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# Visualizing Library Data

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# What is Tableau?

Tableau is easy-to-use business intelligence software used for data analysis, providing visual tools to help you see and understand your data.

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# Why Tableau?

- Started with the Discovery and Delivery Assessment team
- Have many systems that don't talk to each other
- Numerous statistics kept by numerous staff using numerous tools
- Tool to easily connect, view and blend data elements→ Tableau!
- Other libraries using Tableau:
  - University of British Columbia Library
  - UMass Amherst Libraries
  - Ohio State University Libraries
- Libraries Innovation Fund allowed us to purchase 2 desktop licenses

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# Benefits of using Tableau

- Informed decision making
  - Drive improvement of services
  - Create workflow efficiencies
  - Aid in direction of future services
- Connect to a wide variety of data sources (Access, Excel, MS SQL, Oracle…)
- Easy to learn and use
- Use drag and drop tools to visualize data and create interactive dashboards → tell a story

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# Challenges of using Tableau

- Data often comes from many different sources
- Need tools to cleanup and blend the data before using Tableau
  - Time consuming
  - Determining the right tools to use isn’t always easy
- Keeping data up to date

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# Aleph Report: Print Circulation Events

Circ Stats for 20140701 - 20150630 by Sublibrary (ALL) by Item Status

| Sub-library | Item Status | Loans | Renewals | Holds | Returns |
|---|---|---|---|---|---|
| BUFAI | 01 | 14 | 0 | 0 | 10 |
| ******* | | --- | --- | --- | --- |
| sum | | 14 | 0 | 0 | 10 |
| BUFAN | 01 | 5,211 | 3,865 | 2,707 | 5,029 |
| | 02 | 15 | 0 | 0 | 15 |
| | 04 | 8 | 0 | 4 | 4 |
| | 05 | 0 | 0 | 0 | 2 |
| | 09 | 2 | 0 | 2 | 3 |
| | 40 | 23,420 | 4,171 | 8,523 | 23,323 |
| ******* | | --- | --- | --- | --- |
| sum | | 28,656 | 8,036 | 11,236 | 28,376 |
| BUFAP | 01 | 4,226 | 6,587 | 909 | 4,202 |
| | 02 | 26 | 1 | 0 | 26 |
| | 04 | 143 | 3 | 0 | 138 |
| | 05 | 256 | 0 | 0 | 248 |
| | 06 | 17 | 0 | 0 | 17 |
| | 07 | 1 | 0 | 0 | 1 |
| | 08 | 33 | 3 | 0 | 26 |
| | 09 | 6 | 0 | 0 | 6 |
| | 10 | 57 | 0 | 0 | 53 |
| ******* | | --- | --- | --- | --- |
| sum | | 4,765 | 6,594 | 909 | 4,717 |
| BUFCT | 01 | 2 | 8 | 0 | 2 |
| | 02 | 2 | 0 | 0 | 1 |
| ******* | | --- | --- | --- | --- |
| sum | | 4 | 8 | 0 | 3 |
| BUFHI | 01 | 2 | 0 | 0 | 1 |
| ******* | | --- | --- | --- | --- |
| sum | | 2 | 0 | 0 | 1 |
| BUFHM | 04 | 9 | 0 | 0 | 9 |
| | 08 | 89 | 0 | 0 | 89 |
| | 10 | 138 | 1 | 0 | 132 |
| ******* | | --- | --- | --- | --- |
| sum | | 236 | 1 | 0 | 230 |
| BUFHS | 01 | 4,703 | 13,677 | 1,431 | 4,683 |
| | 02 | 5 | 0 | 0 | 5 |
| | 04 | 6,117 | 5 | 0 | 6,115 |
| | 09 | 19 | 0 | 0 | 20 |
| ******* | | --- | --- | --- | --- |
| sum | | 10,844 | 13,682 | 1,431 | 10,823 |

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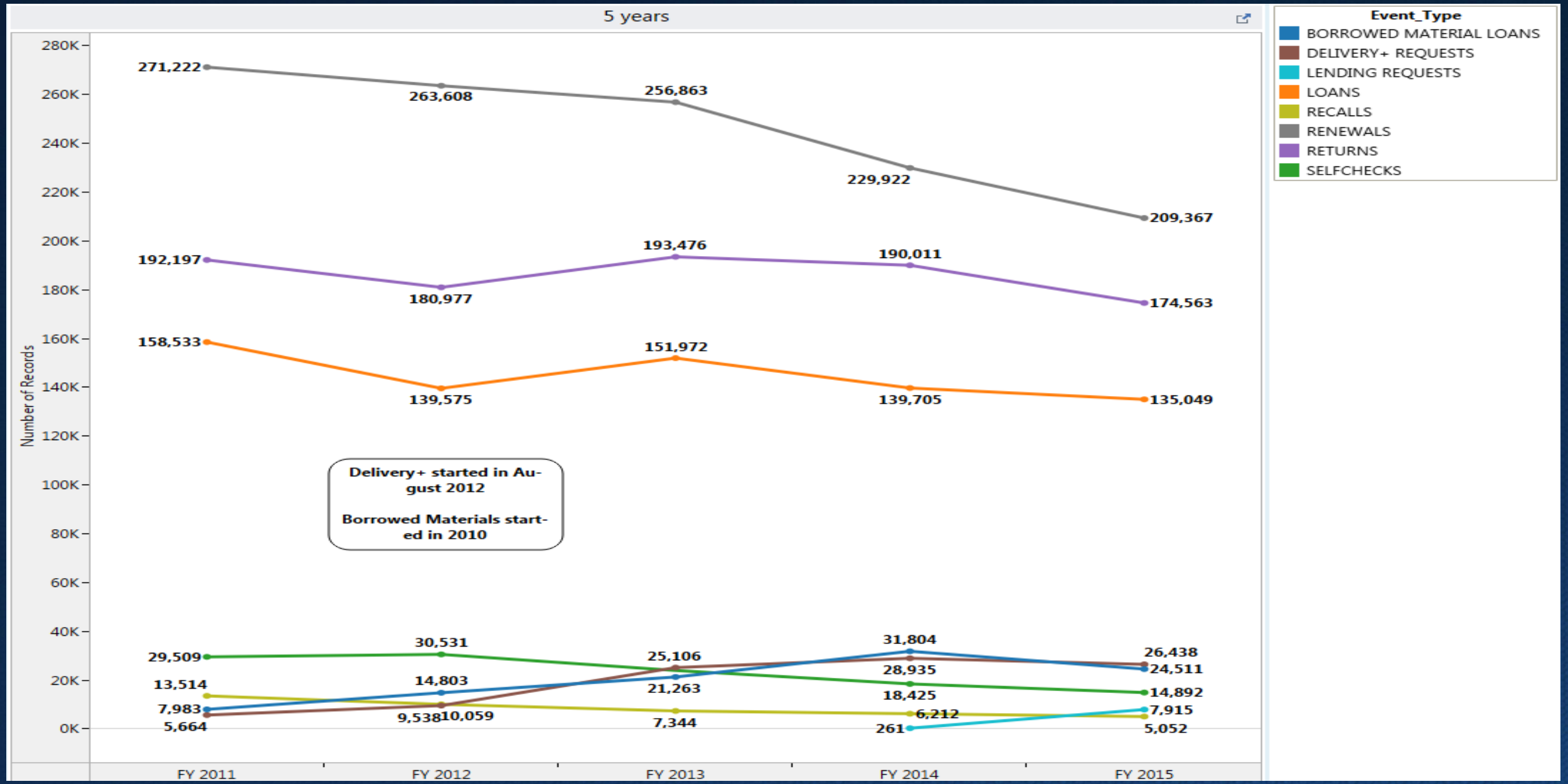
# Tableau Report: Print Circulation Events – 5 years



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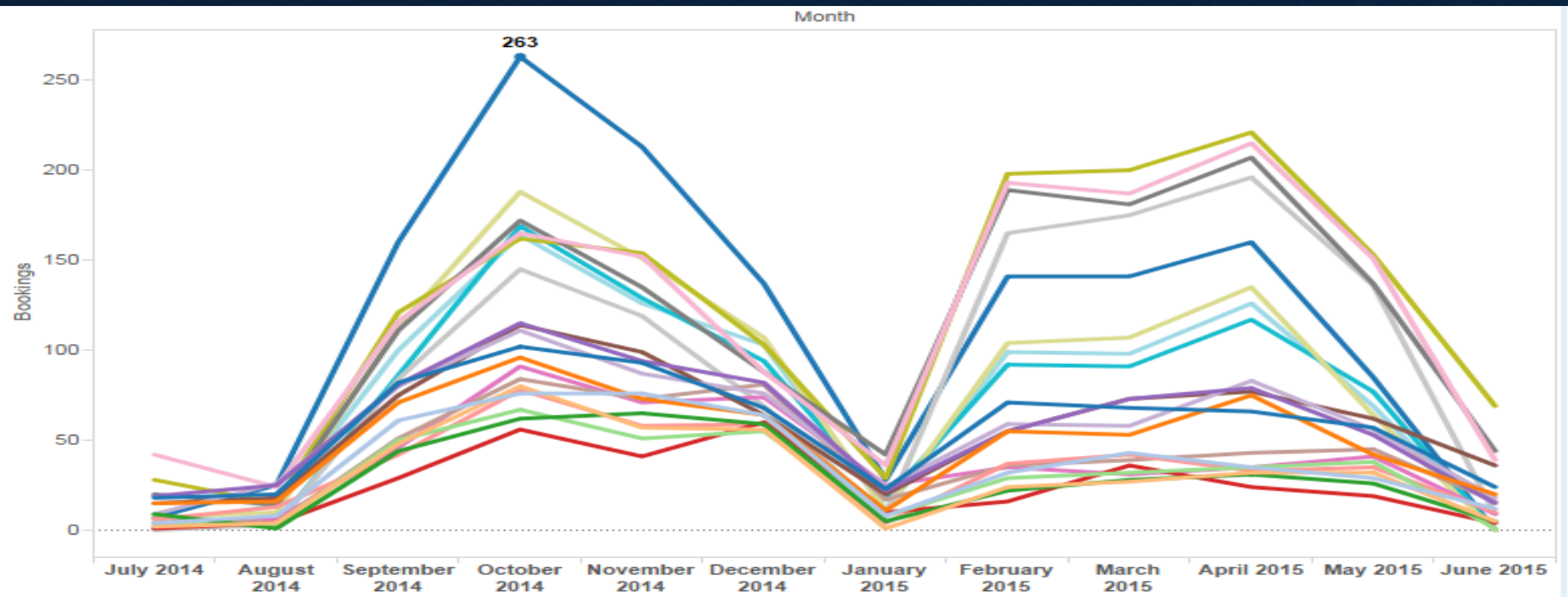
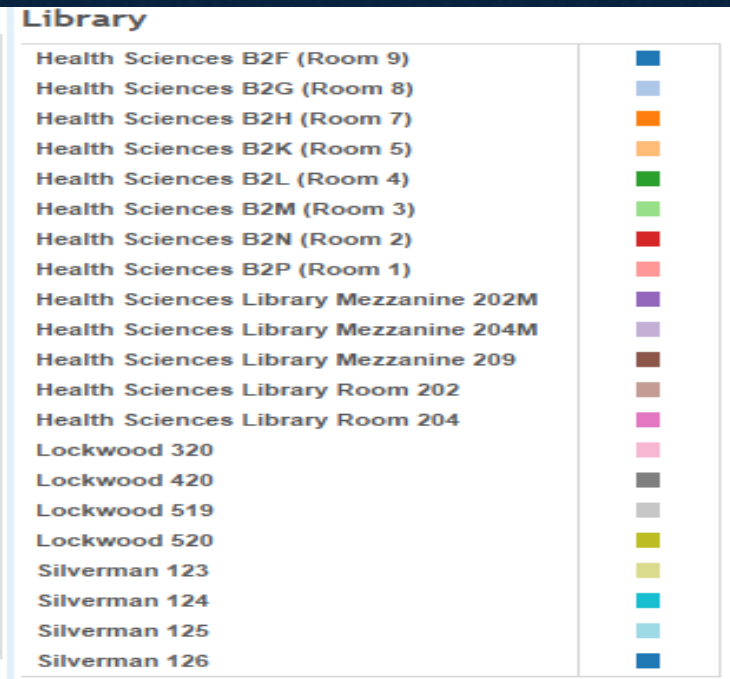
# Room Bookings, 2014-2015




| Month | Lockwood 320 | Lockwood 420 | Lockwood 519 | Lockwood 520 | Silverman 123 | Silverman 124 | Silverman 125 | Silverman 126 | Health Sciences B2F (Room 9) | Health Sciences B2G (Room 8) | Health Sciences B2H (Room 7) | Health Sciences B2K (Room 5) | Health Sciences B2L (Room 4) | Health Sciences B2M (Room 3) | Health Sciences B2N (Room 2) | Health Sciences B2P (Room 1) | Health Sciences Library Mezzanine 202M | Health Sciences Library Mezzanine 204M | Health Sciences Library Mezzanine 209 | Health Sciences Library Room 202 | Health Sciences Library Room 204 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| July 2014 | 42 | 20 | 0 | 28 | 7 | 1 | 3 | 7 | 18 | 4 | 15 | 2 | 9 | 4 | 1 | 6 | 19 | 9 | 15 | 7 | 4 | 221 |
| August 2014 | 24 | 14 | 3 | 15 | 10 | 3 | 14 | 25 | 20 | 8 | 16 | 4 | 1 | 3 | 4 | 13 | 25 | 26 | 18 | 4 | 6 | 256 |
| September 2014 | 116 | 111 | 84 | 121 | 113 | 86 | 100 | 160 | 82 | 61 | 71 | 48 | 44 | 50 | 29 | 42 | 81 | 80 | 75 | 51 | 46 | 1651 |
| October 2014 | 165 | 172 | 145 | 162 | 188 | 169 | 164 | 263 | 102 | 76 | 96 | 80 | 62 | 67 | 56 | 78 | 115 | 111 | 114 | 84 | 91 | 2560 |

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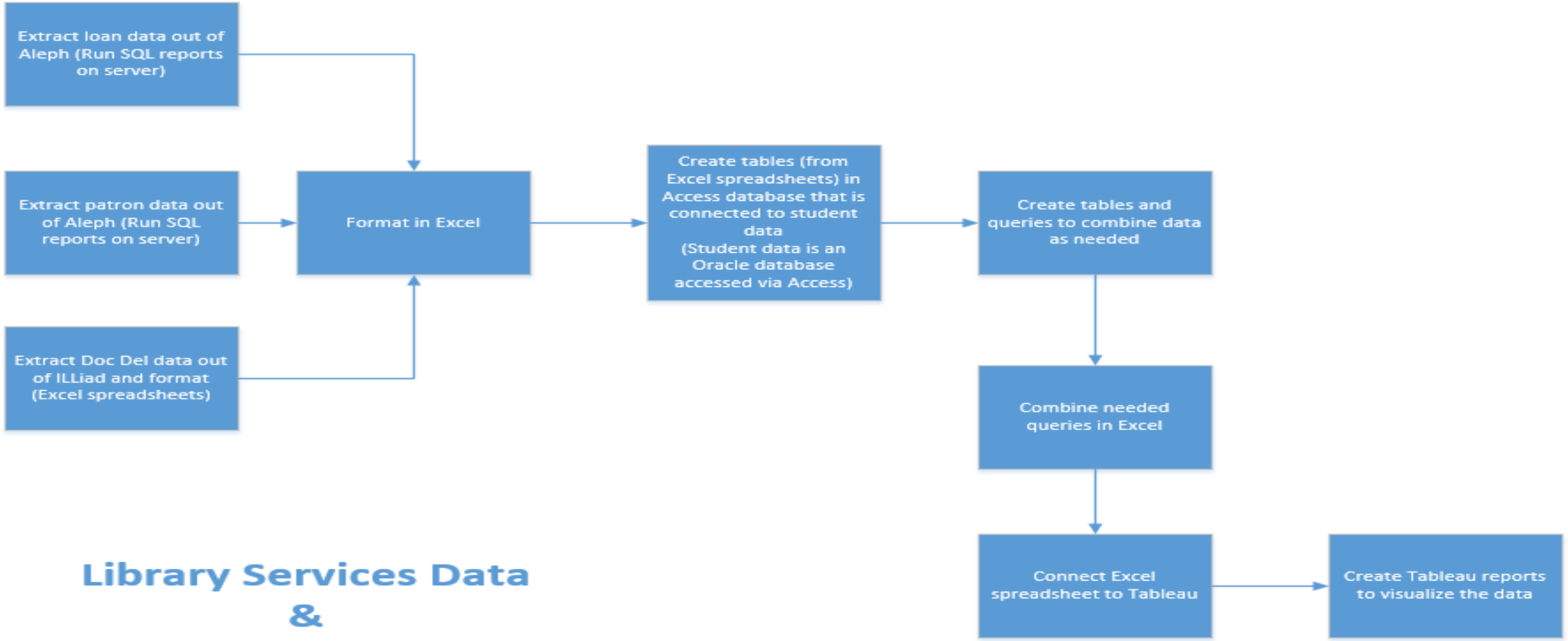
# Data Visualization process example



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# Tableau Reports

- Library Services Data & Institutional Data
    - Average GPA of students who have used and not used Aleph/ILLiad
    - Who is using and not using Aleph/ILLiad
  - Helps us see what impact library services have on student success
  - Helps us identify who isn't using our services – increase promoting libraries to these students, investigate why they are not using our services
  - Source: Aleph SQL reports, Excel spreadsheets, Access database

- Circulation Events
  - Shows activity by time and peak times when most work is occurring for all libraries and by each library. Helpful in determining staffing needs.
  - Source: Aleph SQL report (.txt file) → Tableau

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# Tableau Reports continued…

- ILLiad Delivery Services analysis
  - Shows trends in Borrowing, Document Delivery and Lending services
    - Are services improving, declining or consistent?
    - Are requests being processed in accordance to policies?
    - Are there ways to improve services/processes?
  - Source : ILLiad (via Access/ODBC link)
- Delivery+ (Borrowing and Document Delivery) Services - Trends Analysis
  - Shows requests by UB Patron Status, Faculty Departments, and Processing Units
    - Are services being used? By whom?
    - Which Processing Units have the highest workload for Document Delivery?
  - Source: ILLiad (via Access/ODBC link) and Excel

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# Tableau Reports - Demo

- Staffweb (UB library staff access only)
  - http://staffweb.lib.buffalo.edu/toolbox/statistics/tableau

- Tableau Public
  - https://public.tableausoftware.com/profile/ub.libraries#!/

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# Next Steps

- Continue to combine data from multiple systems within the Libraries
  - How and what faculty, staff and students are using
- Continue to combine Library data with UB systems such as InfoSource
  - Our value to the institution
  - What impact library usage has on retention and academic success
- Explore how else we might benefit from Tableau
  - Analyze operations, costs, quality, and impact of services
  - What questions are we trying to answer?
- Goal to use Tableau across the UB Library units

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# THANK YOU!

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