

IDS CASE STUDY: The Institute for Social Capital

Creating a Hybrid IDS Model for the
Greater Charlotte-Mecklenburg Region

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This case study is based on an extensive review of historical documents detailing the formation and evolution of the Institute for Social Capital, and the legal agreements and policy and procedure documents that guide its current work.

It is also based on interviews with the following individuals:

Ashley Williams Clark

Director of Outreach and Strategic Partnerships, and Interim Director of Institute for Social Capital, Urban Institute at University of North Carolina-Charlotte

James R. Cook, PhD

Professor of Community Psychology at University of North Carolina-Charlotte

Peggy Eagan

Director, Mecklenburg County Department of Social Services

David Hill

Data Scientist, Institute for Social Capital at University of North Carolina-Charlotte Urban Institute

Jesh Humphrey

Vice Chancellor and General Counsel, University of North Carolina-Charlotte

Justin Lane

Data and Research Associate, Institute for Social Capital at University of North Carolina-Charlotte Urban Institute

Jeff Michael

Director, Urban Institute at University of North Carolina-Charlotte

❖ Background

The Institute for Social Capital, Inc. (ISC) is a mature, university-based integrated data system (IDS) that was established in 2004 and became incorporated as a legal entity in 2005. ISC exists to advance university research and to increase the community's capacity for data-informed decision-making. In its 13 years as a secure repository for administrative data from large and small data contributors, ISC has restructured and evolved in ways that have anchored its stability, streamlined its administrative cost structure, and optimized its use of university-based infrastructure.

The establishment of ISC arose from parallel—and then convergent—conversations among board and staff leaders in Charlotte's social sector. Between 2002-2005, Jake Jacobson, then Director of Department of Social Services (DSS), and Peggy Eagan, then Executive Director of Children's Services Network (a children's advocacy organization) began discussing how data might be used to better understand the efficacy and return on investment of all social services dollars spent on children and families. Simultaneously, similar conversations were occurring within Community Works, the planning arm of United Way of Central Carolinas. In contemplating the possibility of integrating data between Charlotte Mecklenburg Schools and other public and social services systems, discussions between Community Works board members Jim Cook, PhD, Professor of Community Psychology at University of North Carolina-Charlotte (UNC Charlotte), and then UNC Charlotte Chancellor James Woodward, led to McKinsey Consulting being enlisted to conduct a feasibility study and develop an implementation plan for an integrated data system.

A planning team was formed comprising Joan Lorden, PhD, UNC Charlotte's Vice-Chancellor and Provost for Academic Affairs, and representatives from Mecklenburg County government, Foundation For The Carolinas, United Way's Charlotte Works, DSS, and agency representatives. The team oversaw implementation of the plan developed by McKinsey and hired the Institute's first Executive Director, Sharon Portwood, PhD, in 2005. To address community partners' concerns about privacy, data security, and autonomy, the decision was made to locate ISC at UNC Charlotte.

The incorporation of ISC as a nonprofit and wholly-owned subsidiary of the UNC Charlotte Foundation was recommended by UNC Charlotte’s legal counsel, exercising an abundance of caution in response to community partners’ concerns about confidentiality of client records, and in an effort to protect deposited data under the State of North Carolina’s open records laws, which applied to research activities of state-funded universities at this time. This statute was changed in 2014.

The first five years of Portwood’s work were devoted to forging individual data-sharing Memoranda of Understanding (MOUs) between ISC Inc. and prospective data contributors, and grant writing to fund additional staff. Between 2007-2009, data sharing agreements were executed between ISC and five large institutions/agencies that became the first depositors to a pilot ISC Community Database launch: Charlotte-Mecklenburg Schools (CMS), Department of Social Services, Mecklenburg County Sheriff’s Office, Communities in Schools (CIS), and Lutheran Family Services. In 2011, discussions between UNC Charlotte’s Urban Institute (an applied research and community outreach institute at UNC Charlotte) and the Charlotte-Mecklenburg Housing Coalition (now the Housing Advisory Board) laid the groundwork that subsequently resulted in the community’s Homeless Management Information System (HMIS) data being brought into the ISC database in 2014. From 2007-2011, approximately \$1.3M in grant and contract funding was raised from The Duke Endowment, CMS, Lutheran Family Services and others to support ISC, in addition to the in-kind and direct financial support provided by UNC Charlotte.

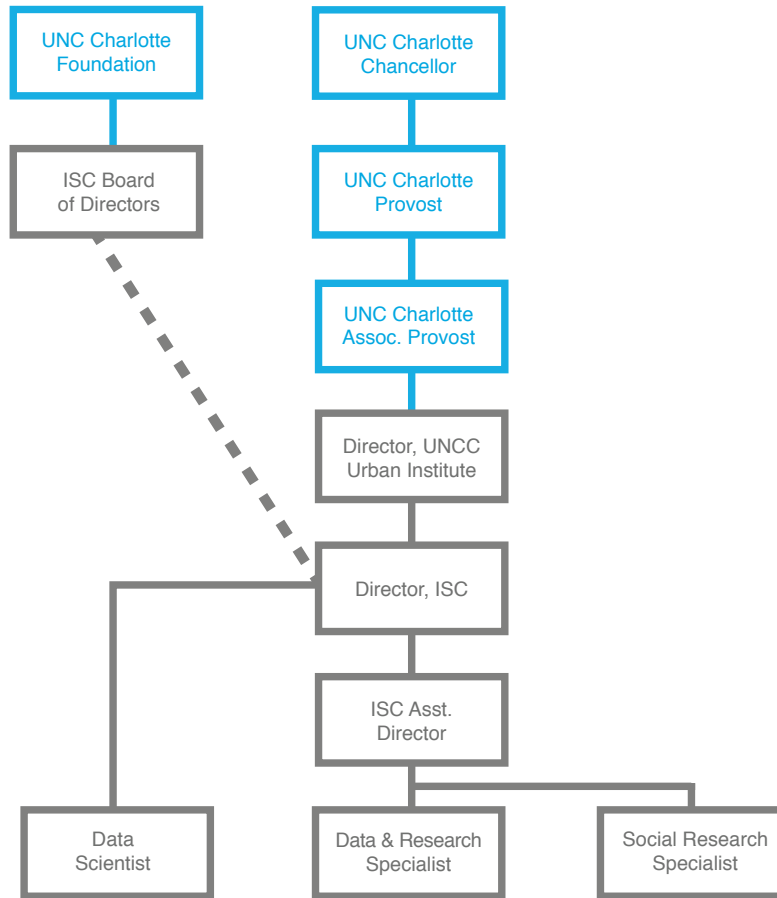
The struggle to establish the legal, policy, technical, and financial infrastructure while demonstrating proof of concept to build community support strained the limited and underfunded capacity of ISC’s staff of four. In 2012, as ISC was preparing for a transition in leadership, Drs. Dennis Culhane and J.J. Cutuli of Actionable Intelligence for Social Policy (AISP) at the University of Pennsylvania were engaged by ISC and funded by a Catalyst Grant from Foundation For The Carolina’s to conduct a review of ISC’s data system capacity, policies, and procedures. Their findings augmented a 2011 strategic plan developed by the ISC board and provided a blueprint for priority work for the incoming director, Amy Hawn Nelson, PhD, who was hired in September 2012.

In June 2011, after concluding that greater resources and more robust staffing and infrastructure would be required for ISC to fulfill its stated mission and vision, the decision was made to restructure within UNC Charlotte’s Urban Institute in 2012.

❖ **ISC Governance Structure**

As described by Jeff Michael, Director of the UNC Charlotte Urban Institute, ISC’s governance structure, as a nonprofit functioning as a subsidiary of a university foundation, represents a hybrid model. As ISC’s bylaws indicate, it is a separate 501(c)(3) and wholly-owned subsidiary of the Foundation of the University of North Carolina at Charlotte.¹ As the only legal member of the board, the University Foundation has sole voting authority over the election and dismissal of board members. Thus, the appointed board functions as an advisory rather than a governing board, responsible for protecting the integrity and security of data and ensuring MOUs are in place. As a matter of practice, the board reviews and provides input to ISC’s research priorities, but the weight of decision making for approving data license requests resides with the board’s Data and Research Oversight Committee (DAROC). DAROC is a designated committee of the ISC Board of Directors, and all members are appointed by the board. The ISC Director reports to the Director of UNC Charlotte Urban Institute rather than the ISC board. All ISC staff are state-funded employees of the university, not ISC. The governance and staffing structure as of August 2018 is depicted in Figure 1 below.

FIGURE 1. ISC Governance and Staff Organizational Chart



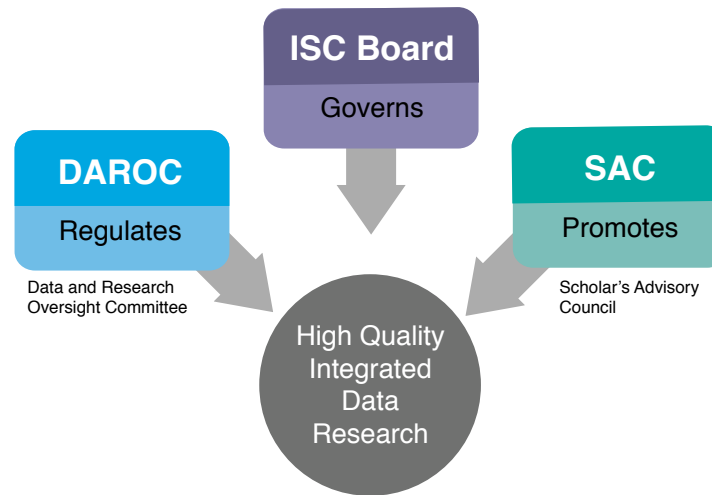
The ISC bylaws allow for up to 18 directors on the board, five of whom are ex-officio: the Mecklenburg County Manager or his/her designee; the Executive Director of United Way of Central Carolinas; the Superintendent of Charlotte-Mecklenburg Schools or his/her designee; the Chair of the ISC Data and Research Oversight Committee; and the Provost and Vice-Chancellor of Academic Affairs of UNC Charlotte. Additionally, UNC Charlotte’s General Counsel or Associated General Counsel and the Vice-Chancellor of Business Affairs serve as Board Secretary and Treasurer respectively, and are nonvoting board members. Other directors are elected from among business and community leaders, the justice system, foundations, and nonprofit organizations—specifically contributing data partners.

Within its governance structure, the ISC board has created two standing committees—the Data and Research Oversight Committee (DAROC) including a subset of committee members who perform Data Quality Review as needed, and a Scholar’s Advisory Council (SAC). DAROC, which meets approximately quarterly, makes recommendations to the ISC Board regarding privacy policy, defines and maintains policy and monitors compliance regarding licensure of Institute data, and “...has the sole authority to review requests for licensure of data and make any and all decisions regarding the release of data not inconsistent with any existing data sharing agreement.”²

Committee composition includes five permanent agency representatives including United Way, Charlotte-Mecklenburg Police Department, and three representatives from the Children’s Alliance—a coalition of child and family-serving nonprofits; three representatives from UNC Charlotte academic departments; and representation from the community of housing and health service providers. The ISC Director, Data Scientist, Data and Research Specialist, and a representative of UNC Charlotte’s General Counsel office serve as ex-officio members.

The Scholar’s Advisory Council makes recommendations to the ISC board regarding data holdings and research priorities, promotes and advances collaborative research, reviews data holdings and recommends data depositors and quality-based data inclusion and exclusion, and generally provides scholarly support to the ISC Board and DAROC. The working relationship between the ISC Board, DAROC, and SAC is represented in Figure 2.³

FIGURE 2. ISC Board, DAROC, and SAC Working Relationship



While ISC’s hybrid governance structure maximizes data security and privacy, it comes with some tradeoffs in terms of perceived accessibility and timely responsiveness to community data inquiry. ISC’s founding purpose was not intended for real-time analyses or case management, thus its utility may be limited for some data contributors. The largest data contributors — Charlotte Mecklenburg Schools (CMS) and Mecklenburg County Department of Social Services (DSS) — tend to rely on their own internal, real-time data for analyses of utilization, client performance, and impact rather than availing themselves of the data integration/linking capacity of ISC. In fact, the most frequent users of ISC data tend to be staff of the Urban Institute in the execution of contract program evaluations and assessments, frequently in partnership with ISC data partners or other community organizations.

Conversely, ISC’s separate incorporation affords it some leeway and flexibility in contracting with outside resources for technical and consulting support. It has also been able to creatively fund graduate student staffing under this structure.

❖ Legal, Policy Agreements

ISC has codified its data sharing, structural and working relationships, data security, and nondisclosure agreements in numerous legal agreements and policies. Its incorporation as a wholly-owned subsidiary of the UNC Charlotte Foundation is articulated in the ISC bylaws. A Cooperation Agreement details the parameters of the relationship between ISC and UNC Charlotte, in terms of the provision of noncontract staff, administrative support, IT support, office space, etc. A Subcontract Agreement between the two entities enables the Urban Institute to pay ISC for data pulls in support of project work conducted by Urban Institute staff.

ISC's Data Sharing Agreements (DSA) and Data Use Agreement (DUA) with data contributors are actually three-way agreements between the data contributors, ISC, and UNC Charlotte. While the actual data sharing occurs between the contributing entities and ISC, Inc., the university must be party to the agreement, as the data resides on university servers and is managed by university employees. A Data Use Agreement (DUA) is executed when lists of program participants from organizations that are noncontributors to the ISC database are used for project-specific purposes. In these instances, data are deleted once the analysis for the project is complete. ISC uses a master agreement that serves as a standing agreement (i.e., not requiring annual renewal) for all but one of its data contributors, CMS.

ISC executes a Data Licensing Agreement (DLA) with researchers once a project and the associated data request have been approved for data pulls involving the data held within the ISC database.

Finally, Nondisclosure Agreements are required to be signed by UNC Charlotte Urban Institute staff and researchers who will be working with the Data Scientist to review data before they are released.

❖ Technology Platform and Data Security

ISC's Integrated Data System (IDS) is designed to prioritize data security, as stipulated in the Data Sharing Agreement, and to optimize performance within the limitations presented by its lean staffing level and current hardware and software configuration. As described in a report prepared by AISP,⁴ the IDS is a federated system in which data from over 40 data contributors are variably deposited on an annual (six data depositors), as-needed (12 depositors), or project-specific basis and are matched and de-identified on an as-needed basis.

The data importation process documented in the 2012 AISP review remains largely in practice today, as data continue to be imported to a single, secured server in a locked room via encrypted flash drives for most data contributors except CMS, for whom data are retrieved from a secure File Transfer Protocol (FTP) site and then downloaded. ISC Data Scientist, David Hill, PhD, has created a virtual folder system within a “data lake” where imported data reside separately, by agency, to be “cleaned,” de-duped, and de-identified. The data are cleaned, matched, and/or integrated on a time-available or an as-needed basis as project-driven data pull requests are approved and processed. It is for this reason that ISC's IDS was described as a federated rather than a fully-integrated data system. The technology platform does not yet support remote access over secure networks.

ISC does not require a standardized data submission format, as this would present a barrier to data submission for many of its smaller data contributors. This has rendered the record matching process more arduous by virtue of the quality of, and format in which data are submitted by some data depositors, compounded by the Data Scientist's limited capacity as a staff of one. As an example, data from one depositor is submitted annually as a multi-worksheet Excel spreadsheet. Any multi-year request involving these data will result in duplicate client records across the years requested, which then must be de-duped before it is usable. Other data deposits from smaller agencies are even more rudimentary and varied in format, rendering some of the administrative data of questionable quality. ISC reports a range of successful record match rates, depending on the project.

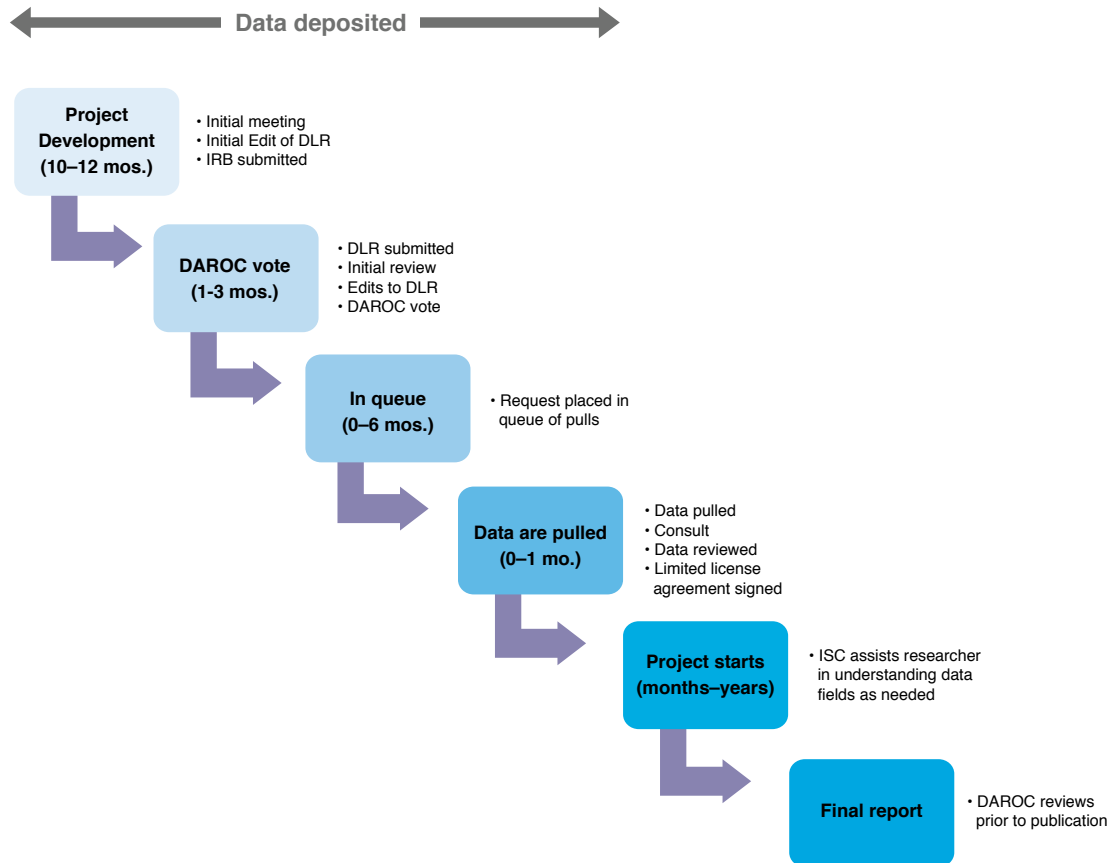
ISC uses Soundex software to perform phonetic matching of first and last names, with date of birth as the third matching field. The matching software is used for any remaining unmatched records after the Data Scientist has executed one pass at matching records that have been converted to a standard format (i.e., “cleaned” by standardizing first and last name formats). ISC makes a master index of data element holdings, the ISC Community Database Codebook, available to researchers through a [secure website](#), which can be used to inform their data requests.

❖ Research Agenda

The mission of ISC is to advance university research and increase the community’s capacity for data-informed decision making. Since 2012, ISC has processed 44 Data License Requests.⁵ It continues to play a prominent role in informing large scale, systemically-focused work around housing and homelessness, economic mobility, early childhood literacy, and in supporting collective impact research and numerous program evaluations. Staff continually pursue strategies to inform community stakeholders about the power of the IDS, and to create collaborative research opportunities. For one example of ISC’s collaborative approach to promoting data-informed decision making, see page 15 of this case study.

As previously described, ISC’s architecture and processes are designed to prioritize data privacy and security. This has created some perceptual obstacles to wider community utilization of the IDS, as some prospective data requestors view the processing timeline as daunting. The steps involved in Data License Request (DLR) process and possible ranges of time required from project development and proposal through completion are summarized in Figure 3.⁶

FIGURE 3. Data License Request Process and Timeline



The ISC Director, Assistant Director, and Data and Research Associate play a critical role in supporting external (community) and internal (Urban Institute staff and UNC Charlotte faculty) data requestors through the DLR review and approval process. Although an IDS master Community Database Codebook exists containing all available administrative data fields, ISC staff usually assist requestors in developing and refining data requests to conform with what is possible and allowable, and in navigating the university’s IRB approval process, when needed. This preliminary development process alone can take up to 12 months, depending on the complexity of the project, whether new legal agreements and processes need to be executed, and/or the extent to which changes have to be made to the research design after the initial data request is submitted.

Data license requests submitted to DAROC for review, editing, and approval are not presented to the full ISC board for approval unless the project requires changes to policies, procedures, or legal documents. The data license request process can take up to three months, depending on whether the timing of the proposal submission is in sync with DAROC’s quarterly meeting calendars, although DAROC can schedule additional meetings, as necessary. Once approved, the time required for data matching and extraction depends on the number of requests in the queue and the complexity of the data pull. Priority is given to funded data requests. Staff report that, at any given time, there are between five and six outstanding requests in the queue. As previously stated, data pulls driven by the work of the UNC Charlotte’s Urban Institute (UI), as the applied research entity of the university, constitute the majority of the requests processed by ISC.

The ISC and UI staff occupy a prominent and influential role in the community, in terms of the credibility, quality, and neutrality associated with their data analysis and reporting in support of high profile, priority community initiatives. The ISC board and the university administration would like more broad-based faculty engagement in research and more collaborative and robust research requests initiated by community partners and its larger data depositors. However, ISC staff acknowledge that expanding its internal and external research capacity has been a casualty of ISC’s lean staffing model, as their time is largely focused on supporting the DLR process and associated data pulls. Additionally, the perceived and — in some cases, experienced — arduous and protracted nature of the DLR process remains a challenge to engaging more community stakeholders in accessing the IDS. The result is that the ISC board continues to struggle with how to position ISC to optimize meaningful work, particularly in a coordinated way with the UI staff.

❖ Political and Financial Sustainability

By all accounts, the decision for ISC to reside at UNC Charlotte has made the difference between its ongoing viability and its being at risk of dissolution. UNC Charlotte is the ultimate ISC sponsor and benefactor, as funder and employer of three ISC staff; underwriter of the technology platform, office space, and legal and administrative support; and fiduciary “owner” of the organization. The restructuring of ISC within the UI resulted in operational economies that eliminated functional duplication and freed up some resources for additional staff.

Over the years, financial support from local foundations and the public sector has been tied to specific project work and large-scale community initiatives rather than a deep and sustained commitment to ongoing organizational operating costs or an investment in the expansion of ISC’s capacity. Options for increasing resources are limited to the acquisition of new grant funding and to private fundraising, which the ISC board is legally able to do but which has not been a historical expectation or part of board culture. Beyond the initial \$1.3M in grant funding to establish ISC, there has been no additional financial community investment, beyond the contributions of UNC Charlotte, in growing ISC’s capacity. UI and ISC leadership concur that future structural evolution will be required in order for ISC to increase its capacity and address resource constraints over the long term.

❖ **EXAMPLE: IDS Utilization Helped Mecklenburg County Identify and Respond to Service Delivery Gap for Children Experiencing Homelessness**

The Housing Advisory Board (HAB) of Charlotte-Mecklenburg exists to document and report homelessness and housing instability in the county, and advise elected officials about optimal investments to positively impact stable and affordable housing.

In 2017, ISC partnered with the UNC Charlotte Urban Institute and Mecklenburg County Community Support Services, on behalf of the Housing advisory Board, to determine the magnitude and impact of homelessness on children.⁷ Data were linked from the Homelessness Management Information System (HMIS) and Charlotte Mecklenburg Schools (CMS).

Challenge:

- To determine whether children experiencing homelessness were connected to services
- To determine the likelihood of being reading proficient among children experiencing homelessness

Findings:

- 38% of CMS students in emergency shelters or transitional housing were not identified as McKinney-Vento, and thus were not connected to services through CMS.
- The odds of a black student experiencing sheltered homelessness being proficient in reading are 50% lower than their non-black peers who experienced homelessness.
- Exceptional students (students with disabilities) that experience homelessness are 93% less likely than non-exceptional students experiencing homelessness to be proficient in reading.

Actions:

- CMS worked with Salvation Army Women’s Shelter to place a dedicated McKinney-Vento counselor at the shelter to ensure that individuals eligible for services were connected as soon as possible.

Results:

- Within weeks, hundreds of new students and their families were connected to McKinney-Vento services.
- Charlotte-Mecklenburg Schools was able to access additional federal resources to support their students, families, and schools serving families experiencing homelessness. These resources are critical in helping to reduce the impact of housing instability on school success for CMS students.

❖ End Notes

- 1 Amended and Restated Bylaws of The University of North Carolina at Charlotte Institute for Social Capital, Inc., 6/8/2016.
- 2 Data and Research Committee Policies and Procedures, approved by the ISC Board of Directors, 6/10/2015.
- 3 ISC Overview PowerPoint Presentation, 2018, Ashley Williams Clark, Interim Director, and Justin Lane, Data & Research Specialist.
- 4 The Institute for Social Capital: Survey of data systems capacity, policies, and procedures. J.J. Cutuli, PhD and Dennis Culhane, PhD, 2012.
- 5 [ISC Newsletter](#), February 2018.
- 6 ISC Overview PowerPoint Presentation, 2018, Ashley Williams Clark, Interim Director, and Justin Lane, Data & Research Specialist.
- 7 [Charlotte-Mecklenburg Family Homelessness Snapshot](#), 2017, Ashley Williams Clark, Justin Lane, and Angelique Marcus Gaines.