



Data & Analytics Portal (DAP):

A dapper solution to data disorder

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What is SILS?



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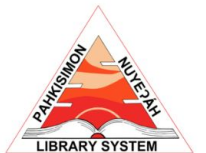
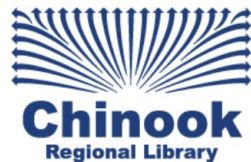
What is SILS?

SILS is...

- A consortium of all the public libraries in Saskatchewan.
 - Formed in 2009
 - 11 libraries (3 city libraries, 7 regional libraries, 1 northern library system)
 - Over 300 branches



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What is SILS?

The SILS Office is...

- A team of 6 staff created by the consortium to provide technology support for the member libraries
 - Overseen by the board of library directors
 - An executive director, 2 sys. admins., an infrastructure analyst, a web developer, and an executive assistant
 - Shared ILS, website development and hosting, mobile apps, notification services, email support, OverDrive, staff intranet, and... *data reporting*
 - Library staff submit issues/requests through a ticketing system

Building Data Services

Building Data Services

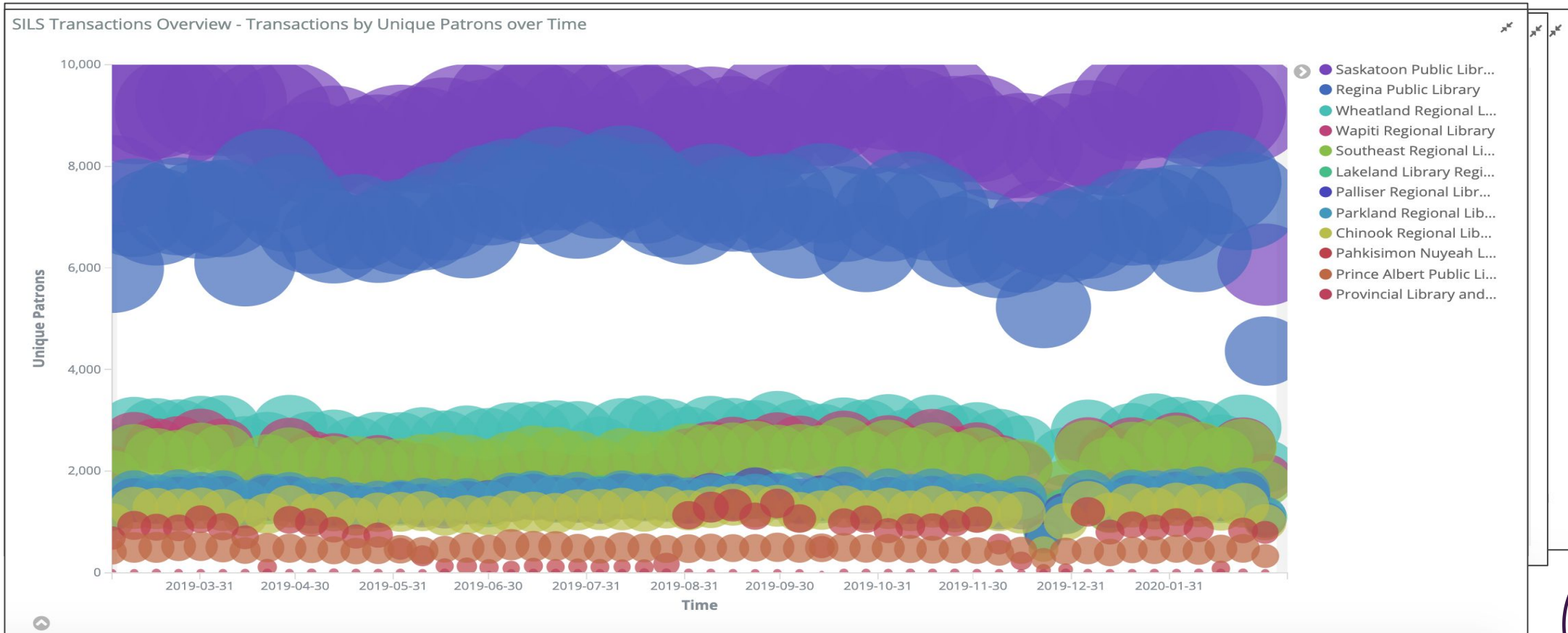
- Started With:
 - Polaris out-of-the-box reports - through the desktop client and directly through **SSRS** (SQL Server Reporting Studio)
 - **SimplyReports**
- Didn't cover all needs, but SSRS and the Report Builder app. allowed us to customize
 - Copied and tailored Polaris reports and created some from scratch
 - Ensure comparability with data from previous ILS (Sierra), but also taking advantage of new opportunities in Polaris/SSRS

Building Data Services

- Through consultation the consortium developed standardized, scheduled reporting
 - Prev. each library produced own reports, making comparison difficult
 - A committee was struck to lead the discussion and come to consensus on what data definitions to use and what to report on
 - Monthly & annual scheduled reports were developed, and exports saved to a Google Drive (our **Statistics Repository**)
- **Google Analytics** was adopted for website usage stats

Building Data Services

Then...a game-changer...Kibana!



Building Data Services

- Kibana is a data visualization tool that allowed us to build accessible and visually appealing dashboards
- Allows imports directly from Polaris (through SQL and SimplyReports)
 - Data indexed using ElasticSearch (an open-source app.)
- Transactional data allows a view of trends over time, and much of the data is up-to-the-minute
- SSRS reports can have performance issues, Kibana is smoother
- Great for assessment and advocacy

It's Too Complicated!



It's Too Complicated!

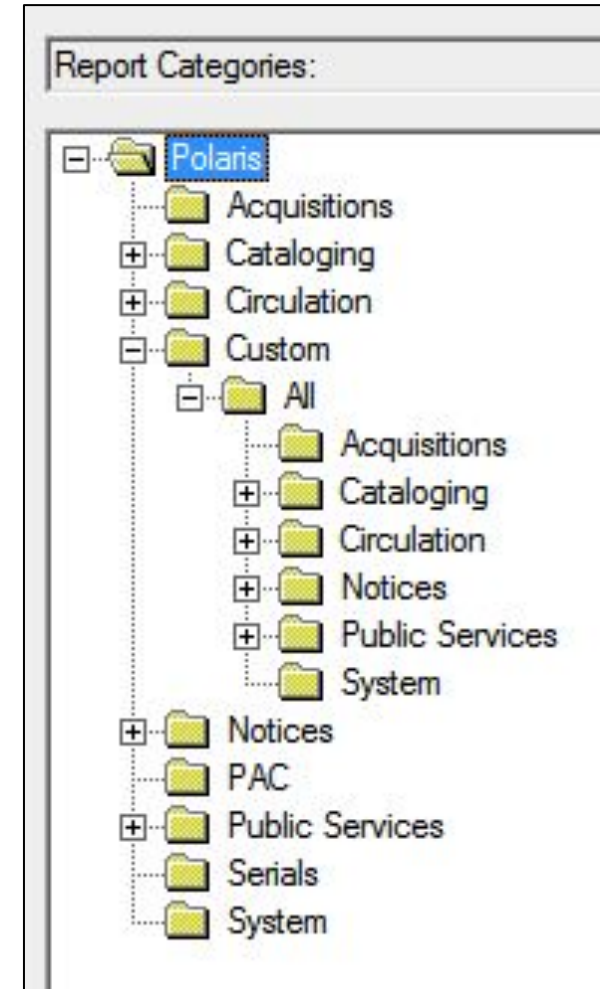
- Resource intensive SSRS reports
 - Some reports run at the wrong time could cause system slow-downs for the entire province!
 - Moved these reports to their own “Do not run between 12pm and 5pm folder”, and we worked with libraries to adhere to the folder’s name

 SILS - Do not run between 12pm and 5pm

[Home](#) > SILS - Do not run between 12pm and 5pm

It's Too Complicated!

- Reporting developed as needed
 - Several reports duplicated data topics
 - Unclear which tool was best for certain data
- We now have 500+ reports in SSRS, including Polaris out-of-the-box reports
 - The SSRS/client folder structure for custom reports repeated the OOTB structure - we have two versions of each folder
- So we received many questions about where to find specific reports / data



It's Too Complicated!

- Aspects of Kibana and SimplyReports had a learning curve for use, so some tools went under-utilized
- Reports themselves were not as helpful as they should be
 - Many did not have descriptions or definitions, e.g. type of branch being filtered on (transaction, patron, assigned branch)
 - Library filters not configured well for consortium

Date Selector: Last Month Begin Date: 2020-02-01
End Date: 2020-03-01 Agency: Parkland Regional Library

Circulation by Material Type

2020-02-01 12:00:00 AM - 2020-03-01 12:00:00 AM

Summary

Material Type	Circulation	Checkouts	Renewals
Book	20796	15511	5285
Book Club in a bag	4	4	0
CD	249	176	73
CNIB restricted materials	3	3	0
DVD - 14A	1012	814	198
DVD - G/PG/Unrated	2442	1788	654
DVD - Not Rated	47	35	12

It's Too Complicated!

Too many options!

Client Reports
SSRS
SimplyReports
Kibana
Google Analytics
Statistics Repository

We Can Make It Better

We Can Make It Better

- 2 system administrators - more capacity for improvements
- Began cleaning-up SSRS/Polaris client reports:
 - Clearer descriptions & improved filters
 - Contextual info in report exports, like begin and end dates
 - Assessed areas of report coverage, merging similar reports
 - Looked at usage data, removing unused reports
 - Improved performance of resource-intensive reports

We Can Make It Better

A “refurbished” SSRS report:

Agency: Circulation Date Period:

Begin Date: End Date:

1 of 2 100%

Circulation by Material Type

Period Start Date: 2/1/2020 12:00:00 AM
Period End Date: 3/1/2020 12:00:00 AM
Execution Date: 3/6/2020 11:04:48 AM

For the agencies selected, the report lists all material types with circulation details (checkouts and renewals) for the chosen time range.

Summary

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We Can Make It Better

- While refining SSRS reports, we daydreamed about a reporting hub
- We wanted it to:
 - Have a page for each reporting tool, describing the data it provides, and linking to related training / help articles
 - Allow text searching and tag-filtering of SSRS reports
 - Show previews of SSRS reports, to clarify contents without running
 - Overall: guide staff to the best tool/report for their need
- Good timing! We contracted with a web designer for other work, and were able to enlist him

We Can Make It Better

Through this work, **DAP** (the Data & Analytics Portal) was developed!

DAP is a single entry point for all SILS supported reporting tools and resources.

It includes descriptions of each tool and documentation on how to use it.

SILS Data & Analytics Portal

SSRS (SQL Server Reporting Service) >

Microsoft SQL Server Reporting Services (SSRS) is a web interface that provides a variety of pre-built reports.

<https://help.sasklibraries.ca/a/solutions/articles/12000057424>

SimplyReports (Polaris) >

SimplyReports is a reporting tool created by Polaris for ad hoc reporting needs.

<https://help.sasklibraries.ca/support/solutions/articles/12000003147-simply-reports-training-materials>

Kibana >

Kibana is a powerful data visualization and dashboarding tool.

We Can Make It Better

- DAP includes the features like descriptions of each tool, and previewing and searching for SSRS reports
- Tags were included in the SSRS reports as part of the description
 - Formatted as “|HO,AG,DO” - the pipe (“|”) character separates tag codes from the actual description
 - Reports included in DAP loaded from SQL, where tag codes converted to actual words (e.g. “HO” becomes “Holds”)
- DAP designed using style guide from SILS’ branding, and SSRS reports were updated to match colours

We Can Make It Better

DAP's SSRS page with tag filters applied:

The screenshot shows the SILS Data & Analytics Portal interface. At the top left, the logo "SILS" is displayed in teal, followed by "Data & Analytics Portal" in black. In the top right corner, there is a button labeled "Landing" with a left-pointing arrow. Below the header, the main content area is titled "SSRS" in teal on the left and "4 of 90 shown" on the right. On the left side of the main content area, there is a search bar with the text "Search" and a magnifying glass icon. Below the search bar is a "Tags" section with a list of tags: "acquisitions" (checked), "agency", "bibliographic", "branch" (checked), "cataloguing", "checkouts", "circulation", "collection", and "consortial". The main content area features a "Branch Fund Hierarchy Report" card. This card has three filter buttons: "Fund" (grey), "Acquisitions" (teal), and "Branch" (teal). Below the filters is a description: "Provides an overview of a selected fund and it's subfunds, by branch. Details including allocated, encumbered, spent and free amounts." At the bottom of the card are three buttons: "Open" with an external link icon, "Preview" with a magnifying glass icon, and "Subscribe" with an upward-pointing arrow icon. Below the "Branch Fund Hierarchy Report" card is a section titled "Closed Fiscal Years - Fund Hierarchy Report" with three filter buttons: "Fund" (grey), "Acquisitions" (teal), and "Branch" (teal).

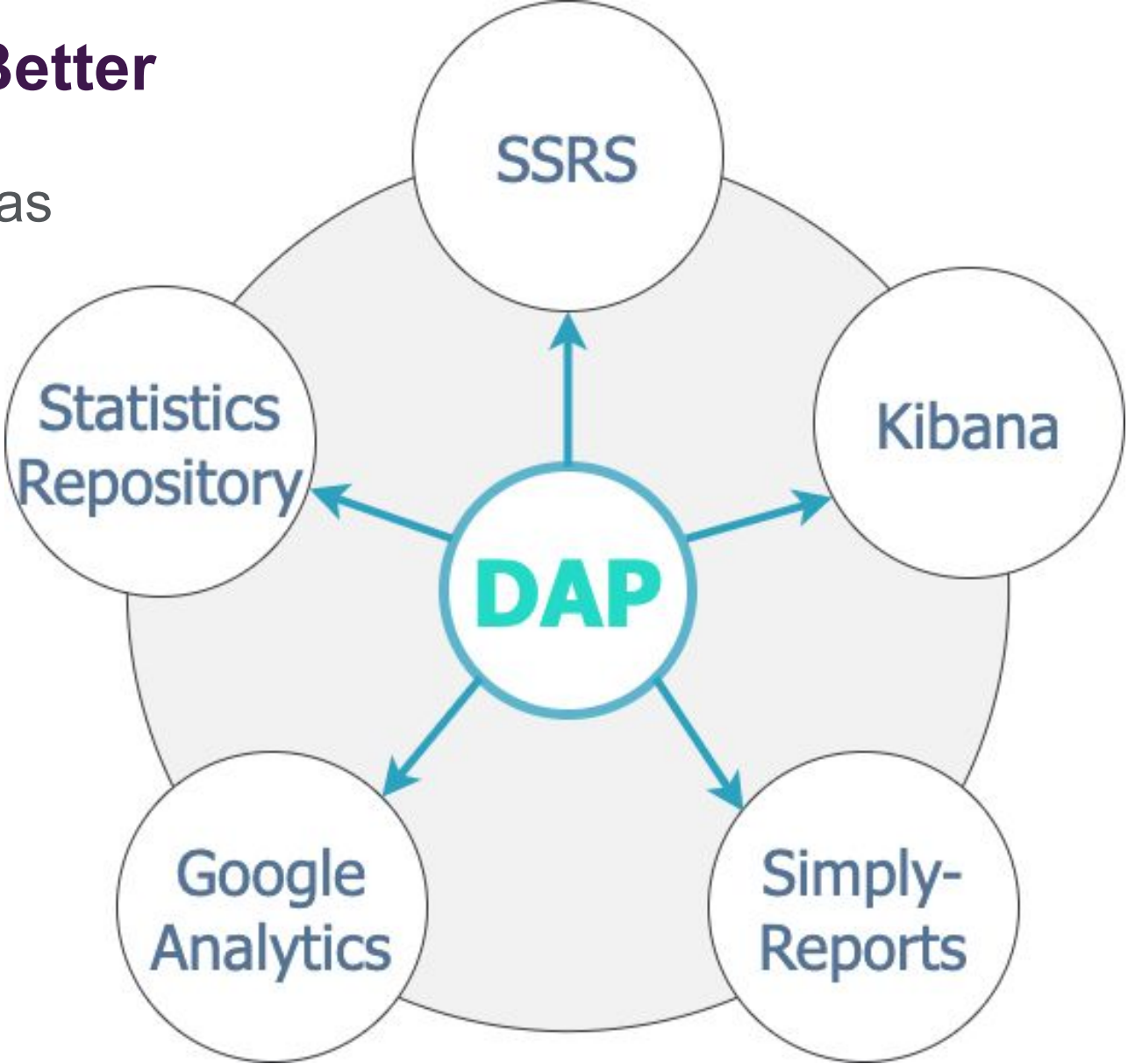
We Can Make It Better

Additional Reporting Changes

- Report Lab:
 - A mailing list of reporting stakeholders from across the library systems
 - Helps ensure changes are useful to all member libraries, and share new reports
- Kibana:
 - Expansion of coverage to include location accountability data (e.g. hold filling and new materials processing - based on Chicago PL presentation at last year's IUG!)
 - Also transit times for shipping; Overdrive data

We Can Make It Better

Overall, everything was better organized and more accessible!



After the Dust Settled

After the Dust Settled

It's not perfect...

- Determining what operations would benefit from reporting is an ongoing process - you never reach an end-point with analytics
- Upkeep of SSRS report metadata (tags, screenshots)
- Adoption of DAP by established/existing staff members
 - While new people who are shown DAP are making use of it. Existing staff often have URLs bookmarked or other paths to reports memorized.
 - We **STILL** receive many questions about where to find specific reports / data (but this is a work in progress!)

After the Dust Settled

...But it's a big improvement

- *We find it helps us get to the right report!*
- Gradually we are guiding people towards the benefits of DAP
- Improved, centralized documentation helps with onboarding new staff members, and refreshing skills for existing staff
- Reports are easier to use and clearer
- Cleaner, clearer reports is helpful for communication with stakeholders and advocacy by libraries

Future Plans

Future Plans

- Automate the SSRS export/import for the report portal system
- Allow favorite reports
- Link directly to specific Kibana dashboards from DAP
- Embed Kibana visualizations into websites (DAP, our intranet site, library web-pages)
- Add external resources, such as Statistics Canada data, to Kibana
- Further improve resource-intensive reports, and reporting redundancies

Questions?



Contacts & Links

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Elastic Search: <https://www.elastic.co/>