Jobs project will begin after the 2016 summer job matching is complete. This phase will involve modifying front-end parts of the process like the application interface for youths and the job matching interface for city employees.

## Tech and Data Milestones

**What technology improvements have been identified for this project?**   
Before the Boston CTDC’s project, DYEE staff carried out the job matching process manually. This added personalization, but spent more city resources than may be necessary with more streamlined technology. DYEE uses a talent acquisition system to match jobs, and by the end of the project, the city’s new technology will pull data from the system through an API to perform the matching algorithm using automated programming. Information like applicants’ locations and travel preferences will be geocoded and processed to factor into matching youth to job opportunities.

City staff will also be able to use new technology to collect youths’ responses to job offers without having to conduct personal phone calls. The new interface will be user-friendly for you and staff. The Boston CTDC believes that by implementing a user-centered design to develop this technology, staff and youth will have an experience that feels more suited to their needs and that achieves better outcomes.

**What data improvements have been identified for this project?**   
Previously, only first-hand knowledge was used to match youth job-seekers. This project systematizes the match process and uses data to add new, important criteria like commute time and youth interest into the job search process. MIT has joined the Collaborative to perform an evaluation of the new matching process as compared to the traditional process that will also attempt to analyze long-term outcomes for youth.

The Boston CTDC is also working to reinvent the way data is being used to conduct job matching. MAPC has created a new dataset used in the matching algorithm that stores a matrix of transportation times to and from different points in the city, based on the applicant’s stated preferences and nearby options. Additionally, the Boston CTDC has taken steps to ensure that youth living in areas where transportation options or jobs are sparse due to a lack of economic opportunity are not excluded from matching simply because jobs are not available in their area. In this way, special considerations in the data will minimize the effects of inequity for residents of neighborhoods with low opportunity.

## About the Partners and Roles

* *Boston’s Department of Youth Engagement & Employment* (DYEE); This agency houses the summer employment program is a one-stop resource center for Boston’s youth.
* *Metropolitan Area Planning Council* (MAPC): The regional planning agency manages the project and leads the collaborative’s technology development.
* *Code for Boston:* Code for Boston is a brigade of Code for America, a volunteer civic innovation organization that holds regular events to help convene technologists and activists together. .
* *Boston’s Department of Innovation and Technology:* DoIT engages, empowers, and improves life for citizens and partners through technology, and is assisting with the technology development’s adherence with the city’s policies and practices.
* *Boston Indicators Project at the Boston Foundation (TBF):* The Boston Indicators Project is reviewing the current uses of the youth employment program data and advising on how analysis can help to understand and strengthen the program.
* *Massachusetts Institute of Technology (MIT):* Researchers at MIT will partner with MAPC to evaluate the effectiveness of the job matching process and evaluate outcomes.