INTRODUCTION
This poster presents the implementation of a collaborative approach and solution for data gathering, data consolidation and most importantly, data accessibility through a live connection to free Google Data Studio dashboards.

Units at the University of Miami Libraries (UML) have long been engaged in data collection activities. Data from instructional sessions, consultations and all types of user interactions have been conducted with the aim of understanding user needs. However, data collection outside of the Alma integrated library system has been decentralized. Library departments have maintained their statistical data locally and without a routine procedure for gathering or sharing data. Every request for cross-departmental data has involved days spent simply getting access to the data. It was clear that we were not utilizing our existing data to its full potential.

Establishing a unified solution based on trust and openness is needed.

OBJECTIVES AND GOALS
The aim of the project is to implement a shared and straightforward data collection platform, which will harvest multiple, diverse data sources and present statistics in a clear and visually engaging manner.

Our key goals are:
- To facilitate the use of data from isolated data sources, not only to encourage evidence-based decision making, but also to better communicate how UM Libraries’ activities support student learning and faculty research.
- To benefit from data in a consistent, library-wide manner.
- To implement a data consolidation solution tool that is (1) familiar (2) flexible (3) enables customized sharing options, and (4) reasonably priced.

UML Access Services Dashboard, Google Data Studio

STRATEGY AND METHODS
Our solution involves the following:
- Move to shared Google Sheets and Forms for any local departmental data collection, then connect these sheets to Google Data Studio, a free tool that allows users to create customized and shareable data visualization dashboards.
- Import and connect other library data sources to Google Data Studio. Google Data Studio can automatically ingest data from either pre-built data connectors (Google Analytics, MySQL, Google Sheets) or any source with an API, allowing for real-time dashboards that aggregate information from multiple sources. All data sources can easily be imported manually as well.
- Investigate and build new live Data Studio Connectors between Google Data Studio and library data systems and sources. Connectors allow a Google Data Studio data source to access the information stored elsewhere.
- Create multiple dashboards customized to each unit’s needs and a “bird’s eye view” dashboard for library administrators.

UML Access Services Dashboard, Google Data Studio

PROJECT STATUS
Customized dashboards have been built and shared with several library departments. So far, we have connected or imported manually the following isolated data sources into Google Data Studio:

<table>
<thead>
<tr>
<th>Metric/Area of Responsibility</th>
<th>Data Sources and Systems</th>
<th>Real-time connection &amp; automatically ingested</th>
<th>Integrated into Google Data Studio (on a timely basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional &amp; Workshops</td>
<td>Google Sheets</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Reference Question Tracking</td>
<td>Google Analytics, MySQL, Google Sheets</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Faculty Head Counts</td>
<td>Surveys</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Library Visitor Access Form</td>
<td>Google Forms</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Loan Study Booking</td>
<td>LibCal</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Collection Holding and Circulations</td>
<td>Alma Analytics</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>COUNTER Usage Reports</td>
<td>Alma Analytics (via SUSHI)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Discipline and Research</td>
<td>Google Analytics</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Guides Statistics</td>
<td>Google Analytics</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

LIMITATIONS
- Cultural resistance or old habits can become an obstacle in moving forward with (new) data sharing or replacing old data collection methods with new methods (e.g. Google Sheets and Forms).
- Building new live Google Data Studio Connectors requires development time, efforts and commitment.
- Data regulations and security may limit the ability to access distinctive data sources using APIs.
- Even with development efforts to create more real-time Google Data Studio Connectors, as is always the case with data, significant preparation and maintenance are required. In many cases, data would still need to be reformatted, filtered and manipulated according to current or future needs.

FUTURE PLANS
- Add additional library data sources to Google Data Studio infrastructure and dashboards.
- Invest in developing new API connectors between Google Data Studio and library systems.
- Create policies and documentation including data workflows, processes, and privacy regulations.

ACKNOWLEDGMENTS
We would like to thank David Ben-Knaan and Abel Facenda Carrasco for building Data Studio Connectors to Alma Analytics and LibCal. API connectors released as open source by the University of Miami Libraries (https://github.com/UMiamiLibraries).

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Make Your Library's Data Accessible and Usable
Create Live Dashboards with Google Data Studio

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