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Subject: Data Interoperability and Social Service Programs: Toward Better Evidence and Evaluation

The Institute for Policy Integrity respectfully submits this letter recommending steps that the Office of Management and Budget (OMB) should take to increase data interoperability in ways that would facilitate better comparative evaluations of federal social services programs.

Policy Integrity is a non-partisan think tank housed at New York University School of Law. Policy Integrity's mission is dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

Different social services programs, overseen by different agencies, often perform similar functions or have similar goals. For instance, many programs distribute financial assistance to reduce poverty or homelessness, or administer services aimed at enhancing access to health care or education. These social services programs also often serve or interface with overlapping populations. The efficacy and cost-effectiveness of these programs is hard to assess for a number of reasons, including that multiple programs contribute to the same output (for instance, better health or educational outcomes). However, one of the main reasons that evaluations and comparisons are difficult is because of insufficient or incompatible data. Data from one program may not be compatible with data from another, or a program may not collect information that evaluators of that program or other programs would find useful. Improving data collection and interoperability would enhance the government's ability to evaluate the success of these programs, both individually and comparatively. These evaluations, in turn, can inform funding allocations to help better ensure that funds are spent where they return the greatest benefit.

Data interoperability is defined as the compatibility between different data sets, often from different organizations.¹ Data that is not collected to maximize sharing and data that is unable to be shared for nontechnical reasons are deemed "not fully interoperable." For the purposes of this letter, the term 'interoperability' includes the processes of data collection that make sharing easier and the processes by which sharing is accomplished.

¹ As the Government Accountability Office (GAO) explains:

Interoperability can be achieved at different levels. At the highest level, electronic data are computable (that is, in a format that a computer can understand and act on to, for example, provide alerts to clinicians on drug allergies). At a lower level, electronic data are structured and viewable, but not computable. The value of data at this level is that they are structured so that data of interest to users are easier to find. At still a lower level, electronic data are unstructured and viewable, but not computable.

GAO, GAO-10-332, ELECTRONIC HEALTH RECORDS: DOD AND VA INTEROPERABILITY EFFORTS ARE ONGOING; PROGRAM OFFICE NEEDS TO IMPLEMENT RECOMMENDED IMPROVEMENTS 3 (2010) (footnote omitted).

Given the difficulty in assessing social services programs and their critical importance to the communities that they serve, Policy Integrity recommends that OMB develop and implement a new data interoperability plan, with the twin goals of improving interagency data collection and data sharing practices.

There will be some obvious, although not insurmountable, challenges to this endeavor. For instance, the collection and sharing of certain types of data is restricted by statute; data collection is resource intensive; and interoperability efforts may run counter to an agency's institutional culture since a program would be required to devote resources to directly improving another agency's programs, with benefits being derived over the long-term from reciprocal sharing or long-term use of the data. Because of these challenges, addressing the interoperability issue will require strong leadership, cooperation, planning, and expertise.

This analysis describes the interoperability issue, discusses some of the relevant tools available to OMB, and recommends steps OMB should undertake to improve interoperability among agencies and sub-agencies that administer social services programs. The following discussion is broken into three parts:

- I. Improving Data Interoperability Would Allow for Better Comparative Evaluation of Social Services Programs. Recent Government Accountability Office (GAO) reports have highlighted the problems of overlapping programs and have also shown how incompatible data standards have affected social services programs that benefit the homeless. Examples collected by GAO combined with other secondary literature show that there are several barriers to data interoperability, including statutory and cultural barriers. However, fixing these data problems will allow for the overlapping programs to be evaluated comparatively and may also provide ancillary benefits, including increased program effectiveness.
- II. There are Many Tools, Processes, Groups, and People that Could Be Enlisted To Improve Data Interoperability. Numerous processes, methods, individuals, and organizations could play potential roles in improving data interoperability. Examples include the Office of E-Government, the National Information Exchange Model, and eXtensible Business Reporting Language.
- III. OMB Should Demonstrate Leadership in Developing and Implementing a Detailed Plan for Improving Data Interoperability and Interagency Data Sharing. OMB has singular leverage that can be used to bring agencies together and coordinate their data collection and data sharing efforts. A data sharing process spearheaded by OMB should also be designed with an eye toward facilitating social science research, research that is conducted by the agencies themselves, as well as outside research conducted by universities, state governments, and private actors.

Increasing data interoperability will allow OMB to comparatively evaluate social services programs better and lead to more efficient funding allocations among overlapping social services programs.

I. IMPROVING DATA INTEROPERABILITY WOULD ALLOW FOR BETTER COMPARATIVE EVALUATIONS OF SOCIAL SERVICES PROGRAMS

Recent GAO reports have highlighted some of the problems that arise when social services programs serve overlapping populations. In addition to possible redundancies, these programs do not collect interoperable data that can be used to evaluate and compare programs. This Part discusses overlapping programs and the use of interoperable information, and then explains some of the challenges inherent in collecting this information, including misaligned incentives, statutory barriers, and institutional barriers.

Recent GAO Reports Demonstrate the Data Collection and Sharing Problems Among Social Services Programs, Especially Targeting Homelessness

Recently, the GAO released its second annual report on wasteful overlap between government programs.² A recurring theme in both this report and last year's report is that agencies are not sharing or collecting critical data. For instance, agencies providing services for low-income children are not collecting data that would be helpful in conducting program evaluations: officials at the Department of Education and the Department of Health and Human Services (HHS) did not know how many children, in total, were served by core programs performing early learning and child care services for children under 5 years of age; also, HHS does not keep track of how many working families receive child care directly funded by Temporary Assistance for Needy Families (TANF).³

The number of social services programs also poses a challenge for government and academic researchers who attempt to gauge program effectiveness. For instance, GAO reported that there were 18 different programs that provided domestic food assistance, but concluded that 11 of those programs had not been studied well enough to determine whether they were succeeding at their missions.⁴

Insufficient data collection, insufficient data sharing, and insufficient interoperability all operate in tandem to obstruct comparative program evaluations. In a separate report on programs affecting homelessness, GAO highlighted a clear example of how one agency's methods for collecting data rendered that data incompatible with other agencies' databases. The result was an incomplete and ill-formatted data set that was unusable for gauging program effectiveness. GAO also reported that homelessness data was not being kept accurately because different agencies used different definitions of 'homeless' and related terms, as well as different metrics for measuring those categories: the variations meant that "study findings are difficult to compile or compare."⁵ GAO also found that the agencies were only retaining data that they considered necessary for their own institutional agenda.⁶ Additionally, as a result of data limitations, evaluative studies could only track either aggregate data or else very narrow populations, and therefore could offer only limited guidance on assessing what short- and long-term factors correlate with homelessness.⁷

² See GAO, GAO-12-342SP, 2012 ANNUAL REPORT: OPPORTUNITIES TO REDUCE DUPLICATION, OVERLAP AND FRAGMENTATION, ACHIEVE SAVINGS, AND ENHANCE REVENUE (2012) [hereinafter GAO, 2012 ANNUAL REPORT]. See also GAO, GAO-11-318SP, OPPORTUNITIES TO REDUCE POTENTIAL DUPLICATION IN GOVERNMENT PROGRAMS, SAVE TAX DOLLARS, AND ENHANCE REVENUE (2011) [hereinafter GAO, 2011 ANNUAL REPORT].

³ GAO, 2012 ANNUAL REPORT, *supra* note 2, at 197. There were also many data problems listed in both reports that were outside the social services context. See, e.g., GAO, 2011 Annual Report, *supra* note 2, at 79–81 (reporting that the Department of Defense and the Department of Veterans Affairs were expecting to spend billions of dollars on entirely different health care IT systems).

⁴ GAO, 2011 Annual Report, *supra* note 2, at 125–26; see also GAO, GAO-10-346, DOMESTIC FOOD ASSISTANCE: COMPLEX SYSTEM BENEFITS MILLIONS, BUT ADDITIONAL EFFORTS COULD ADDRESS POTENTIAL INEFFICIENCY AND OVERLAP AMONG SMALLER PROGRAMS 30–35 (2010).

⁵ GAO, GAO-10-702, HOMELESSNESS: A COMMON VOCABULARY COULD HELP AGENCIES COLLABORATE AND COLLECT MORE CONSISTENT DATA 29 (2010) [hereinafter GAO, HOMELESSNESS: A COMMON VOCABULARY].

⁶ GAO, GAO-12-302T, HOMELESSNESS: TO IMPROVE DATA AND PROGRAMS, AGENCIES HAVE TAKEN STEPS TO DEVELOP A COMMON VOCABULARY 3–4 (2011) [hereinafter GAO, HOMELESSNESS: TO IMPROVE] (“[The Department of Housing and Urban Development], HHS, and Education each collect data for its own purposes, resulting in differences in what data are collected and how they are aggregated.”).

⁷ *Id.* at 30–36.

GAO concluded that there is a vast untapped potential that could come from coordinating all social services programs whose constituencies include homeless people—even programs that are primarily designed to perform other functions:

Federally-funded mainstream programs, whose primary purpose is to provide a range of services and funds to low-income households, often provide these services and funds to those who are experiencing or have experienced homelessness or to those defined as being at risk of becoming homeless. Thus, while homelessness is not the primary focus of these programs, data collected by them could be useful for understanding the nature of homelessness. Further, several researchers and advocates with whom we spoke noted that they could better understand the dynamics of homelessness if these programs collected individual client-level data on homelessness and housing status as part of their routine data collection activities.⁸

For example, several large programs—the Community Services Block Grant, the Social Services Block Grant, the Maternal and Child Health Block Grant, and the Children’s Health Insurance Program (CHIP)—do not report on which or how many of their clients are experiencing homelessness.⁹ Additionally, even though many states report to HHS through TANF and Medicaid, only 28 states collect data on “indicators of homelessness.” Even among these states, however, the information is not collected “using consistent definitions.”¹⁰

In a follow-up report, GAO noted further that the U.S. Interagency Council on Homelessness had been “facilitating discussions . . . about the feasibility of creating a common data standard,” but noted that the various stakeholder agencies—for instance, those that provide health or housing related services—were having trouble collaborating.¹¹ More robust and pointed efforts are required to coordinate the collection of data related to homelessness, and how that data should be disseminated and used to improve knowledge about the effectiveness of a multitude of government programs.

Social Services Programs that Serve the Same Constituencies Should Be Required to Collect Data That Will Enable Robust Comparative Program Evaluations

As with programs that directly or indirectly serve homeless populations, many other social services programs have interweaving functions or shared constituencies. For example, “federal investment in early learning and child care is . . . administered through 45 programs that provide or may support related services to children from birth through age 5, as well as five tax provisions that subsidize private expenditures in this area.”¹²

The above discussion focused on overlapping or potentially redundant programs. A related, yet analytically distinct, issue involves agencies that perform complementary functions. These agencies may assist the same constituencies in different ways, and yet their efforts and data collection practices are also insufficiently coordinated. The reasons for this have more to do with bureaucratic inertia than any deliberate aim to silo agency activity: “Structural and organizational lines have

⁸ *Id.* at 26.

⁹ *Id.*

¹⁰ *Id.* at 27–28.

¹¹ GAO, GAO-12-453SP, FOLLOW-UP ON 2011 REPORT: STATUS OF ACTIONS TAKEN TO REDUCE DUPLICATION, OVERLAP, AND FRAGMENTATION, SAVE TAX DOLLARS, AND ENHANCE REVENUE 49 (2012).

¹² GAO, 2012 ANNUAL REPORT, *supra* note 2, at 193.

historically divided child welfare, education, and the courts, which makes collaboration and communication difficult in spite of shared concern over the education of children and youth.”¹³ As noted above, numerous social services programs including TANF and Medicaid collect data differently; usually with an eye toward gathering information that suits their own institutional needs at the time.¹⁴ Moreover, programs may feel as though they are prohibited from generating interoperable data because the data that they collect is statutorily mandated.¹⁵

It is widely acknowledged that insufficient information exists for robust evaluations of social services programs. The consensus among scholars is that “there is a paucity of data about the impact of public and private social programs, and the existing data are often unreliable.”¹⁶ Mismatches between agencies’ data collection and sharing practices undoubtedly contribute to the absence of quality data sets.

Debates over the success of Head Start, the early childhood education program, illustrate how attempts to measure a program’s effectiveness are stymied when agencies fail to collect important data and when the data that is collected is incompatible across agencies.¹⁷ For instance, one researcher who collected his own data found that Head Start improved childhood outcomes in the long run.¹⁸ On the other hand, another researcher who surveyed relevant literature concluded that the program is ineffective, since benefits to children’s cognitive development that had been attributed to Head Start actually tend to fade over time. The author of that survey noted the prevalence of “measurement problems” that arose from data limitations.¹⁹ Even the test scores were not interoperable, in that they could not be compared against each other. These conflicting

¹³ CASEY FAMILY PROGRAMS, PUTTING DATA TO WORK TO IMPROVE CHILD WELL-BEING: POST-CONVENING REPORT 6 (2006), http://www.icwpartnership.org/documents/Practice_Development/Data%20to%20Improve%20Child%20Well%20Being.pdf.

¹⁴ See GAO, HOMELESSNESS, A COMMON VOCABULARY, *supra* note 5, at 26 (“Federally-funded mainstream programs, whose primary purpose is to provide a range of services and funds to low-income households . . . have not consistently collected data on homelessness and housing status.”); see also GAO, HOMELESSNESS: TO IMPROVE DATA AND PROGRAMS, *supra* note 6.

¹⁵ See *id.* at 14 (“[T]he data collected necessarily reflect the definitions of homelessness included in the statutes that govern the relevant programs”). See also *id.* at 53–54 (noting that HUD responded to an earlier version of the report by arguing that “data collection is driven by statutory definitions”).

¹⁶ Kristin M. Ferguson et al., *Outcomes Evaluation in Faith-based Social Services: Are We Evaluating Faith Accurately?*, 17 RES. ON SOC. WORK PRAC. 264, 264 (2007).

¹⁷ The studies below were used in Letter from Policy Integrity to Colleen Rathgeb, Office of Head Start (Dec. 20, 2010), http://policyintegrity.org/documents/Policy_Integrity_Final_Comments_on_Head_Start_Rule.pdf.

¹⁸ See Clive R. Belfield et al., *The High/Scope Perry Preschool Program: Cost-benefit Analysis Using Data from the Age-40 Follow-up*, 41 J. HUMAN RES. 162, 162–64, 166–78 (2006) (describing study methodology and noting that “tax incidence was estimated”); see also Head Start Research and Evaluation Project (EHSRE), ADM’N FOR CHILDREN & FAMILIES, HHS, http://www.acf.hhs.gov/programs/opre/ehs/ehs_resrch/ehs_overview.html#design (last visited May 2, 2011) (describing the amount of direct research for the Early Head Start Research and Evaluation Project, including having to contract with the RAND Corporation to do follow-up research without noting any reliance on any existing data); Audio News Briefing on the HighScope Perry Preschool Study Age 40 Findings, HIGHSCOPE (Nov. 18, 2004), <http://www.highscope.org/Content.asp?ContentId=253> (describing how private foundations collected data). Belfield’s study, in addition to requiring self-reporting for income, had to use “self-reported and official information sources” for the students’ welfare receipt. Belfield et al., *supra*, at 164. By contrast another study was able to link children to tax data. See Raj Chetty et al., *How Does Your Kindergarten Classroom Affect Your Earnings? Evidence from Project Star* (Nat’l Bureau of Econ. Research, Working Paper No. 16,381, 2010).

¹⁹ See W. Steven Barnett, *Long-term Effects of Early Childhood Programs on Cognitive and School Outcomes*, FUTURE CHILD., Winter 1995, at 34–35. Barnett explained some of the data problems with his analysis, including different tests which resulted in, among other things, “(1) less uniformity of test administration and (2) lost data because schools used different tests from year to year.” *Id.* at 35. Because of the lack of data, Policy Integrity recommended that the Administration for Children and Families conduct its own study on Head Start. Letter from Policy Integrity to Colleen Rathgeb, *supra* note 17, at 13–15.

assessments of Head Start are just the tip of the iceberg, but they offer a glimpse of the inefficiencies and confusion that can result from poor data management.

Better Data Collection and Sharing Would Enable More Robust Comparative Evaluations of Programs, Enhancing Their Efficacy and Cost-Effectiveness

Data interoperability facilitates better evaluation of the effectiveness of social services programs.²⁰ Data collection by multiple agencies is particularly important for social services programs because measuring social services program outputs is inherently challenging. Disaggregating the impacts of different social services programs, for instance, can be especially difficult.²¹ As one scholar put it, “Evaluation of these programs is particularly challenging because they address a wide diversity of problems and possible solutions, often include multiple agencies and clients, and change over time to meet shifting service needs.”²² In this context, cooperative data sharing between agencies is critical. It is also essential for comparative evaluations, so that OMB can make more informed decisions about budget allocations, and make allocations that maximize net benefits.

In addition to making programs easier to evaluate, more data sharing among agencies will have the ancillary benefit of improving how their respective programs function. When government agencies share data, staff develop and maintain working relationships. Such relationships can be one of a government official’s most important assets.²³ According to GAO, agencies that use the same definition of homelessness, which in turn facilitates the collection of interoperable data, are more likely to coordinate their broader efforts to address homelessness.²⁴ For instance, the McKinney-Vento Homeless Education Program in one state was able to collaborate with the state’s Head Start program because they used the same definition of homelessness as Head Start; however, that same education program was unable to coordinate certain efforts with HUD, on account of differences in terminology.²⁵ Data sharing can also be used to help ensure that programs give benefits only to persons qualified to receive them. This is known as “program integrity.”²⁶

²⁰ See Sharon S. Dawes & Theresa A. Prado, *Maximizing Knowledge for Program Evaluation: Critical Issues and Practical Challenges of ICT Strategies*, 4084 LECTURE NOTES IN COMPUTER SCI. at 58, 58–59 (2006) (suggesting that “the detailed databases and information systems that support program operations” and “recent developments in IT” can enable better program evaluations).

²¹ “[C]ost allocation techniques are difficult to apply in the public sector because many outputs are joint products.” Paul H. Jensen & Robin E. Stonecash, *The Efficiency of Public Sector Outsourcing Contracts: A Literature Review* (Melbourne Inst., Working Paper No. 29/04, 2004), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=625461.

²² ADELE HARRELL ET AL., URBAN INST., *EVALUATION STRATEGIES FOR HUMAN SERVICES PROGRAMS: A GUIDE FOR POLICYMAKERS AND PROVIDERS 2* (1996); *id.* at 26–27 (“When many agencies coordinate and combine their resources to meet the needs of clients, one of the most difficult problems is assembling information on who received what types and amounts of service.”); Martin Knapp et al., *Commissioning for Quality: Ten Years of Social Care Markets in England*, 30 J. SOC. POL’Y 283, 286 (2001) (“[T]he impacts (or outcomes) of social care are notoriously difficult to measure . . .”). Similarly, a study of federal, state, and local government contracts argues that the variety in those contracts “suggest[s] that it is difficult for human service contracts to have clearly defined goals, well specified outcomes, appropriate measurement indicators and data collection methods.” Gerald J. Blasi, *Government Contracting and Performance Measurement in Human Services*, 25 INT’L J. PUB. ADMIN. 519, 535 (2002).

²³ See Sharon S. Dawes, *Interagency Information Sharing: Expected Benefits, Manageable Risks*, 15 J. POL’Y ANALYSIS & MGMT. 377, 379 (1996) (describing working relationships as necessary for a functioning government and arguing that information sharing reinforces those relationships).

²⁴ See GAO, HOMELESSNESS, A COMMON VOCABULARY, *supra* note 5, at 48–49 (noting that coordination “was more likely to occur between those parts of agencies that were using a common vocabulary”).

²⁵ *Id.* (noting that coordination “was more likely to occur between those parts of agencies that were using a common vocabulary”).

²⁶ See, e.g., GAO, 2012 ANNUAL REPORT, *supra* note 2, at 96–97 (“[W]ithout effective sharing of information among federal agencies about their funding decisions, they may use available funds inefficiently due to duplication of effort.”); *id.* at 180–83 (calling for increased information sharing in order to apply social security payment offsets).

Challenges to Improving Data Interoperability

Despite the benefits of interoperability, agencies do not share data or ensure compatibility for several reasons. Three core reasons are: (1) currently, agencies and their staff are not well incentivized to work on data interoperability; (2) agencies lack the resources that the private sector employs to make data interoperable, such as the pay scales used to recruit and retain talented IT professionals; and (3) statutory and cultural barriers inhibit data interoperability.

Currently, Agencies and Their Staff Are Not Well Incentivized to Ensure Data Interoperability

Agency staff are not, at present, incentivized to expend resources to collect data that would primarily benefit or facilitate the evaluation of programs administered by other agencies. At a planning level, each agency is incentivized primarily to consider only their own returns; therefore they have little institutional reason to fully consider and account for program benefits that might be seen as “accruing” to other agencies, while their own agency fronts the costs.²⁷ Although improved data sharing is likely to improve the cost-effectiveness of social programs overall, those cost-savings will likely be spread across agencies, with some agencies or programs coming out “losers” while others “winners.”²⁸ Moreover, most agencies do not currently assign responsibility for ensuring data interoperability to one particular office or staff person. As a result, the negative repercussions of failing to achieve interoperability are limited from a personnel standpoint.²⁹

Agencies may even feel incentivized to keep data about their programs inaccessible or to not collect certain information at all. Agencies may feel this way because they see data control as leverage: “Agencies resist sharing information because information is a source of power and a symbol of their authority to make and implement decisions.”³⁰ Similarly, agencies may worry that their data will be used against them by other agencies or outside researchers.³¹ Or, agencies may be concerned that sharing data will compromise the success of their own programs. The IRS, for instance, may be

²⁷ See David Landsbergen, Jr. & George Wolken, Jr., *Realizing the Promise: Government Information Systems and the Fourth Generation of Information Technology*, 61 PUB. ADMIN. REV. 206, 206 (2001) [hereinafter Landsbergen & Wolken, *Realizing*] (describing how Department of Defense coordination with EPA would have generated useful epidemiological data, but was not collected presumably because it was not relevant to the Department of Defense’s mission); see also DAVID LANDSBERGEN & GEORGE WOLKEN, ELIMINATING LEGAL AND POLICY BARRIERS TO INTEROPERABLE GOVERNMENT SYSTEMS: PHASE II: RECOMMENDATIONS 2 (Aug. 12, 1998) (prepared for the Intergovernmental Enterprise Panel), available at http://www.osc.edu/press/releases/1998/phase_2_Recommendations.pdf [hereinafter LANDSBERGEN & WOLKEN, ELIMINATING BARRIERS] (noting that a difficulty in resolving government technology problems includes “turf battles between agencies to secure resources and avoid costs and risks”).

²⁸ See Joan H. Krause, *Following the Money in Health Care Fraud: Reflections on a Modern-day Yellow Brick Road*, 36 AM. J.L. & MED. 343, 355 (2010) (noting that “the disposition of federal health care fraud recoveries is governed by the individual fraud statutes” and that large sums are given to Civil False Claims Act relators and the Treasury rather than the programs that originally expended the money); cf. David A. Hyman, *Health Care Fraud and Abuse: Market Change, Social Norms, and the Trust “Reposed in the Workmen,”* 30 J. LEGAL STUD. 531, 561 (2001) (“Program administrators often have quite different objectives and sometimes find that a zero tolerance approach to fraud is actually counterproductive, although they are understandably reluctant to explain this point to oversight committees.”).

²⁹ See J.R. DeShazo & Jody Freeman, *Public Agencies as Lobbyists*, 105 COLUM. L. REV. 2217, 2221 (2005) (“[C]ongressional committees . . . reward an agency’s pursuit of its primary mission to the exclusion of its obligations under other statutes . . .”); Jing Zhang et al., *Exploring Stakeholders’ Expectations of the Benefits and Barriers of E-government Knowledge Sharing*, 18 J. ENTERPRISE INFO. MGMT. 548, 553 (2005) (“It is difficult for sharing projects to compete with existing programs and other mission-critical and agency-based projects. As a result, e-government projects in general can be thwarted by financial constraints.”).

³⁰ Dawes, *supra* note 23, at 381.

³¹ Cf. Sue Richardson & Sheena Asthana, *Inter-agency Information Sharing in Health and Social Care Services: The Role of Professional Culture*, 36 BRITISH J. SOC. WORK 657 (2005) (describing how different professionals see themselves as communities and do not trust other communities with their information).

concerned that if taxpayers knew their tax information was going to be shared with other agencies, voluntary compliance would decrease.³²

Agencies Lack Some of the Resources That Facilitate Data Interoperability in the Private Sector

There are important differences between the government and the private sector that make it harder for government agencies to share data than for private sector firms, although interoperability is still a problem for private firms.³³ The most important difference between the two types of organizations may be that the government has a harder time attracting and retaining talented IT professionals than the private sector.³⁴ The problem in retaining talented IT professionals extends to the highest levels of leadership.³⁵ And yet because devoting resources to interoperability runs counter to historical trends and entrenched agency cultures, consistent IT leadership will be critical to improving interoperability going forward.³⁶

Problems in government information systems also have a “unique scale and scope . . . that make it difficult to find and adapt best practices from elsewhere.”³⁷ These problems are exacerbated by “the various political, issue, and budgetary cycles that repeatedly disrupt the long-run planning and implementation of projects.”³⁸ Disruption in an agency’s data sharing leadership, such as that brought about by political changes or new budgetary cycles, raises special challenges; for this reason, progress on reforming government data systems can be very slow, at least at first. Large government data sharing initiatives may require several years before tangible progress is made.³⁹ Such disruptions may make the rewards of data interoperability seem especially remote or far off in

³² See Stephen W. Mazza, *Taxpayer Privacy and Tax Compliance*, 51 U. KAN. L. REV. 1065, 1068 & n.19 (2003) (noting that “policy makers consistently declare that preserving the confidentiality of taxpayer information submitted to the IRS is important to the functioning of the voluntary tax compliance system” and listing sources).

³³ See Kevin Heubusch, *Interoperability: What it Means, Why it Matters*, AM. HEALTH INFO. MGMT. ASS’N (Jan. 2006), http://library.ahima.org/xpedio/groups/public/documents/ahima/bok1_028957.hcsp?dDocName=bok1_028957 (“Interoperability is a common challenge throughout business.”).

³⁴ VIVEK KUNDRA, U.S. CIO, 25 POINT IMPLEMENTATION PLAN TO REFORM FEDERAL INFORMATION TECHNOLOGY MANAGEMENT 13 (2010) (“Challenges with program management are pervasive across the Federal Government due to a general shortage of qualified personnel.”); LANDSBERGEN & WOLKEN, ELIMINATING BARRIERS, *supra* note 27, at 1 (noting that the public sector has “difficulty in attracting and retaining the best technical support skills”).

³⁵ See GAO, GAO-11-634, FEDERAL CHIEF INFORMATION OFFICERS: OPPORTUNITIES EXIST TO IMPROVE ROLE IN INFORMATION TECHNOLOGY MANAGEMENT 27 (2011) [hereinafter GAO, CIOs] (noting that the median tenure of federal CIOs is 25 months).

³⁶ See *U.S. CIO Vivek Kundra's Departure Raises Doubts About Nation's Top IT Role*, CIO INSIGHT (June 17, 2011), <http://www.cioinsight.com/c/a/Government/US-CIO-Vivek-Kundras-Departure-Raises-Doubts-About-Nations-Top-IT-Role-708439/> (“[U]ltimately, . . . IT managers and agency CIOs that don’t agree with the federal CIO’s direction on how their operation should be run can simply ignore him. They know that they’ll still be around long after the political appointee leaves. So generally, these managers give the ideas lip service, but otherwise they simply out-wait them.”); cf. Zhang et al., *supra* note 29, at 552 (“Knowledge sharing initiatives represent a new way of thinking, and require radical process and behavior changes for individuals and collectives.”).

³⁷ LANDSBERGEN & WOLKEN, ELIMINATING BARRIERS, *supra* note 27, at 2.

³⁸ *Id.* at 1.

³⁹ As Department of Homeland Security CIO Richard Spires explains:

I have found that it takes about three years for a portfolio governance approach to mature so you have a solid set of business objectives and measures, you have a defined goal end state, and you have a solid enterprise transition strategy. This approach cannot be treated as a budget exercise, in which you gather people once a year to do analysis. The boards and support organizations must persist, with boards meeting at least every quarter, and typically more often during the first two years upon the standup of a portfolio.

Richard A Spires, *Enterprise and Portfolio Governance Critical To Ensure IT is Strategically Supporting Your Agency*, CIO.Gov (July 11, 2011), <http://www.cio.gov/pages.cfm/page/Enterprise-and-Portfolio-Governance-Critical-to-Ensure-IT-is-Strategically-Supporting-Your-Agency>.

the future; this further discounts an agency's perceived interest in committing resources to interoperability now.

The fact that many federally funded social services programs are actually implemented at the state level raises additional challenges. For instance, 56.8 percent of the federal funds that the State of Texas receives goes toward health and human services programs, including Medicaid, the State Children's Insurance Program, the Special Supplement Nutrition Program for Women, Infants, and Children, and TANF.⁴⁰ As noted above in the homelessness example, the fact that various federal programs are implemented by uncoordinated state agencies raises practical difficulties in collecting interoperable data. As described by the GAO, some states collect data on "indicators of homelessness," but do "not collect this information using consistent definitions," while others do not collect that data at all.⁴¹ The states' varying approaches to implementing Head Start grants offers another example of how the lack of unity in program administration poses a barrier to measuring the comparative effectiveness of social services programs. Any plan to improve data interoperability must, therefore, duly consider the role of states in program implementation.

Statutory and Cultural Barriers Inhibit Data Interoperability

Statutory language may also pose a barrier to interagency data sharing. For instance, numerous laws prohibit agencies from sharing personally identifiable information. A prominent example is the Computer Matching Act or Privacy Act, 5 U.S.C. § 552a. This Act disallows information sharing between government agencies unless they create matching agreements that, among other things, stipulate the purpose of the match and establish procedures for notifying individuals if the data sharing may result in an adverse action against them, such as the discontinuation of a subsidy.⁴² However, there are several well-known exclusions in the Act that should be taken into consideration when pursuing an interoperability agenda. For instance, the Act only applies to personally identifiable information retrieved by an identifier, does not limit so-called "routine" use of data, and provides no limitations on the data after they are disclosed to another agency.⁴³

Even where a statute does not create a direct barrier to data sharing,⁴⁴ cultural barriers may inhibit sharing.⁴⁵ For instance, the varying definitions of homelessness that inhibit agency collaboration in that policy area are, in part, the product of incongruous statutory mandates.⁴⁶ In another example,

⁴⁰ TEX. HEALTH & HUMAN SERVS. SYS., FEDERAL FUNDS REPORT: FISCAL YEAR 2011, at 3 fig.II.2, 6-7 & tbl.III.1, <http://www.hhsc.state.tx.us/reports/2011/federal-funds-1211.pdf>.

⁴¹ GAO, HOMELESSNESS, A COMMON VOCABULARY, *supra* note 5, at 27-28.

⁴² Steve C. Carlson & Ernest D. Miller, Comment, *Public Data and Personal Privacy*, 16 SANTA CLARA COMPUTER & HIGH TECH L.J. 83, 106 (1999).

⁴³ See GAO, GAO-08-795T, PRIVACY: CONGRESS SHOULD CONSIDER ALTERNATIVES FOR STRENGTHENING PROTECTION OF PERSONALLY IDENTIFIABLE INFORMATION 13-21 (2008) [hereinafter GAO, PRIVACY].

⁴⁴ At least some public officials expect to be able to work around statutory prohibitions. See Sharon S. Dawes et al., *From "Need to Know" to "Need to Share": Tangled Problems, Information Boundaries, and the Building of Public Sector Knowledge Networks*, 69 PUB. ADMIN. REV. 392, 398 (2009) ("In our research, general lack of legislative support, misallocated funding, and simple lack of funding were perceived as more severe barriers than laws that specifically restricted knowledge and information sharing.").

⁴⁵ See DeShazo & Freeman, *supra* note 29, at 2239 ("As they interpret their statutory mandates, agencies tend to internalize a particular mission, develop an agency culture, and cultivate a unique expertise."). According to a British study, key barriers to e-government were "misunderstanding and consequent misapplication of legal aspects concerning public access to government information" and "[c]ultural values and beliefs [that] represent a potential bias towards information disclosure or withholding." See Luciano Batista & Marc Cornock, *Information Sharing in E-government Initiatives: Freedom of Information and Data Protection Issues Concerning Local Government*, J. INFO., L. & TECH., no. 2, 2009, at 14. Note that as with Dawes, *supra* 44, the perceived legal barrier is not actually a legal prohibition.

⁴⁶ GAO, HOMELESSNESS, A COMMON VOCABULARY, *supra* note 5, at 1, 53-54 (noting different statutory definitions of homelessness and that HUD attributes differences in data collection to different definitions).

there are 18 different food assistance programs, each of which was created by a separate statute; the statutes enacted different rules relating to data collection and, taken together, sometimes require states to collect the same information multiple times.⁴⁷ When agencies are required by statute to think or act in different ways, they understandably experience difficulty coordinating their programs and data practices. These cultural barriers and misaligned incentives may arguably be more difficult to overcome than statutory barriers.⁴⁸

II. THERE ARE MANY TOOLS, PROCESSES, GROUPS, AND PEOPLE THAT COULD BE ENLISTED TO IMPROVE DATA INTEROPERABILITY

OMB is in the Best Position to Lead on This Issue

OMB's role in budgeting and interagency coordination makes it especially well suited to address data interoperability. Moreover, the quality of OMB's own work is impeded by lack of interoperability. Incomplete data results in inadequate and inaccurate economic analysis, including comparative analysis of programs that serve the same constituency. Given OMB's mandate, OMB has both the authority and leverage to take the lead in solving the interoperability problem.

OMB already has recognized the critical need for more information to evaluate programs. In a memorandum encouraging data sharing, OMB Deputy Director for Management Jeffrey Zients and Office of Information and Regulatory Affairs (OIRA) Administrator Cass Sunstein acknowledged that "[t]he judicious use of accurate and reliable data plays a critical role in initiatives designed to increase the transparency and efficiency of Federal programs and to enhance our capacity to gauge program effectiveness."⁴⁹ Critically, Zients and Sunstein recognized that improved data sharing would result in "[m]ore informed research on public policy as a result of an increased number of theoretical and empirical studies that rigorously analyze, and augment the understanding of, Federal programs within government for the public at large."⁵⁰ Moreover, OMB is already "allocating funding for agencies that voluntarily demonstrate how their FY 2012 funding priorities are subjected to rigorous evaluation" and "working to eliminate programs that . . . are duplicative. . . ."⁵¹ Because increasing data interoperability is meant to allow for rigorous evaluation that, in turn, allows for more rational allocation of resources among overlapping programs, it fits squarely within OMB's existing goals. Moreover, the Paperwork Reduction Act gives OMB express authority to centralize data sharing.⁵²

While OMB should take the reins in laying out a detailed plan for improving data interoperability, many of the mechanisms it should consider using or enlisting in its plan already exist. Some of

⁴⁷ GAO, 2012 ANNUAL REPORT, *supra* note 2, at 125–26.

⁴⁸ See Stephen R. Falke, *Environmental Data: Finding It, Sharing It, and Using It*, 9 J. URB. TECH. 111, 117–18 (2002) ("Institutional thinking and culture is considered the fundamental challenge to the development of distributed information systems. Despite still-pending technical requirements, the greatest barriers to the success of distributed information systems lie within the culture of institutions and the mindsets of the people who work in them. The statutory history of institutions makes it difficult for them to collaborate and share information.").

⁴⁹ JEFFREY D. ZIENTS & CASS R. SUNSTEIN, OMB, M-11-02, SHARING DATA WHILE PROTECTING PRIVACY 1 (2010).

⁵⁰ *Id.* at 2.

⁵¹ JEFFREY D. ZIENTS, FEDERAL CHIEF PERFORMANCE OFFICER AND DEPUTY DIR. OMB, THE ACCOUNTABLE GOVERNMENT INITIATIVE—AN UPDATE ON OUR PERFORMANCE MANAGEMENT AGENDA 4 (2010).

⁵² See, e.g., 44 U.S.C. § 3509 (2006) ("The Director may designate a central collection agency to obtain information for two or more agencies if the Director determines that the needs of such agencies for information will be adequately served by a single collection agency, and such sharing of data is not inconsistent with applicable law."). See also *id.* § 3510; GAO, PRIVACY, *supra* note 43, at 12 ("In 1980, the enactment of the Paperwork Reduction Act made virtually all federal agency information collection activities subject to OMB review and established broad objectives for OMB oversight of the management of federal information resources.")

these mechanisms may also shed light on potential pitfalls, or steps OMB would be better off not taking.

Mechanisms Currently Under Direct OMB Control

Performance Improvement Council

The Performance Improvement Council (PIC), established by the GPRA Modernization Act of 2010,⁵³ “consists of Performance Improvement Officers [‘PIOs’] from the 24 [Chief Financial Officers Act of 1990] agencies and other agencies and is chaired by the Chief Performance Officer and Deputy Director for Management at OMB.”⁵⁴ Both leadership roles are currently held by Jeffrey Zients.

PIC is tasked with setting “Cross-Agency” goals and “Management” goals, collectively known as “Federal Priority Goals”⁵⁵ and encourages agencies to set their own “Agency Priority Goals.”⁵⁶ These goals are posted on performance.gov, and agencies are required to make quarterly progress reports to OMB on both types of goals.⁵⁷ Several of these goals evoke interoperability concerns, but are conceptually distinct. Examples include goals related to cybersecurity, improper payments, data center consolidation, and closing skills gaps.⁵⁸ Zients has also made commitments to fix large-scale IT management, which is primarily about acquiring IT and moving to cloud storage.⁵⁹

OIRA

OIRA was created by the Paperwork Reduction Act of 1980 to review and limit paperwork burdens placed on private parties by the federal government.⁶⁰ But since 1981, OIRA has been known primarily for its role in reviewing federal regulations for proper cost benefit analysis and conformity with Presidential priorities.⁶¹ However, OIRA has also undertaken a coordinating role for agency regulatory activities as well.⁶²

OIRA’s oversight mechanisms are not designed with data sharing issues in mind, but due to the office’s coordination function, OIRA personnel have significant expertise and influence on areas that may overlap with data sharing goals. OIRA is home to the Chief Statistician and the OIRA Branch Chief for Information Policy, both of whom have been at least peripherally involved in discussions dealing with agency data problems.⁶³ The OIRA Administrator also has the informal ability to

⁵³ GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (codified in scattered sections of 5 and 31 U.S.C.).

⁵⁴ OMB, CIRCULAR A-11, PREPARATION, SUBMISSION, AND EXECUTION OF THE BUDGET § 200.12 (Aug. 2011). The list of Chief Financial Officers Act agencies can be found at 31 U.S.C. § 901(b).

⁵⁵ JACOB J. LEW & JEFFREY D. ZIENTS, OMB M-11-31, DELIVERING AN EFFICIENT, EFFECTIVE, AND ACCOUNTABLE GOVERNMENT 17–18 (2011) (describing Federal Priority Goals).

⁵⁶ *Id.* at 8–15 (describing Agency Priority Goals).

⁵⁷ *Id.* at 16–17 (explaining the quarterly review process on Agency Priority Goals).

⁵⁸ *Using Goals To Improve Performance and Accountability*, PERFORMANCE.GOV, http://goals.performance.gov/goals_2013 (last visited May 2, 2012) (listing the Cross-Agency Priority Goals that “[t]he Administration has . . . adopted . . . to improve cross-agency coordination and best practice sharing”).

⁵⁹ ZIENTS, *supra* note 51, at 7–9.

⁶⁰ Paperwork Reduction Act of 1980, Pub. L. No. 96-511, 94 Stat. 2812 (codified as amended at 44 U.S.C. §§ 3501–3520 (2006)).

⁶¹ Exec. Order No. 12,291, 3 C.F.R. 127 (1981) (setting forth procedures for OIRA cost-benefit review of regulations); *see also* Michael A. Livermore, *Cause or Cure? Cost-Benefit Analysis and Regulatory Gridlock*, 17 N.Y.U. ENVTL. L.J. 107, 119 (2008) (describing “OIRA’s primary role” as “checking regulations against cost-benefit criteria, mainly to ensure that costs do not exceed benefits”).

⁶² Exec. Ord. No. 12,866, 3 C.F.R. 638 (1993) (expanding OIRA’s interagency regulatory coordination procedures).

⁶³ Katherine K. Wallman, *Federal Statistics: Understanding a Crucial Resource*, 631 ANNALS AM. ACAD. POL. & SOC. SCI. 22, 24 (2010) (“Led by the chief statistician, OMB’s work involves identifying priorities for improving federal statistical

increase data sharing because he or she can convene regulatory working groups. For example, former Administrator Sally Katzen convened a task force that looked at data sharing issues.⁶⁴

Office of E-Government

The E-Government Act imbued the OMB's Chief Information Office with statutory authority to provide leadership on IT spending in the federal government.⁶⁵ The Act also created the Office of E-Government and the E-Government Fund. However, the Office of E-Government, as currently organized, does not seem to be prioritizing the interoperability problem. For instance, its E-Government Fund⁶⁶ seems to be used primarily to support transparency programs like Data.gov, Performance.gov and USASpending.gov.⁶⁷ Although the Office of E-Government's focus on transparency may not make it the best home for an interoperability project, its IT knowledge and placement within OMB may prove helpful in a larger interoperability initiative, as discussed below Section III.

Other Available Actors, Tools, and Considerations

Agency Chief Information Officers

The Clinger-Cohen Act of 1996 required each agency to designate a Chief Information Officer (CIO).⁶⁸ CIOs have direct responsibility for, among, other things "carrying out the agency's information resources management activities to improve agency productivity, efficiency, and effectiveness."⁶⁹ CIOs therefore are likely to have a great deal of knowledge about information technology currently being used by the government. That said, most CIOs have not focused on interoperability. According to GAO, CIOs are "not consistently responsible for all of the 13 areas assigned by statute or identified as critical to effective IT management;" they focus more on IT management than on procedures for collecting and disseminating agency data.⁷⁰ Moreover, the role any CIO could play in a long-term interoperability project is limited by their job tenure, which on average lasts only 25 months.⁷¹ Given these factors, as well as OMB's statutory mandate, OMB is much better suited to lead a multi-agency data coordination effort than any particular agency's CIO.

programs, establishing government-wide statistical and information-quality policies and standards, and evaluating statistical programs for compliance with OMB guidance.").

⁶⁴ See, e.g., *Establishing a Federal CIO: Information Technology Management and Assurance Within the Federal Government: Hearing Before the Subcomm. on Gov't Mgmt., Info., & Tech. of the H. Comm. on Gov't Reform*, 106th Cong. 11-15 (2000) (statement of Sally Katzen, Deputy Dir. for Mgmt., OMB) (describing OMB's work before the Office of E-Government was created); see also Sally Katzen, Remarks at the Fifth Annual Robert C. Byrd Conference on the Administrative Process (Jan. 27, 1994), reprinted in *Reinventing Government or Refining Reagan/Bush Initiatives?*, 8 ADMIN. L.J. AM. U. 23, 55 (1994) ("The Information Policy Committee, which I chair, is a subgroup of the Information Infrastructure Task Force, and we have been working to develop various methods of using information technology to improve the regulatory process.").

⁶⁵ 44 U.S.C. § 3603.

⁶⁶ *Id.* § 3604(a)(2).

⁶⁷ David Saleh Rauf, *W.H.: Don't Cut E-Government Fund*, POLITICO (Dec. 7, 2011), <http://www.politico.com/news/stories/1211/70027.html>. Following earlier cuts, the Office of E-Government closed FedSpace, a program in beta testing that was "a collaboration platform for federal employees to share information and develop a community to solve problems." Jason Miller, *Budget Cuts Shutter Two Open Gov Sites, Others Impacted*, FEDERALNEWSRADIO (May 24, 2011), <http://www.federalnewsradio.com/?nid=697&sid=2395471>.

⁶⁸ 44 U.S.C. § 3506.

⁶⁹ *Id.* § 3506(a).

⁷⁰ GAO, CIOs, *supra* note 35, at 18, 22 tbl.2 (2011).

⁷¹ *Id.* at 27.

The National Information Exchange Model

The National Information Exchange Model (NIEM) functions in a way most similar to the blueprint recommended below, in Section III. OMB has recommended that more agencies adopt NIEM, and it is being used by the agencies with greater frequency.⁷²

The first part of the NIEM process involves creating an Information Exchange Package Documentation (IEPD). An IEPD is “[a] collection of artifacts that define and describe the structure and content of an information exchange.”⁷³ IEPDs are created by conducting a business analysis and requirements review, mapping the data sources among those who want to share information, testing the IEPD, reviewing it, publishing it, and implementing it.⁷⁴

The IEPD is then used to format an Information Exchange Packet (IEP), which is the actual exchange of information, including information populated from the source database.⁷⁵ The value of NIEM is that it offers a prepackaged way to make data interoperable and also scales well, so agencies using NIEM would not have to reinvent the wheel in developing processes for enabling data interoperability.⁷⁶

The DATA Act

Legislators have also been working on implementing new models of data sharing. One of the major legislative initiatives currently being considered is the DATA Act of 2011. The Data Act was introduced in the House of Representatives by Representative Darrell Issa and in the Senate by Senator Mark Warner.⁷⁷ It has not yet been passed, although it was unanimously approved by the House Committee on Oversight and Government Reform.⁷⁸ If enacted, the Act would create a new independent body entitled the Federal Accountability and Spending Transparency Board (FASTB), whose purpose would be to facilitate greater consistency in data policy across administrations.⁷⁹ The FASTB would collect information about federal spending on data projects; it would also have authority to audit and conduct oversight of government programs to determine if there is waste, fraud, or abuse.⁸⁰ The DATA Act would further require anyone other than an individual person who receives federal funds over \$100,000 to report all receipts and all agencies to report all expenditures to FASTB.⁸¹

Computer Languages

Recently, Congress has been promoting the use of standardized computer languages across the federal government. For instance, several draft bills have included language that would require or

⁷² FEDERAL CIO COUNCIL, AGENCY INFORMATION EXCHANGE FUNCTIONAL STANDARDS EVALUATION 3 (2010). The actual guidance seems to be missing.

⁷³ NIEM Glossary, NAT’L INFO. EXCHANGE MODEL, <https://www.niem.gov/glossary/Pages/Glossary.aspx?alpha=I> (last visited May 2, 2012).

⁷⁴ IEPDs Overview, NAT’L INFO. EXCHANGE MODEL, <https://www.niem.gov/about/tech/Pages/iepd.aspx> (last visited May 2, 2012).

⁷⁵ INTRODUCTION TO THE NATIONAL INFORMATION EXCHANGE MODEL (NIEM), NIEM PROGRAM MGMT. OFFICE 11 (2007).

⁷⁶ *Id.* at 18–20.

⁷⁷ See H.R. 2146, 112th Cong. (2011); S. 1222, 112th Cong (2011); 158 CONG. REC. H2095 (daily ed. Apr. 25, 2012) (showing House passage of the DATA Act).

⁷⁸ *Oversight Committee Approves Federal Spending Transparency Bill*, COMM. ON OVERSIGHT AND GOV’T REFORM (June 22, 2011), <http://oversight.house.gov/release/oversight-committee-approves-federal-spending-transparency-bill/>; H. REP. NO. 112-260 (2011).

⁷⁹ H.R. 2146, sec. 201.

⁸⁰ H.R. 2146, sec. 201, §§ 3623–24.

⁸¹ H.R. 2146, sec. 101, §§ 3601–04.

encourage government agencies to use eXtensible Business Reporting Language (XBRL).⁸² The DATA Act, for instance, would require reporting entities to use uniform data standards and to use XBRL as much as possible.⁸³ However, XBRL may not be the best data language for all situations because it was originally designed to be used for financial data.⁸⁴

Agency Terminology

As discussed in Section I, differences in agency terminology create an additional barrier to coordinating data collection and data sharing. These divergences may arise from contradictory statutory mandates, or longstanding agency practice. To improve interoperability across the federal government, steps should be taken to harmonize agencies' working definitions of "homelessness" and other terms. Similar efforts should be made to harmonize terminology across the states, since the states are often responsible for implementing federally-funded social services programs.

III. OMB SHOULD DEMONSTRATE LEADERSHIP IN DEVELOPING AND IMPLEMENTING A DETAILED PLAN FOR IMPROVING DATA INTEROPERABILITY AND INTERAGENCY DATA SHARING

OMB has singular leverage that can be used to bring human services agencies together and coordinate their data collection and data sharing efforts. Data sharing procedures should also be designed with an eye toward facilitating social science research that is conducted outside the federal government, by universities, state governments, or private actors. In developing its plan, OMB should consider all of the above mentioned procedures, mechanisms, and people.

A Three Phase Approach

Policy Integrity recommends that OMB create an overarching "enterprise architecture" that will ensure that the data necessary for conducting robust evaluations of social services programs is (a) collected by agencies in the first instance and (b) made available to other agencies and to outside researchers. The enterprise architecture would be developed in three phases. First, OMB should determine what data it needs by consulting with leading researchers who study social services programs. Second, OMB should engage in a governance process, in which key players meet and discuss how their data is currently collected, stored, and shared, how they could work toward the targets created through consultation with the researchers, and what resources they would need to meet those targets. Third, the information should be analyzed and synthesized to produce an enterprise architecture, to serve as a "blueprint[]" for systematically and completely defining an organization's current (baseline) or desired (target) environment."⁸⁵

In the first phase, OMB will investigate the underlying problem to determine where the data gaps are and how data could be better collected and shared. To this end, OMB should consult with agency officials, as well as leading researchers who study social services programs and their effectiveness. By learning what the researchers know—or, more precisely, what information they would like to know—OMB can better understand the nature of the data collection and sharing problem and how to solve it. OMB can use various methods to select specific academic researchers

⁸² See Child and Family Services Improvement and Innovation Act, Pub. L. No. 112-34, sec. 105, § 440, 125 Stat. 369, 376–77 (2011) (codified at 42 U.S.C. § 629m) (requiring the Secretary of Health & Human Services to work with an OMB interagency work group to create interoperable data standards for the Stephanie Tubbs Jones Child Welfare Program and requiring that the eXtensible Business Reporting Language as much as possible).

⁸³ H.R. 2146, sec. 102.

⁸⁴ *How XBRL Works*, XBRL, <http://www.xbrl.org/how-xbrl-works-1> (last visited Apr. 26, 2012) ("XBRL is a powerful and flexible version of XML which has been defined specifically to meet the requirements of business and financial information.").

⁸⁵ CIO COUNCIL, A PRACTICAL GUIDE TO FEDERAL ENTERPRISE ARCHITECTURE, at iii (2001).

or research institutions to consult. For instance, OMB could make selections based on its own relationships with researchers, or it could request candidates from a scientific organization like the National Research Council.

In the second phase, OMB should convene a governance body to design a blueprint for its interoperability initiative. This body should be composed of a variety of experts, including academic researchers, IT personnel, OMB staff who perform cost-benefit analysis, and the heads of the social services programs that are the focus of the interoperability agenda.⁸⁶ For certain planning functions, this body may need to be subdivided into “portfolios”⁸⁷ who can then report back to the larger group. The breakout portfolios should be based around the various social services programs—their functions and their constituencies. Agencies may find this kind of analysis useful, and having an early output—for example, a map of program functions—could create goodwill toward OMB’s longer-term goal of improving data collection and sharing.⁸⁸

It will be important to invite representatives of numerous interest groups and government programs to participate in this governance process.⁸⁹ First, data interoperability cannot be solely an IT-driven process.⁹⁰ IT specialists may not understand the agency’s resource limitations as well

⁸⁶ Richard A. Spires, *Getting Program Governance Right Helps Ensure Success*, CIO.Gov (Apr. 28, 2011), <http://www.cio.gov/pages.cfm/page/Getting-Program-Governance-Right-Helps-Ensure-Success> (“I believe alignment amongst key stakeholders is a critical factor to program success, and a strong, active Program Governance Board is required to ensure such alignment. Complex IT systems encompass at least a half-dozen stakeholder organizations that must be synchronized, including the strategy organization, the business or mission owner of the system, IT, finance, procurement, security, and privacy. Ensuring all key stakeholders are involved in key decisions is an essential element to assuring genuine alignment.”).

⁸⁷ Spires, *supra* note 39 (“But in larger and more complex organizations, it becomes daunting for the top leadership to deal with all programs and program allocation decisions. Portfolio governance is essential to provide the scale needed to deal with decisions in large organizations. We decompose the problem into what we call ‘portfolios,’ or logical partitions that can support various elements of an organization’s strategy and mission outcomes. Portfolios may be defined based on the organizational structure of an agency, but in many instances, the portfolios represent functional groupings that can drive improvements to mission effectiveness.”);

⁸⁸ *Id.* (“To maximize mission effectiveness that integrates Components, we are working to implement 13 functionally-oriented portfolios, to include mission support functions (e.g., securing, screening, and incident response) and business functions (e.g., finance, human resources).”). Grouping agencies and programs by functions is an immediate payoff on the project. See Landsbergen & Wolken, *Realizing*, *supra* note 27, at 213 (“Interoperability projects are more easily implemented when the projects . . . result in short, or even same-year benefits . . .”); cf. Dawes et al., *supra* note 44, at 399 (“Early experience sets the tone and direction of cross-boundary relationships To avoid serious mistakes and to control the risks of such undertakings, the early planning process needs to facilitate candid discussions that explicitly identify and engage stakeholders; fully describe benefits, barriers, and risks . . .”).

The Federal CIO Council recommends that each agency develop this inventory: “Agencies should: Assess and develop an inventory of data and information exchange assets that are available within their agency and department/bureau organizations; Categorize the assets by mission to ensure alignment with stated agency goals and to demonstrate value; . . .” FEDERAL CIO COUNCIL, *supra* note 72, at 23. But a centralized review could find agencies that share missions across departments.

⁸⁹ See SCOTT A. RENNER, MITRE CORP., A “COMMUNITY OF INTEREST” APPROACH TO DATA INTEROPERABILITY 5 (2001) (“The data panel needs to include representatives from every part of the [community of interest]. When some systems or organizations are not represented, it is likely that some of their knowledge will not be captured by the data panel, or that some of the knowledge codified by the panel will not be transferred back into those groups.”); Beryl Bellman & Felix Rausch, *Enterprise Architecture for E-government*, 3183 LECTURE NOTES IN COMPUTER SCI. 48, 55 (2004) (“Without taking a holistic, integrated EA perspective the implementation of E-Government becomes overwhelmed by technical possibilities without understanding how different alternatives respectively impact business activities. As a consequence, often after a great deal of money is spent building the IT-centric architecture, its business value cannot be demonstrated.”); Dawes et al., *supra* note 44, at 400 (“[N]o information system . . . can solve political, organizational, or managerial problems, or problems associated with conflicting or competing goals or professional practices. . . . [N]o unexamined IT ‘solution,’ will untangle them.”).

⁹⁰ See Jens Andexer & Willem Bekker, *SOA: The Good, the Bad, and the Ugly*, IBM (Nov. 6, 2009), <http://www.ibm.com/developerworks/webservices/library/ws-goodbad/index.html?ca=drs-> (“For [Service Oriented

as other agency staffers, and may not understand the research needs as well as the researchers do. Among other interests that could be represented in the governance process are representatives of privacy interests and representatives of social service advocacy groups. It is also critically important for any interoperability project to have buy-in from agency leadership, to ensure the architecture will be integrated into an agency's existing processes.⁹¹ Key agency participants will include personnel who have end-to-end knowledge of how social service programs function, as well as those who are familiar with the agency's research arm and data management department.

Since "the federal government has given states far greater power to administer programs for children and families,"⁹² it will also be important to include state representatives in the project design process. Despite the challenges of coordinating data collection among all fifty states, the federal government has several tools available to help bring states into the interoperability fold. In some policy areas, OMB has express statutory authority to "designate standard data elements" for information that is required to be reported.⁹³ In the alternative, agencies can use their rulemaking authority to create regulatory mandates for data collection. For instance, as a condition of federal funding, the Administration for Children and Families (ACF) requires states to collect specific data on children who are adopted or placed in foster care through the hands of the state.⁹⁴ Through congressional appropriations, ACF has also been able to provide states with grant money to create statewide automated child welfare information systems.⁹⁵ Perhaps the easiest way, however, for OMB to compel states to start collecting specified information in specified formats would be to include detailed data requirements in grant agreements.⁹⁶ OMB should analyze and consider all of its options for requiring or incentivizing methods of data collection, doing so with input from those who are responsible for implementing programs on the ground.

In the third phase of this project, the information gathered by the leadership board would be compiled into a new database system—technically referred to as an "enterprise architecture"—together with a timeline for implementing the new interoperability agenda. By this point, OMB will be fully aware of which agencies and sub-agencies are best positioned to collect the data that analysts and researchers need to conduct more robust evaluations of social services programs. OMB will have brought together enough expertise—technical and substantive—to know what data needs to be collected, by whom, and how that data can be made interoperable. Finally, using its leadership position within the federal government, OMB will be able to ensure that new interoperability policies are put into practice on the federal, state, and local level.

Architecture] to be a success, business and IT must align the[ir] purpose and objectives. IT driven SOAs fail because they are perceived as a change in technology that has no direct benefit to business."); *supra* note 89.

⁹¹ Spires, *supra* note 39 ("The involvement of key executive stakeholders to work in partnership is key to success. Just relying on subject matter experts or EA to drive and mature a solid planning process usually results in good analysis that is never implemented.").

⁹² Letter from Reps. Rep. Chaka Fattah & Rep. Dave Camp 1 (June 18, 2009), <http://www.childindicators.com/PDF/HR2558DearColleagueJune18.pdf>.

⁹³ See Child and Family Services Improvement and Innovation Act, Pub. L. No. 112-34, sec. 105, § 440, 125 Stat. 369, 376–77 (2011) (codified at 42 U.S.C. § 629m(a)(1)) (requiring the Secretary of Health & Human Services to work with an OMB interagency work group that will consider state perspectives to create interoperable data standards for the Stephanie Tubbs Jones Child Welfare Program).

⁹⁴ See 45 CFR § 1355.40 (2010).

⁹⁵ See 45 CFR 1355.50–1355.57; *About SACWIS*, DEP'T OF HEALTH & HUMAN SERVICES, <http://www.acf.hhs.gov/programs/cb/systems/sacwis/about.htm> (last visited Apr. 20, 2012).

⁹⁶ See FEDERAL CIO COUNCIL, *supra* note 72, at 3 (executive summary) (noting that federal agencies "are beginning to include the use of NIEM in . . . grant language to state and locals").

CONCLUSION

Many federally-funded social services programs have similar goals and serve overlapping communities. This creates special challenges for researchers and analysts interested in assessing the efficacy and cost-effectiveness of individual programs. Such evaluations are critical for ensuring that taxpayer dollars are allocated to programs that generate the largest net benefits. The time is right, and the economic climate demands, a new interagency data collection and data sharing initiative. The initiative should ensure that the data necessary for conducting robust comparative evaluations is collected at the source, by those responsible for implementing social services programs. That data must be made interoperable, so that it can be shared across agencies and with outside researchers, in a uniform terminology. For a variety of reasons, including its statutory authority, technical expertise, and budgeting leverage, OMB is in the best position to lead this much-needed cross-agency initiative.

Respectfully submitted,

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