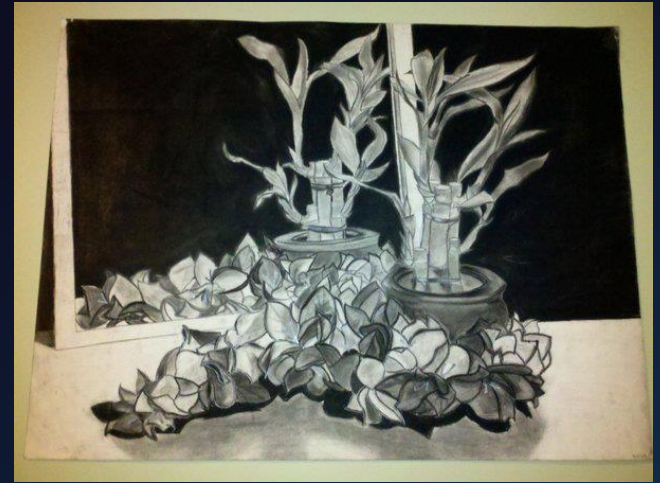


Introduction

Mike Gonzales, PMP, MPH

- Biogen Project Manager
- Data Visualization Enthusiast
- Analytics & Data Sciences Department
 - Biometrics, Epidemiology, Business Ops



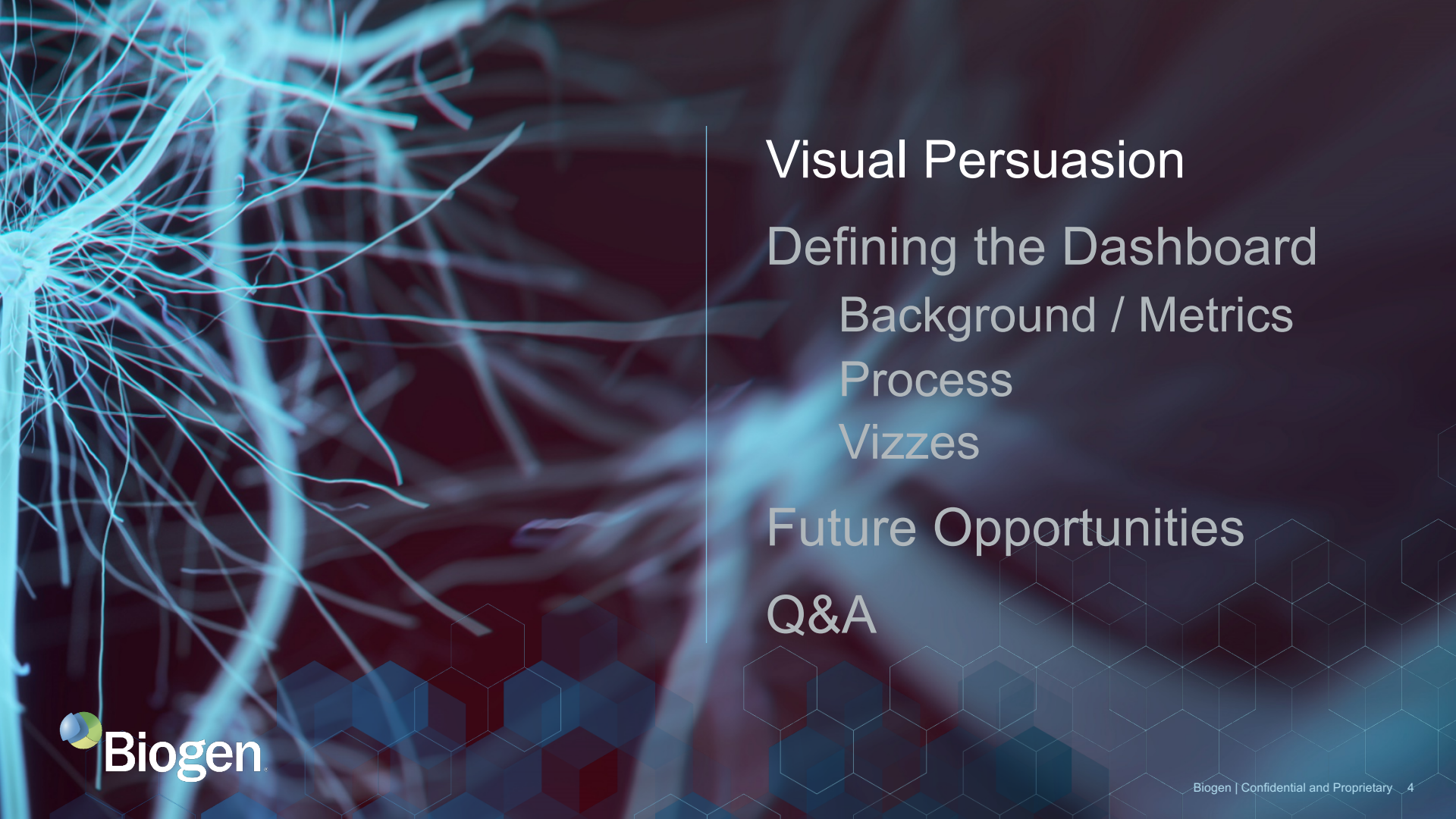
Sample Questions

- Are there any other uses for the dashboard?
- Why use Tableau?
- What's the data flow?



VISUALIZING STUDY METRICS TO SPARK DISCUSSION AND ACTION

Mike Gonzales
DV01



Visual Persuasion

Defining the Dashboard

Background / Metrics

Process

Vizzes

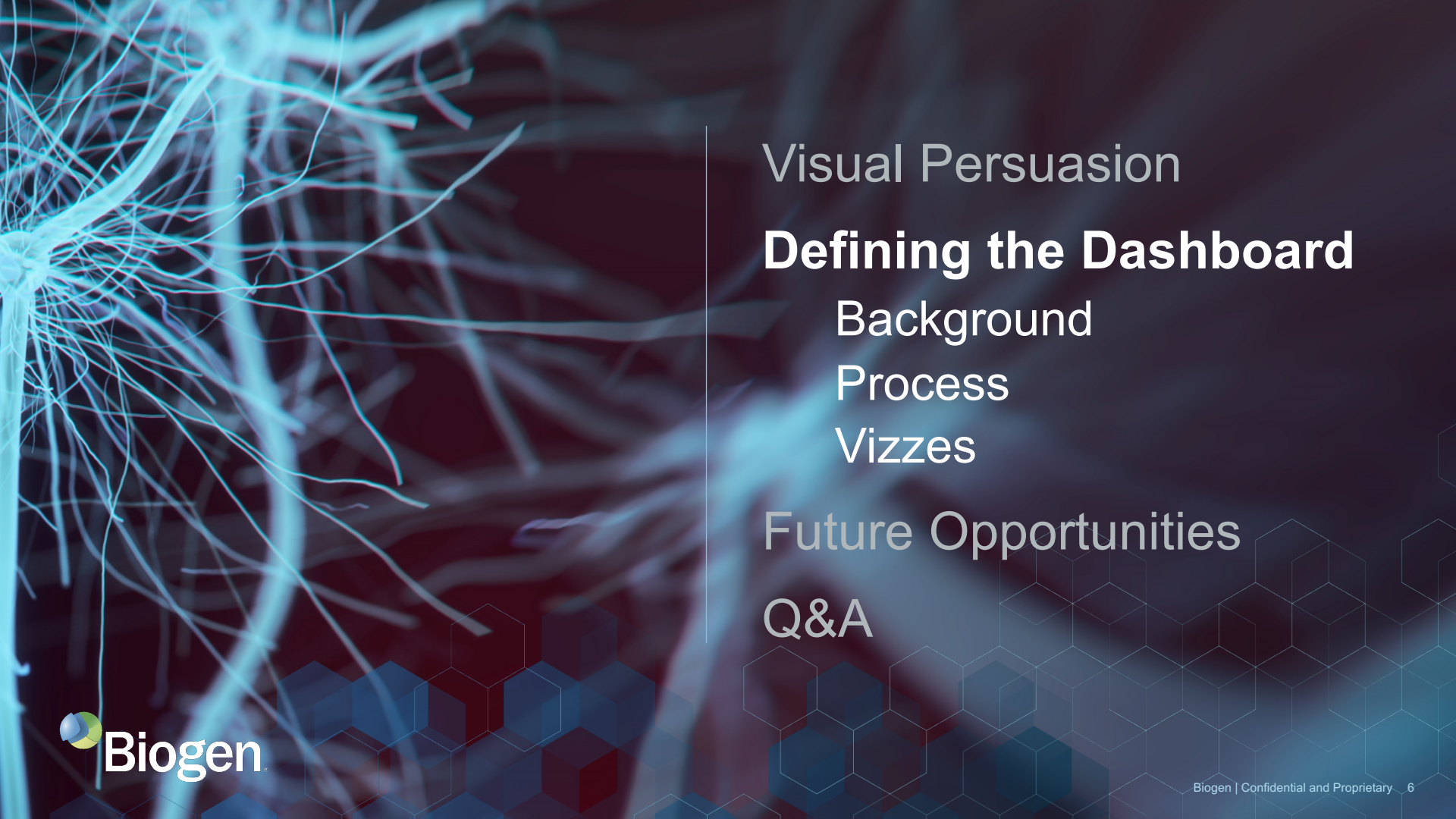
Future Opportunities

Q&A

Visual Persuasion

- We are increasingly relying on data to communicate
- Project Management = driving action through effective communication.





Visual Persuasion

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Dashboard - Metrics

Study Start-Up



Study Maintenance



Database Lock



CSR

- Unblinding Plan before First Patient In (FPI)
- Database Design Revisions
- Database Go-Live before FPI

- Stable SAP / SAP to planned Database Lock (DBL)
- $SAP < DBL$
- Inadvertant Unblindings

- Last Patient Out to DBL
- Planned vs. Actual DBL

- DBL to:
 - First Look
 - SDTM
 - TLGs
 - Med Writing

Background

- Every quarter, Biometrics leadership/functional heads and SMEs meet to discuss portfolio health
- Decentralized reporting
- Fatigue, unpredictability : tedious, easy to “gloss”

Driving Action

Simple study metrics are easy to calculate

The problem is human

The solution is ~~technology~~, human

Dashboard – New Process

Centralized Reporting

Singular vision with minimal burden

Empowerment

Enable functions to highlight all issues and successes

Discussion

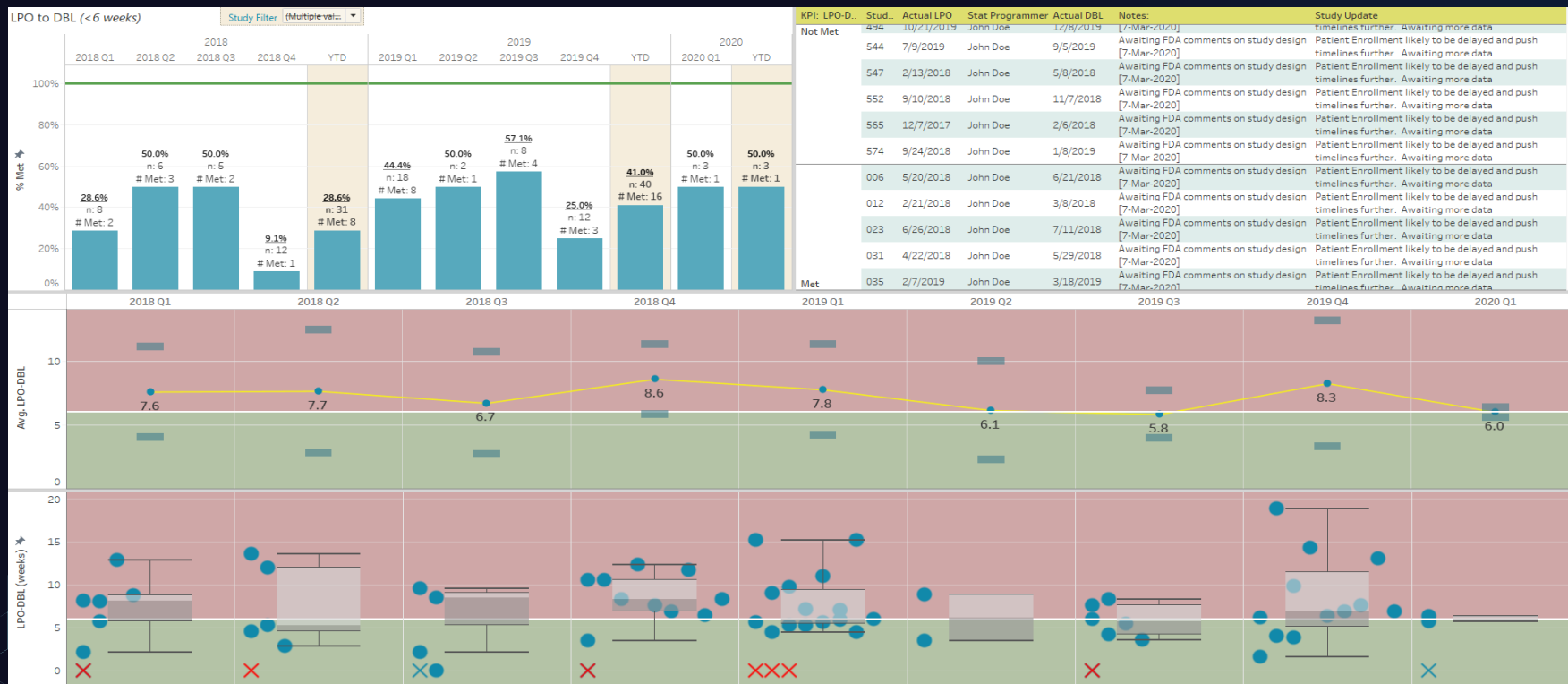
Everyone is comfortable speaking

Transparency

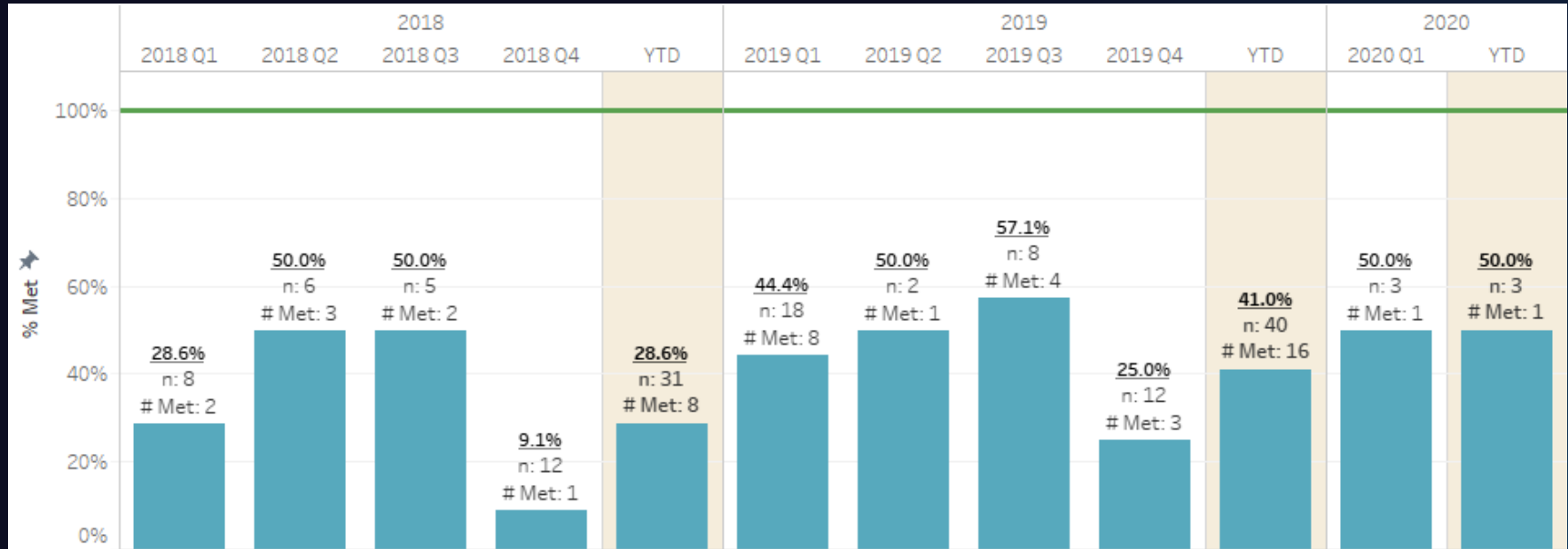
All data is visible and standardized – no bias



Dashboard – The Layout

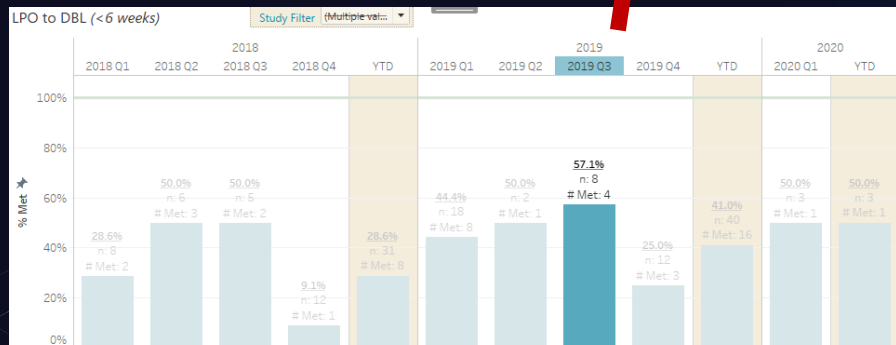


Dashboard – Met/Not Met

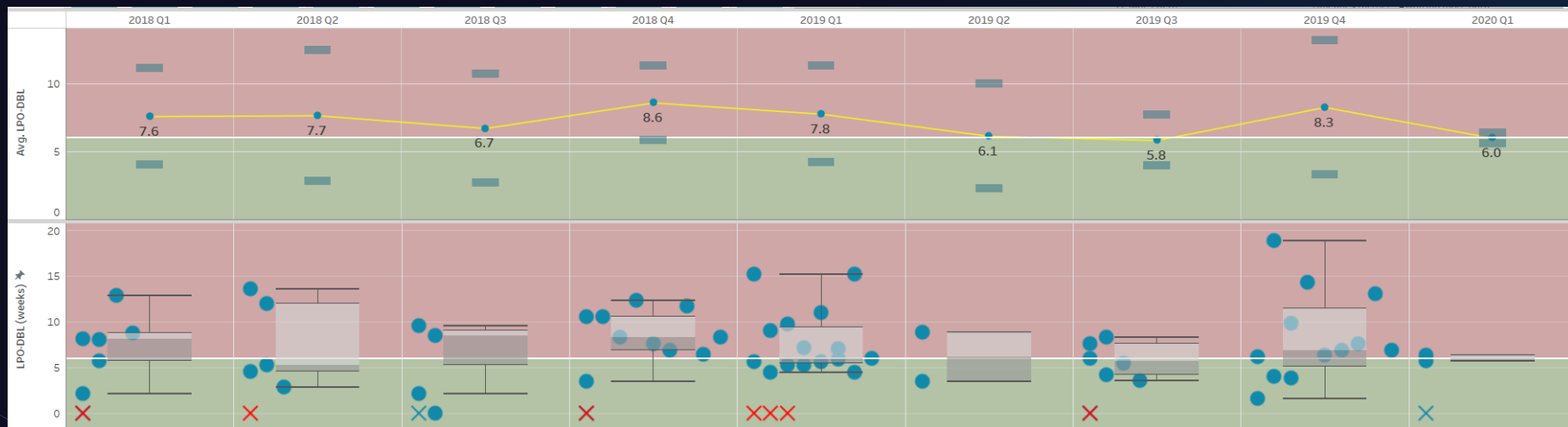


Dashboard – Table

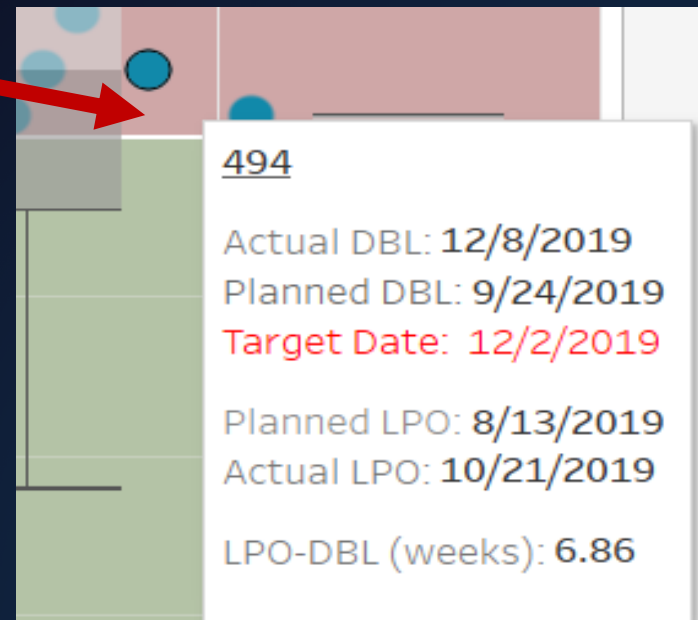
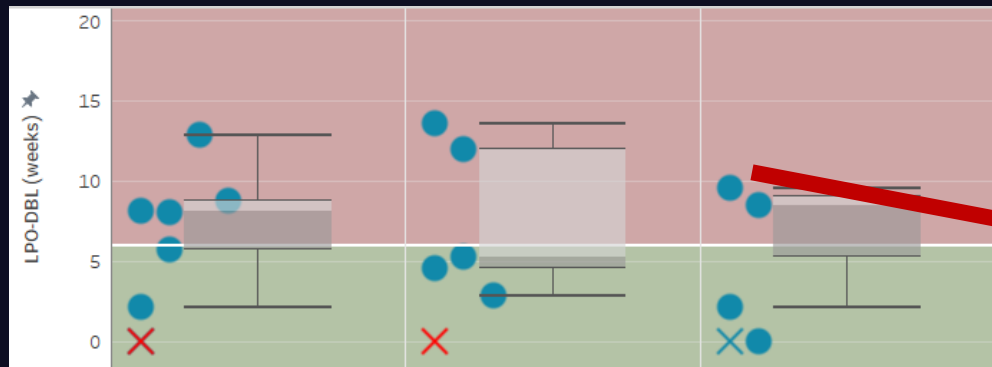
LPO-D..	Stud..	Actual LPO	Stat Programmer	Actual DBL	Notes:	Study Update
Not Met	215	5/22/2019	John Doe	7/14/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
	544	7/9/2019	John Doe	9/5/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
Met	125	6/20/2019	John Doe	8/1/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
	252	6/23/2019	John Doe	7/22/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
	287	8/1/2019	John Doe	9/8/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
	497	8/18/2019	John Doe	9/12/2019	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
Upcoming	569	Null	John Doe	Null	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data
Missing DBL	489	5/20/2019	John Doe	Null	Awaiting FDA comments on study design [7-Mar-2020]	Patient Enrollment likely to be delayed and push timelines further. Awaiting more data



Dashboard



Dashboard - Tooltipping



Dashboard - Tooltipping



483

Actual DBL:
Planned DBL:
~~Target Date: 2/4/2019~~

Planned LPO: 6/27/2005
Actual LPO: 12/24/2018

LPO-DBL (weeks):

Dashboard - Tooltipping



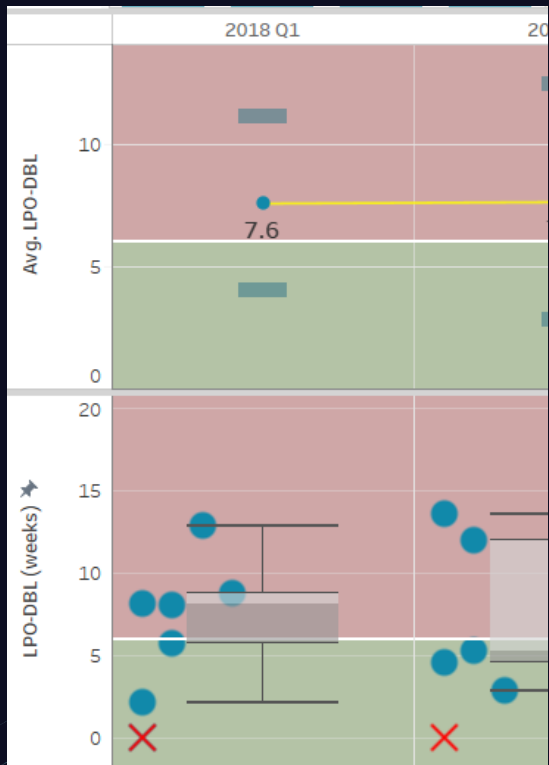
491

Actual DBL:
Planned DBL:
Target Date: 2/6/2020

Planned LPO: 8/25/2022
Actual LPO: 12/26/2019

LPO-DBL (weeks):

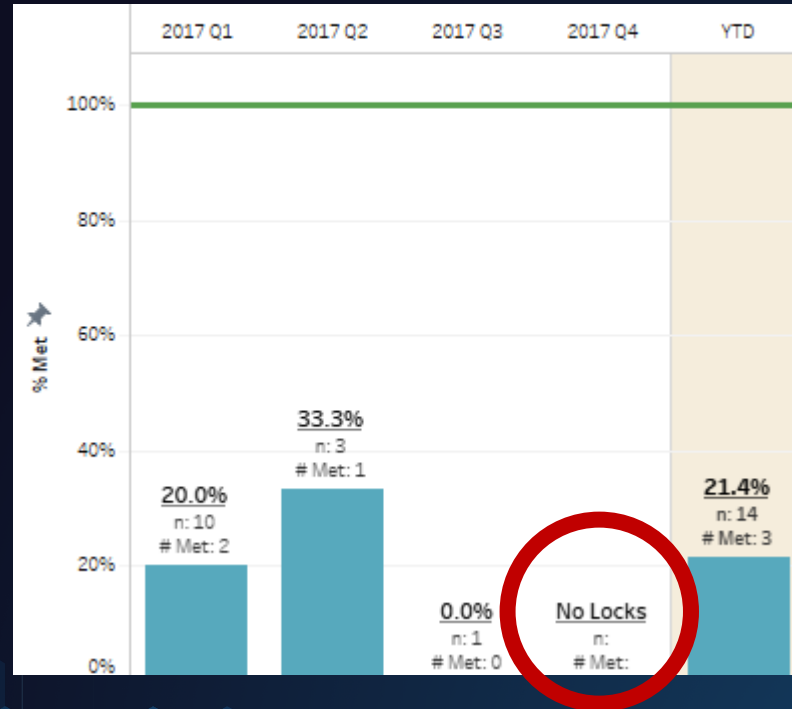
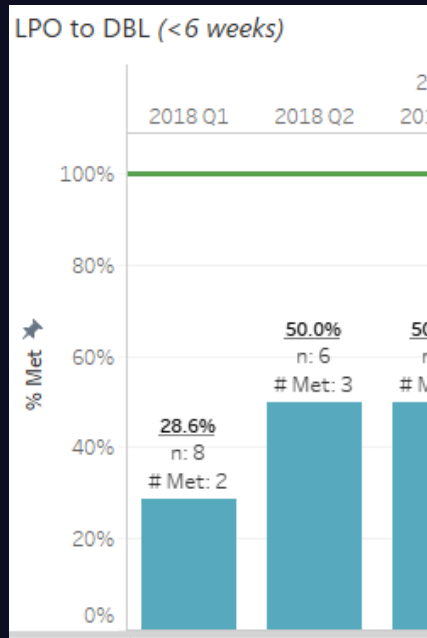
Dashboard – Color



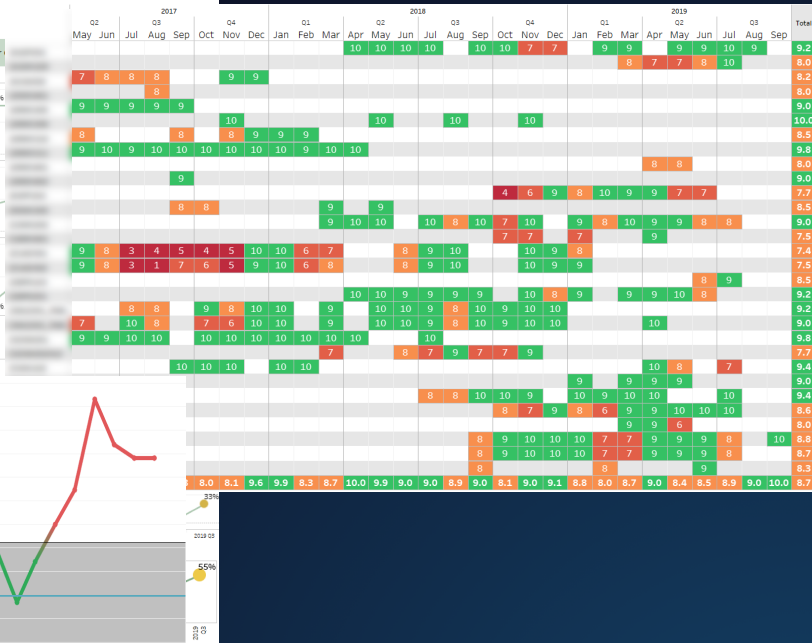
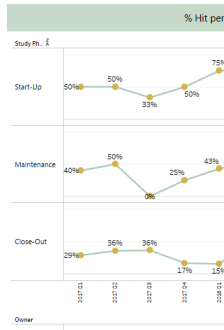
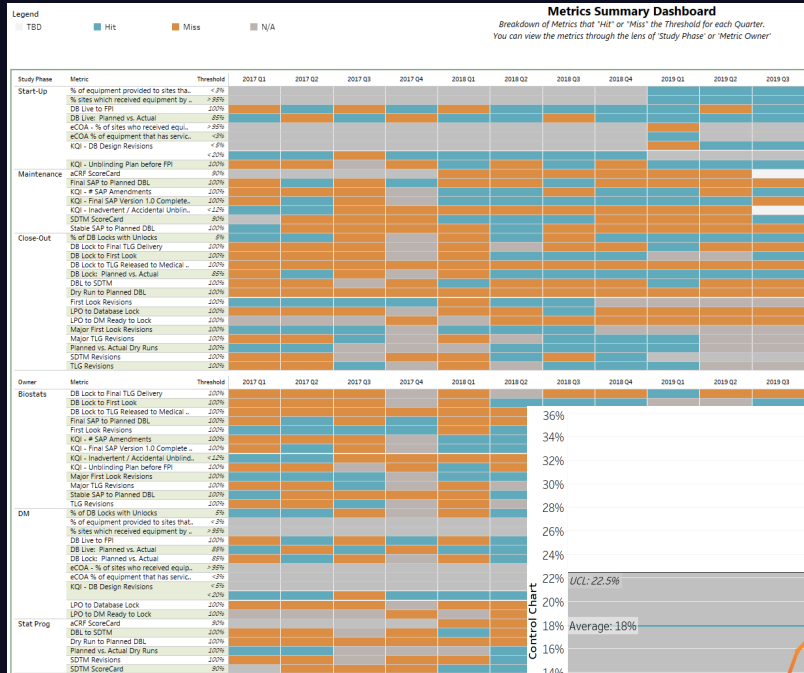
- Red and Green are muted, they are secondary and fade from attention
- Green -> Red -> Yellow -> Blue...
- Most of the top companies' logos have 1-3 colors



Dashboard – Readability



Dashboard – Artistic License



Lessons Learned

❖ Needs to be fast...really fast

“...a latency of a half a second with interactive graphics has profound effects on the way a viewer engages with the graphic. They moved the mouse less, shifted the types of interactions they did and lessened some of their interactions altogether.

They were also more likely to comment verbally on the interface.”



Visual Persuasion

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So now where to?

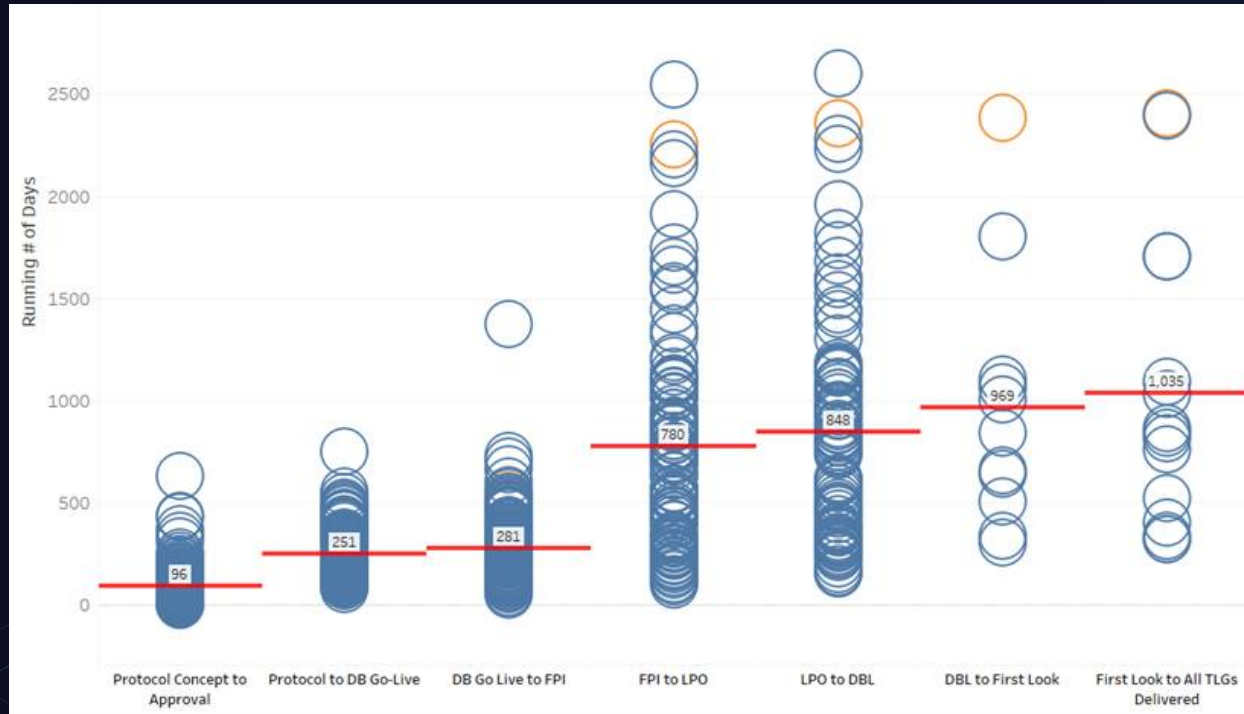
People: Capacity

So now where to?

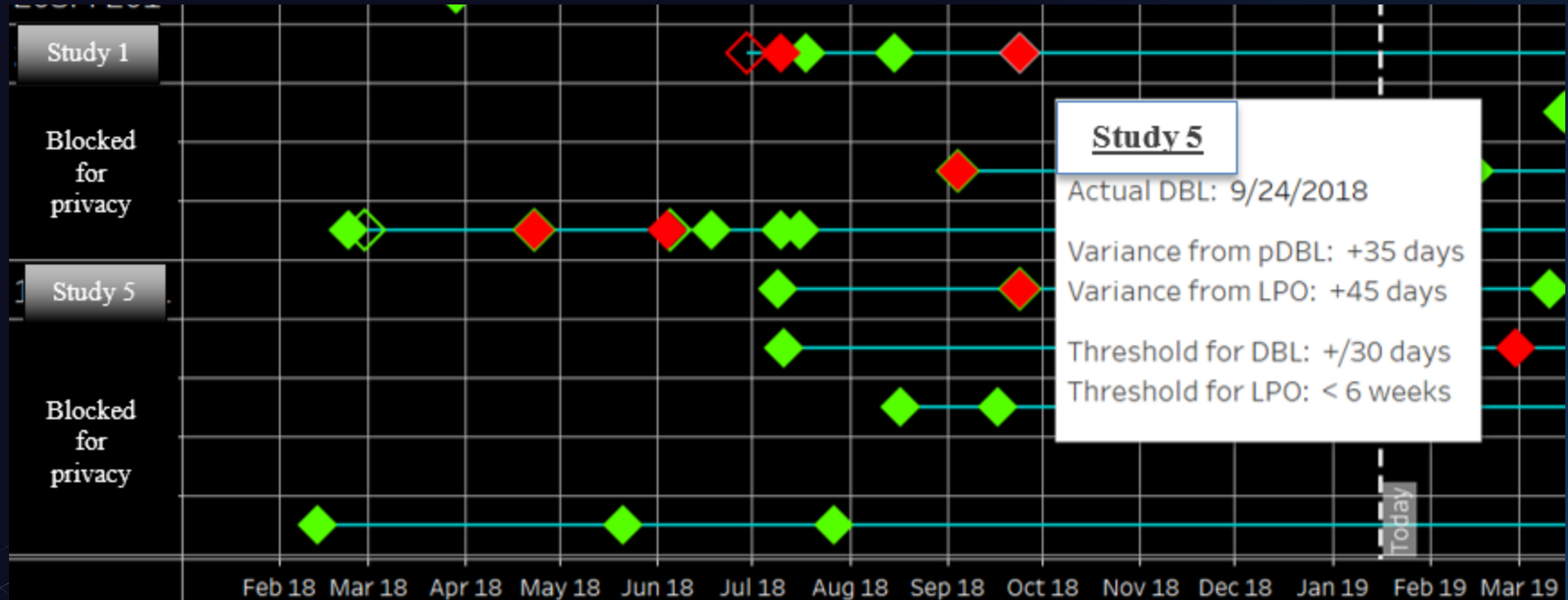
Technology:

- Adding uncertainty and further complexity
 - “When is my bus coming?”
 - Hypothetical Outcome Plots / Timeline
- Write-back
- Speech-command

Hypothetical Outcome Plots?

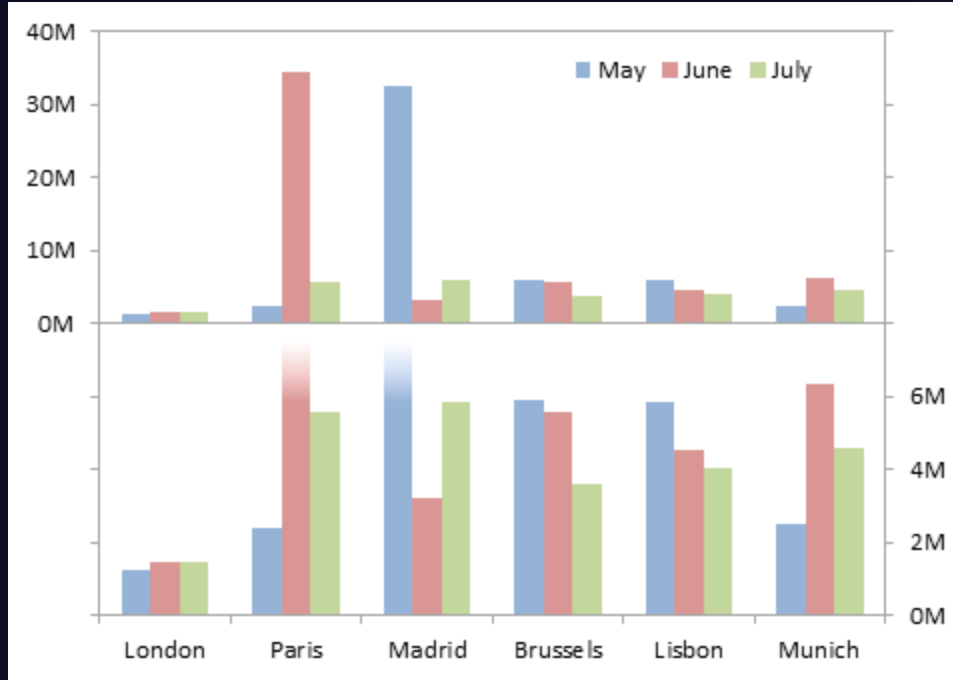


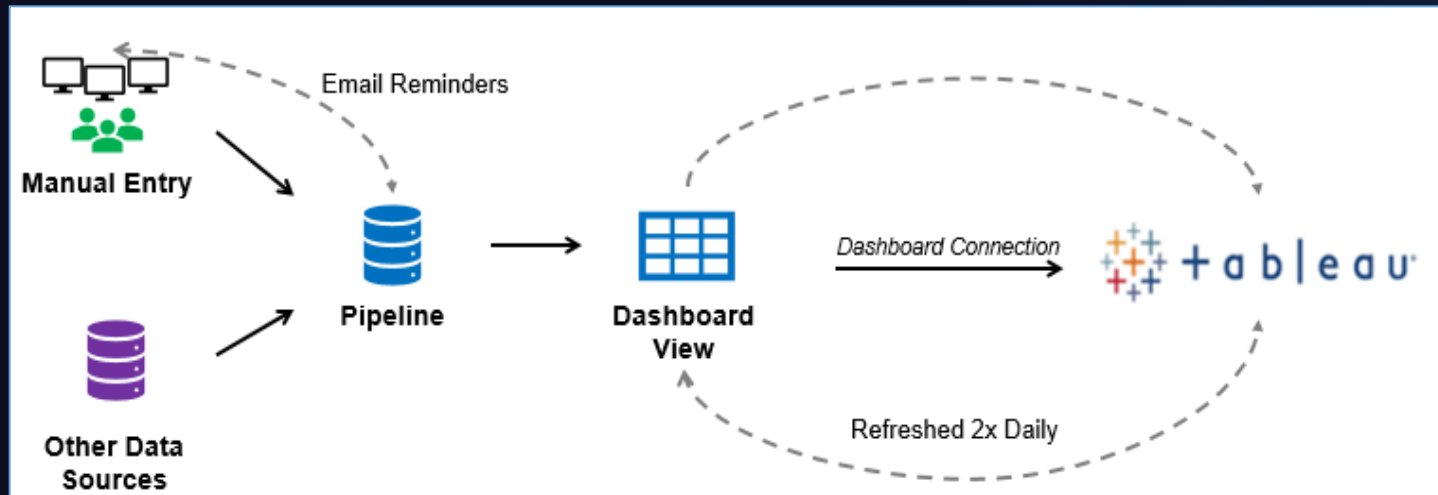
Timeline?





Back-Up Slides





Why Tableau?

- ❖ Use what you know
- ❖ So simple, a _____ could understand it
- ❖ Not the final solution (probably)