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An Open Data Standard for Local Government Financial Reporting: How it Could Work in Michigan

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An Open Data Standard for Local Government Financial Reporting: How it Could Work in Michigan

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Executive Summary

XBRL, an open data standard, can improve access and analysis of public financial data for local governments in Michigan. Key benefits of creating an XBRL program for local governments include enhanced public transparency, easier data access for local officials, and a process to verify and compare financial data between local governments. Key challenges include the complexity of building a data system for XBRL, and the variability in what resources local governments will need to comply with a new standard.

Introduction

Flint's water crisis, although coming to a head in 2014, was the result of a fiscal crisis decades in the making. The same is true of Detroit's bankruptcy. Yet, as a society, we tend to take local government fiscal health for granted until something goes terribly wrong. A key problem is that we lack the data and tools to form a shared and accurate understanding of how well our communities are doing and to detect signs of stress before they become full-blown crises.

Better understanding of local fiscal health is now more important than ever, as American democracy faces crises at all levels. Local communities are being asked to tackle some of the most important issues facing our country - the COVID-19 pandemic, systemic inequity, Black Lives Matter and police reform, and deteriorating infrastructure, among others. But what might it mean to "defund the police" or invest in infrastructure if we do not have a shared understanding of the fiscal context in which these decisions are made?

The most important information for understanding local fiscal health can be found in Annual Comprehensive Financial Reports (ACFRs) or audited financial reports. Access to this information is important to many stakeholders, including the general public, the press, philanthropic and other nonprofits, economic developers, the federal and state governments, businesses, bondholders, and researchers, as well as local government managers, employees and retirees. Unfortunately, data in these ACFRs are currently provided as PDF documents, which severely limits their accessibility, comparability, and usefulness for many stakeholders - especially those who are not trained in government accounting.

While there have been efforts by the State of Michigan and various private companies to collect data from the financial reports to create financial dashboards and transparency websites, these efforts are limited by the need to manually collect or scrape data from PDF documents, making them expensive, duplicative, and prone to human and/or computer error.

To solve these problems, stakeholders need to have access not just to the PDF documents but to the underlying data itself. This can be accomplished by adopting an "open data standard," where local government financial data is reported and collected in a digital format that can be easily searched, sorted, merged, compared, analyzed, and put to use.

This report will explore the adoption of an open data standard called XBRL (eXtensible Business Reporting Language) for Michigan local governments. Section I explains the XBRL open data standard and how it works in financial reporting. Section II describes the adoption of XBRL standards both within the US and internationally, with specific focus on implementation for government entities. Section III explores how local governments in Michigan could adopt XBRL reporting, highlighting the benefits and challenges that would be involved. Section IV concludes and summarizes the recommendations and best practices.

Section I: XBRL

<table>
<tr><td>Key Terms</td></tr>
<tr><td>

- **data standard**: a documented set of rules and definitions for technical information that guide its management, definition, and relevant systems
- **open data standard:** a data standard created through a collaborative, publicly accessible process. Open data standards are typically free or priced reasonably for public use.
- **taxonomy:** a set of categories and definitions created using a specific data standard for a specific type of data (e.g. financial data)

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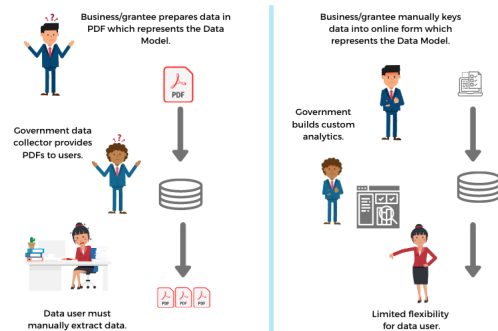## What is an open data standard?

An open standard is a documented set of definitions and rules concerning technical information that is made available for public use. Weights and measures, such as the length of an inch or the weight of a kilogram, and the design of USB computer cords, are examples of open standards. The advantage of standards is that they facilitate widespread use, innovation, and collaboration, since everyone is able to agree and understand on the same set of measures and definitions.

Typically, a standard is managed by an organization that governs the definitions of relevant concepts and organizes rules and procedures for gathering information and making any changes to the standard. An open standard is different from a closed or proprietary standard in that the process for creating an open standard is more collaborative and consensus-driven, and the standard itself is available for use either for free or at a reasonable cost. A common example includes HyperText Markup Language (HTML), which the public can use to create webpages.

An open *data standard* refers to an open standard concerning digital data--how data are defined, organized, and managed. One advantage of using an open data standard, in comparison to a closed standard, is that users are not tied to specific, single-vendor-supplied applications to access and use data. As a result, competition among suppliers is encouraged and open data standards are often substantially easier and cheaper to use than closed standards. Open standards also facilitate inter-organizational collaboration as users can freely share

GOVERNMENT DATA COLLECTION IS

BETTER WITH STANDARDS

WHEN DATA STANDARDS ARE NOT USED …

Business/grantee prepares data in PDF which represents the Data Model.

Government data collector provides PDFs to users.

Data user must manually extract data.

Business/grantee manually keys data into online form which represents the Data Model.

Government builds custom analytics.

Limited flexibility for data user.

EVERY PREPARATION TOOL, THE DATA COLLECTION SYSTEM, AND EVERY ANALYTICAL TOOL MUST MAINTAIN SEPARATE COPIES OF THE DATA MODEL.

- PDF requires manual re-keying, does NOT produce machine-readable data. Likely to result in less robust analysis.
- Online forms require government to build costly custom analytics which are expensive to change. Leads to less flexibility in data extraction for data users. Filling in online forms is labor-intensive, prone to error.
- Change in reporting requirements requires changes to the Data Model three separate places: 1) preparation tools, 2) data collection system, 3) analytics tools.
- Big expense for grantees, for government, and for data users.

WHEN OPEN, NON-PROPRIETARY DATA STANDARDS ARE ADOPTED …

TAXONOMY: the single source of the data model maintained by Government
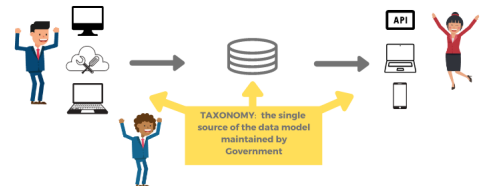
THE TAXONOMY IS THE ONLY SOURCE OF THE DATA MODEL.

- A data standard:
  - is NOT a product, NOT a technical format like JSON, CSV, HTML, or XML.
  - is a technical language with a consistent structure to define reported facts, by conveying meta-data (data type, units, definition, label, time period) about the data.
  - can be used in lots of software - to prepare, and to analyze, data.
- Keeps costs low for grantees and data users because it can be used in lots of open source and commercial applications.
- Eliminates the need for government to build analytics tools. Data is machine-readable as soon as its received.
- Government manages reporting requirement change with no IT or vendor involvement.
- Changes made in the taxonomy ONCE, translate to changes in the collection system, preparation tools, and analytics tools.

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data with others, as well as develop tools to easily extract and manipulate data.

What is the XBRL Data Standard?

eXtensible Business Reporting Language (XBRL)[1] is an open data standard that is commonly used for digital business financial reporting, and is managed by a non-profit organization, XBRL International. The XBRL data standard provides a common language and format that can be adapted to many different financial reporting contexts. Instead of physical document-based reporting, XBRL creates a framework to share the same information digitally.

According to XBRL International:
> "The change from paper, PDF and HTML based reports to XBRL ones is a little bit like the change from film photography to digital photography, or from paper maps to digital maps. The new format allows you to do all the things that used to be possible, but also opens up a range of new capabilities because the information is clearly defined, platform-independent, testable and digital. Just like digital maps, digital business reports, in XBRL format, simplify the way that people can use, share, analyse and add value to the data."[2]

In the "inline" or iXBRL format, financial reports are both human- and machine-readable. iXBRL financial reports look the same as they do in regular paper document format, except that important data items such as different asset accounts, are "tagged". For example, see the excerpt from Page County, VA's Statement of Net Position[3] below. Data that are highlighted with red lines have been "tagged" so that they can be easily accessed, analyzed, and shared without having to be copied and pasted into a separate spreadsheet or database.

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[1]XBRL. "An Introduction to XBRL." XBRL, https://www.xbrl.org/the-standard/what/an-introduction-to-xbrl/.
[2]Ibid.
[3]XBRL. "iXBRL Document: Page County, Virginia." *XBRL US*, https://xbrlus.github.io/cafr/ixviewer/ix.html?doc=../samples/38/County_of_Page_VA-2019-Statements.html.
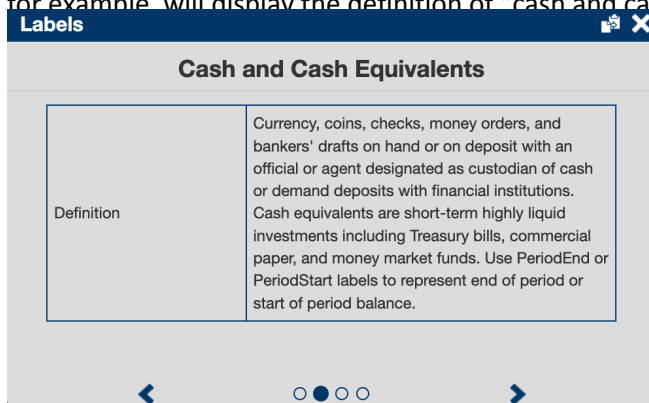
COUNTY OF PAGE, VIRGINIA   **Exhibit 1**

Statement of Net Position
June 30, 2019

	Primary Government	Component Unit	Component Unit	Component Unit
			Economic	Luray-Page
	Governmental Activities	School Board	Development Authority	Airport Authority
ASSETS				
Cash and cash equivalents	$ 13,580,560	$ 956,099	$ 271,506	$ 253,678
Receivables (net of allowance for uncollectibles):				
Taxes receivable	15,121,763			
Accounts receivable	663,748	75,062	1,496,661	5,746
Notes receivable	-	-	2,725	-
Due from primary government		2,137,633		
Due from other governmental units	1,120,158	569,221	-	31,058
Inventories	-	30,560	-	42,081
Prepaid items		292,156	1,475	
Capital assets (net of accumulated depreciation):				
Land	1,970,464	977,491	2,751,000	1,936,386
Buildings and improvements	41,632,491	33,039,817	-	11,326,700
Machinery and equipment	1,142,999	1,370,114	-	157,121
Construction in progress	75,000	140,950	-	218,203
Total assets	$ 75,307,183	$ 39,589,103	$ 4,523,367	$ 13,970,973

XBRL data tags facilitate accurate and swift data extraction from an XBRL document. A data tag is essentially a pre-defined category or concept. Clicking on the data tag for "cash and cash equivalents," for example, will display the definition of "cash and cash equivalents," its value for Page County in FY19,

Labels

Cash and Cash Equivalents

Definition	Currency, coins, checks, money orders, and bankers' drafts on hand or on deposit with an official or agent designated as custodian of cash or demand deposits with financial institutions. Cash equivalents are short-term highly liquid investments including Treasury bills, commercial paper, and money market funds. Use PeriodEnd or PeriodStart labels to represent end of period or start of period balance.

All tags are defined by an underlying data "taxonomy," which ensures that tags like "cash and cash equivalents" always mean the same thing, whether you are looking at Page County FY19 or any other local government or fiscal period.

For financial reporting, taxonomies can be created to tag any useful data, such as assets, liabilities, expenditures, and revenues accounts or other useful concepts from Generally Accepted Accounting Principles (GAAP) or Uniform Charts of Accounts. When many governments adopt XBRL-formatted reporting, XBRL tags allow the data to be easily compiled and analyzed. For example, Page County may wish to compare the size of its General Fund balance or long-term liabilities to other counties in Virginia or to itself in different fiscal years.

Section II: Implementation of Financial Data Standards in the US and Internationally

International Implementation of Public XBRL Filings

Over 100 regulators in 60 countries use XBRL taxonomies,[4] primarily focusing on private-sector regulatory and supervisory data collection concerning financial regulation, capital markets, and businesses registrars. In the US, XBRL is used by the Securities and Exchange Commission (SEC) and other regulatory bodies overseeing different industry sectors.

Although XBRL taxonomies are used less frequently in public finance, Spain, Italy, and Brazil began using XBRL to collect municipal financial data in the late 2000's[5]. Beginning with Spain in 2007, these three countries have successfully standardized a variety of municipal filings using XBRL taxonomies. The Spanish Ministerio de Hacienda has used several sets of XBRL taxonomies to collect municipal financial statements concerning budget settlements, fiscal budgets, and quarterly financial updates. Similarly, Brazil and Italy began requiring municipalities to file financial reports in XBRL format in 2014 and 2016, respectively. Researchers note that several factors in these countries were conducive to successful XBRL implementation: the authorization of a centralized body to mandate changes in financial reporting, the capacity for Spain, in particular, to withhold intergovernmental funding for compliance, and support from a variety of accounting system vendors before state mandates became effective.[6]

U.S. Federal Rules and Legislation Concerning XBRL

In the US, the federal government has adopted XBRL standards in several areas of public reporting. Since 2005, the Federal Financial Institutions Examination Council has required specific banks to file quarterly Reports of Condition and Income (Call Reports) using XBRL. The U.S. Securities Exchange Commission (SEC) has also required operating companies and mutual funds to submit financial data using XBRL since 2009, with similar requirements for Nationally Required Statistical Rating Organizations (NRSROs) to publicly publish certain credit ratings using XBRL in the same year. More recently in 2018, the SEC began mandating several entities, including operating companies and variable annuity and life insurance accounts, to use Inline XBRL for specific financial data and disclosures. In 2019, the Federal Energy Regulatory Commission also began requiring XBRL reporting for public utilities.

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[4] XBRL. (2016, September 30). *XBRL Around the World*. XBRL. https://www.xbrl.org/xbrl-around-the-world/

[5] Joffe, M., & Reck, J. (2019, January). Applying XBRL to US State and Local Government Audited Financial Report. *George Mason University: Mercatus Working Paper*. https://www.mercatus.org/system/files/joffe-xbrl-mercatus-working-paper-v1.pdf.

[6] Ibid.

In 2019, Congress passed and the President signed the Grant Reporting Efficiency and Agreements Transparency (GREAT) Act, HR 150.[7] This law requires that Single Audit reporting packages be provided in an electronic form in accordance with a machine-readable non-proprietary data standard. All state and local governments spending $750,000 in federal funds in a given year must file a Single Audit, and their reporting packages include the same basic financial statements included in ACFRs. Indeed, many governments include their entire ACFR as part of their Single Audit reporting packages.[8]

State Legislation and Implementation of XBRL

In 2007, the Association of Government Accountants (AGA), conducted a pilot program in Oregon focused on creating a Governmental Accounting Standards Board (GASB)-compliant XBRL taxonomy for state and local financial reporting (discussed in more detail below).[9] However, likely due to stress factors stemming from the ensuing Great Recession, the lack of a national-level regulatory body, as well as perceived challenges from SEC XBRL implementation at the federal level, state and local momentum for XBRL has stagnated .[10] Challenges included faulty and incomplete filings as well as legacy mandates instructing use of both old and new reporting systems, leading to higher costs and a lack of public data.[11]

Over the last few years, however, there has been renewed interest in implementing XBRL for state and local governments. For example, Will County (IL)[12] and Upper St. Clair Township (PA),[13] as well as a number of other pilot locations, have published several XBRL financial statements. XBRL US has also convened a Standard Government Reporting Working Group, and several states have considered or passed bills and laws concerning XBRL adoption, including Florida, Illinois, and California.[14] In 2019, the Working Group released an updated version of its pilot Inline XBRL taxonomy meant to represent sections of the Annual Comprehensive Financial Report, which several governmental entities have used to generate sections of previous years' ACFRs.[15]

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[7] United States, Congress. Public Law 116-103, Grant Reporting Efficiency and Agreements Transparency Act. congress.gov, 2019. https://www.congress.gov/bill/116th-congress/house-bill/150.

[8] Ibid.

[9] Abraham, C., & Kull, J. L. (2008, September). XBRL and Public Sector Financial Reporting: Standardized Business Reporting: The Oregon CAFR Project. *AGA CPAG Research Series*, *16*. https://digital.osl.state.or.us/islandora/object/osl%3A2134/datastream/OBJ/view.

[10] Joffe, M., & Reck, J. (2019, January). Applying XBRL to US State and Local Government Audited Financial Report. *George Mason University: Mercatus Working Paper*. https://www.mercatus.org/system/files/joffe-xbrl-mercatus-working-paper-v1.pdf.

[11] Ibid.

[12] Blackburn, D. (n.d.). *Open Government Center*. Will County Auditor. https://www.willcountyauditor.com/open-gov-center.

[13] Upper St. Clair. (n.d.). *Annual Comprehensive Financial Reports (ACFR)*. Financial Reports. https://www.twpusc.org/departments/finance/acfr.php.

[14] XBRL US. (n.d.). *Standard Government Reporting*. XBRL. https://xbrl.us/home/government/state-and-local-government.

The following sections provide additional detail on state and local XBRL initiatives.

Oregon, 2006

Oregon's state government, working with an advisory group led by the Association of Government Accountants as well as Oregon's State Controller, piloted one of the first taxonomies for public finance in 2007. This project focused on two primary statements in Oregon's ACFR, the Statement of Net Assets and Statement of Activities for fiscal year 2006. Although the project took much longer to complete than initially expected, the advisory group successfully created 150 tagged data elements that meet GASB accounting standards. The resulting report noted the importance of a diverse advisory board, strong leadership from Oregon's State Controller, and knowledge-sharing between taxonomy developers and public finance experts.[16] Several challenges included incorporating the dimensionality of ACFR statements, in which data is organized across multiple columns and rows, reaching a consensus between Oregon and GASB personnel concerning definitions for the taxonomy, and finding software to render the resulting product.[17]

Will County, 2018

Will County, Illinois, became the first local government in the United States to produce a version of its ACFR using XBRL on its public website in 2018. This taxonomy contains XBRL data elements for the Statement of Net Position, Statement of Activities, Governmental Fund Balance Sheet, Governmental Fund Balance Sheet, and Governmental Fund Statement of Revenues, and Expenditures and Changes in Fund Balances.[18] The website for Will County now contains Inline XBRL financial statements for fiscal years ending in 2016 and 2017 as well.[19] In 2020, Illinois's legislature considered H.R. 703, a bill recommending the use of XBRL by all Illinois's state entities and governments.[20] Although this bill did not

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[15] XBRL US. (n.d.). *CAFR Taxonomy, 2019 Demonstration Release*. XBRL. https://xbrl.us/xbrl-taxonomy/2019-cafr/.

[16] Abraham, C., & Kull, J. L. (2008, September). XBRL and Public Sector Financial Reporting: Standardized Business Reporting: The Oregon CAFR Project. *AGA CPAG Research Series*, *16*. https://digital.osl.state.or.us/islandora/object/osl%3A2134/datastream/OBJ/view.

[17]Ibid., page 24.

[18] Business Wire. (2019, September 5). XBRL US 2nd Release of CAFR Taxonomy for Municipal Reporting in Public Exposure Review. *Business Wire*. https://www.businesswire.com/news/home/20190905005876/en/XBRL-US-2nd-Release-of-CAFR-Taxonomy-for-Municipal-Reporting-in-Public-Exposure-Review.

[19] Blackburn, D. (n.d.). *Open Government Center*. Will County Auditor. https://www.willcountyauditor.com/open-gov-center.

[20] Illinois State, Legislature, House. XBRL-Support. ila.gov, https://www.ilga.gov/legislation/BillStatus.asp?DocNum=0703&GAID=15&DocTypeID=HR&LegID=123773&SessionID=108&SpecSess=&Session=&GA=101. 101st General Assembly, H.R. 703, Session Sine Die 13 Jan. 2021.

advance, two community college districts have worked with XBRL US to produce prototype filings for public access.

Florida, 2018

Florida Gov. Rick Scott signed HB 1073 into law in early 2018, allowing the State's Chief Financial Officer (CFO) to require local governments to file ACFRs in XBRL format beginning in fiscal year 2022[21]. In 2019, the State has awarded a contract to Visma Connect and the Dinocrates Group to develop XBRL taxonomies for the State, county, municipal, and special district financial filings. These vendors completed their taxonomy in late 2020, and it is now being evaluated by the State's CFO's office. Once the CFO approves the proposed taxonomy, local governments must submit financial statements conforming to it.

In 2019, researchers partnered with the City of St. Petersburg, Florida, to develop a prototype Inline XBRL taxonomy for the city's ACFR for fiscal year 2017. They contracted an external developer to update an XBRL taxonomy that had previously been created with another partner. According to the researchers,[22] key challenges with the prototype development included the developer's inexperience with Inline XBRL, difficulties with using existing programs, such as PDF-to-HTML converters for Inline XBRL, and the size of the resulting Inline XBRL document creating difficult loading using internet browsers. They also noted that multiple bases of accounting, definition of terms, and the number of disclosures posed an issue for prototype development as well.

California, 2019

In 2019, State Senator John Moorlach proposed SB 598, a local government XBRL bill modeled on the American Legislative Exchange Council's model Open Financial Statements Act.[23] In committee, Moorlach agreed to scale the legislation back to a study bill that would authorize a multi-stakeholder commission to develop a taxonomy and make a recommendation to the legislature about an eventual filing mandate. Although the revised bill unanimously passed both houses of the legislature, Governor Gavin Newsom vetoed it[24].

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[21]Florida State, Legislature. Statute 218.32, Annual financial reports; local governmental entities. flsenate.gov, 2018. Florida Senate, https://www.flsenate.gov/Laws/Statutes/2018/218.32.

[22] Joffe, M., & Reck, J. (2019, January). Applying XBRL toUS State and Local Government Audited Financial Report. *George Mason University: Mercatus Working Paper*. https://www.mercatus.org/system/files/joffe-xbrl-mercatus-working-paper-v1.pdf.

[23] American Legislative Exchange Council. (2018, August 9). *The Open Financial Statement Act*. https://www.alec.org/model-policy/the-open-financial-statement-act/.

[24] California State, Legislature, Senate. Open Financial Statements Act. leginfo.legislature.ca.gov, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB598. 2019-2020 Session, S.B. 598, Amended 02 Apr. 2019.

Although XBRL development stalled in the 2000s, these examples signal a promising interest at the state and local levels over the last few years. In addition, continuing advances in technology, especially with widespread adoption of new digital technologies as a result of the pandemic, make the adoption of open financial data standards an increasingly feasible option for state and local governments. In the next section, we explore the benefits and challenges of approaching XBRL adoption and implementation in Michigan.

Section III: Benefits and Challenges of Implementing XBRL in Michigan

How XBRL Reporting Could Be Implemented for Local Governments in Michigan

Designing and implementing an XBRL data reporting standard for Michigan local governments would be a multi-phase process that requires engagement from a wide variety of stakeholders. The Center for Local, State, and Urban Policy (CLOSUP) at the University of Michigan can lead the effort to convene stakeholders, seek funding, and manage project activities. As a collaborative process, stakeholders will include local governments, associations such as the Michigan Municipal League, Michigan Townships Association, and Michigan Association of Counties, XBRL US Working Group members, and the Michigan Department of Treasury.

With the guidance of stakeholders, updating the XBRL taxonomy to capture important elements of Michigan local government ACFRs will be an essential early focus for the project. Next would come the pilot phase. Using the new Michigan taxonomy, CLOSUP would work with XBRL US and a number of Michigan local governments to design the software functionality and organizational processes to create prototypes of XBRL formatted financial statements and an XBRL archive of underlying data. Following the pilot phase, CLOSUP will then work with stakeholders to evaluate lessons learned and seek additional funding and support to implement a broader implementation of XBRL reporting for local governments in Michigan.

Potential Benefits of XBRL

For local governments:

- **Streamlining/eliminating reporting requirement:** XBRL data can be more easily accessed than data in PDF documents. For example, instead of having to read through an entire ACFR to find a

particular data point, local officials can use programs to quickly retrieve validated data on concepts like, "net assets," along with their values. In addition, local officials could fulfill various duplicative state and federal reporting requirements, such as the Michigan F-65 Annual Financial Report, simply by making their XBRL data available once.

- **Access to usable high-quality data for internal management and external transparency**: Local officials may gain key insights into internal management through XBRL financial data. XBRL data can be used to collect a wide range of financial data over many years, allowing for local officials to understand past and present trends and plan for the future. Having high-quality, validated data also presents opportunities for managing external relationships and funding opportunities.[25]

- **May lower borrowing costs:** XBRL data may potentially save local governments money in accessing capital markets, as more complete and trustworthy data can make it easier for investors to assess credit risk. This would reduce investors' incentives to demand higher interest rates as a way of hedging against uncertainty.[26]

- **May lower the cost of third-party transparency applications:** Since XBRL is an open data standard, it is possible to lower the costs and expand the capabilities of third-party transparency applications. Having validated XBRL data freely available means that the value added of these applications will shift away from data collection toward data analysis and interpretation, making them more useful to local governments and the public.

For the State:

- **Data accuracy and completeness:** To help fulfill its mission of local government oversight and stewardship, the State would receive validated XBRL data in both human and machine-readable formats. Since local officials would submit financial data to the State using easily accessible and tagged data, data submissions are likely to be more complete and contain much less human error.

- **Reduce lag time in data availability:** Since tagged XBRL data is machine-readable, local officials can more quickly and easily generate financial data for submission to the State. This bypasses hours of manually reading through ACFRs and verifying accuracy.

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[25] Suarez, Virginia, et al. "Making the Case for Using Financial Indicators in Local Public Health Agencies." *Am J Public Health*, vol. 101, no. 3, 2011, pp. 419-425, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3036674/#bib3.

[26] Miller, B. (2019, October 2). Can Standardized Financial Data Help Government Save Money? *Govtech Biz*. https://www.govtech.com/biz/can-standardized-financial-data-help-government-save-money.html.

- **Facilitates proactive oversight of local government fiscal stress:** With a validated and streamlined data collection process, State officials can use readily available data to track trends, calculate financial ratios, or develop other indicators of fiscal stress. Collecting data over many years and across all localities is conducive to noticing trends, comparing municipalities, and detecting patterns and early warning signs of fiscal stress.

- **Ease of updating and extending the taxonomy:** XBRL's open standard structure provides for options to easily change and extend the data taxonomy. As new definitions or updates to financial accounting standards emerge or new reporting requirements are adopted, XBRL can be modified as needed.[27]

For the public:

- **Transparency and accountability for the general public:** Local financial filings in XBRL format means that important figures are tagged and easily accessible. Instead of needing to understand how to read a full financial audit report, researchers, journalists, and the general public can search a document for the necessary information. In addition, because XBRL makes it easier for governments to use third-party transparency applications, the public may have more options to access and interpret high-quality data using visualizations, searches, or other data exploration tools.

- **Potential savings from healthier local governments:** An increase in accurate, accessible data gives policymakers and the public more tools to guide state and local fiscal decisions, including budgeting and long-term strategic planning. Better financial planning can help local governments deliver more value to their residents at a lower cost.

XBRL Implementation Challenges

Organizational challenges:

- **"First mover" problem:** Entities that would benefit from XBRL adoption usually face time and resource constraints. From each entity's perspective, it is less costly to delay XBRL uptake until the "first mover" incurs the fixed costs of initial research and development. Therefore, it is difficult to incentivize nascent involvement in XBRL standard adoption without centralized leadership.

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[27] Strader, Troy J. "XBRL Capabilities and Limitations." *The CPA Journal*, 2007, http://archives.cpajournal.com/printversions/cpaj/2007/1207/p68.htm.

- **Learning curves and up-front costs for local governments:** As a previous case study in Oregon noted, there likely will be technical or organizational hurdles associated with taxonomy development and implementation.[28] Costs, such as the time to understand XBRL and new software applications, may be prohibitive for many local governments without additional technical support.

- **Little incentive for uniformity:** In Michigan, there are no current mandates for XBRL implementation. Without codified and enforced rules, some local governments will have little incentive to produce uniform sets of XBRL data.

Technical challenges

- **Wide variety of existing systems and procedures for financial reporting:** Integrating XBRL data into existing processes for financial reporting will be challenging. Since there are a variety of differences in processes used for creating and publishing financial reports, it may be difficult to create a single standardized method of creating XBRL data across different entities. Solutions will likely require multiple approaches and options for local governments.

- **Non-uniformities in elements and format of local government financial statements:** Differences in financial reports among Michigan municipalities generates challenges in creating a standardized taxonomy. For example, there may be an issue if various local governments use different terms for similar concepts. Developing the taxonomy will entail balancing the advantages of uniformity with the benefits of flexibility to capture existing heterogeneity.

Section IV: Conclusions and Recommendations

The XBRL standard has been used to disseminate accessible, comparable, and verifiable financial data in the private sector and its use is expanding in the public sector. An open data standard like XBRL allows for accurate and easy data collection, resulting in better information for public officials and stakeholders interested in local public finance. Although key challenges include learning how to implement and coordinate across different programs and stakeholders, CLOSUP can use a collaborative project model to ensure that the needs of all stakeholders are accounted for in implementing XBRL reporting for Michigan local governments.

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[28] Abraham, C., & Kull, J. L. (2008, September). XBRL and Public Sector Financial Reporting: Standardized Business Reporting: The Oregon CAFR Project. *AGA CPAG Research Series*, *16*. https://digital.osl.state.or.us/islandora/object/osl%3A2134/datastream/OBJ/view.

Going forward, the following lessons and best practices should guide the implementation of an XBRL standard for Michigan local governments:

1. **Creating a low-cost, simple, and collaborative project model assists in implementation:** Several factors may assist in XBRL implementation. Creating free or low-cost tools for municipal XBRL use helps to encourage municipal adoption. Additionally, involving multiple vendors and municipal entities produces a larger number of choices for municipal filing and a higher degree of taxonomy standardization.[29]

2. **Long-term organizational support is important to coordinate multiple stakeholders and program implementation:** Project leadership should focus on guiding stakeholders through complexities of XBRL implementation phase-in, mediating and managing relationships between various stakeholders, and reminding stakeholders of the value and benefits of XBRL adoption.[30]

3. **Cross-directional communication of technical and subject-matter expertise results in fewer errors:** Ensuring that technical information and public finance knowledge is shared between different stakeholders leads to fewer errors in XBRL adoption. The Oregon case study suggested that various stakeholders present their areas of expertise at the outset.[31]

4. **Showing how the XBRL process works helps to communicate the pilot program and benefits:** XBRL adoption and implementation are complex processes, and may seem vague to interested stakeholders. Using multimedia, such as diagrams, videos, and demonstrations, assists in helping stakeholders concretely understand the benefits and process of implementing XBRL data.[32]

5. **Focus on the big picture:** While a digital open standard for local government financial data may seem like a technocratic project, the emphasis should be on the larger public values it will serve -- transparency, public engagement, and keeping local government fiscally healthy so that they may serve their communities.

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