



How to make an impact with data

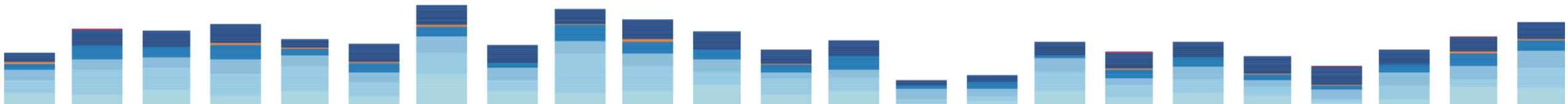
Andy Cotgreave | Technical Evangelist | Tableau Software

January 2018

Welcome!

We'll get started in just a few minutes.

- All lines are muted
- Today's webinar is being recorded
- All registrants will receive the slides and recording via email
- Dial in or use your computer's audio
- Submit questions for the presenters via the Q&A panel



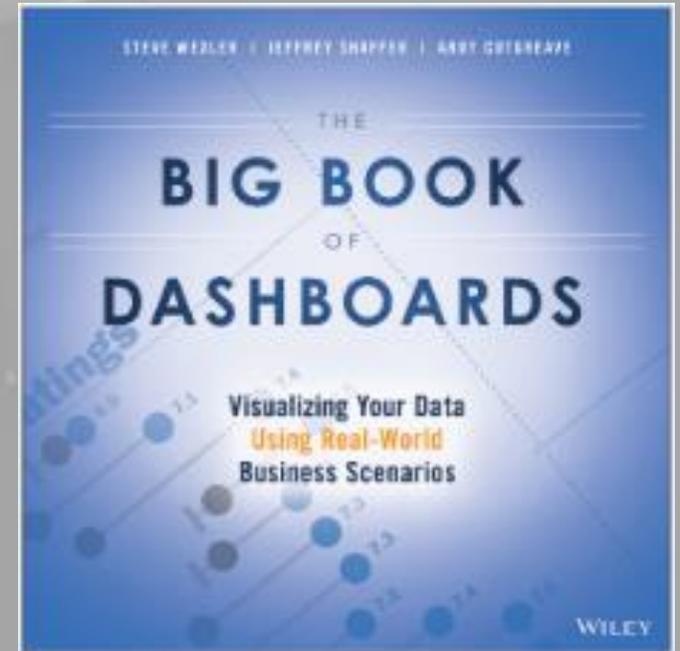
How to make an impact with your data: Going from Boring to Beautiful

Andy Cotgreave
Senior Technical Evangelist
Tableau

@acotgreave

Andy Cotgreave

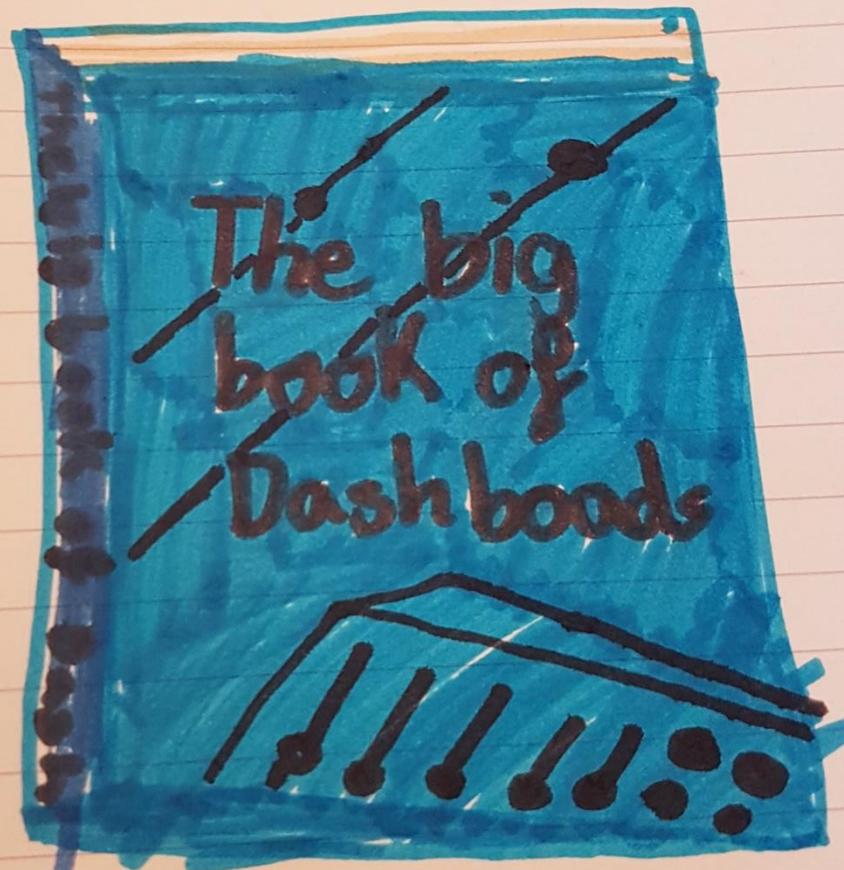
Technical Evangelist, Tableau



www.bigbookofdashboards.com

@acotgreave

This is my Dad's book.
And I think it's really
boring because it's -
about Dashboards!!!!!!





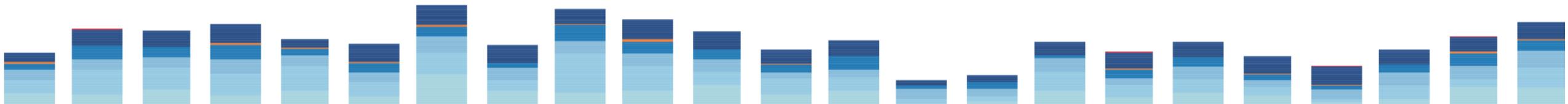
How to make an impact with data

Andy Cotgreave | Technical Evangelist | Tableau Software

January 2018

How is today's webinar structured?

- This is a presentation I deliver to audiences around the world
- I will deliver it mostly in the same manner I do to a live audience
- Where necessary, I will interrupt my own flow to talk about how it can be used to create conversations in the audience



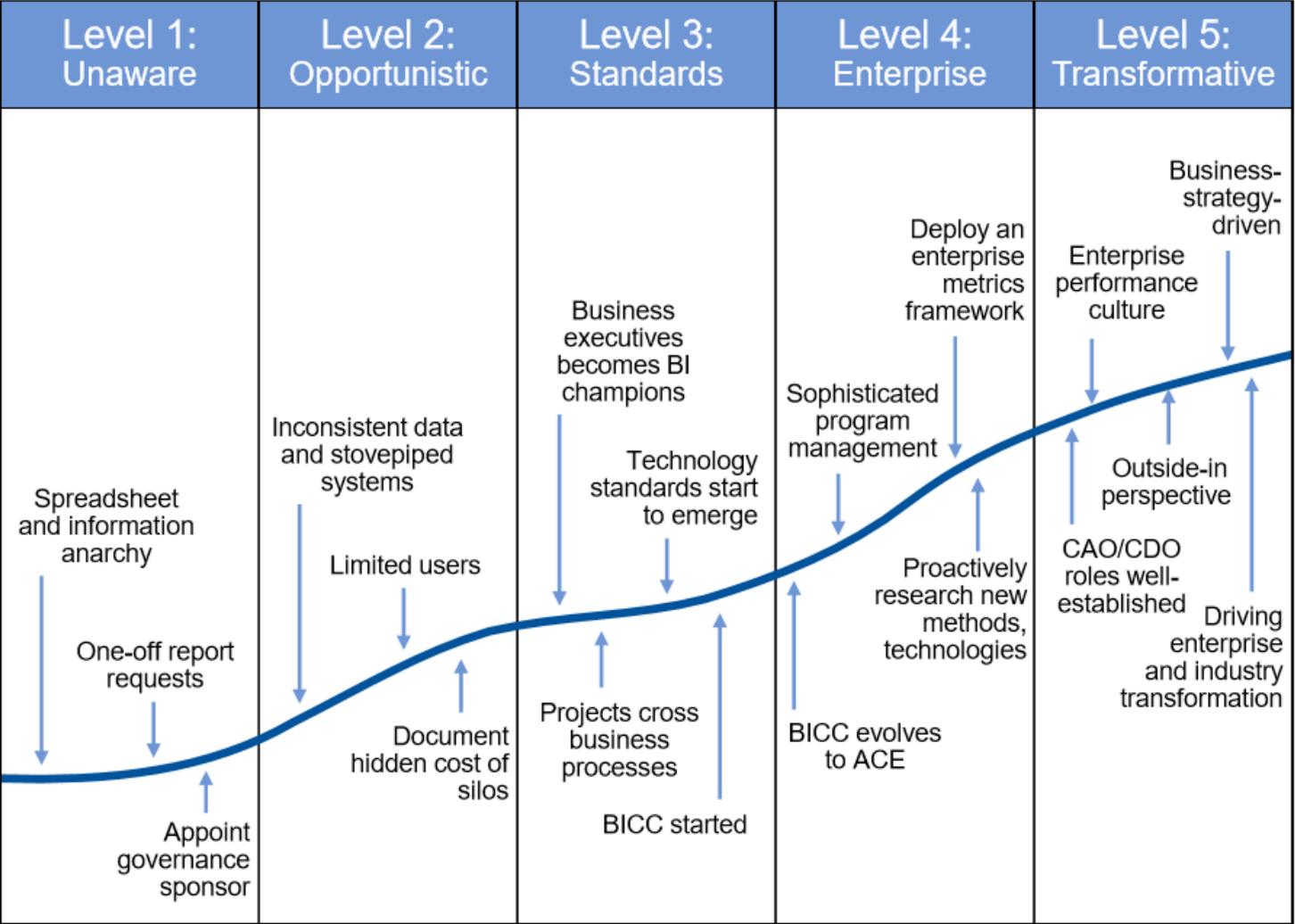
How to make an impact with your data: Going from Boring to Beautiful

Andy Cotgreave
Senior Technical Evangelist
Tableau

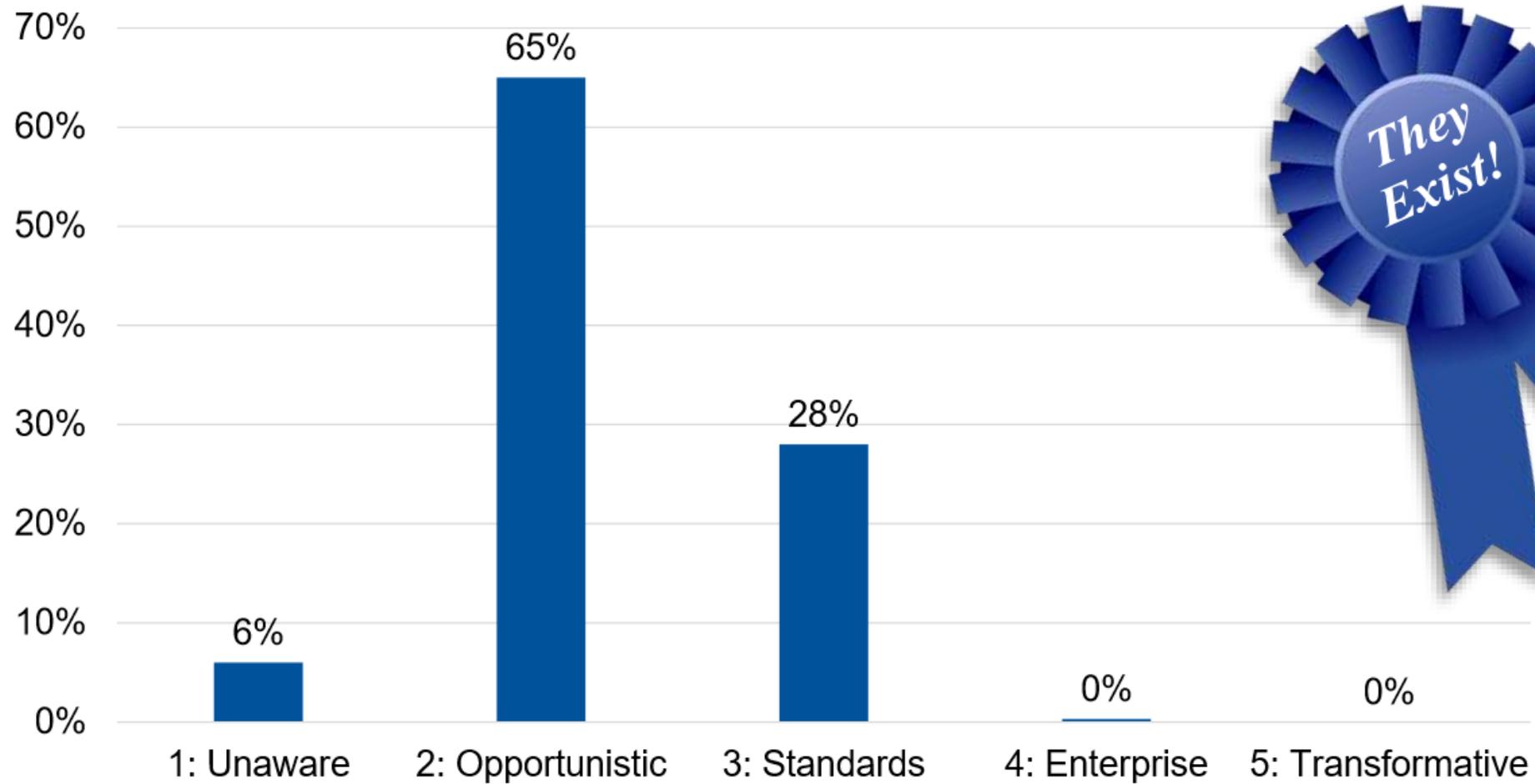
@acotgreave

IMPACT?

ITScore for BI and Analytics: Levels of BI and Analytics Maturity



BI and Analytics Maturity From ITScore Assessments



**TECHNOLOGY IS NOT THE
PROBLEM**

BUSINESS CULTURE IS THE PROBLEM

Training

Design

Collaboration

Iteration

Training

Design

Collaboration

Iteration

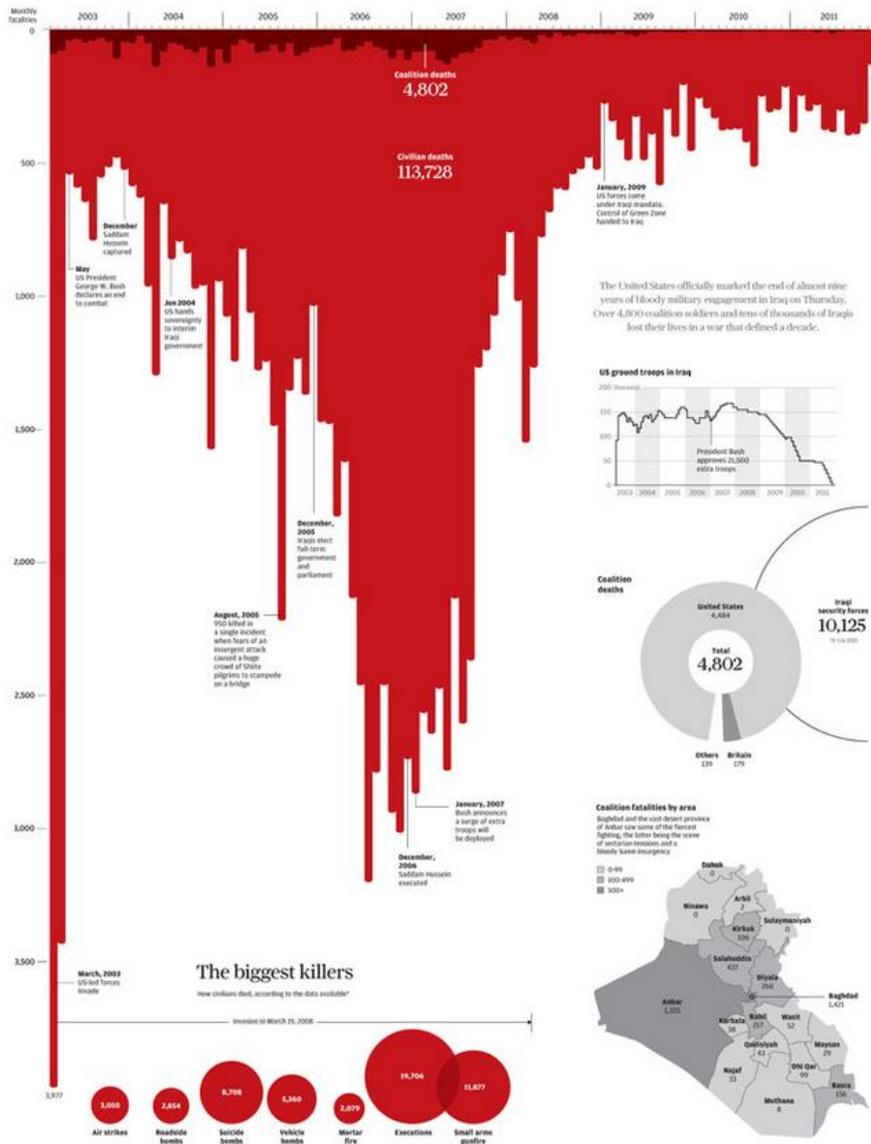
**“Data visualisation
is a language. It’s
a means to convey
an opinion, an
argument.”**

**Kim Rees – Founding Partner,
Periscope**

PERISCOPIC
DO GOOD WITH DATA



Iraq's bloody toll

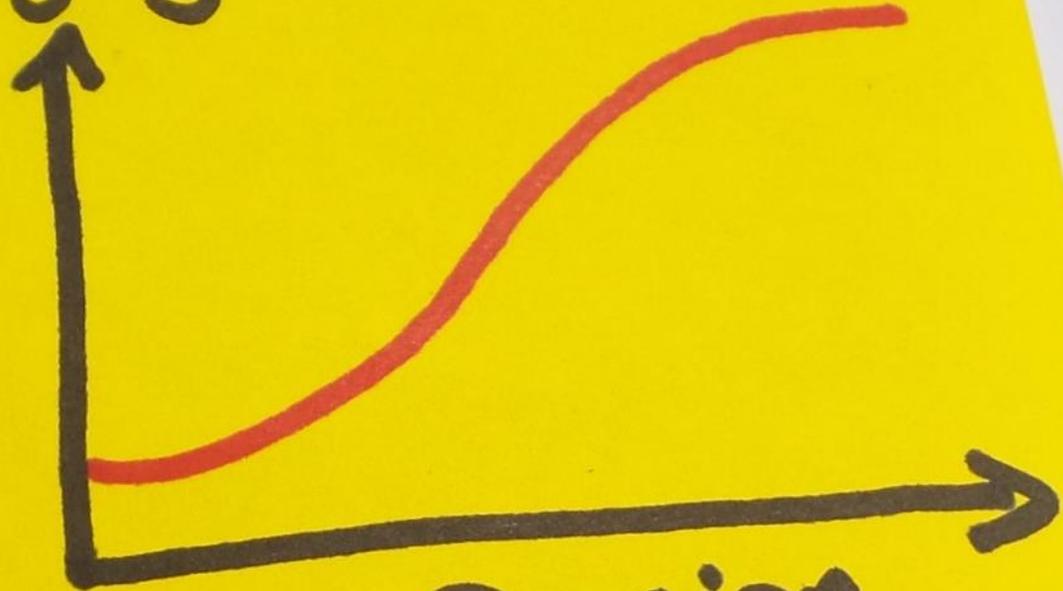


*AFP graphics; Reuters photo

*Based on information received up to March 21, 2008. Count of deaths according to news reports; not all figures are in Iraq.

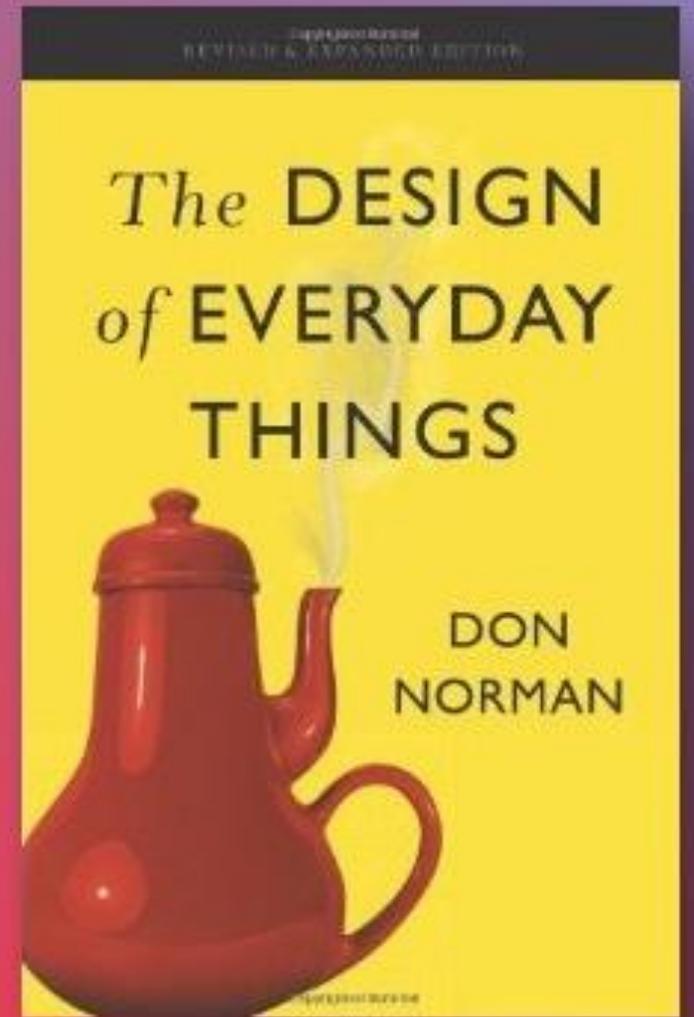
Sources: Reuters, Iraqis Daily, New England Journal of Medicine, CBS, Reuters, Associated Press

User
Engagement



Design
Improvements

“Great designers
produce
pleasurable
experiences.”



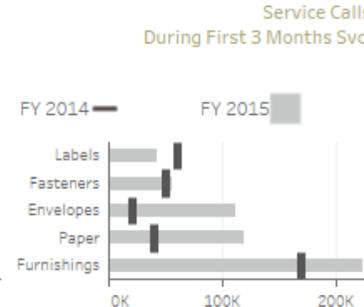
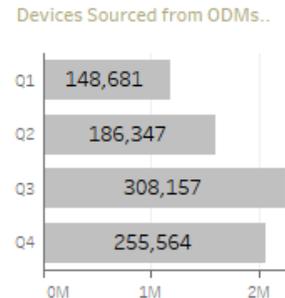
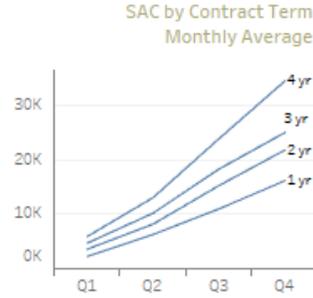
Which do you prefer?



Superstore Wireless

Created by Tableau

Goal 1 : Reduce Subscriber Acquisition Cost

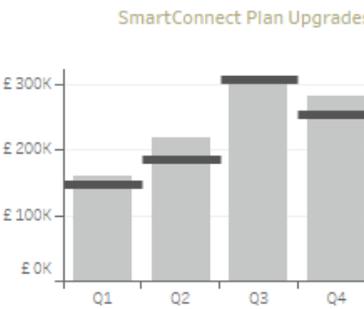
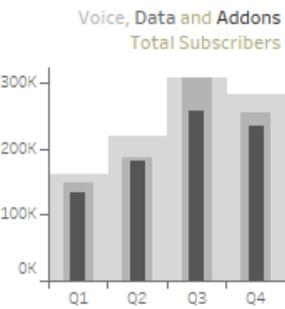
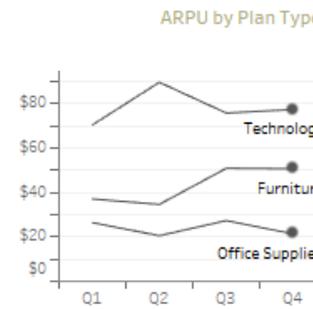


Executive Summary

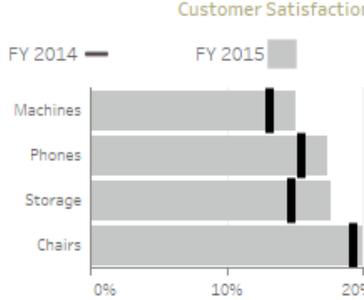
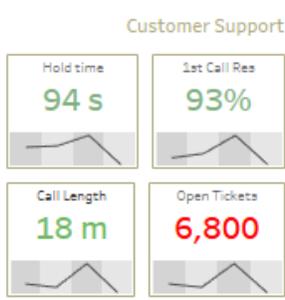
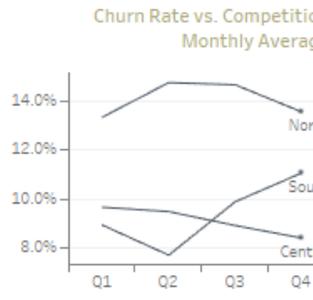
	FY 2015	FY 2016
FY 2015	\$1.86M	\$2.51M
Profit	\$0.24M	\$0.31M
Cost	\$2.95M	\$4.24M



Goal 2 : Increase Average Revenue Per User



Goal 3 : Reduce Churn



Going back as far as 1983, these two commodities have often moved in close correlation with one another, even as the Consumer Price Index rose steadily. However, in the past 10 years, price spikes, global economic crises, and other factors have added to volatility in the relationship between

OIL & GOLD

1985 Range of Oil Prices per barrel: **\$10 - \$140**

Range of Gold Prices per oz.: **\$255 - \$1,814**

1990 The prices of oil and gold are often in close correlation with one another, as the white line here shows. Even as the black (oil) and gold bars grow and shrink, denoting how close those commodities are to their maximum per-unit price over a 34-year period, they tend to become larger and smaller in approximate unison.

1995 This changes, however, in the year 2000. As the price of oil rises dramatically, and then crashes during the global economic crisis, its price becomes less tethered to gold's.

Gold, on the other hand, leaps in price after the economic crash—perhaps as people search for what they perceive as safer investments.

2000

June 2008 is the month where oil's proximity to its max price (100.0%) outstripped gold's proximity to its max price (43.3%) the most, with a difference of +56.7%.

While the prices of these two commodities remain somewhat linked, the past fifteen years has demonstrated an increased volatility between them.

2005

July 2016 is the month where gold's proximity to its max price (69.8%) outstripped oil's proximity to its max price (24.1%) the most, with a difference of +45.7%.

2010

2015



Created by Mike Cisneros for #MakeoverMonday
Twitter: @mikevizneros

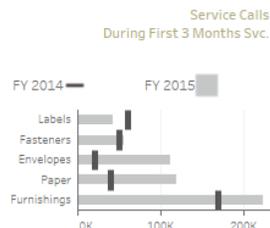
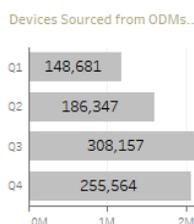
Data Source: Quandl – Gold Prices, Crude Oil Prices, Consumer Price Index
www.quandl.com/data/FRED/CPIAUCSL-Consumer-Price-Index-for-All-Urban-Consumers-All-Items



Superstore Wireless

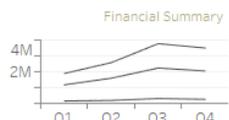
Created by Tableau

Goal 1 : Reduce Subscriber Acquisition Cost

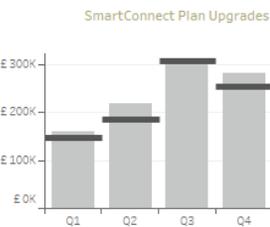
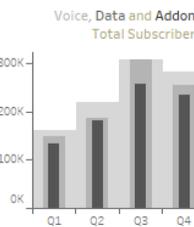
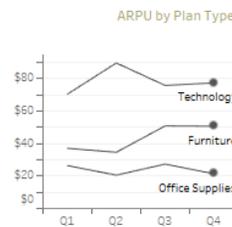


Executive Summary

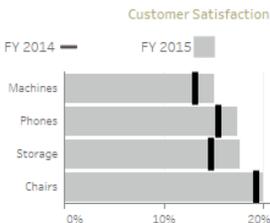
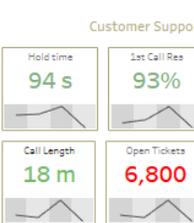
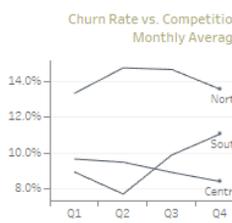
	FY 2015	FY 2016
FY 2015	\$1.86M	\$2.51M
Profit	\$0.24M	\$0.31M
Cost	\$2.95M	\$4.24M



Goal 2 : Increase Average Revenue Per User



Goal 3 : Reduce Churn



Going back as far as 1983, these two commodities have often moved in close correlation with one another, even as the Consumer Price Index rose steadily. However, in the past 10 years, price spikes, global economic crises, and other factors have added to volatility in the relationship between

OIL & GOLD

Range of Oil Prices per barrel: \$10 - \$140

Range of Gold Prices per oz.: \$255 - \$1,814



June 2008 is the month where oil's proximity to its max price (100.0%) outstripped gold's proximity to its max price (43.3%) the most, with a difference of +56.7%.

July 2016 is the month where gold's proximity to its max price (69.8%) outstripped oil's proximity to its max price (24.1%) the most, with a difference of +45.7%.



Created by Mike Cisneros for #MakeoverMonday
Twitter: @mikevizneros

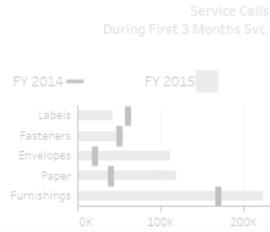
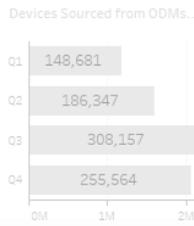
Data Source: Quandl - Gold Prices, Crude Oil Prices, Consumer Price Index
www.quandl.com/data/FRED/CPIAUCSL-Consumer-Price-Index-for-All-Urban-Consumers-All-Items



Superstore Wireless

Created by Tableau

Goal 1 : Reduce Subscriber Acquisition Cost

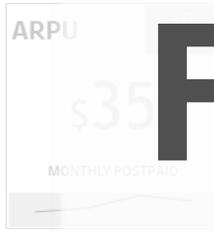


Executive Summary

	FY 2015	FY 2016
FY 2015	\$1.86M	\$2.51M
Profit	\$0.24M	\$0.31M
Cost	\$2.95M	\$4.24M



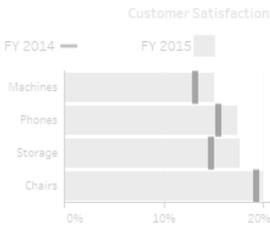
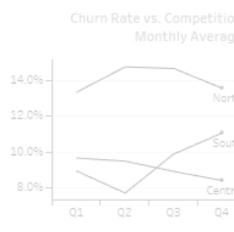
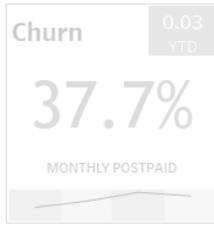
Goal 2 : Increase Average Revenue Per User



Subscriber Growth



Goal 3 : Reduce Churn



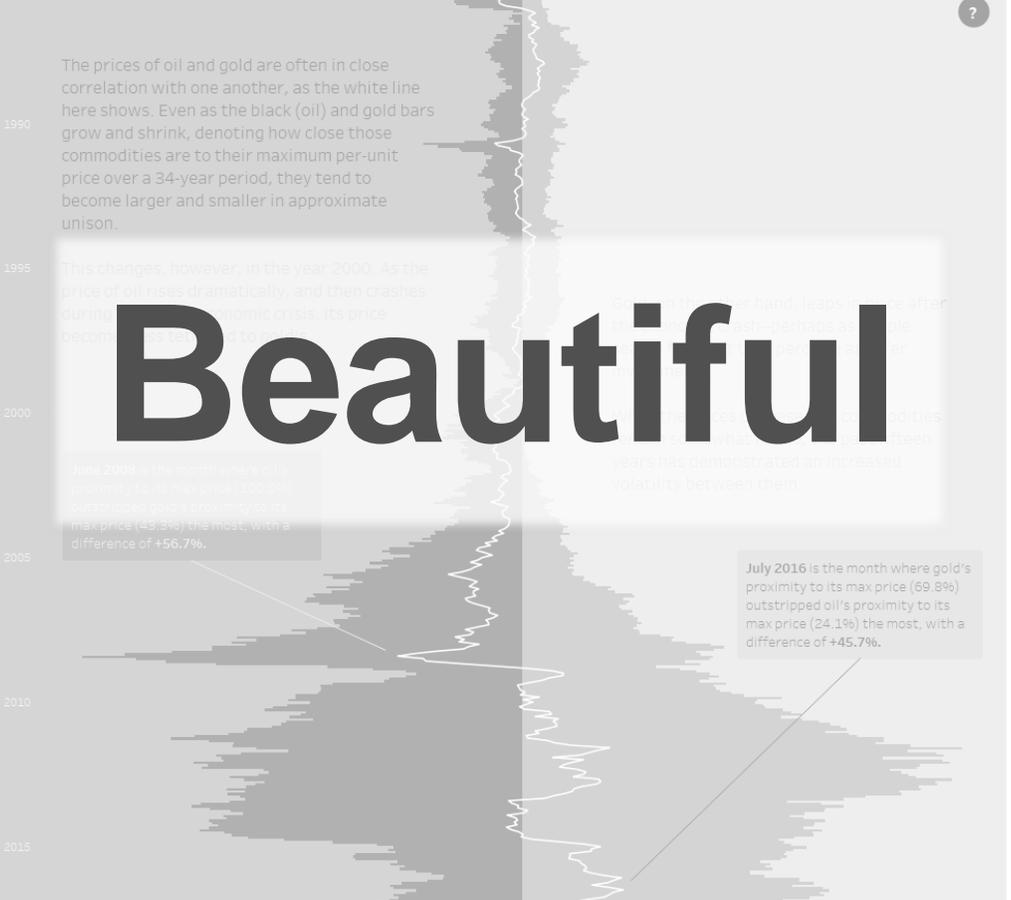
Functional

Going back as far as 1983, these two commodities have often moved in close correlation with one another, even as the Consumer Price Index rose steadily. However, in the past 10 years, price spikes, global economic crises, and other factors have added to volatility in the relationship between

OIL & GOLD

Range of Oil Prices per barrel: **\$10 - \$140**

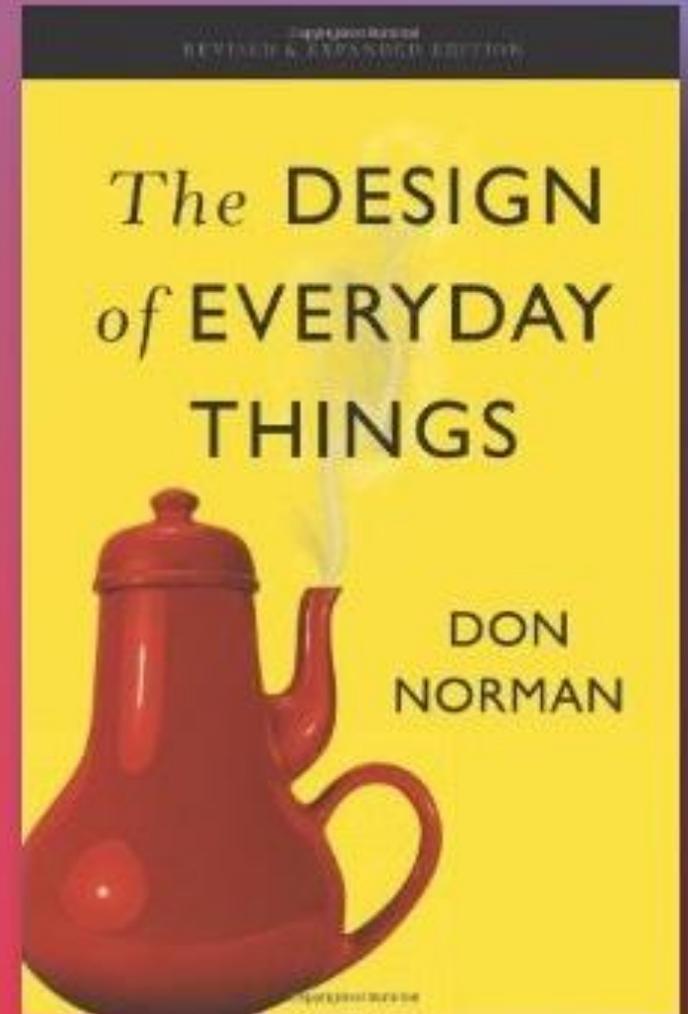
Range of Gold Prices per oz.: **\$255 - \$1,814**



Created by Mike Cisneros for #MakeoverMonday
Twitter: @mikevizneros

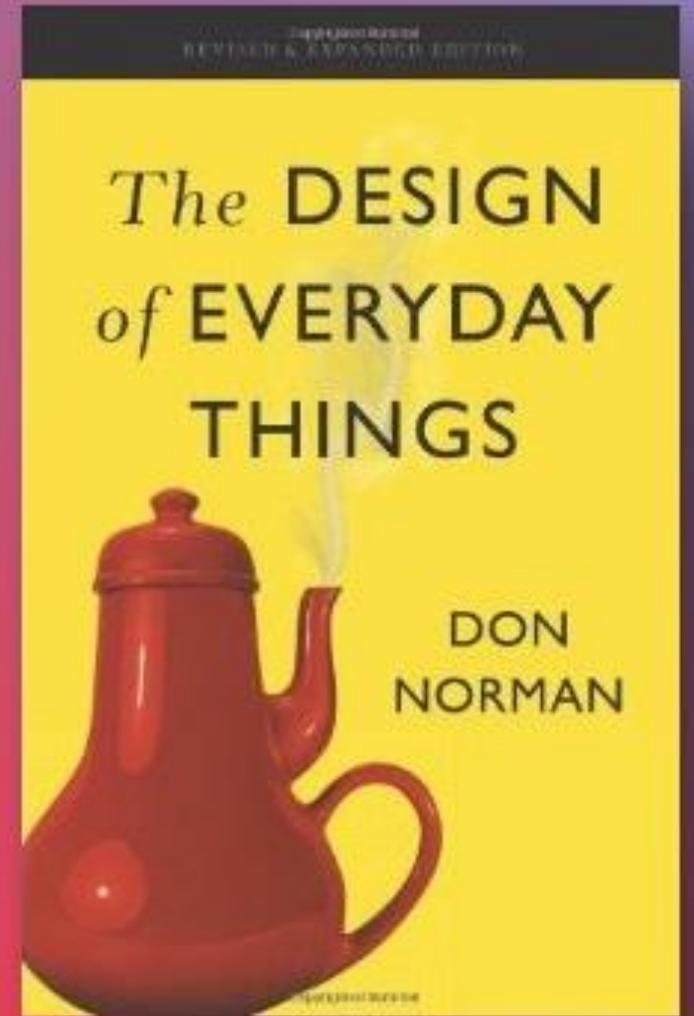
Data Source: Quandl - Gold Prices, Crude Oil Prices, Consumer Price Index
www.quandl.com/data/FRED/CPIAUCSL-Consumer-Price-Index-for-All-Urban-Consumers-All-Items

Pleasurable experiences: *The three levels of processing*



Pleasurable experiences:
The three levels of processing

Visceral
Behavioural
Reflective



Don Norman's Pleasurable experiences: *The three levels of processing*

- **Visceral**
- **Behavioural**
- **Reflective**

Visceral

What would you change?

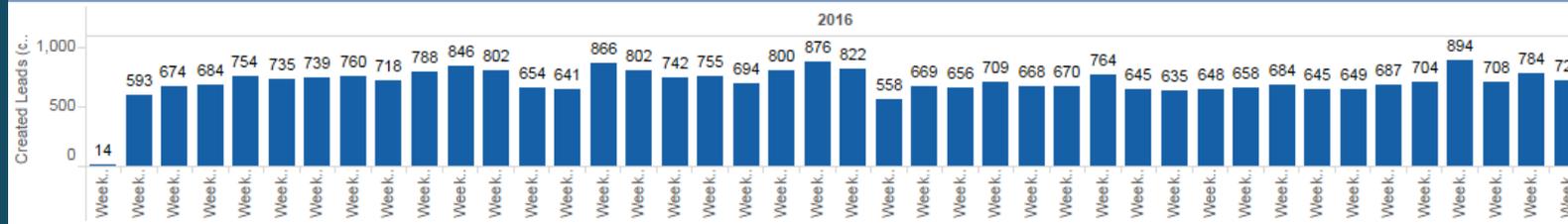
UK Key Metrics for 2016

How are we doing in 2016?

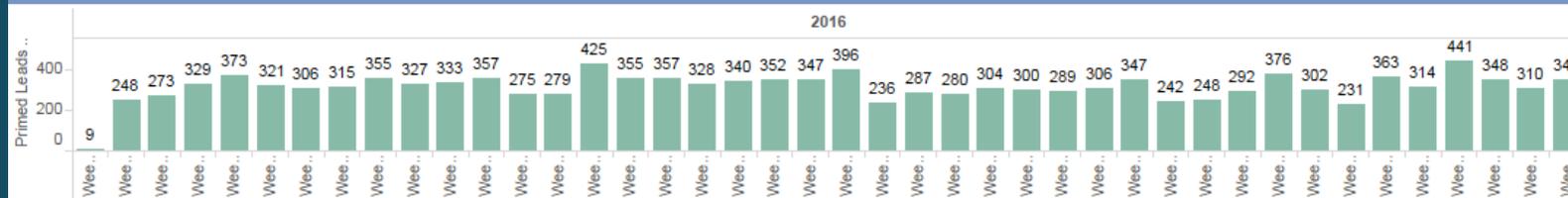


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

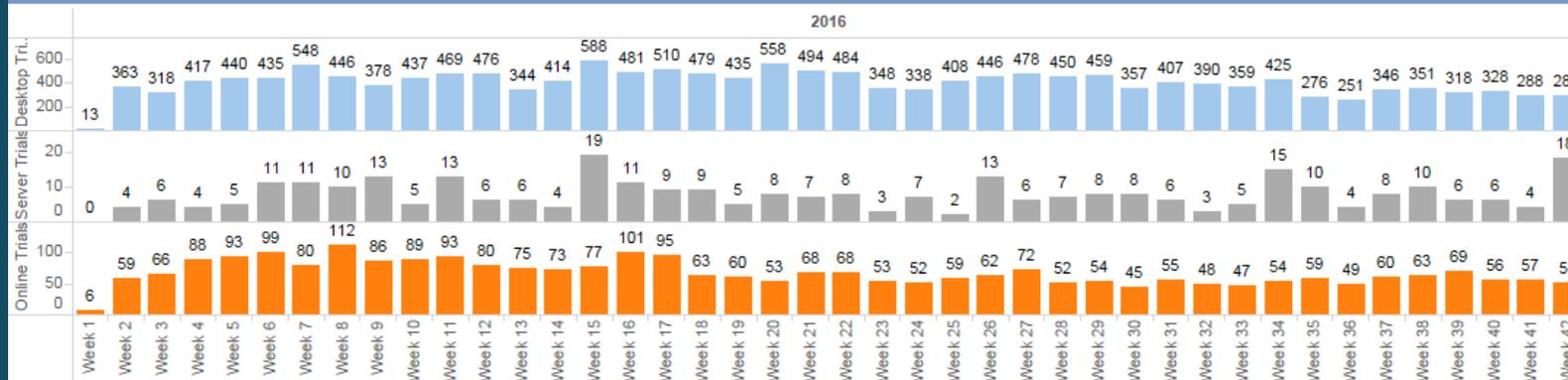
Weekly Progress



Primed Leads



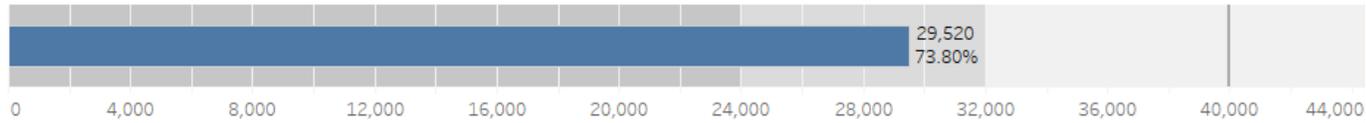
Trials



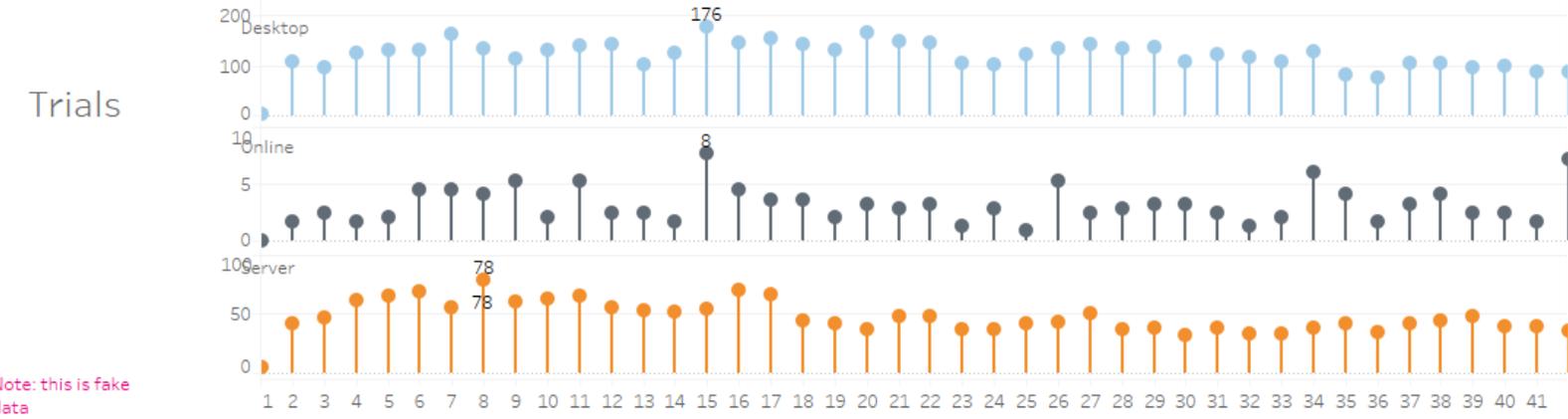
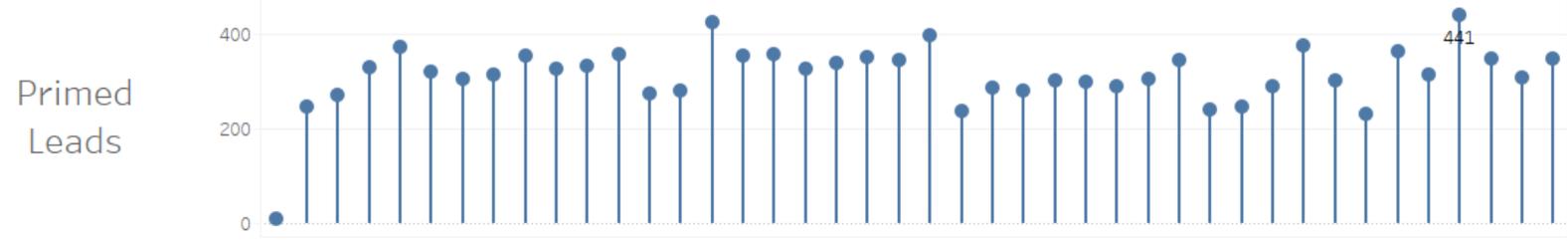
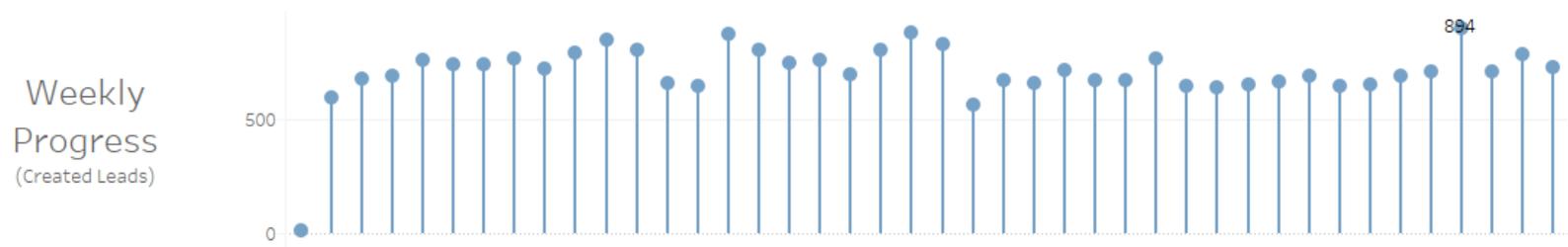
Note: this is fake data

UK Key Metrics for 2016

How are we doing in 2016? (Leads created)



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	



Note: this is fake data

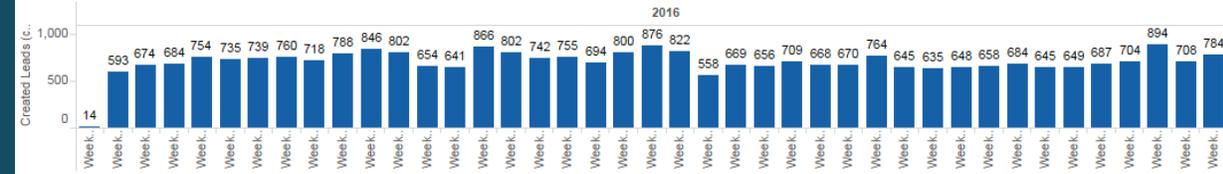
UK Key Metrics for 2016

How are we doing in 2016?

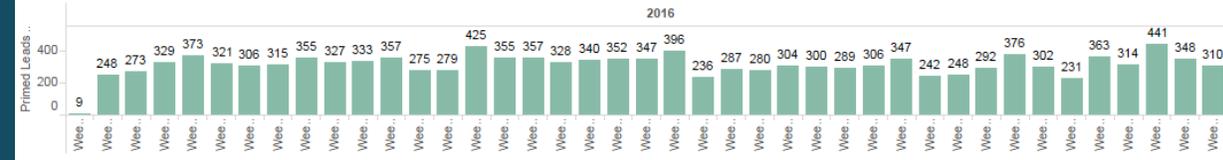


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

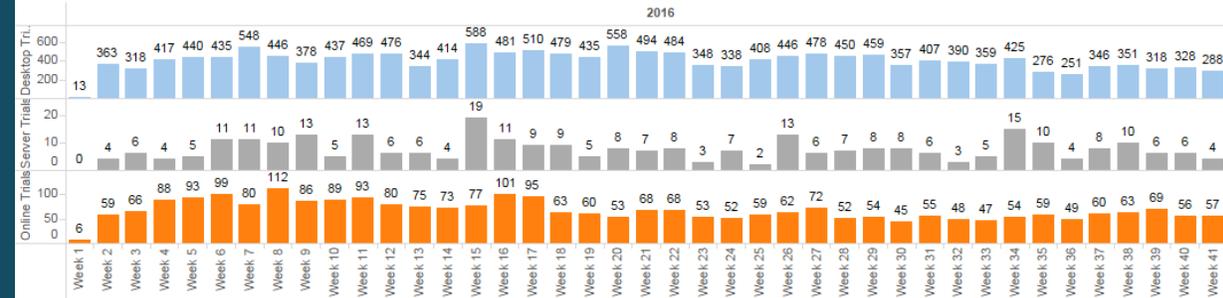
Weekly Progress



Primed Leads



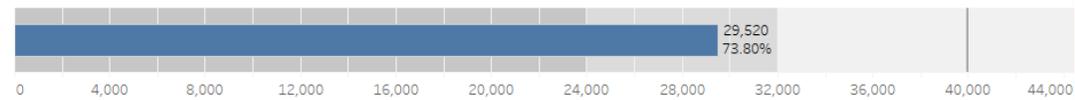
Trials



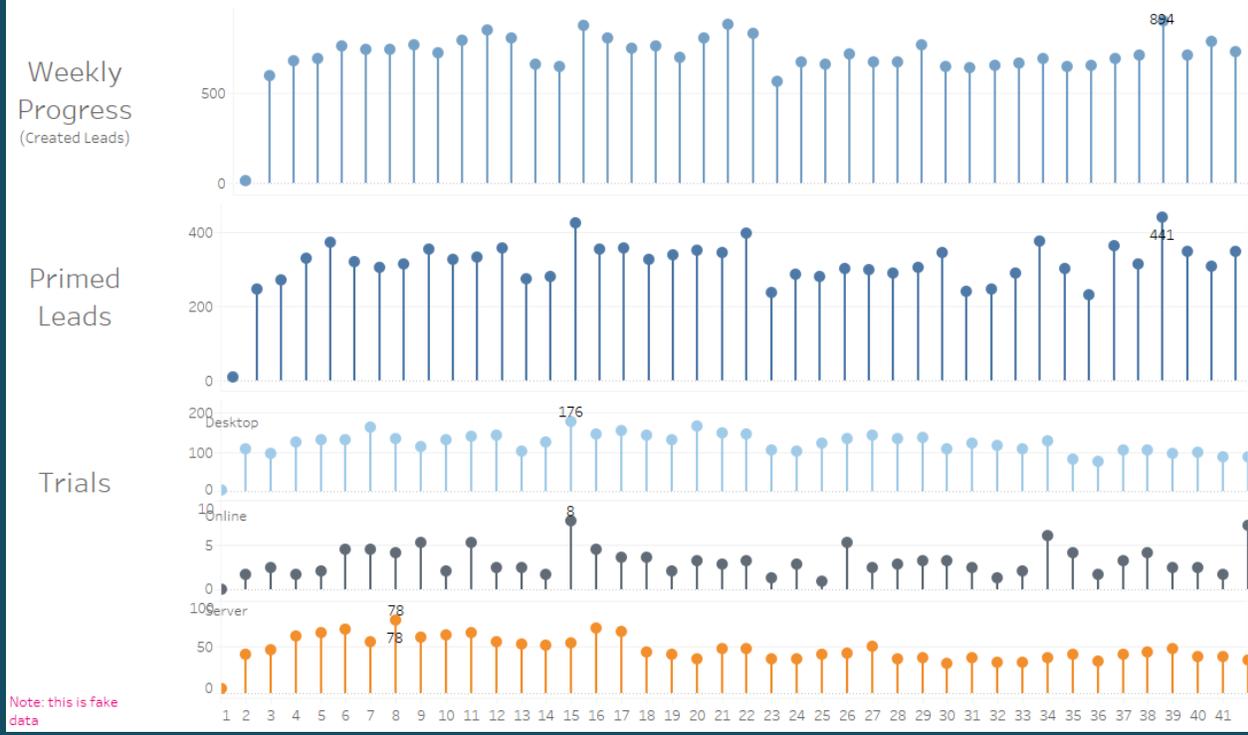
Note: this is fake data

UK Key Metrics for 2016

How are we doing in 2016? (Leads created)



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	



Note: this is fake data

UK Key Metrics for 2016

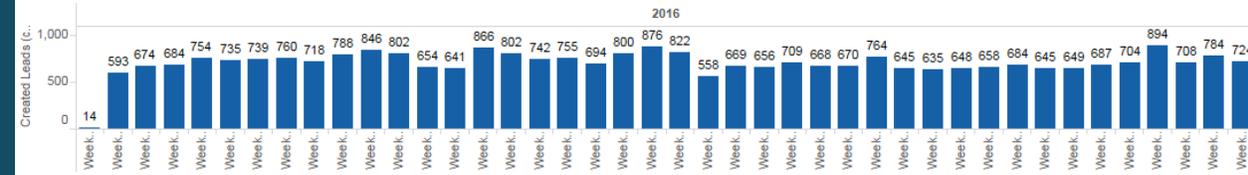
How are we doing in 2016?

29,520
73.80%

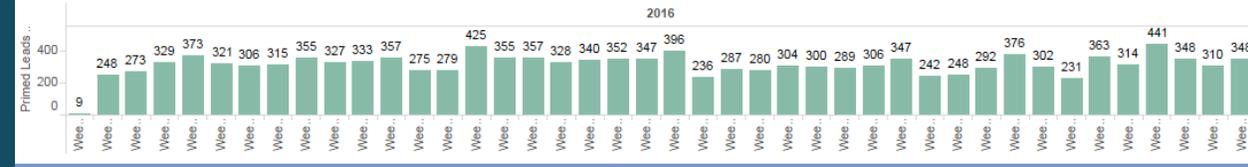


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

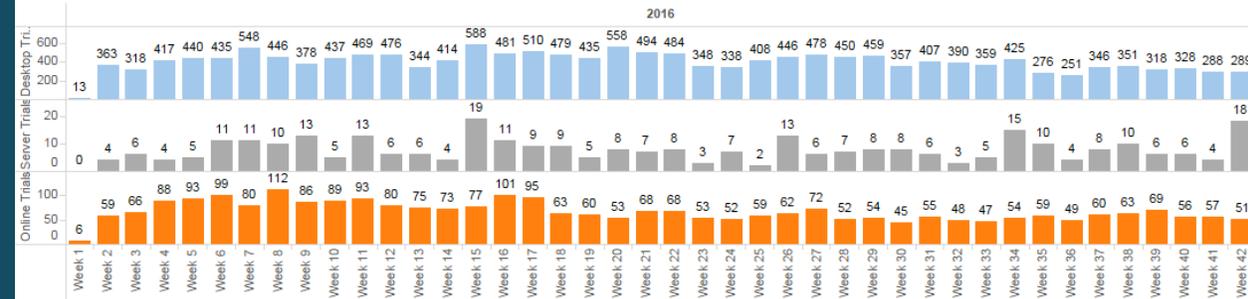
Weekly Progress



Primed Leads



Trials



Note: this is fake data

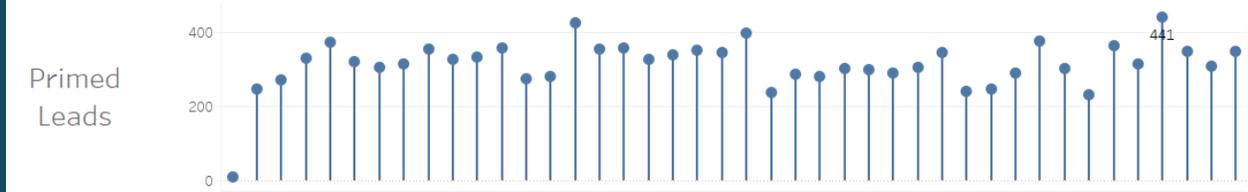
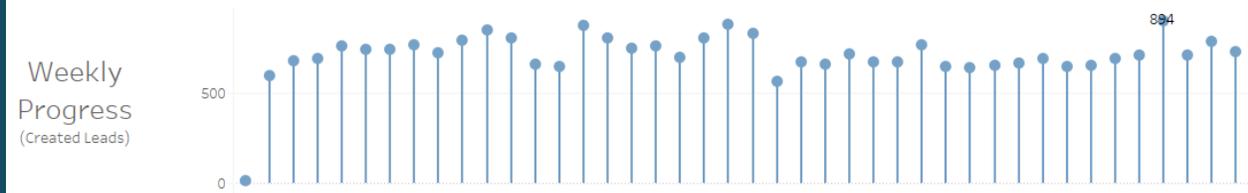
UK Key Metrics for 2016

How are we doing in 2016? (Leads created)

29,520
73.80%



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	



Note: this is fake data

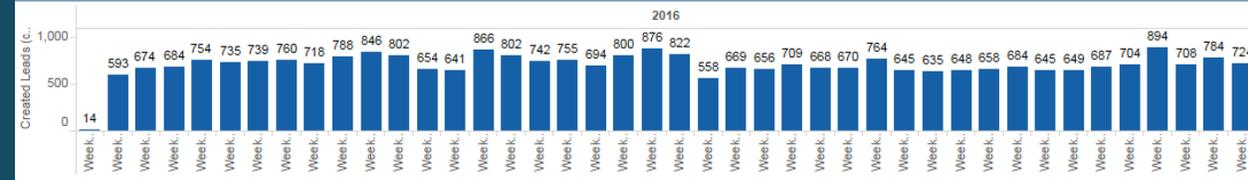
UK Key Metrics for 2016

How are we doing in 2016?

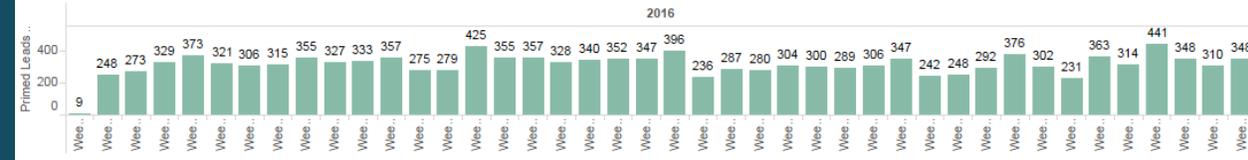


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)		
13,163	36,522	14.56	6.93%	

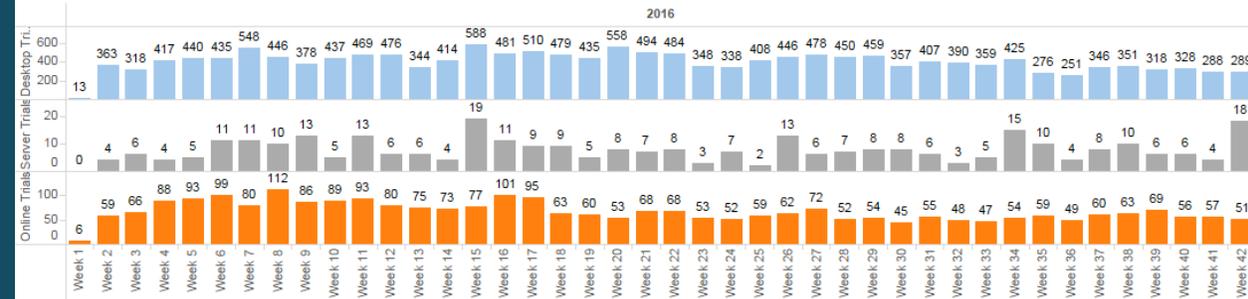
Weekly Progress



Primed Leads



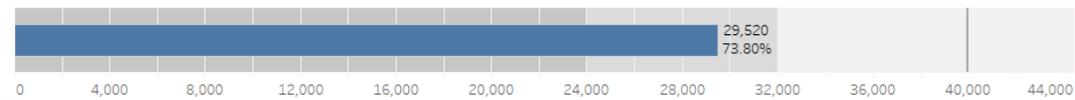
Trials



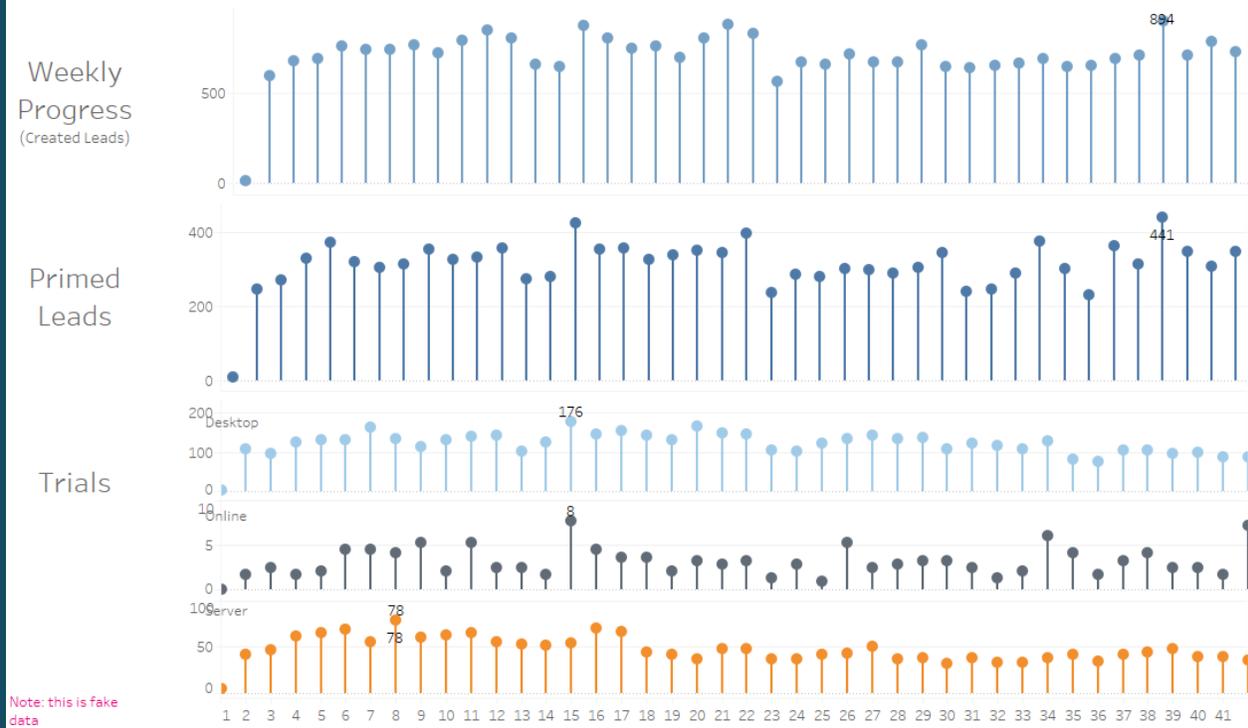
Note: this is fake data

UK Key Metrics for 2016

How are we doing in 2016? (Leads created)



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)		
13,163	36,522	14.56	6.93%	



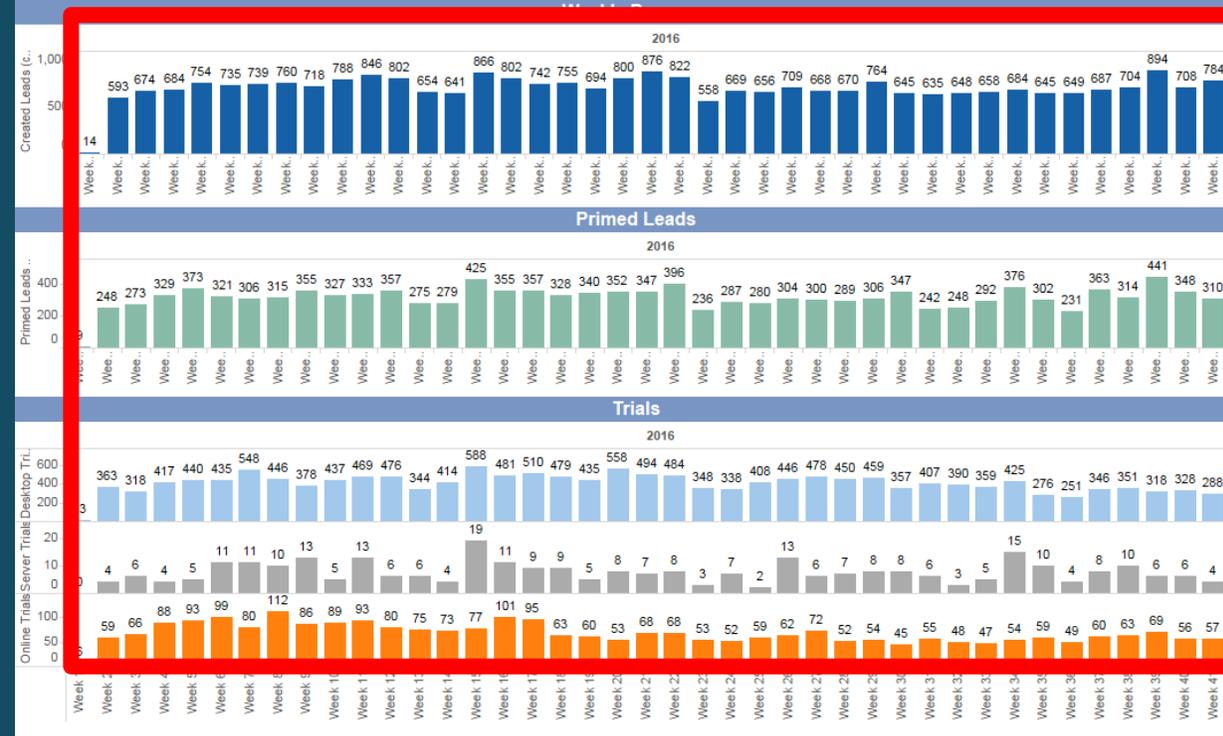
Note: this is fake data

UK Key Metrics for 2016

How are we doing in 2016?

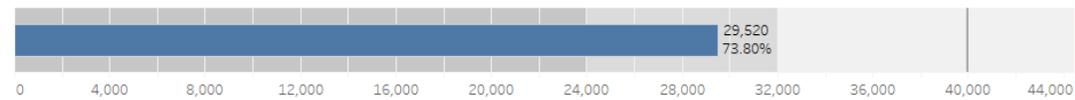


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

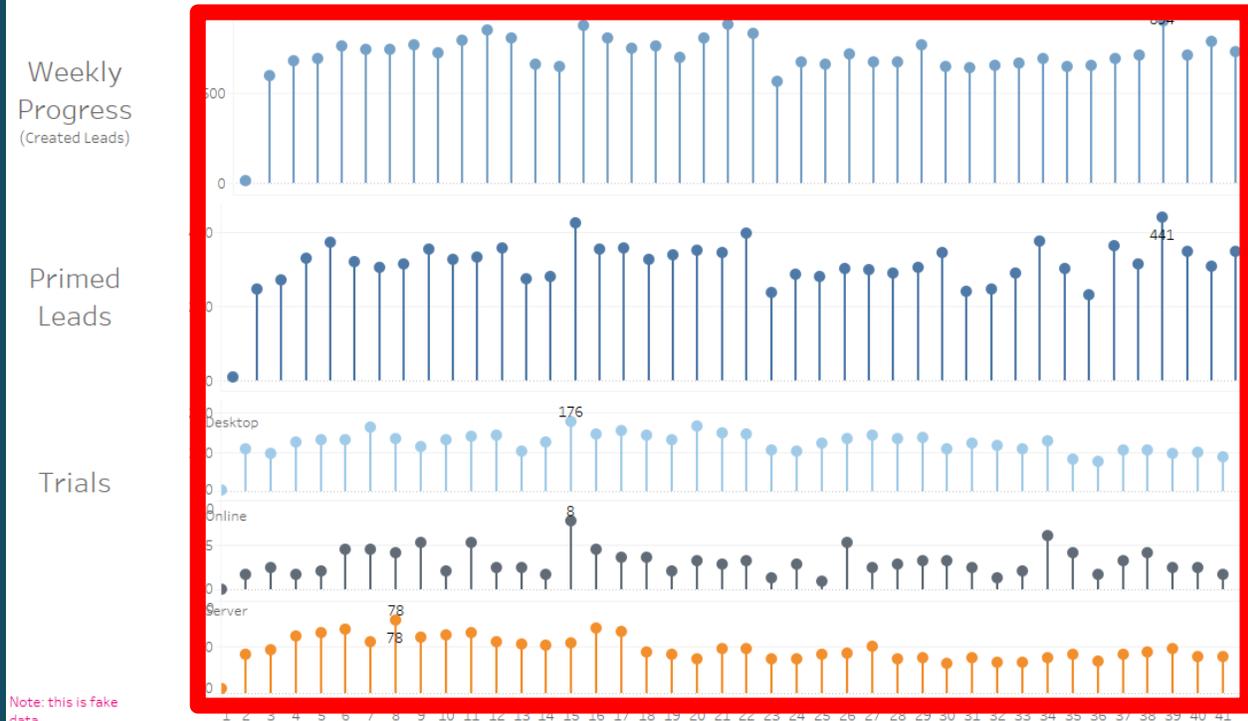


UK Key Metrics for 2016

How are we doing in 2016? (Leads created)



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	



UK Key Metrics for 2016

How are we doing in 2016?

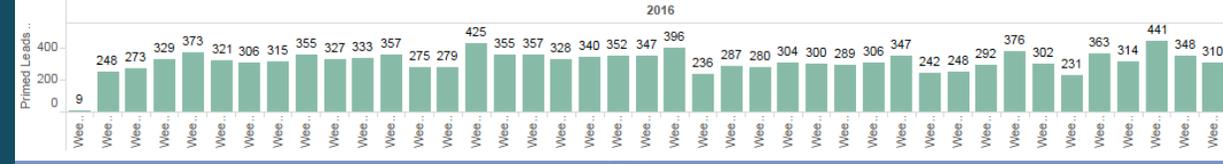


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

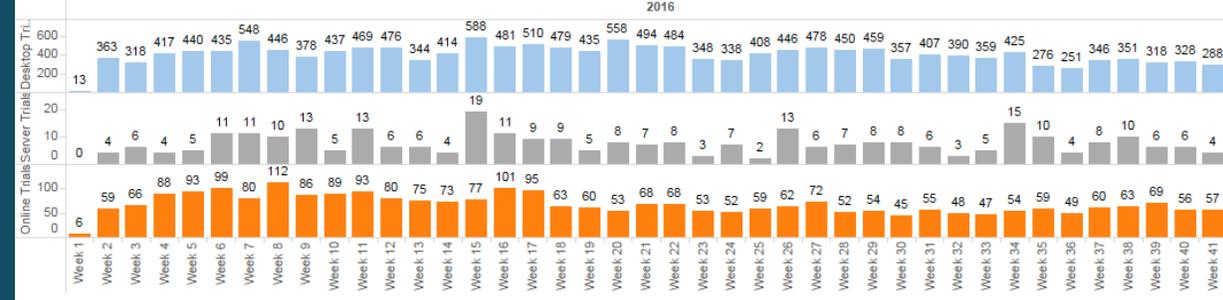
Weekly Progress



Primed Leads



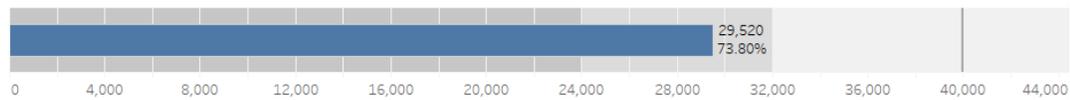
Trials



Note: this is fake data

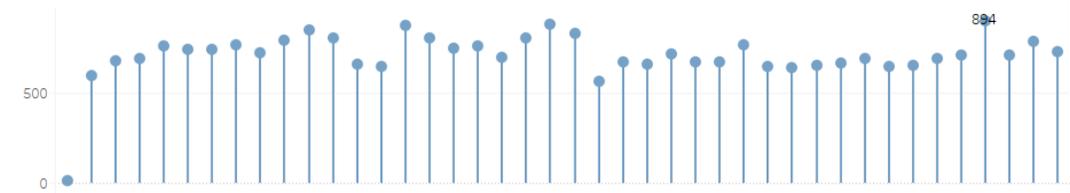
UK Key Metrics for 2016

How are we doing in 2016? (Leads created)

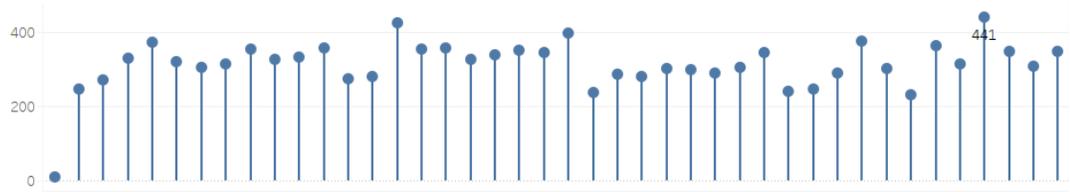


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

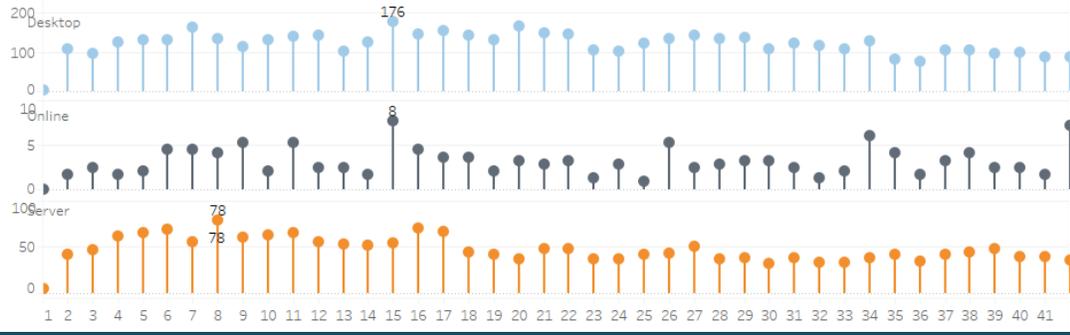
Weekly Progress (Created Leads)



Primed Leads



Trials



Note: this is fake data

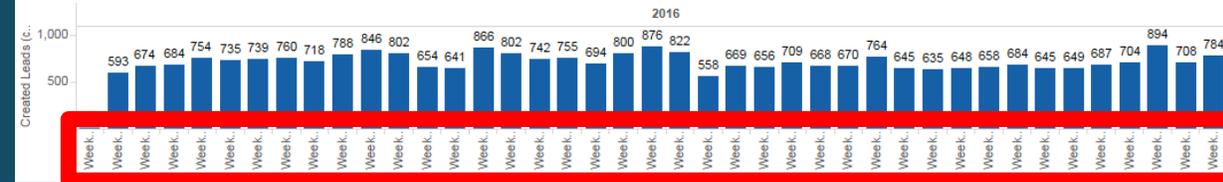
UK Key Metrics for 2016

How are we doing in 2016?

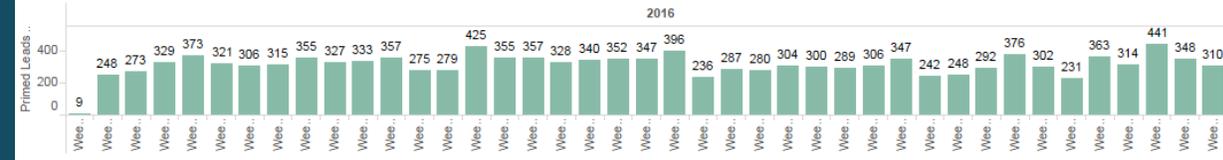


Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 40,000	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

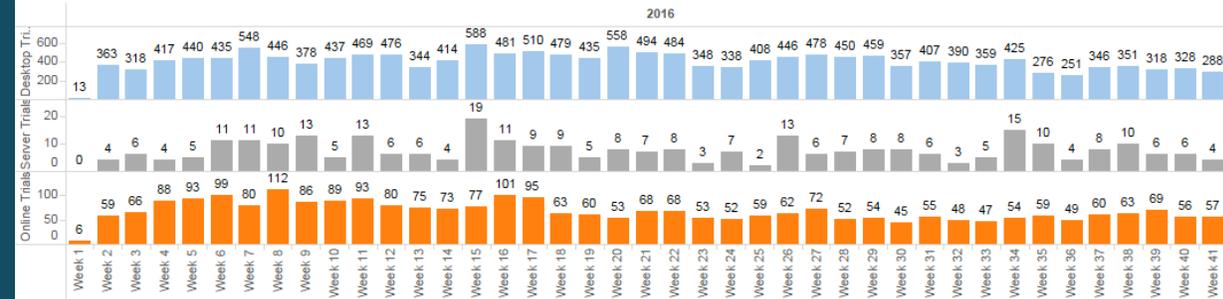
Weekly Progress



Primed Leads



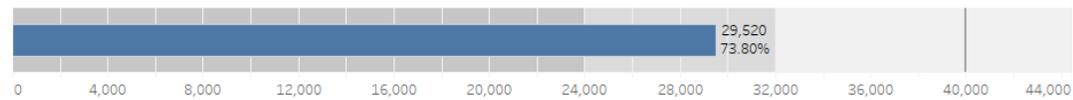
Trials



Note: this is fake data

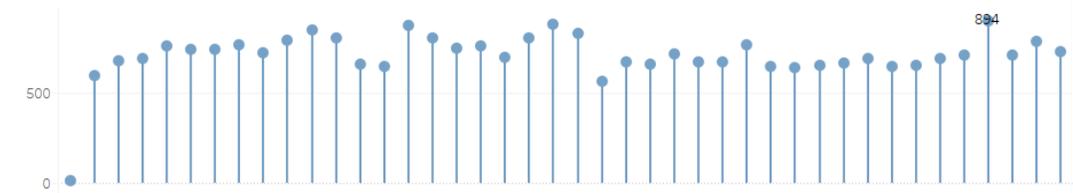
UK Key Metrics for 2016

How are we doing in 2016? (Leads created)



Leads left to go	AVG Weekly Leads	Weeks Left	Opps Created	Opps Won
10,480	702.3	11	4,880	2,467
Primed this Year	AVG Leads x Weeks Left	Weeks we need to hit 100k	Conversion (Opps Won/Primed Leads)	
13,163	36,522	14.56	6.93%	

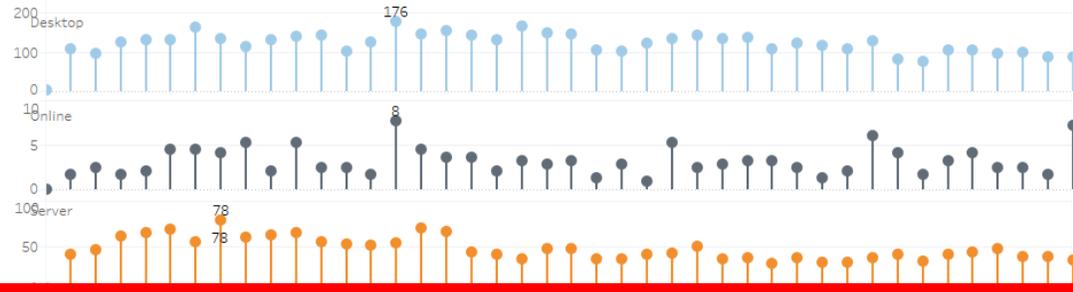
Weekly Progress (Created Leads)



Primed Leads



Trials

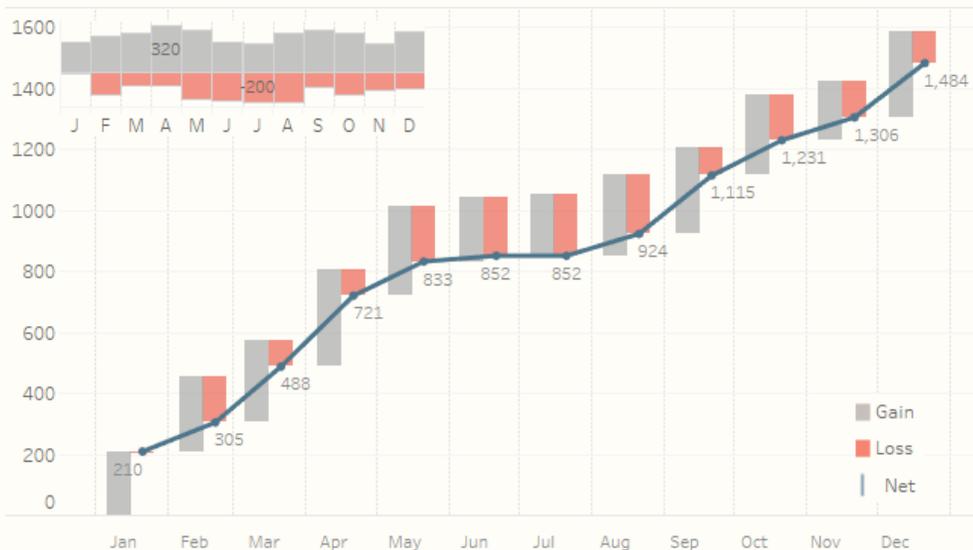


Note: this is fake data

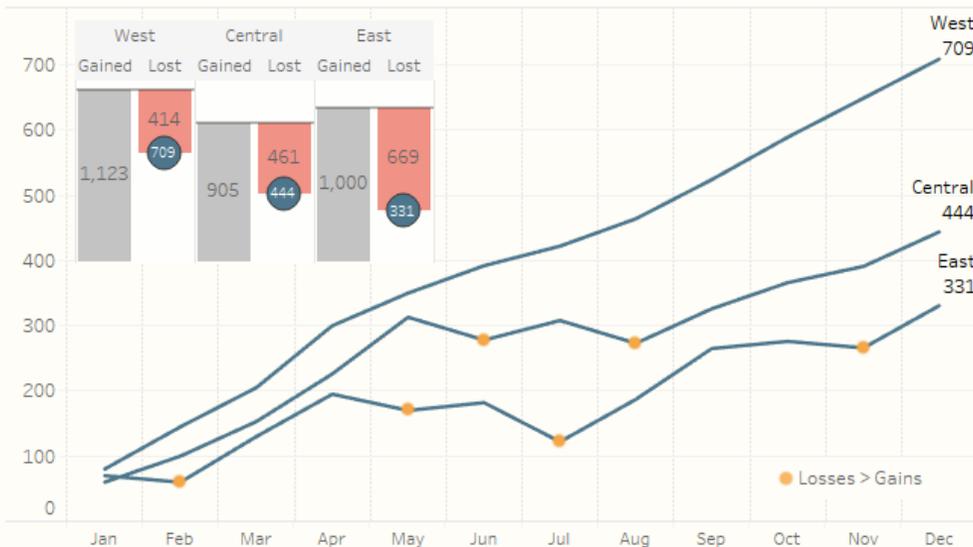


Subscriber Churn Analysis

Subscriber activity - All



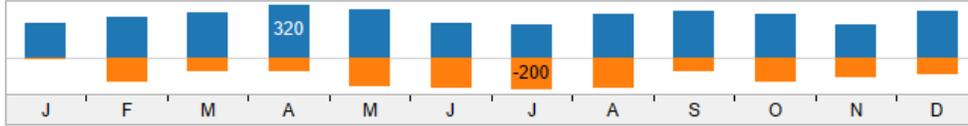
Net subscriber activity by division



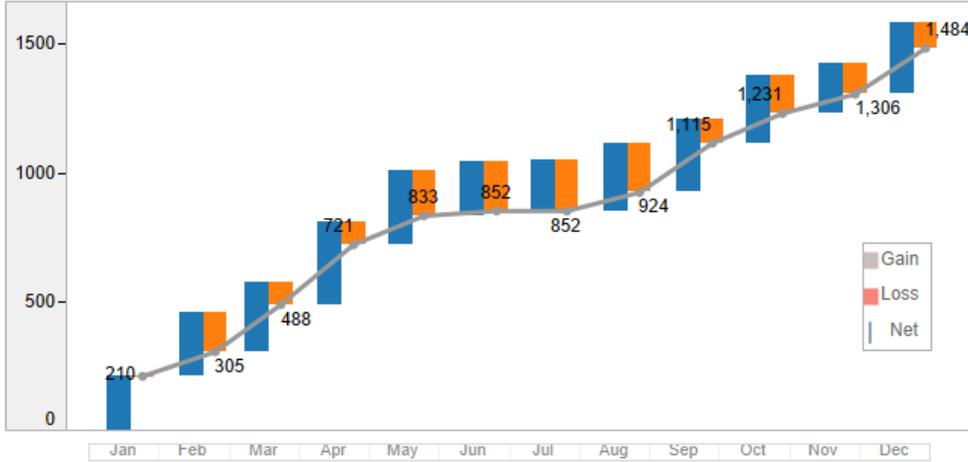
Details

		Gained	Lost	Net	Running total
West	January	80	0	80	80
	February	80	-15	65	145
	March	90	-30	60	205
	April	120	-25	95	300
	May	100	-50	50	350
	June	119	-77	42	392
	July	75	-45	30	422
	August	119	-77	42	464
	September	90	-30	60	524
	October	80	-15	65	589
	November	80	-20	60	649
	December	90	-30	60	709
Total	1,123	-414	709		
Central	January	60	0	60	60
	February	85	-45	40	100
	March	80	-27	53	153
	April	90	-17	73	226
	May	120	-33	87	313
	June	45	-80	-35	278
	July	75	-45	30	308
	August	45	-80	-35	273
	September	80	-27	53	326
	October	85	-45	40	366
	November	60	-35	25	391
	December	80	-27	53	444
Total	905	-461	444		
East	January	70	0	70	70
	February	80	-90	-10	60
	March	100	-30	70	130
	April	110	-45	65	195
	May	70	-95	-25	170
	June	45	-33	12	182
	July	50	-110	-60	122
	August	99	-34	65	187
	September	112	-34	78	265
	October	99	-88	11	276
	November	55	-65	-10	266
	December	110	-45	65	331
Total	1,000	-669	331		
Grand Total	3,028	-1,544	1,484		

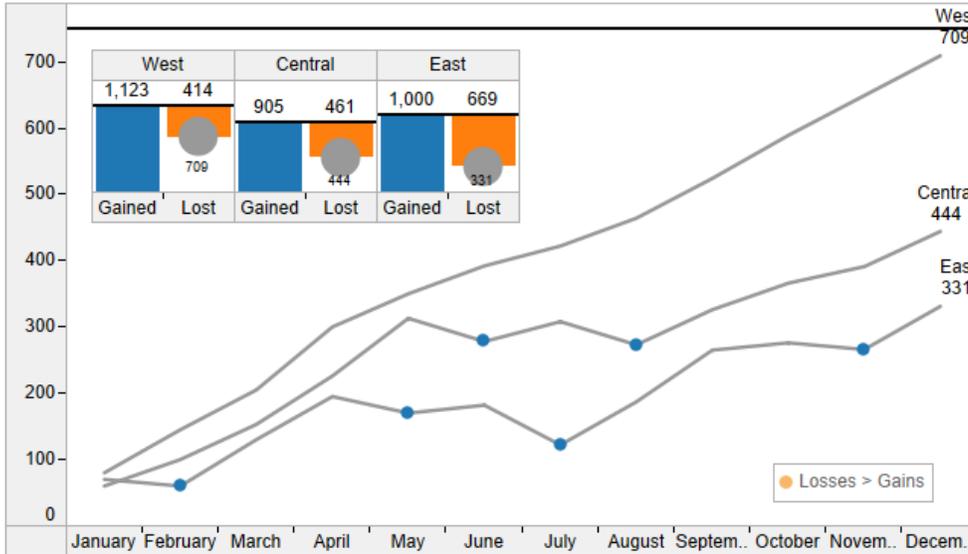
Subscriber Churn Analysis



Subscriber activity - All



Net subscriber activity by division

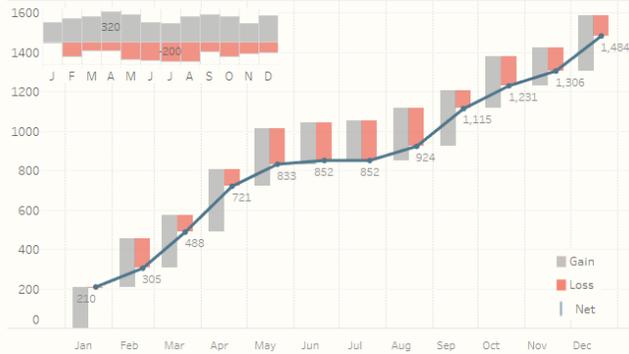


Details

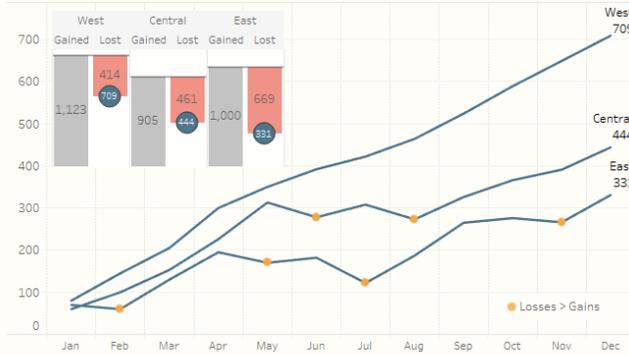
		Gained	Lost	Net	Running total
West	January	80	0	80	80
	February	80	-15	65	145
	March	90	-30	60	205
	April	120	-25	95	300
	May	100	-50	50	350
	June	119	-77	42	392
	July	75	-45	30	422
	August	119	-77	42	464
	September	90	-30	60	524
	October	80	-15	65	589
	November	80	-20	60	649
	December	90	-30	60	709
	Total	1,123	-414	709	4,829
Central	January	60	0	60	60
	February	85	-45	40	100
	March	80	-27	53	153
	April	90	-17	73	226
	May	120	-33	87	313
	June	45	-80	-35	278
	July	75	-45	30	308
	August	45	-80	-35	273
	September	80	-27	53	326
	October	85	-45	40	366
	November	60	-35	25	391
	December	80	-27	53	444
	Total	905	-461	444	3,238
East	January	70	0	70	70
	February	80	-90	-10	60
	March	100	-30	70	130
	April	110	-45	65	195
	May	70	-95	-25	170
	June	45	-33	12	182
	July	50	-110	-60	122
	August	99	-34	65	187
	September	112	-34	78	265
	October	99	-88	11	276
	November	55	-65	-10	266
	December	110	-45	65	331
	Total	1,000	-669	331	
Grand Total		3,028	-1,544	1,484	

Subscriber Churn Analysis

Subscriber activity - All



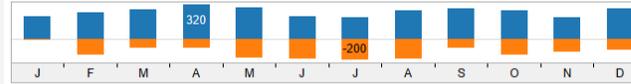
Net subscriber activity by division



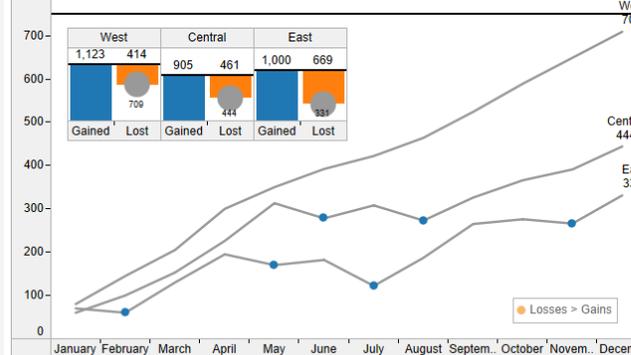
Details

		Gained	Lost	Net	Running total
West					
January		80	0	80	80
February		80	-15	65	145
March		90	-30	60	205
April		120	-25	95	300
May		100	-50	50	350
June		119	-77	42	392
July		75	-45	30	422
August		119	-77	42	464
September		90	-30	60	524
October		80	-15	65	589
November		80	-20	60	649
December		90	-30	60	709
Total		1,123	-414	709	
Central					
January		60	0	60	60
February		85	-45	40	100
March		80	-27	53	153
April		90	-17	73	226
May		120	-33	87	313
June		45	-80	-35	278
July		75	-45	30	308
August		45	-80	-35	273
September		80	-27	53	326
October		85	-45	40	366
November		60	-35	25	391
December		80	-27	53	444
Total		905	-461	444	
East					
January		70	0	70	70
February		80	-90	-10	60
March		100	-30	70	130
April		110	-45	65	195
May		70	-95	-25	170
June		45	-33	12	182
July		50	-110	-60	122
August		99	-34	65	187
September		112	-34	78	265
October		99	-88	11	276
November		55	-65	-10	266
December		110	-45	65	331
Total		1,000	-669	331	
Grand Total		3,028	-1,544	1,484	

Subscriber Churn Analysis



Net subscriber activity by division



Details

		Gained	Lost	Net	Running total
West					
January		80	0	80	80
February		80	-15	65	145
March		90	-30	60	205
April		120	-25	95	300
May		100	-50	50	350
June		119	-77	42	392
July		75	-45	30	422
August		119	-77	42	464
September		90	-30	60	524
October		80	-15	65	589
November		80	-20	60	649
December		90	-30	60	709
Total		1,123	-414	709	4,829
Central					
January		60	0	60	60
February		85	-45	40	100
March		80	-27	53	153
April		90	-17	73	226
May		120	-33	87	313
June		45	-80	-35	278
July		75	-45	30	308
August		45	-80	-35	273
September		80	-27	53	326
October		85	-45	40	366
November		60	-35	25	391
December		80	-27	53	444
Total		905	-461	444	3,238
East					
January		70	0	70	70
February		80	-90	-10	60
March		100	-30	70	130
April		110	-45	65	195
May		70	-95	-25	170
June		45	-33	12	182
July		50	-110	-60	122
August		99	-34	65	187
September		112	-34	78	265
October		99	-88	11	276
November		55	-65	-10	266
December		110	-45	65	331
Total		1,000	-669	331	
Grand Total		3,028	-1,544	1,484	

Don Norman's Pleasurable experiences: *The three levels of processing*

Visceral

● Behavioural

Reflective

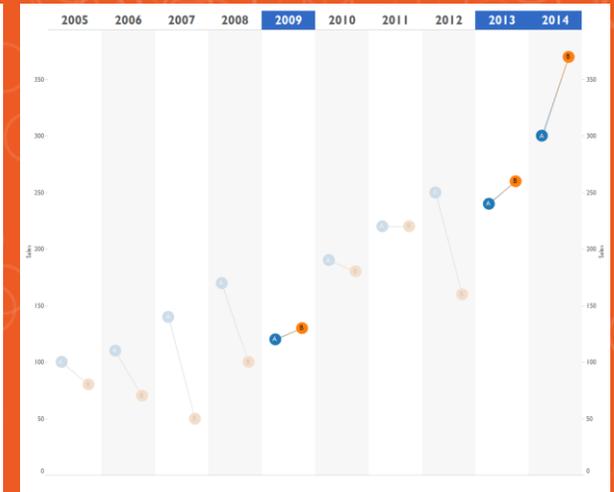
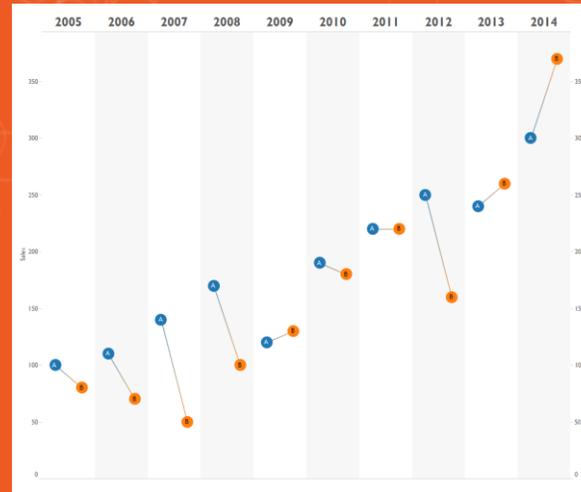
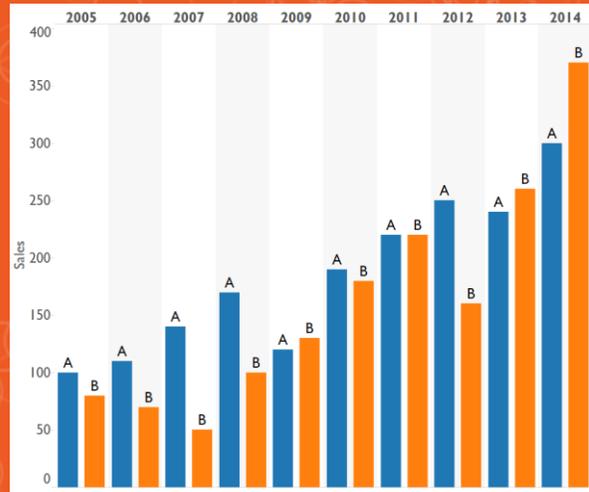
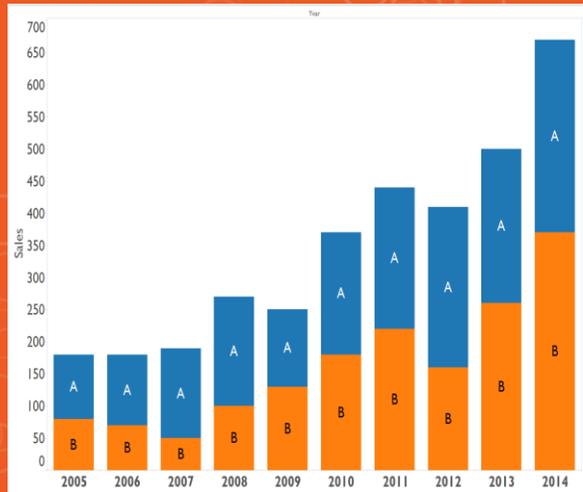
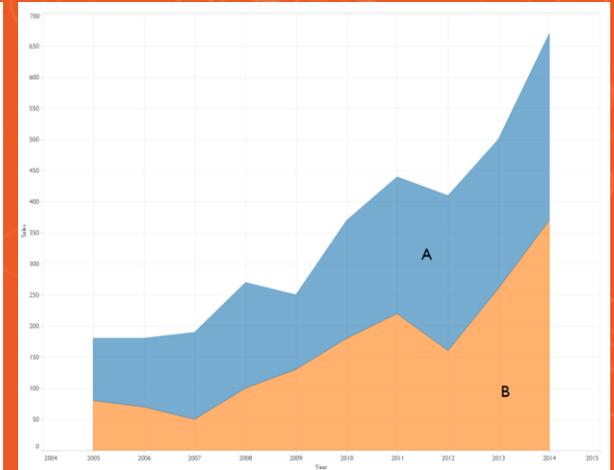
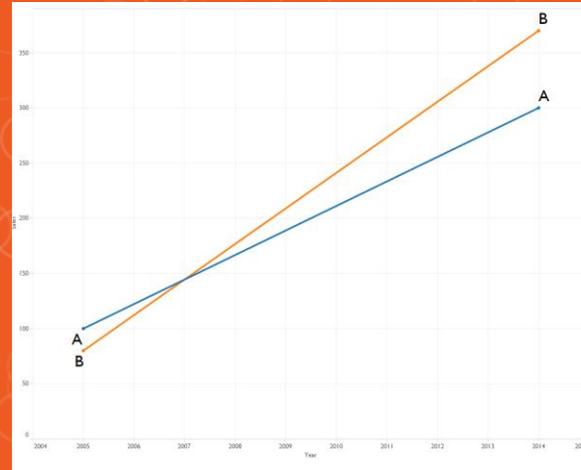
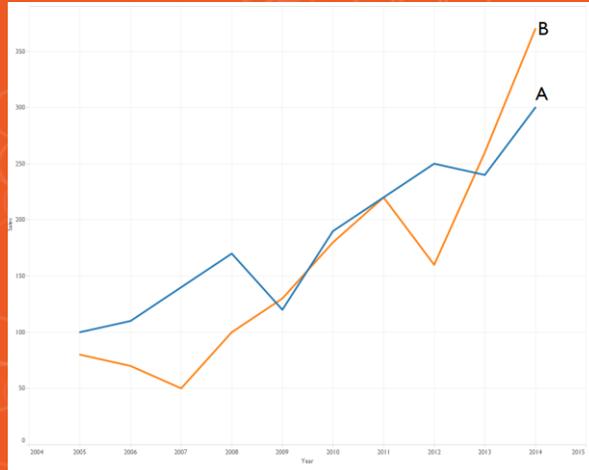
Behavioural

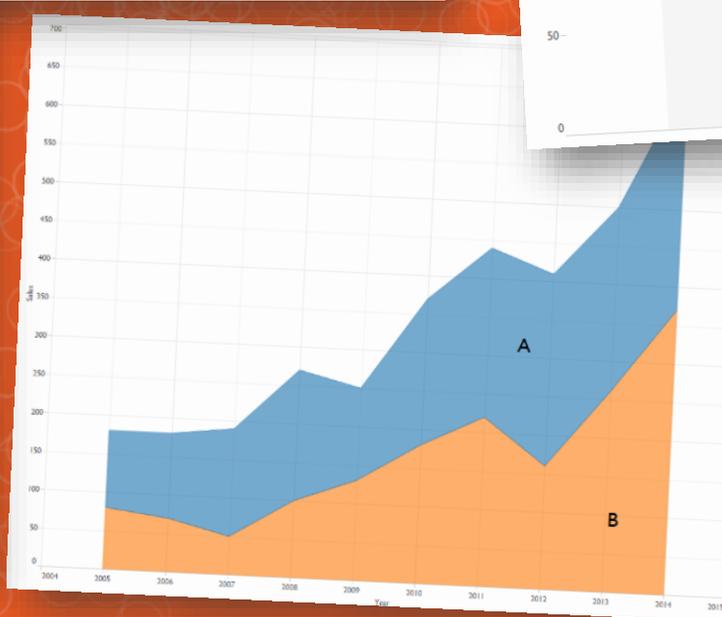
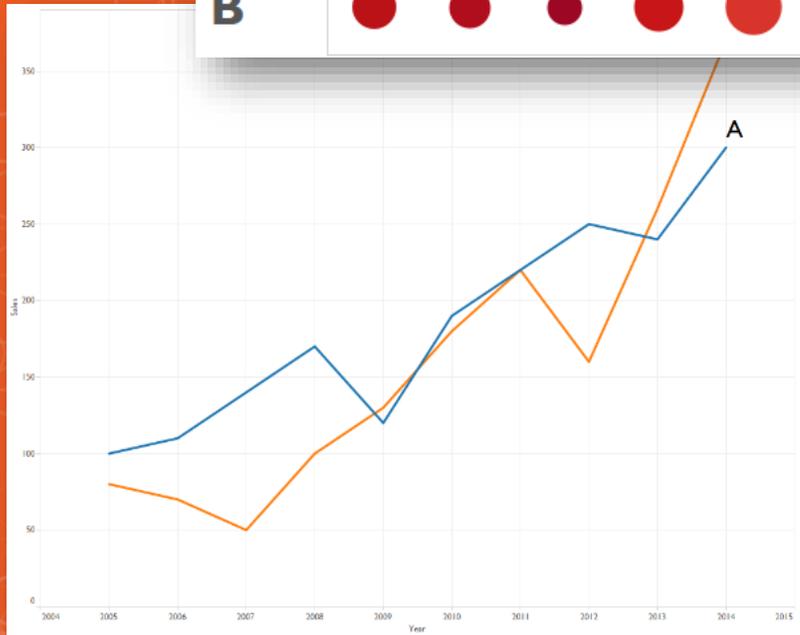
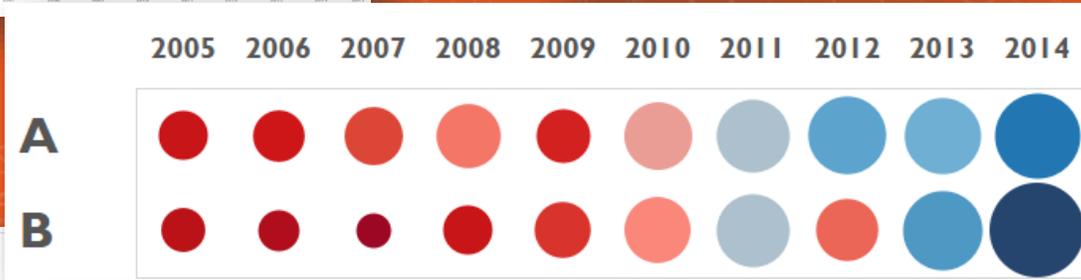
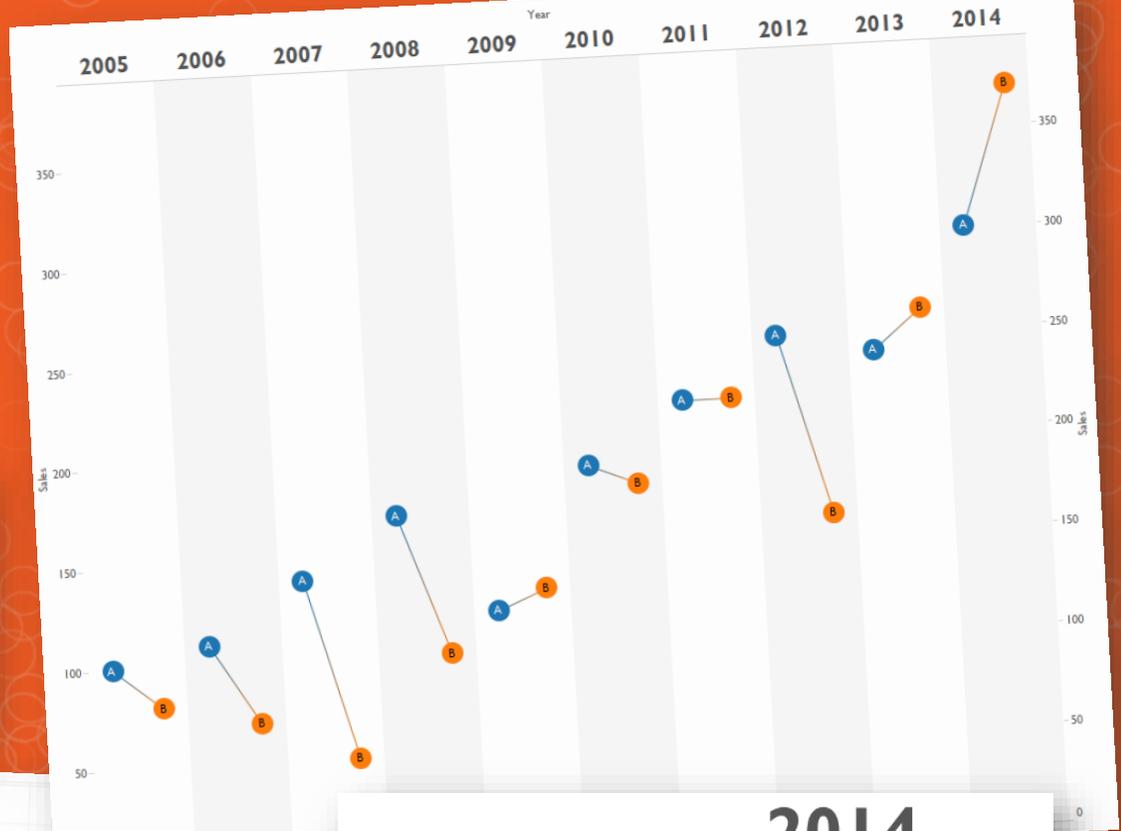
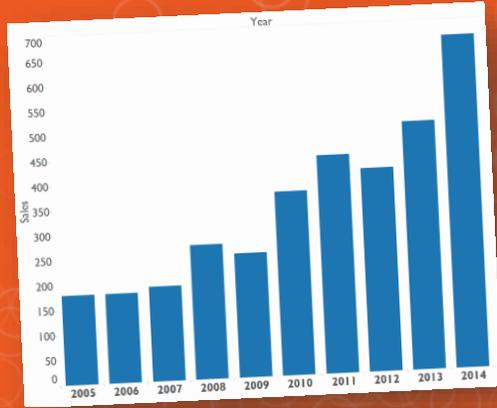
Behavioural: Chart Choice

	Year										
Product	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Total
A	100	110	140	170	120	190	220	250	240	300	1,840
B	80	70	50	100	130	180	220	160	260	370	1,620

What charts would you use to show this data? Why?

Year	A	B
2005	100	80
2006	110	70
2007	140	50
2008	170	100
2009	120	130
2010	190	180
2011	220	220
2012	250	160
2013	240	260
2014	300	370
Total	1,840	1,620

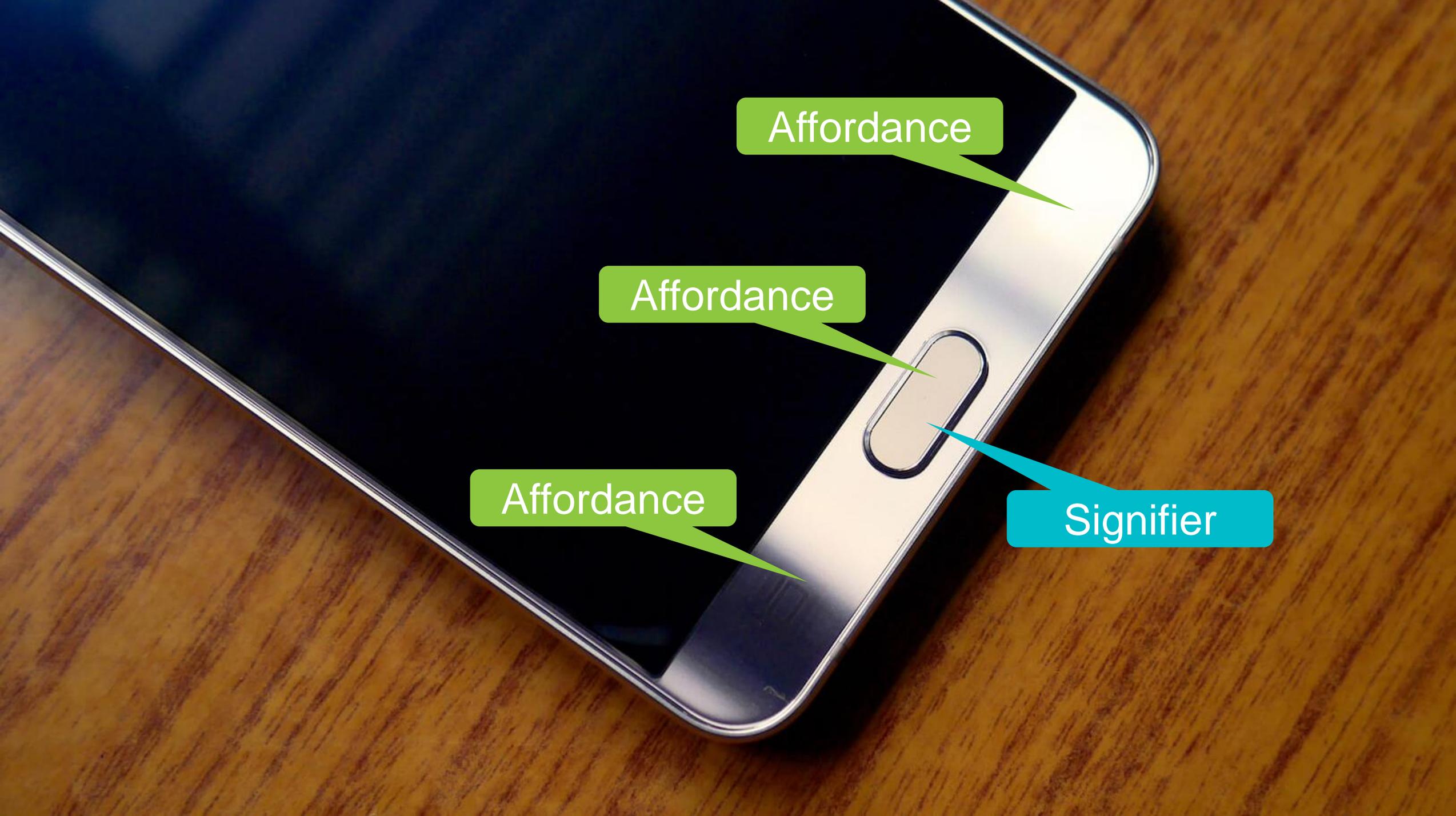




	2014
A	300
B	370
Total	670

Affordances and Signifiers





Affordance

Affordance

Affordance

Signifier

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010



#1



#2



#3



#4



#5



Birth Weight / Size



Class:

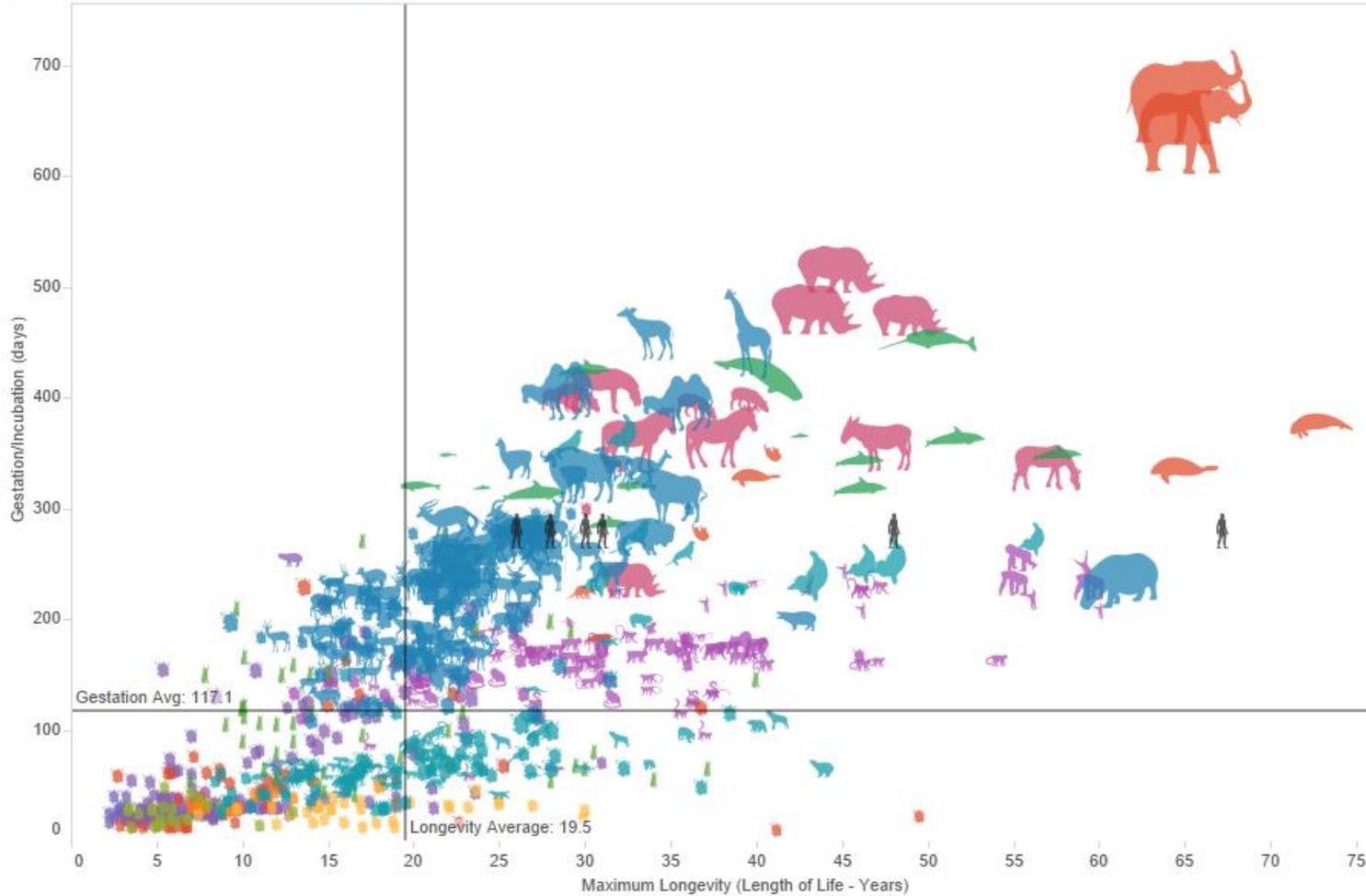
Mammalia (Mammals)

Include Whales:

No

Color Legend

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorpha
- Demoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha



Datasource:

<http://bit.ly/1K7H8cB>

Images Retrieved from:

<http://bit.ly/1PItOxp>

<http://bit.ly/1OQ8Ysl>

<http://tableau.com>

Eric Brown

www.ericbrown.com



Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010



#1



#2



#3



#4



#5



Birth Weight / Size



Class:

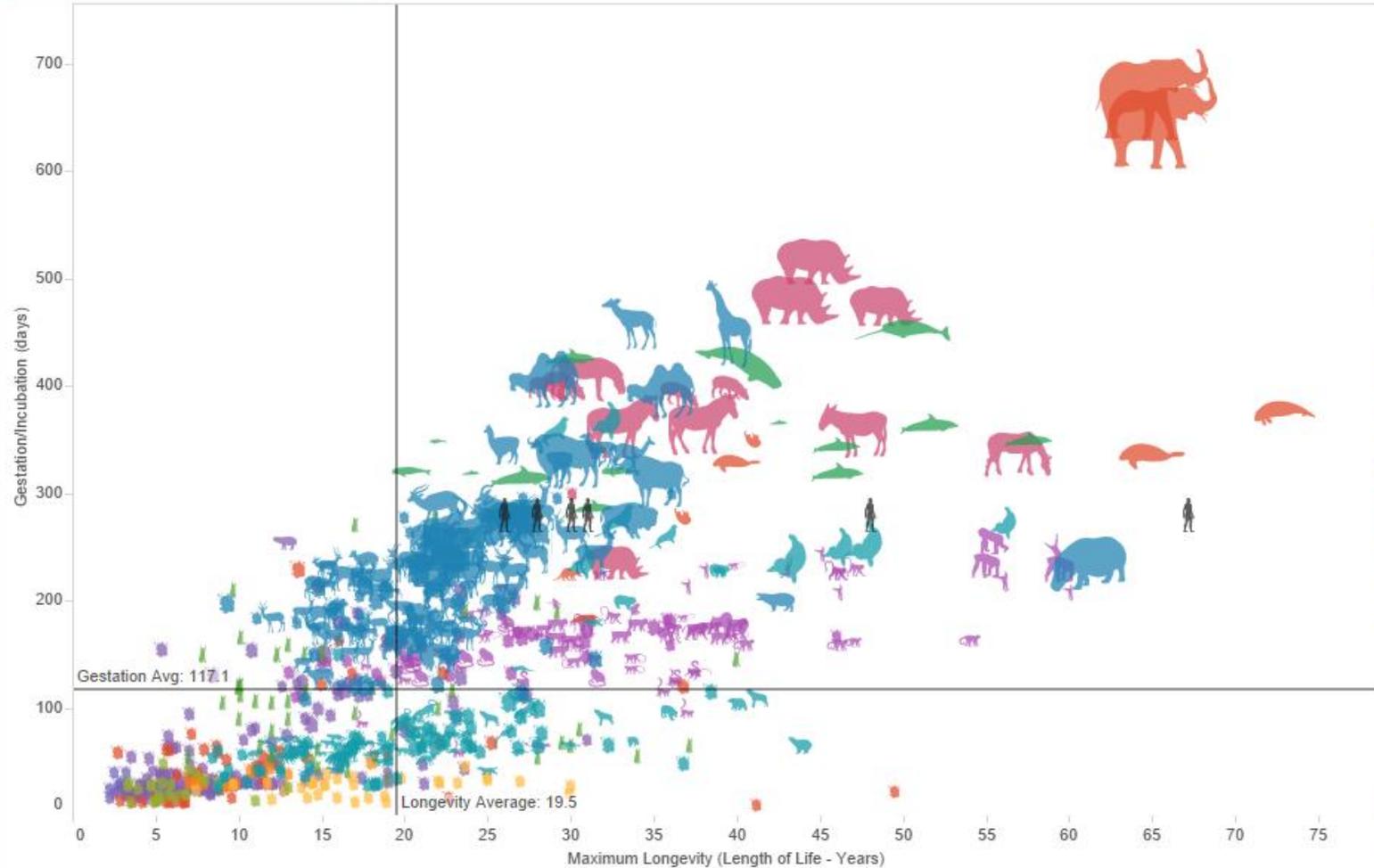
Mammalia (Mammals)

Include Whales:

No

Color Legend

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha



Datasource:
<http://bit.ly/1K7H8cB>
 Images Retrieved from:
<http://bit.ly/1PiTOxp>
<http://bit.ly/1OQ8Ysl>

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010

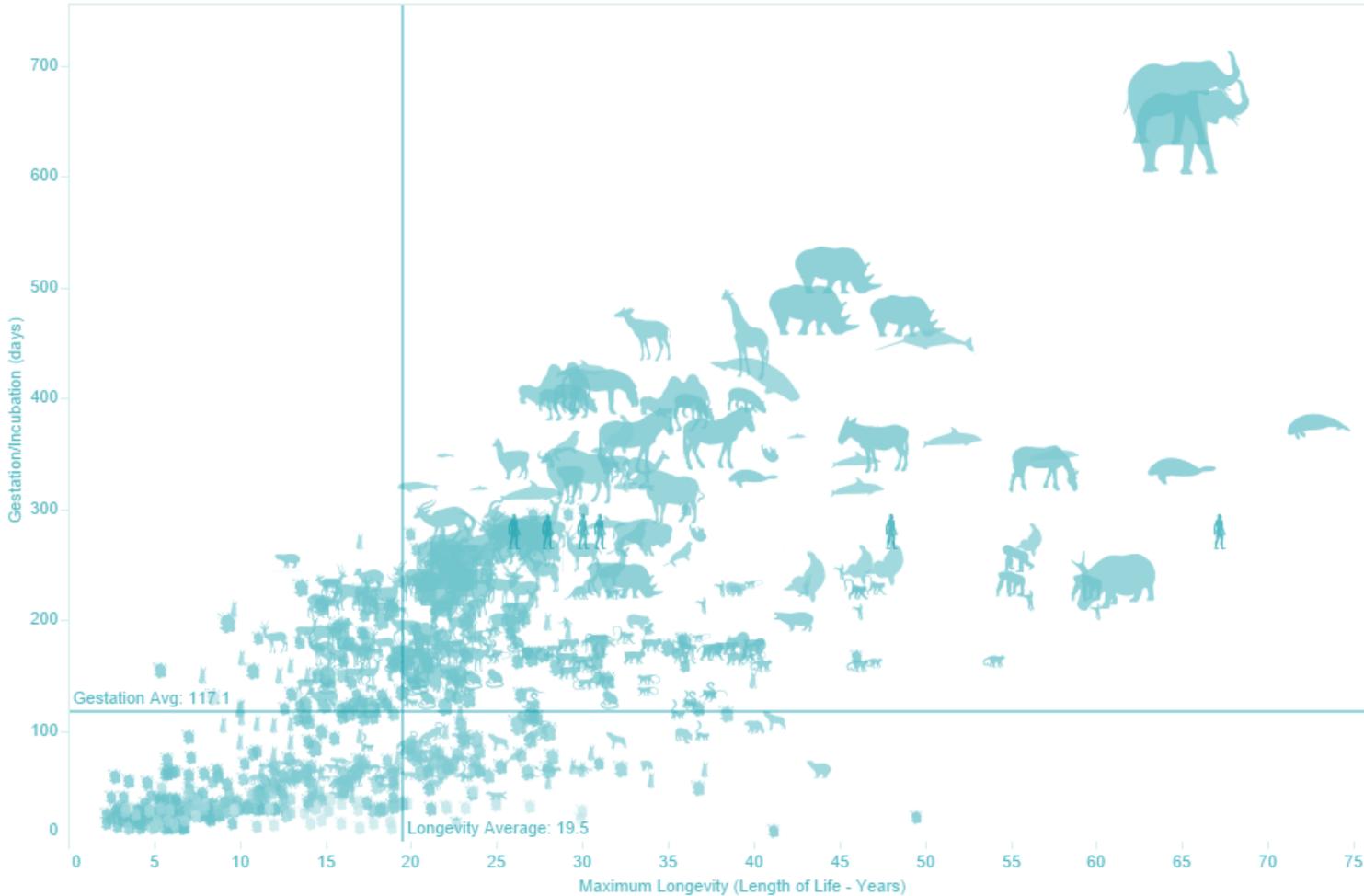


Birth Weight / Size



Heavier

Lighter



Class:

Mammalia (Mammals)

Include Whales:

No

- Class Legend
- Human Primates
 - Artiodactyla
 - Carnivora
 - Cetacea
 - Chiroptera
 - Dasyuromorphia
 - Dermoptera
 - Diprotodontia
 - Lagomorpha
 - Other Mammals
 - Perissodactyla
 - Pholidota
 - Primates
 - Rodentia
 - Soricomorpha

Datasource:
<http://bit.ly/1K7H8cB>
Images Retrieved from:
<http://bit.ly/1PiTOxp>
<http://bit.ly/1OQ8Ysl>

1. Visible Filters:
 - a. Choose animal in top left
 - b. Class and Include Whales on right

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010



#1 A- Score: 92 Baikal seal	#2 B- Score: 82 Gorilla	#3 B- Score: 81 Orangutan	#4 C+ Score: 79 Chimpanzee	#5 C Score: 74 Pygmy chimpanzee or bonobo
---	---	---	--	---

Birth Weight / Size



Heavier



Lighter

Class:

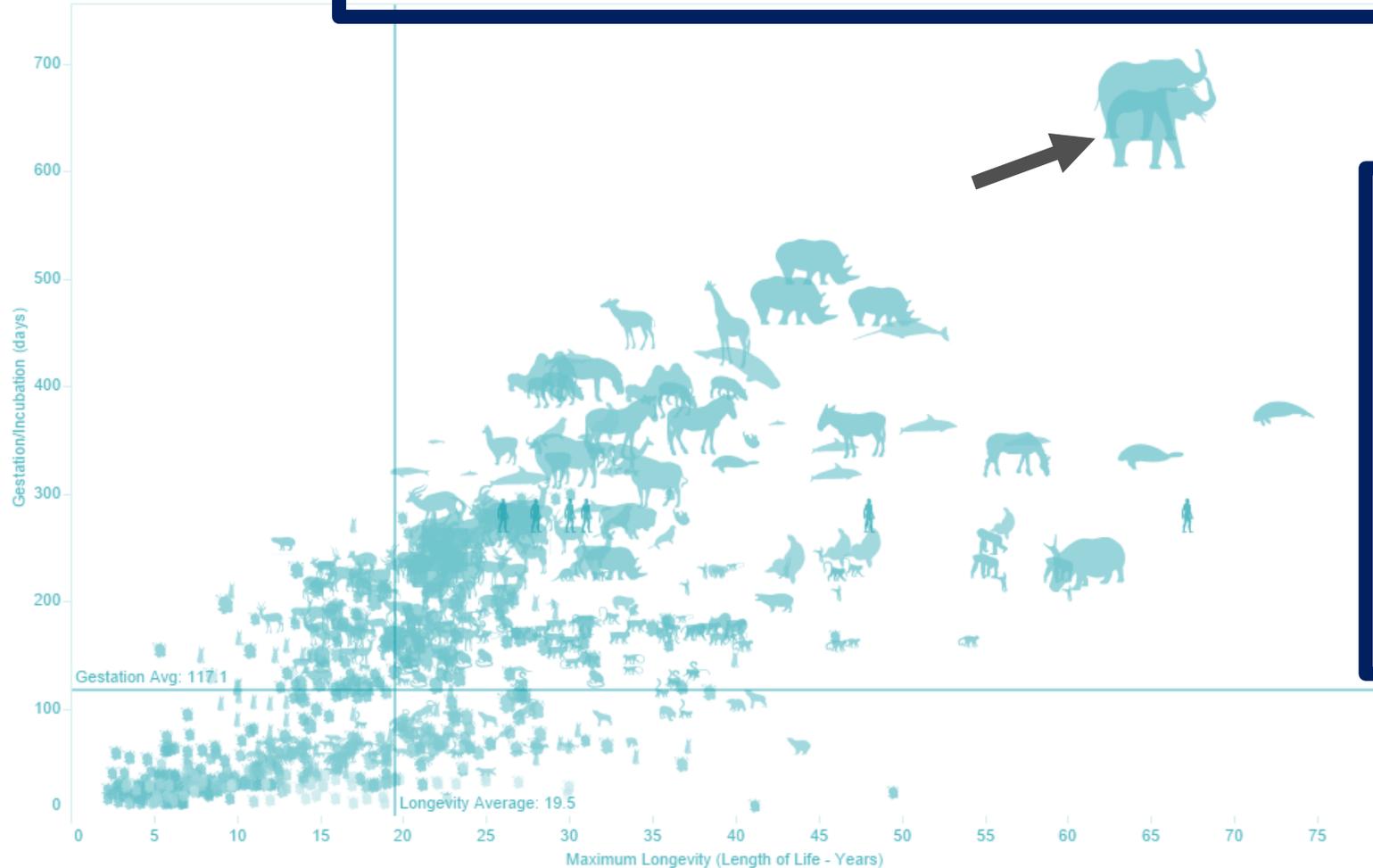
Mammalia (Mammals)

Include Whales:

No

Color Legend

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha



Datasource:

<http://bit.ly/1K7H8cB>

Images Retrieved from:

<http://bit.ly/1PiTOxp>

<http://bit.ly/1OQ8YsI>

1. Visible Filters:

- Choose animal in top left
- Class and Include Whales on right

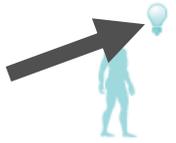
2. Action filters:

- The animals on the top row
- Marks on the scatterplot
- The color legend

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010



#1



#2



#3



#4



#5



Birth Weight / Size



Class:

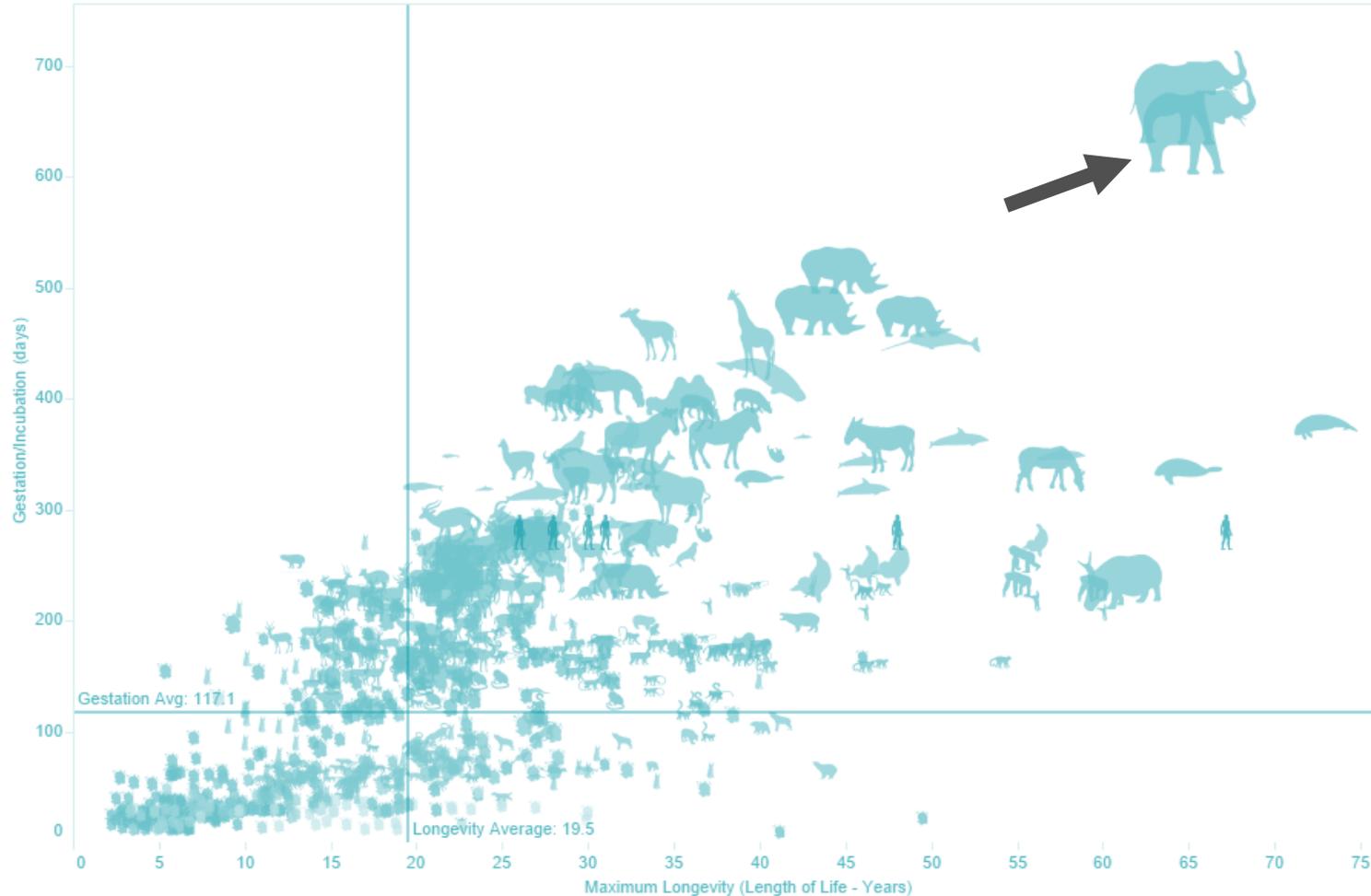
Mammalia (Mammals)

Include Whales:

No

Color Legend

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha



Datasource:
<http://bit.ly/1K7H8cB>
Images Retrieved from:
<http://bit.ly/1PiTOxp>
<http://bit.ly/1OQ8YsI>

1. Visible Filters:

- Choose animal in top left
- Class and Include Whales on right

2. Action filters:

- The animals on the top row
- Marks on the scatterplot
- The color legend

3. Misc

- Tooltips
- Light bulb
- URLs

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:

Humans in 2010



#1

A-
Score: 92
Baikal seal

#2

B-
Score: 82
Gorilla

#3

B-
Score: 81
Orangutan

#4

C+
Score: 79
Chimpanzee

#5

C
Score: 74
Pygmy chimpanzee or bonobo

Birth Weight / Size

Heavier



Lighter



Class:

Mammalia (Mammals)

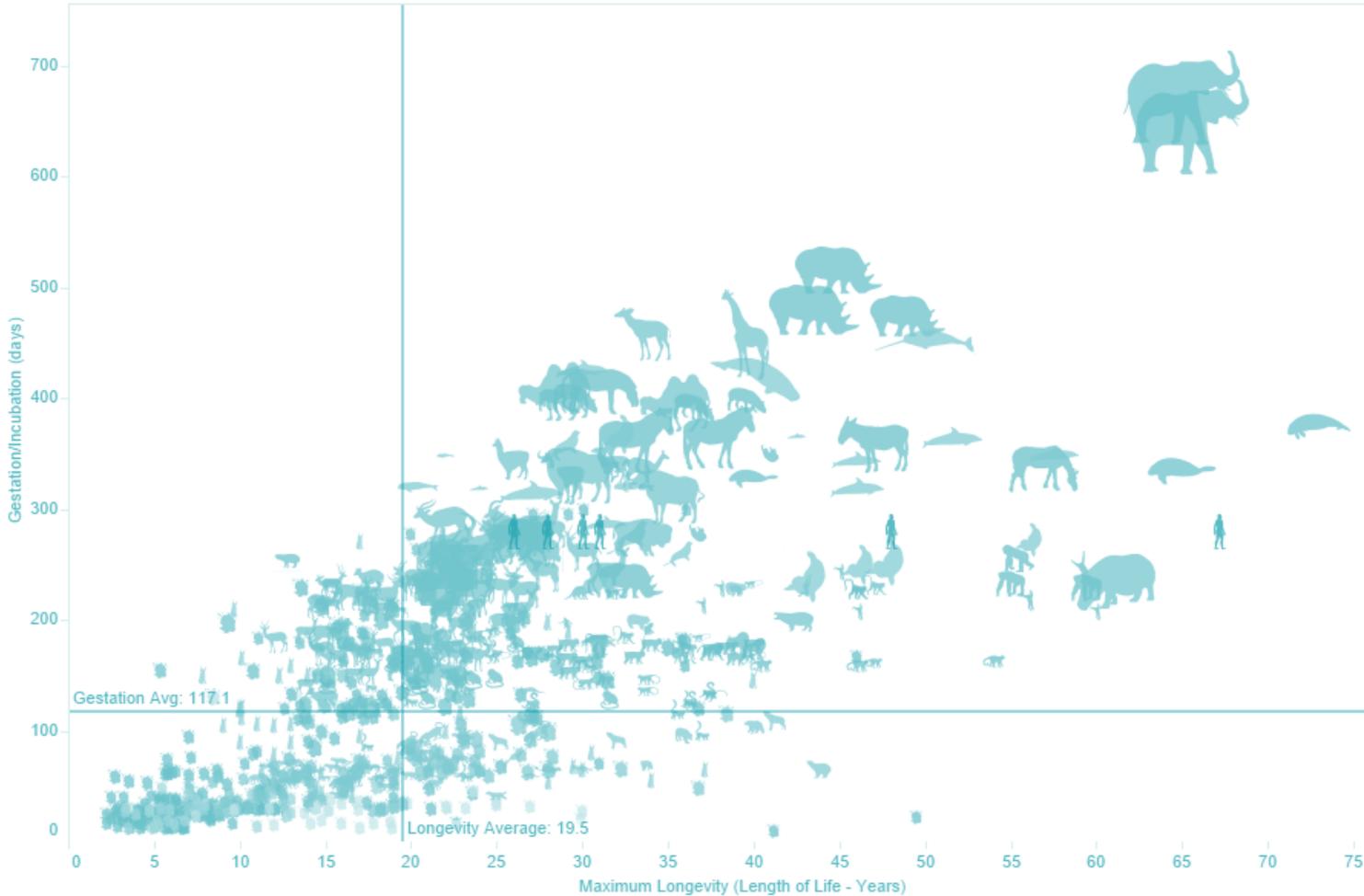
Include Whales:

No

Color Legend

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha

Datasource:
<http://bit.ly/1K7H8cB>
Images Retrieved from:
<http://bit.ly/1PiTOxp>
<http://bit.ly/1OQ8Ysl>



1. Visible Filters:

- Choose animal in top left
- Class and Include Whales on right

2. Action filters:

- The animals on the top row
- Marks on the scatterplot
- The color legend

3. Misc

- Tooltips
- Light bulb
- URLs

4. Gotchas –

- Keep Only on top row tooltips
- Choose an obscure animal in filter: oops everything goes black

Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:
Humans in 1950

Class:
Mammalia (Mammals)

Include Whales:
No

Selected:



#1

A-

Score: 92
Baikal seal

#2

B

Score: 83
Gorilla

#3

C+

Score: 77
Orangutan

#4

C+

Score: 77
South American fur seal

#5

C

Score: 75
Japanese serow

Birth Weight / Size



Heavier



Lighter

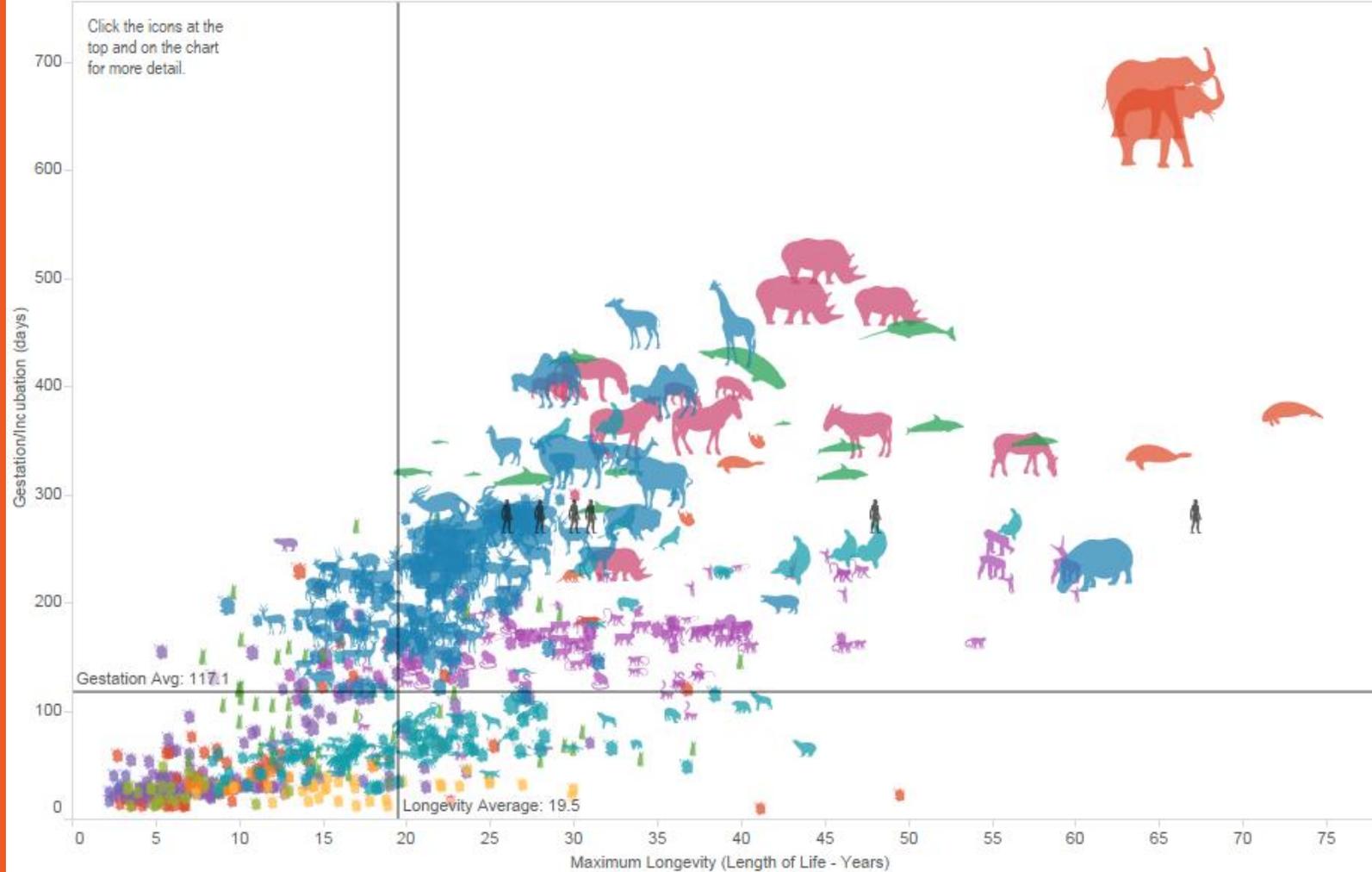
Species class:
Click to highlight

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha

Compatibility Score: The compatibility score is derived using a combination of the following pieces of information:

1. Gestation (Pregnancy) Length
2. Maximum Age
3. Birth Weight
4. Litter Size

Datasource: <http://bit.ly/1K7H8cB>
 Images Retrieved from:
<http://bit.ly/1PjTOxp>
<http://bit.ly/1OQ8Ysl>



Pregnancy vs. Longevity: Which animals are comparable to historic humans

Choose Animal to Compare:
Humans in 1950

Class:
Mammalia (Mammals)

Include Whales:
No

Species class:
[Click to highlight](#)

- Human Primates
- Artiodactyla
- Carnivora
- Cetacea
- Chiroptera
- Dasyuromorphia
- Dermoptera
- Diprotodontia
- Lagomorpha
- Other Mammals
- Perissodactyla
- Pholidota
- Primates
- Rodentia
- Soricomorpha

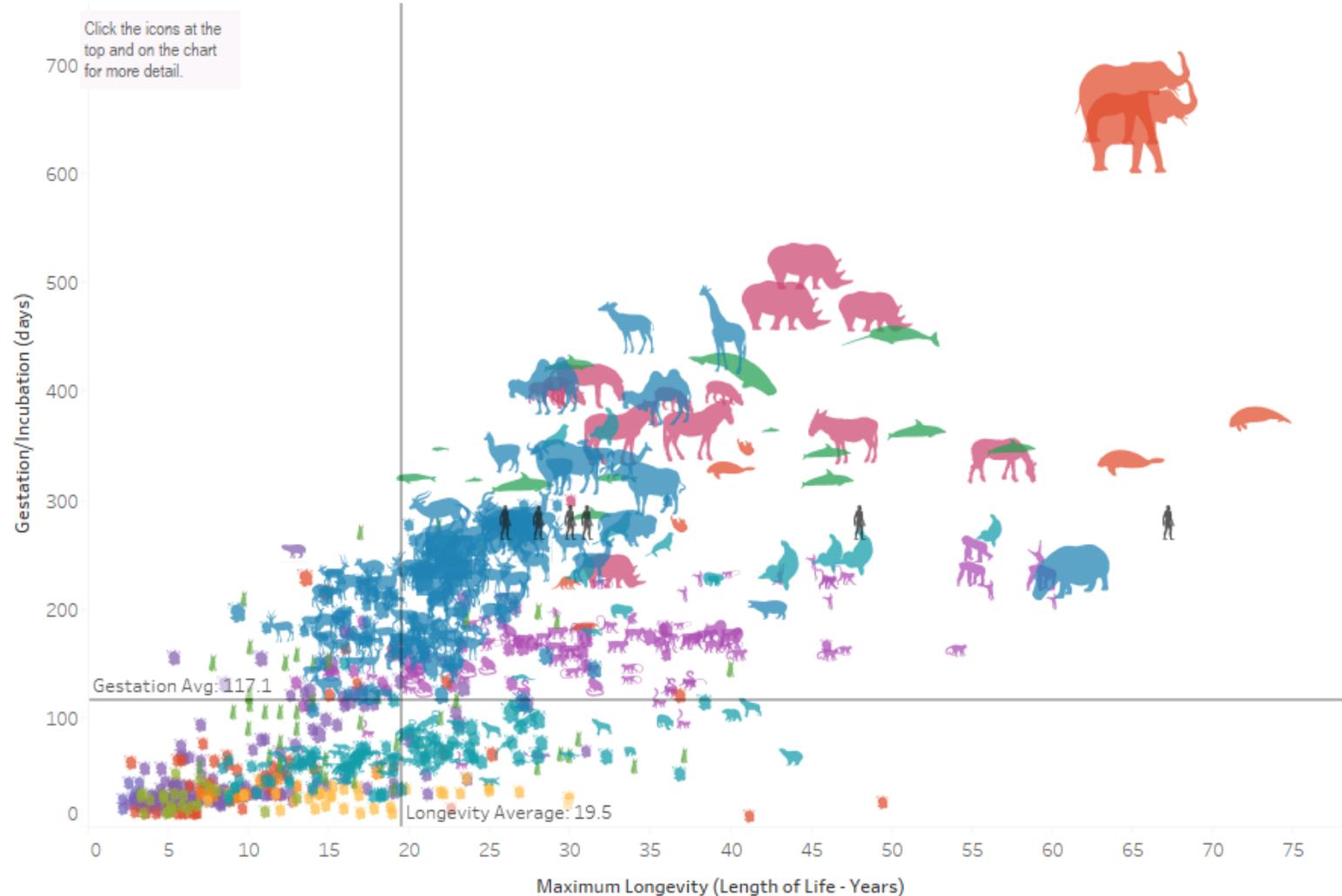
Compatibility Score: The compatibility score is derived using a combination of the following pieces of information:

1. Gestation (Pregnancy) Length
2. Maximum Age
3. Birth Weight
4. Litter Size

Datasource: <http://bit.ly/1K7H8cB>
 Images Retrieved from:
<http://bit.ly/1PiTOxp>
<http://bit.ly/1OQ8YsI>

Selected: #1 #2 #3 #4 #5 Birth Weight / Size

	A- Score: 92 Baikal seal	B Score: 83 Gorilla	C+ Score: 77 Orangutan	Score: 77 South American fur	C Score: 75 Japanese serow	Heavier
						Lighter





Behavioural: Layout

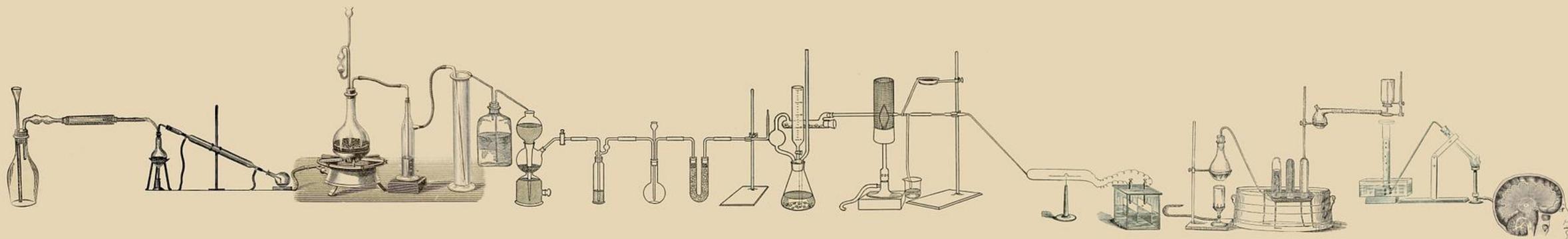


Tableau Research: Eye-tracking

Agency Utilization Rollup

\$3.8M
Fees

\$3.4M
Potential

\$1.3M
New Biz + Opportunity

\$2.6M
Internal Projects

+12.2
FTE Overstaffed



Target vs Billable vs Non-Billable %

Department	Target %	Billable %	Non-Billable %
Creative	99%	53%	46%
Account Management	105%	47%	58%
Project Management	104%	35%	69%
Technology	102%	28%	74%
Operations	4%		
Executive/Admin	57%		57%
New Biz	106%		100%

Non-Billable vs Billable Hours

Department	Non-Billable Hours	Billable Hours
Creative	5,749	6,743
Account Management	10,670	8,620
Project Management	8,396	4,274
Technology	14,454	5,468
Operations	10	33
Executive/Admin	2,179	16
New Biz	2,350	1

Cost | Fees | Potential

Department	Cost	Fees	Potential
Creative	\$1,083K		
Account Management	\$1,159K	\$795K	
Project Management	\$698K	\$808K	
Technology	\$883K	\$1,762K	
Operations			
Executive/Admin			
New Biz			

Show Potential at 100% of Target ▼

New Biz + Opp

Department	Hours	%
Creative	1,456 hrs	12%
Account Management	4,524 hrs	25%
Project Management	1,455 hrs	12%
Technology	361 hrs	2%
Operations	6 hrs	0%
Executive/Admin	0 hrs	0%
New Biz	1,764 hrs	80%

Cost \$533K

Internal Projects

Department	Hours	%
Creative	1,301 hrs	10%
Account Management	1,579 hrs	9%
Project Management	2,283 hrs	19%
Technology	9,608 hrs	49%
Operations	0 hrs	0%
Executive/Admin	4 hrs	0%
New Biz	40 hrs	2%

Cost \$755K

Internal Admin

Department	Hours	%
Creative	2,992 hrs	24%
Account Management	4,567 hrs	25%
Project Management	4,659 hrs	38%
Technology	4,485 hrs	23%
Operations	5 hrs	0%
Executive/Admin	2,176 hrs	56%
New Biz	546 hrs	25%

Cost \$1,163K

Utilization Trend



Agency Utilization Rollup

\$3.8M
Fees

\$3.4M
Potential

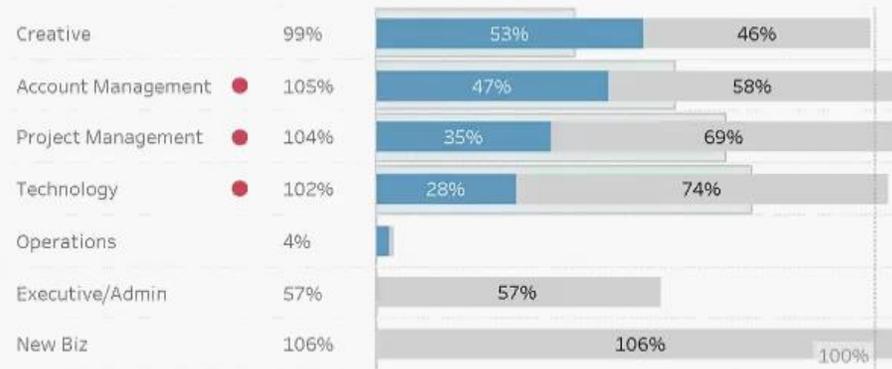
\$1.3M
New Biz + Opportunity

\$2.6M
Internal Projects

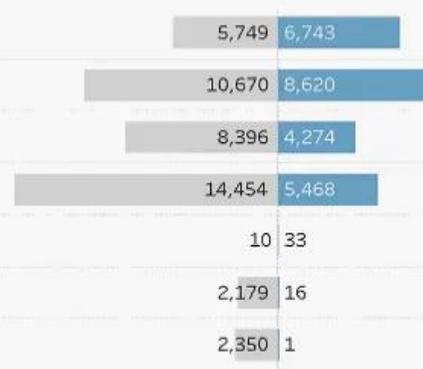
+12.2
FTE Overstaffed



Target vs Billable vs Non-Billable %



Non-Billable vs Billable Hours



Cost | Fees | Potential



New Biz + Opp



Cost \$533K

Internal Projects



Cost \$755K

Internal Admin



Cost \$1,163K

Utilization Trend



Agency Utilization Rollup

\$3.8M
Fees

\$3.4M
Potential

\$1.3M
New Biz + Opportunity

\$2.6M
Internal Projects

+12.2
FTE Overstaffed



Target vs Billable vs Non-Billable %

Department	Target %	Billable %	Non-Billable %
Creative	99%	53%	46%
Account Management	105%	47%	58%
Project Management	104%	35%	69%
Technology	102%	28%	74%
Operations	4%		
Executive/Admin	57%		57%
New Biz	106%		106%

Non-Billable vs Billable Hours

Department	Non-Billable Hours	Billable Hours
Creative	5,749	6,743
Account Management	10,670	8,620
Project Management	8,396	4,274
Technology	14,454	5,468
Operations	10	33
Executive/Admin	2,179	16
New Biz	2,350	1

Cost | Fees | Potential

Department	Cost	Fees	Potential
Creative	\$1,083K		
Account Management	\$1,159K	\$795K	
Project Management	\$698K	\$808K	
Technology	\$883K	\$1,762K	
Operations			
Executive/Admin			
New Biz			

Show Potential at 100% of Target ▼

New Biz + Opp

Department	Hours	%
Creative	1,456 hrs	12%
Account Management	4,524 hrs	25%
Project Management	1,455 hrs	12%
Technology	361 hrs	2%
Operations	6 hrs	0%
Executive/Admin	0 hrs	0%
New Biz	1,764 hrs	80%

Cost \$533K

Internal Projects

Department	Hours	%
Creative	1,301 hrs	10%
Account Management	1,579 hrs	9%
Project Management	2,283 hrs	19%
Technology	9,608 hrs	49%
Operations	0 hrs	0%
Executive/Admin	4 hrs	0%
New Biz	40 hrs	2%

Cost \$755K

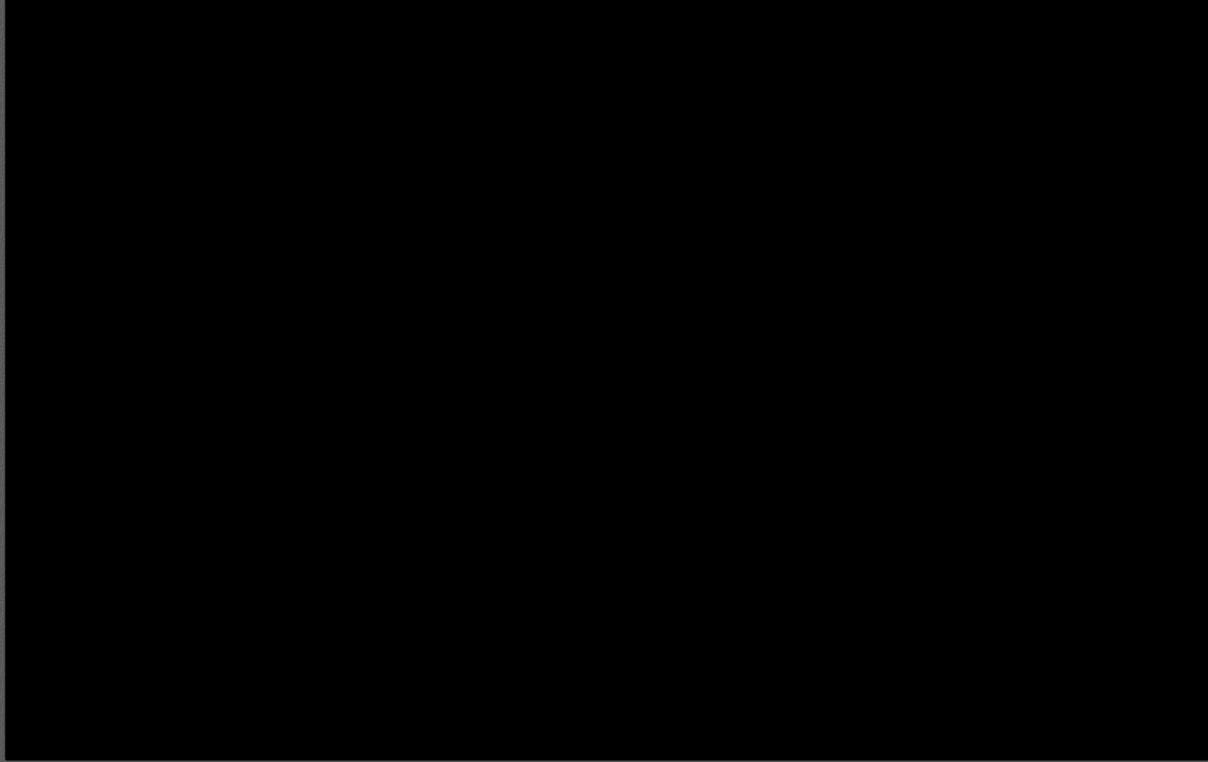
Internal Admin

Department	Hours	%
Creative	2,992 hrs	24%
Account Management	4,567 hrs	25%
Project Management	4,659 hrs	38%
Technology	4,485 hrs	23%
Operations	5 hrs	0%
Executive/Admin	2,176 hrs	56%
New Biz	546 hrs	25%

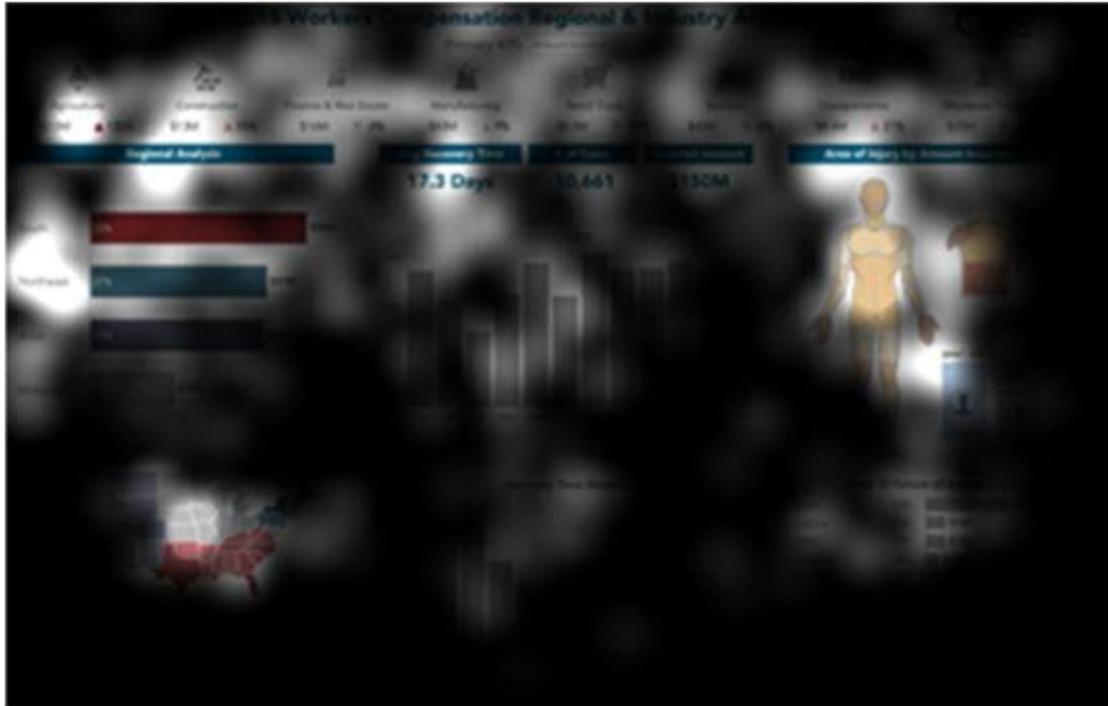
Cost \$1,163K

Utilization Trend

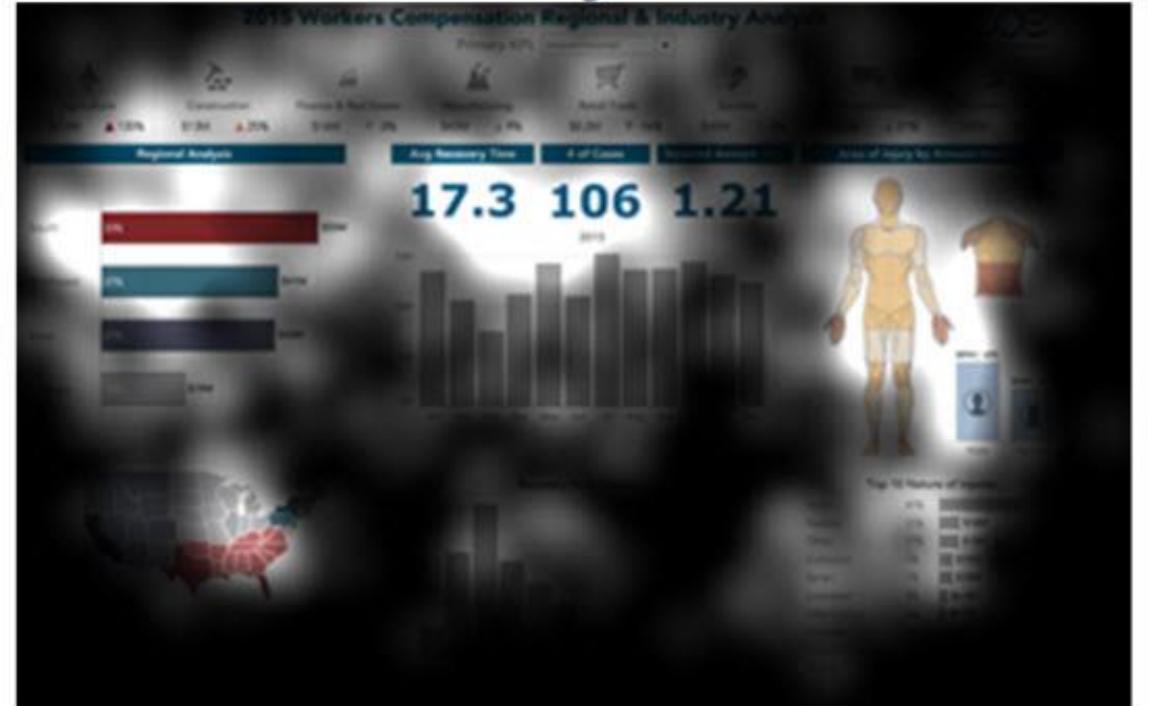




Condition A – Small font numbers



Condition B – Large font numbers



Don Norman's Pleasurable experiences: *The three levels of processing*

Visceral

Behavioural

● Reflective

Reflective



User
Engagement



Design
Improvements

How to make an impact with your data?

The three levels of processing:

Visceral

Behavioural

Reflective

Training

Design

Collaboration

Iteration

However....

DASHBOARDS ARE THE PROBLEM

**“Impact” is NOT just about
beautiful/functional
dashboards**

The interesting thing was, we thought we were doing well, and then we discovered there was this big negative cost. It was like, 'Oh my God.' Suddenly you go and say, 'Okay, I've discovered a new aspect of engine cost that we hadn't realized.'

Suddenly you're going, "Bang, bang, bang, two minutes in Tableau" and you can see the average per month, the average per day, and it's like, "Oh, wow—we can do this slightly differently.'

Within two days, I'd literally re-worked the whole instruction, sent it out to people, and off we went. As a result, it's been a very significant difference in terms of U.S. dollars.



The interesting thing was, we thought we were doing well, and then **we discovered there was this big negative cost**. It was like, 'Oh my God.' Suddenly you go and say, 'Okay, I've discovered a new aspect of engine cost that we hadn't realized.'

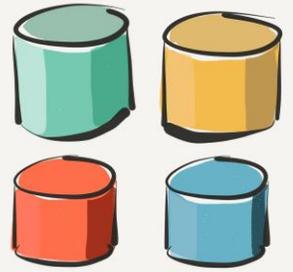
Suddenly you're going, "**Bang, bang, bang, two minutes in Tableau**" and you can see the average per month, the average per day, and it's like, "Oh, wow—we can do this slightly differently.'

Within two days, I'd literally re-worked the whole instruction, sent it out to people, and off we went. As a result, it's been a very significant difference in terms of U.S. dollars.

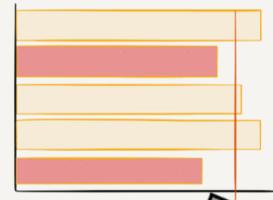


**Bang, bang,
bang, two
minutes...**





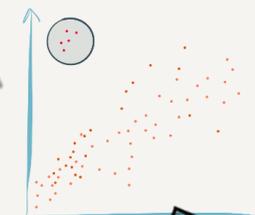
DATA VISUALISATION
 KNOWN UNKNOWN
 PREDEFINED ANSWERS ONLY



WHY?



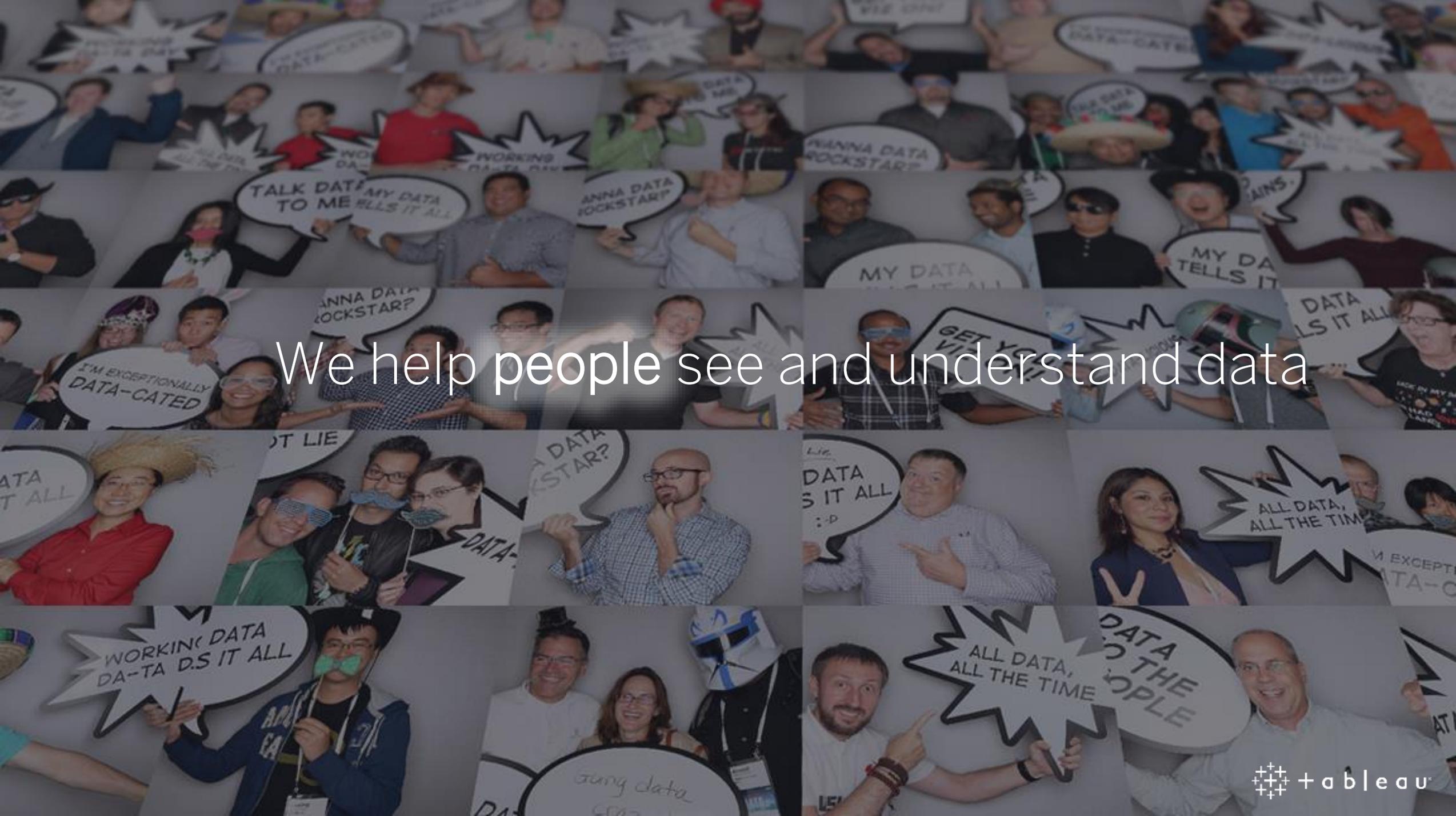
WHY?



WHY?

m	m	m	m
m	m	m	m
m	m	m	m
m	m	m	m

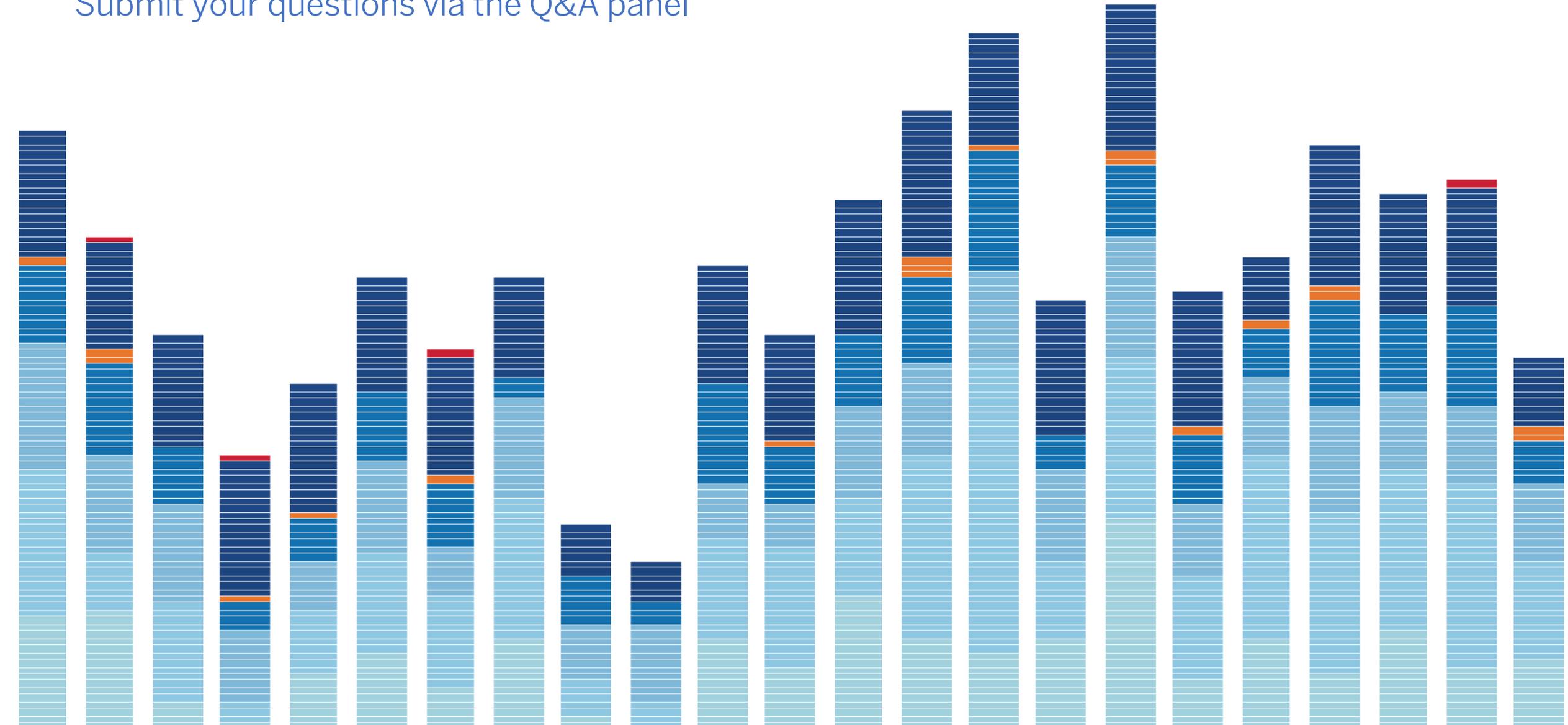
VISUAL ANALYTICS
 UNKNOWN UNKNOWN
 INSTANT ANSWERS TO NEW QUESTIONS

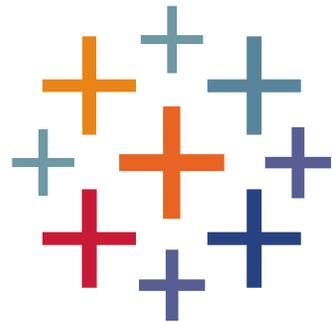


We help people see and understand data

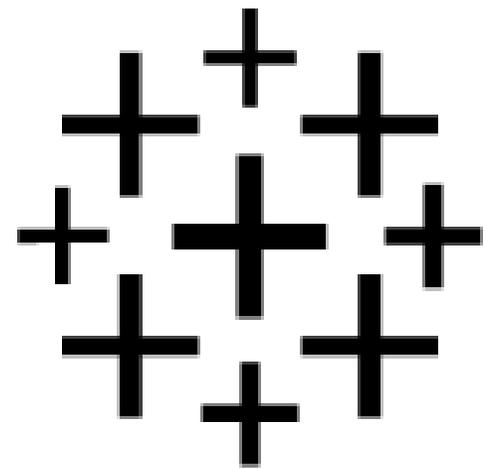
Questions?

Submit your questions via the Q&A panel





+ a b l e a u[®]



+

ableau®