



Analytics and Your Neighbors – Comparative Approaches

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igelu
International
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ExLibris
a ProQuest Company

Agenda

1

Introduction

2

Benchmark Analytics

3

Comparative Collection Analytics

Introduction

- Cooperative friendly neighbors



<https://www.usnews.com/cmsmedia/4c/f6/9ffcd3384bef804f289a888780a4/151213-friendlyneighbors-stock.jpg>

Introduction

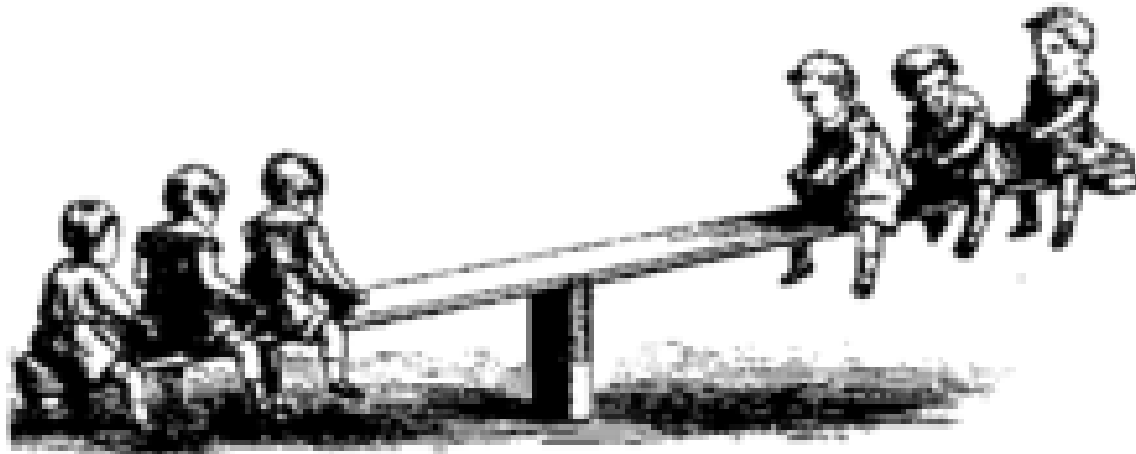
- Not like this



<http://static.srcdn.com/wp-content/uploads/Neighbors-2-Sorority-Rising-Cast.jpg>

Introduction

- When performing comparative analysis, there is a need to balance different aspects of the comparison
 - The depth/detail of data
 - The breadth of comparison/number of institutions comparing to



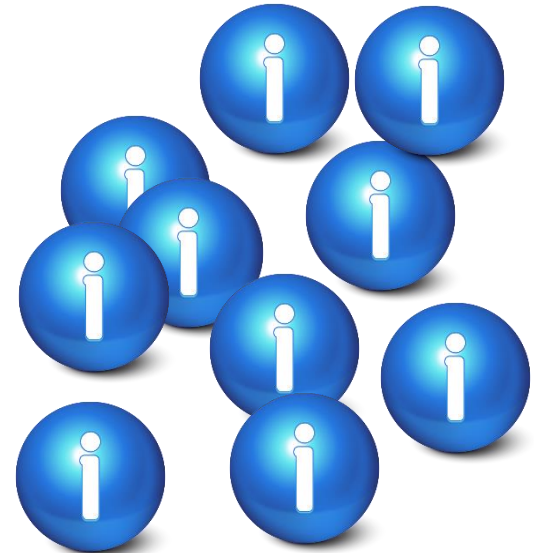
Introduction

- **Benchmark Analytics** puts focus on the **breadth** of comparison
- Data being compared is high level/KPI



Introduction

- **Comparative Collection Analytics** puts focus on the **depth** of comparison
- Group for comparison is smaller



Agenda

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Introduction

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Benchmark Analytics

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Comparative Collection Analytics

Benchmark Analytics

- The overall goal and idea of the Benchmark analytics is for the institution to identify
 - Where in their workflows improvements can be made
 - Where processes are already at a satisfactory or above satisfactory level.
- One way for doing this is to compare KPIs (Key Performance Indicators) with other institutions
- The KPIs can be measured on a monthly or yearly basis. This enables the identification of trends.
- **Already live and in production. New KPIs are being added throughout the remainder of 2017 and 2018.**

Benchmark Analytics

- For example, an institution may see that from the time of ordering physical items until the time the item arrives takes significantly longer than the average for other institutions.
- This institution can then drill down to investigate where in the process there may be a problem.
 - It may be that between the time the order is created until the time it is sent takes too long because the “review” process is taking too long.
 - It may be that certain vendors are taking an unusually long time to process the orders.
 - There could also be a problem with the period from when the item arrives to the institution until it arrives to the acquisitions librarian to scan it in.
- Benchmark analytics allows the institution to identify these issues

Benchmark Analytics

- As part of the process each institution is defined with a profile so that they can be compared appropriately with other institutions, in a **non-identifying manner**

Total annual amount spent on library resources of all formats? *

☐ Under 1 Million
☐ 1-2 Million
☐ 2-5 Million
☐ 5-10 Million
☐ 10-15 Million
☐ 15-20 Million
☐ 20-25 Million
☐ 25-30 Million
☒ Over 30 Million

Total annual percent spent on electronic materials? *

☐ Below 25%
☒ 25-50%
☐ 50-75%
☐ More than 75%

Total annual percent spent on physical materials? *

☐ Below 25%
☐ 25-50%
☒ 50-75%
☐ More than 75%

Total undergraduate student body size? *

☐ Below 2 Thousand
☐ 2-5 Thousand
☐ 5-10 Thousand
☐ 10-15 Thousand
☐ 15-20 Thousand
☐ 20-30 Thousand
☐ 30-40 Thousand
☒ Over 40 Thousand

Type of institution *

☐ Academic
☐ Special
☐ Government
☐ Technical Trade School
☒ Public

Select the main source of Library funding? *

☒ Public funding
☐ Private funding
☐ Mix of public and private funds

What are the primary areas of study that your library serves?

☒ Select All
☒ Humanities
☒ Social Sciences
☒ Sciences
☒ Engineering
☒ Multidisciplinary
☒ Other

Other:

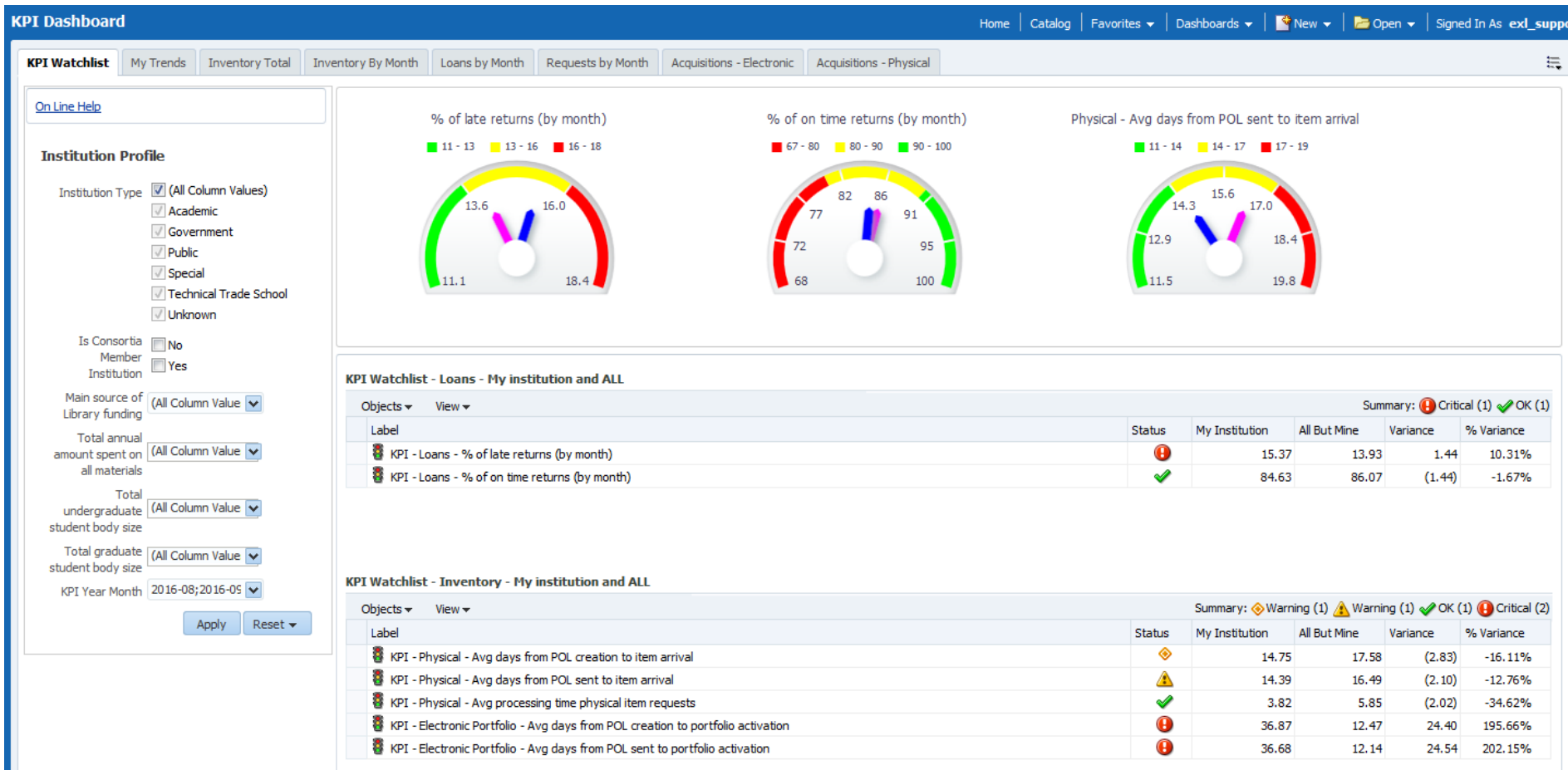
Does your library serve any of the following professional graduate schools?

☒ Select All
☒ Medical
☒ Dental
☒ Public Health
☒ Business
☒ Law
☒ Other

Other:

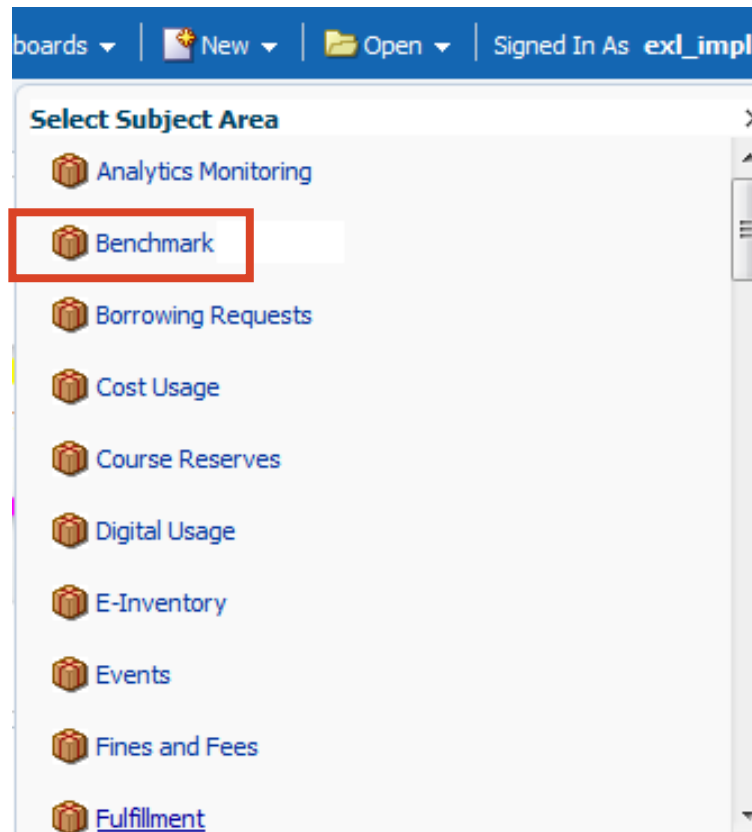
Benchmark Analytics

- The Benchmark Analytics can be easily accessed via an “out of the box” customizable and ready to use KPI dashboard.



Benchmark Analytics

- The Benchmark Analytics is a subject area in Alma Analytics and, like all other subjects, customized specific reports can be created on demand by each institution.



Benchmark Analytics - KPI Watchlist

The screenshot displays the 'KPI Watchlist' application interface. At the top, there are four tabs: 'KPI Watchlist', 'My Trends', 'Inventory Total', and 'Inventory By'. Below the tabs is a search bar containing the text 'On Line Help'. The main section is titled 'Institution Profile' and contains several filter options:

- Institution Type:** A list of checkboxes with the following options: ☒ (All Column Values), ☒ Academic, ☒ Government, ☒ Public, ☒ Special, ☒ Technical Trade School, and ☒ Unknown.
- Is Consortia Member Institution:** Two radio buttons, 'No' (selected) and 'Yes'.
- Main source of Library funding:** A dropdown menu with '(All Column Value)' selected.
- Total annual amount spent on all materials:** A dropdown menu with '(All Column Value)' selected.
- Total undergraduate student body size:** A dropdown menu with '(All Column Value)' selected.
- Total graduate student body size:** A dropdown menu with '(All Column Value)' selected.
- KPI Year Month:** A dropdown menu with '2016-04;2016-05' selected.

At the bottom of the filter section are two buttons: 'Apply' and 'Reset'.

- As is the case with all tabs in the KPI Dashboard the comparison to other institutions can be filtered by various criteria.

Benchmark Analytics - KPI Watchlist

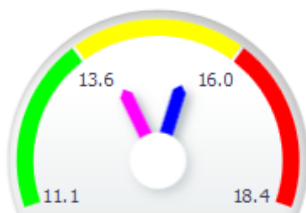
- The KPI Watchlist provides a summary of various KPIs which can be seen together.
- The gauges quickly inform the user where his institution (blue dial) stands in comparison to other institutions (pink dial)



Benchmark Analytics - KPI Watchlist

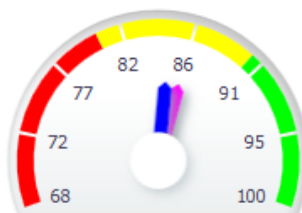
% of late returns (by month)

■ 11 - 13 ■ 13 - 16 ■ 16 - 18



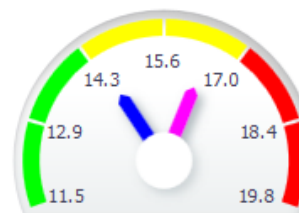
% of on time returns (by month)

■ 67 - 80 ■ 80 - 90 ■ 90 - 100



Physical - Avg days from POL sent to item arrival

■ 11 - 14 ■ 14 - 17 ■ 17 - 19



KPI Watchlist - Loans - My institution and ALL

Objects ▾

View ▾

Summary: ❗ Critical (1) ✅ OK (1)

Label	Status	My Institution	All But Mine	Variance	% Variance
❗ KPI - Loans - % of late returns (by month)	❗	15.37	13.93	1.44	10.31%
✅ KPI - Loans - % of on time returns (by month)	✅	84.63	86.07	(1.44)	-1.67%

KPI Watchlist - Inventory - My institution and ALL

Objects ▾

View ▾

Summary: ⚠ Warning (1) ⚠ Warning (1) ✅ OK (1) ❗ Critical (2)

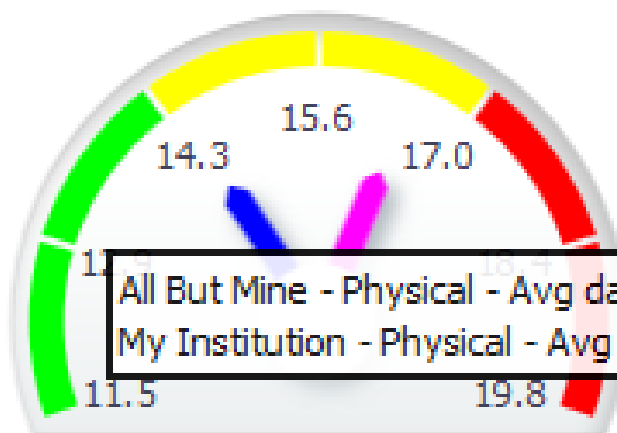
Label	Status	My Institution	All But Mine	Variance	% Variance
⚠ KPI - Physical - Avg days from POL creation to item arrival	⚠	14.75	17.58	(2.83)	-16.11%
⚠ KPI - Physical - Avg days from POL sent to item arrival	⚠	14.39	16.49	(2.10)	-12.76%
✅ KPI - Physical - Avg processing time physical item requests	✅	3.82	5.85	(2.02)	-34.62%
❗ KPI - Electronic Portfolio - Avg days from POL creation to portfolio activation	❗	36.87	12.47	24.40	195.66%
❗ KPI - Electronic Portfolio - Avg days from POL sent to portfolio activation	❗	36.68	12.14	24.54	202.15%

Benchmark Analytics - KPI Watchlist

- Hovering over the gauge provides further details. When the dial is near the green this is good.
- When the dial is near the red this is a warning

Physical - Avg days from POL sent to item arrival

■ 11 - 14 ■ 14 - 17 ■ 17 - 19



All But Mine - Physical - Avg days from POL sent to item arrival : 16.5 (14 - 17)
My Institution - Physical - Avg days from POL sent to item arrival : 14.4 (14 - 17)

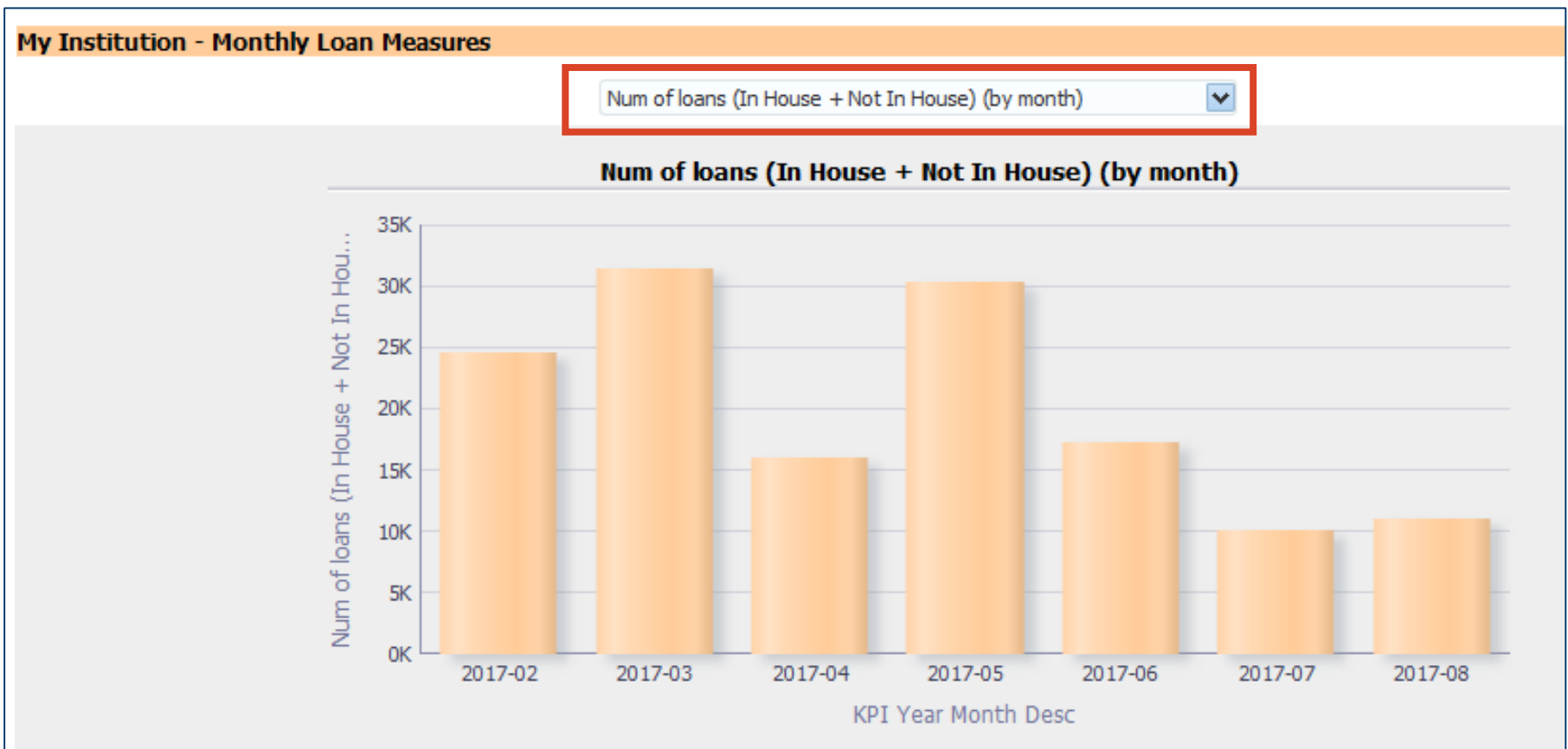
Benchmark Analytics - KPI Watchlist

- The KPI Watchlist also provides the information in tabular form with status indicators of warning, critical and OK

KPI Watchlist - Loans - My institution and ALL					
Objects ▾ View ▾		Summary: ⚠ Warning (1) ✅ OK (1)			
Label	Status	My Institution	All But Mine	Variance	% Variance
 KPI - Loans - % of late returns (by month)	⚠	12.77	14.60	(1.83)	-12.52%
 KPI - Loans - % of on time returns (by month)	✅	87.23	85.40	1.83	2.14%

Benchmark Analytics - My Trends

- The “My Trends” tab of the dashboard provides the institution with an up close look at his own institution, and may be filtered by time and specific measures.

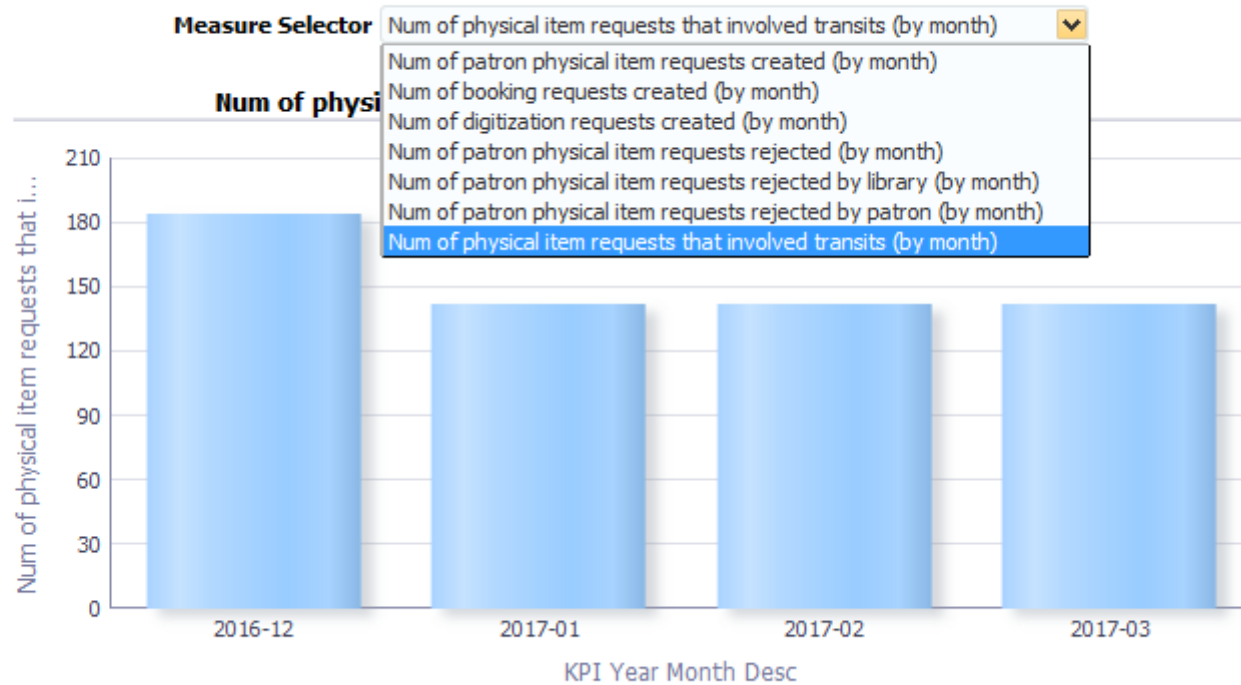


Benchmark Analytics - My Trends

- The “My Trends” currently includes five areas of measurements.
 - Monthly requests measures
 - Monthly loan measures
 - Monthly inventory measures
 - Monthly Borrowing Requests
 - Monthly Lending Requests
- Each area includes several measures

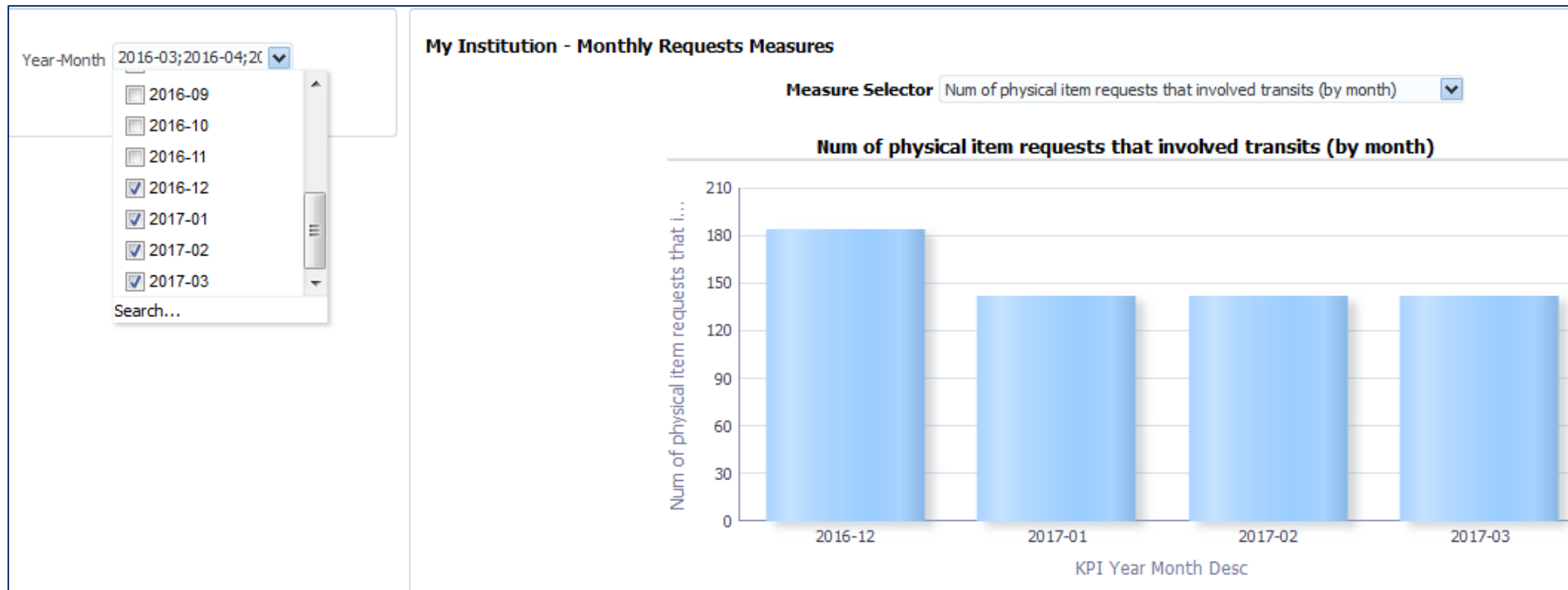
Benchmark Analytics - My Trends

My Institution - Monthly Requests Measures



Benchmark Analytics - My Trends

- And, of course, each institution can choose the dates for which he wants to see the trends

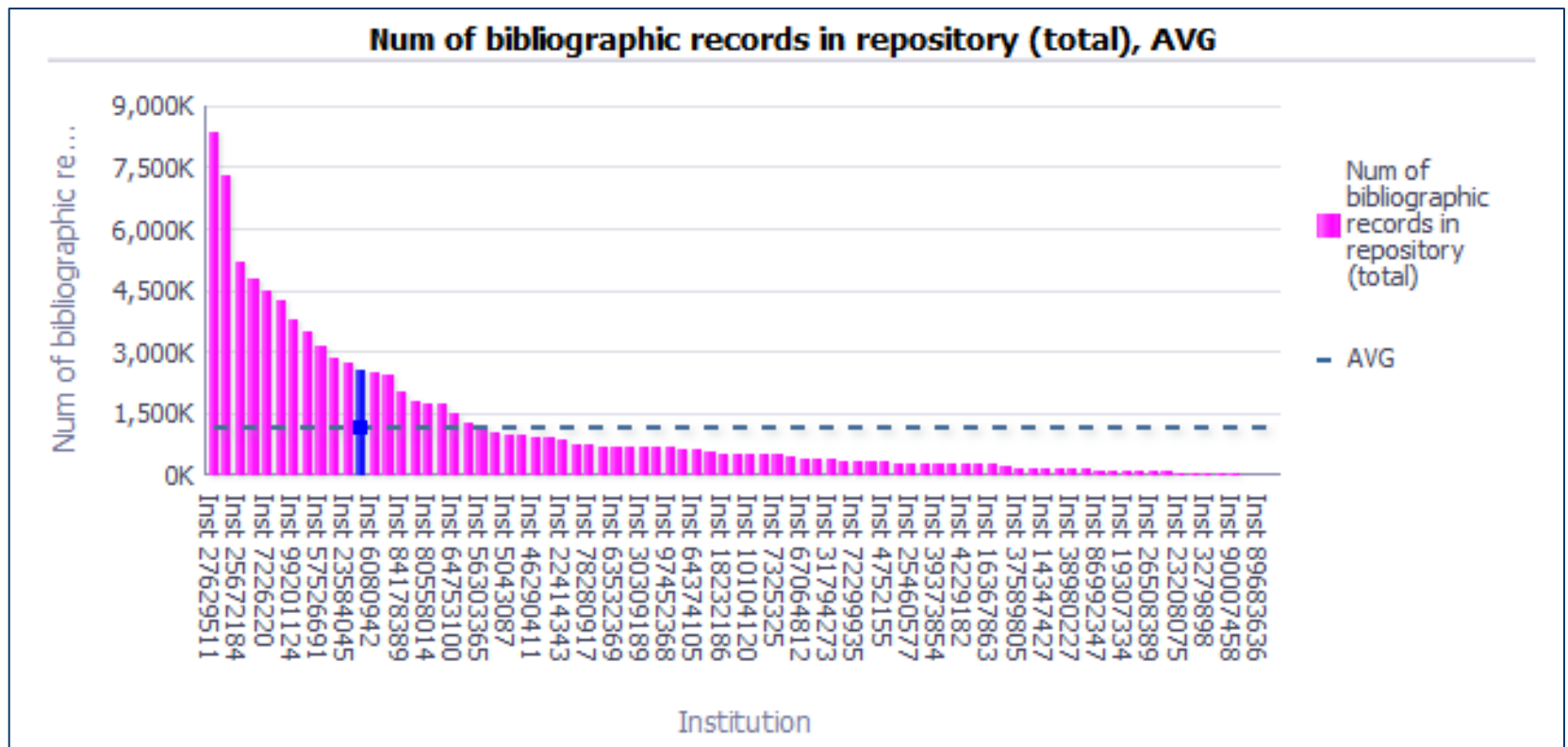


Benchmark Analytics - Inventory Total

- The Inventory Total tab allows the institution to compare its inventory to other institutions
- At the current time this includes:
 - Number of bibliographic records in repository (total)
 - Number of electronic collections in repository (total)
 - Number of electronic portfolios in repository (total)
 - Number of physical items in repository (total)

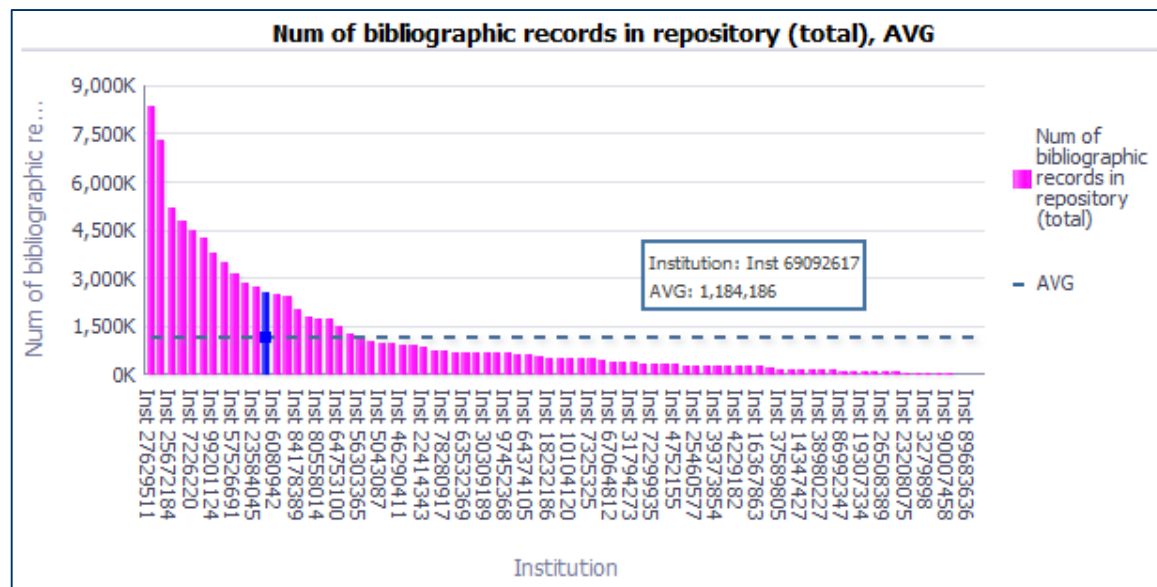
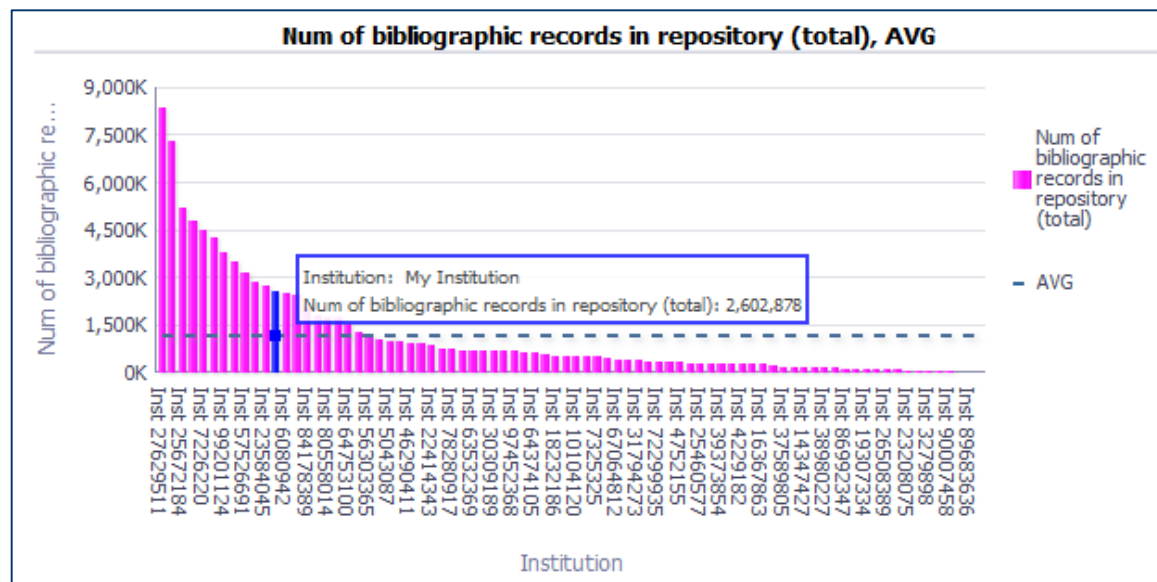
Benchmark Analytics - Inventory Total

- The dotted line is the average
- The blue bar is “my institution”
- The pink bars are all other institutions.



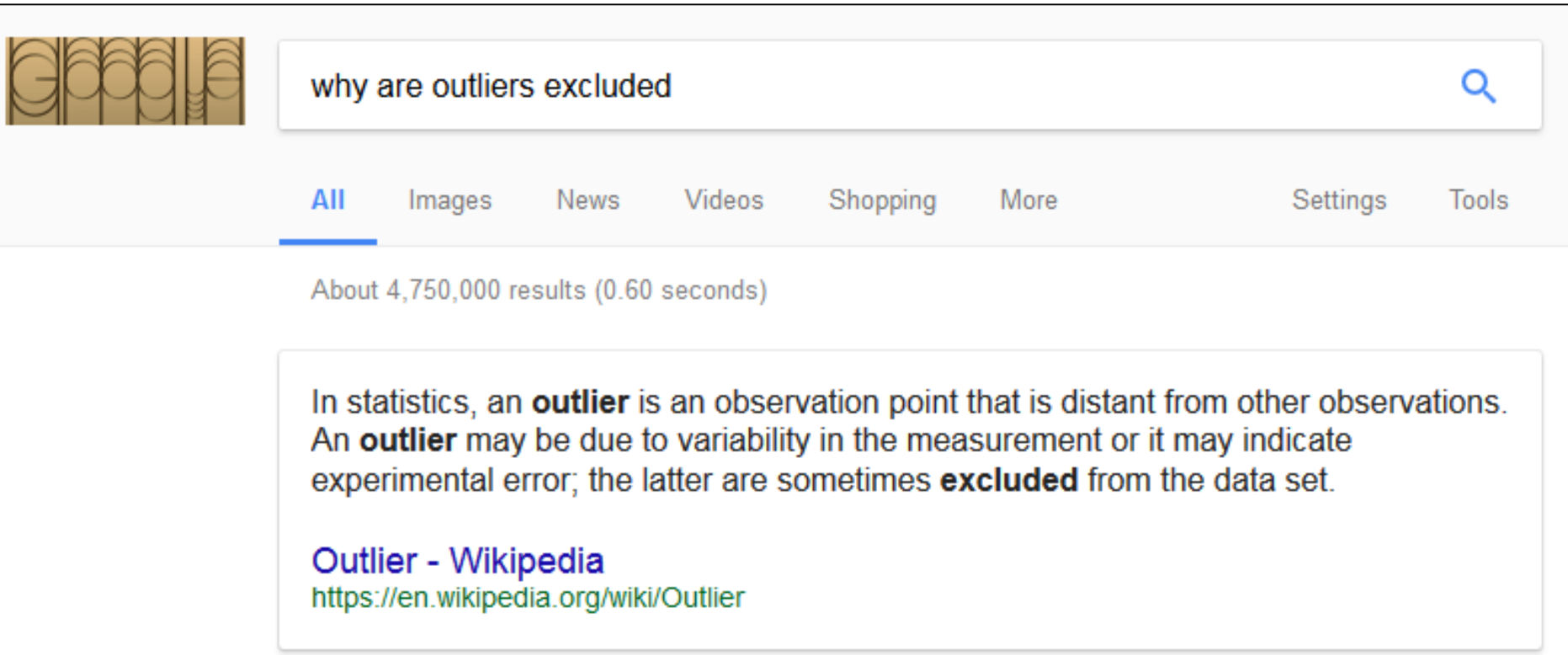
Benchmark Analytics - Inventory Total

Hovering over the data provides additional information.



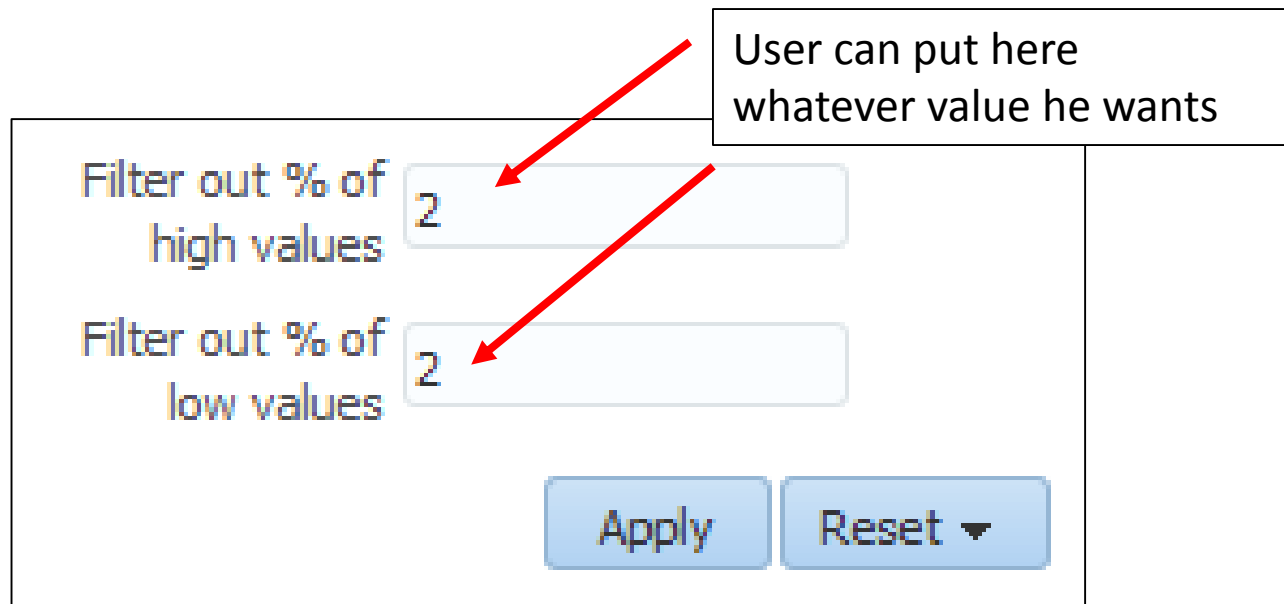
Inventory Total

- The outliers can also be removed from the graphs



Inventory Total

- It is possible to filter out the extreme high and low values (outliers) in benchmark analytics graphs.
- This gives **a more accurate picture** of the situation.



The screenshot shows a user interface for filtering data. It contains two input fields, both with the value '2' entered. The first field is labeled 'Filter out % of high values' and the second is labeled 'Filter out % of low values'. Two red arrows point from a text box to these two input fields. The text box contains the text 'User can put here whatever value he wants'. Below the input fields are two buttons: 'Apply' and 'Reset' with a dropdown arrow.

User can put here whatever value he wants

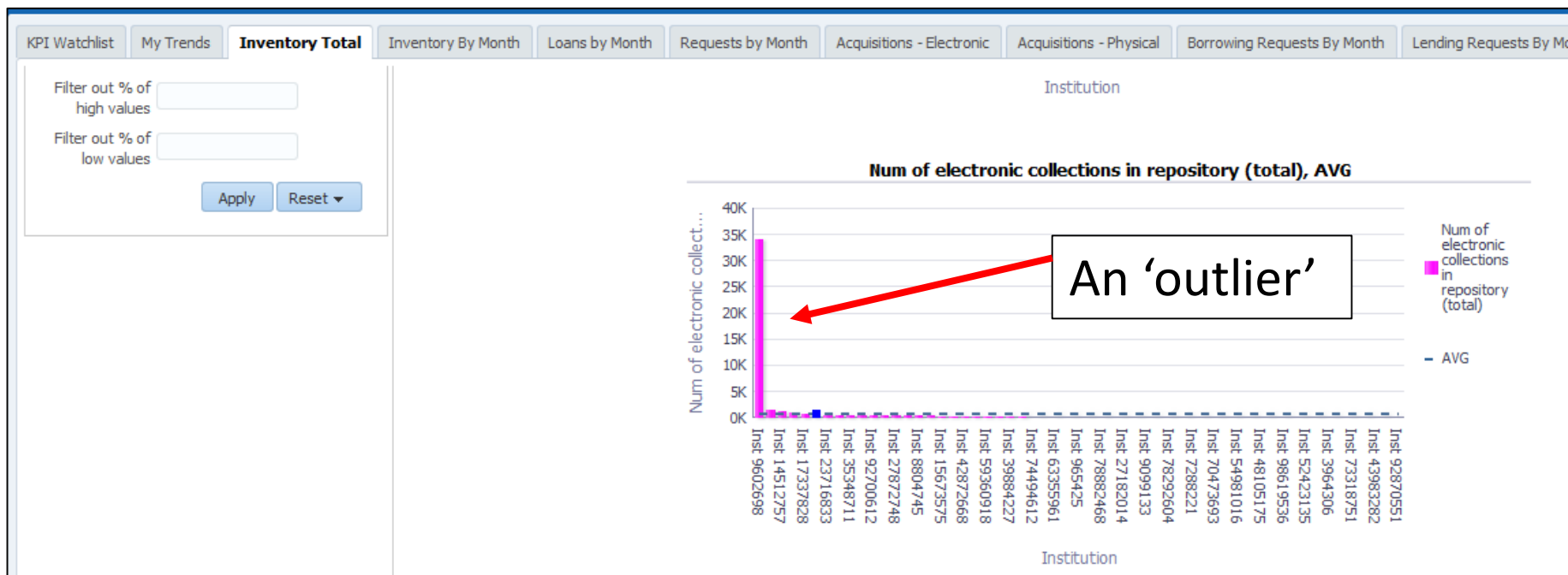
Filter out % of high values 2

Filter out % of low values 2

Apply Reset ▼

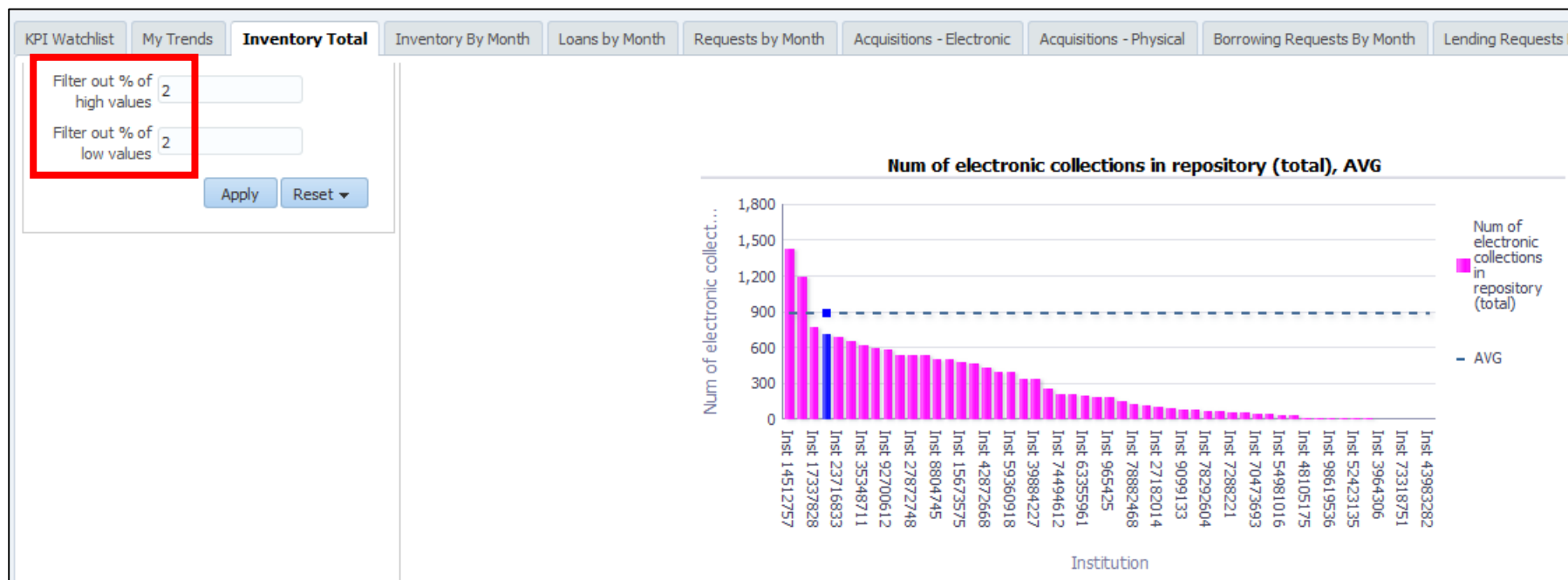
Inventory Total

- This is the graph 'Num of electronic collections in repository (total), AVG' in the 'Inventory Total' tab.



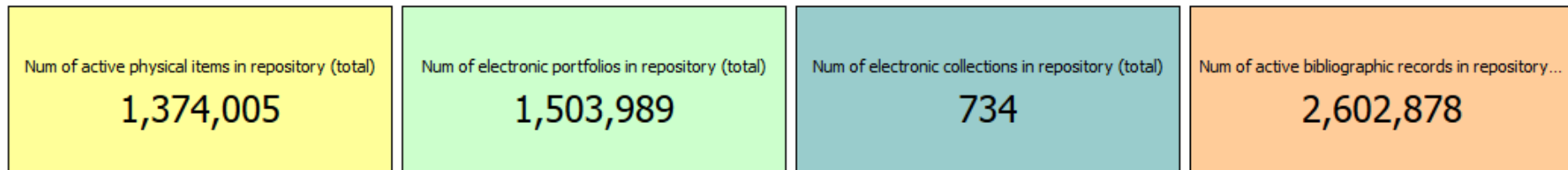
Inventory Total

- After removing the top and bottom 2% we have a more accurate picture



Inventory Total

- The data also appears at the top of the dashboard in performance tiles

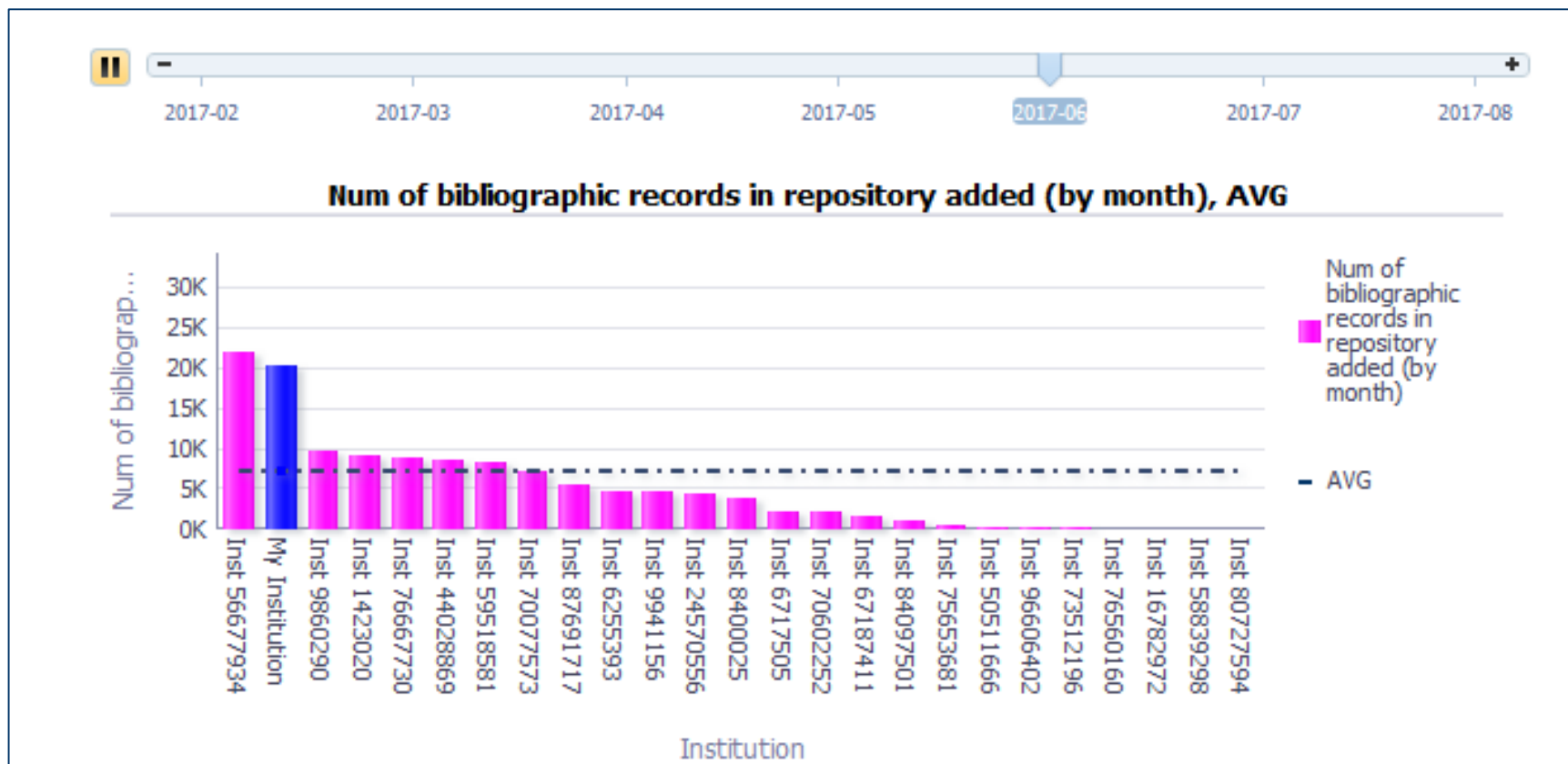


Benchmark Analytics - Inventory Total **by month**

- The Inventory Total **by month** tab allows the institution to compare **what was added to** his inventory with other institutions
- At the current time this includes:
 - Number of bibliographic records in repository (by month)
 - Number of electronic collections in repository (by month)
 - Number of electronic portfolios in repository (by month)
 - Number of physical items in repository (by month)

Benchmark Analytics - Inventory Total **by month**

- The chosen times appearing can be “played” on the slide bar on top showing the changes over the time period



Benchmark Analytics - Inventory Total **by month**

- The data also appears at the top of the dashboard in performance tiles.
- Here we have the average amounts added per month for the specified time period

Num of physical items in repository

4,414

added (by month)

Num of electronic collections in repository

7

added (by month)

Num of electronic portfolios in repository

30,909

added (by month)

Num of bibliographic records in repository

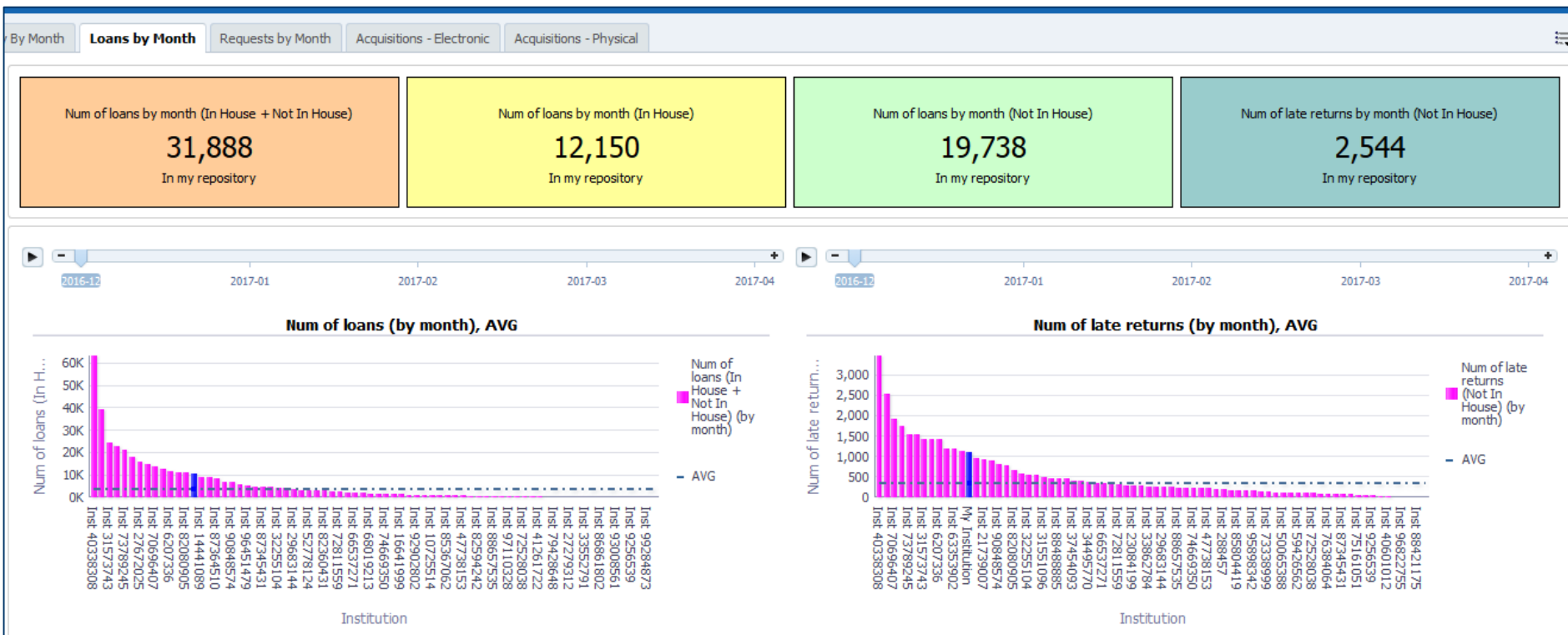
25,089

added (by month)

Benchmark Analytics - **Loans** by Month

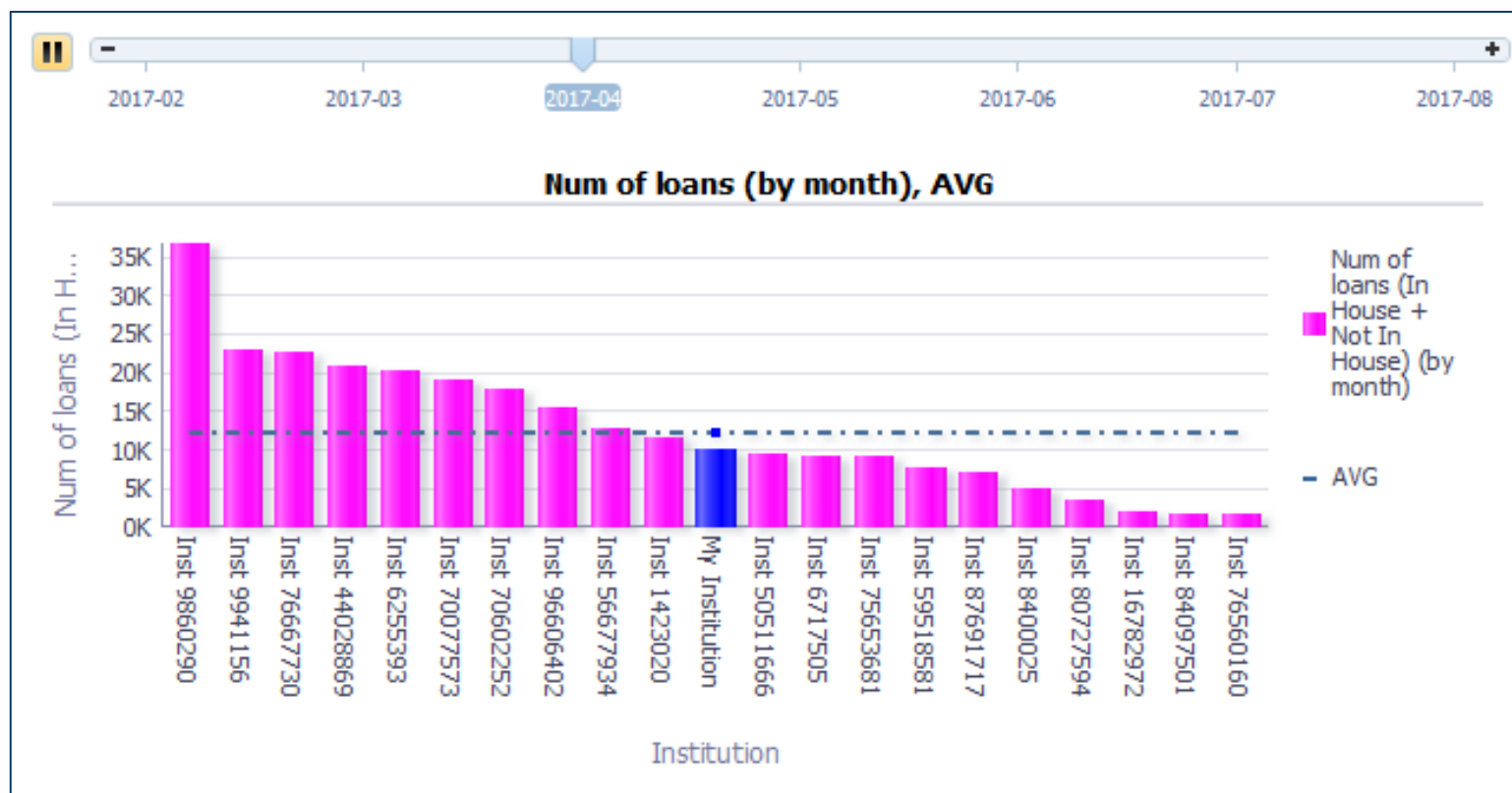
- The Loans by Month tab allows the institution to compare its fulfillment loans with other institutions
- At the current time this includes:
 - Number of loans (by month)
 - Number of late returns (by month)

Benchmark Analytics - Loans by Month



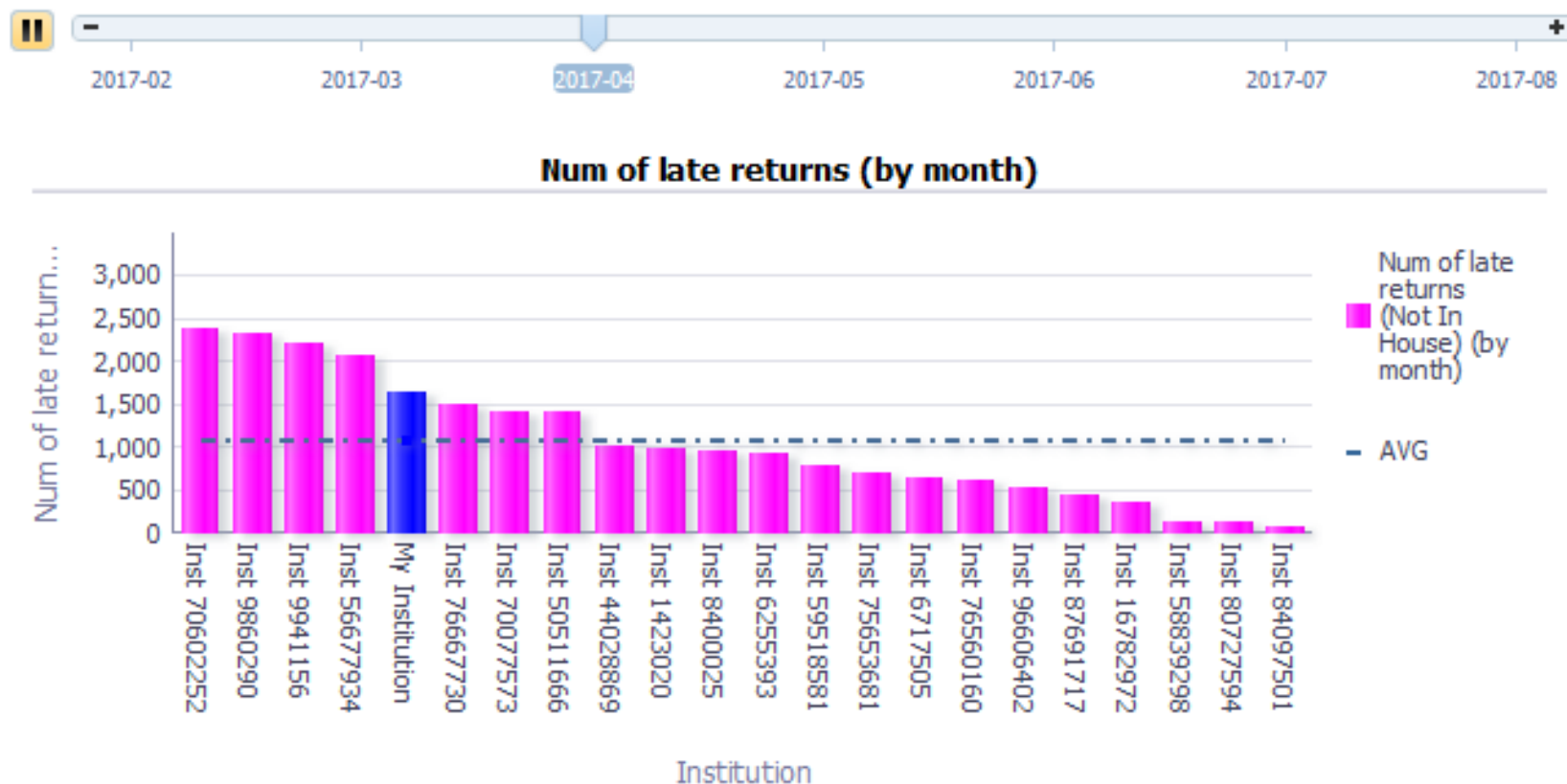
Benchmark Analytics - Loans by Month

- The chosen times appearing can be “played” on the slide bar on top showing the changes over the time period
- Here is the number of loans per month per institution



Benchmark Analytics - Loans by Month

- Here is the number of late returns per month per institution



Benchmark Analytics - Loans by Month

- The data also appears at the top of the dashboard in performance tiles

Num of loans by month (In House + Not In House)

31,888

In my repository

Num of loans by month (In House)

12,150

In my repository

Num of loans by month (Not In House)

19,738

In my repository

Num of late returns by month

2,544

In my repository

Benchmark Analytics - **Requests** by Month

- The Requests by Month tab allows the institution to compare its fulfillment requests with other institutions
- At the current time this includes:
 - Number of patron physical item requests created (by month)
 - A detailed table including
 - Number of patron physical item requests created (by month)
 - Number of patron physical item requests rejected (by month)
 - Number of patron physical item requests rejected by patron (by month)
 - Number of patron physical item requests rejected by library (by month)

Benchmark Analytics - Requests by Month

Num of patron physical item requests (by month)

2,422

rejected

Num of patron physical item requests (by month)

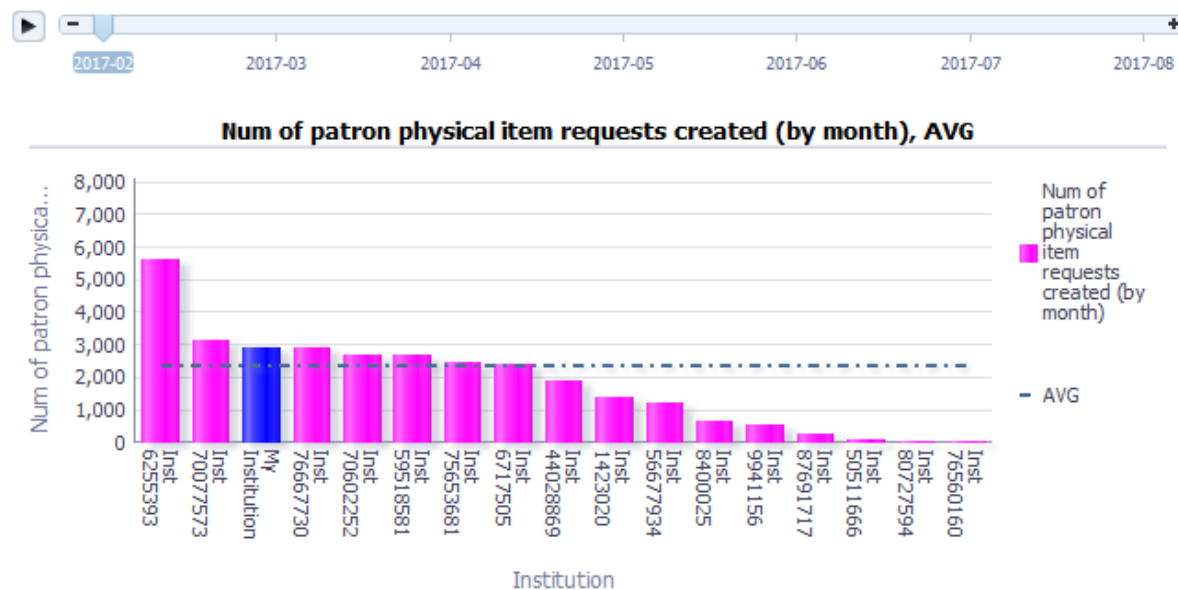
660

rejected by library

Num of patron physical item requests (by month)

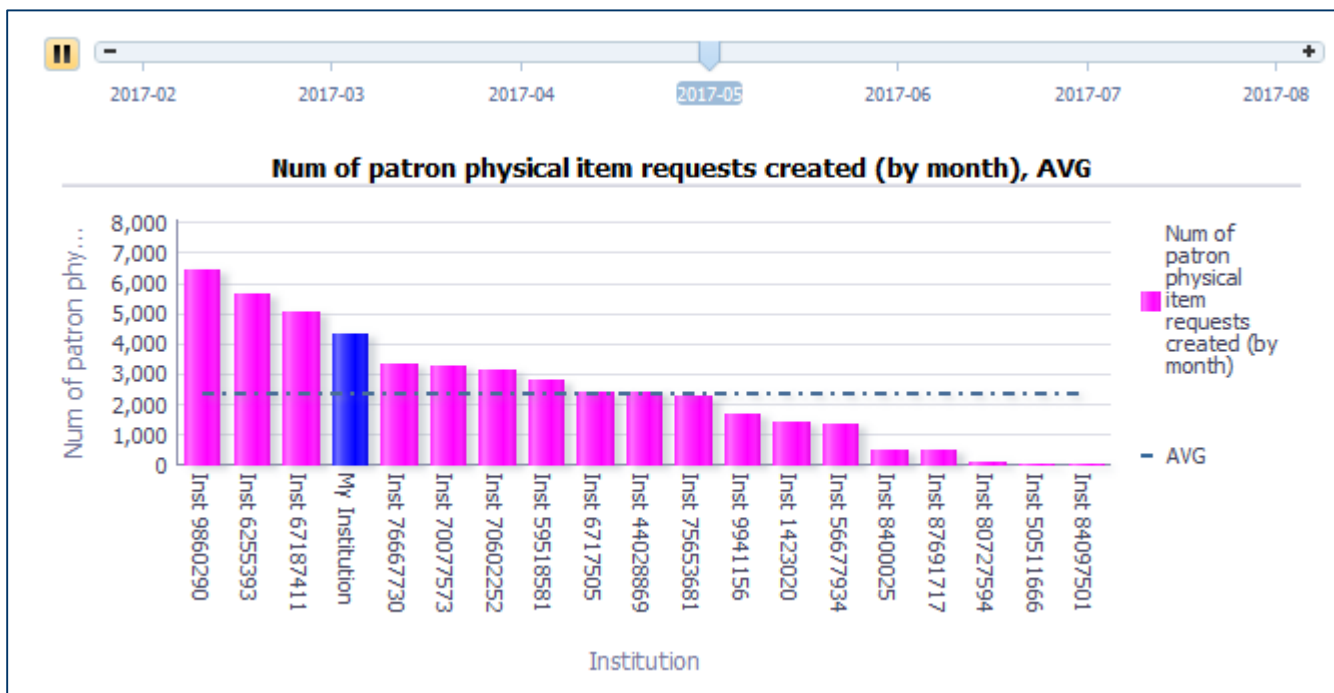
64

rejected by patron



Benchmark Analytics - Requests by Month

- The chosen times appearing can be “played” on the slide bar on top showing the changes over the time period
- Here is the patron physical item requests created per month per institution



Benchmark Analytics - Requests by Month

- Here is table showing the data with additional measures

Institution	Num of patron physical item requests created (by month)	Num of patron physical item requests rejected (by month)	Num of patron physical item requests rejected by patron (by month)	Num of patron physical item requests rejected by library (by month)
Inst 96614676	10,126	710	101	149
Inst 66131130	7,809	818	10	11
Inst 25290108	5,523	1,220	7	75
Inst 56773351	4,958	826	21	134
Inst 53859913	4,311	931	19	63
My Institution	2,982	287	9	59
Inst 59507251	2,945	262	11	42
Inst 37394907	2,441	214	9	105
Inst 5584154	2,439	807	9	81
Inst 81375611	2,295	217	1	58
Inst 34286026	1,406	267	4	29
Inst 52033242	1,365	189	2	34
Inst 97407214	1,327	39	5	13
Inst 81159948	989	219	7	15
Inst 31722692	790	108	5	27

Benchmark Analytics - **Requests** by Month

- The data also appears at the top of the dashboard in performance tiles

Num of patron physical item requests (by month)

2,422

rejected

Num of patron physical item requests (by month)

660

rejected by library

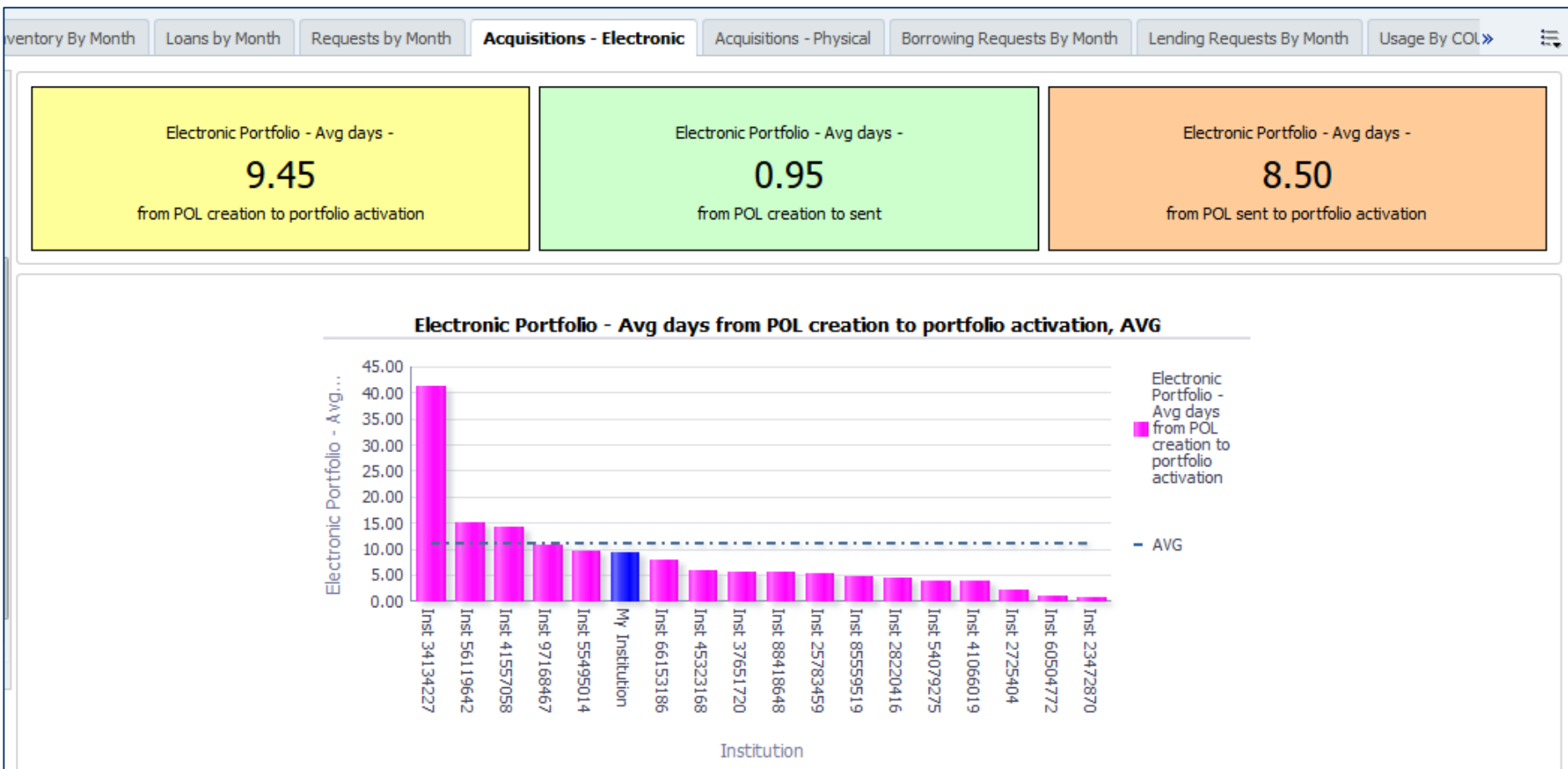
Num of patron physical item requests (by month)

64

rejected by patron

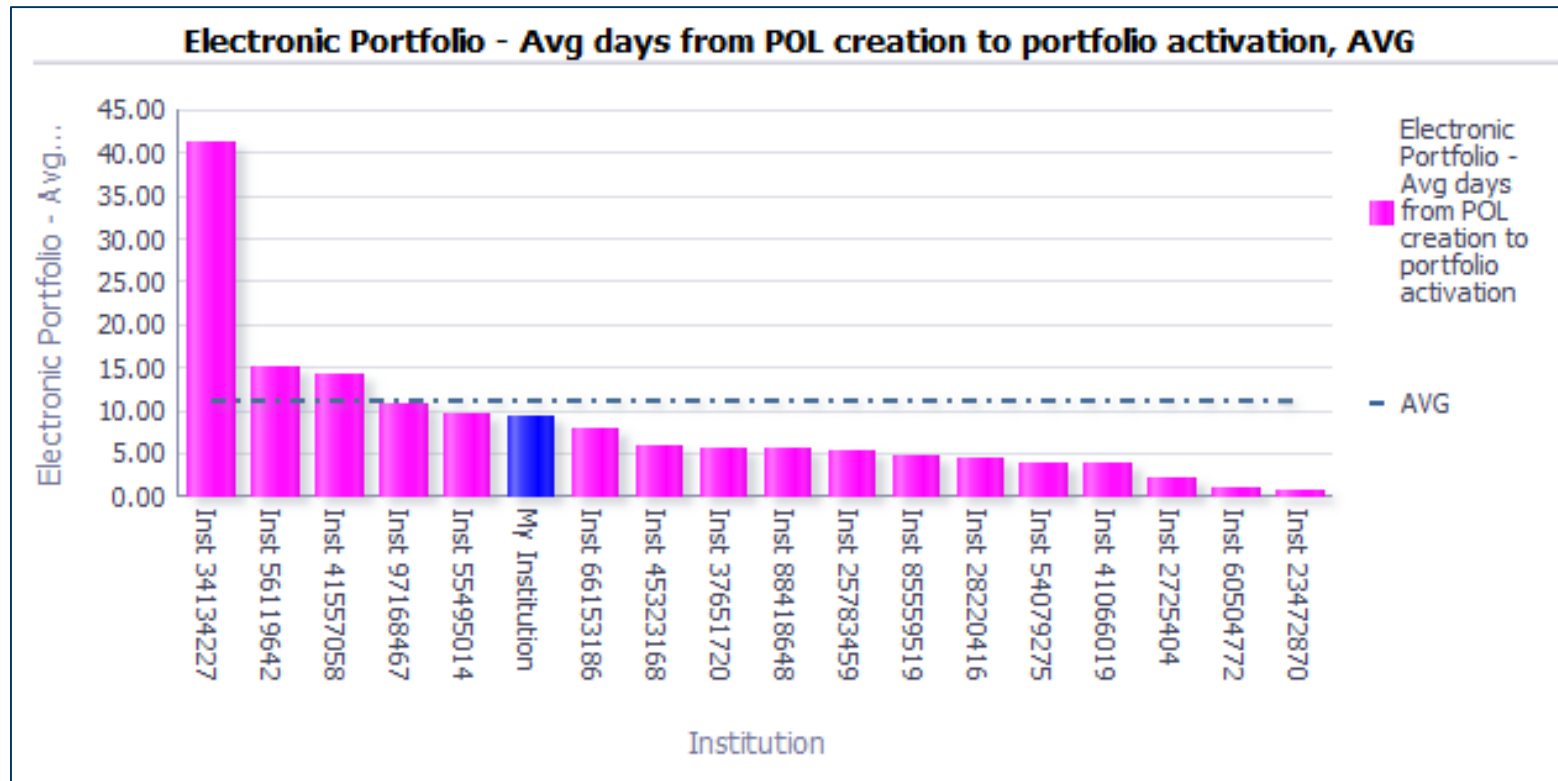
- The Acquisitions – Electronic tab allows the institution to compare its acquisitions measures regarding electronic collection and portfolios with other institutions
- At the current time this includes:
 - Electronic Portfolio - Avg days from POL creation to portfolio activation

Benchmark Analytics - Acquisitions - **Electronic**



Benchmark Analytics - Acquisitions - **Electronic**

- Here the institution can see that regarding the time it takes from ordering electronic inventory to getting it activated he is a little under (faster than) the average.



- The data also appears at the top of the dashboard in performance tiles

Electronic Portfolio - Avg days -

9.45

from POL creation to portfolio activation

Electronic Portfolio - Avg days -

0.95

from POL creation to sent

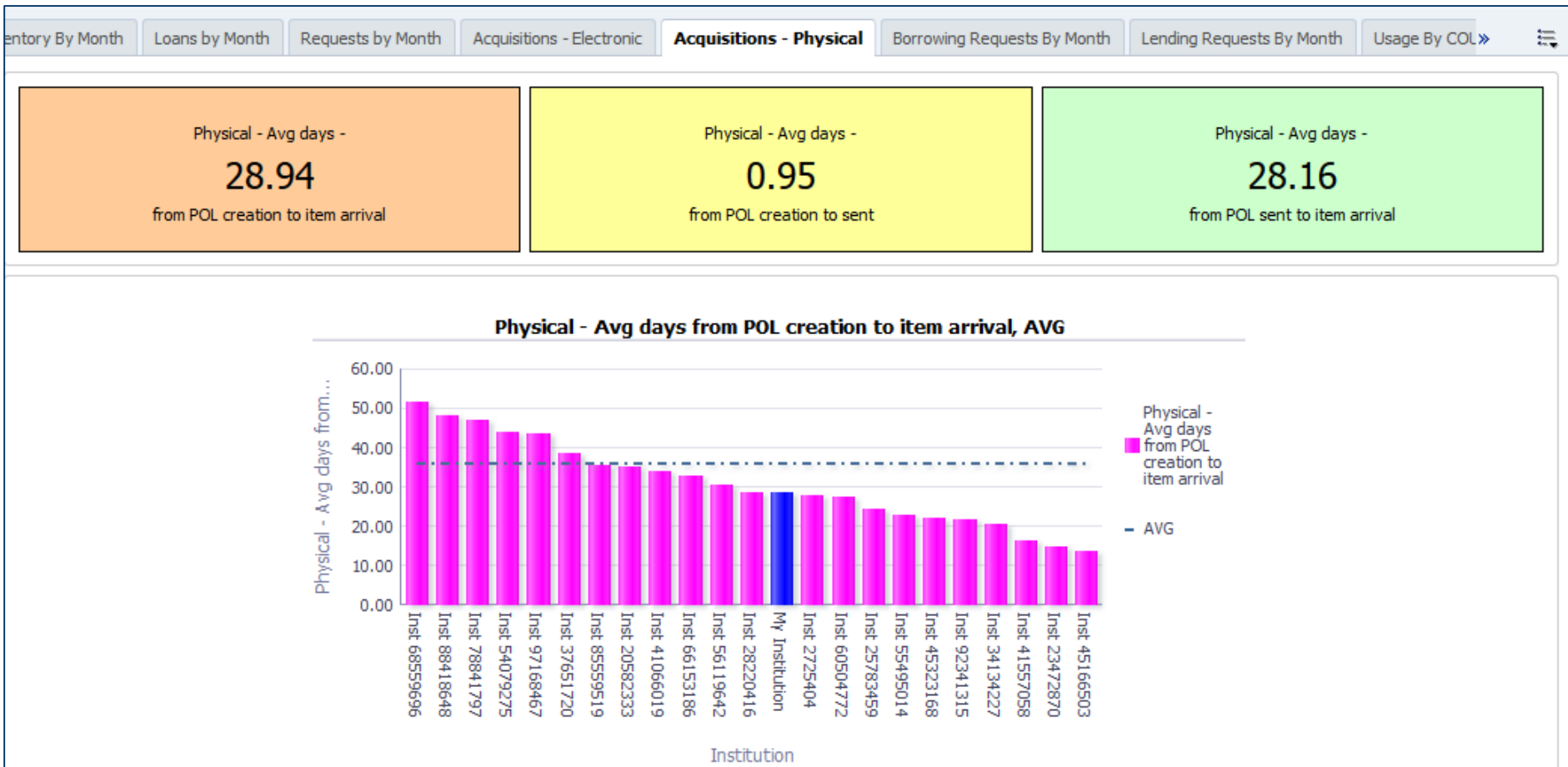
Electronic Portfolio - Avg days -

8.50

from POL sent to portfolio activation

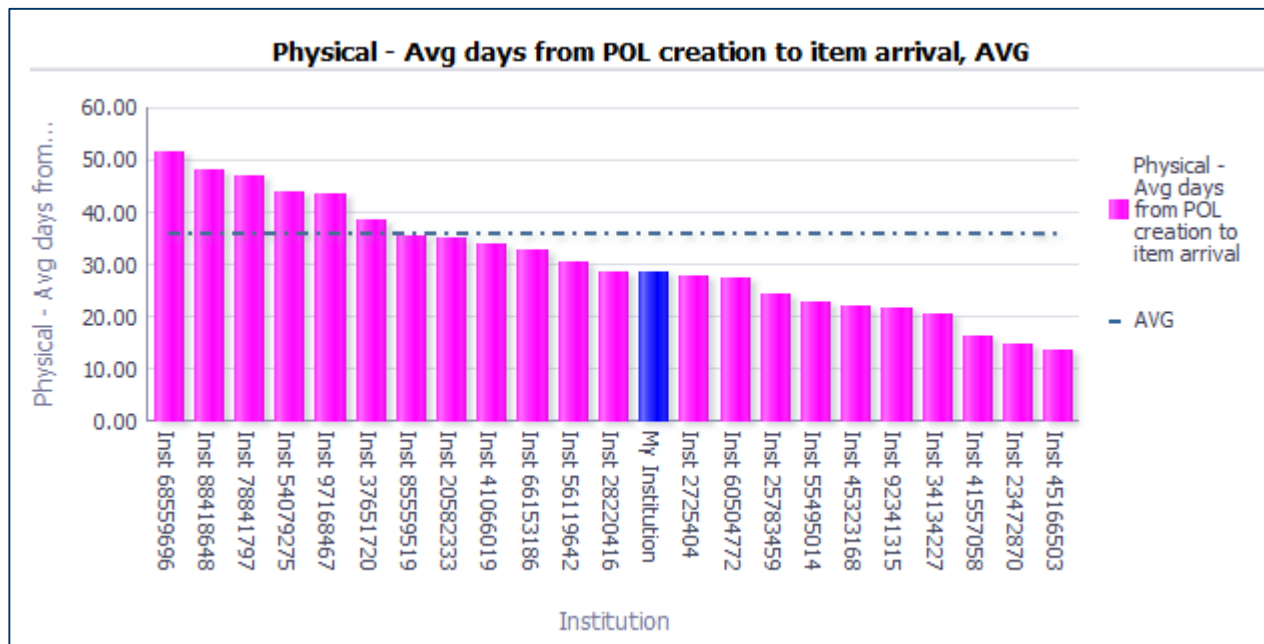
- The Acquisitions – Physical tab allows the institution to compare its acquisitions measures regarding the ordering of physical one-time inventory with other institutions
- At the current time this includes:
 - Physical - Avg days from POL creation to item arrival

Benchmark Analytics - Acquisitions - Physical



Benchmark Analytics - Acquisitions - **Physical**

- Here the institution can see that regarding the time it takes from ordering physical inventory to having it arrive it is faster than (it takes less days) the average.



- The data also appears at the top of the dashboard in performance tiles

Physical - Avg days -

28.94

from POL creation to item arrival

Physical - Avg days -

0.95

from POL creation to sent

Physical - Avg days -

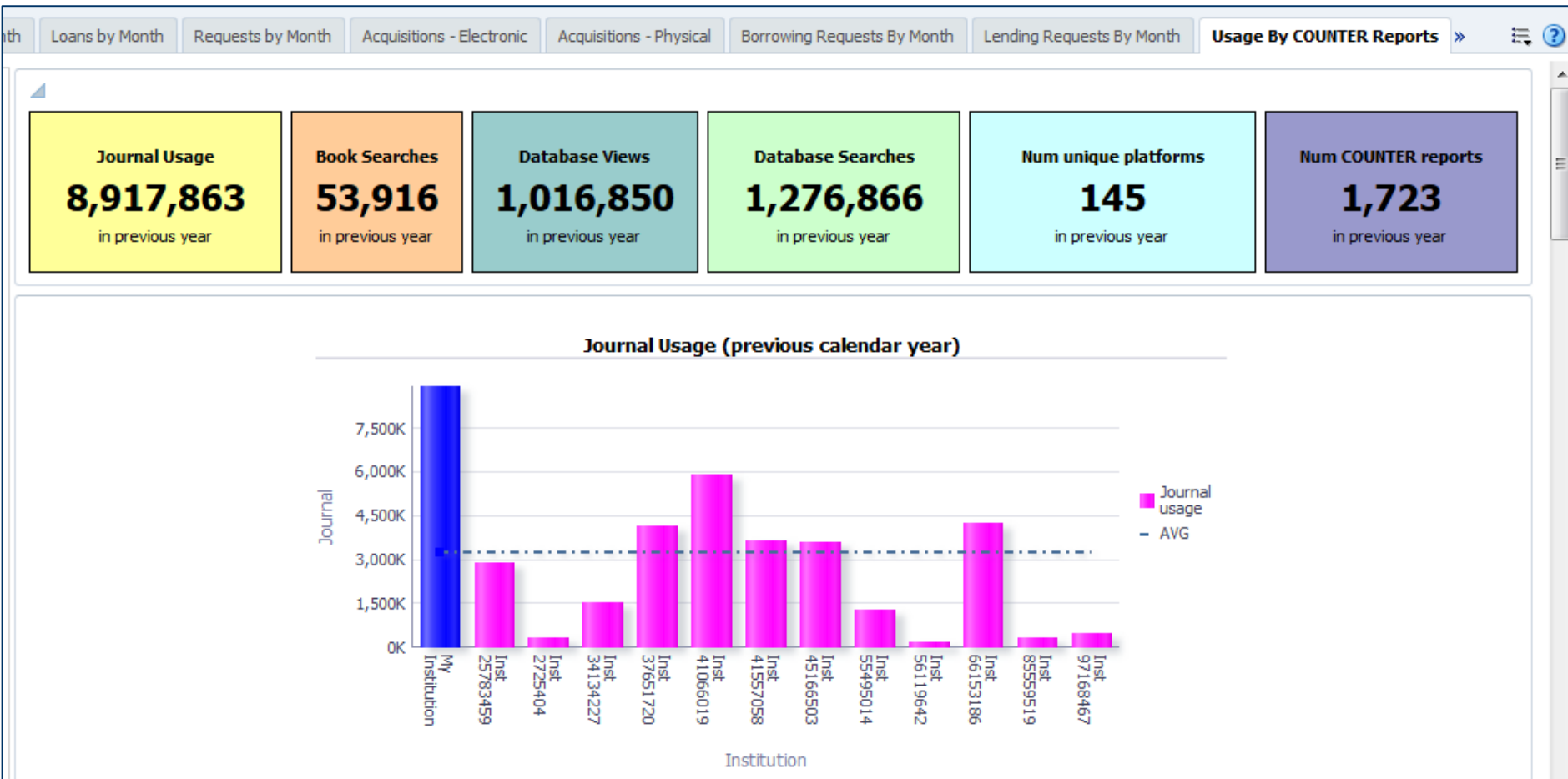
28.16

from POL sent to item arrival

Benchmark Analytics – Usage by COUNTER reports

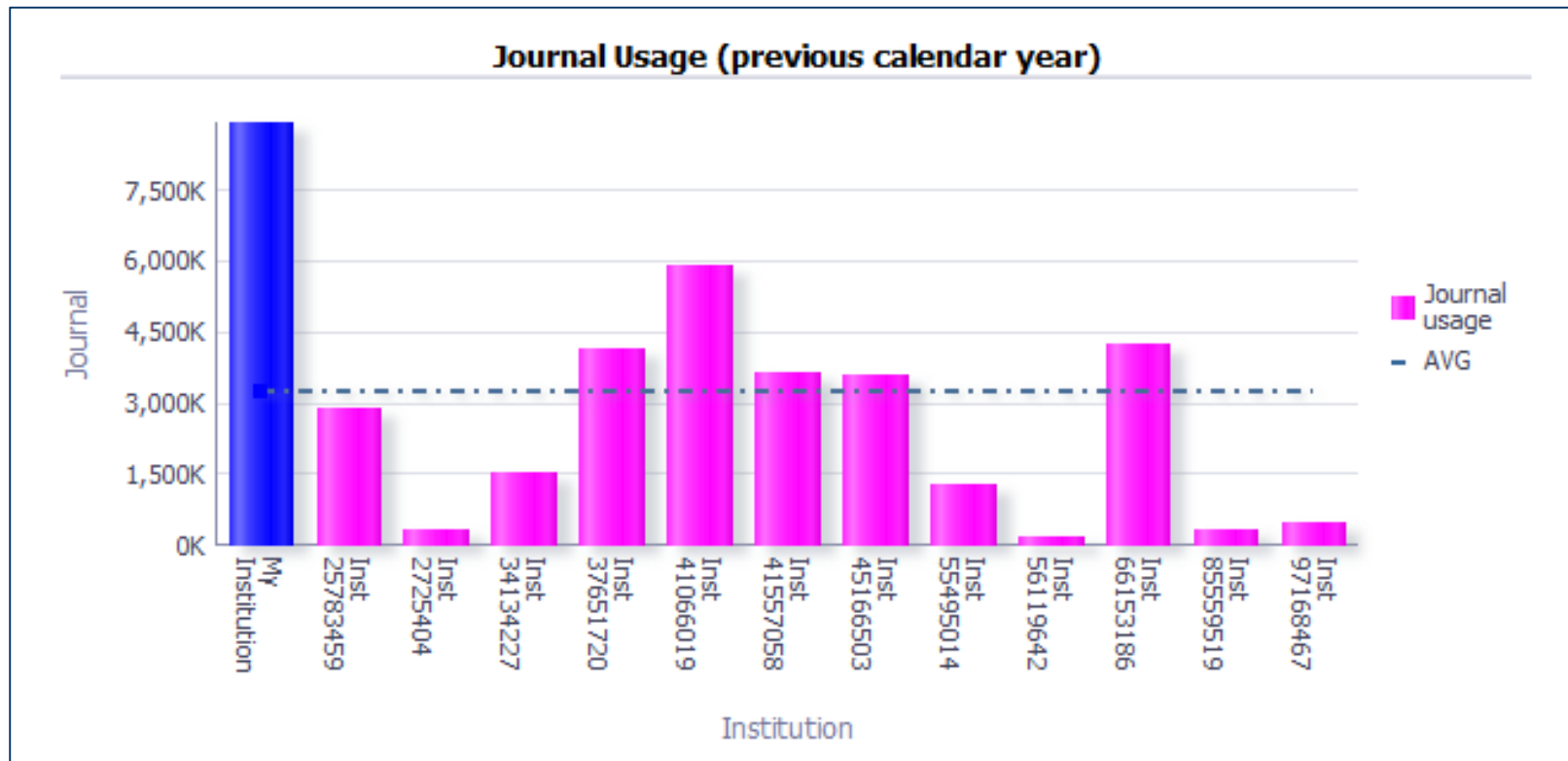
- It is also possible to compare the usage of electronic resources as reported via COUNTER reports
- At the current time this includes:
 - Journal Usage (in previous year)
 - Book Searches (in previous year)
 - Database Views (in previous year)
 - Database Searches (in previous year)
 - Number of Unique Platforms (in previous year)
 - Number of COUNTER reports (in previous year)

Benchmark Analytics – Usage by COUNTER reports



Benchmark Analytics – Usage by COUNTER reports

- Here the institution can see that they have higher than average Journal Usage (JR1)



Benchmark Analytics – Additional planned KPIs

- In addition to the KPIs shown here, there are plans to roll out several additional KPIs.
- These include the following:

Area	KPI
Alma Staff	Number of staff logins - in the last year
Claiming	Percentage of orders that have to be claimed - orders sent in the last year
Cost Per Use	Average Cost Per Use - in the last year (from COUNTER reports is Cost Usage subject area)
Course Reserves	Number of items in Course Reserves location - added - in last year
Digital Inventory	Number of digital objects - added- in the last year
Digital Inventory	Number of digital objects - total
Discovery	Number of Journal/DB views - in the last week
Discovery	Number of searches - in last week
Discovery	Number of ServicePage/Uresolver sessions - in the last week
Discovery	Number of sessions - in last week

Benchmark Analytics – Additional planned KPIs

Area	KPI
Fees	Money collected from patrons - total - in the last year
Fees	Money owed by Patrons - total
Fees	Money waived by staff - total - in the last year
Fees	Percentage of patrons that have blocks
Fees	Percentage of patrons that owe money
Invoicing	Average handling time for invoices - From creation until closure - invoices created in the last year
Invoicing	Average handling time for invoices - From creation until payment - invoices created in the last year
Invoicing	Average handling time for invoices - From creation until sent for payment - invoices created in the last year
Resource Sharing Borrowing Requests	Average supply time for borrowing (outgoing ILL) requests - in the last year
Resource Sharing Borrowing Requests	Number of borrowing (outgoing ILL) requests placed - in the last year
Resource Sharing Lending Requests	Number of lending (incoming ILL) requests - in the last year
Resource Sharing Lending Requests	Percentage of lending (incoming ILL) requests that could not be filled - in the last year
Transit	Average time in transit - in the last year

Agenda

- 1** Introduction
- 2** Benchmark Analytics
- 3** **Comparative Collection Analytics**

Comparative Collection Analytics - Overview

- The overall goal and idea of the Comparative Collection Analytics is for the institution to be able to understand the collection relative to a set of peer institutions
- Peer institutions have agreed (mutually) to work together in a known and identified manner
- This will enable the institution to, for example
 - Create weeding (withdrawal) plans
 - Effectively create a collection development policy by knowing what subjects are held by other institutions which are my peers and thus accessible to my patrons.

Comparative Collection Analytics

- Bibliographic and inventory data is compared with that of other predefined peer institutions.
- Example 'queries':
 - How much overall overlap is there between your collection and those of your peers?
 - How many of your items are unique among your set of predefined peers?
 - How old is your collection compared to those of your peers?

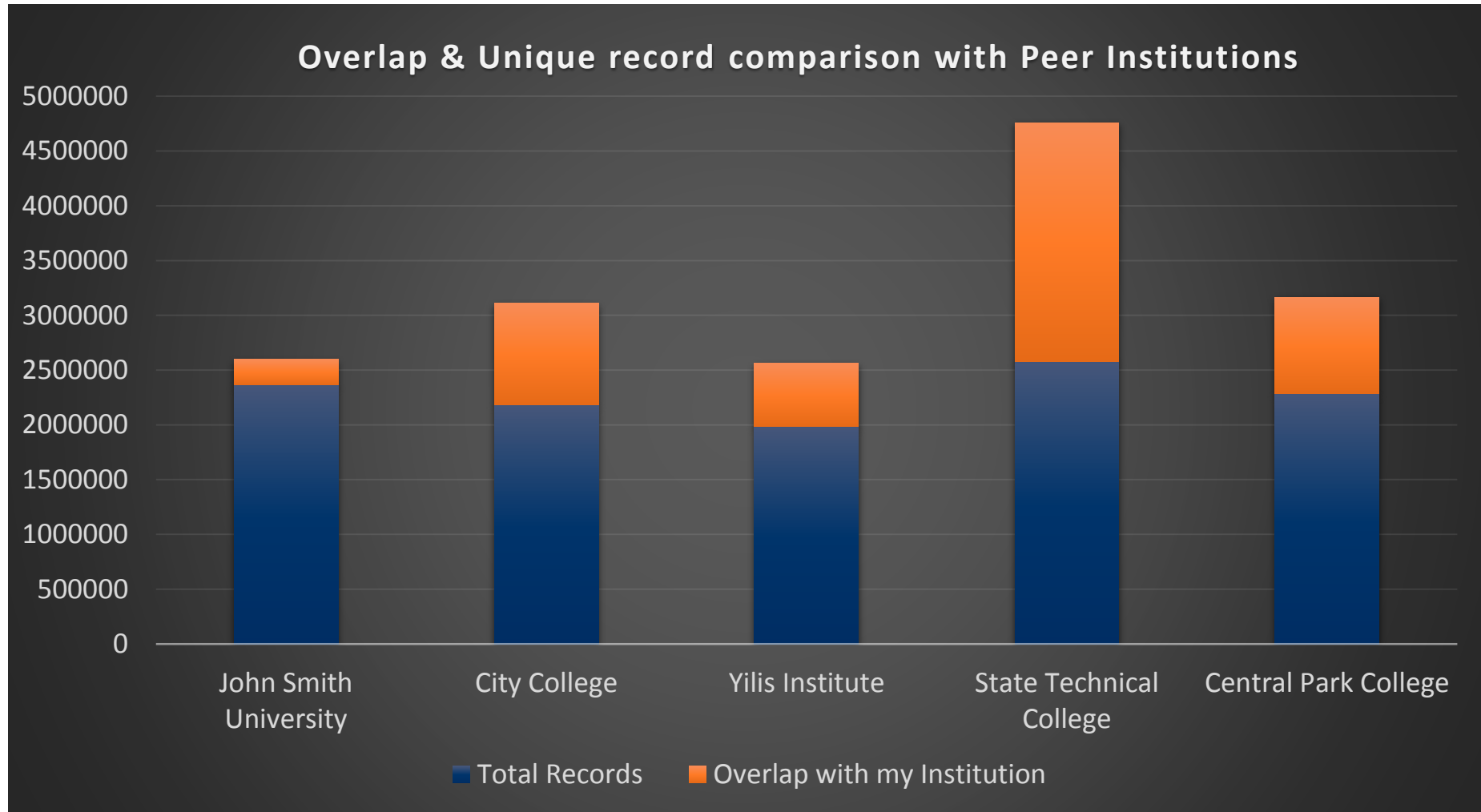
Comparative Collection Analytics - Peer Institutions

- Typically the “peer institutions” are institutions which
 - Are located in the same geographical area
 - Have resource sharing or other cooperative fulfillment policy agreements
 - May also have e-resource licensing and other acquisition cooperative programs
 - May engage in common digitization projects

Comparative Collection Analytics - Peer Institutions

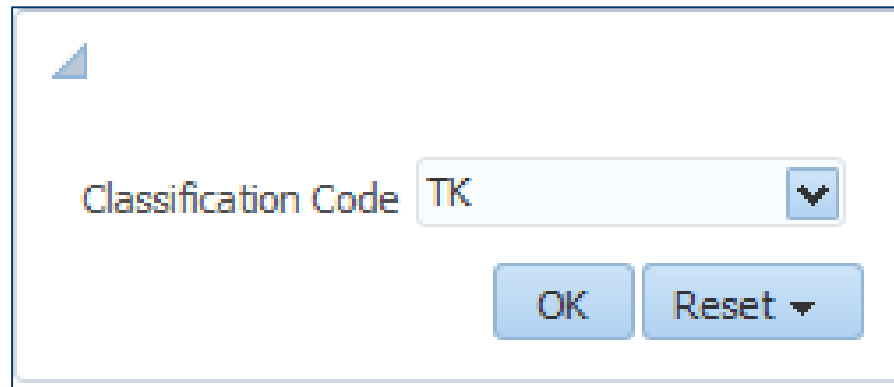
- In the example here the “Sarah Khan Technical College” has five peers:
 - John Smith University
 - City College
 - Yilis Institute
 - State Technical College
 - Central Park College
- These peers all form a group of six institutions which collaborate with each other on various levels.
- For example patrons in each of the six institutions and can loan items from the other five institutions.

Comparative Collection Analytics – General Overlap



Comparative Collection Analytics – LC Classification Overlap

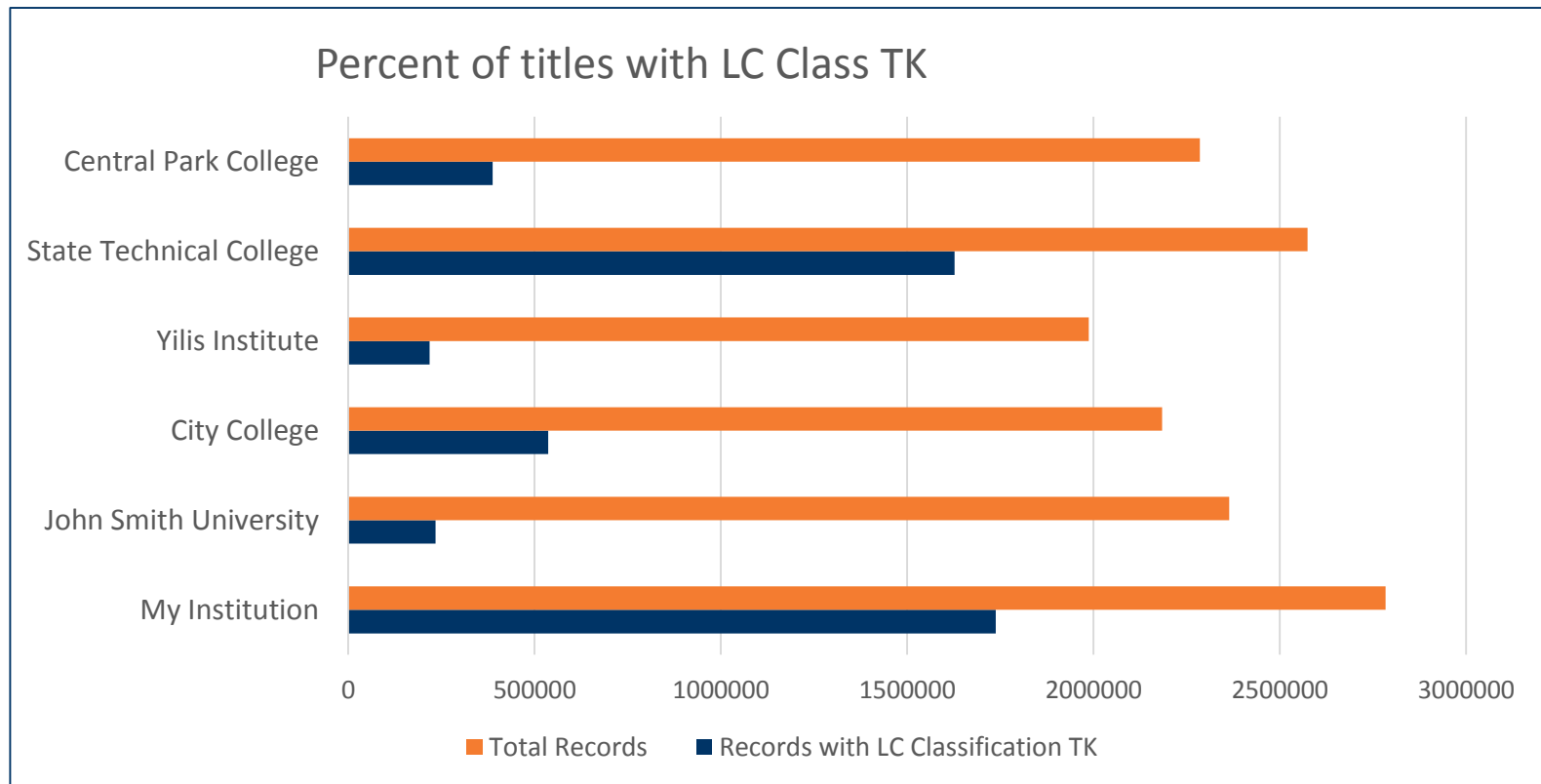
- It will also be possible to query which institutions have “how many” bibliographic records with particular call numbers or subjects.
- Example: TK is the LC Classification code for Electrical Engineering



A screenshot of a web form with a light blue border. Inside the form, the text "Classification Code" is followed by a text input field containing "TK" and a small blue downward arrow button. Below the input field are two buttons: "OK" and "Reset", both with blue backgrounds and white text. The "Reset" button has a small blue downward arrow to its right.

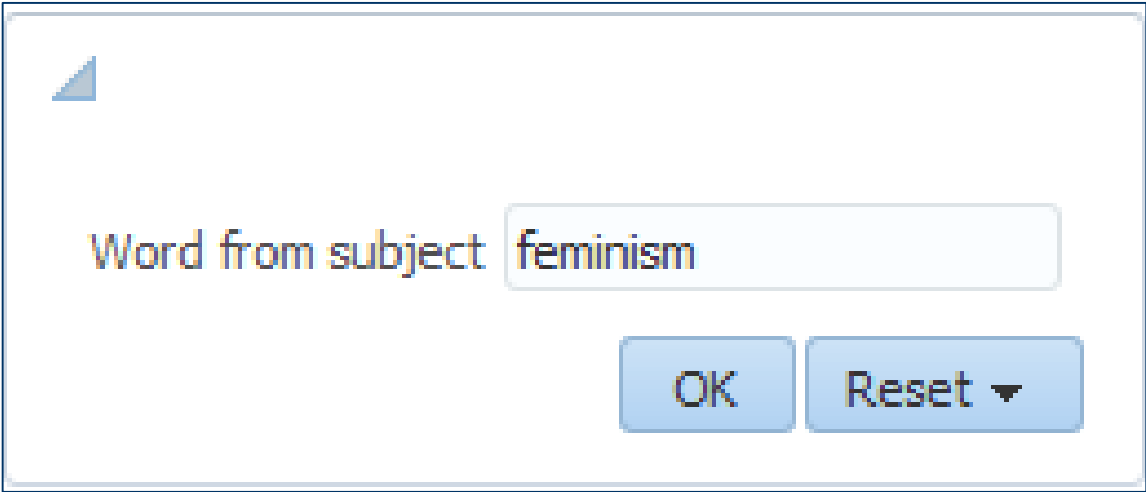
Comparative Collection Analytics – LC Classification Overlap

- Here we clearly see that "My Institution" and "State Technical College" both have many records (more than half of total) which are for “Electrical Engineering”



Comparative Collection Analytics – Subject Overlap

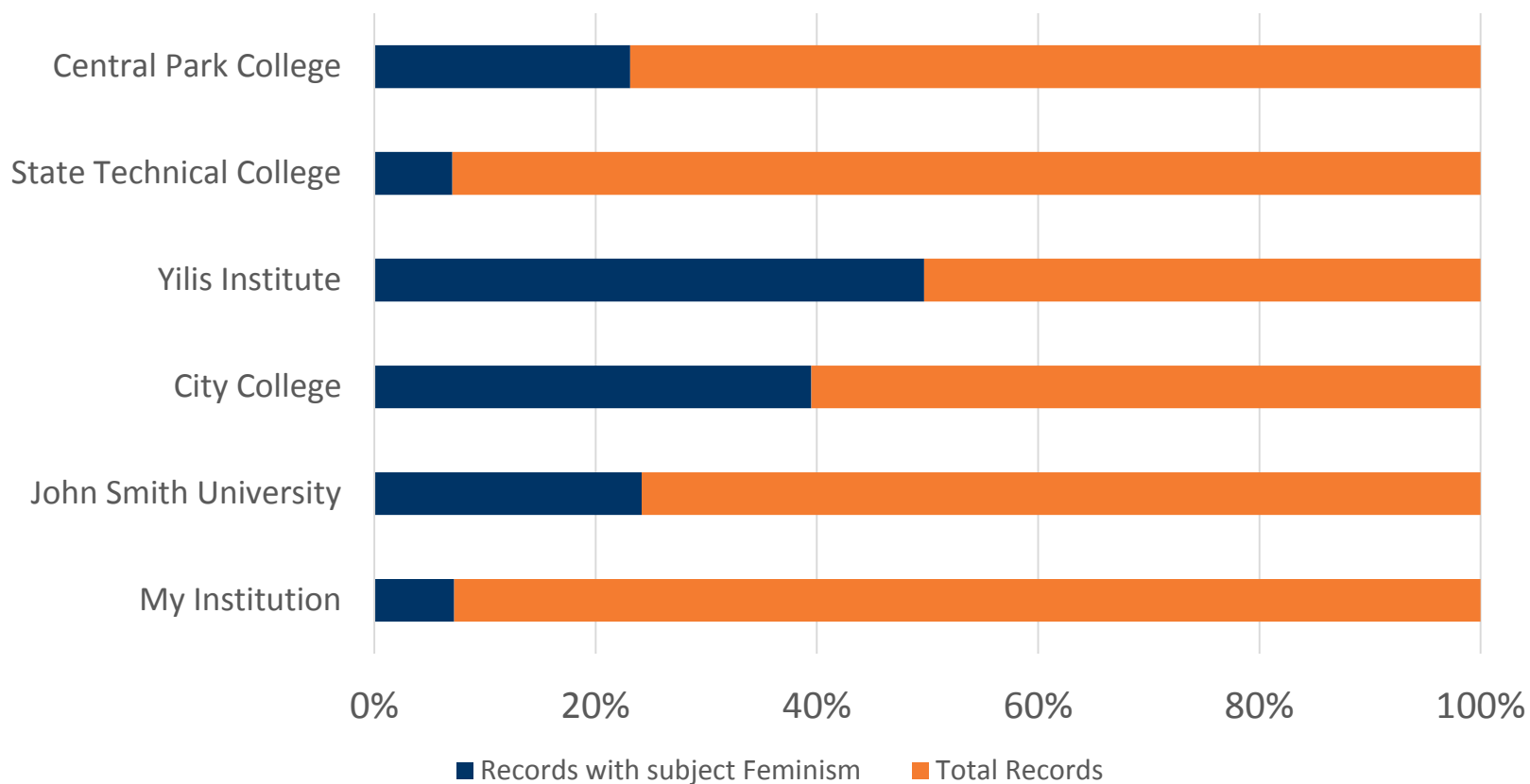
- On the other hand ... if we compare the institutions on “word from subject = feminism” ...



Word from subject

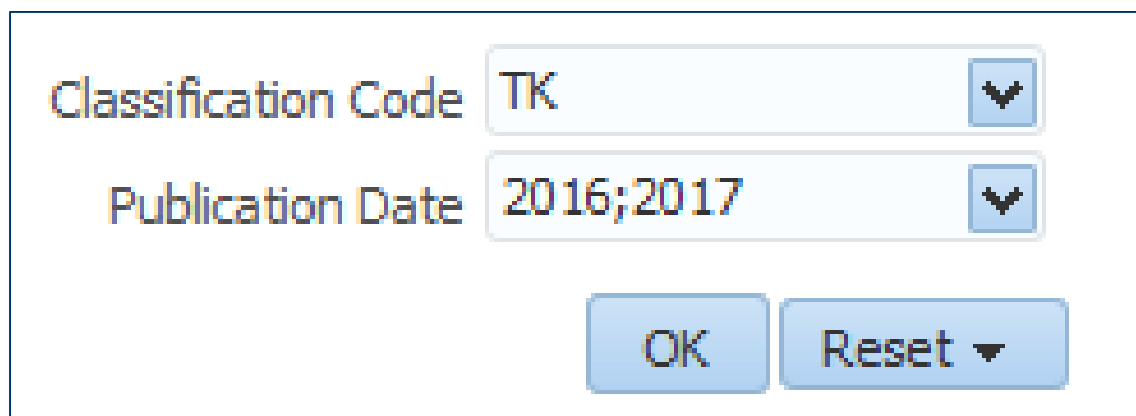
Comparative Collection Analytics – Subject Overlap

Records with subject Feminism



Comparative Collection Analytics – LC and Year Overlap

- There are some cases where it is important to also be able to filter by year.
- For example we previously saw that both "My Institution" and the "State Technical College" have a lot of material with LC Category “TK” which is “Electrical Engineering”.
- We may further want to know how much of that material is from the last two years.

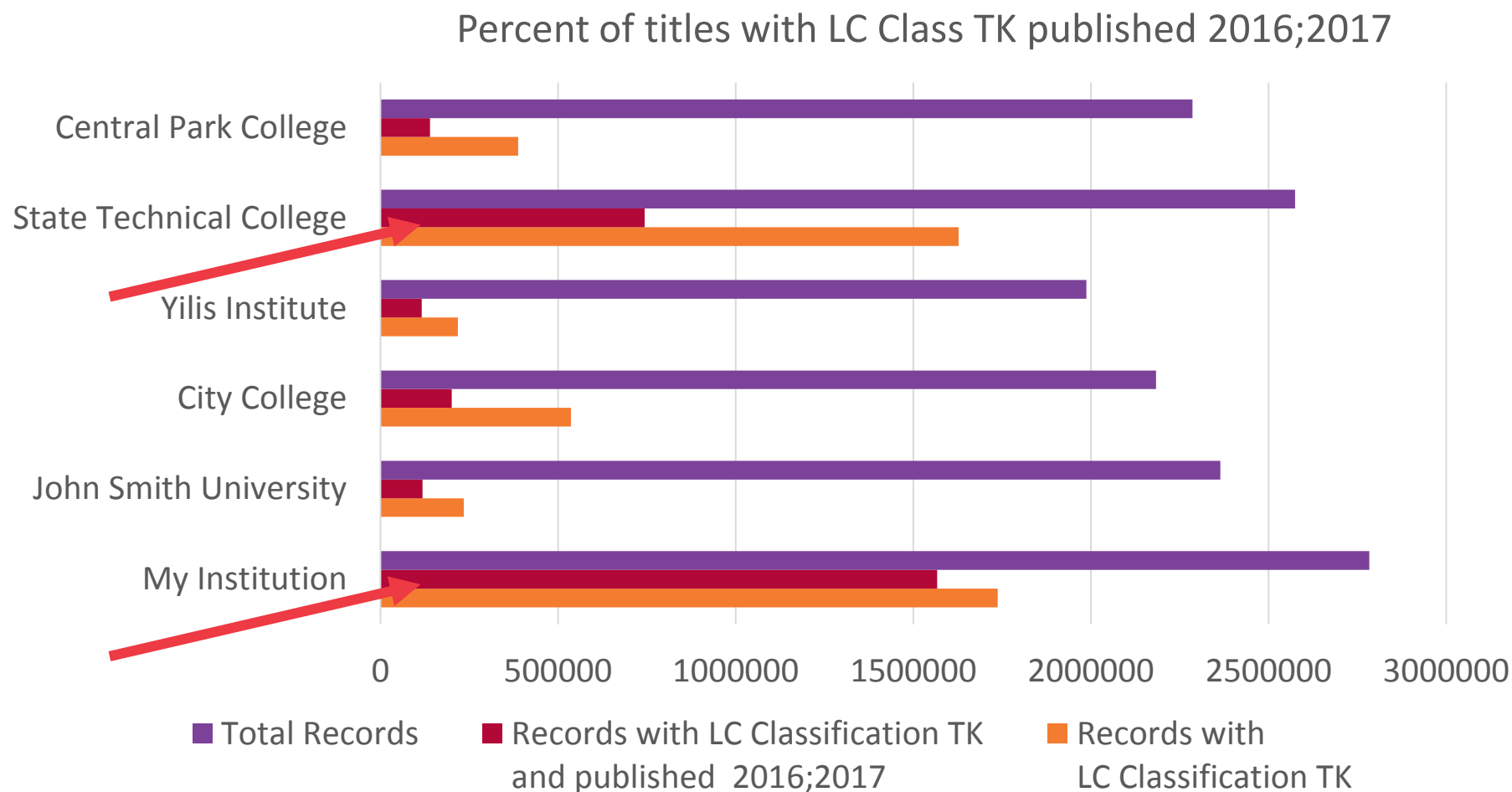


The screenshot shows a search filter interface with two dropdown menus and two buttons. The first dropdown menu is labeled "Classification Code" and has "TK" selected. The second dropdown menu is labeled "Publication Date" and has "2016;2017" selected. Below the dropdowns are two buttons: "OK" and "Reset".

Classification Code	TK
Publication Date	2016;2017
<input type="button" value="OK"/> <input type="button" value="Reset"/>	

Comparative Collection Analytics – LC and Year Overlap

- Here are the results in graph format





Thank Yoel
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