

Credit Union TUG

Virtual Meetup: September 19th, 2018



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Credit Union User Group

Agenda

Introduction & Purpose

Analytics & Big Data Transformation @ SDFCU

Q&A

Tableau & Tell

The Latest From Tableau

We Want YOU!



Introduction & Purpose

Charlotte Taft | Director of Business Intelligence

Callahan & Associates | Washington, DC | ctaft@callahan.com



Tableau:

“Help people see and understand data.”

Credit Unions:

“Help members live better lives.”

Credit Unions + Tableau

“Use analytics to drive value for our members.”

Where do we start?

Cooperation!

Connecting for conversations

Sharing best practices

Discussing challenges

Offering solution examples

Credit Union TUG Online Community

Tableau Community Forums Forums ▾ Ideas User Groups ▾ Events Resources ▾

Credit Unions

Connect with others from the Credit Union industry to improve how we use analytics to drive value for our members.

Following in 1 stream Leave this group

Actions ▾ **Overview** Activity Content People Reports Manage ▾

Announcements

<https://community.tableau.com/groups/credit-unions>

About the CUTUG



Connect with others from the Credit Union industry to improve how we use analytics to drive value for our members.

Owned by:
Jessica Waydelis, Charlotte Taft, Aania Aclam

Welcome to the CU Tableau User Group #CUTUG

We've just launched this TUG for credit unions - and we're thrilled you found us!

Please join us - just log in (creating an account is easy if you don't have one!) and click Join This Group.

Register Now: Virtual CU Tableau User Group Meeting

In the meantime:

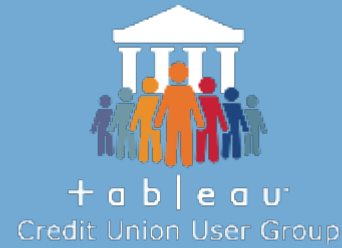
- Ask a question!
- Post an interesting article or workbook you're proud of
- Take our poll

Ask a Question

Ask your question...

BEGIN

Actions



Analytics & Big Data Transformations @ SDFCU

Reginald Wilkerson | Director of Enterprise Data Management Systems

State Department Federal Credit Union | Washington, DC | rwilkerson@sdfcu.org



Tableau Credit Union User Group
SDFCU Analytics Journey
Reginald Wilkerson

September 19th, 2018



We're going through a digital revolution...

In 2017 SDFCU began a shift in how we do business and took steps to start a digital transformation. This shift includes altering our culture to take advantage of our data to make informed data-driven decisions, leveraging cloud based infrastructure to allow for more rapid deployment of solutions and automating manual processes throughout SDFCU in order to reduce manual errors and increase accuracy and efficiency.



**Cloud
Infrastructure**



**Data Analytics &
Business Intelligence**



**Process
Automation**

Overview

Data is our most valuable asset, and we are now using it in new ways at the Credit Union. In order to enable this new way of conducting analysis and providing Leadership and team members with accurate and actionable data; new tools and technologies were introduced in order to create a modern data analytics platform.

Issue

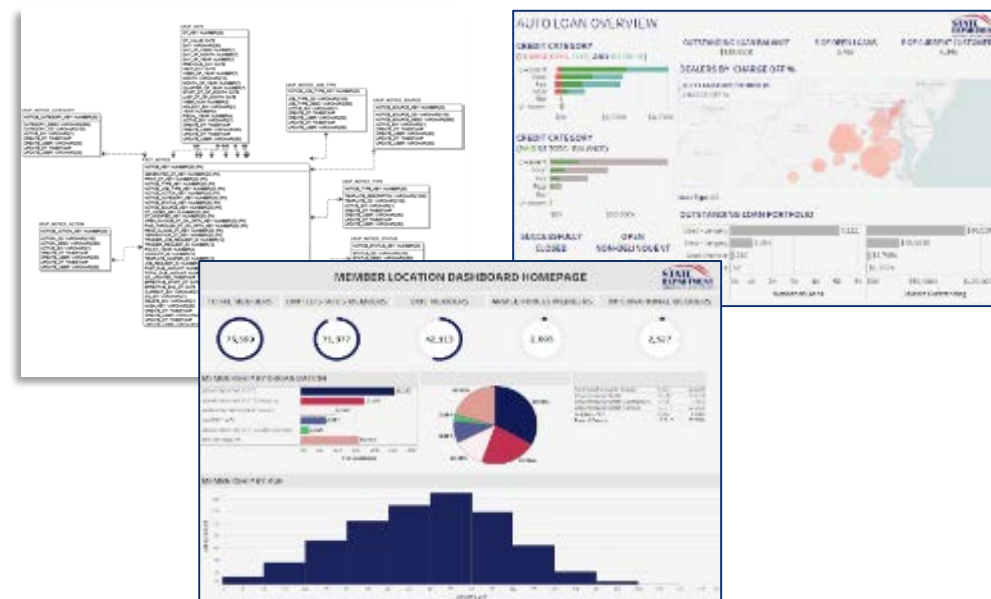
■ Limited Accessibility

- Challenge in providing effective operational and management reporting due to disparate data sources and siloed teams
- Lengthy data and report request/development turn around
- Resources are required to have database and SQL knowledge to pull, analyze, validate and reconcile data

■ Limited Functionality

- Outdated and manual reporting techniques
- Lack of ability to show interdependency of data issues across teams
- PDF and Excel reports limit informational views, lack time filters or aggregate and data manipulation capabilities
- Real-time data unavailable on reports

Impact



■ Data Marts broken out by Subject Area

- Single source of truth or a centralized information hub encourages coordinated decision-making across the Enterprise
- Reduced report development time due to greater accessibility and functionality
- User friendly organization of data marts reducing the need for deep technical knowledge
- Scalable platform to access, filter and organize data to target SDFCU department specific questions

■ Custom Dashboards with Actionable Insights

- Data is tangible and easier to understand to drive better decision making
- Customizable to cater to all levels of users (Executive down to the Analyst level)
- Creates the ability to design new products by analyzing our own data

Current State – ARCU Challenges

User Challenges

SYSTEM LATENCY

- Reports do not return results in a timely manner

OUT OF THE BOX REPORTS ARE NOT BEING USED

- The reports that come with ARCU don't meet user needs so they are left unused

REPORTS ARE NOT TAILORED TO ANSWER SDFCU STRATEGIC QUESTIONS

- Users often have to use other manually generated sources of data to supplement reporting as they don't have all the information they need in the report

LIMITED AD-HOC REPORTING CAPABILITY

- It is not easy for users to build ad-hoc reports; they have to rely on a long development cycle to have reports that they need built
- Users still rely a lot on manually generated spreadsheets and data for their operational needs

ARCU REPORTS ARE NOT DYNAMIC

- Reports are mostly grid-type in nature; almost no visualizations
- Very basic drill-down and filtering functionality; not a lot of opportunity to slice and dice data from different perspectives

At A Glance

394 Total Reports

107 reports have been executed since 4/24, **54** of which are 'custom' reports

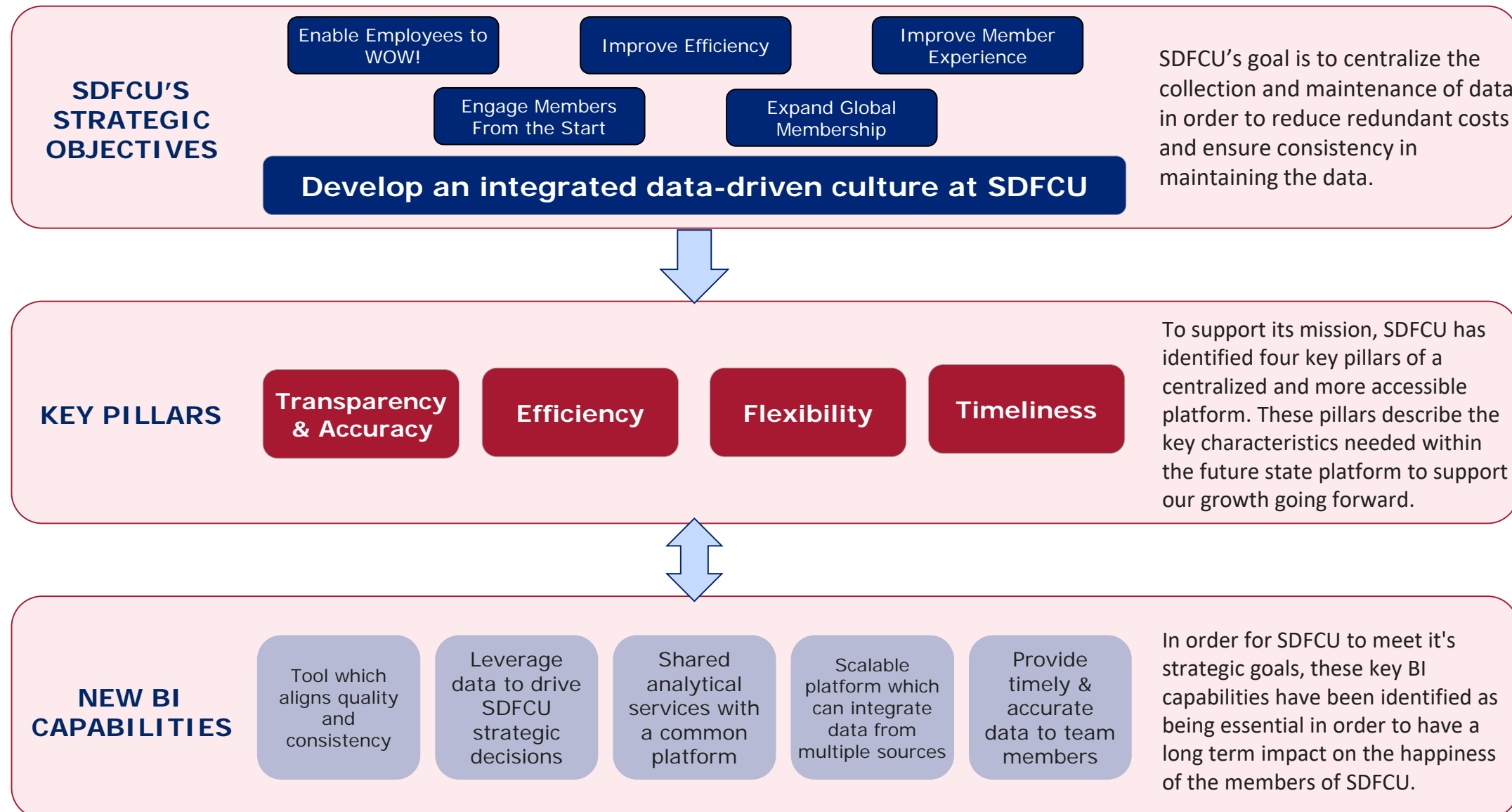
291 reports have not been executed since 4/24, **18** of which are 'custom' reports, the rest are out-of-the box

*Key reports, such as the **Milestone Report** is mostly generated from **manual** processes and not entirely from reporting in ARCU*

After a considerable review of the ARCU platform and meeting with the business users, the team was able to determine that it didn't fully meet our needs going forward as the source of data for the analytical platform here at SDFCU.

Data Value Drivers

The new platform has started to reduce operational friction and is providing SDFCU's end users with clean, accurate and easily accessible data.



SDFCU Data Platform

The data platform has begun to reduce operational friction and is providing SDFCU's team members with clean, accurate and easily accessible data while leveraging cloud technologies for flexibility and scalability.

Key Benefits

Transparency & Flexibility

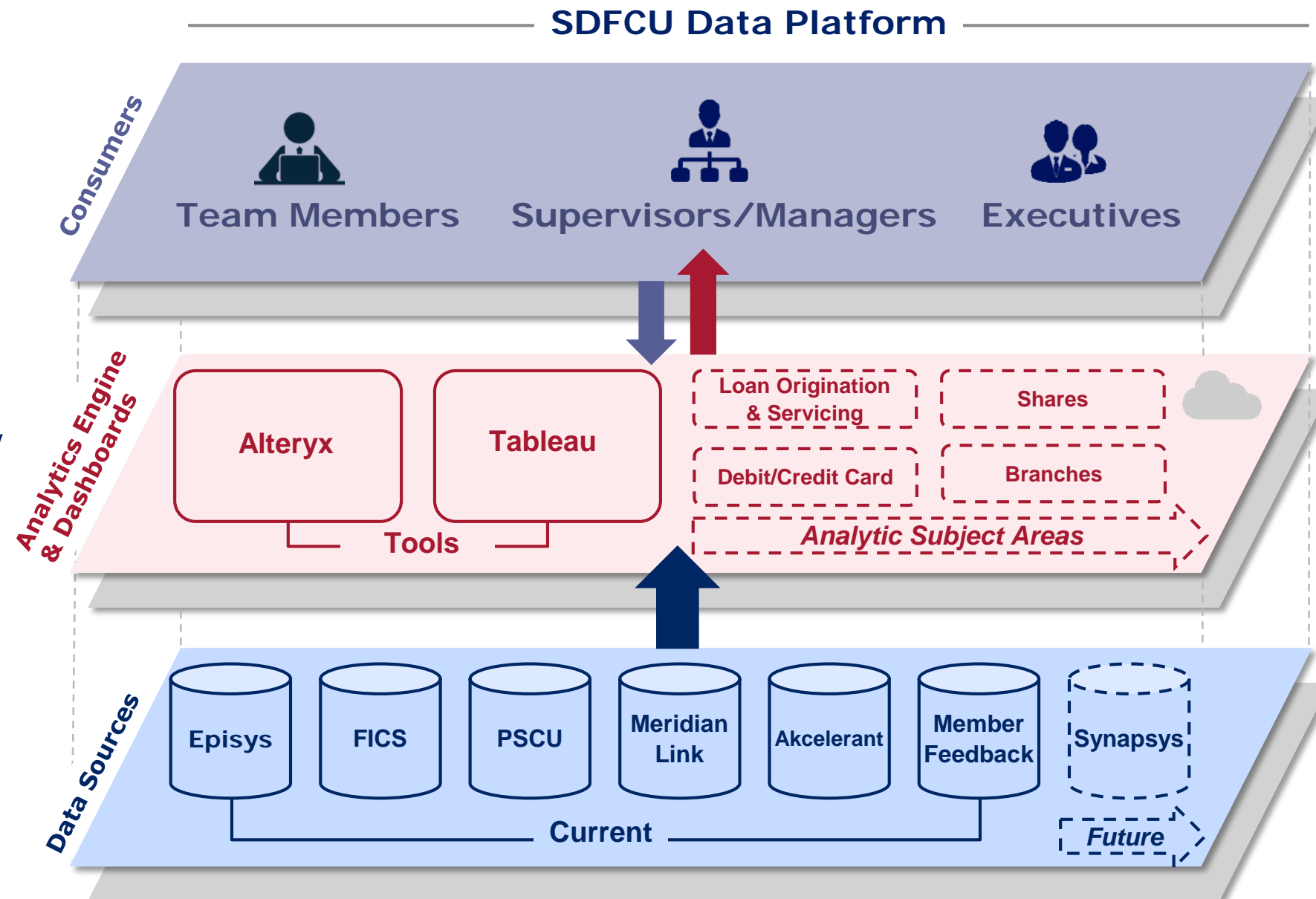
- Implementation & Integration of new products and tools (integration of new data sets)
- Ability to respond quicker to member needs and regulatory changes

Insight-Driven

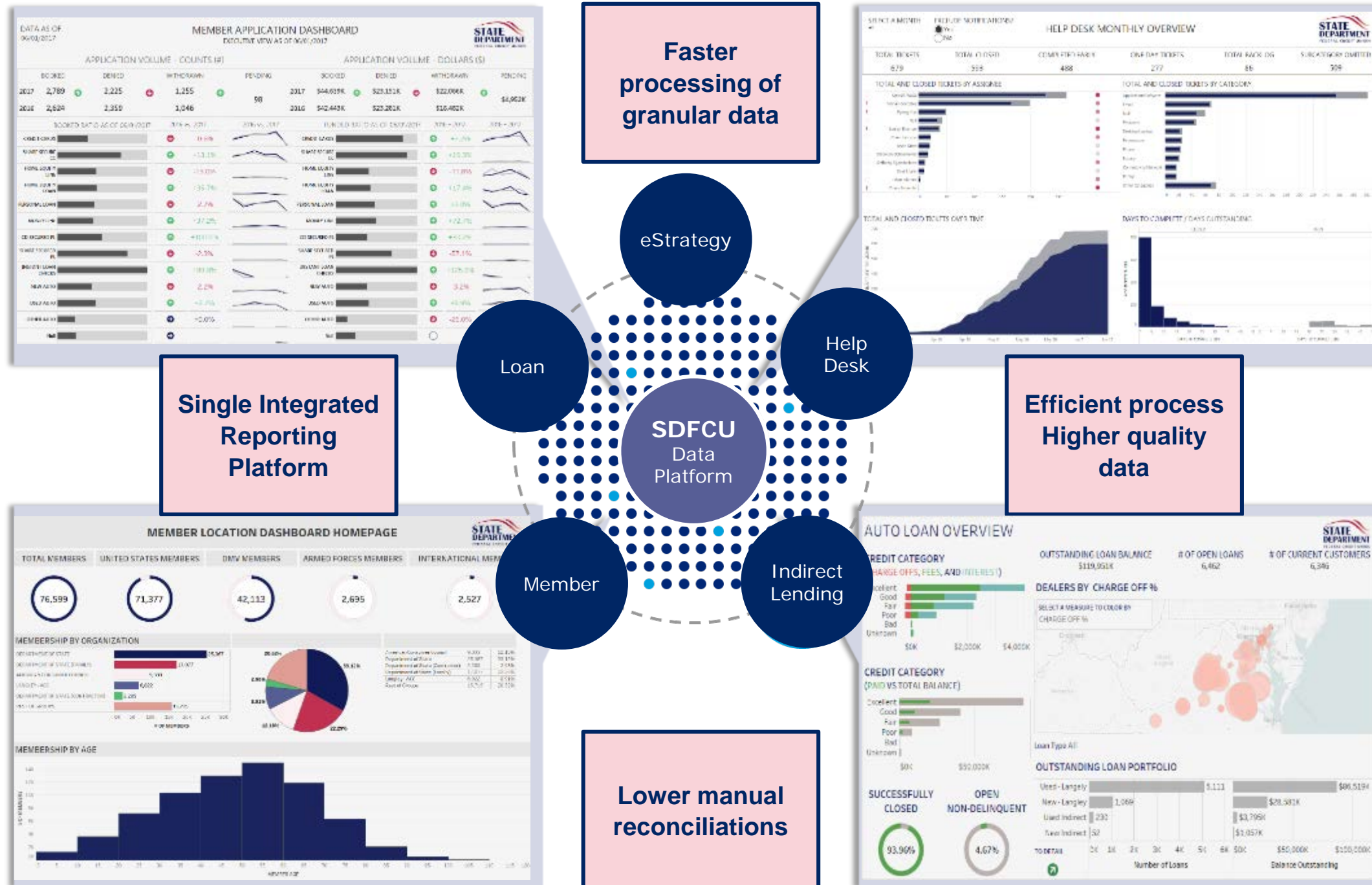
- Business Insights, not just metrics
- Ability to quickly analyze and review business scenarios

Single Platform

- Data transparency and traceability across the enterprise
- Vastly reduce manual intervention

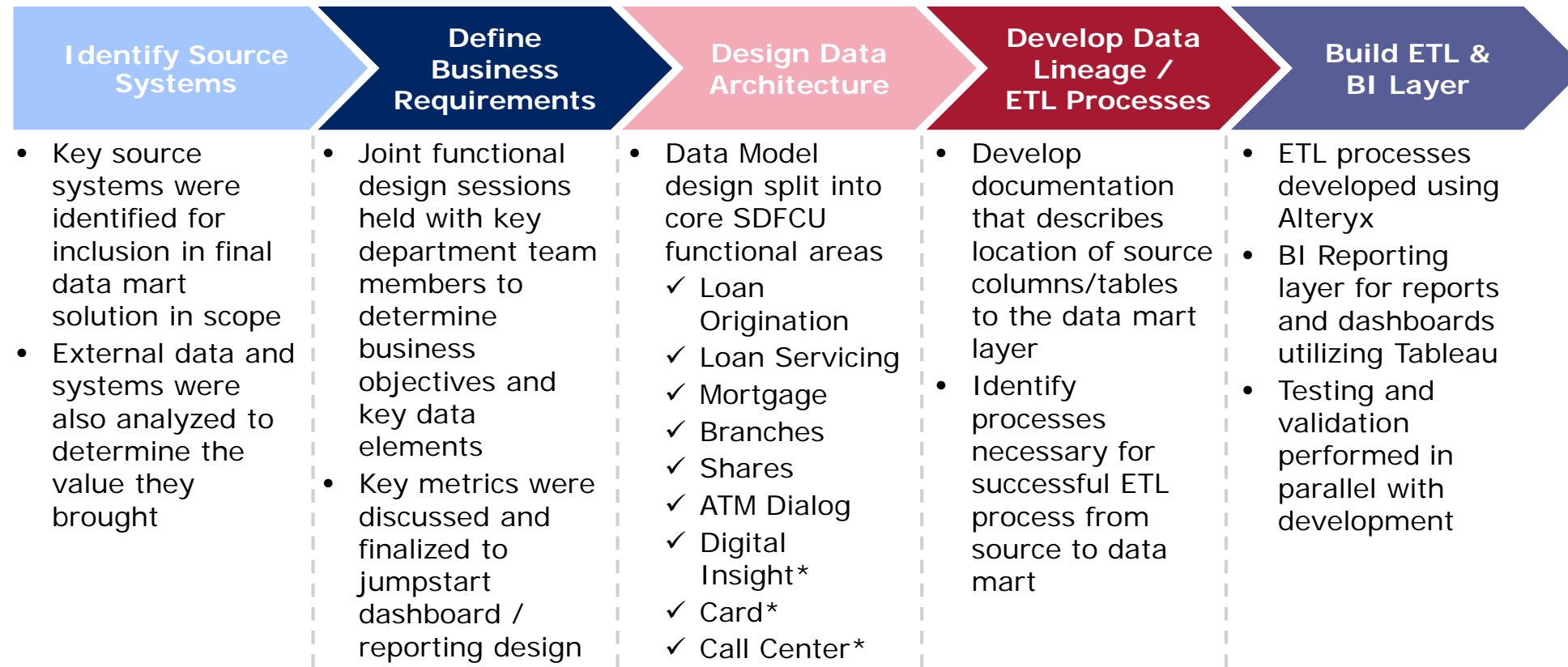


Data Platform Insights



Approach

Our approach included collaborating with the various business units around SDFCU to enable them to have success with enhancing their use of data and reporting.



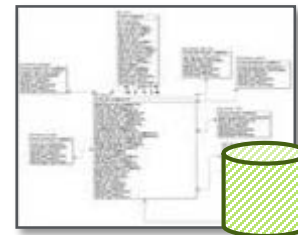
Work Products



Functional Design Document



Technical Design Document



Logical & Physical Data Model



Data Lineage Document

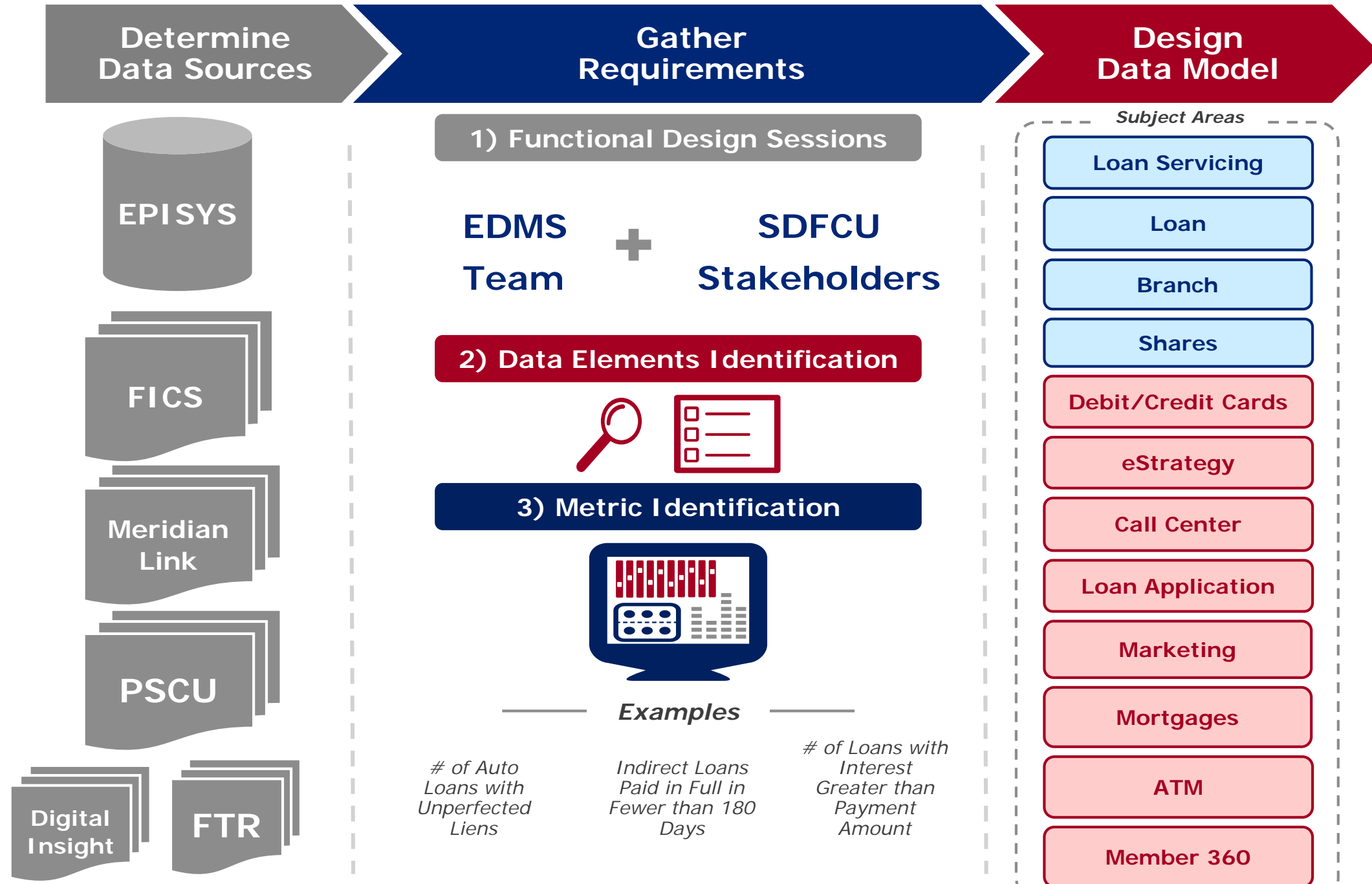


Tableau Dashboards

* In scope for a upcoming data marts

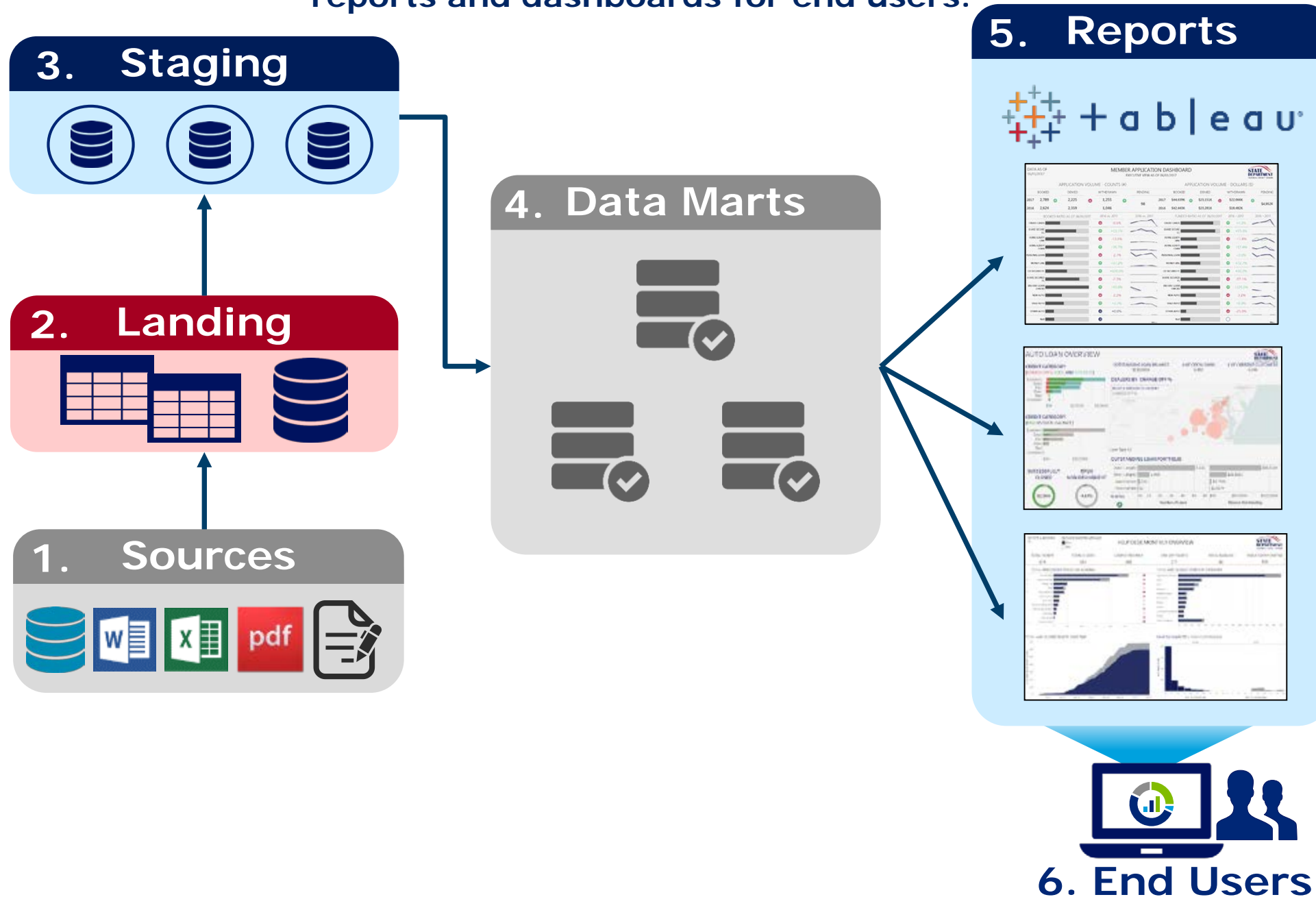
Approach Cont'd

The key inputs to our logical data model included extract files from each source system which were in scope, along with the detailed requirements gathered in speaking with the stakeholders for each Subject Area.



Conceptual Data Architecture

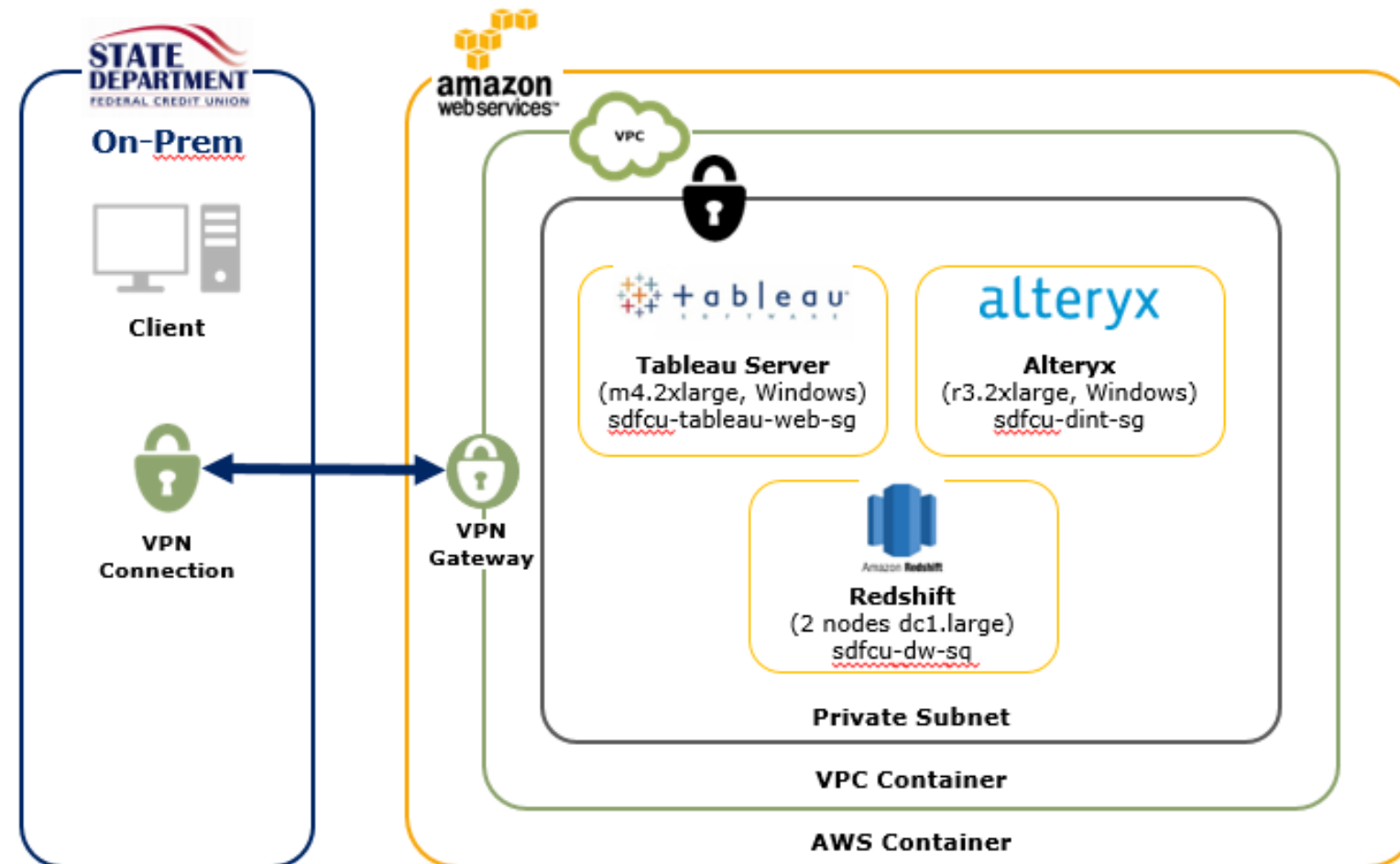
The high level conceptual data architecture establishes the flow, transformation, storage and consumption of data to enable the creation of reports and dashboards for end users.



AWS Analytics Architecture

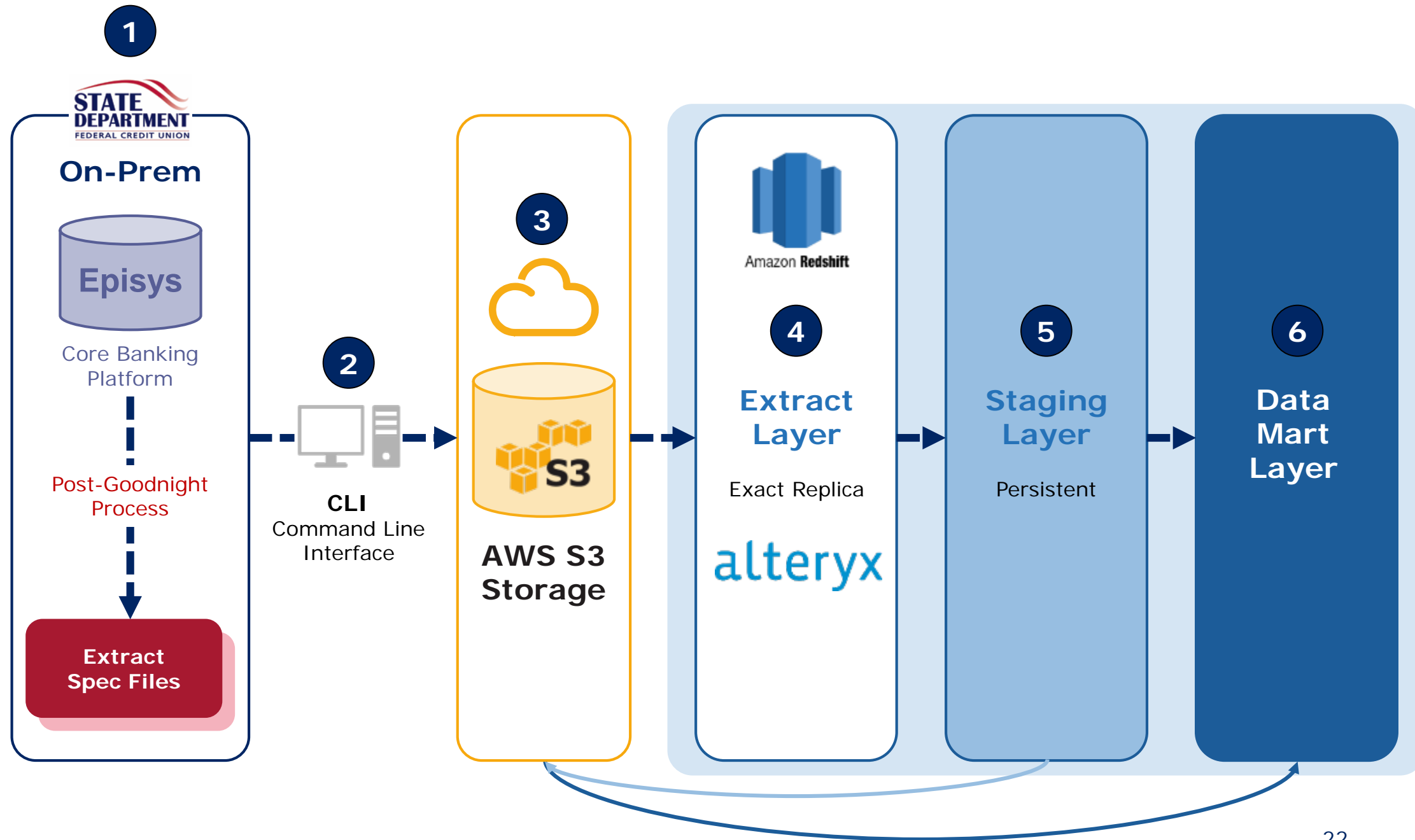
Benefits

- Data remains secure in the cloud. The Amazon Virtual Private Cloud acts as an extension of the SDFCU network.
- The cloud allows for increased scalability and flexibility. We now only pay for the hardware/processing power that we need, without having to allocate resources to maintain the systems.
- Alteryx and Tableau are business user-centric tools with a generous learning curve.



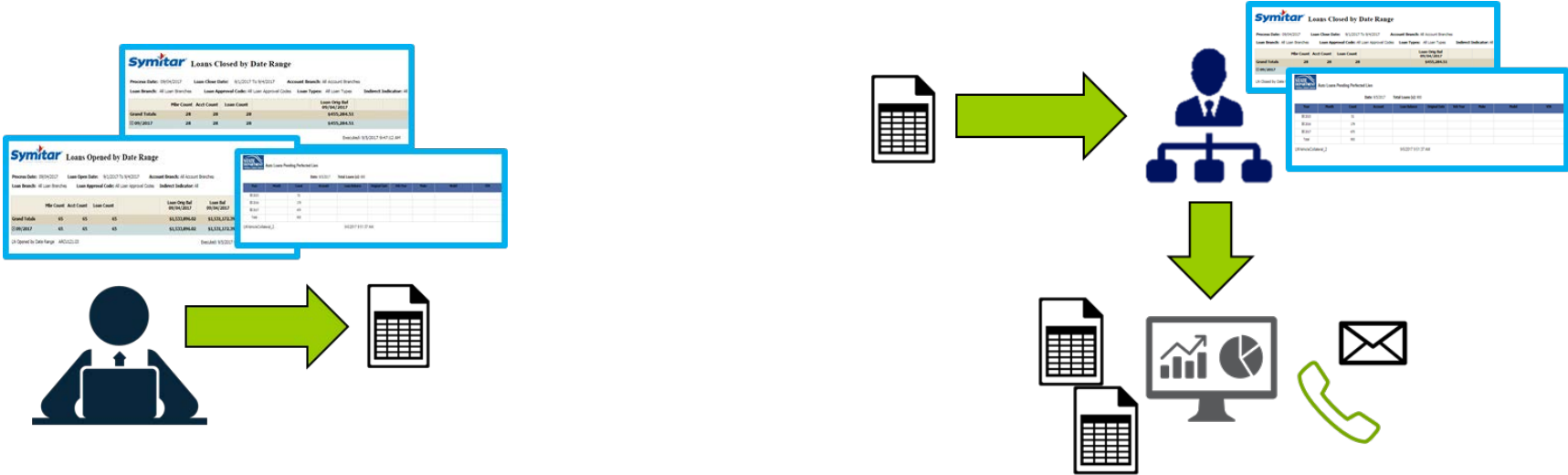
There are currently over 300 Credit Unions that are on AWS cloud platform, including Partner's Federal Credit Union and Vibrant Credit Union.

Episys Data Extract Strategy



Loan Servicing Current Process

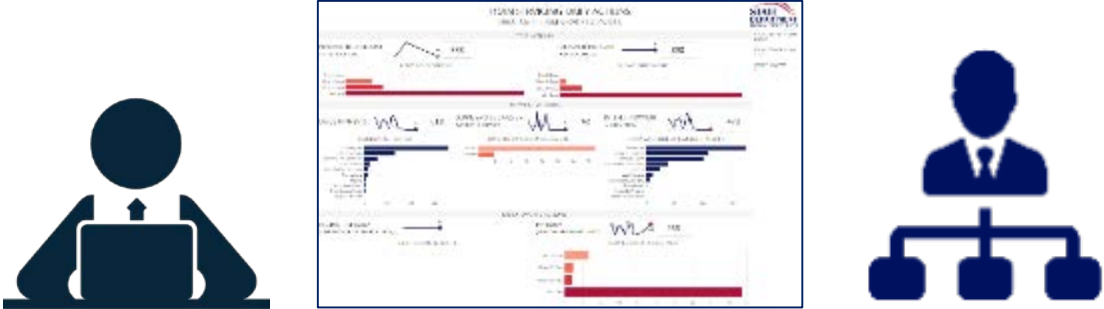
Pending Title Release Daily Task Example – Current State



1 Team member looks at several ARCU reports and creates a list of titles to close

2 Team lead receives information from Team member and looks at several ARCU reports to confirm task; has to get information to perform auxiliary tasks such as calling or emailing a dealer and summarizing information into an aggregate report








Pending Title Release Daily Task Example – Future State



- ✓ Both Parties only need to look at One Dashboard which creates a Single version of the Truth
- ✓ You can drill down to get a detail view for the team member and drill-up for a summary view for the team lead
- ✓ Highlighted Metrics and Visualization helps focus information into actionable items

Loan Servicing Benefits

The Loan Servicing Operational Dashboards have helped the team be more efficient with their time and resources.

Benefits	Insights
 <p>'Actionable' Dashboards</p>	 <p>Reduce time and effort processing information across SDFCU</p>
 <p>Metrics and Visualizations guide the user and focus on insights</p>	 <p>Centralize information and establish 'single version of the truth'</p>
 <p>Process improvement will save the team at least 2 hours per resource/per day (20 hours a week)</p>	 <p>Enable self-service dashboards and empower business users to improve process</p>
 <p>Efficiencies gained helps make time for other tasks such as calls to members</p>	

Example: Serving the Underserved

- ❑ Complex business requirements to define “underserved”
- ❑ Sources of data needed for classification:
 - US Census
 - American Community Survey
 - Geolocation data
 - Bureau of Labor Statistics
 - Active members at SDFCU
 - Loan data associated with members
- ❑ Barriers to analysis
 - External data difficult to obtain
 - Data need to be geocoded
 - Complex spatial calculations
 - Conformed SDFCU data needed

With the legacy technology stack, this query *would not* have been able to be answered.

Example: Serving the Underserved

Our approach included leveraging all of the components of our new data analytics technology stack.



Collect SDFCU Data

Query the Amazon Redshift data warehouse to gather and join member data with the products associated with those members



Gather Internal and External Data

Load a mix of Alteryx provided (e.g. Census, American Community Survey, TomTom) and external datasets



Calculate Metrics for Geographic Areas

Apply business rules at the Census Block Group grain to determine underserved geographic areas



Apply Underserved Classification

Spatially join the geocoded SDFCU member data with the underserved area metrics to apply the underserved classification to members

Example: Serving the Underserved

Which of our members live in underserved communities?

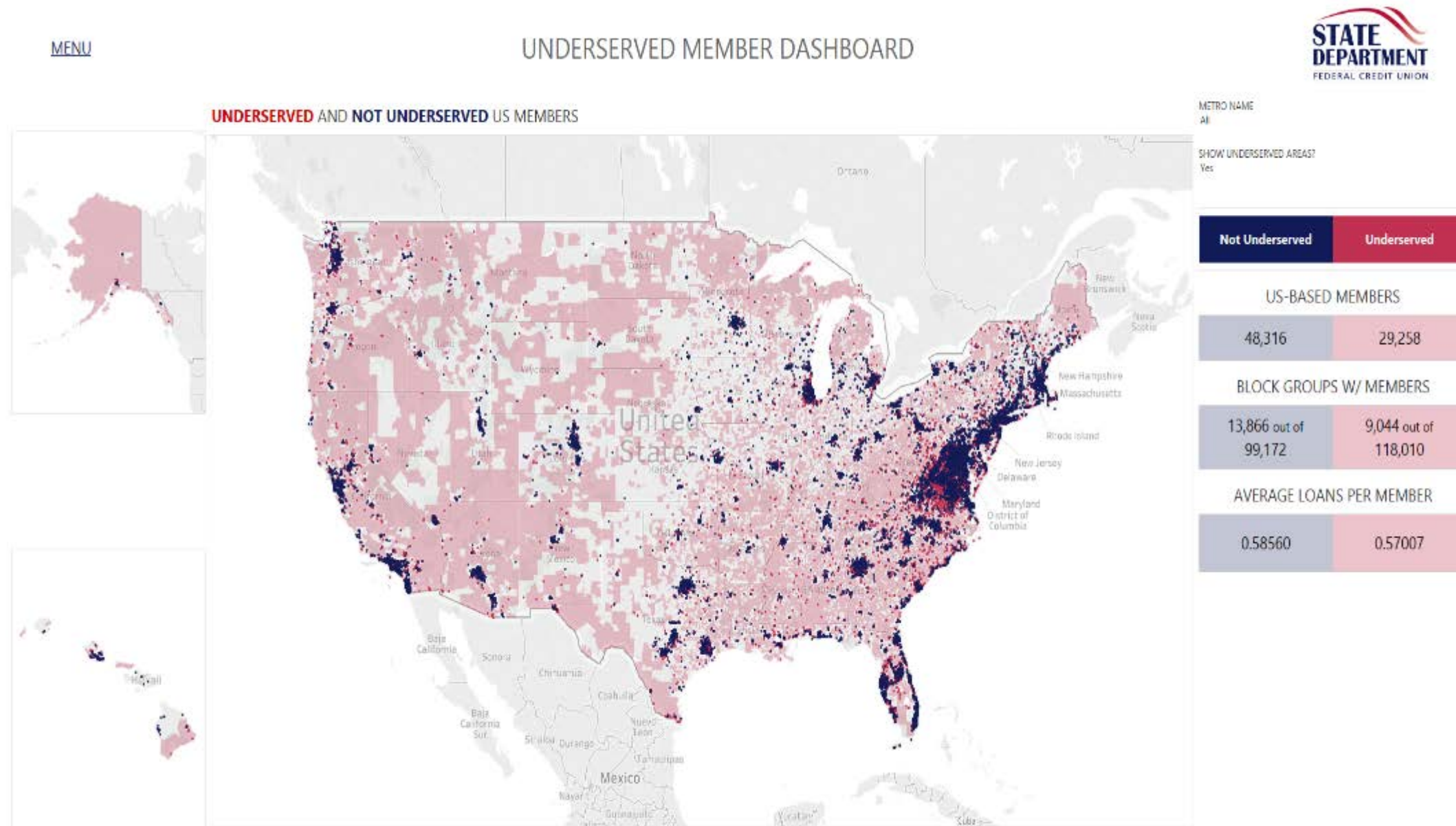




Tableau & Tell

Andrew Bertrand | Data & Technology Manager

Our Community Credit Union | Shelton, WA | abertrand@ourcu.com



Andrew kicked off the CUTUG's "Tableau & Tell" series.

We walked through a set of Our Community CU's dashboards on Tableau Server, which covered everything from indirect lending trends, marketing impact, and member-level loan performance. Check out his presentation in the recording from our meeting.

In this section of every virtual meet-up we will take a credit union dashboard and discuss its development, deployment, and the value it adds to departments, strategic initiatives, and (most importantly) members.

Want to Tableau & Tell? Contact us!



What's New In Tableau

Lauren Penticuff | Account Manager

Tableau Software | Washington, DC | lpenticuff@tableau.com



2018.1

Analytics

- **Hierarchy Filters**
- Step Lines
- Refit Clusters
- Hide Sheet for Viz in Tooltip

Spatial

- **Spatial Databases**
- **Dual Axis Mapping**

Tableau Online

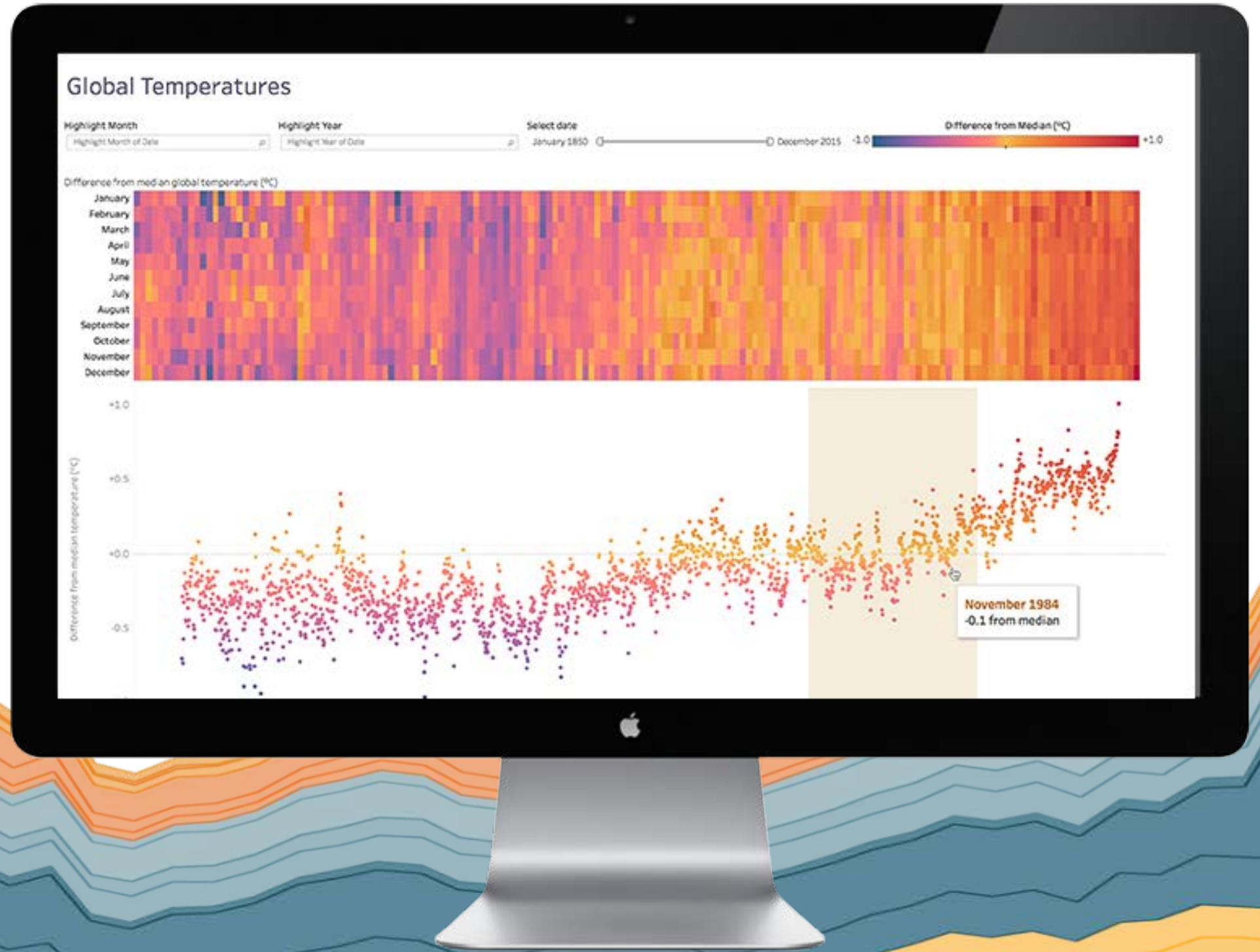
- Tableau Bridge
- Dashboard Starters

To The Web

- Create New Workbook
- Connect to Data
- Data Tab
- Replace Published Data sources
- **Download as Older Version**
- Delete Comments



Analytics



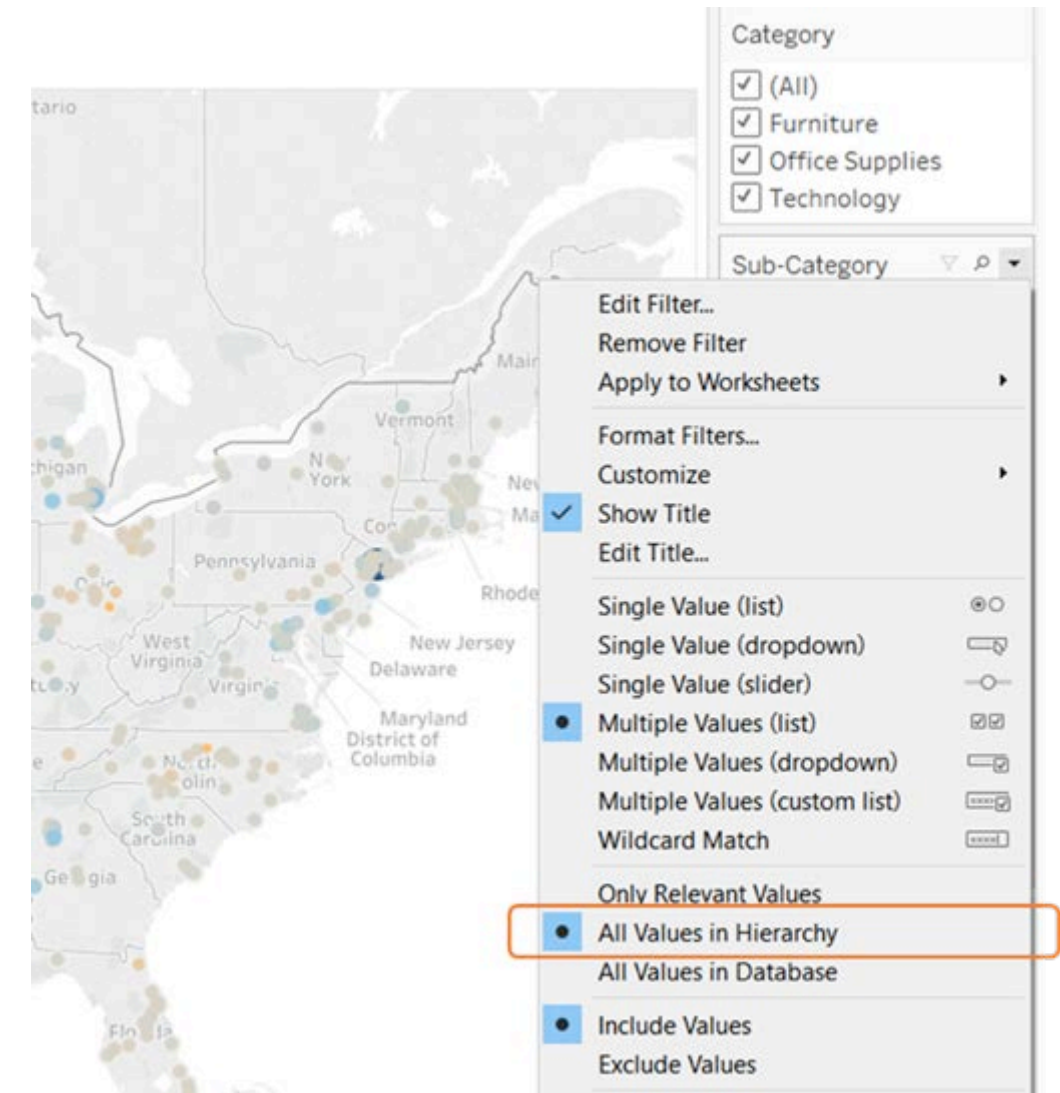
Hierarchy Filters

Improved Filter Semantics

Only Relevant Values' 2.0

Near instant query times for filters

- Snowflake & Star Schemas

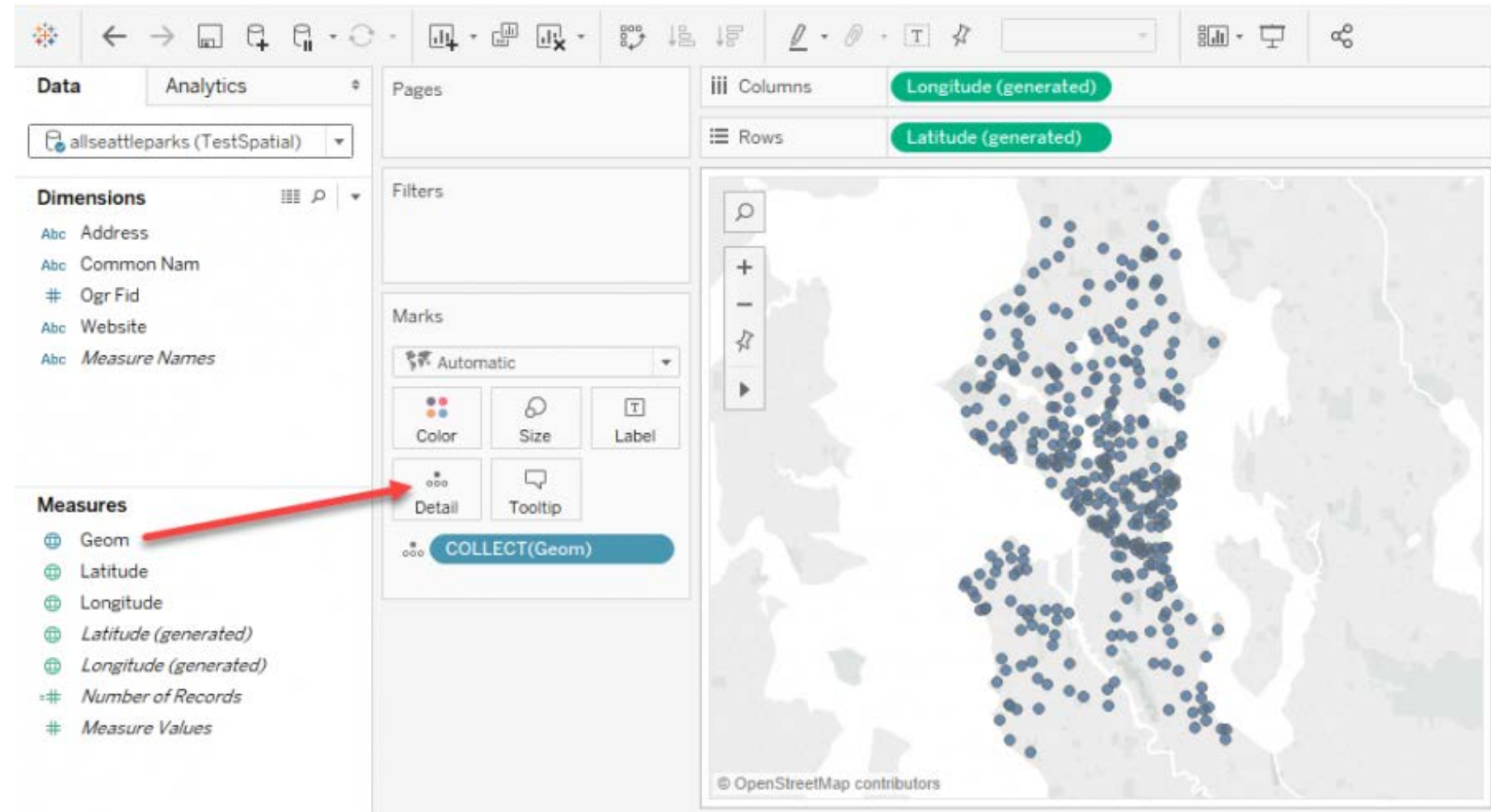


Spatial

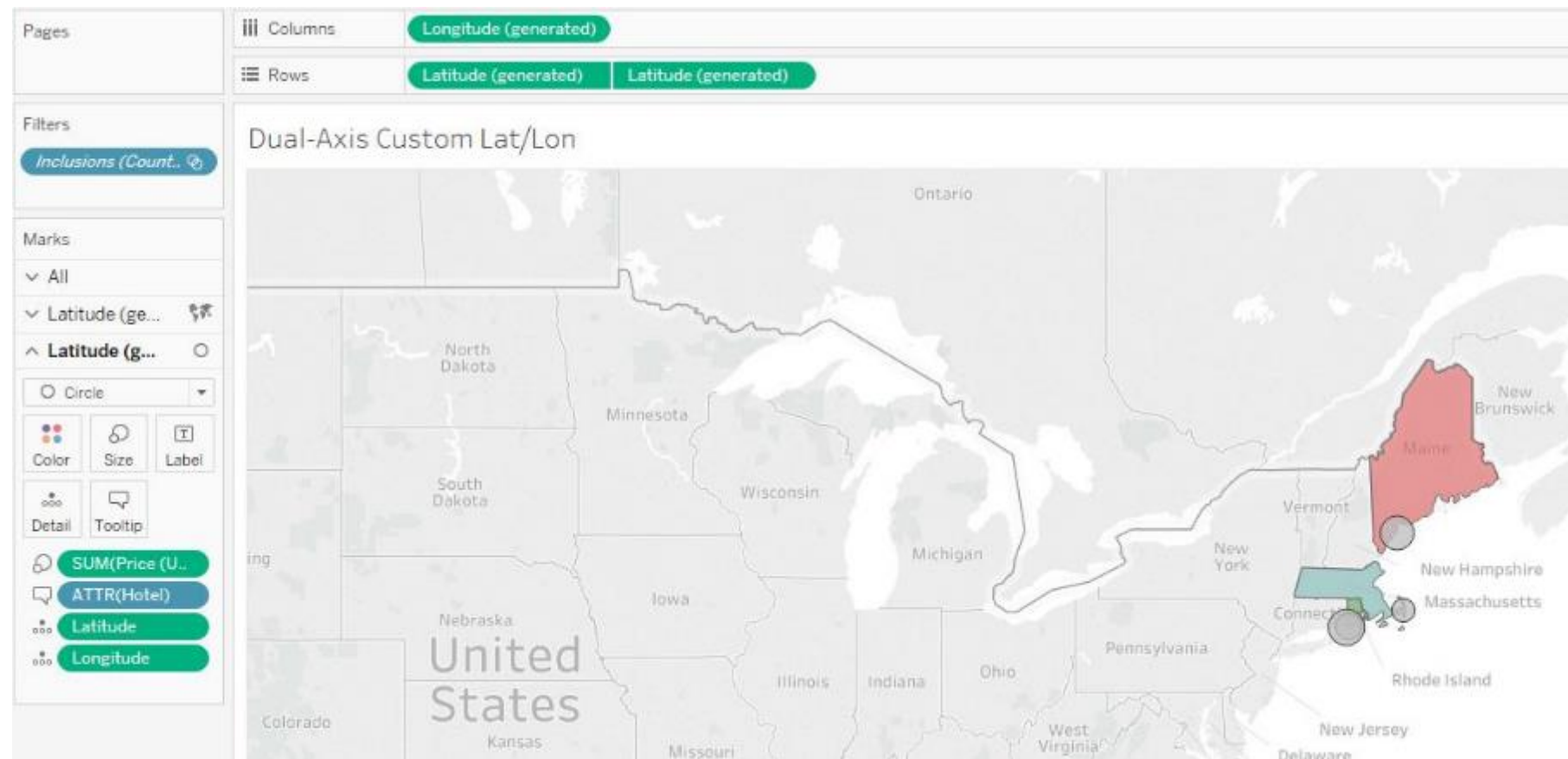


SQL Server Spatial Data

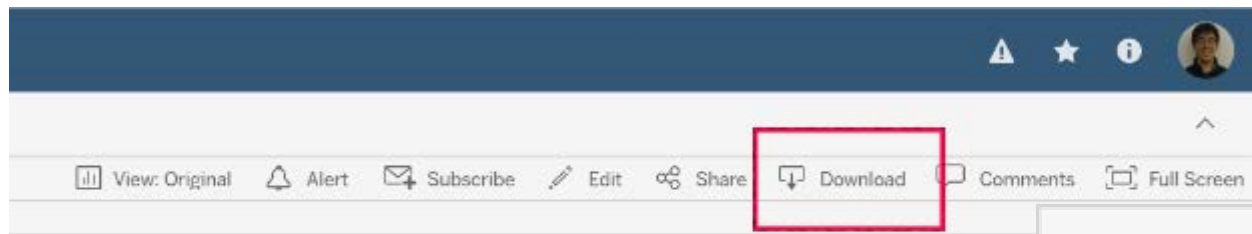
- Microsoft SQL Server only
- Extract to increase performance



Dual Axis Mapping for Custom and Generated Lat/Lon



Download As...



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Download Tableau Workbook

Select a version to download the workbook as. Keep the workbook in its current version or select a different version. If you downgrade the workbook to a previous version, some functionality may be lost. [Learn more](#)

Version

Current

- Current
- Tableau 10.5
- Tableau 10.4
- Tableau 10.3
- Tableau 10.2



2018.2

Analytics

- **Dashboard Extensions**
- **Nested Sorting**
- Negative Log Axis Values
- ISO 8601 Date Standard

Design

- Dashboard Grids
- Precise Positioning
- Transparent Objects
- Automatic Mobile Layouts

Mapping

- **Spatial Joins**
- Geocoding Updates

Connectors

- Intuit Quickbooks Enhancements

Collaboration

- **@Mentions**
- Custom Subscription Schedules
- Web Authoring

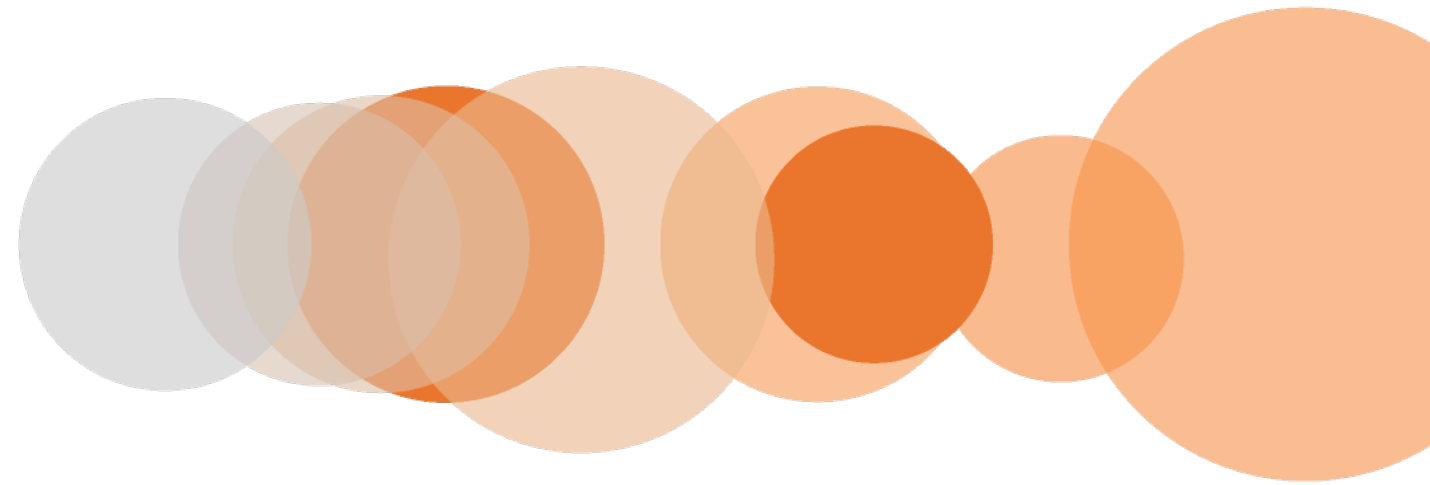
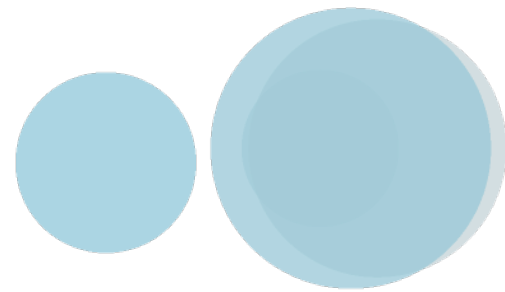
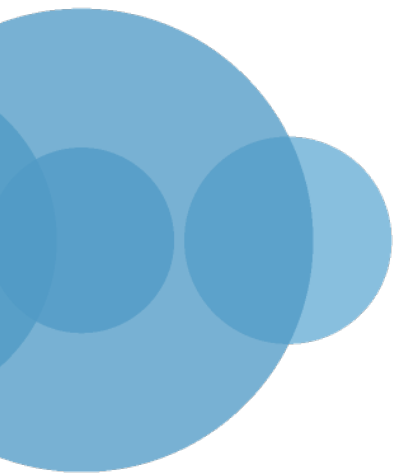
Administration

- Server Admin Improvements
- **TSM**
- Tableau Bridge Install
- Job API

Prep

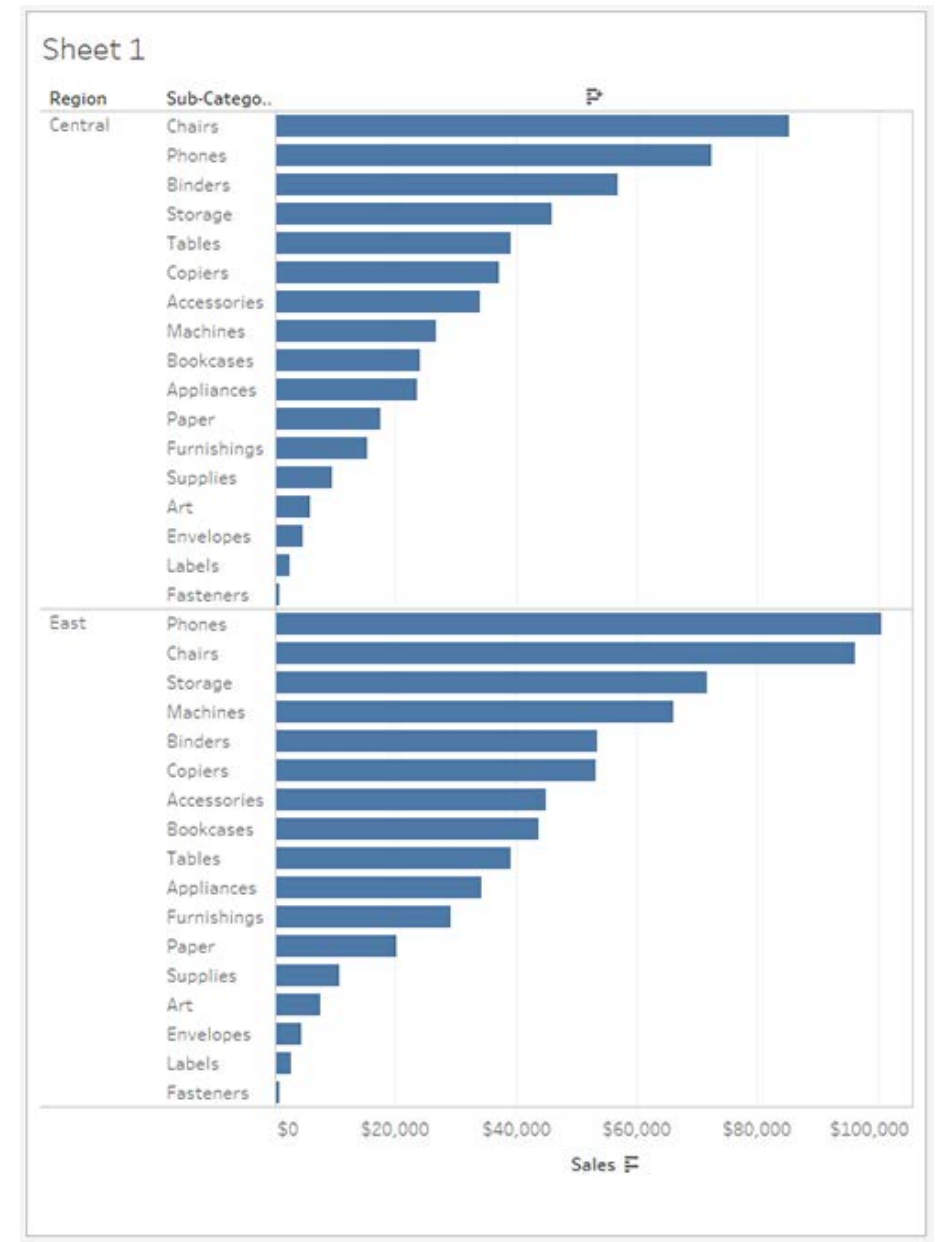
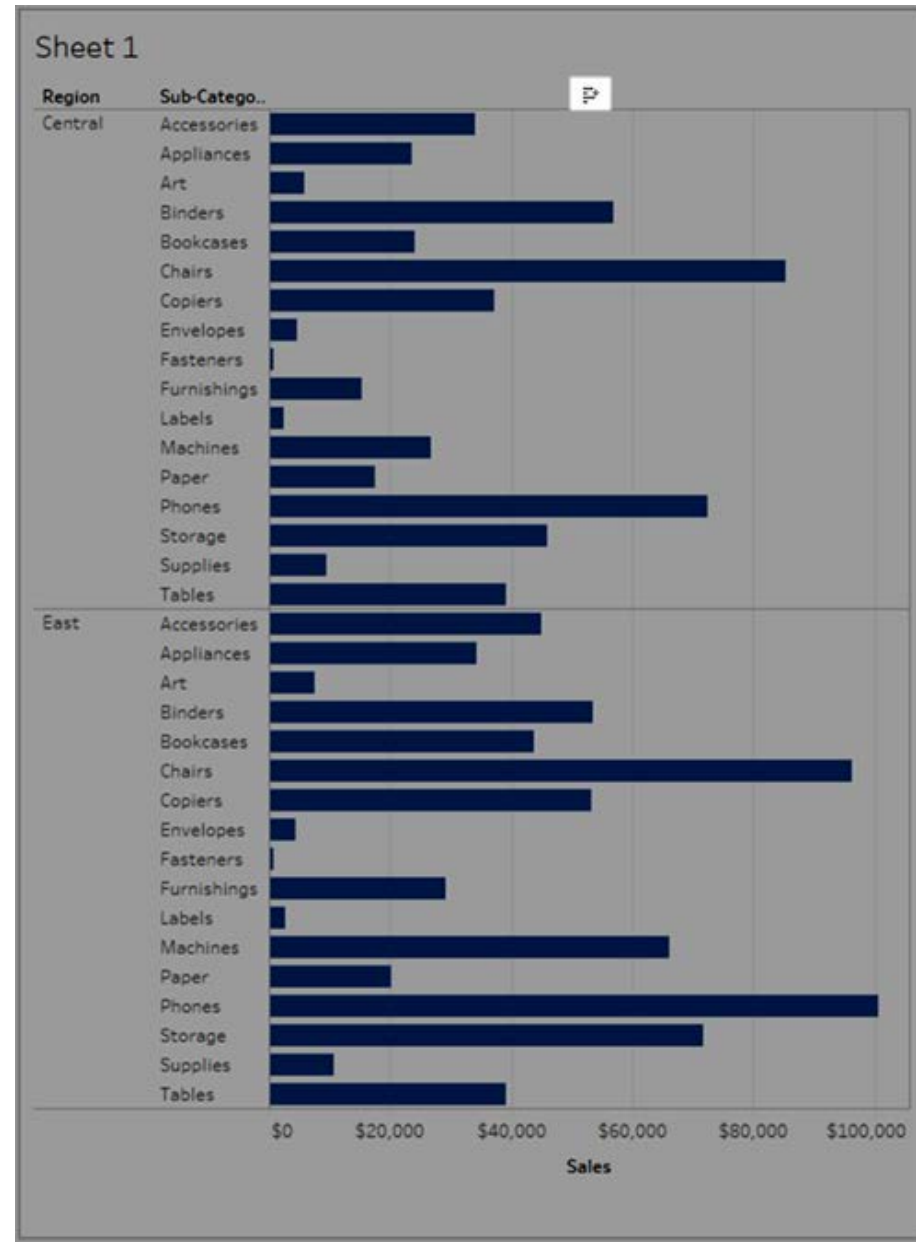
- New Data Connectors
- Union Mismatch Summary
- Multi-Select Values and Group
- Show Mismatches for Non-Equal Joins
- Filtering Improvements
- Icon Improvements

Analytics



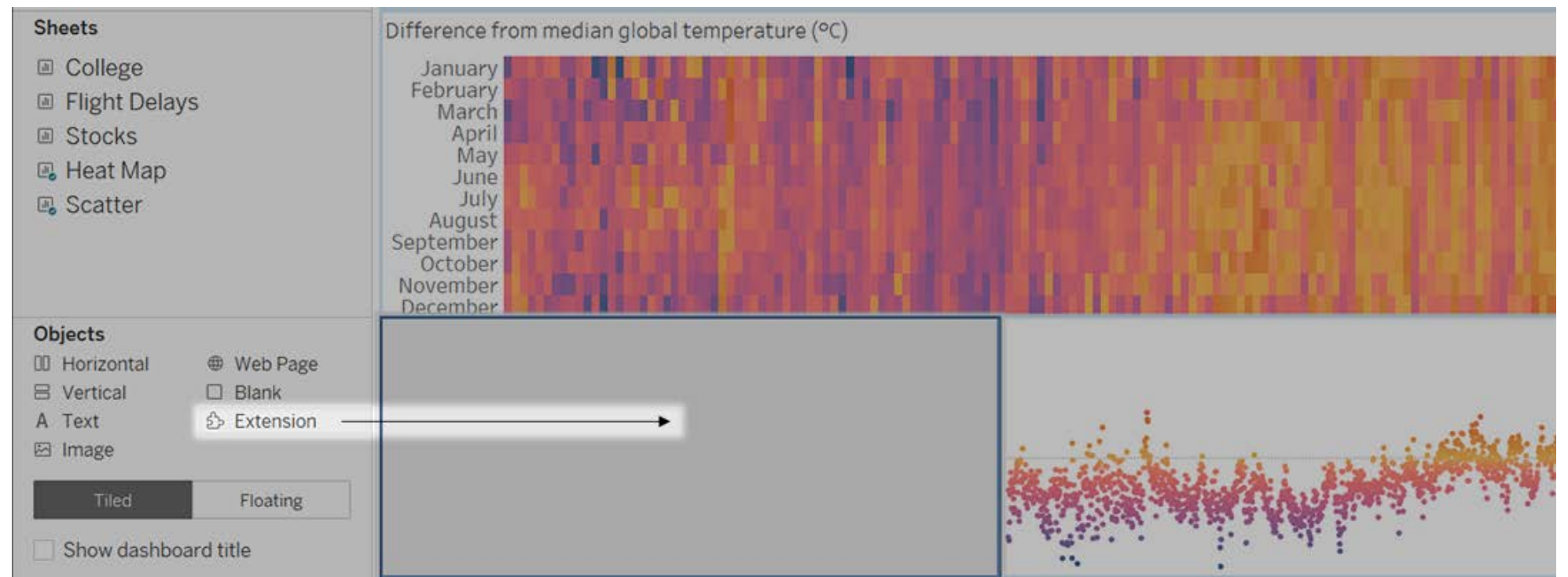
Nested Sorting

- Intuitive sorting when using multiple panes

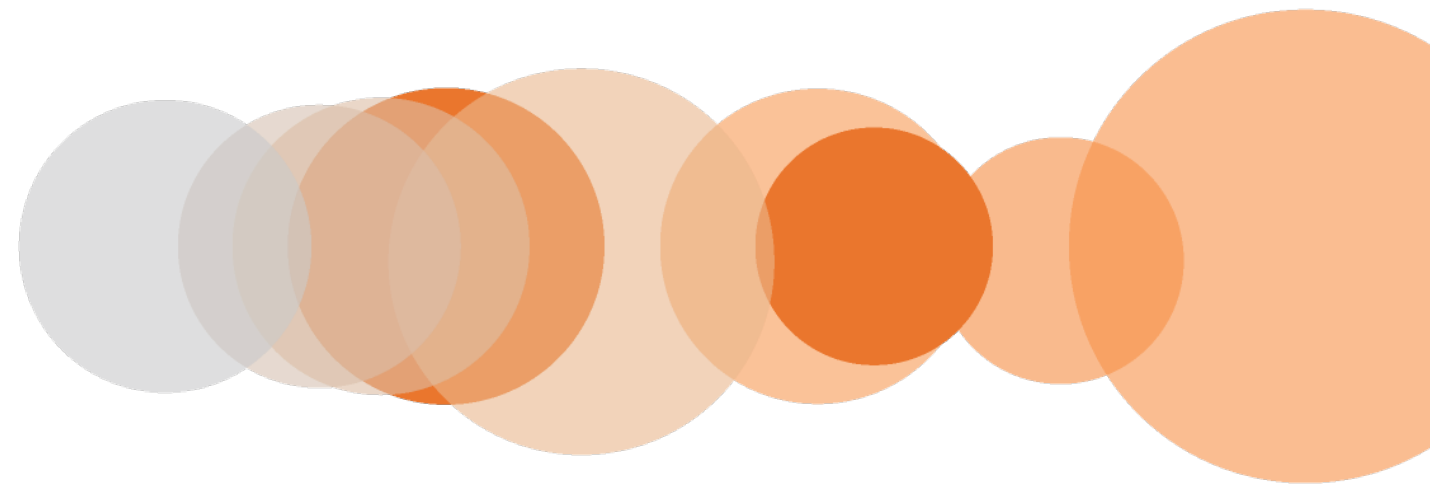
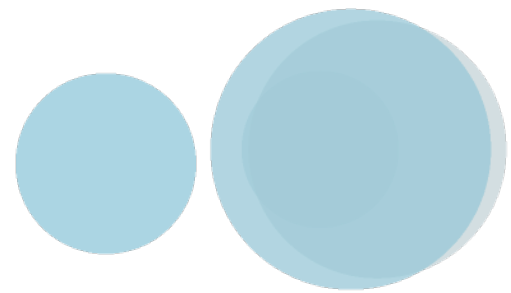
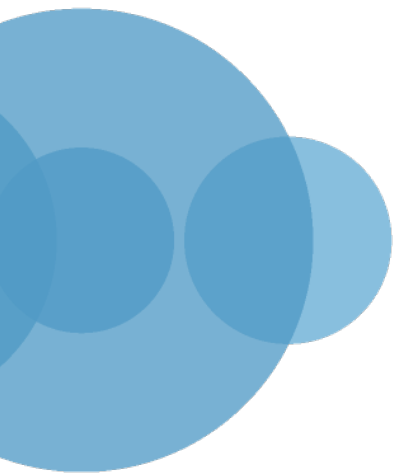


Dashboard Extensions

- Custom Objects
- Integrate with your Applications
- Explore existing [Extensions in the Gallery](#)

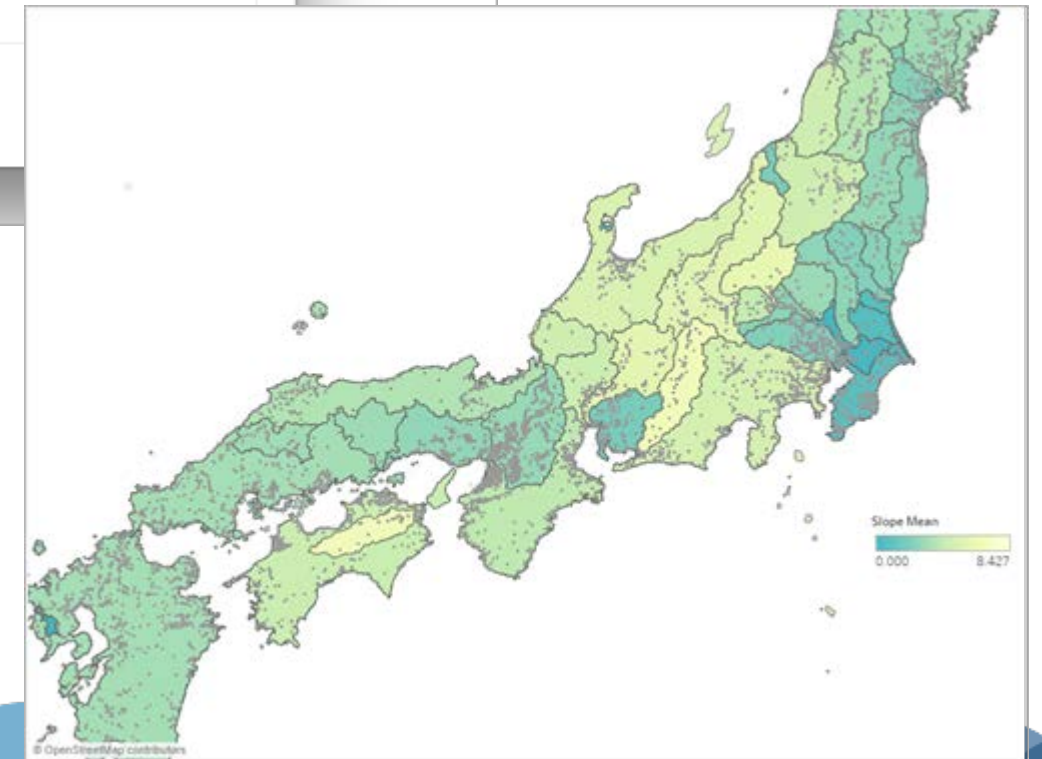
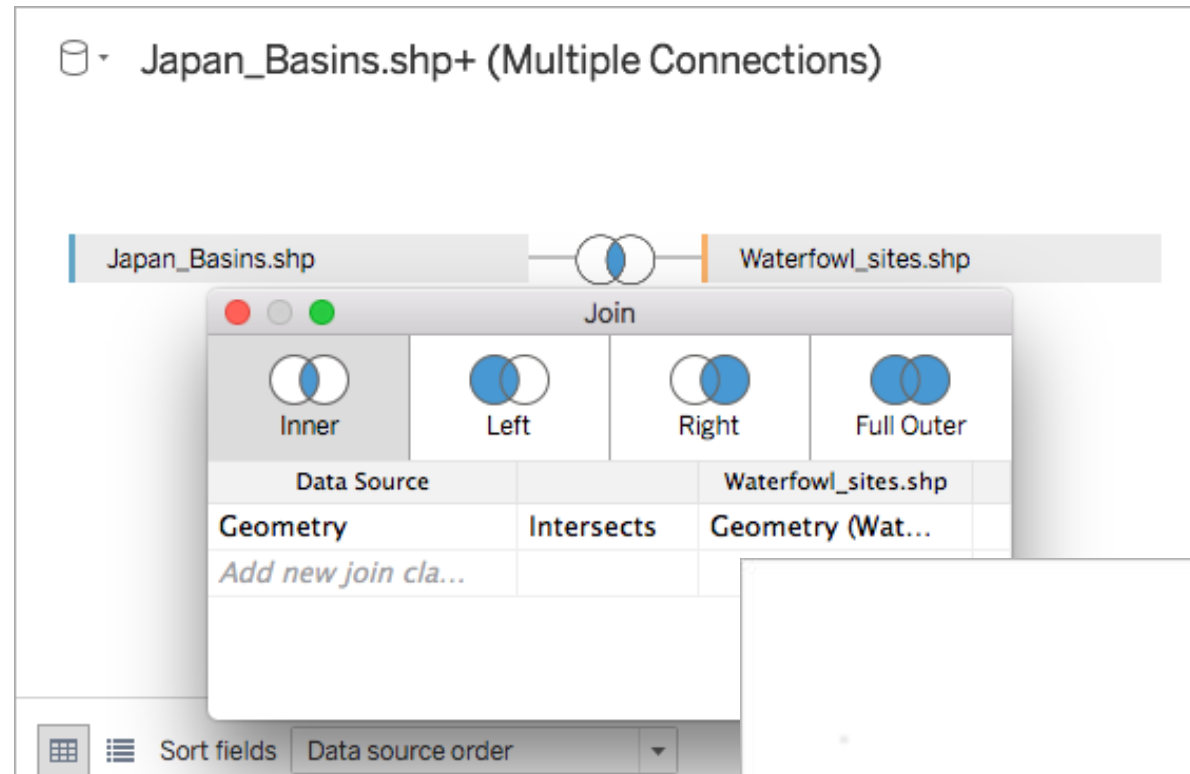


Mapping

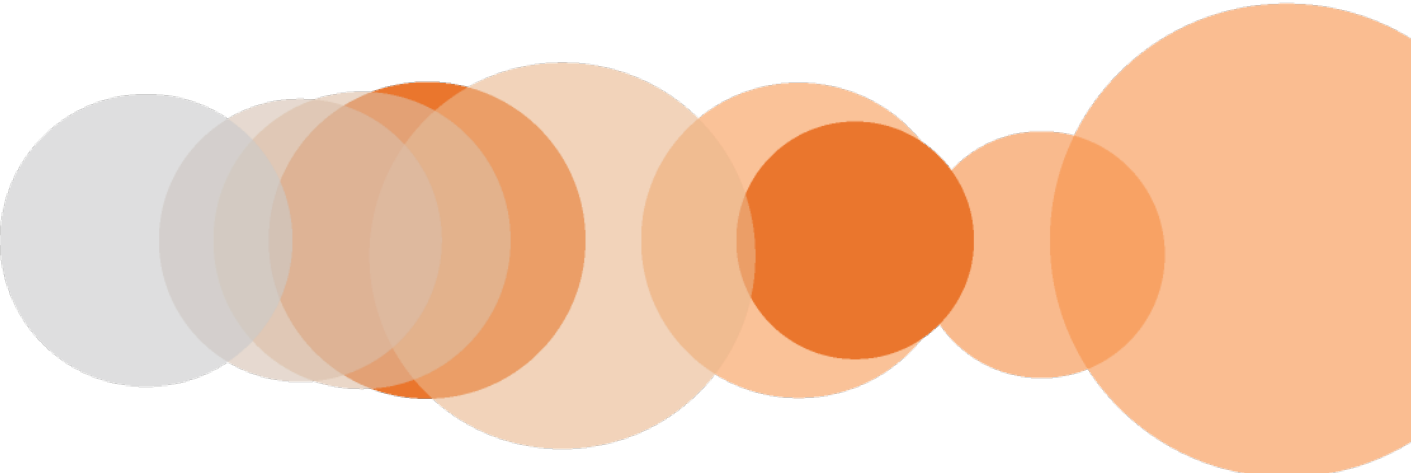
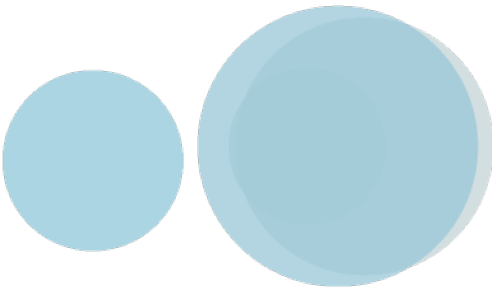
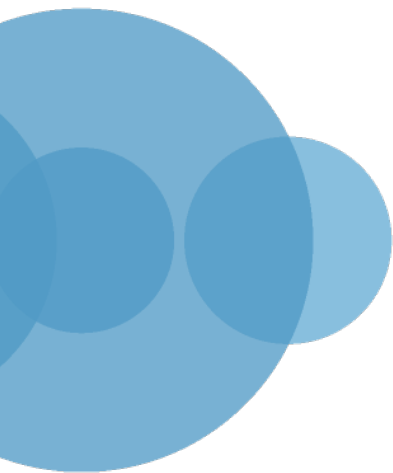


Join Intersecting Spatial Data

- Spatial Files & MSSQL
- Cross Data source
- Join on “Intersect”




Collaboration



@Mentions

Mon 7/16/2018 1:10 PM
demotableausoftware
Eli has mentioned you in a comment

To



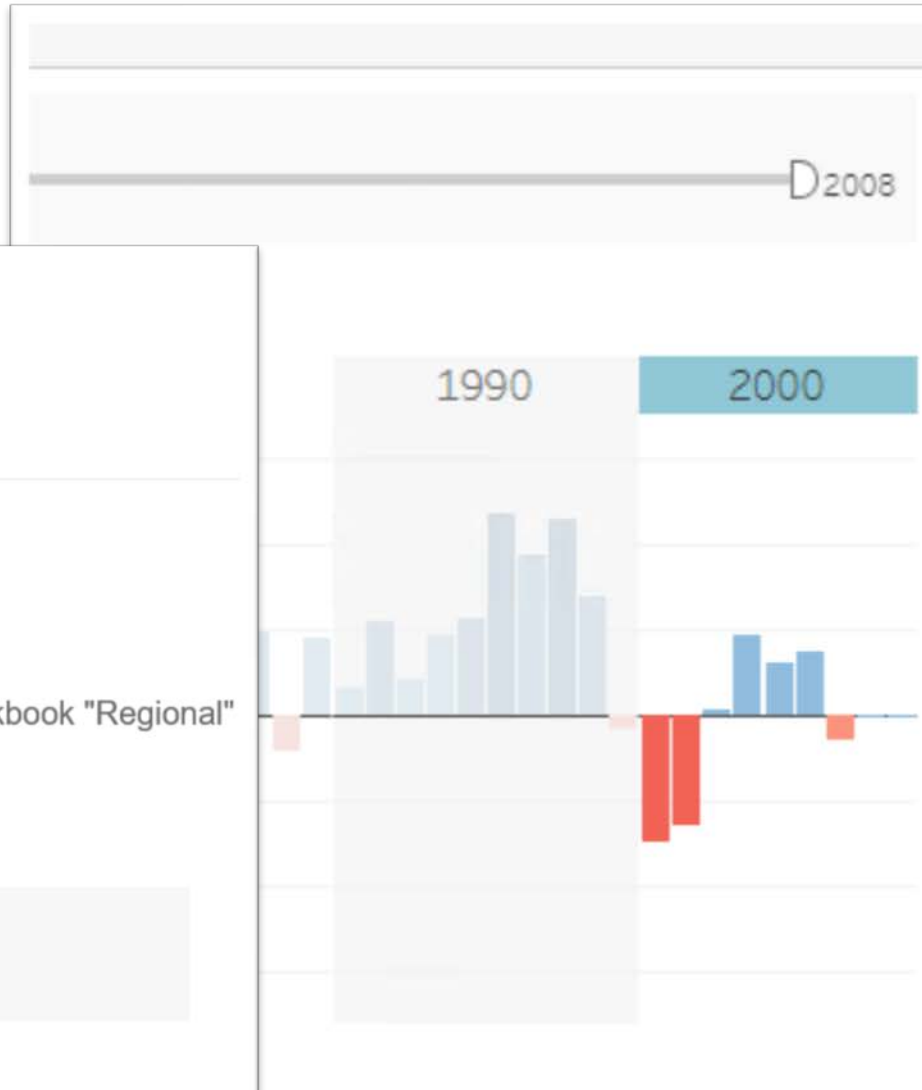
Eli mentioned you in a comment on the workbook "Regional"
Site: Default

Eli Jul 16, 8:10PM Z
What do you think of this trend @John?

[View in Tableau](#)

Click on the button to view the viz. Do not reply to this email.

You are receiving this notification because you were mentioned by in a comment on the workbook [Regional](#) on [Tableau](#).
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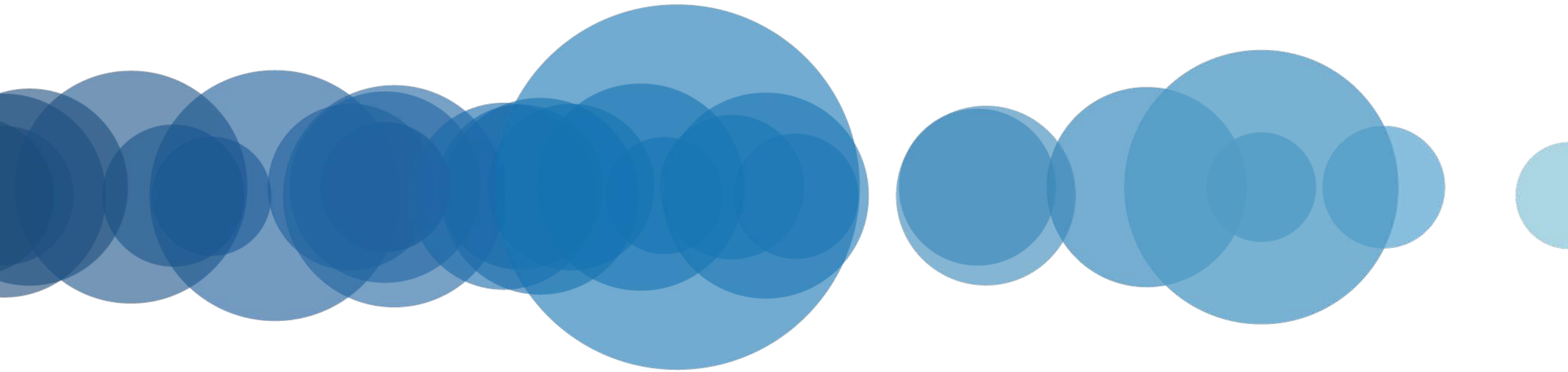
Eli 8:10 PM
What do you think of this trend
@John ?

GBP Economic Indicators

3 Years for Year and Decade

Market Conditions

Administration



TSM

- Web-based Server Configuration & Management application
- First introduced with Tableau Server on Linux in 10.5



Why and What's New with TSM?

Flexibility & Ease of Automation

- Admins can access the TSM via CLI, Web GUI, or directly hit the REST APIs

No more primary + worker(s)

- All nodes in a cluster are peers; backup primary is no longer required

Hot Topology

- Change the # of Backgrounder & VizQL processes without restarting Tableau Server

Faster Upgrades & Minimized Downtime

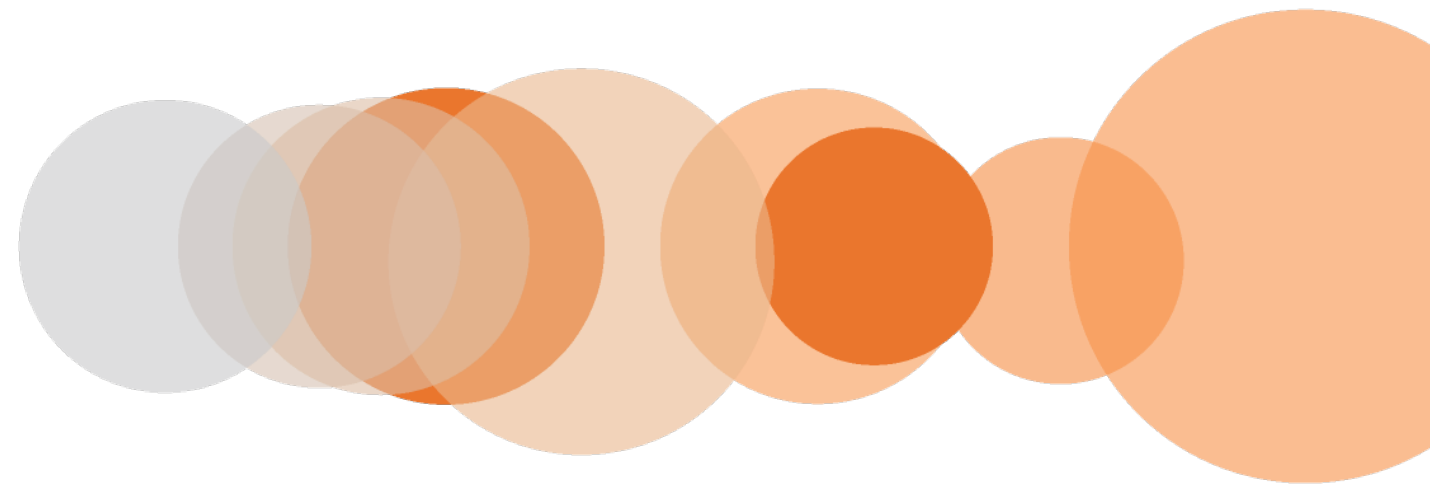
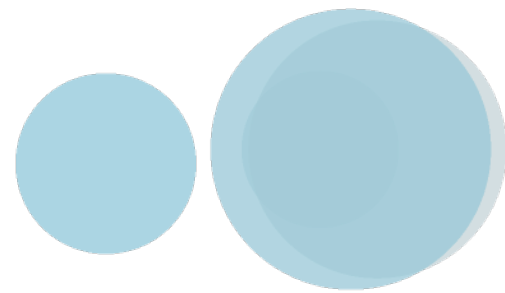
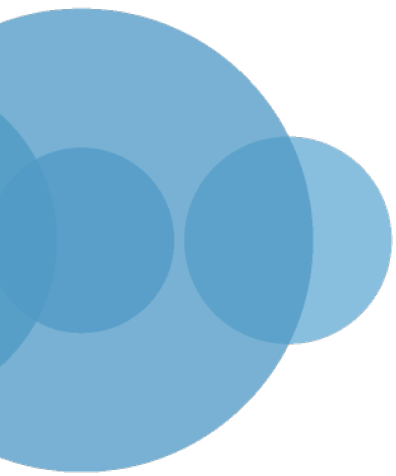
- New upgrade paradigm minimizes downtime during an upgrade

Replaces

- Tableau Server Configuration, Manage License Keys, Tableau Server Monitor Utilities, Tabadmin



Prep 2018.2



Attending conference? Stay tuned for info on
our CU meet-up!

TABLEAU

CONFERENCE

#TC18 New Orleans Oct 22-25



We Want YOU!

Don't Forget: Join the Online Conversation

Tableau Community Forums

Forums ▾ Ideas User Groups ▾ Events Resources ▾

Credit Unions


Connect with others from the Credit Union industry to improve how we use analytics to drive value for our members.

Following in 1 stream

Actions ▾ **Overview** Activity Content People Reports

<https://community.tableau.com/groups/credit-unions>

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Owned by:
Jessica Waydelis, Charlotte Taft, Aania Aclam

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Please join us - just log in (creating an account is easy if you don't have one!) and click Join This Group.

Register Now: Virtual CU Tableau User Group Meeting

In the meantime:

- Ask a question!
- Post an interesting article or workbook you're proud of
- Take our poll

Ask a Question

Ask your question...

BEGIN

Actions

- Join the online community
- Ask a question
- Share a viz
- Solve a problem

Interested in speaking?

Interested in hosting?

Interesting in planning?

Got ideas you want covered?



WE WANT YOU!
FOR THE CUTUG!

Contact Us

Charlotte Taft | ctaft@callahan.com