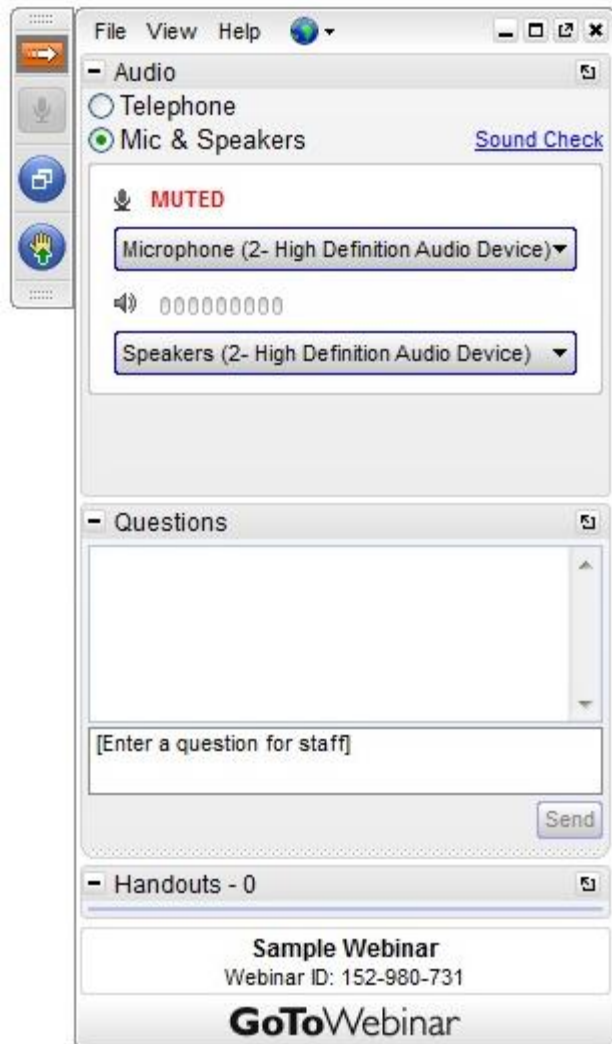# SENTURUS

ADVANCED ANALYTICS IN TABLEAU: USE THE FORCE!

Built-In Functions and 3rd Party Tools for Deeper Data Insights

GoToWebinar Control Panel
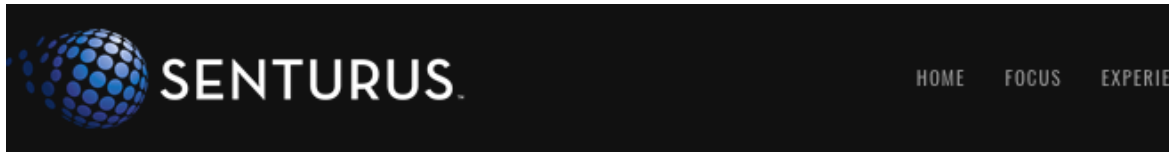

Click arrow to restore full control panel

Submit questions here

Presentation Slide Deck
www.senturus.com/resources/
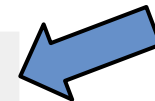
Agenda

- Introductions
- The Analytics Maturity Curve
- Tableau's Built-In Advanced Analytics
- Tableau's Options for Advanced Analytics
- Open Source Programming Languages
- Clustering Demo Using Tableau
- Time Series Demo Using R Integration
- A/B Testing Demo Using Alteryx
- Additional Resources
- Q&A and Wrap-up

Introducing...Today's Presenters

Arik Killion

Advanced Analytics Architect

Senturus, Inc.

Michael Weinhauer
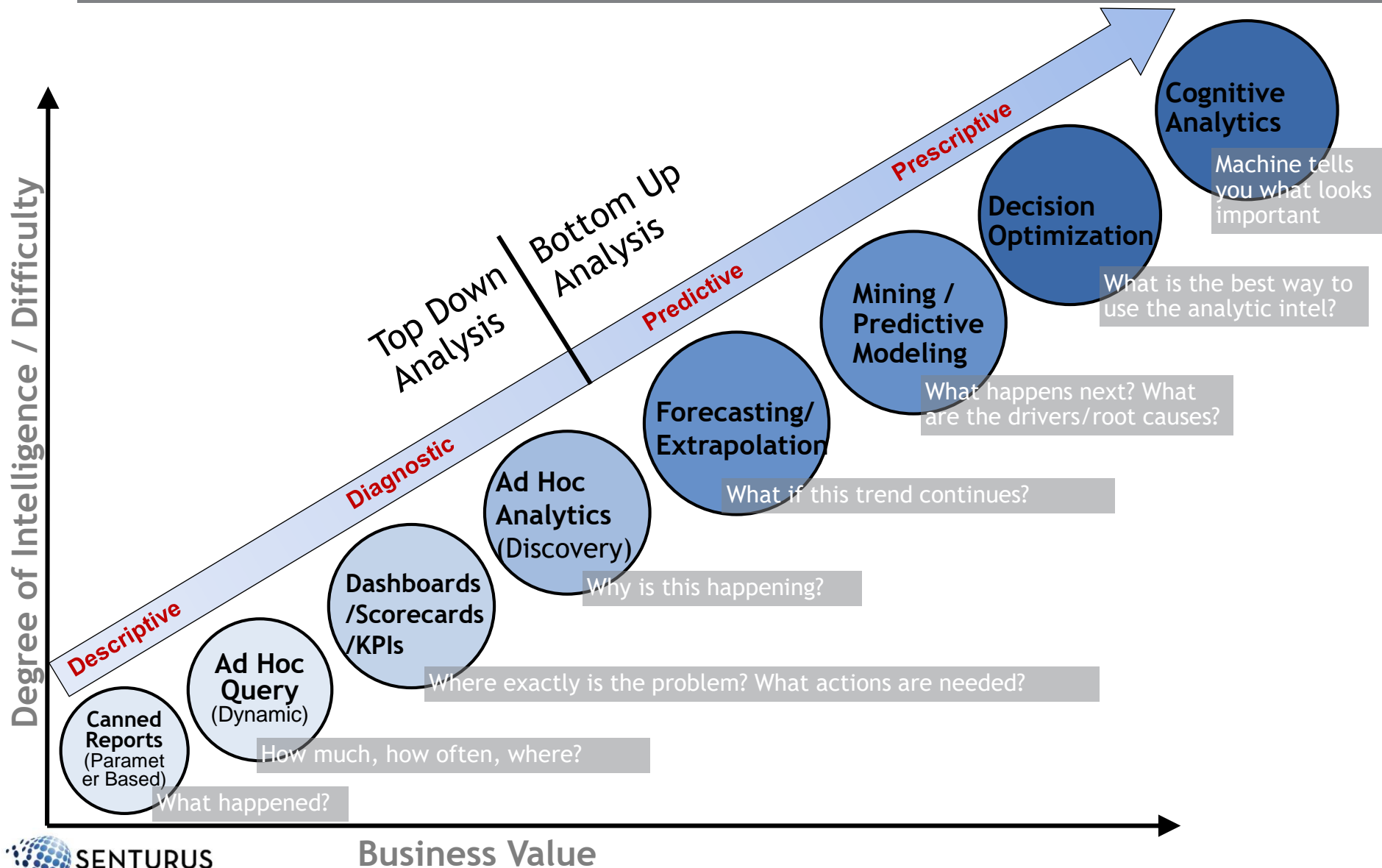
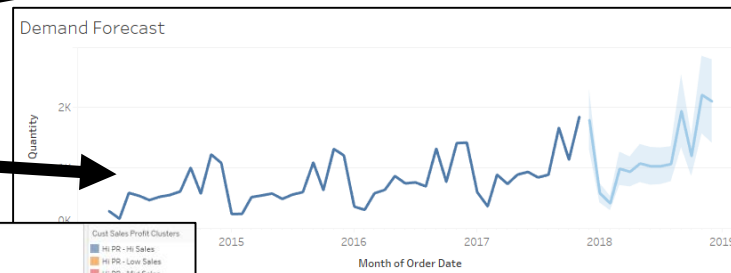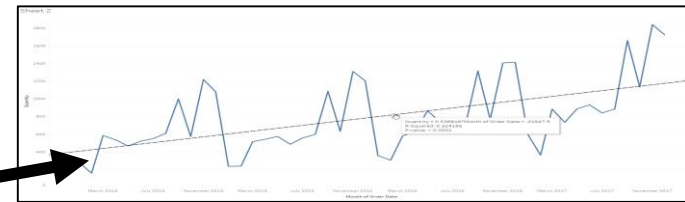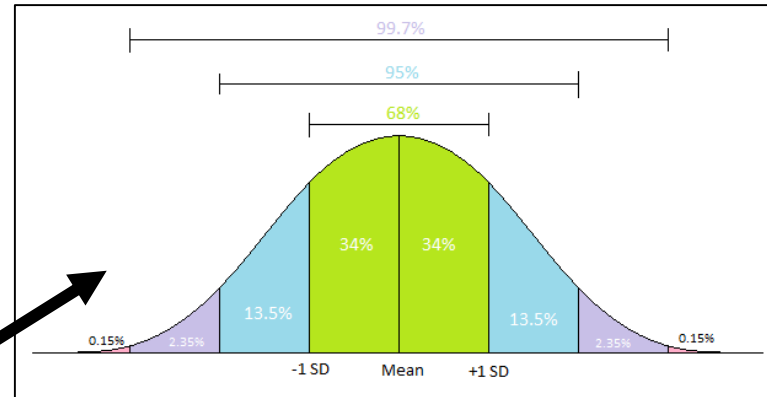Practice Area Director / Solutions Architect

Senturus, Inc.

Advanced Analytics Options within Tableau

The Analytics Maturity Curve

Degree of Intelligence / Difficulty (vertical axis)

Business Value (horizontal axis)

Top Down Analysis | Bottom Up Analysis

Descriptive → Diagnostic → Predictive → Prescriptive

Canned Reports (Parameter Based)
What happened?

Ad Hoc Query (Dynamic)
How much, how often, where?

Dashboards /Scorecards /KPIs
Where exactly is the problem? What actions are needed?

Ad Hoc Analytics (Discovery)
Why is this happening?

Forecasting/ Extrapolation
What if this trend continues?

Mining / Predictive Modeling
What happens next? What are the drivers/root causes?

Decision Optimization
What is the best way to use the analytic intel?

Cognitive Analytics
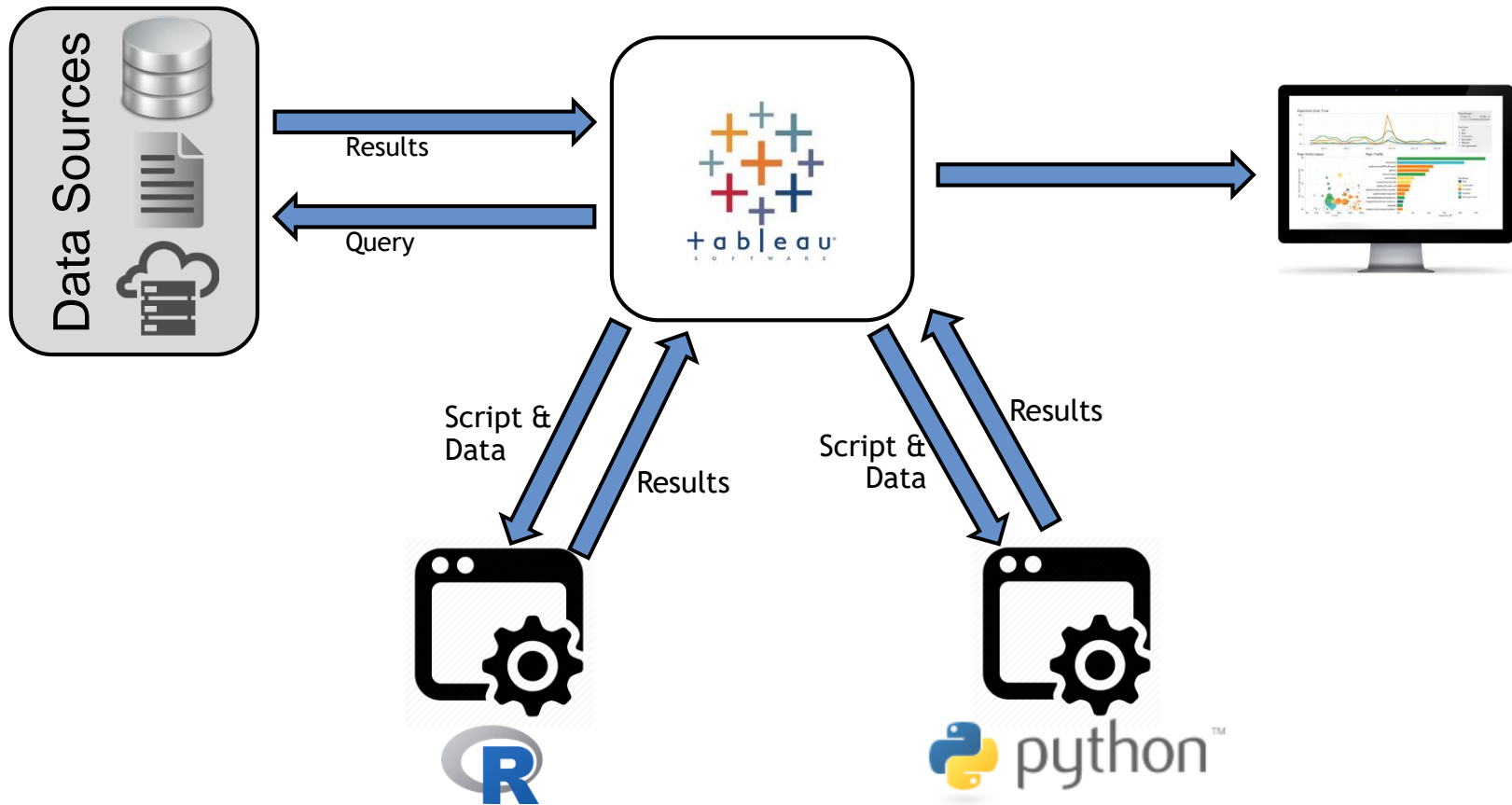Machine tells you what looks important

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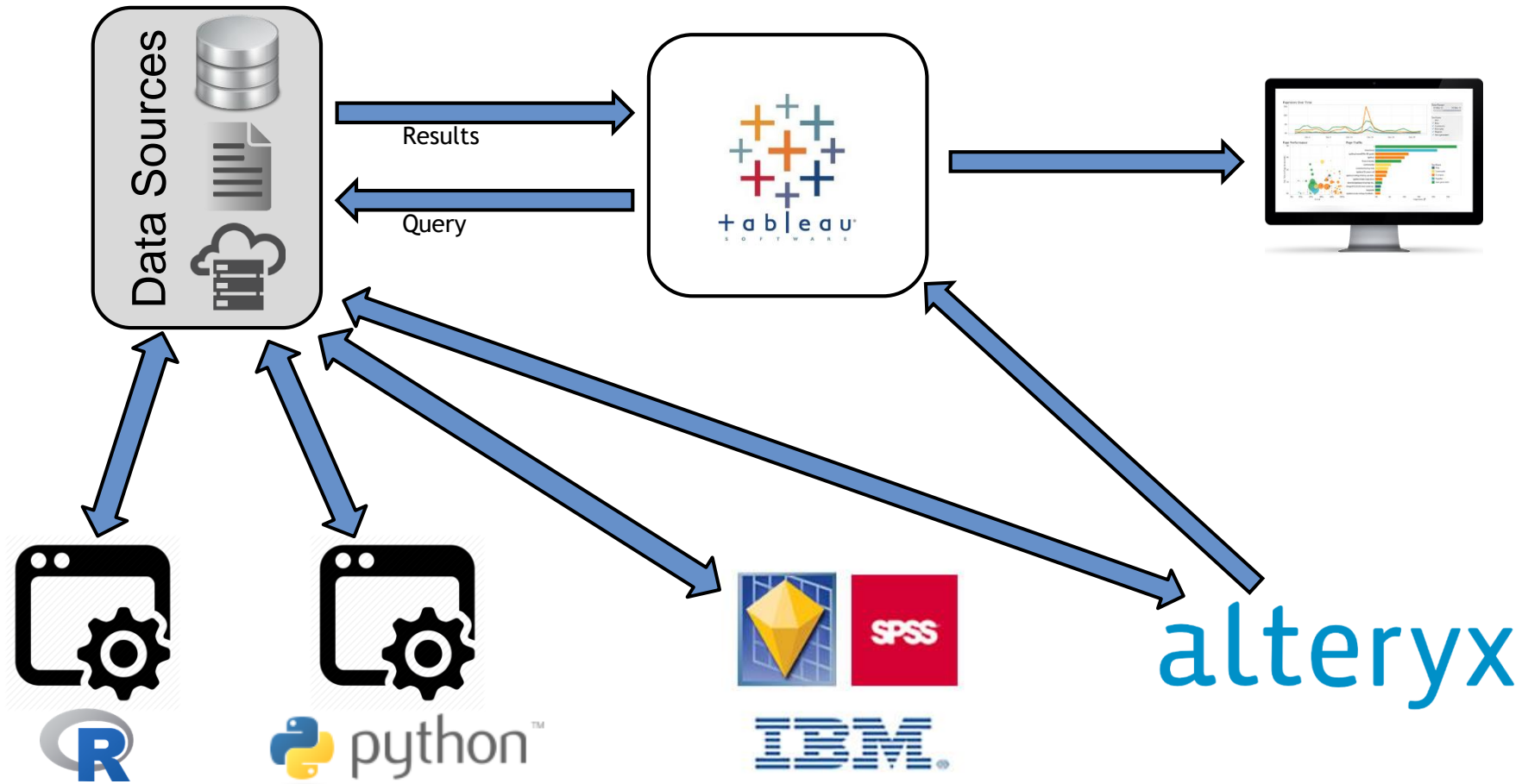# Tableau's Built-In Analytics
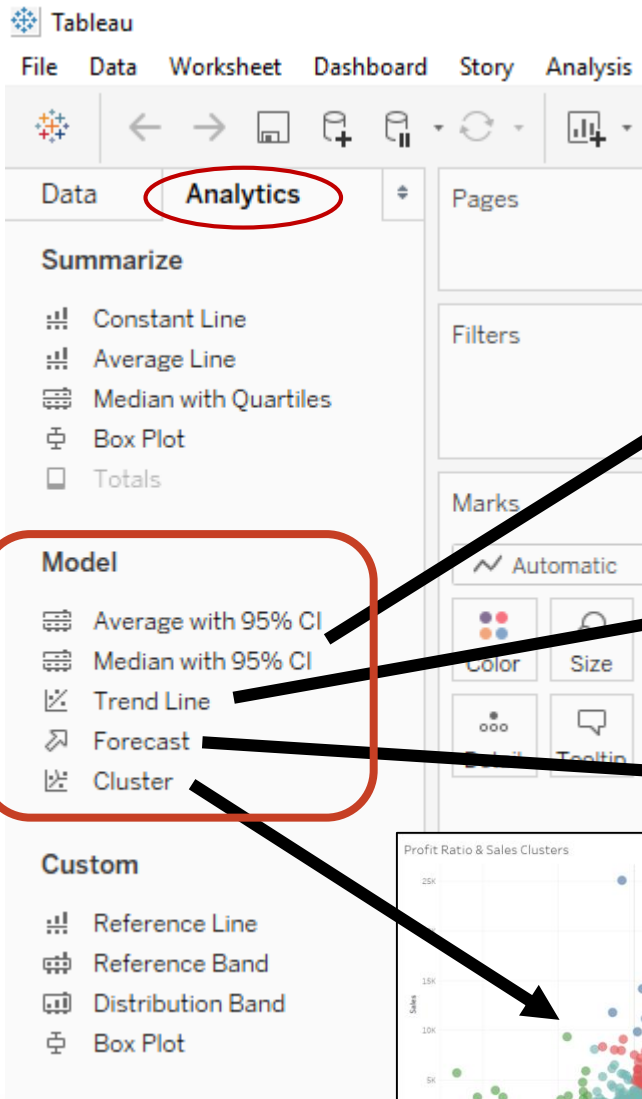
Using 3rd Party Analytics with Tableau

Integrated Architecture

Using 3rd Party Analytics with Tableau

Stand-Alone Architecture

Open Source Analytic Programming Languages

- Users primarily have been from academia and research, but is expanding into the enterprise

- Steep learning curve, but quite user friendly and easy to move into more advanced things once this is achieved

- Many packages available to perform various advanced analytics tests and models

- Most common IDE is RStudio

- Users primarily have been programmers crossing over into advanced data analysis

- Very gradual learning curve due to code readability and simplicity

- Came a little later to the analytics game, but has many libraries available that are comparable in R

- Various IDEs available, but most common for Data Science work is Spyder or Rodeo

Tableau Integration with R & Python

- Requires a server to handle and process requests coming from Tableau: R uses Rserve and Python uses TabPy

- Configuration on Tableau is as easy as telling it where the server is and what port address – found under Help > Settings
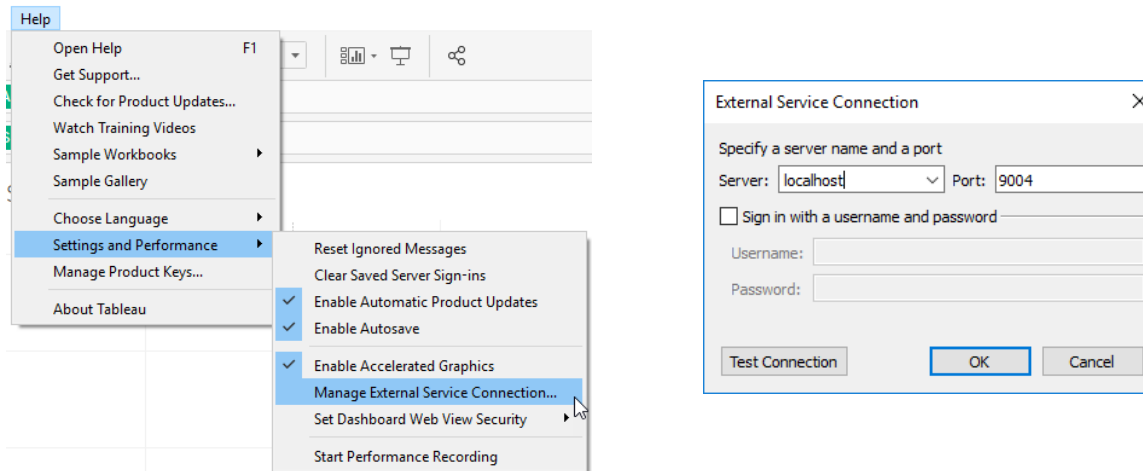
- Both "server" apps can run on a local machine for personal use or in a multi-user environment on an actual server.

NOTE: The Rserve server for R for can only accommodate a single user when it is being run on Windows OS.

Poll

How have you used advanced or predictive analytics with Tableau? (select all that apply)

- I haven't yet
- Internal Tableau functionality
- 3rd party integrations (R, Python)
- Stand-alone programming languages or enterprise tools
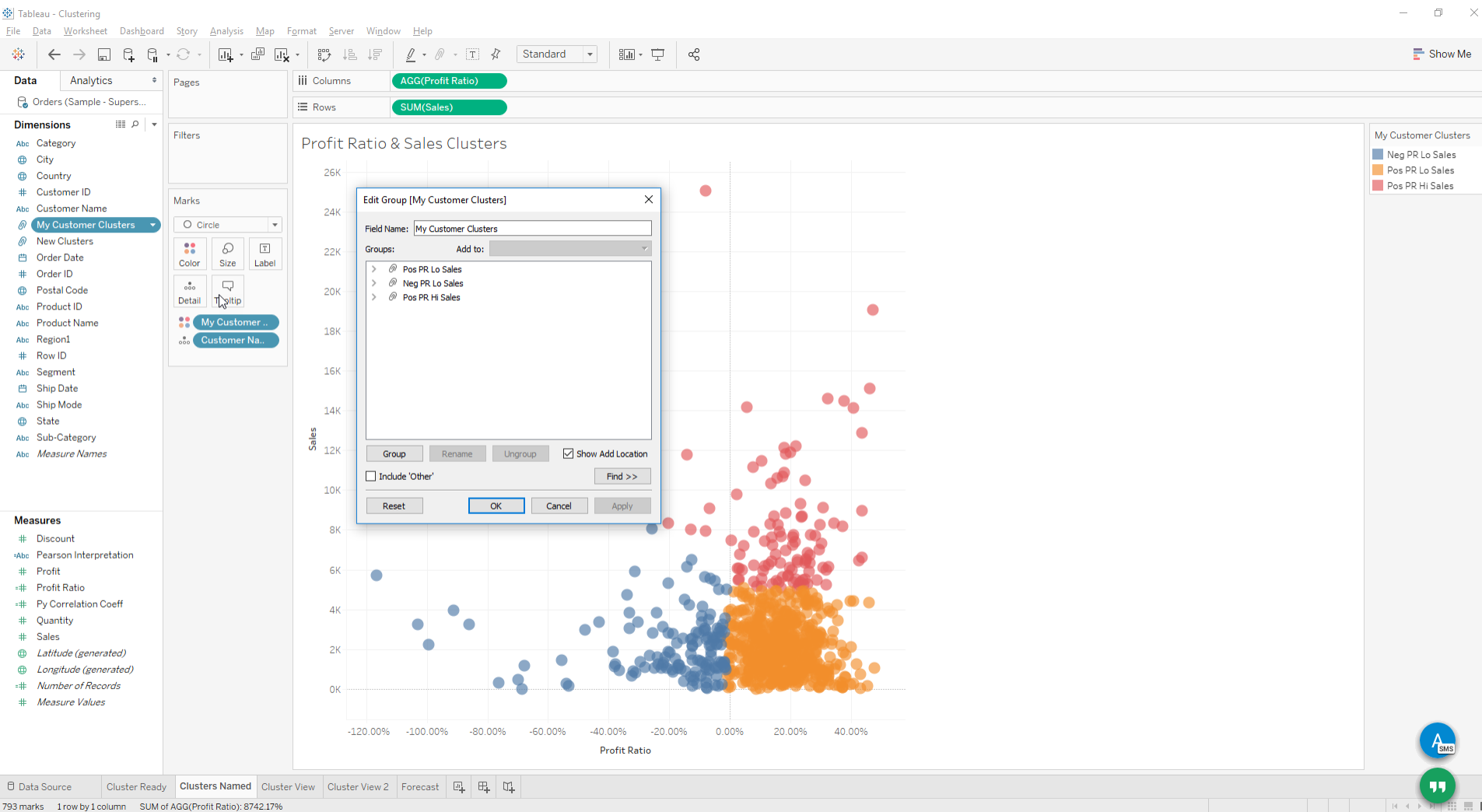- Advanced analytics produced elsewhere that I use
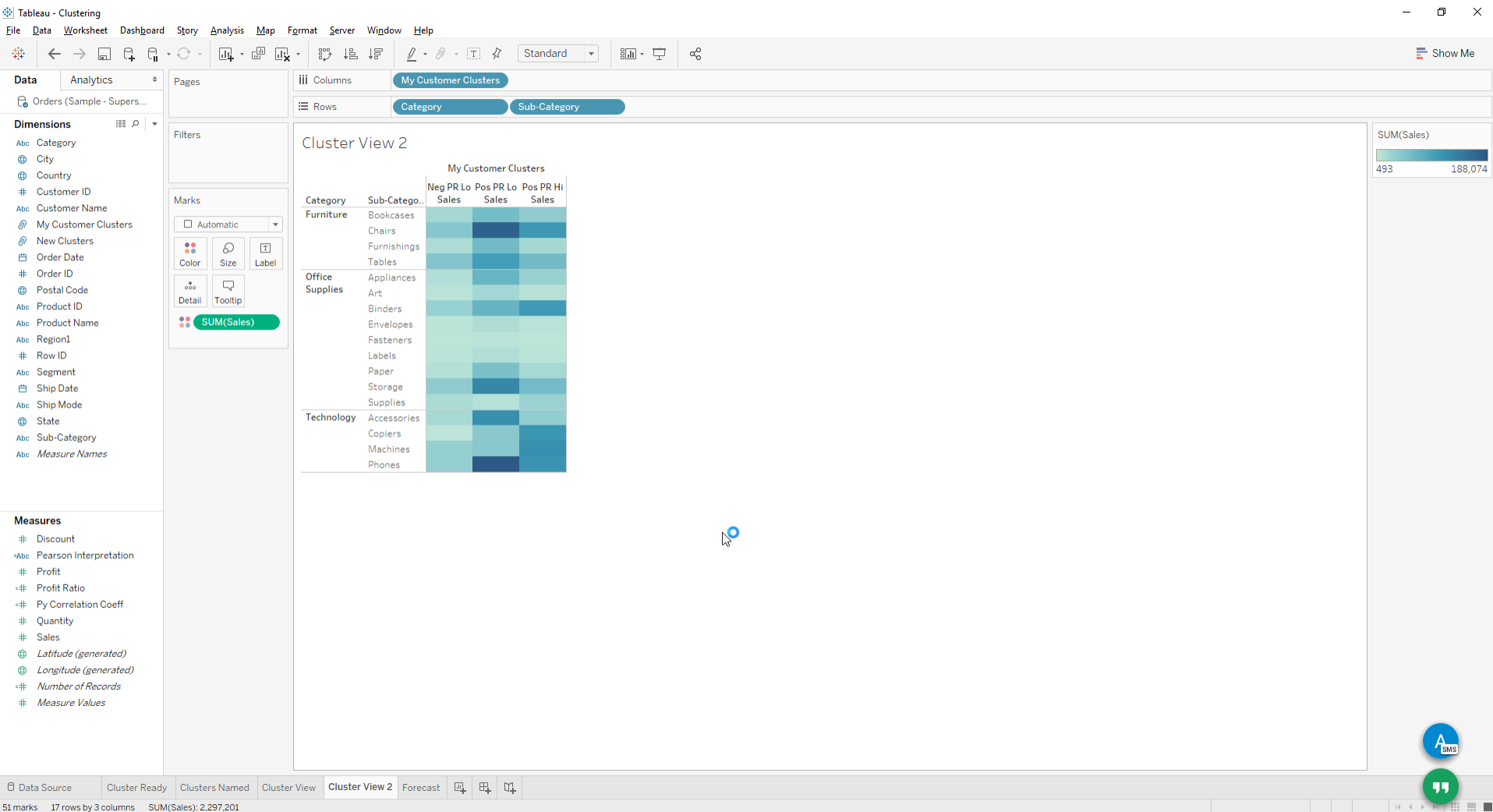
BUILT-IN ANALYTICS

Clustering Demo

Clustering with Tableau

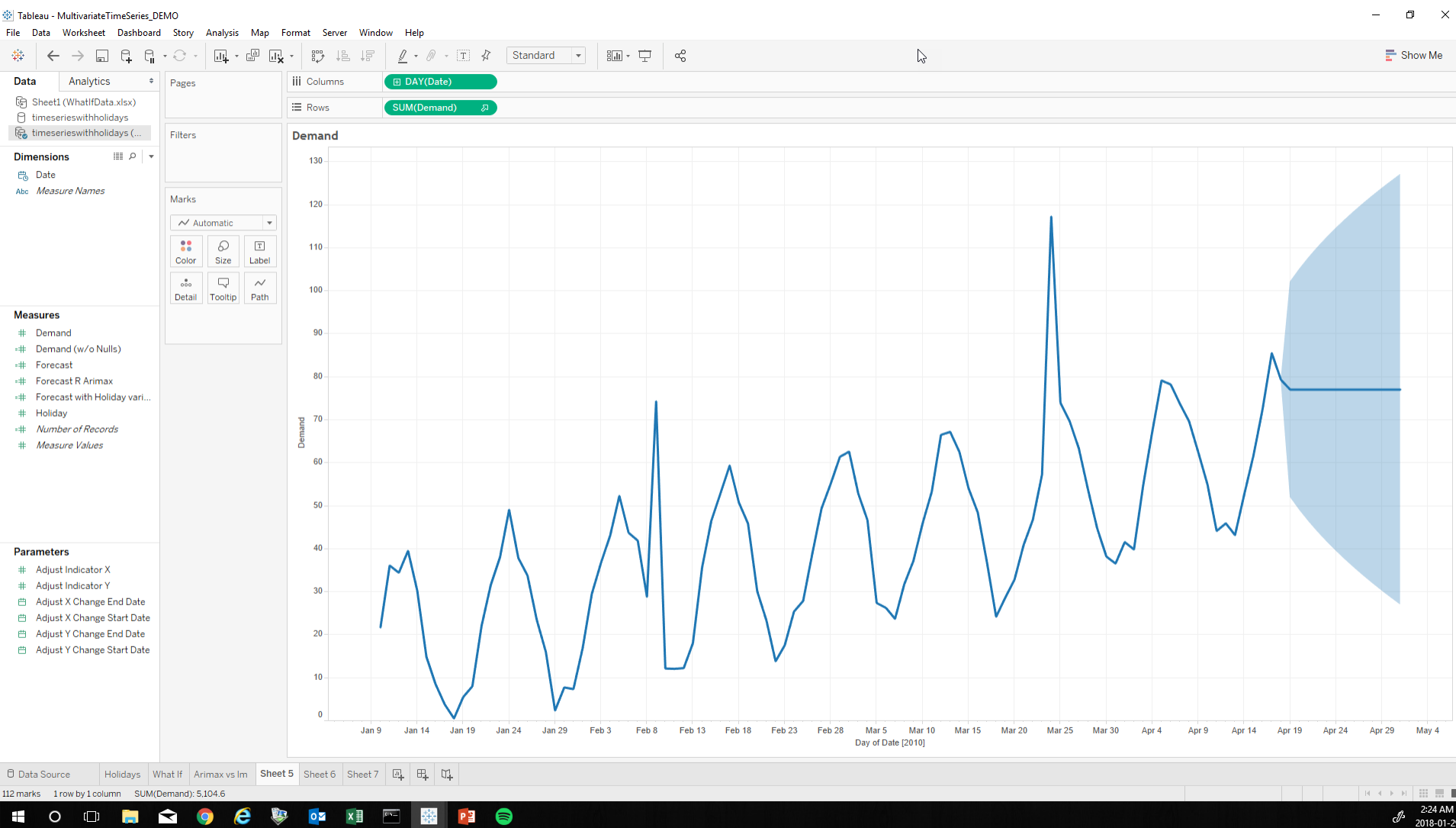# Clustering with Tableau
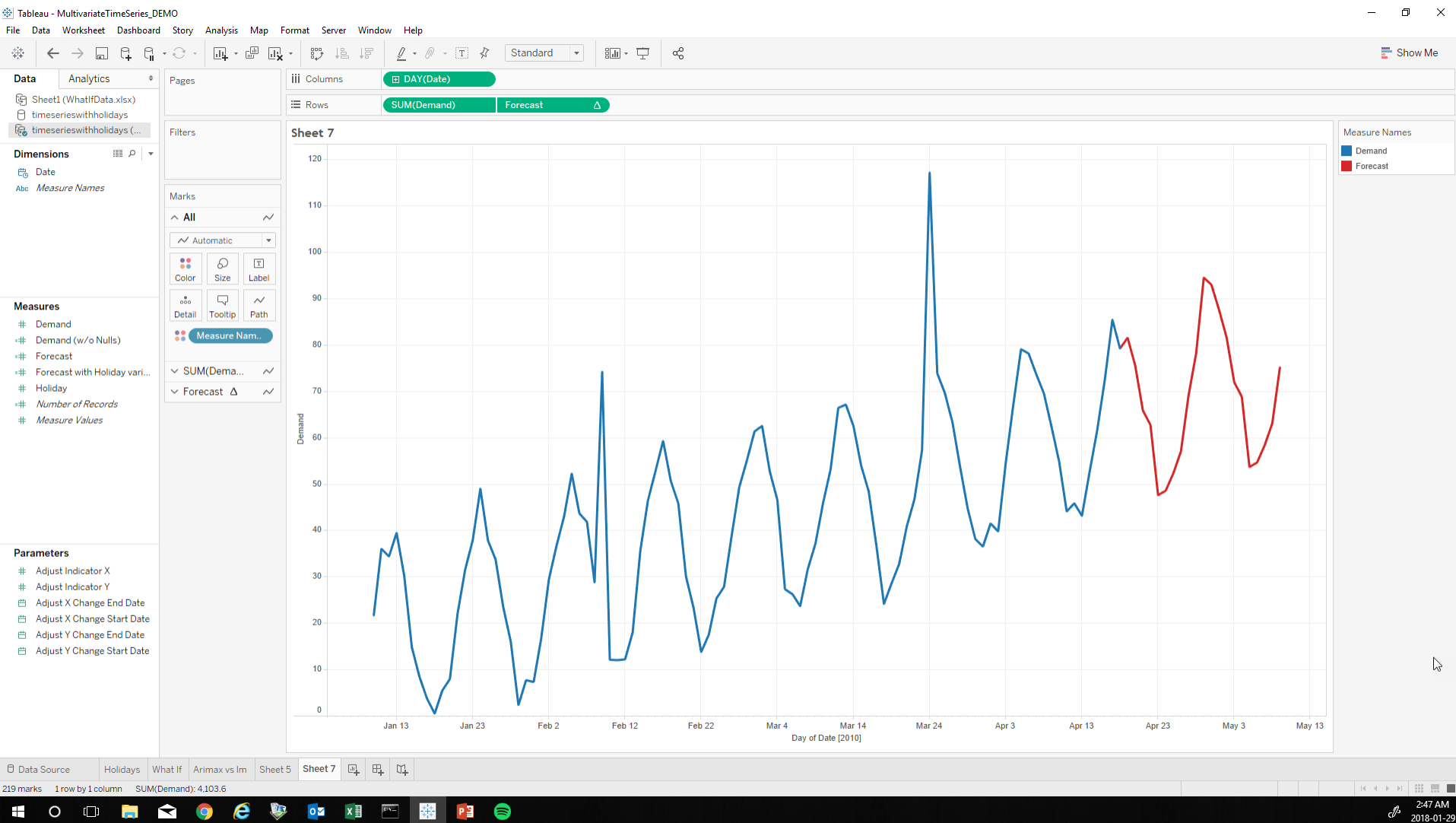
Clustering with Tableau

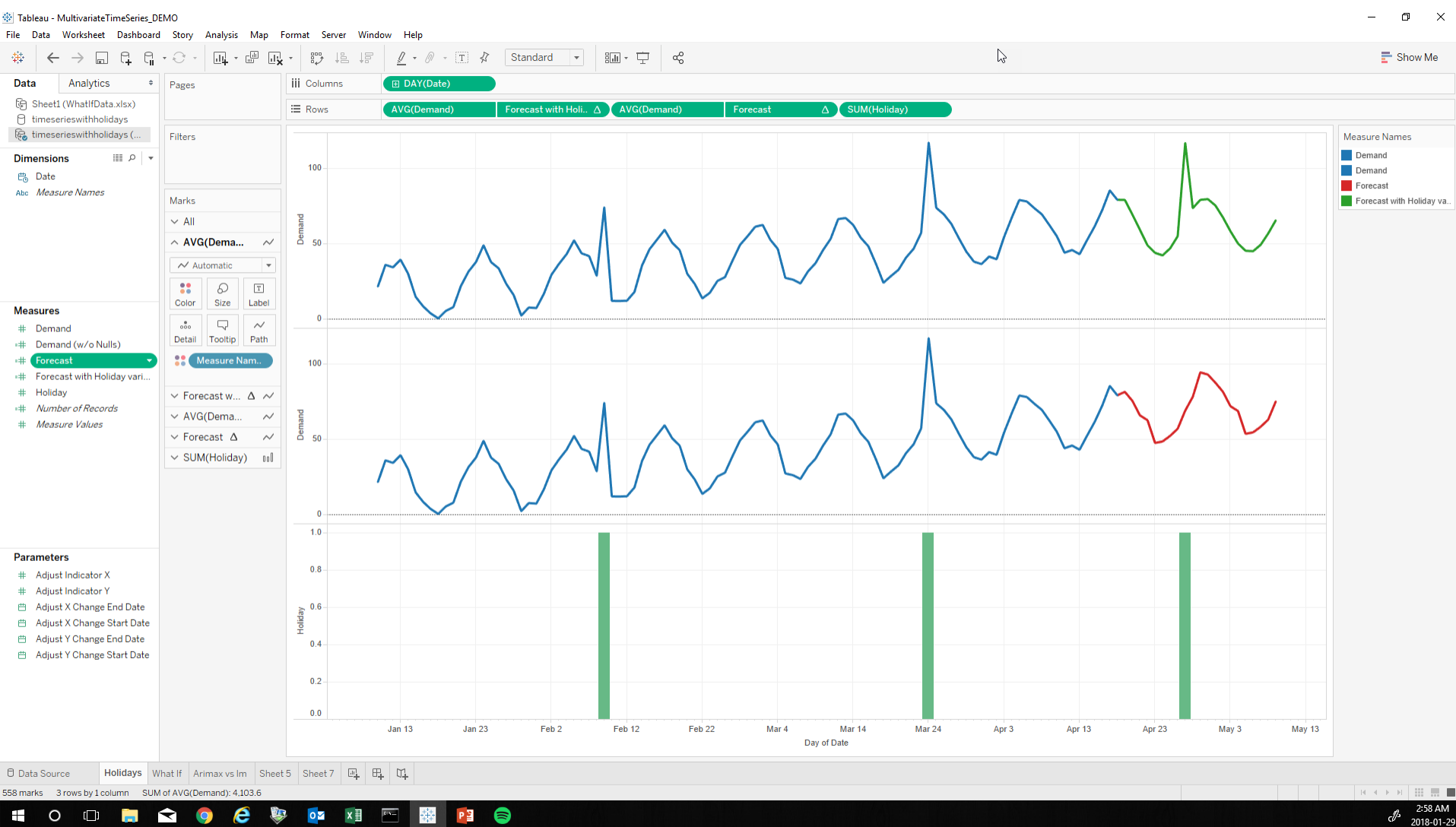# FROM BUILT-IN ANALYTICS TO ADVANCED FORECASTING IN R

Time Series Demo

Demand Forecast – Built-In Function

Demand Forecast Using R – Monthly Seasonality

Demand Forecast Using R – with Holiday Variable

A/B Marketing Test Models

Using Alteryx

A/B Test for Offer Response

A/B Test for Offer Response

A/B Test for Offer Response

EVALUATING OPTIONS FOR USING ADVANCED ANALYTICS WITH TABLEAU

Welcome to The (Functionality) Matrix

Advanced Analytics with Tableau Matrix

Functional Area	Tableau Built-in Functions	Tableau Integration		Analytic Programming Languages		Enterprise Software Platforms	
		R (via Rserve)	Python (via TabPy)	R (stand-alone)	Python (stand-alone)	Alteryx Designer	IBM SPSS Modeler
On-the-fly Table Calculations for Visualization	●	●	●	○	○	◐	○
Learning Curve/Low Coding Requirement	●	◐	◐	○	○	◐	◐
Breadth of Scoring or Modeling Capabilities	○	◐	◐	●	●	●	●
Scalability	◐	○	○	◐	◐	●	●
Centralization of Scripts & Models	○	○	○	●	●	●	●
Repository with Premissions Control, Versioning and Scheduling	○	○	○	○	○	●	●
Cost of Deployment	●	●	●	◐	◐	◐	○

Benefits of Using Advanced Analytics

- Greater insights and visualization capability

- More powerful clustering and forecasting capabilities over the built-in functions

- Allows the analytics to find insights that may not be readily apparent

- Flexibility to use <u>any</u> available analytic applications, such as:

• Extracting Sentiment from Text	• Prediction Models for Attrition or Conversion
• Outlier & Anomaly Detection	• Association & Sequence Analysis
• Geocoding & Spatial Analytics	• Optimize & Prioritize
• Identify & Measure Risk	• Root-Cause Analysis

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Tableau with Advanced Analytics Expert Assistance

1 Day Jumpstart

- Setup a single R Server instance
- Configuration of Tableau integration
- Walk through
- Hands-on walk through on three practical example scripts

$1,495*

3 Day Advanced Analytics Planning

- Assessment of business objectives
- Evaluation of Tableau dashboard/reporting and supporting data sources
- Mapping of top three advanced analytics solution approaches to meet objectives
- Findings and solution recommendations document

$4,599*

Flexible Mentoring

- Expert guidance with existing data and/or dashboards
- One-on-one training
- Provided at an hourly rate

* plus travel expenses

SENTURUS

Who We Are

Business Analytics Consultants

Bridging the Gap Between Data & Decision Making

Business Analytics Architects

- Dashboards, Reporting & Visualizations

- Data Preparation & Modern Data Warehousing

- Self-Service Business Analytics

- Big Data & Advanced Analytics

- Planning & Forecasting Systems

- Proprietary Analytics Connector Software

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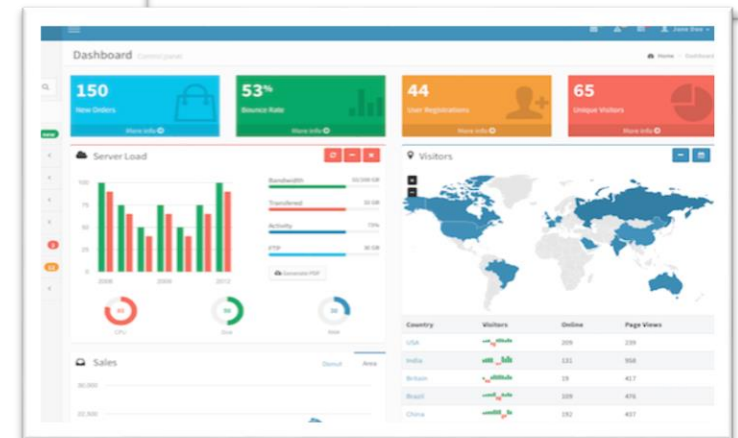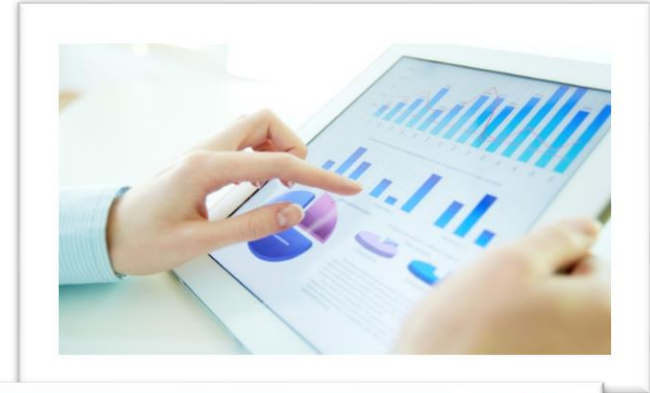
1000+ Clients, 2000+ Projects, 17+ Years
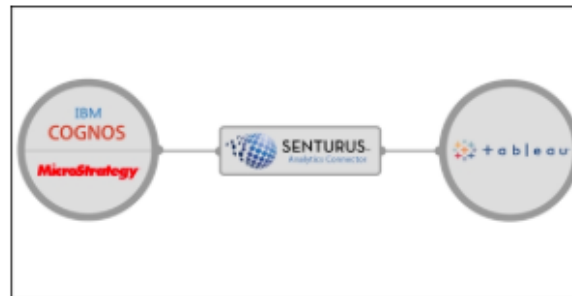
ADDITIONAL RESOURCES

Upcoming Events www.senturus.com/events

INSTALLING COGNOS ANALYTICS V11

UPDATED TIPS FOR THE LATEST RELEASE

Thursday, February 15, 2018 - 11am PT (2pm ET) - 60 minutes

**NORTHWESTERN CREATES TABLEAU
VIZZES AGAINST LIVE COGNOS DATA**

Thursday, February 22, 2018 - 11am PT (2pm ET) - 60 minutes

TABLEAU LIKE A PRO IN HALF A DAY

HANDS-ON WORKSHOP IN SAN FRANCISCO

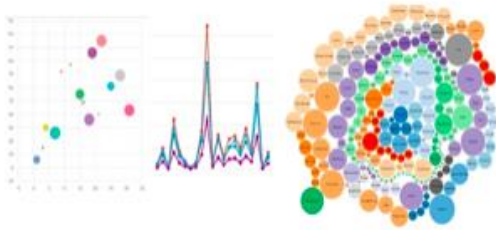Wednesday, February 28, 2018 - 8:30am – 12:30pm - 4 hours

**USING TABLEAU TO VISUALIZE
SALESFORCE DATA**

FREE, HANDS-ON WORKSHOP IN SAN FRANCISCO

Wednesday, February 28, 2018 - 12:30pm – 4:30pm - 4 hours

Upcoming Events www.senturus.com/events

INTRODUCTION TO COGNOS ANALYTICS V11

HANDS-ON WORKSHOP IN COSTA MESA, CA

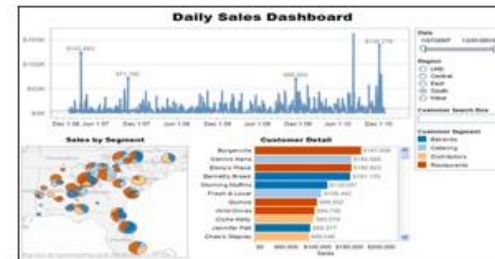Wednesday, March 7, 2018 - 10:00am – 2:30pm - 4 hours 30 minutes

TABLEAU LIKE A PRO IN HALF A DAY

HANDS-ON WORKSHOP IN COSTA MESA, CA

Wednesday, March 7, 2018 - 8:30am – 12:30pm - 4 hours

USING TABLEAU TO VISUALIZE SALESFORCE DATA

FREE, HANDS-ON WORKSHOP IN COSTA MESA, CA

Wednesday, March 7, 2018 - 12:30pm – 4:30pm - 4 hours

THINK COCKTAILS WITH SENTURUS AT IBM THINK 2018

MEET US AT RI RA

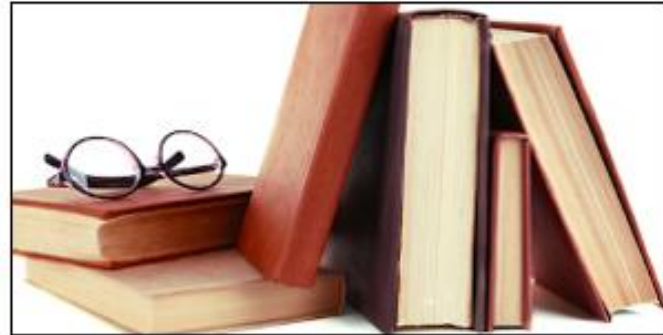Tuesday, March 20, 2018 - 6:30 pm – 9:30 pm - 3 Hours

Visit Our Free Resource Library and Blog

http://www.senturus.com/senturus-resources/

BLOG

A great place to find out what's top of mind at Senturus.

RESOURCE LIBRARY

An extensive, free library of past webinars, demos, whitepapers, presentations, helpful hints and more.

BLOG POST:
Installing and Configuring R for Use with Tableau

http://www.senturus.com/blog/installing-configuring-r-use-tableau/

Tableau and Cognos Training Options

New Expert Tableau Class includes Using R

Custom tailored training also available

Q&A and Wrap-up

If your question or issue is broader than what can be answered today, contact us at

info@senturus.com

and we will set up a free consultation.
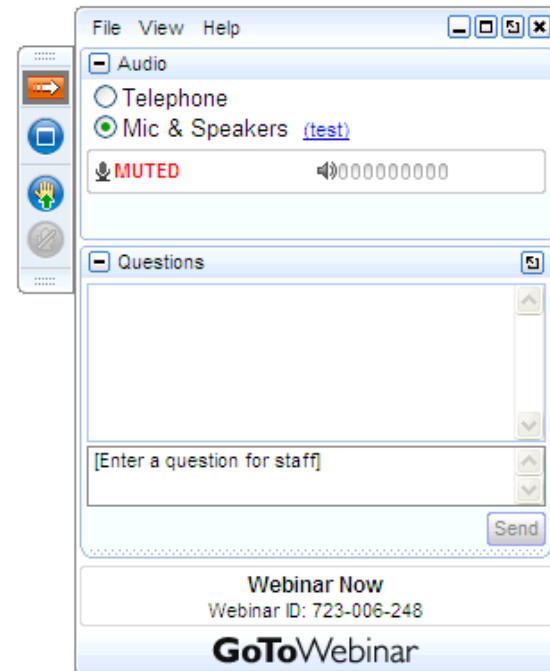
Thank You!

www.senturus.com
info@senturus.com
888 601 6010

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