Recent legislation targeted at economic, social, and environmental priorities is taking the form of grants, increasing the amount of federal money flowing to the local level. As stewards of public funds, the federal government is accountable to Congress and the-taxpaying public to ensure that these funds are being used to deliver the intended measurable outcomes. In the past, expanding grant recipient reporting requirements has been used to improve transparency into how grant funds are spent and intended outcomes are achieved. However, year after year, studies show that this approach has increased the administrative burden on grant recipients, tied up precious resources better used to deliver results, and not provided the transparency needed by grantmaking entities to enable better grants management decision making.

In 2019, Congress passed the Grant Reporting Efficiency and Agreements Transparency (GREAT) Act with the intent of addressing both transparency and administrative burden issues. The GREAT Act set deadlines for establishing grants data standards, issuing implementation guidance to federal agencies, and implementing the use of the grants management data standards for information collection. In addition, the GREAT Act sought to “minimize the disruption of existing reporting practices of, and not increase the reporting burden on, agencies or recipients of Federal awards; and explore opportunities to implement modern technologies in reporting relating to Federal awards.” To address the GREAT Act mandates, some agencies have begun to explore distributed ledger technology (DLT), or “blockchain,” to manage grants information as “digital assets.” MITRE, a not-for-profit public interest company, took on the challenge of evaluating a modified business operating model enabled by DLT to improve transparency and reduce administrative burden.
In this paper, we will share an overview of the work MITRE and its government and private sector partners have completed to develop a proof-of-concept and evaluate the use of DLT with a modified grants management business operating model based on grants management data standards. Because the December 31, 2022, deadline specified in the GREAT Act for issuing implementation guidance to federal agencies is quickly approaching, this paper also shares our initial recommendations for Congress, the executive branch, and the private sector on leveraging our work to implement the GREAT Act mandates. We believe leveraging the work of MITRE and its government and private sector partners has great potential to reduce administrative burden while also increasing visibility and transparency through all tiers of the grantmaking ecosystem, thus allowing grant recipients to redirect funds spent on administrative and compliance activities to achieve intended outcomes.

The Current State of Grants Management

Grantmaking is a complex and decentralized process. In many cases, federal funds pass through multiple tiers of grantmaking entities through sub-awards before they are expended by the grant sub-award recipient that executes the project or delivers the services. The federal agencies and other grantmaking entities in the upper tiers of the grants ecosystem face the challenge of little or no visibility into the use of their grant funding, and information on grant award results is not received in a timely fashion. Congress has attempted to address the issue by including in the GREAT Act the requirement to “strengthen oversight and management of Federal grants and cooperative agreements by agencies by consolidating the collection and display of and access to open data that has been standardized and, where appropriate, increasing transparency to the public.”

### Current State of Grants Management

<table>
<thead>
<tr>
<th>Federal Agency</th>
<th>FY21 Grant Dollars (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHS</td>
<td>$771.4</td>
</tr>
<tr>
<td>Education</td>
<td>$281.4</td>
</tr>
<tr>
<td>DoT</td>
<td>$99.1</td>
</tr>
<tr>
<td>HUD</td>
<td>$53.1</td>
</tr>
<tr>
<td>DHS</td>
<td>$42.0</td>
</tr>
<tr>
<td>USDA</td>
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<tr>
<td>USAID</td>
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</tr>
<tr>
<td>DOL</td>
<td>$14.5</td>
</tr>
<tr>
<td>NSF</td>
<td>$7.8</td>
</tr>
<tr>
<td>DoD</td>
<td>$7.8</td>
</tr>
<tr>
<td>All Agencies</td>
<td>&gt;$1.3 trillion</td>
</tr>
</tbody>
</table>

Source: USAspending.gov
In addition, many grant recipients achieve their objectives by receiving funding from multiple grantmaking entities, resulting in significant administrative burden to monitor administrative requirements compliance, provide duplicative financial and performance reports to each of the grantmaking entities, and provide grants information to independent auditors and government agency Inspectors General (IGs). According to the 2021 Annual Grants Management Survey of federal, state, and local government and private sector non-profit grants managers, conducted annually by the National Grants Management Association, The George Washington University, and REI Systems, approximately 35% of grants managers’ time is spent on compliance activities, and 50% submit grants reports using data entry and email. In addition, the survey found that priorities for improving grants management include “standardizing business processes, right-sizing reporting requirements, modernized systems, standardized data, automation in data reporting, and streamlined systems with fewer portals.” The GREAT Act attempts to address these grant recipient challenges by including the requirement for federal agencies to “reduce burden and compliance costs of recipients of Federal grants and cooperative agreements by enabling technology solutions, existing or yet to be developed, for use in both the public and private sectors to better manage the data that recipients already provide to the Federal Government.”

MITRE Demonstration Project: The Future of Grants Management

In 2018-2019, MITRE conducted interviews and discussions with federal, state, and local government agencies, universities, community-based organizations, IGs, independent auditors, and government and industry technology experts to identify the actions needed, benefits, challenges, and barriers to fully addressing the issues faced by grantmaking entities and grant recipients. Based on this information, we developed a proposed future state grants management business operating model. This proposed business operating model was the basis against which we conducted a technology evaluation of DLT. We concluded that DLT, in comparison with traditional database technologies, could provide unique capabilities needed to fully implement the future state business operating model. Specifically, using DLT could improve visibility and traceability through all tiers of
the distributed grants ecosystem and reduce the reporting and compliance checking burden on grant recipients and grantmaking entities. This is because of DLT’s ability to automatically, securely, and immediately share grants information as “digital assets” among “permissioned” parties in a network of federal and non-federal de-centrally managed business systems. Although the business systems will have widely varying technology platforms, the grants information will be shared with appropriate parties through agreed upon grants management data standards, and business rules will be enforced using “smart contracts.”

A Summary of the Demonstration Project

At the urging of the 2019 study participants, in 2020 MITRE began the Future State Grants Management Demonstration Project. To execute the Demonstration Project, MITRE formed a voluntary consortium of federal agency, university, community-based organization, and industry grants management service (GMS) and DLT Service providers (see sidebar). The Demonstration Project included building and evaluating a functional proof-of-concept of the proposed grants management future state as well as identifying actions needed to address legislative/policy, governance, economic, organizational, and data use concerns associated with implementing the proposed grants management future state.

As part of the Demonstration Project, the MITRE team and consortium partners successfully executed two business use cases (“user stories”) where grantmaking entities, grant recipients, IGs, and independent auditors each used a single GMS to perform their grants management activities. In these use cases, their GMS connected to the DLT Service and automatically made available to other permissioned grants management entities the appropriate grant award, payment request, financial, performance, single audit, and closeout information using a common set of grants management data standards.

**CONSORTIUM PARTNERS**

- American Council for Technology (ACT) and Industry Advisory Council (IAC)
- AmpliFund
- Cloudocracy
- Coral Blockchain
- CoreChain Technologies
- Council of the Inspectors General on Integrity and Efficiency (CIGIE)
- Health and Human Services (HHS) Administration for Children and Families (ACF)
- Health and Human Services (HHS) Program Support Center (PSC)
- Illinois Coalition Against Domestic Violence (ICADV)
- National Academy of Public Administration (NAPA)
- National Head Start Association
- National Science Foundation (NSF)
- R3
- REI Systems
- University of Washington
- Wipfli LLP
The graphic below provides a high-level visualization of the architectural components of the Grants Management Future State Solution and the role each consortium partner played to develop the functional proof-of-concept.

Key Takeaways from the Demonstration Project

The Demonstration Project’s results provide evidence that duplicative creation and transmission of grants management reports could be eliminated; automation of payment integrity and compliance checks could be significantly expanded; and all tiers of grantmaking entities as well as independent auditors and IGs could access timely, accurate, and complete grants information.

In addition to end user business process benefits, the Demonstration Project identified potential for federal government cost reduction or avoidance. Such savings could be realized if federal agencies leverage a network of commercial GMS providers offering software-as-a-service (SaaS) connected to DLT Services, rather than the traditional approach of building and maintaining custom federal solutions. The grantmaking and grant recipient organizations that use GMS SaaS connected to DLT Services could eliminate the need to build and maintain point-to-point interfaces and multiple report variations to satisfy different grantmaking entities. In addition, the significantly expanded scope and accessibility of grants information, based on a common set of grants data standards, would enable industry to develop new and more robust “information-as-a-service” offerings customized to specific public or private sector interest groups.
The graphic below summarizes the benefits to each grants management ecosystem stakeholder group that could be achieved through implementation of a grants management future state based on the Demonstration Project.

Next Steps in Achieving the Future State of Grants Management

In Fall 2022, MITRE will release a full report on the results of the Demonstration Project, which will provide information on:

- The recommended future state business operating model and technology solution architecture and design
- The results of the functional proof-of-concept end user test and evaluation
- The analysis and recommendations to address implementation challenges
- The recommended action plan to implement and sustain the grants management future state

Key near-term actions that will be recommended in the action plan are:

**Conduct Pilots**

The Office of Management and Budget (OMB) and the Health and Health and Human Services (HHS) Grants Management Quality Service Management Organization (Grants QSMO) should identify and support one or more federal agencies, state agencies, and community-based organizations in executing one or more operational pilots based on the results of the Demonstration Project and using integrated GMS/DLT Services selected by the grantmaking and grant recipient entities.
OMB and the Grants QSMO should establish an initial governance body with representatives from each of the grants management ecosystem stakeholder groups participating in the operational pilot(s).

The governance body should leverage the results of the Demonstration Project to jumpstart the public-private technology solution environment, manage solution standards implementation, monitor operations and compliance, and mitigate issues that arise in the operation of the public-private solution environment.

The governance body should include a neutral entity operating in the public interest that has the program management, business, and technical capabilities necessary to orchestrate the activities of grants management ecosystem stakeholders.

Entities participating in the operational pilot(s) should provide their end users with data analysis business process and tools training to enable them to effectively use the significantly expanded scope and volume of grants information available to them.

**Update Policy and Legislation**

Congress should update federal grants management legislation and OMB should update the Uniform Guidance regulations (2 CFR Part 200) to shift language from “reporting” to “making information available,” eliminate references to current technologies and systems to enable the continuous evolution of solutions, and emphasize the contractual relationship between grantmaking and grant recipient entities while also allowing for other authorized entities to receive grants management information and streamline payment request processing.

**Develop and Update Guidance**

With OMB’s support, the National Institute of Standards and Technology should develop grants management-specific information privacy and protection guidance and the National Archives and Records Administration should update federal records management guidance for information stored on DLT.

**Refine Action Plan and Expand Implementation**

Lessons learned from the operational pilot(s) should be used to further refine the action plan and expand implementation of the grants management future state business operating model and technology solution.

**Conclusion**

MITRE and the government, university, community-based organization, and industry consortium partners have successfully demonstrated how to address the long-standing challenges of transparency and administrative burden in grants management. The MITRE report on the Demonstration Project will provide the business operating model, technology architecture and design, and action plan needed to achieve the future state. It will be imperative for Congress, OMB, and the Grants QSMO to leverage the work accomplished to date and actively lead and support grants management ecosystem stakeholders in this effort.
About the Authors

Jasmine Faubert is the Outcome Lead for Grants Management and Shared Services in MITRE’s Center for Government Effectiveness and Modernization. She has over 30 years of experience in federal financial management, grants management, and information technology implementations to improve government policymaking and program decision-making.

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Marla Ozarowski is a Principal Program Manager in MITRE’s Center for Government Effectiveness and Modernization. For over 30 years, she has successfully led major change programs in both the public and private sectors. Marla specializes in federal grants management, shared services, and IT transformations that enable stakeholders to carry out their missions more effectively.

For more information about the Center for Data-Driven Policy, contact policy@mitre.org.

References


3 The MITRE study found that the DLT capability to use “tokens” to transfer monetary value was not needed to fully achieve the objectives of the future state business operating model, and that including the capability would generate stakeholder resistance to adopting a future state business operating model based on DLT.