IDS CASE STUDY:
New York City

Creating "One City":
New York City's Center for Innovation
through Data Intelligence

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ACTIONABLE INTELLIGENCE

FOR SOCIAL POLICY

In 2002, several New York City Commissioners and deputy level officials, representing an array of Health and Human Service Agencies and other agencies, set out to strategize about how to coordinate interagency services and reduce bureaucratic demands on families who rely on services provided by multiple agencies. This "One-City" project involved the Department of Homeless Services (DHS), Human Resources Administration (HRA), Administration for Children's Services (ACS), Department of Probation (DOP), Department of Youth and Community Development (DYCD), Department of Correction (DOC), NYC Housing Authority (NYCHA), the Department for the Aging (DFTA) and Housing Preservation and Development (HPD).

The Department of Homeless Services (DHS) initially took the lead by identifying homeless families who were also involved with ACS, DOC and HRA. Using The One-City strategy, DHS identified families who were multi-system involved and convened case reviews, in cooperation with all relevant agencies, with the goal being to more efficiently resolve client related issues. These case reviews correlated with improved client services because case managers were able to coordinate with multiple agencies on the client's behalf. This process empowered DHS and the other agencies to "think about where [their] policies conflicted with other agencies and identify where system changes needed reform as well as promoting best practices and cross agency training on how to work effectively with the most complex-multi-system involved family" (Schretzman, interview, March 21).

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These inter-agency successes coincided with Mayor Bloomberg's agenda to use data to improve city services and promote positive outcomes for clients through a more effective benefit dispersal system. Improved information technology and greater access to administrative data has allowed HHS agencies to improve client outcomes and deliver

coordinated services more effectively. The city has placed an increased emphasis on available city-data being shared amongst all agencies, which better informs policy makers and provides a readily available metric for program and service evaluation.

The Office of the Deputy Mayor for Health and Human Services (DMHHS) has responded to the call. To improve the outcomes of individuals and families served by HHS agencies, a system wide inter-agency effort has been orchestrated to identify needs, implement program and services to target these needs; and communicate these results to improve client services, all with a particular focus on individuals who are being served, by more than one agency. Issued in 2008, Executive Order 114 facilitated a series of initiatives aimed at strengthening the city's ability to implement data-driven policies, which expedited the efficient implementation of services and programs, and provided coordinated services to clients.
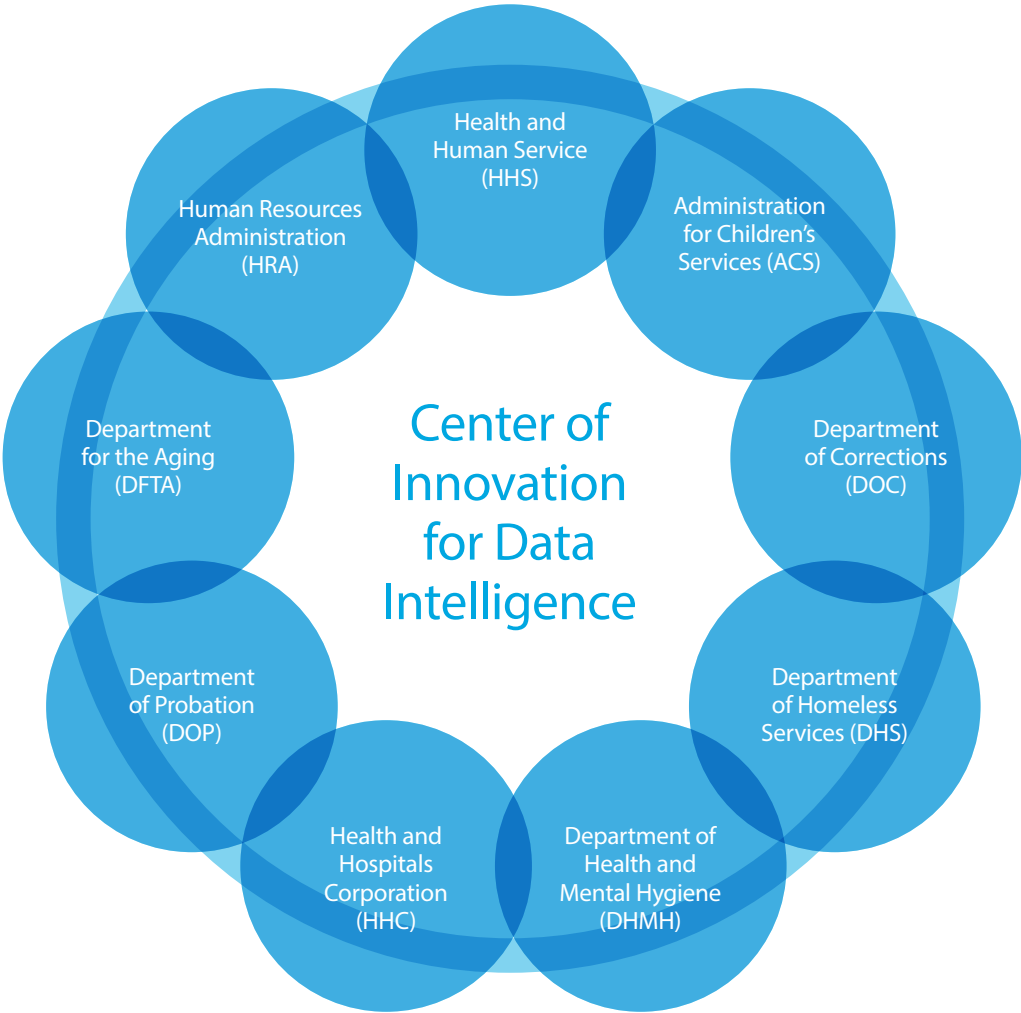
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While each HHS agency collects data about individuals and/or families served and has some data analysis capacity, prior to the Center for Innovation through Data Intelligence (CIDI), the city did not have the legal or analytical infrastructure to quickly analyze data for multi- agency use. For example, there was no way to provide a coordinated approach to cross agency service in an emergency using real time data to support residents impacted by Super Storm Sandy. To address this problem, CIDI staff analyzed survey data collected by the National Guard on a daily basis and created specific multi- agency reports so that residents' needs were met by services from the appropriate agency: such as visiting nurses (DOH), sanitation workers (DSNY), shelter officials (DHS), hot meals and water (DFTA). Another example of how CIDI used data from Super Storm Sandy is that CIDI was able to produce maps of residential units that were known to be without heat, electricity and/ or telephone in the impacted areas of the city. The data visualization allowed city workers to better plan how many investigators to send to a specific areas to ensure appropriate coverage. A second problem was the inability to determine the effects

of involvement with any particular agency on subsequent involvement with other city agencies. One question, for example, is whether children entering foster care are at higher risk of involvement in the juvenile justice system, or to further know whether supportive housing for youth aging-out of foster care, helps prevent involvement with other city systems, such as homeless services, probation or correction.
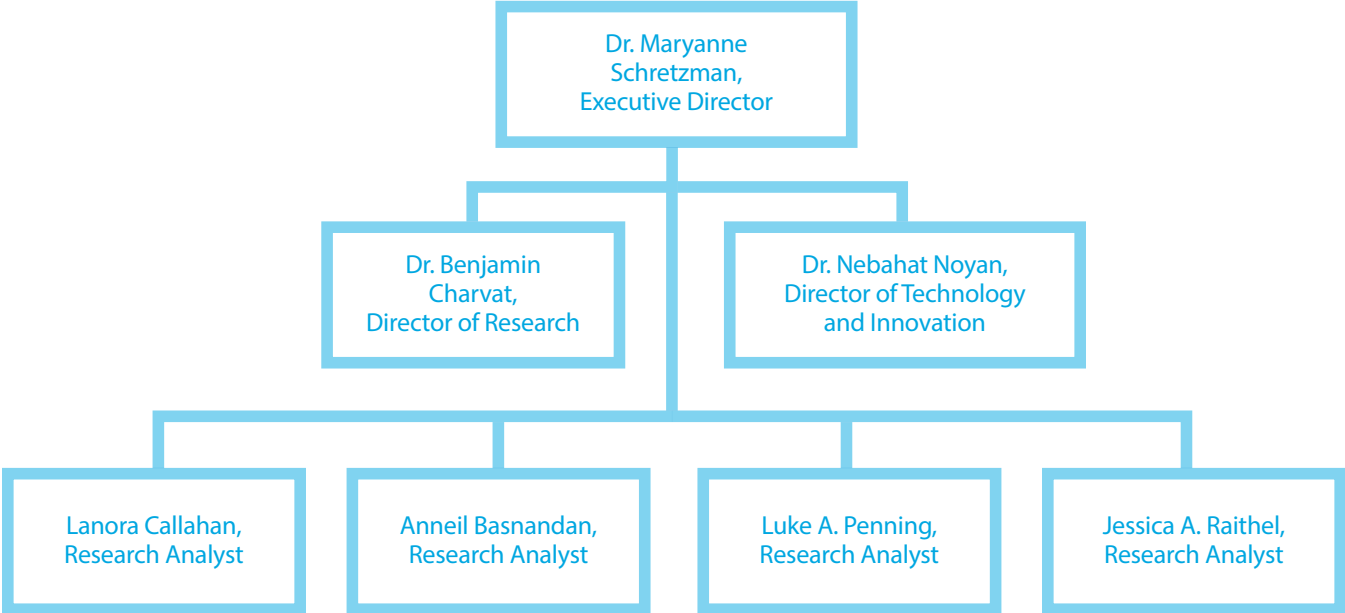
CIDI incorporates data from a variety of HHS agencies to promote policy-driven research and improve services to city residents (see figure 1 for a complete list of agencies that contribute data).

FIGURE 1. **Contributing Agencies, Center for Innovation through Data Intelligence**

Creating "One City": New York City's Center for Innovation through Data Intelligence

Dr. Maryanne Schretzman previously served as the Family Services Coordinator for the City of New York and is currently the executive director of CIDI. Dr. Benjamin Charvat previously worked as the Senior Program Manager at the New York City Department of Education and is now the CIDI Director of Research.

FIGURE 2. CIDI's Organizational Chart

During the site visit, I conducted semi-structured interviews with CIDI staff as well as government officials and community partners who work directly with CIDI personnel. The interviews were based on an interview protocol developed with the University of Pennsylvania's Actionable Intelligence for Social Policy (AISP) team. Using standard qualitative methods, I structured these interviews using four themes—securing and maintaining legal agreements, establishing governance processes, data analytics management and processes, and economic and political realities to sustain operations. The themes all helped to illuminate and better understand the policy evolution and

benefits of this newly integrated data system. Since CIDI is housed under the Mayor's office and remains under the direct supervision of the Deputy Mayor of Health and Human Services (HHS), it is positioned uniquely. New York State law stipulates that the Deputy Mayor of HHS has the right to review any case that receives HHS services in her oversight capacity as the Deputy Mayor. CIDI acts as an intermediary group between city agencies in order to collect and analyze data that falls under HHS jurisdiction. CIDI follows all HIPAA and FERPA guidelines and follows the highest security standards for the data.

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While CIDI enjoys a special relationship with HHS agencies, it also works with other city agencies to draft MOUs, which stipulate the parameters for data use. To ensure ethical data use and practice, the Deputy Mayor for Health and Human Services, city commissioners review research proposals during their monthly executive meetings. The commissioners have the right to approve, make modifications or deny data requests and research proposals. CIDI relies on the outcomes of the executive monthly meetings to ensure that the research benefits the city's agencies and meets the organization's aims to promote interagency work in New York City government, and to ensure privacy standards are upheld.

Once a research study has been approved, CIDI staff work with other agency staff to finalize the research method and submit the final proposal to CIDI's Institutional Review Board (IRB). While the project is under review of the IRB, the HHS agencies involved with the project will have a period of two weeks to allow their agency lawyers to review the terms of the research project in order to guarantee that these projects comply with local, state, and federal laws, such as HIPAA and FERPA. This is an additional step that CIDI uses to ensure legal compliance and appropriate use of data. External researchers must

secure permission to conduct research from their own IRB as well. When the research is complete, study personnel submit their findings to the agencies that contributed data for review. Once approval from each agency involved with the project is granted, the results are then posted on CIDI's public website which is freely available (Schretzman and Charvat, interview, March 21).

❖ Data Analytics Management and Processes

CIDI data analysts acquire data through a variety of means depending on the contributing agency's preferences and protocols. Some agencies transfer data using encrypted flash drives or CDs. Others send data through a secure file and transfer protocol (FTP). Once the data have been transferred, they are stored in a large repository on a City Hall server. The data are encrypted the moment that they are uploaded to the server to ensure that no one can access the data without authorization. They are also password protected to guarantee that only CIDI can access them.

Once they are uploaded to the server, the data analysts begin the process of preparing the data for analysis. Initially, a CIDI analyst is assigned the lead of a project and is responsible for the formation of a work group that includes agency representation from each agency that is contributing data (monthly workgroups) to discuss methodology and any problems or concerns in a particular data set. This provides CIDI the context of where and how the relevant data was collected as well as its meaning. After the method and variables are selected, the analyst conducts descriptive statistical functions on the datasets to examine if there are any other notable patterns. Once they have completed this phase, the analysts verify the data and link the records using SAS software. While variables vary across datasets, the analysts typically use first name, last name, date of birth, and social security numbers (when available) to match records from one agency's data to another. Each analyst maintains his or her own data dictionary for each project (Callahan, interview, October 10).

❖ Leveraging Integrated Data to Examine and Enhance City Programs and Social Service Outcomes

CIDI works with a variety of city agencies to conduct policy-driven research and examine the effectiveness of city programs and services.   CIDI as the data analysis and research group uses the information from multiple HHS agencies to answer policy questions, sharpen policy design, assess outcomes, and advocate for best practices based upon the research findings. Some examples: The strongest predictor of a foster care youth becoming involved in juvenile justice is their first entry into foster care at the age of 9 or older. This analysis supported the child welfare agency to issue a "request for proposals" to offer more than 20 million dollars in proactively targeting this group for family prevention services. The Center has received foundation funding to track the outcomes of both foster care and juvenile justice involved youth to further predict risk factors associated with poor outcomes. And, with another foundation, CIDI has joined with a not-for-profit agency to evaluate the outcomes of young adults in a supportive housing program using administrative data from a variety of HHS agencies combined with data from the not-for-profit agency. This will be the first outcome study of a program using cross-agency administrative data. CIDI's innovative approach promises to lead to a new standard for measuring outcomes in health and human service programs. CIDI has also collaborated with the Department of Homeless Services (DHS) to develop a predictive model to predict if a family entering family shelter will be a long stayer or short stayer. In this way, DHS can match family need to services.   CIDI also works with ACS Child Care and the Department of Homeless Services to analyze data to improve fiscal efficiencies. In this work, CIDI not only looked at individual agency data to uncover potential fiscal inefficiencies, but also looked at potential cross-agency financial inefficiencies (e.g., an individual in a homeless shelter and also in an inpatient drug treatment center at the same time). Finally, CIDI also used a common methodology to analyze data on racial disparity across the HHS agencies as part of the Young Men's Initiative.

Even though HHS agencies are the primary consumer of CIDI services, other agencies, such as the New York City Housing Authority (NYCHA), also work with CIDI to engage their expertise. Tamara Dumanovsky, Deputy Director of NYCHA, said that NYCHA has

collected data for decades, in order to establish rent prices, determine resident eligibility, and provide services to its clients. For the past several months, NYCHA has been working with CIDI staff to think about how they might utilize their data to improve service outcomes and benefit their residents. For example, NYCHA is interested in finding out which schools enroll NYCHA youth so that the agency can work with school personnel to implement programs and services to enhance academic achievement.

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In addition, CIDI has assisted NYCHA staff with creating feasible research studies based on program and policy questions that have arisen. For example, the Department of Consumer Affairs provides financial counseling for city residents who are in debt or looking to become more financially secure individuals. NYCHA has developed their own referral program to connect individuals in their housing units who may wish to take advantage of this counseling program. Benjamin Charvat, CIDI's Director of Research, has been working closely with NYCHA staff to examine if the financial counseling program actually enhances outcomes for NYCHA residents.

Making use of the expertise of CIDI staff allows NYCHA to integrate data and conduct policy-driven research in an economical way because NYCHA does not need to hire additional staff to do this work. Dumanovsky believes that CIDI represents "an incredible resource for inter-agency work, because everybody needs to protect their own data and we have to be very sensitive to how we use it and who uses it and no one wants to hand their data over to another agency" (Dumanovsky, interview, March 21). As Charvat suggests, CIDI acts as a third party to negotiate data sharing and to increase policy-driven analyses among a variety of agencies that serve New York City residents (Charvat, interview, March 21).

❖ Economic and Political Realities to Sustain Operations: Lessons Learned

When asked about the lessons that CIDI staff members have learned as the organization evolved from an entity that integrated data across city agencies to one that is deeply engaged in innovative, policy-driven research, Schretzman and Charvat immediately responded that program needs must be at the forefront of any integrated data system. Initially, CIDI staff worked with IT staff to think about the technology necessary to integrate data to answer research questions.   Over time, CIDI realized that this was the wrong approach because it is more useful to build your IT infrastructure based on need, as opposed to building a huge IT project and then determine need. As Schretzman and Charvat emphasized in their interviews, CIDI is a tool to improve social service outcomes in the City of New York, and thus, these social service programs must drive the work that they do. This, coupled with the Mayor's direct support for this work, has enabled them to sustain their operations.

When I asked CIDI staff what makes them the most proud of the work that they have done, Lanora Callahan said that she knows that her analyses and research matter. Callahan was the lead analyst on a multisite study with other AISP network sites on youth who were involved in the foster care and juvenile justice system. This study showed that youth who entered the foster care system after the age of nine were more likely to be involved with the juvenile justice system later in life. CIDI discussed this finding with several city commissioners, who in turn, implemented programs to address the study's results (Callahan, interview, October 10; See also, Goerge et al., 2013).

Benjamin Charvat believes that CIDI has "really been able to change peoples' minds about working with other agencies" and how the work that each agency does impacts other agencies, as well. Charvat and Schretzman agree that the organization's branding and placement within DMHHS matters because it sends a signal to the other agencies that CIDI serves as a liaison and advocate for data sharing and research. Schretzman believes that this positioning enables CIDI to engage with other agencies

in a way that has never happened before in the City of New York. This collaborative approach has helped government officials and agency staff members understand CIDI's aims and processes. As Charvat says, CIDI has ushered in a "paradigm shift" for the way in which the City of New York operates and has promoted inter-agency work to enhance the programs and outcomes that the government supports (Schretzman and Charvat, interview, March 21).

❖ Works Cited—Data Uses and Practices

George, R. M., Cusick, G. R., Hess, N., Gacitua, C., Coulton, C., Crampton, D., ... Cutuli, J. J. (2013). *From Foster Care to Juvenile Justice: Understanding Youth who Cross Over in Three Cities*. Philadelphia, PA: Actionable Intelligence for Social Policy-University of Pennsylvania.

❖ Recommended Citation