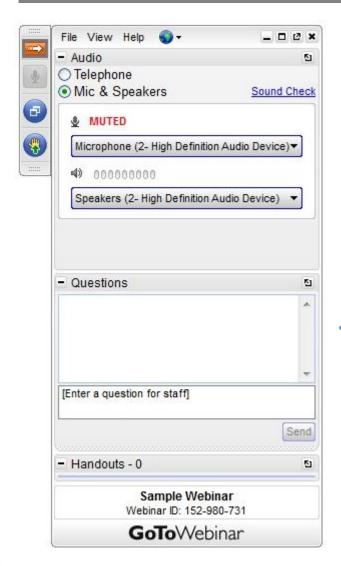




#### GoToWebinar Control Panel



Click arrow to restore full control panel

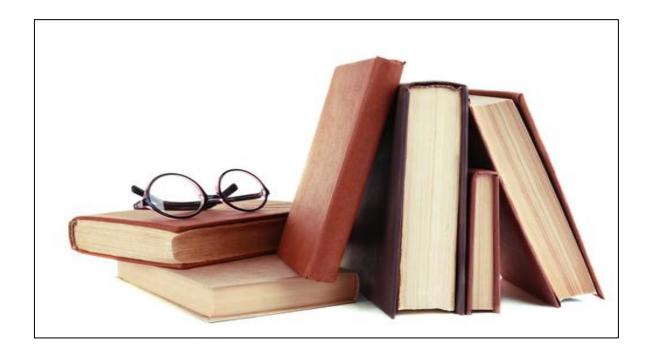


Submit questions here



#### Presentation Slide Deck

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



#### **RESOURCE LIBRARY**

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



#### Agenda

- Introductions
- Differences Between Desktop and Enterprise-Wide Use of Tableau
- 10 Specific Things To Keep In Mind
- Summary of Pitfalls to be Avoided
- Additional Resources & About Senturus
- Q&A



#### INTRODUCING...TODAY'S PRESENTERS



John Peterson
CEO and Co-Founder
Senturus, Inc.



**Kyle Biehle**Tableau Solutions Architect
Senturus, Inc.



#### Poll

Describe your experience rolling out Tableau the desktop and department(s):

- Wildly successful and easy to manage
- Successful, but have some challenges
- Ran into some big snags
- Haven't tried it yet
- No intentions of rolling it out





#### WE'RE NOT IN KANSAS ANYMORE

SCALING TABLEAU ENTERPRISE-WIDE INTRODUCES MANY NEW ISSUES

## Typical Tableau Progression

Where the rules change







Desktop

**Department** 

Enterprise



## Lots of Important Things Change

#### ...when crossing the department boundary

	Desktop/Dept	Enterprise-Wide
Analyst role	Explorer	Data modeler/author/publisher
Skills required	Limited	Wide range
Audience	Focused and limited	Wide variety (consumers)
Environment control	Individual	Potentially lots of cooks
Training	Self-taught	Formal
Role of IT	Non-existent	Significant
Security/access control	Little or none	Important
Source data	Cobbled together	Plumbed and controlled
Data refresh	Manual	Automated
Data validity	Rough is often OK	Must be accurate
Data control	Individual use	Need to limit data sprawl
Updates/Maintenance	Informal	Controlled
Single source of truth Not too important		Critical  Copyright 2017 Senturus, Inc. All Rights Reserved.

## Tableau: Beyond the Desktop



... We're not in Kansas anymore





#### 10 THINGS I WISH I HAD KNOWN

**LESSONS FROM THE TRENCHES** 



#### TABLEAU CAN'T DO EVERYTHING

PLAY TO TABLEAU'S STRENGTHS & OFFLOAD OTHER TASKS

#### So You've Got Tableau...

- And some eager analysts
- And a few dozen dashboards
- From a few dozen data sources
- And you want to start sharing them
- Now what?



#### Do: Use Tableau to Enhance, Not Simply Replace

#### Tableau is great at:

- Interactive solutions
- Exploratory analytics
- Dashboards
- Self-service analytics

#### Tableau is not so great as:

- A spreadsheet tool
- A data extraction and delivery tool
- A canned reporting tool
- Pixel perfect financial reporting system



#### Don't: Replicate what you already have

Don't Forklift Your Excel Reports to Tableau

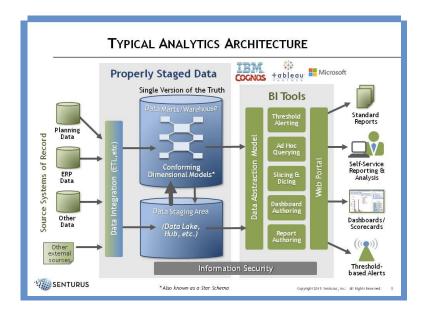
- Ask: How can they be improved?
- What are the follow-up questions that the users have that can't be answered with the current reports?
- How could you improve them to allow them to answer their own questions





#### Do: Leverage Your Current BI Stack & DW

- It contains all of the business rules
- It's been vetted
- It can feed your metadata layer
- Leverage the knowledge that IT has about that data
- Use Tableau Connectors to leverage it directly







## ANALYSTS NEED TRAINING TO BECOME TABLEAU AUTHORS

ROLES CHANGE WHEN YOU GO WIDE

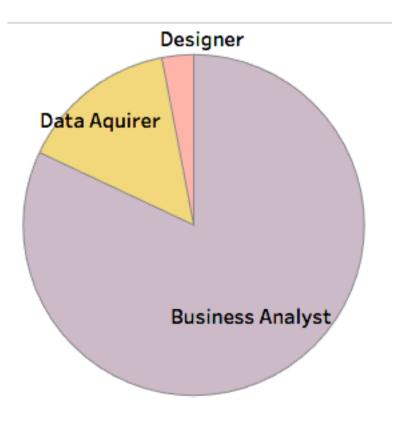
#### Authors Aren't Typically Designers or **Data Modelers**

#### Ideal Tableau Developer

# Designer **Business Analyst**

Data Modeler

#### Typical Analyst



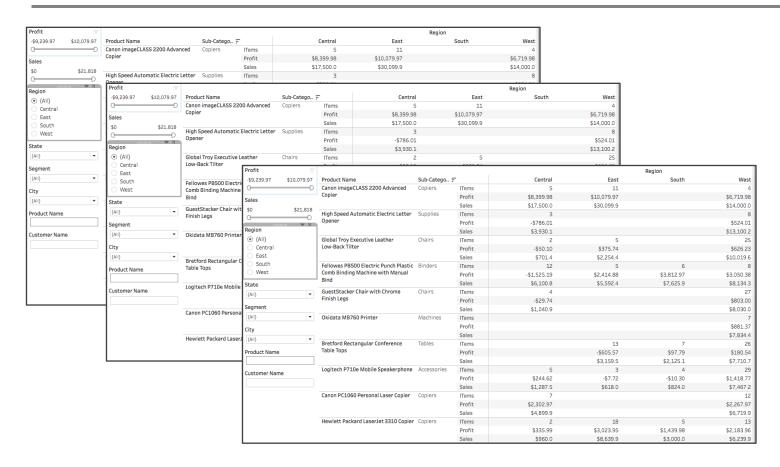


## If Your Only Tool is a Hammer . . .





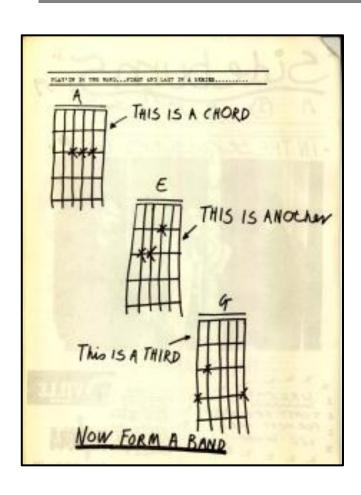
## If Your Only Tool is Excel . . .



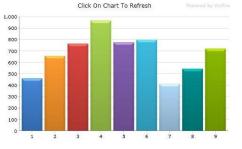
Every solution looks like a spreadsheet



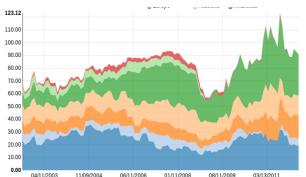
## It's easy to get competent; it's hard to be great



This is a chart



This is another



This is a table

ID	BRAND	MODEL	YYYYMM	REGION	D_MODEL_ID	D_MONTH_ID	D_REGION_ID	SALES_UNITS	MM/YYYY
1000	Alfa Romeo	Alfa Romeo 147	201202	Netherlands	1000	1001	1000	1	Feb-12
1001	Alfa Romeo	Alfa Romeo 147	201203	Netherlands	1000	1002	1000	1	Mar-12
1002	Alfa Romeo	Alfa Romeo 159	201201	Netherlands	1001	1000	1000	24	Jan-12
1003	Alfa Romeo	Alfa Romeo 159	201202	Netherlands	1001	1001	1000	15	Feb-12
1004	Alfa Romeo	Alfa Romeo 159	201203	Netherlands	1001	1002	1000	14	Mar-12
1005	Alfa Romeo	Alfa Romeo 159	201204	Netherlands	1001	1003	1000	3	Apr-12
1006	Alfa Romeo	Alfa Romeo 159	201205	Netherlands	1001	1004	1000	7	May-12
1007	Alfa Romeo	Alfa Romeo 159	201206	Netherlands	1001	1005	1000	5	Jun-12
1008	Alfa Romeo	Alfa Romeo 159	201207	Netherlands	1001	1006	1000	3	Jul-12
1009	Alfa Romeo	Alfa Romeo 159	201208	Netherlands	1001	1007	1000	2	Aug-12
1010	Alfa Romeo	Alfa Romeo 159	201209	Netherlands	1001	1008	1000	1	Sep-12
1011	Alfa Romeo	Alfa Romeo 159	201210	Netherlands	1001	1009	1000	1	Oct-12
1012	Alfa Romeo	Alfa Romeo 159	201211	Netherlands	1001	1010	1000	1	Nov-12
1013	Alfa Romeo	Alfa Romeo 159	201301	Netherlands	1001	1012	1000	1	Jan-13
1014	Alfa Romeo	Alfa Romeo 159	201302	Netherlands	1001	1013	1000	4	Feb-13
1015	Alfa Romeo	Alfa Romeo Giulietta	201201	Netherlands	1002	1000	1000	278	Jan-12
1016	Alfa Romeo	Alfa Romeo Giulietta	201202	Netherlands	1002	1001	1000	186	Feb-12
1017	Alfa Romeo	Alfa Romeo Giulietta	201203	Netherlands	1002	1002	1000	176	Mar-12
1018	Alfa Romeo	Alfa Romeo Giulietta	201204	Netherlands	1002	1003	1000	132	Apr-12
1019	Alfa Romeo	Alfa Romeo Giulietta	201205	Netherlands	1002	1004	1000	142	May-12

Now build a dashboard!



## Analysts Need Support to Expand Their Visualization Skills

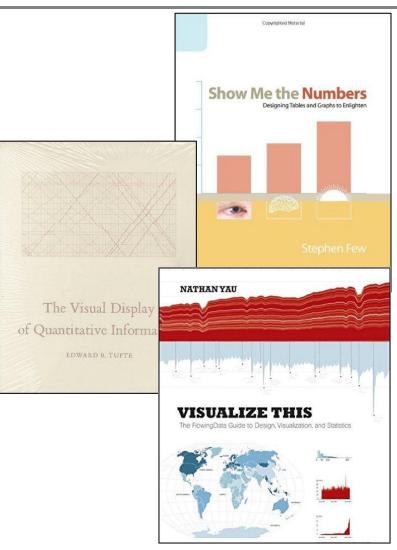
Get your developers training in best practices in visualization

#### Read the books

- Edward Tufte
- Stephen Few

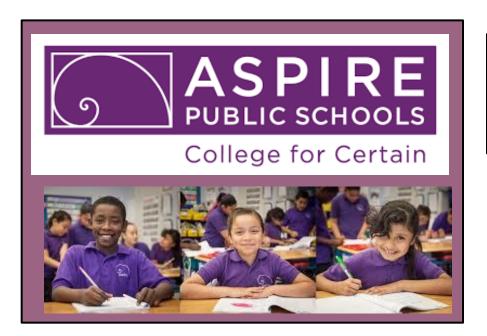
#### Get inspired online

- NY Times
- Flowing Data
- Andy Kirk: Visualizing Data
- Senturus resources





#### Train and Embed Your Authors





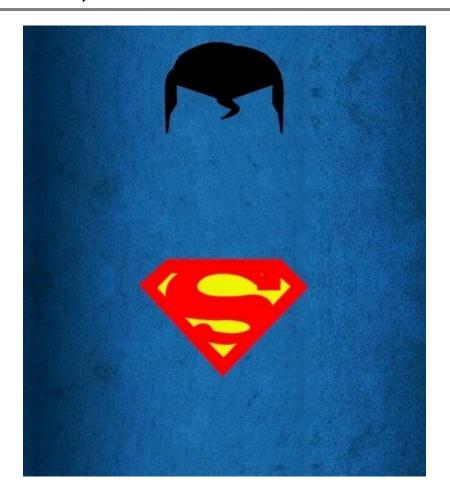




#### LESS IS MORE

BROAD USE MAGNIFIES CONFUSION AND MAINTAINABILITY ISSUES

#### Less Is (often) More



You're not done when you can't put any more in - you're done when you can't take anymore away.



#### Demo



#### Sales by Category Dashboard



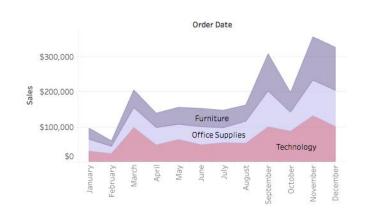
Sales by Category

Furniture	
Office Supplies	
Technology	

\$500,000

Yesterdays	Orders
------------	--------

Unique Customers	4
Orders	7
Items	23
Sales	\$713.79
Profit	\$101.54



#### Set Filters

Order Date	
1/3/13	12/30/16

Region (AII)

Sub-Category
(All)

Data As of: 4/18/17 4:00:35 PM Get Info

#### SalesbyState





#### LESS IS MORE. . . MORE IS LESS

#### You want this . . .



#### Not this . . .





#### Focus on Maintainability

Items that affect maintainability

- Complexity
- Security and access control (complexity)
- Shear quantity
- Different versions over time
- Personnel changes
- Lack of standard approaches
- Lots of replicated one-offs vs. well-thought out models
- Duplicated data modeling in every workbook

In essence, always think about scaling for the future





#### DATA PREPARATION IS CRITICAL

JUST BECAUSE TABLEAU CAN DO IT, DOESN'T MEAN IT SHOULD

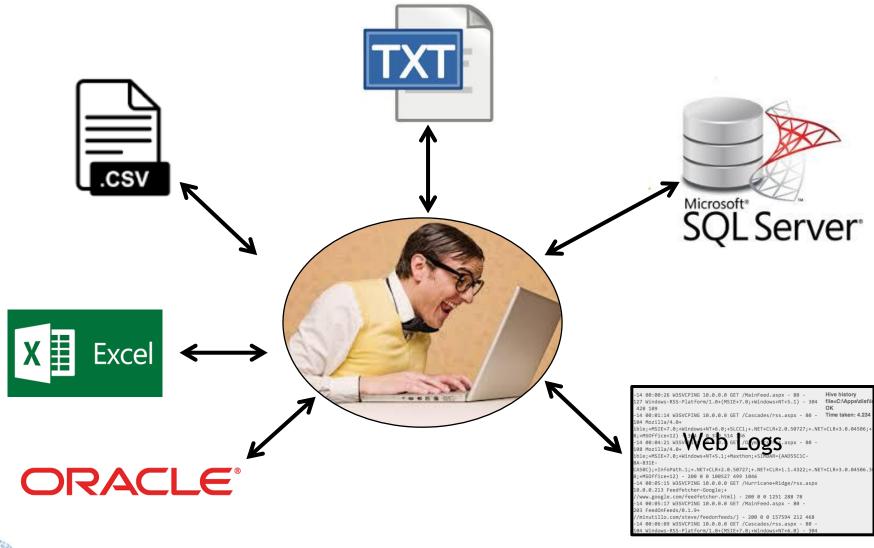
#### The Data is Never Perfect



There are no superstore data sets in the real world



#### The Blessing and the Curse of Data Blending





## **Understand the Consequences of Your Actions**

Every choice carries a cost





#### Don't Make Tableau Do All the Work

- To extract or not to extract?
- Use custom SQL or a view?
- Create calculated fields in Tableau or pre-calc in the database?
- Use performance recorder

Rule of Thumb: Make the database do the heavy lifting. Push whatever you can to the backend.



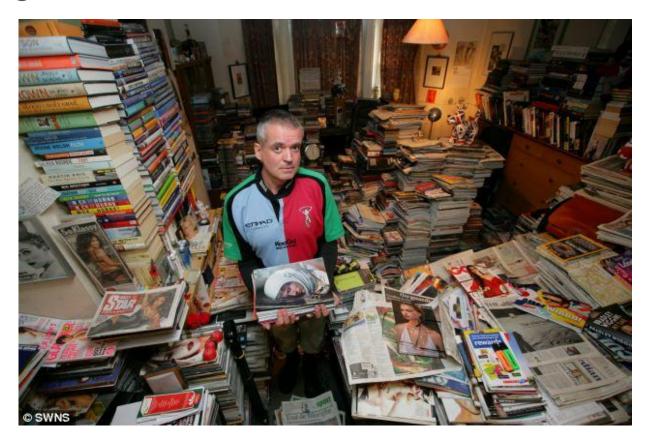


## TABLEAU SERVER WILL BECOME A DUMPING GROUND

FREEDOM CAN SOMETIMES BECOME A CURSE

#### Tableau Server Isn't a Database

- But it will become a dumping ground
- Multiple copies of data will wind up here unless it's managed





#### Possible Implications to Watch Out For

- Security issues
- Large duplicated datasets
- Lack of organization
- Unused workbooks
- Performance issues
- Stale and misleading information
- Multiple versions of the truth/confusion





## SINGLE SOURCE OF THE TRUTH STILL MATTERS

DATA GOVERNANCE IS STILL KING

## Beware Multiple Versions of the Truth





## IT Historically Viewed as Obstructionist





## Single Source of Truth Still Matters

- Designate a data steward to act as the gatekeeper
- Implement a data promotion strategy
  - Only vetted data sources get to production environment
- Publish as Tableau data sources with enhanced fields, parameters, hierarchies
- Consider centralizing core dimensions, hierarchies, metrics, datasets
- A data warehouse still has significant value



## **Encourage Exploration**



. . . but keep it in the sandbox





## SHARED ENVIRONMENTS WILL EFFECT USER EXPERIENCE

SEPARATE THE SANDBOX FROM THE BOARD ROOM

#### **Isolate Your Environments**













#### COUNT ON CONCURRENT USAGE & PERFORMANCE ISSUES

- Use multiple environments
- Widely-distributed routine reports/dashboards require a different SLA than ad hoc exploration
- Data sets will need to be patrolled
- Staff accordingly





#### YOU WILL NEED IT

Stealth Mode Does Not Scale

## The IT/Analyst Relationship is Symbiotic

## Center of Operations

(IT)

- Security
- Data Governance
- Scalability
- Training
- Tableau Server

## Center of Excellence

#### (Analysts)

- Authoring with Best Practices
- Identifying and Promoting Datasources
- Evangelism
- Tableau Desktop



## IT Has a Significant Role to Play

- Manage Tableau Server
  - –Security: users, projects and groups
  - -Extracts
  - Data sources
- Manage production database(s)
- Provide SQL/ETL expertise
- Manage metadata (data steward)
  - VetTableau data sources
- Manage performance





#### **Users and Roles**

Who do you need to be successful?

- The business
  - Executive sponsor
  - The consumers
  - The subject matter experts
- Center of excellence (analysts)
  - Tableau champions
  - Tableau authors
- Center of operations (IT)
  - Database and server administrators
  - Data modelers/ETL
  - Data steward

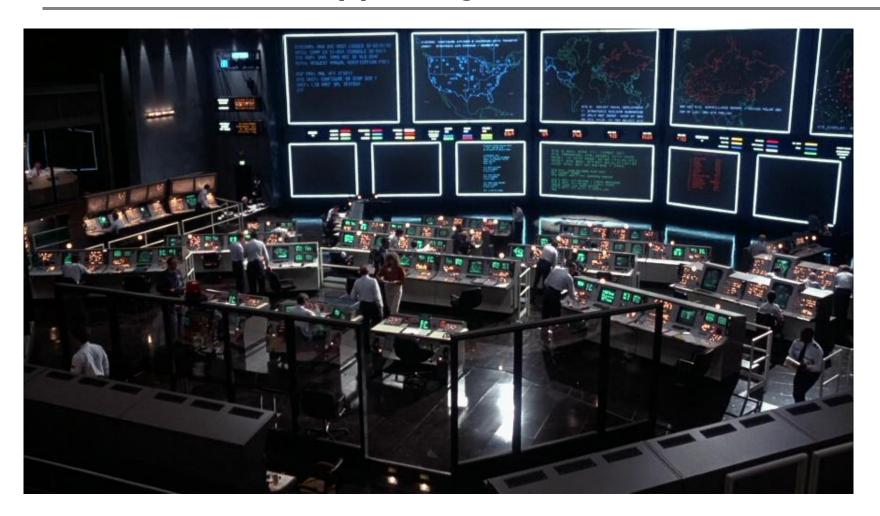




#### MONITOR AND CONTROL

"POST AND GO" DOES NOT WORK

## Watch What's Happening Behind the Scenes



It's not set it and forget it



#### **Monitor Performance**

#### On Tableau Server

- · Monitor user access who's using what and when
- Schedule extracts at appropriate times (watch concurrency)
- Decide when data sources should be live connects to the database
  - Or better as extracts

#### On the database(s)

- Analyze queries
- Monitor how users are accessing the databases
  - Train on best practices
- Create proper data structures
  - Star schema
  - Aggregate tables





## ENGAGEMENT OF THE STAKEHOLDERS IS CRITICAL

"IF YOU BUILD IT, THEY WILL COME" FAILS

## Myth: If You Build It They Will Come



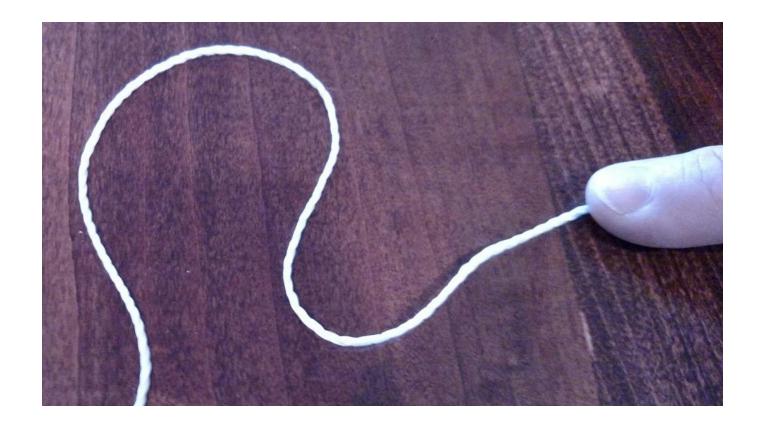
#### Just Because You Built the Perfect Dashboard. .



Doesn't mean anyone will use it

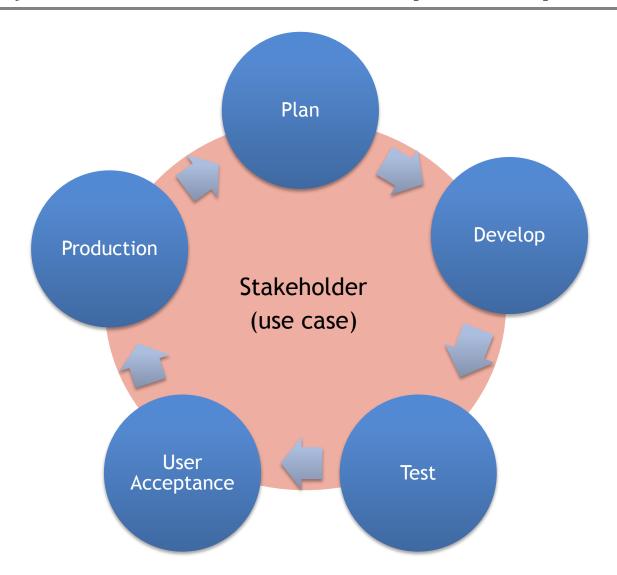


## Pushing on a String Doesn't Work





## Identify a Use Case. . . Develop. . . Repeat







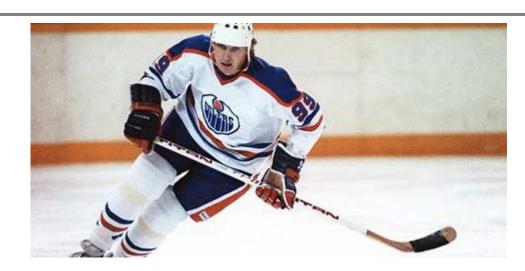
#### SKATE TO WHERE THE PUCK WILL BE

SUMMARY: PITFALLS TO BE AVOIDED

#### THINK AHEAD

#### On matters of:

- Security
- User types
- Data integrity
- Conflicting data
- Confusion
- Design consistency (templates)
- Performance impacts
- Maintainability especially after departure of key individual(s)
- Redundancy and duplication of effort
- Training





#### SERIOUSLY CONSIDER A ROADMAP

## ...Before sprinting down the path





## In Summary: If I Had Only Known...

- Tableau can't do everything
  - Play to Tableau's strengths and offload other tasks
- Analysts need training to become Tableau authors
  - Roles change when you go wide
- Less is more
  - Broad usage magnifies confusion and maintainability issues
- Data preparation is critical
  - Just because Tableau can do it, doesn't mean it should
- Tableau Server will become a dumping ground
  - Freedom can sometimes become a curse
- Single source of truth still matters
  - Data governance is king
- Shared environments will effect user experience
  - Separate the sandbox from the board room
- You WILL need IT
  - Stealth mode does not scale
- You've got to monitor and control
  - "Post and go" doesn't work
- Engagement of stakeholders is critical
  - "If you build it, they will come" fails

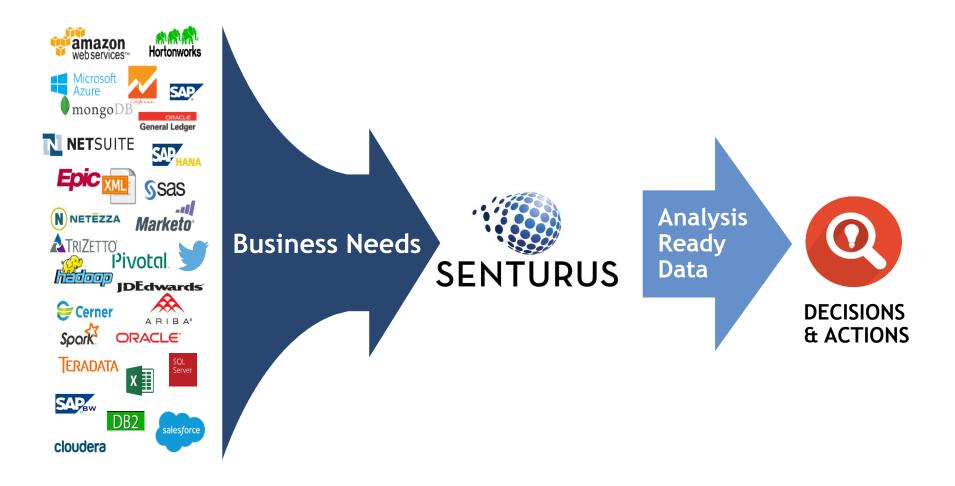




#### WHO WE ARE

**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





### 1000+ CLIENTS, 2000+ PROJECTS, 16+ YEARS



#### SEPHORA



















Genentech

A Member of the Roche Group







































#### **ADDITIONAL RESOURCES**

#### Free Tableau Server Trial & Assistance

# Free Tableau Server trial and free help installing it

Let us know in the question pane or Send an email to Jim Frazier at jfrazier@senturus.com



## **Tableau Server Optimization Assessment**



#### **Assessment Itinerary**

- · Check Tableau Server configuration settings for best practices
- · Explore hardware sizing and provide guidance
- Inspect network/hardware configuration and settings for best practices
- · Analyze backend data sources and structures
- Analyze a sample set of worksheets and dashboards to troubleshoot performance issues



#### **Deliverable**

 Findings and recommendations document pinpointing sources of performance issues



#### Guarantee

 If Senturus does not find and diagnose the factors creating your performance problems, you don't pay



#### Cost

\$2995



#### **Additional Resources**

# The Perks and Pitfalls of Tableau Server Success Strategies for Expanding Tableau Company Wide <a href="http://www.senturus.com/resources/going-big-time-with-tableau-server/">http://www.senturus.com/resources/going-big-time-with-tableau-server/</a>

# Informational Dashboard Science and Design The Science behind Effective Dashboards http://www.senturus.com/resources/information-dashboard-science-and-design/

# Tableau Dashboard Design: Best Practices 10 Tips with Demonstrations <a href="http://www.senturus.com/resources/10-best-practices-for-tableau-dashboard-design/">http://www.senturus.com/resources/10-best-practices-for-tableau-dashboard-design/</a>

#### The Tableau Drive Manual

https://www.tableau.com/sites/default/files/pages/tableau-how-to-drive-manual.pdf

#### **Designing Efficient Workbooks**

https://www.tableau.com/learn/whitepapers/designing-efficient-workbooks

# Connect Tableau to Cognos: Ixia Shows How Demo of Senturus Analytics Connector http://www.senturus.com/resources/using-cognos-as-a-data-source-for-tableau/



## **Tableau Training Options**

http://www.senturus.com/training/choosing-tableau-class/

#### Regularly Scheduled, Instructor-led, Online

- Introductory, intermediate and advanced Desktop courses
- Expert business analytics instructors
- Hands-on exercises

#### Private, Custom Onsite or Online Tableau Training

- Tailored to users' level of expertise
- Desktop and Server versions
- Classes can be made even more relevant by using your company's data



## **Upcoming Events**

#### www.senturus.com/events



## MICROSOFT AZURE'S VALUE PROPOSITION FOR BI

DEMO AND DISCUSSION: IS AZURE RIGHT FOR YOUR ORGANIZATION?

Thursday, April 27, 2017 - 10am PT/ 1pm ET - 60 minutes



## IBM PLANNING ANALYTICS 2.0: NEW CAPABILITIES FOR TM1 USERS

PLUS TM1 CUBES FOR COGNOS ANALYTICS NEW FEATURES

Tuesday, May 9, 2017 - 11am PT/ 2pm ET - 60 minutes



## **Upcoming Events**

#### www.senturus.com/events



#### TABLEAU LIKE A PRO IN HALF A DAY

HANDS-ON WORKSHOP IN PALO ALTO, CA

Thursday, May 25, 2017 - 8:30am - 12:30pm PT or 1pm - 4:30pm PT - 4 hours or 3.5 hours



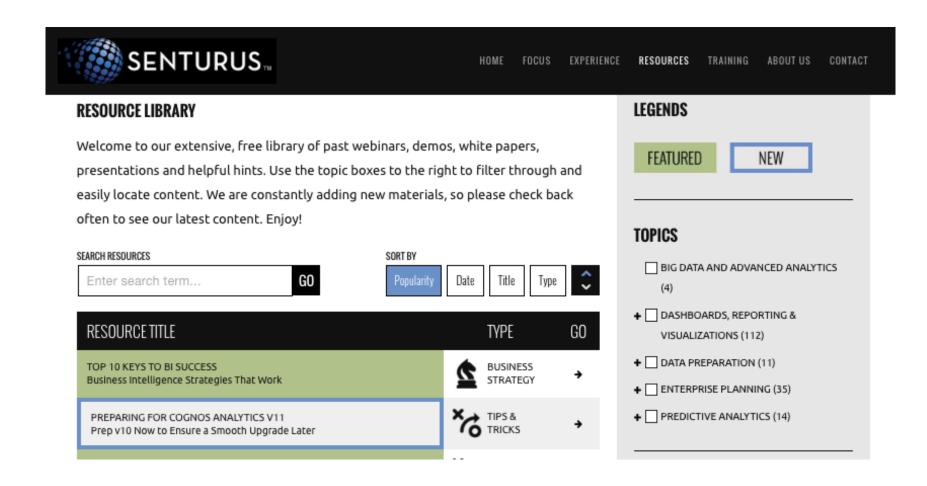
#### TABLEAU LIKE A PRO IN HALF A DAY

HANDS-ON WORKSHOP IN DENVER, CO

Tuesday, July 18, 2017 - 8:30am - 12:30pm MT - 4 hours



### Free Resources on www.senturus.com



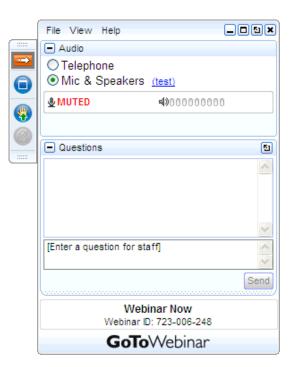


### Q&A

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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