

# Principles of Dashboarding



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# Contents

- What is a Dashboard
- Types of Dashboards
- Elements of a Dashboard
- Reading Patterns
- Dashboard best practices

# What is a Dashboard?

visual display of the most important information needed to achieve one or more objectives

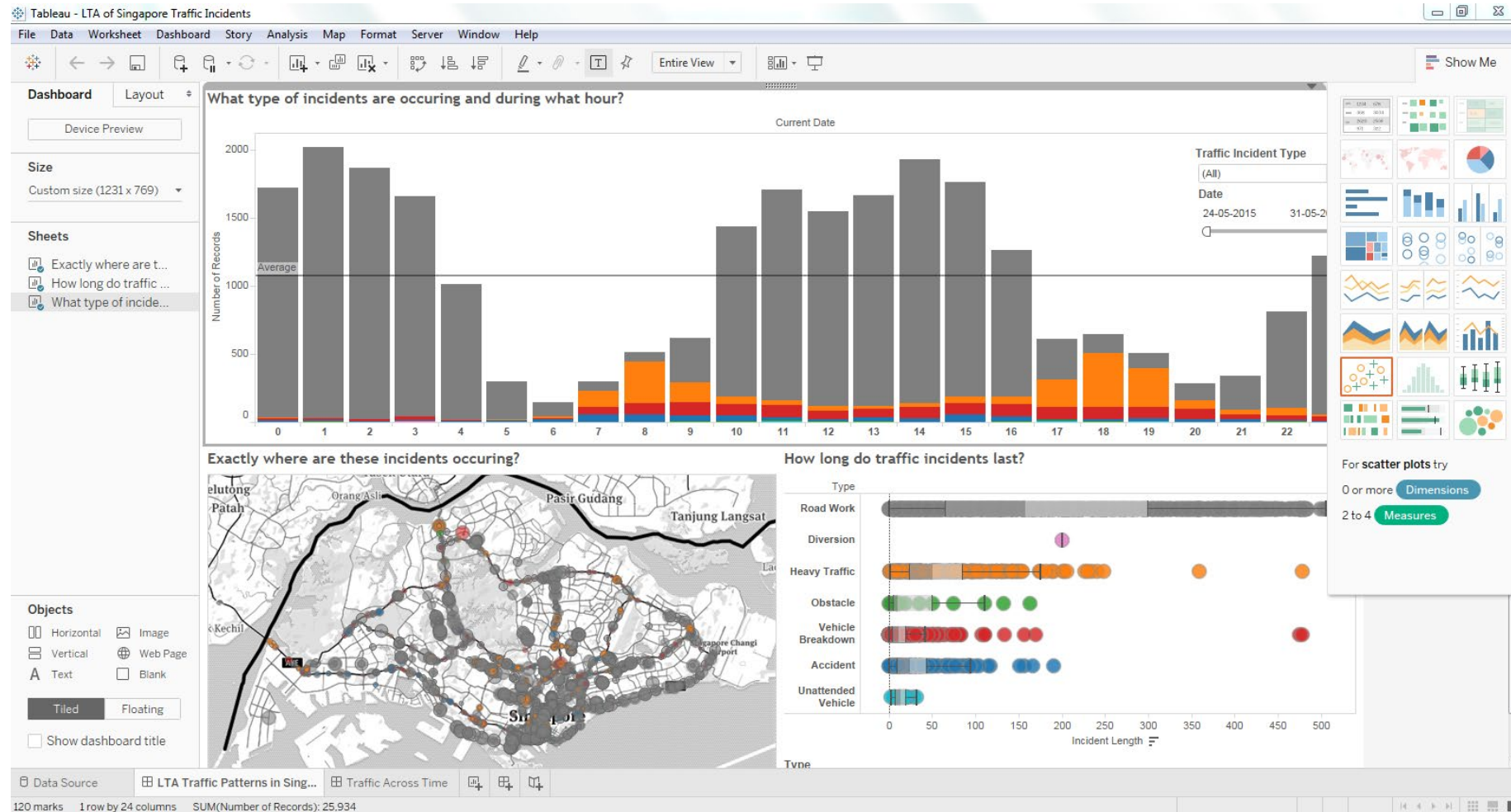
consolidated and arranged on a single screen so the information can be monitored at a glance



Stephen  
Few



# Dashboard: Traffic Incidents Monitoring

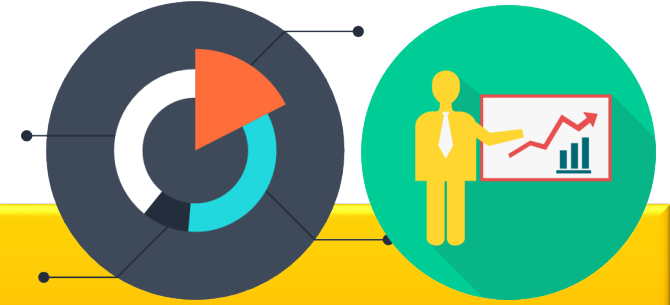


<https://public.tableau.com/profile/russell.christopher1087#!/vizhome/LTAofSingaporeTrafficIncidents/LTATrafficPatternsinSingapore>

# Dashboard: Doctors Scorecard



<https://gallery.idashboards.com/preview/html5/?guestuser=webexamples&dashID=228>  
<https://www.idashboards.com/dashboard-examples/>  
<https://gallery.idashboards.com/preview/html5/>



# Types of Dashboards

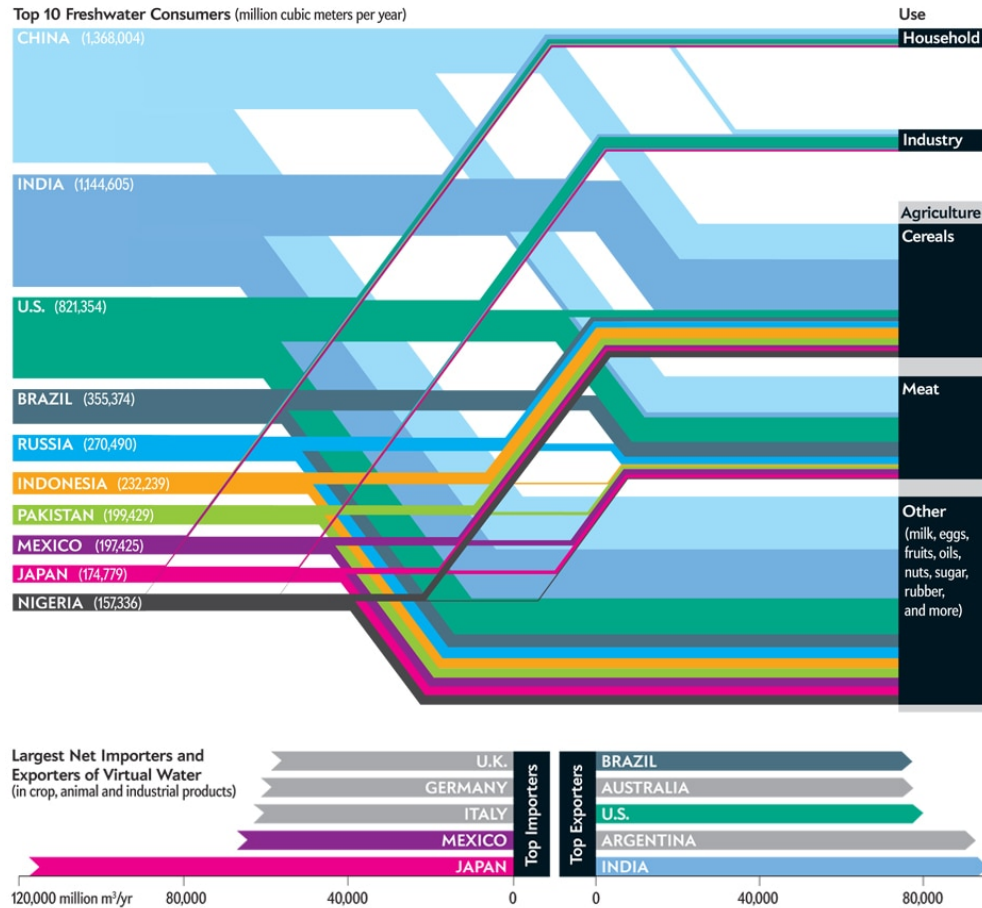
Conducting Explanatory, Exploratory and Diagnostic Analysis  
Visually

Strategic (Executive), Analytical & Operational Dashboards

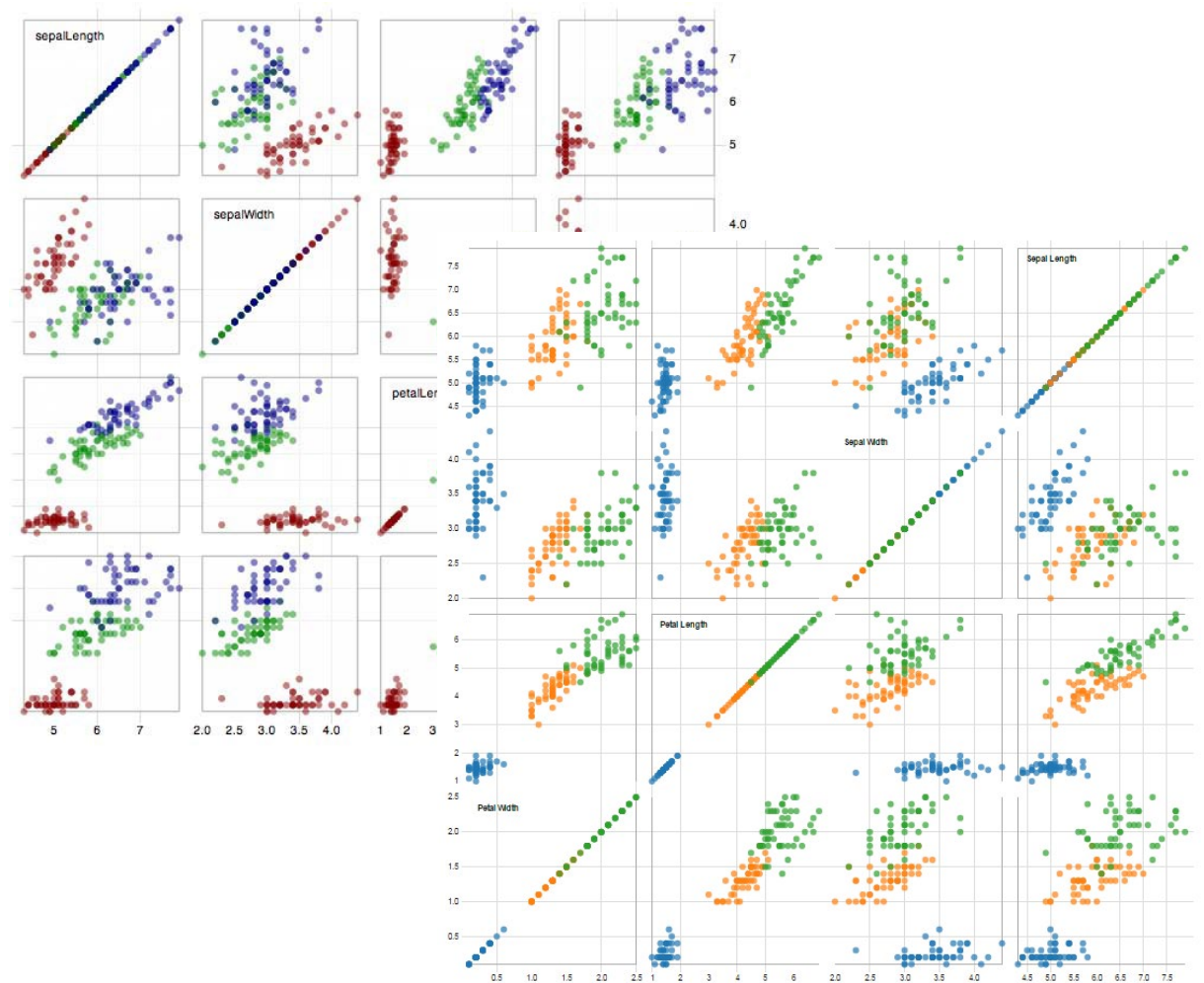


# Data Visualisation

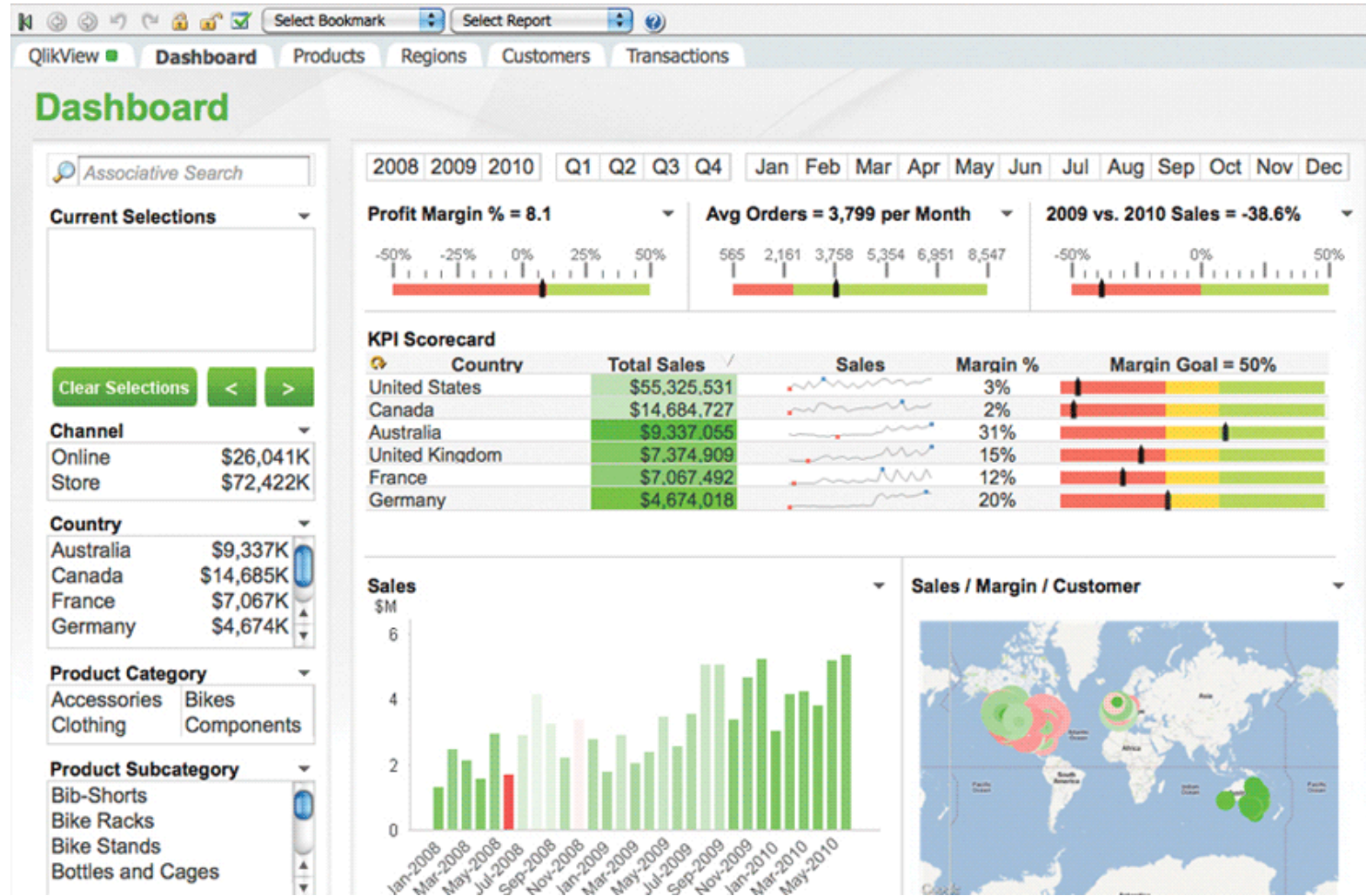
## Explanatory vs Exploratory



Graphics by Jen Christiansen  
Source: "The Water Footprint of Humanity," by Arjen Y. Hoekstra and Mesfin M. Mekonnen, in Proceedings of the National Academy of Sciences USA. Published online February 13, 2012



# Executive Dashboards

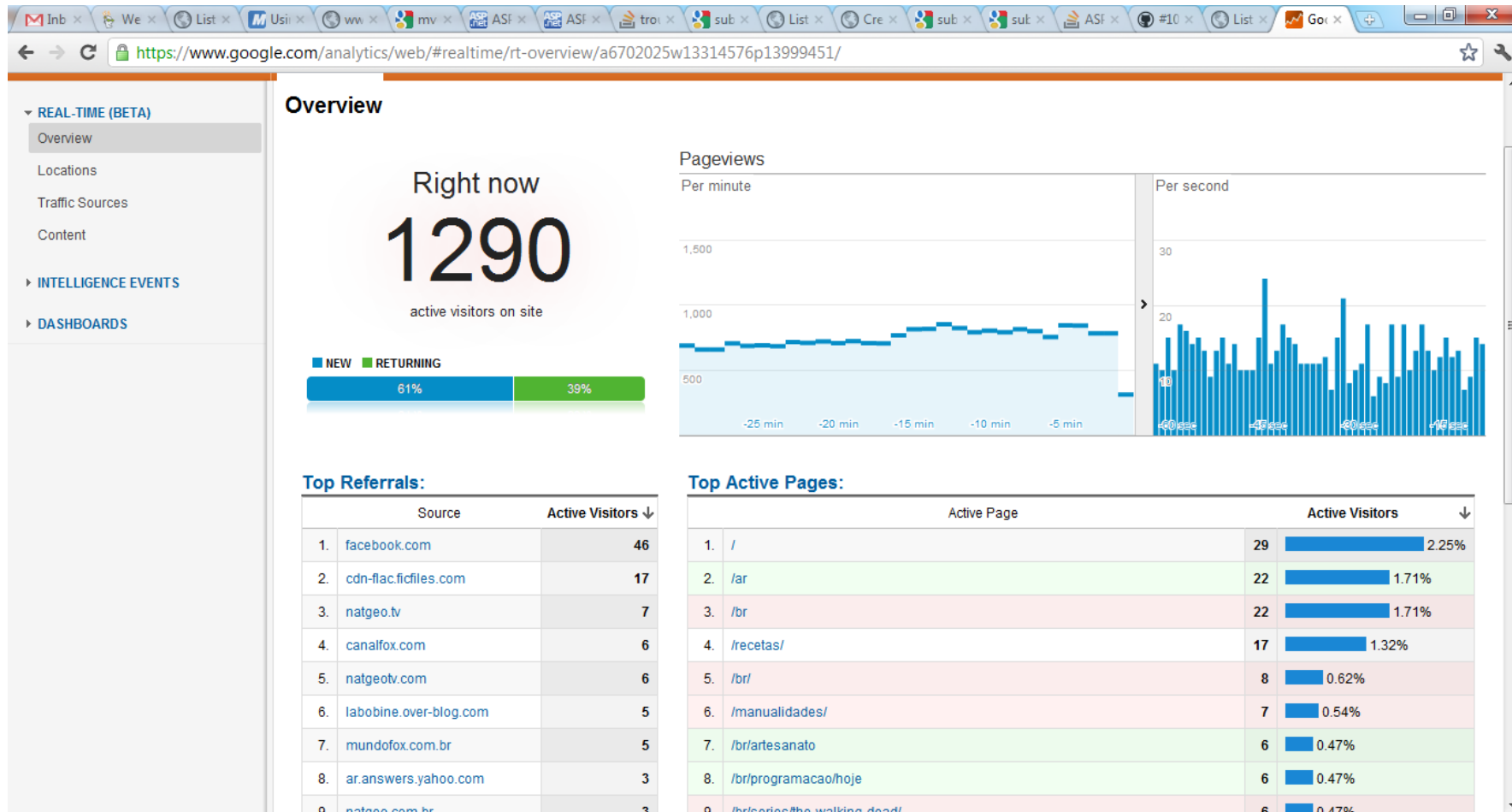




# Analytical Dashboards



# Operational Dashboard



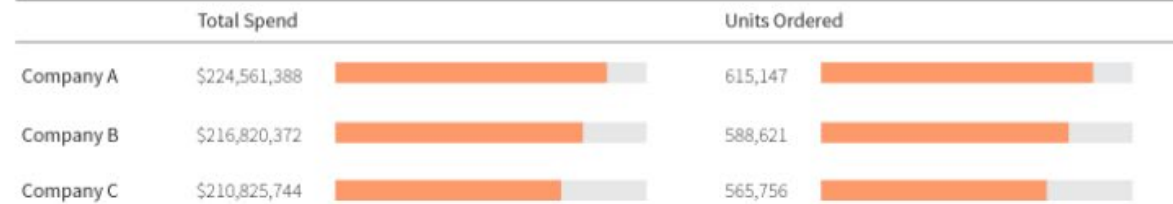
Carl Anderson, Creating a Data-Driven Organization: Practical Advice from the Trenches, O'reilly 2015.

# Dashboard for Sales Performance

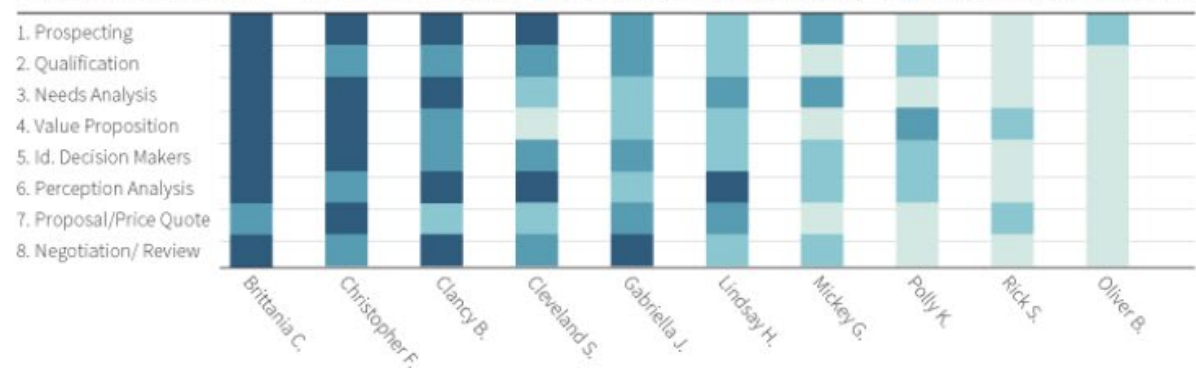
## TOTAL SALES



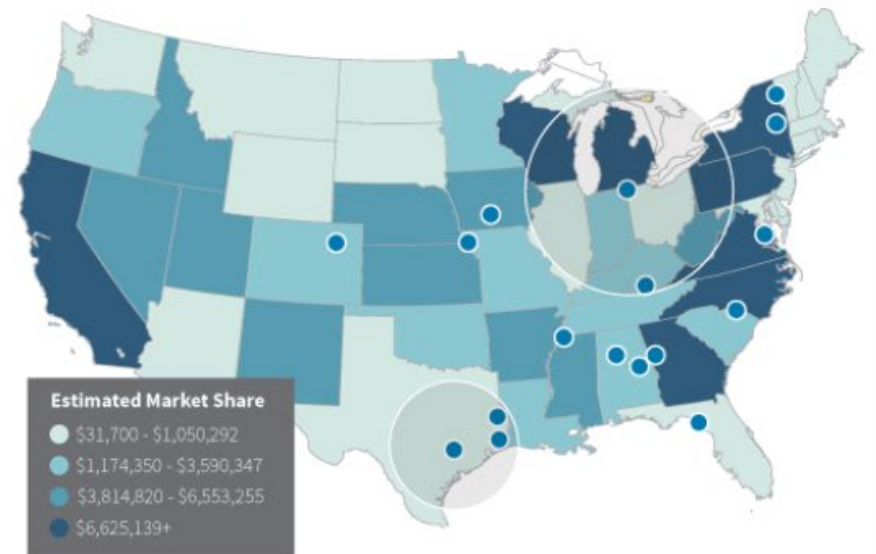
## TOP CLIENTS



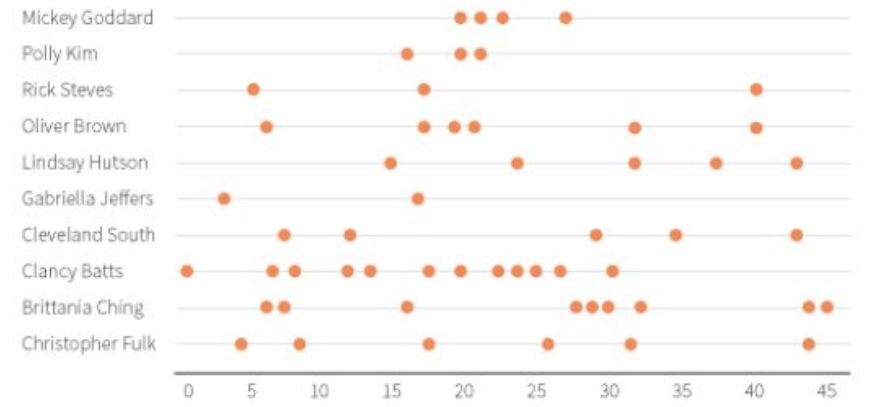
## UPCOMING FUNNEL



## CLIENT DISTRIBUTION



## MEETINGS BOOKED - IN THE NEXT 45 DAYS



# Real time Dashboard



# Elements of a Dashboard

- Purpose
- Audience
- Data
  - Dimensions
  - Measures
  - Metrics
- Packaging
  - Layout
  - Charts
  - Interactivity
- Consumption
  - Alerts
  - Collaboration
  - Dissemination



# Dashboard Basics

- Purpose
  - The purpose of a dashboard is to align stakeholders towards a common objective on a periodic basis using data
  - The objective should be encapsulated in a set of metrics that indicate progress
  - Periodicity is an important aspect of the dashboard
- Audience
  - Dashboards could have different audiences across the organisational hierarchy
  - The more strategic the outlook of the audience, the more higher up the view would be
  - Operational and Tactical views might need drilling into details

# Dashboard Data: Dimensions

- Factors on which data could be segmented
- Each dimension would have a hierarchy
- There might be some multiple hierarchies
- Common dimensions include
  - Time
    - Most important dimension
  - Org Structure
  - Geography
  - Product or Service lines
  - Customer Segments
  - Complaint Categories

# Dashboard Data: Measures

- Facts or data points that are representable across dimensions
- Lowest level of the dimension hierarchy must be specified for each measure
- Examples
  - Sales numbers, Sales amounts
  - Number of accounts
  - Customers on book

# Dashboard Data: Metrics

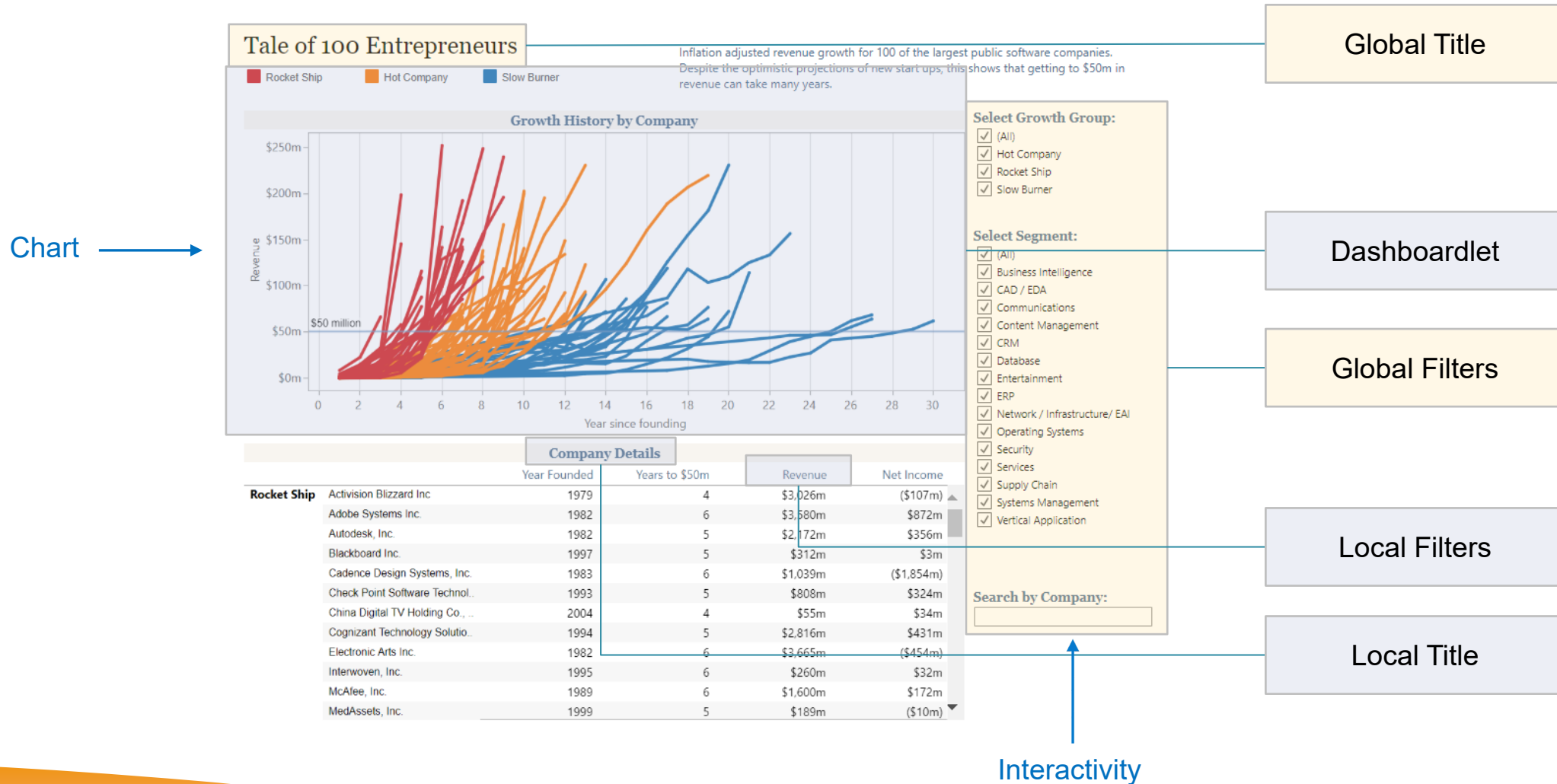
- A measure or a derivative of measure per dimension set that has business implications
- It is important enough to be tracked regularly
- Sometimes KPIs or targets are set for them
- Examples
  - Growth in Sales over last period
  - Number of new accounts opened this period
  - Amount of collections this period

# Dashboard Consumption

- Alerts
  - Specific thresholds could be set crossing which alerts could be sent to users
- Collaboration
  - Discussion could happen across specific dashboards
- Dissemination
  - Dissemination could be scheduled in a certain periodicity



# Dashboard Packaging: Layout



# Key Characteristics of a good Dashboard



Single screen presentation



Shows the most important performance indicators



Interactivity is not essential to understanding performance



The information can be understood by all



No supplementary information is required for interpretation

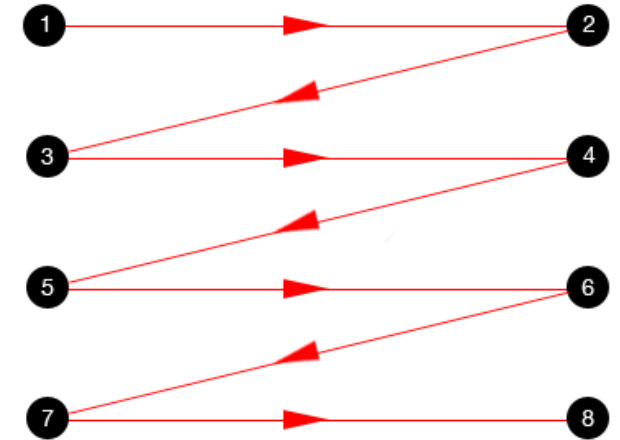
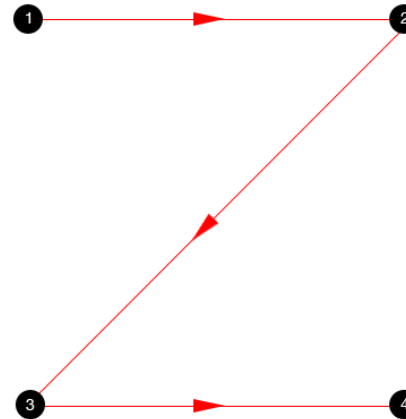
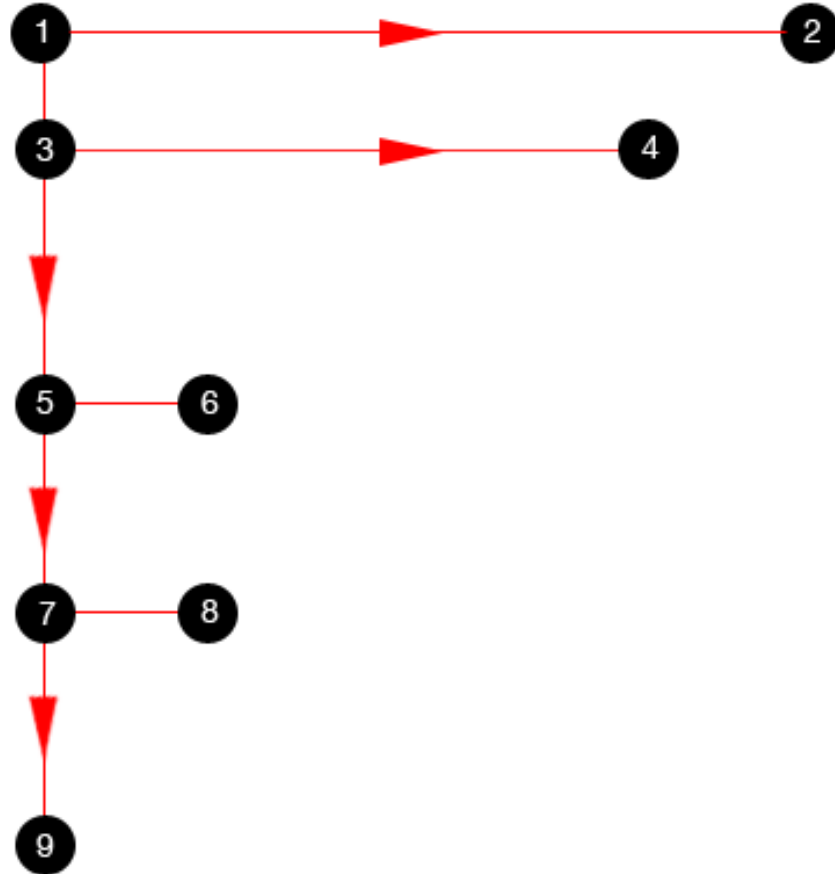


Data is updated consistently and automatically

[www.dashboardinsight.com/articles/digital-dashboards/fundamentals/what-is-a-dashboard.aspx](http://www.dashboardinsight.com/articles/digital-dashboards/fundamentals/what-is-a-dashboard.aspx)

# Reading Patterns

## F-Shape, Zig-zag, Golden Triangle



## Questions:

### • How are our sales moving over time?

- Trend over time
- Year-over-year change
- Special events

***Sales 'Targets' should be added***

### • Where are our sales coming from?

- Top performing areas
- Focus areas for future growth
- Rationalization opportunities

### • Who are the most valuable clients?

- How they fare against targets
- Strategy profiles (e.g. bulk buyers)

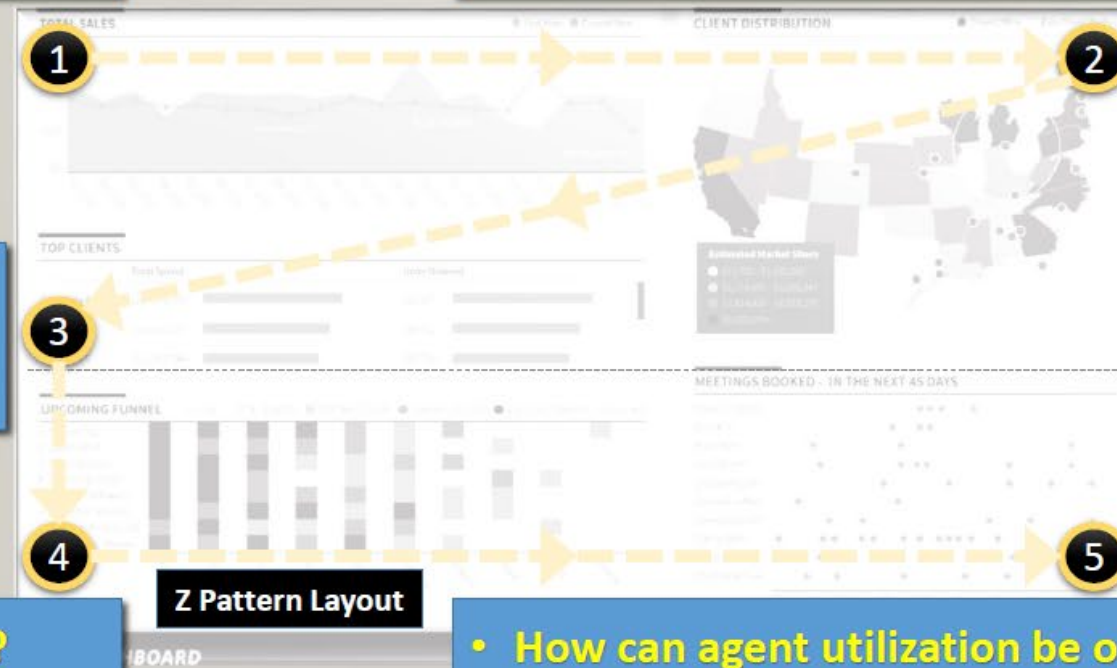
### • How is the pipeline for sales agents?

- Agents with highest sales funnels
- Resource reallocation opportunities

***Should be simplified using 'Average' sales pipeline, instead of distribution by funnel***

### • How can agent utilization be optimized further?

- Scheduled agent peak and downtimes
- Responsibility sharing opportunities



# Common Design Pitfalls



1. Exceeding the boundaries of a single screen
2. Supplying inadequate context for the data
3. Displaying excessive detail or precision
4. Expressing measures indirectly
5. Choosing inappropriate media of display
6. Introducing meaningless variety
7. Using poorly designed display media
8. Encoding quantitative data inaccurately
9. Arranging the data poorly
10. Ineffectively highlighting what's important
11. Cluttering the screen with useless decoration
12. Misusing or overusing color
13. Designing an unappealing visual display





# Workshop: Create your Dashboard



Define Purpose and Audience



Identify dimensions, measures and metrics



Sketch the layout



Present an illustrative dashboard