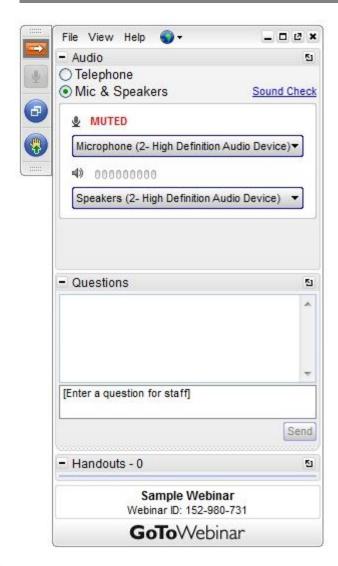


# TABLEAU DASHBOARD DESIGN: BEST PRACTICES

**Data Exploration and Actionable Insights** 

# GoToWebinar Control Panel



Click arrow to restore full control panel

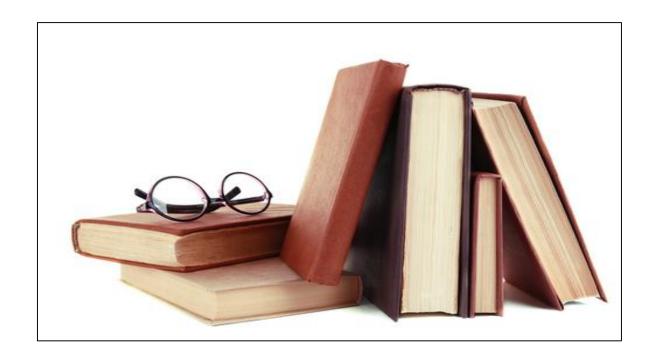


Submit questions here



# **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

- Introduction
- Senturus Overview
- Presentation in Tableau Workbook
- Additional Resources
- Q&A



# Introducing...Today's Presenters



Michael Weinhauer
Practice Area Director /
Solutions Architect
Senturus, Inc.



Jim Frazier
VP of Client Solutions
Senturus, Inc.

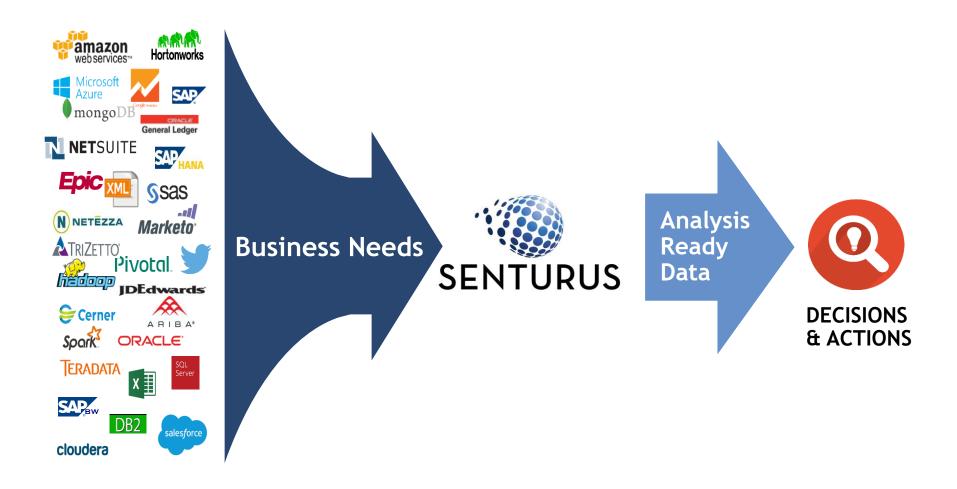




# WHO WE ARE

**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
- Software to Automate and Enable our Clients in the Practice Areas Above





# 1000+ Clients, 2000+ Projects, 16+ Years



# SEPHORA































































# Poll

What are your biggest challenges in creating effective dashboards? (Select all that apply)

- Properly prepared data
- Understanding the business problem behind the dashboard
- Skill level with Tableau
- Securing and/or distributing workbooks
- Other





TABLEAU WORKBOOK

### "10 Best <u>Better</u> Practices for Tableau Dashboard Design"

- 1. How to design a dashboard with a goal in mind.
- 2. How the overall dashboard layout impacts effectiveness.
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Pulling it all together....







### "10 Best Better Practices for Tableau Dashboard Design"

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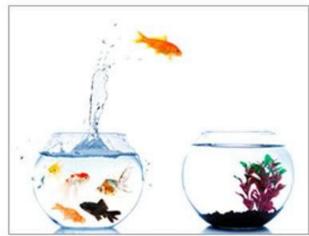


### "Best" vs "Better"/"Good"

"Best" dashboard is the one that

- yields actionable insights
- gets adopted by end user(s)

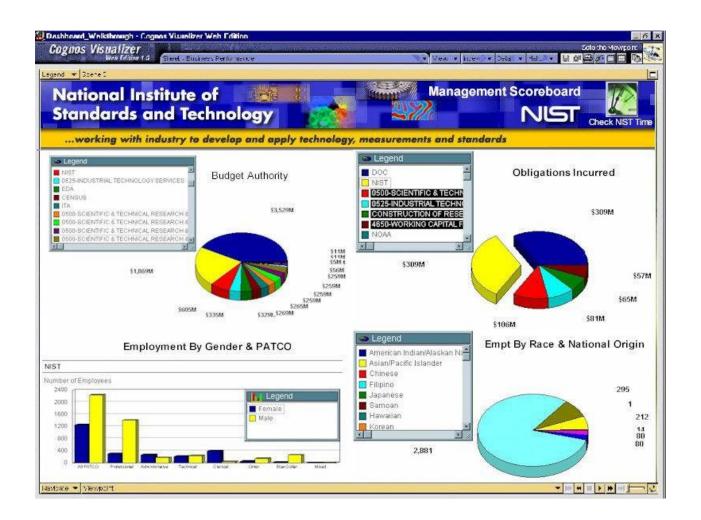




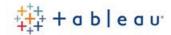


























What do they all have in common?

.. "woof" is right!







### **KISS Still Applies**

"The painting isn't done when I can't get anything else in, but when I can't take anything else out." - Famous painter

"I have only made this letter longer because I have not had the time to make it shorter." - Blaise Pascal

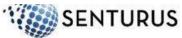
Tableau's great strength is also its (and by extension, possibly your) greatest weakness - avoid over-complicating!

- Use the 5 Second Rule
- Introduce to end users w/out training
- Experiment and iterate rapidly WITH end users









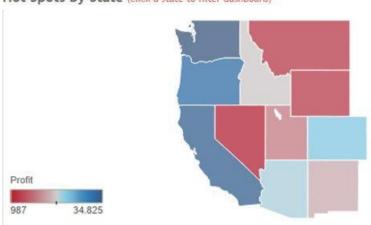


### **Superstore Metrics**

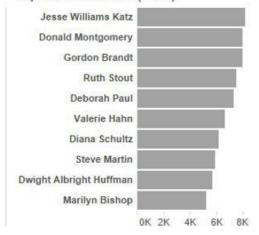
at a glance..

441 customers	▼:	900 orders	•		91K rofit	•	1	,311K sales	<b>A</b>	15° profit r			\$10 avg unit p	
Departmental	Metrics	Monthly	Trend (click t	to filter)				Detai	it			% gional Pro	429 ofit Hotspo	
					Custom	ers	Orders	Sales	Profit	Ratio	Central	East	South	West
choose a metric Profit	Furniture	~		. •	1	95	247	\$525K	\$35K	7%				
choose relative date 1/1/2015 12:00:00	Office Supplie	s	^		3	55	580	\$271K	\$46K	17%				
	Technology	\	<b>✓</b>	\ <b>*</b>	2:	29	293	\$515K	\$110K	21%				





### Top 10 Customers (Profit)







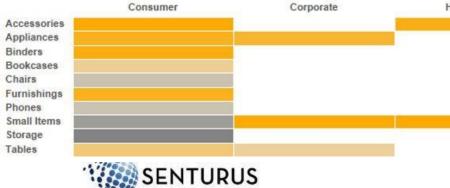
### Regional Profit Dashboard

### Regional Profit and Monthly Trends (click to filter)





### Customer Segment/Sub-Category Heatmap (click to filter)



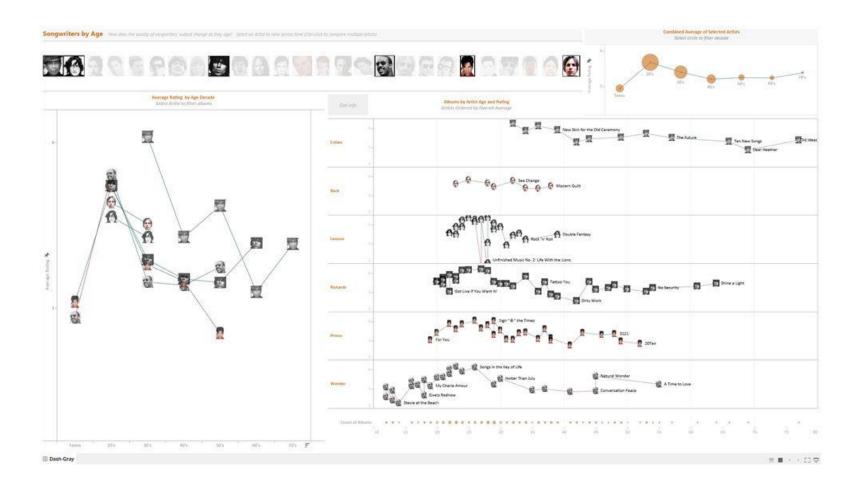
### YOY Variance

(click to filter)

North Carolina	-2050.82%					
Tennessee	-1923.40%					
Colorado	-219.33%					
Illinois	-140.13%					
Wyoming	-100.00%					
Maine	-100.00%					
Rhode Island	-90.94%					
Nevada	-83.88%					
Alabama	-82.52%					
Virginia	-77.00%					

Home Office











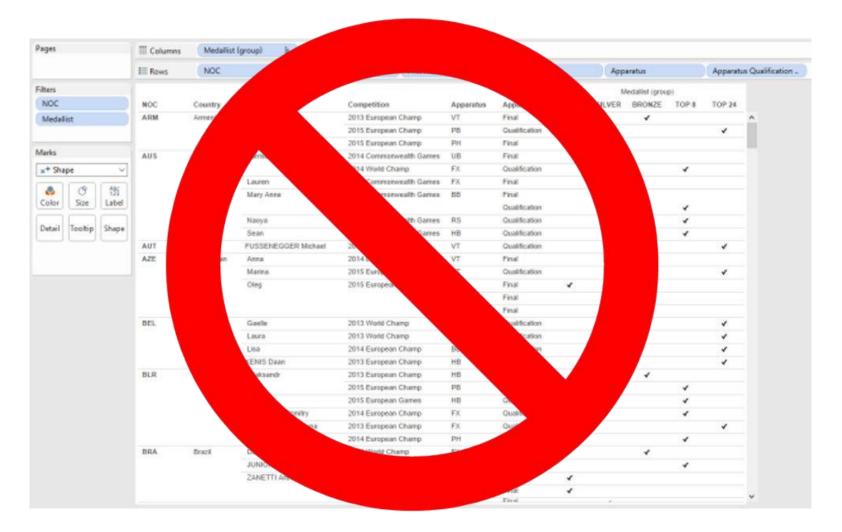
Don't give your users headaches, give them hot dogs!

Or visual belly rubs...



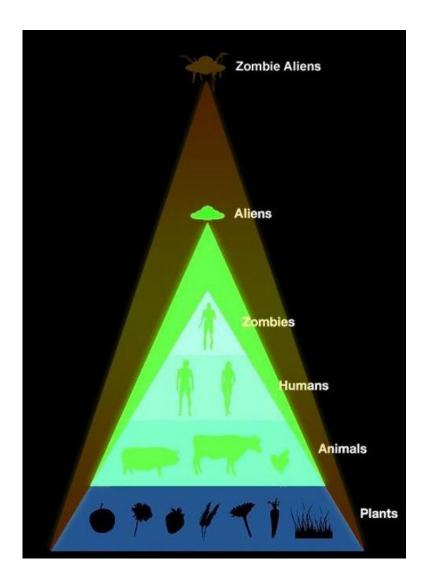


### Visualizations should be VISUAL!









Pre-attentive visual capabilities are a big part of what propelled you to the top of the food chain (except for apparently zombies, aliens, and of course, zombie-aliens)...







...by keeping you from being eaten by T-Rexes...

...and Saber Tooth Tigers...



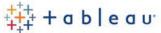




## Only to die playing Pokemon Go, but that's another story...







# Pre-Attentive Attributes - The Eves Have It!

- •When our eyes are open, our vision accounts for two-thirds of the electrical activity of the brain a full 2 billion of the 3 billion firings per second, and
- 50% of our neural tissue is directly or indirectly related to vision\*
- More of our neurons are dedicated to vision than the other four senses combined, and
- olfactory cortex is losing ground to the visual cortex about 60 percent of our smell-related genes have been permanently damaged in this neural arbitrage\*\*



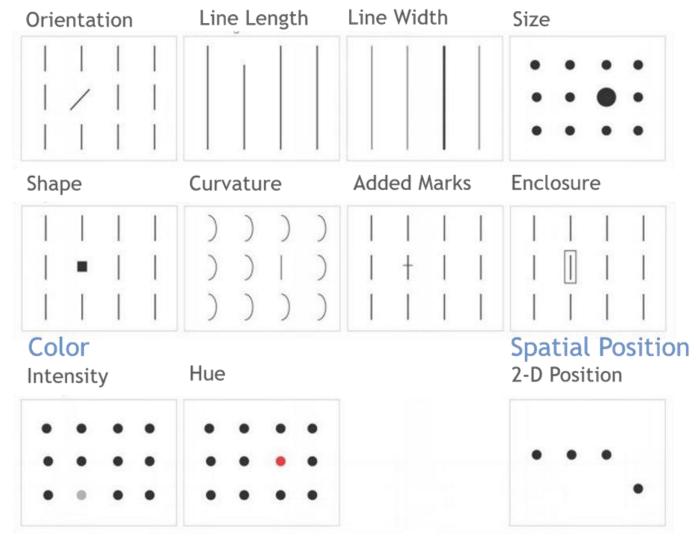




<sup>\*</sup> Source: John Medina, Brain Rules, 2015

<sup>\*\*</sup> Source: Neuroanatomist R.S. Fixot, 1957

### **Form**







### Visualization is part art, part science. Engage BOTH sides of your brain!







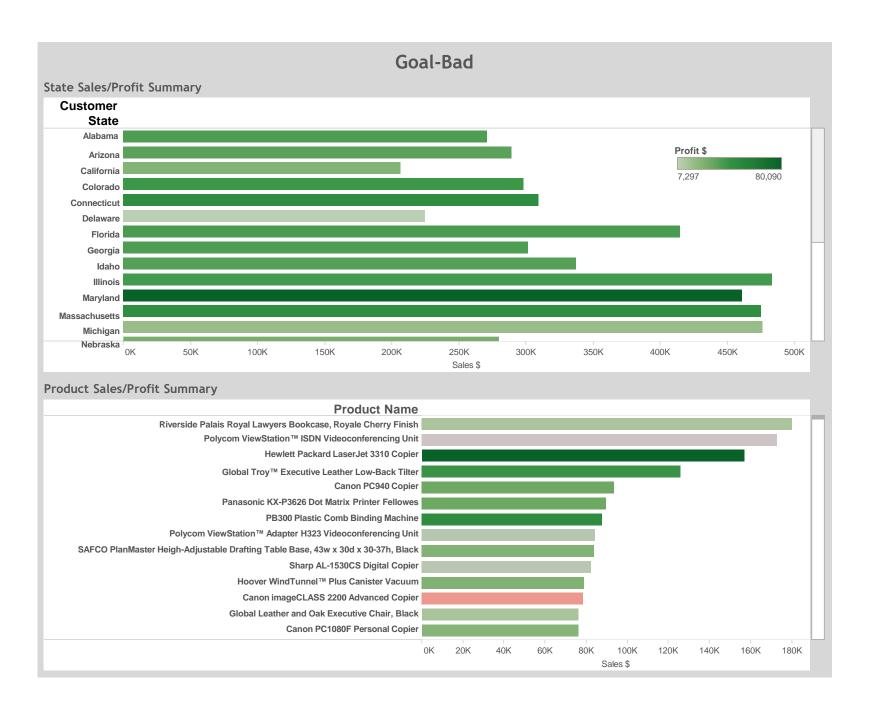
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Selected detail

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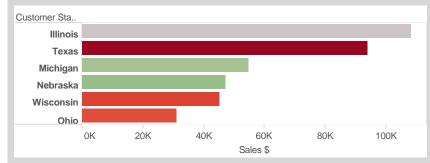




# South Dakota Wyoming New York Lowa United States Kansas Missouri Mexico Missouri Mexico Missouri Missouri Missouri Morth Carolina South Carolina Missouri Missou



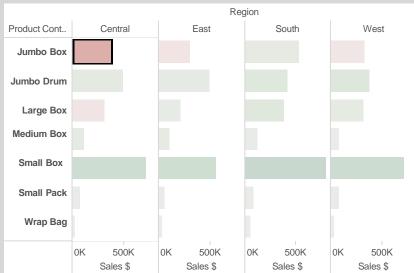
### Sheet 16



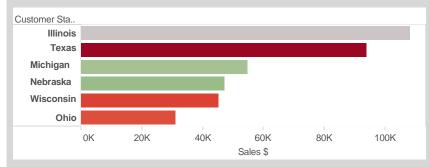
### DRIVER - Click a bar to change other charts

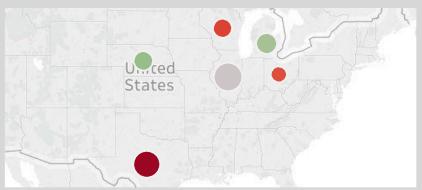


# DRIVER - Click a bar to change other charts Product P









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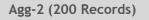
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#### Performance

AGG-1 (16 Records)





Agg-4 (35k Records)

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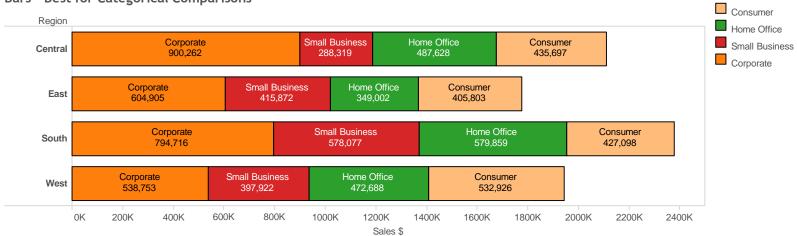
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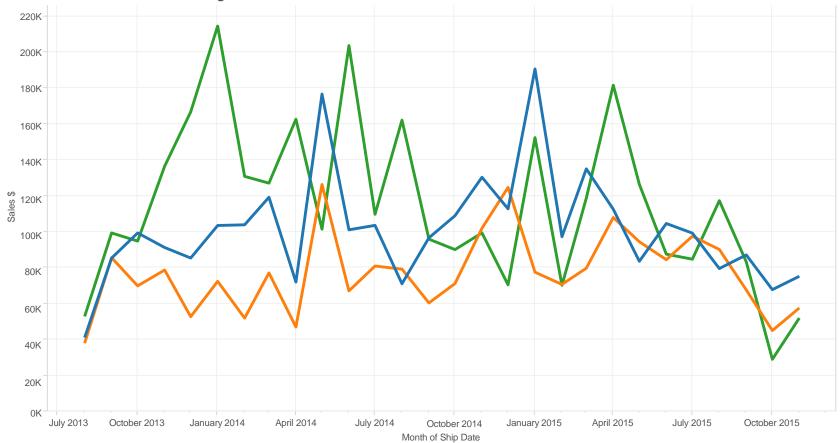




**Bars - Best for Categorical Comparisons** 



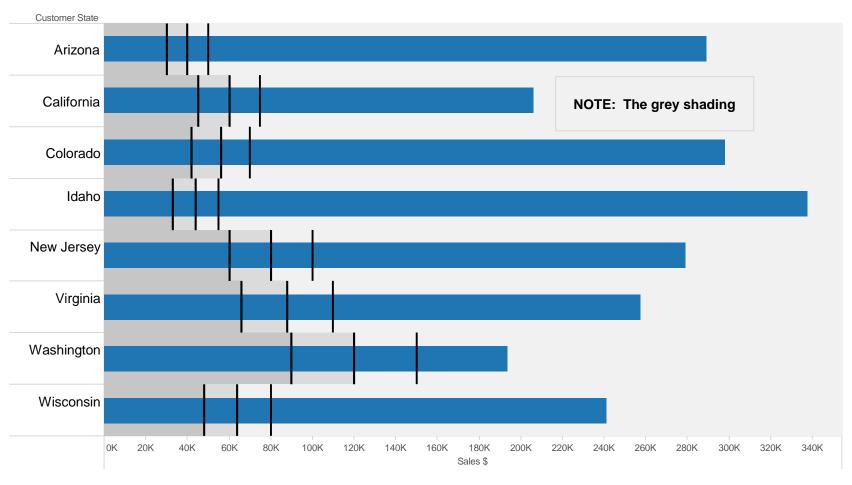
#### Line Charts - excellent for showing data over time!



Scatter - different measures, leveraging position, color and shape! 180K-160K 140K 120K Profit \$ 100K 80K Region Cen Central East 60K-South **★** West 40K × Product Category Furniture 20K-Office Supplies Technology 0K 0K 100K 200K 300K 400K 500K 600K 700K 800K 900K 1000K Sales \$

Sales \$ Maps - Take advantage of built-in Demographics! 198 50,000 Ontario 100,000 150,000 198,111 Profit \$ Montana Minnesota -11,727 52,787 South Dakota Per Capita Income Idaho 11,100 to 25,200 Michigan New York 25,200 to 28,600 Nebraska 28,600 to 31,900 Pennsylvania Uniteu 31,900 to 36,000 States 36,000 to 84,600 Conne New Jerse Tennessee Delaware Arkansas Maryland District of Columbia Mexico

# Compare LIKE values (Example Prev Yr Sales versus New Yr Quota Blue Bar = Sales\$. Black Line = Quota\$.



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#### RED means Profit is BELOW State average. BOLD means Profit is ABOVE state average.

#### UPPERCASE means Profit is BELOW state average

Customer State	Discount Rate	Avg. Sales \$	Avg. Profit \$		Uppercase State	Discount Rate	Avg. Sales \$	Avg. Profit \$
Alabama	4.56%	1,818	25 1		Alabama	4.56%	1,818	25 1
Arizona	4.64%	1,581	191	ARIZONA		4.64%	1,581	19 1
California	4.90%	1,305	151		CALIFORNIA	4.90%	1,305	15 1
Colorado	4.68%	2,057	28 8	COLORADO		4.68%	2,057	28 8
Connecticut	4.74%	1,579	24 4		Connecticut	4.74%	1,579	24 4
Delaware	5.15%	1,653	54	DELAWARE		5.15%	1,653	54
Florida	5.05%	1,671	157		FLORIDA	5.05%	1,671	15 7
Georgia	4.89%	1,657	20 8	Georgia		4.89%	1,657	20 8
ldaho	4.98%	1,939	20 7		Idaho	4.98%	1,939	20 7
Illinois	5.28%	2,022	168	ILLINOIS		5.28%	2,022	16 8
Maryland	4.95%	1,945	33 8		Maryland	4.95%	1,945	33 8
Massachusetts	5.01%	2,350	23 2	Massachusetts		5.01%	2,350	23
Michigan	5.17%	1,952	73	MICHIGAN		5.17%	1,952	73
Grand Total	4.95%	1,824	197	Grand Total		4.95%	1,824	19 7

. .

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#### Down to a Single Query to the Database

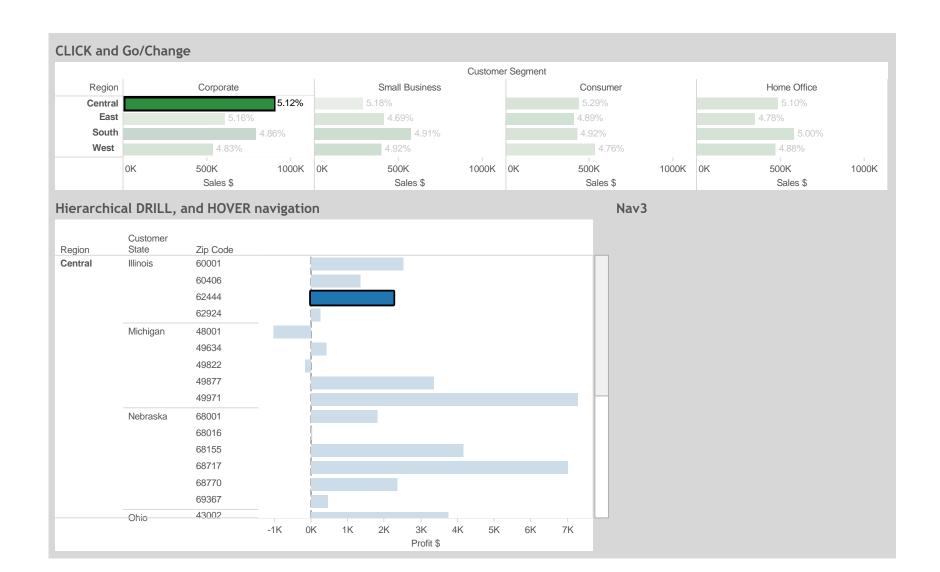
-12,909 45,016

Product Product Categor Containe		<b>Central</b> Small Business			<b>East</b> Small Business			South Small Business			West Small Business						
У	r			Но		Но		Но						Н			
					me Consum Corporate Office			me Consum Corporate Office				ome Consum Corporate					
Furniture	Jumbo Box	72,019	118,684	110 207	46,804	45,640	70,119	68,279	80.456		175,972	84.558		93,695	70,138	79,101	27,601
· uiiiiui o	ouribo Box	12,010	110,001	110,201	10,001	10,010	70,110	00,210	00, 100	02,700	170,072	0 1,000	110,701	00,000	70,100	70,101	21,001
	Jumbo Drum	38,999	89,417	64,936	74,430	59,304	108,577	19,369	47,887	17,093	80,504	48,293	67,419	68,034	82,176	23,376	46,500
	Large Box	11,292	33,833	14,484	16,523	4,433	21,822	11,127	25,875	8,735	25,468	40,059	4,016	17,544	2,459	46,371	11,409
	Medium Box	6,348	22,996	8,950	2,598	5,309	3,099	14,269	2,50 1	1,576	15,455	18,503	3,622	13,213	1,798	6,270	13,649
	Small Box	2,408	1,814	4,472	3,094	2,853	4,310	2,784	5,673	2,144	6,297	1,704	1,99	1,955	4,839	3,321	4,026
	Small Pack	1,705	5,849	3,858	1,588	2,796	1,688	2,239	52	1,007	6,089	2,620	4,578	1,638	4,622	1,936	37
									7								6
Office	Jumbo Drum		42,276	16,082	14,588	20,294	40,952	32,044	11,791	8,800	8,927	6,444	6,173		18,284	6,840	2,497
Supplies	_																
	Large Box	15,996	26,103	1,961	1,337	4,409	5,458	4,991	4,109	2,349	11,083	24,902	8,849	9,198	23,833	23,283	3,32
	Medium Box	8,502	3,287	2,349	36 5		3,746	1,539	91	23,957	3,152	4,797	1,119	2,732	14,849	840	81 8
	Small Box	111,235	131,630	99,049	54,781	39,793	96,661	85,267	84,814	60,887	146,889	117,134	144,741	94,603	109,201	88,230	70,699
	Small Pack	4,720	11,013	2,364	1,99 1	2,693	2,496	1,971	3,07 1	3,776	12,963	2,975	3,883	6,703	1,964	3,800	91 4
Technology	Jumbo Box		22,741			27,008	3,502	3,699	8,469	14,591	54,354	3,731	17,232	9,172	21,225		29,355
	Jumbo Drum	73,896	46,368	24,723	8,454	44,595	51,937	29,892	26,495	33,200	81,588	29,895	25,752	22,972	55,765	24,662	24,919
	Large Box		140,340	46,985		68,201	42,939		23,281	128,887	3,797	70,183	54,994	64,286	3,378	38,416	75,251
	Medium Box	27,969	19,550	13,970	1,412	9,150	49,490	2,451	17,758	9,200	26,183	6,862	9,012	14,052	5,840	3,231	5,600
	Small Box	46,941	162,799	45,820	48,445	56,075	74,742	51,592	55,027	32,321	100,323	95,376	90,078	87,152	86,676	108,825	59,895
	Small Pack	8,546	11,980	10,017	7,763	4,868	17,563	9,544	10,493	8,785	18,127	9,527	4,904	15,510	15,841	9,943	15,752

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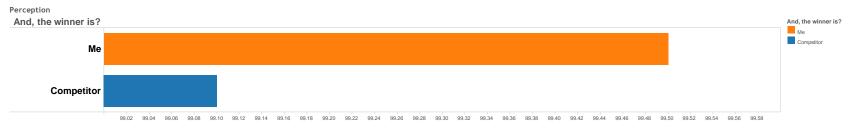




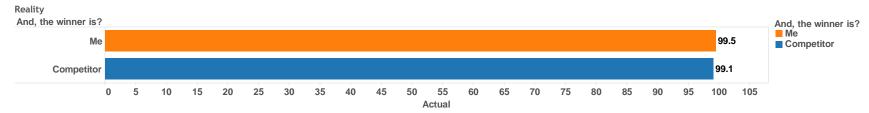
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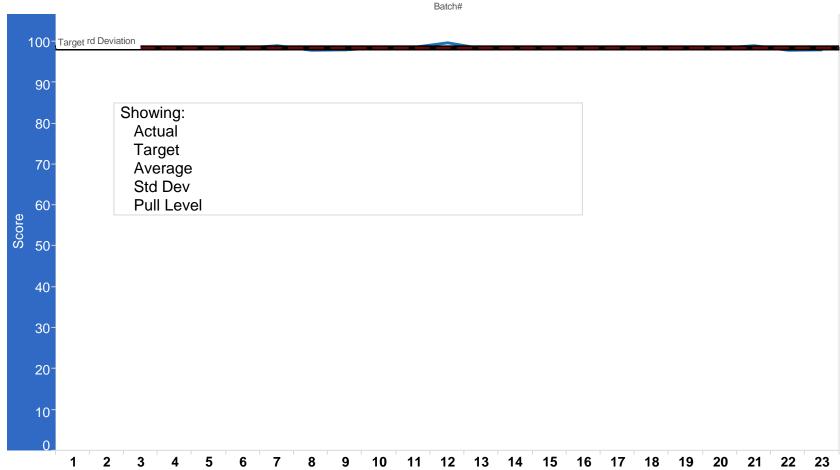


Sum of Actual for each And, the winner is?. Color shows details about And, the winner is?.

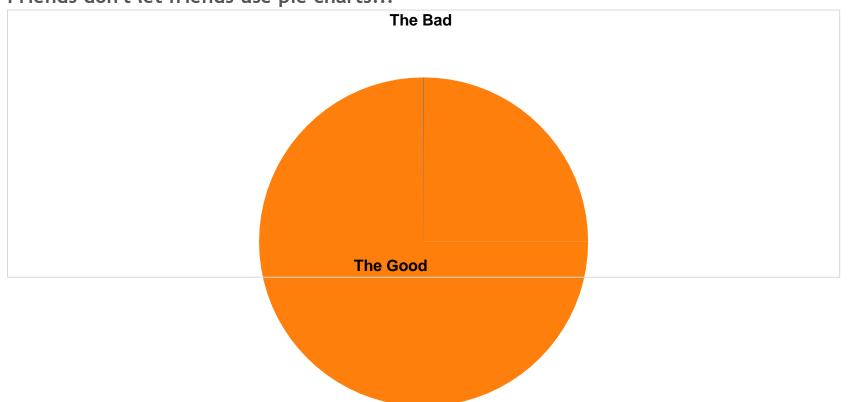


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Friends don't let friends use pie charts!!!



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### ADDITIONAL RESOURCES

# **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

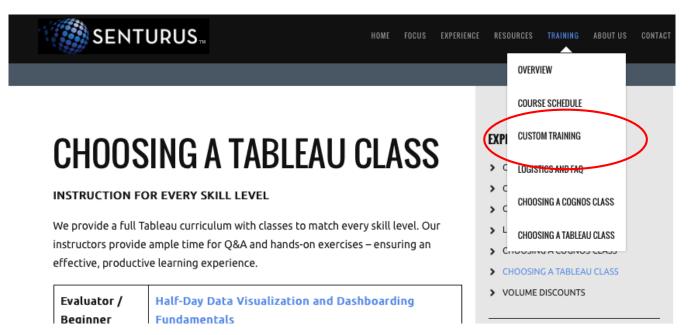
\$2995



### Tableau Training Led by Expert Instructors

- Beginner, intermediate & advanced courses
- Regularly scheduled online courses
- Private, on-site, custom options

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





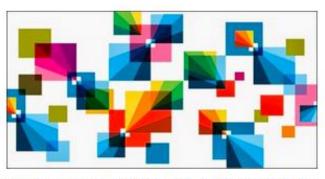
# **Upcoming Events**

### www.senturus.com/events



# WORLD OF WATSON COMES TO THE BAY AREA

Thursday, December 8, 2016 - 9:30am - 2:00pm PT - 4.5 hours



#### WHAT'S NEW IN COGNOS ANALYTICS 11.0.5

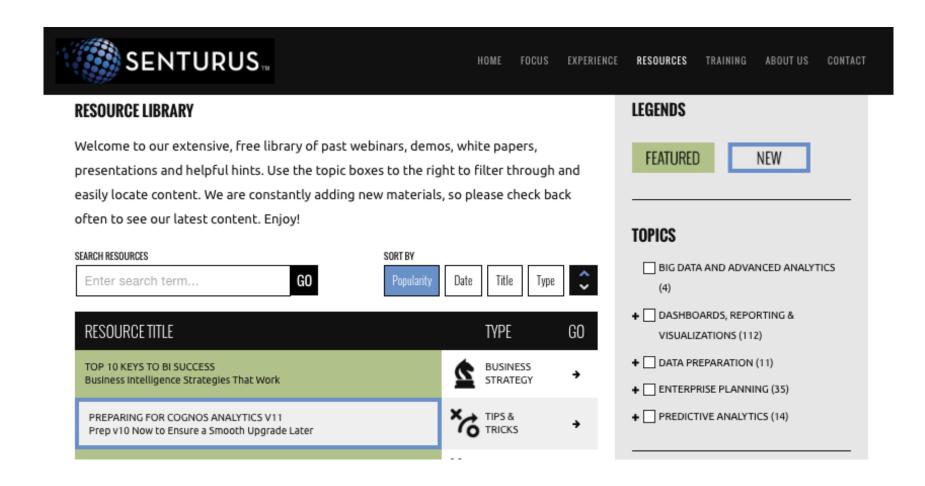
DEMOS AND Q&A WITH THE IBM PRODUCT TEAM

Thursday, December 15, 2016 - 10am PT/1pm ET - 60 minutes



### More Free Resources:

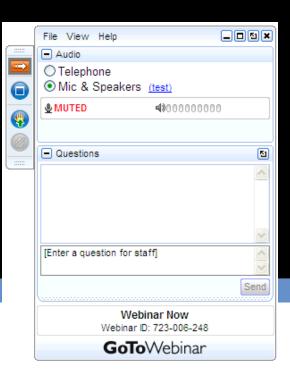
# http://www.senturus.com/resources/







Q & A



### Thank You!

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