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Michael C. Hawkins

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This project report examines how Kent State University Libraries' *Map It!* service integrates data visualization and assessment to enhance research support, learning, and community engagement. Established in 2019 within the Map Library, *Map It!* provides consultation, instruction, and project collaboration for students, faculty, staff, and community partners seeking to communicate data through maps, dashboards, and visual narratives. Assessment is embedded throughout the service workflow, combining quantitative metrics, such as project volume, disciplinary reach, and tool usage; with qualitative feedback that captures learning and engagement outcomes. Over five years, *Map It!* has completed more than 150 projects, expanded across 20 academic departments, and developed partnerships with local organizations. Findings demonstrate how visualization functions as both a library service and a framework for assessment, making institutional and community impact both measurable and visible. The report concludes with lessons learned and future directions for sustaining evidence-based, data-informed, and community-centered library services.

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## Visualizing Impact: Assessing Engagement and Outcomes through the Map It! Data Visualization Service

Michael C. Hawkins  
Kent State University Libraries, United States

### ABSTRACT

This project report examines how Kent State University Libraries' *Map It!* service integrates data visualization and assessment to enhance research support, learning, and community engagement. Established in 2019 within the Map Library, *Map It!* provides consultation, instruction, and project collaboration for students, faculty, staff, and community partners seeking to communicate data through maps, dashboards, and visual narratives. Assessment is embedded throughout the service workflow, combining quantitative metrics, such as project volume, disciplinary reach, and tool usage; with qualitative feedback that captures learning and engagement outcomes. Over five years, *Map It!* has completed more than 150 projects, expanded across 20 academic departments, and developed partnerships with local organizations. Findings demonstrate how visualization functions as both a library service and a framework for assessment, making institutional and community impact both measurable and visible. The report concludes with lessons learned and future directions for sustaining evidence-based, data-informed, and community-centered library services.

**Keywords:** Library Assessment; Evidence-based Practice; Data Visualization; Service Evaluation; User Engagement; Academic Libraries

### INTRODUCTION

Academic libraries are redefining assessment through data, visualization, and collaboration. Beyond counting usage or attendance, today's libraries are expected to demonstrate how their services foster learning, research, and community impact.

At Kent State University Libraries, the Map It! service embodies this evolution. Established in 2019 within the Map Library, *Map It!* was created to meet the growing demand for accessible, high-quality data visualization and mapping support across campus and throughout the surrounding community. Housed within the Map Library and aligned with the Community Geography Lab, the service assists students, faculty, staff, and local organizations in transforming data into meaningful visual narratives using tools such as ArcGIS Online, StoryMaps, Tableau, R, and QGIS. By bridging the technical and conceptual dimensions of visualization, *Map It!* helps users produce visual outputs and communicate data responsibly.

As Head of the Map Library and Data Librarian, I oversee this program at the intersection of geospatial technology, data literacy, and library assessment. From student research and faculty

grant projects to civic storytelling and public data dashboards, *Map It!* integrates visualization into a wide range of academic and community contexts while embedding assessment within its own workflows.

This project report addresses the central question guiding *Map It!*'s development: How can a specialized library service demonstrate its value through data-driven visualization, consultation, and measurable outcomes? By framing visualization itself as both service and evidence, *Map It!* offers a model for how libraries can make their impact visible.

## **PROGRAM BACKGROUND & DEVELOPMENT**

The Map It! service was established in 2019 as part of Kent State University Libraries' commitment to expanding research support, data literacy, and digital scholarship. Developed under the newly created position of Data Librarian and Head of the Map Library, the service was designed to bridge the gap between traditional cartographic collections and emerging needs for digital and geospatial visualization. From its inception, *Map It!* was envisioned not only as a technical support resource but as a collaborative hub that helps researchers, students, and community partners tell stories with data.

Early priorities focused on accessibility and flexibility. The service introduced both proprietary and open-source tools; including ArcGIS Online, StoryMaps, Tableau, R, and QGIS—to ensure users from diverse disciplines could participate regardless of technical background. Over time, *Map It!* evolved into a consultative and instructional service model, offering tailored support for students, faculty, staff, and local organizations. Projects range from workshops and faculty consultations to community mapping initiatives.

Community collaboration quickly became a defining feature of *Map It!*. Since its launch, the service has completed more than 150 visualization projects, including partnerships with the City of Kent on a downtown mural StoryMap, with Main Street Kent on a walking tour of the city's industrial heritage (see Figure 1), and with the Newman Center on mapping public resources for unhoused residents. These collaborations demonstrate the library's civic role while reinforcing Kent State's "student first" mission through experiential learning and applied research.

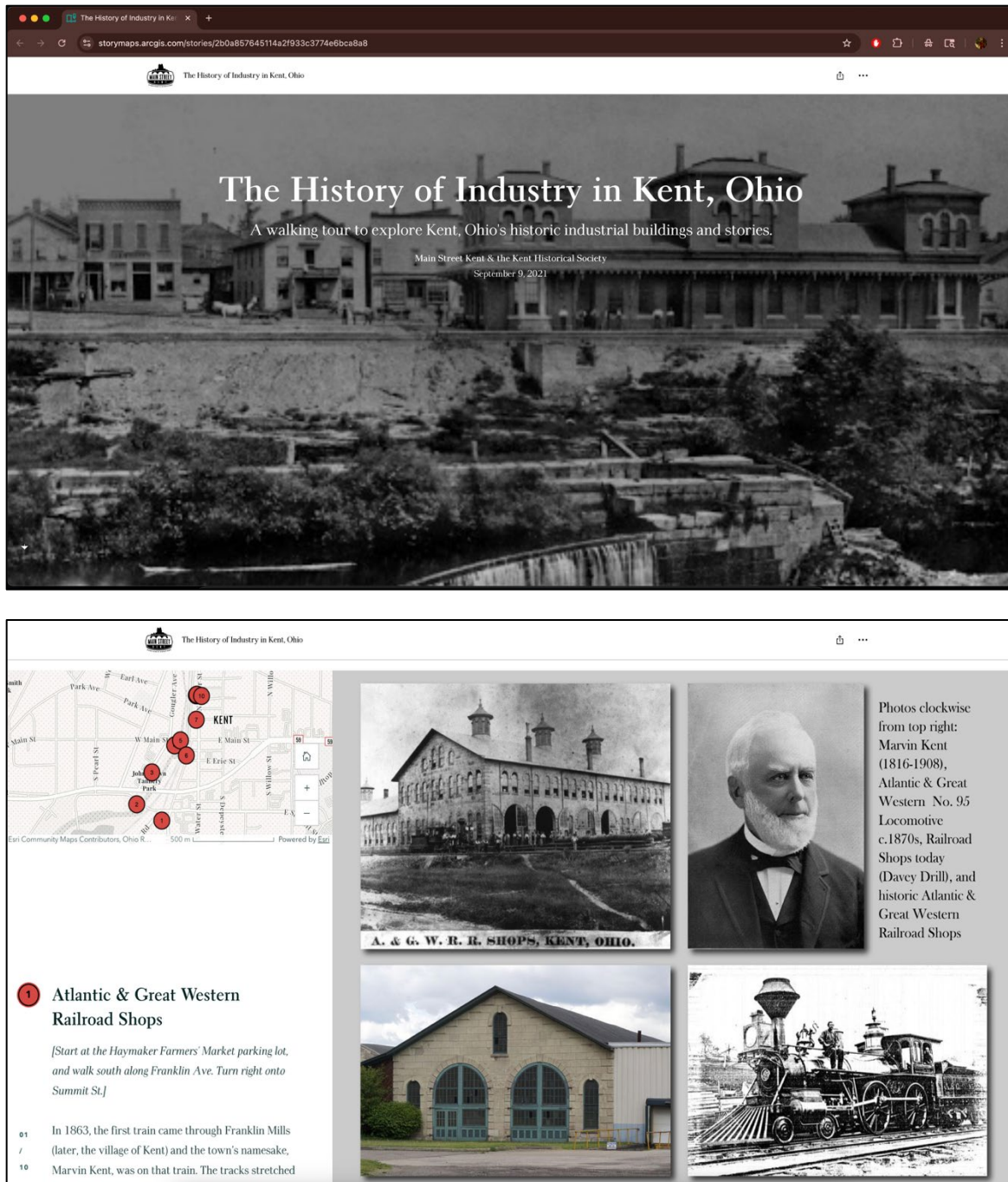


Figure 1. Main Street Kent Industrial Heritage StoryMap developed through the Map It! service.

**Note.** The images show the project's opening interface and mapped walking tour highlighting Kent's historic industrial sites. This collaborative effort with Main Street Kent and the Kent Historical Society connects local history, spatial data, and community storytelling.

Retrieved from The History of Industry in Kent, Ohio, by Main Street Kent & the Kent Historical Society, 2021. (<https://storymaps.arcgis.com/stories/2b0a857645114a2f933c3774e6bca8a8>). Copyright 2021.

*Map It!* also plays a central role in student engagement and mentoring. The service supports undergraduate and graduate research through programs such as SURE (Summer Undergraduate Research Experience), McNair Scholars, and the Provost Leadership Academy, where students learn to visualize and communicate data effectively. As the program matured, *Map It!* was integrated into the newly developed Community Geography Lab, which provides space for hands-on learning, collaboration, and visualization. This transformation has redefined the traditional map library as an active site of data literacy, creative inquiry, and community engagement a place where visualization becomes both an educational practice and a reflection of institutional and civic impact.

## ASSESSMENT FRAMEWORK & METHODOLOGY

Assessment is embedded within the *Map It!* service model from the initial consultation through project completion. Rather than evaluating impact as a separate or post-hoc activity, *Map It!* integrates assessment directly into its workflows, ensuring that evidence of value is collected continuously and transparently.

Each new project begins with a service intake form that captures essential details, including the project's purpose, intended audience, visualization tools, and anticipated outcomes. Consultations are then logged by tool type (e.g., ArcGIS Online, Tableau, QGIS) and user category (faculty, student, community). This process enables the program to document demand, identify user groups across disciplines, and track engagement patterns over time. By collecting this information consistently, *Map It!* can visualize its own service metrics alongside user-generated data, creating a feedback loop between service provision and assessment.

Quantitative data form one component of this framework. Metrics include the number of consultations, workshops, and visualization projects completed each year; the number of departments or community organizations served; and the range of visualization tools employed. Users now include public health, history, business, and communication faculty and students. These patterns demonstrate how visualization has become a universal research and storytelling tool across campus.

To align assessment with the nature of the service itself, *Map It!* employs an ArcGIS Dashboard that visualizes consultation and project data in real time. The dashboard functions both as an internal management tool helping to identify trends and allocate resources and as an outward-facing mechanism that communicates impact to library leadership and stakeholders.

Qualitative assessment is equally central to this model. Users provide feedback through post-project reflections or follow-up consultations, offering insight into their learning experience, satisfaction, and research outcomes. Faculty and students frequently share examples of completed visualizations, which serve as tangible evidence of skill development and scholarly contribution. These artifacts—maps, StoryMaps, dashboards, and infographics—illustrate how users transform data into meaning, making visualization a form of assessment.

Together, these approaches create a sustainable, data-informed assessment system that captures both growth and impact. By embedding assessment within its everyday practice, *Map It!* demonstrates how libraries can make their influence visible through the very tools and methods they help others use.

## FINDINGS & OUTCOMES

The assessment data collected through **Map It!** reveal measurable growth and broad impact that extend beyond traditional service metrics. Since its establishment in 2019, *Map It!* has evolved from a small visualization support program into a central component of Kent State University Libraries' research and engagement infrastructure. Over five years, the service has completed more than 150 projects, supported hundreds of consultations and workshops, and built partnerships with over 20 academic departments and multiple community organizations.

### Quantitative Outcomes

Service analytics show consistent growth in both the number and diversity of projects. After completing 25 projects in its first year, *Map It!* now averages 40–50 annually, reflecting increased participation from non-STEM disciplines. Requests for support span public health, anthropology, journalism, architecture, and business, demonstrating the adaptability of visualization tools across academic contexts. As shown in Figure 2, Map It! projects and consultations have steadily increased each year since 2019, reflecting growing interdisciplinary participation and expanded community partnerships. Course integrations and workshops—such as *Introduction to QGIS* and *Getting Started with ArcGIS Online*—reach hundreds of students and community members, introducing non-GIS users to spatial data and the potential of mapping as a learning tool.

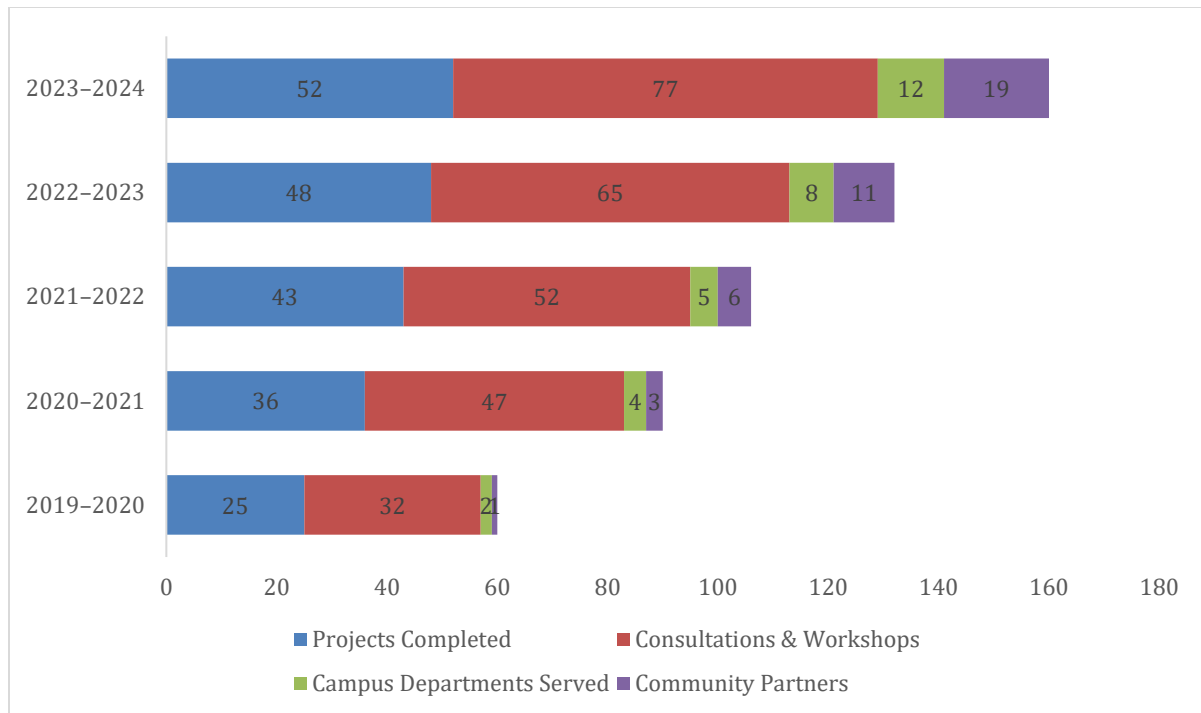


Figure 2. Map It! project and consultation growth, 2019–2024.

*Note: The chart shows a steady increase in project completion, consultations, and campus and community collaborations over five years, illustrating how the Map It! service expanded from small, introductory visualization projects to complex, cross-disciplinary initiatives.*

Community-based projects continue to advance the university's civic engagement mission. Collaborations with local partners demonstrate how visualization supports cultural, social, and environmental needs. The *Main Street Kent Art Walk StoryMap* and the *Newman Center Community Resource Map* illustrate how library expertise connects academic knowledge with community priorities. As shown in Figure 3, *Map It!* visualizations serve as living community maps, promoting cultural engagement and demonstrating how library-supported visualization projects extend beyond campus.



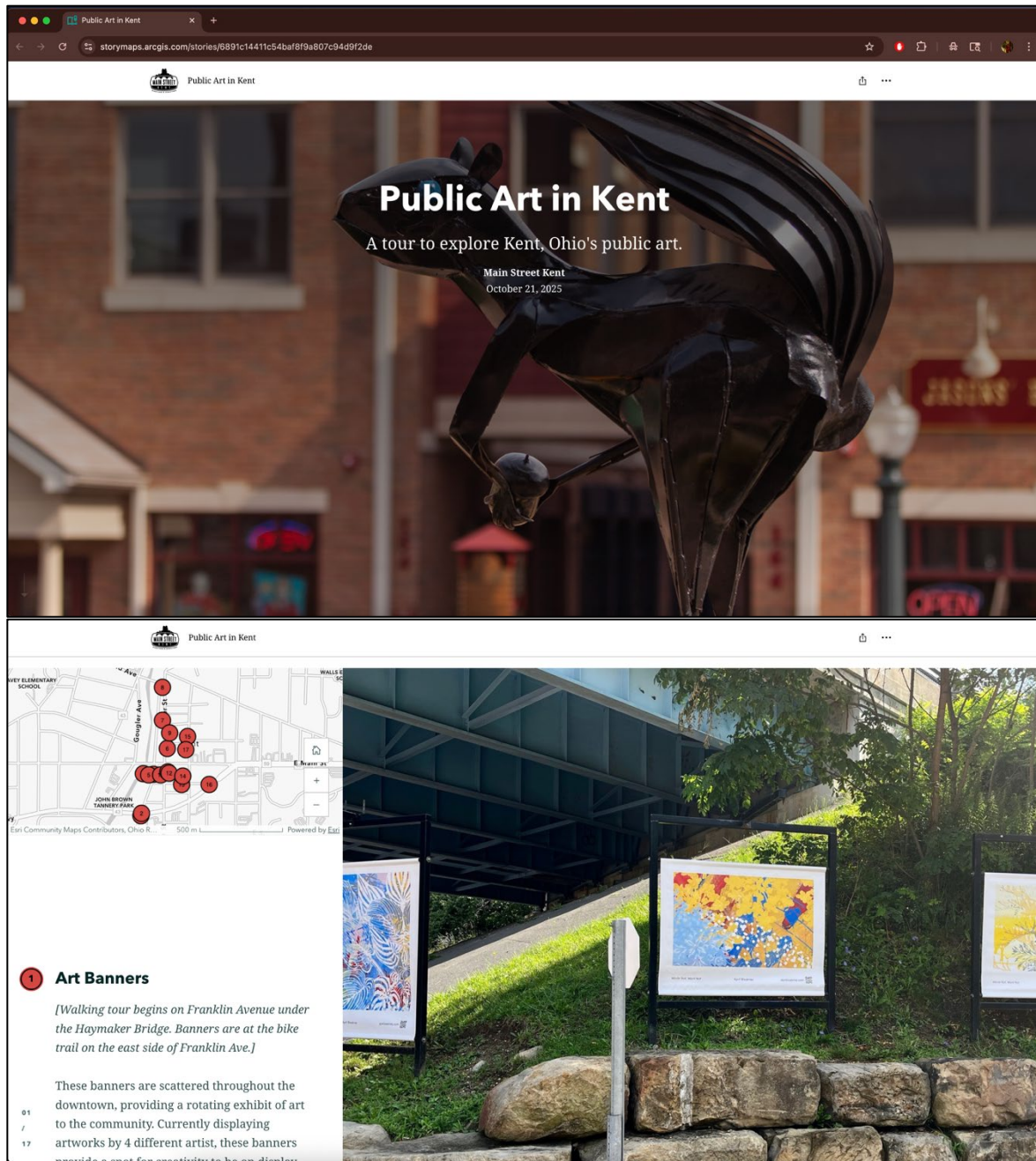


Figure 3. Main Street Kent Art Walk StoryMap created through the Map It! service

**Note.** The images display the project's main interface and a mapped view of public art installations. Developed in collaboration with Main Street Kent, this visualization highlights how library-supported storytelling connects cultural geography, community art, and civic engagement. Retrieved from Public Art in Kent, by Main Street Kent, 2025 (<https://storymaps.arcgis.com/stories/6891c14411c54baf8f9a807c94d9f2de>). Copyright 2025.



## Qualitative Outcomes

Qualitative feedback highlights themes of learning, empowerment, and collaboration. Faculty partners report improved communication of research findings and greater visual impact in grants and presentations. Students express increased confidence in data interpretation and storytelling, describing visualization to “see data as something alive and meaningful.” Community partners note that visualization enhances advocacy and transparency; projects such as the *Backyard Urban Chicken Map* demonstrate how data can inform policy and public awareness. Feedback has directly shaped *Map It*’s service design, revealing new training needs and data management priorities.

## Institutional Impact

Collectively, these findings show that *Map It!* enhances learning, fosters interdisciplinary collaboration, and strengthens community partnerships. Each consultation and project also produces measurable evidence of engagement, informing staffing, software licensing, and resource planning—making assessment an active driver of growth and institutional value.

## REFLECTIONS & LESSONS LEARNED

The development of the **Map It!** service has provided key insights into how libraries can sustain innovative, data-informed programs while embedding assessment meaningfully within their workflows. The experience shows that assessment is most effective when treated not as a reporting requirement, but as an integral and visible part of daily practice.

A central lesson has been the value of designing assessment into the service model from the outset. *Map It!* was structured so that each intake form, consultation record, and project artifact contributes to a continuous feedback cycle. This approach reduces the burden of separate data collection while generating consistent, comparable evidence of use and impact. By aligning dashboards and visual analytics with assessment processes, *Map It!* demonstrates how visualization itself can communicate value in real time.

Another realization is that data visualization is both a **product** and a **process** of learning. Visualizations created by students, faculty, and community partners serve as evidence of skill development and engagement, while the library’s own dashboards turn assessment data into accessible narratives for stakeholders. Visualization thus functions as both service output and language of accountability, making the library’s impact tangible and relatable.

Collaborative partnerships remain vital to sustaining innovation. Faculty and community partners who understand the value of visualization are more likely to share outcomes and feedback, enriching assessment data and reinforcing the service’s credibility. These collaborations have positioned *Map It!* as both a research support mechanism and a community engagement platform; two complementary domains strengthened by transparent evidence of success.

Scaling assessment to match program growth continues to present challenges, including staffing needs, dedicated assessment time, and evolving tool development. Yet these challenges

have clarified priorities: automating data collection, expanding dashboard capabilities, and maintaining adaptable methods responsive to new visualization technologies.

Ultimately, *Map It!* demonstrates that embedding assessment into service design transforms it from an obligation into a catalyst for learning, improvement, and impact. By transforming assessment into visualization, the program ensures the library's influence is not only measurable but unmistakably visible.

## FUTURE DIRECTIONS

As the **Map It!** service continues to mature, assessment remains central to its sustainability and future growth. The next phase will focus on developing more robust systems to visualize longitudinal impact and further integrate visualization into institutional decision-making. A major upcoming initiative is the **Living Impact Dashboard**, a dynamic platform that aggregates consultation data, project outcomes, and user feedback across multiple years. The dashboard will provide administrators, faculty, and community partners with real-time insights into engagement trends, disciplinary reach, and collaborative partnerships. Beyond internal reporting, it will serve as a public-facing tool that visually communicates how library services contribute to research, learning, and civic engagement.

Efforts are also underway to link *Map It!* assessment data with the university's broader analytics infrastructure. Connecting visualization metrics to indicators such as student success, grant activity, and course engagement will enable the library to produce compelling, evidence-based narratives of institutional value. Furthermore, the upcoming **NSF CIVIC grant collaboration** with the Geography Department exemplifies how *Map It!* can extend its community impact. The project will establish a regional geo-data storage facility, allowing agencies, nonprofits, and researchers to share and analyze local data.

## CONCLUSION

The evolution of **Map It!** shows how libraries can transform visualization from a support service into a strategic assessment tool. Through intentional design and transparent evaluation, *Map It!* has made assessment a natural part of its operations and identity.

Its success demonstrates that libraries can best communicate value by using the very methods they promote. Each consultation, visualization, and dashboard supports learning while producing evidence of impact. By uniting service and scholarship, *Map It!* offers a model for integrating visualization with continuous assessment.

Ultimately, *Map It!* redefines assessment as dynamic, visual, and participatory; woven into creation rather than confined to reports. It exemplifies how data visualization makes library contributions to research, education, and community engagement measurable and visible.

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**About the author**

Michael C. Hawkins is Head of the Map Library and Data Librarian at Kent State University Libraries. He manages data visualization, mapping, and geospatial research support for students, faculty, and community partners through the *Map It!* service. His work integrates spatial research, digital scholarship, and community collaboration across disciplines. Trained in geography, his research explores the intersections of sports geography, industrial heritage, and place identity, examining how spatial narratives shape culture and community. Hawkins also contributes to projects in geospatial literacy, digital humanities, and applied mapping that connect academic inquiry with public and regional engagement.