

Module 3A:

Dashboards for Business

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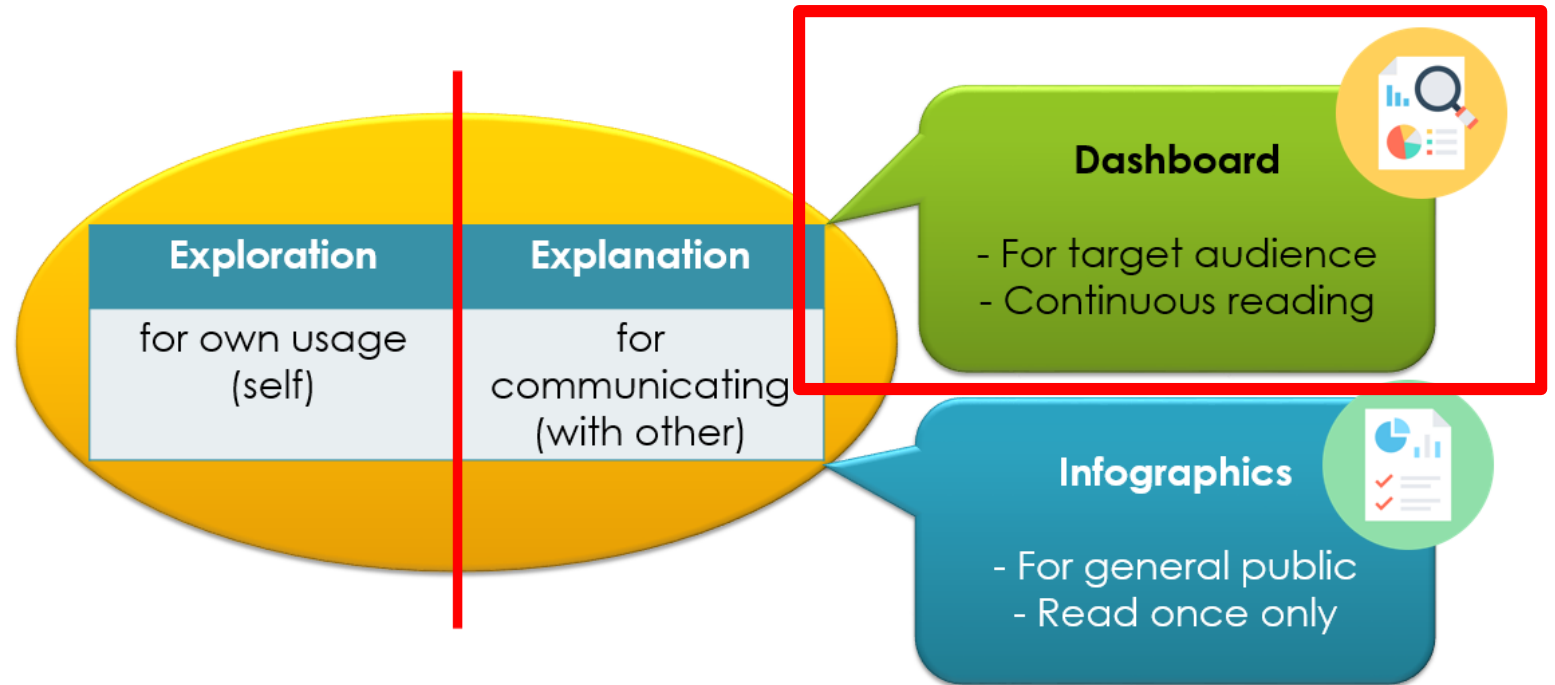
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Introduction

- What is Dashboard
- Type of Dashboard
 - Explanatory vs Exploratory
 - Strategic (Executive), Analytical & Operational Dashboards
- Reading Patterns
- Dashboard Design
- Dos and Don'ts



What is a Data 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

data dashboard
- Stephen Few



<http://www.dashboardinsight.com/articles/digital-dashboards/fundamentals/what-is-a-dashboard.aspx>

Dashboard



- the **representation** and **presentation** of data that exploits our **visual perception** abilities in order to amplify **cognition**

Dashboard Real Estate



Where to Place Information ?

Use **position** and **visual emphasis** to control how users engage with the dashboard and understand the key messages...

Key Characteristics of a good Data Dashboard...



Single screen presentation



Shows the most important performance indicators



Interactivity is not essential to understanding performance



The information can be understood by all



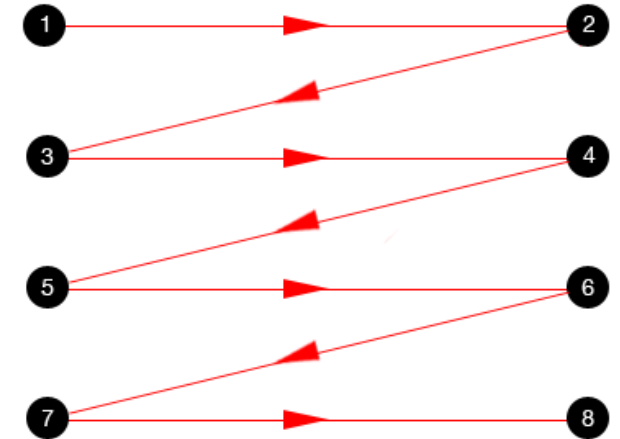
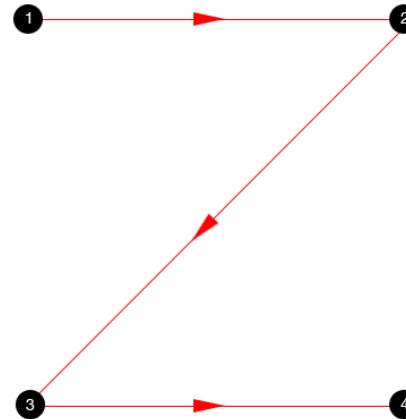
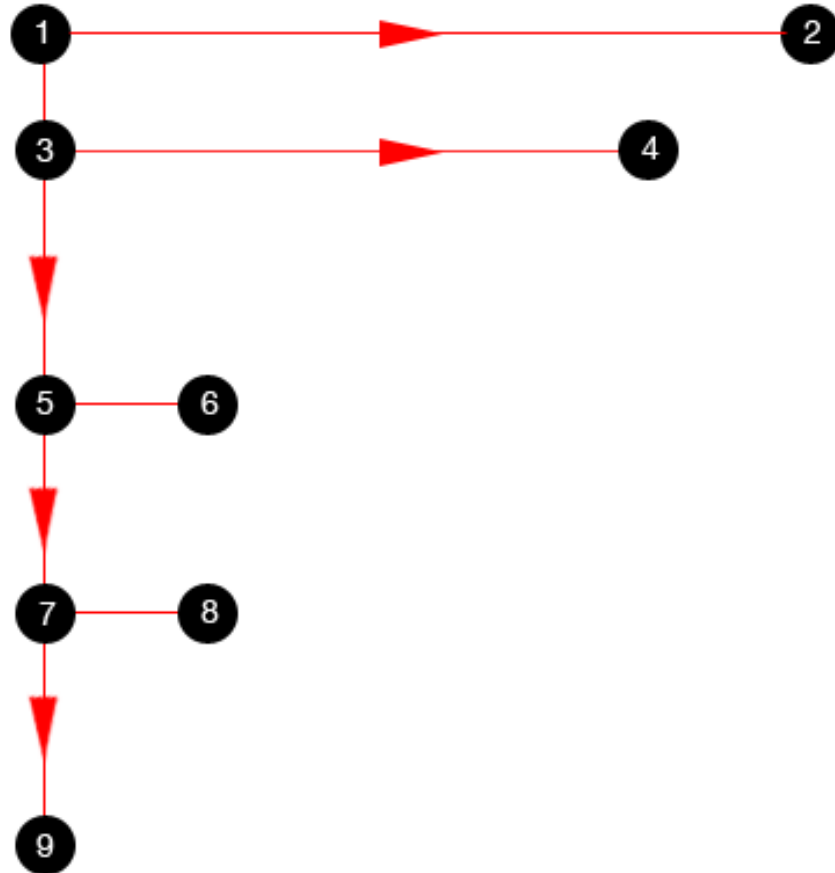
No supplementary information is required for interpretation

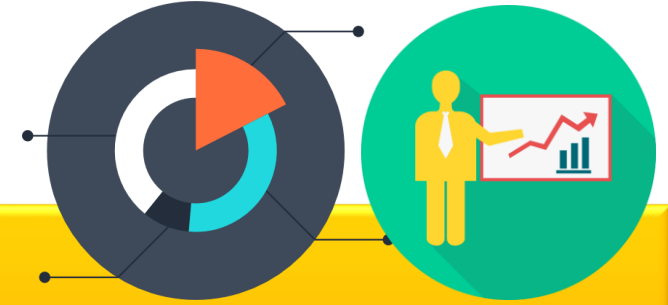


Data is updated consistently and automatically

Reading Patterns

F-Shape, Zig-zag, Golden Triangle





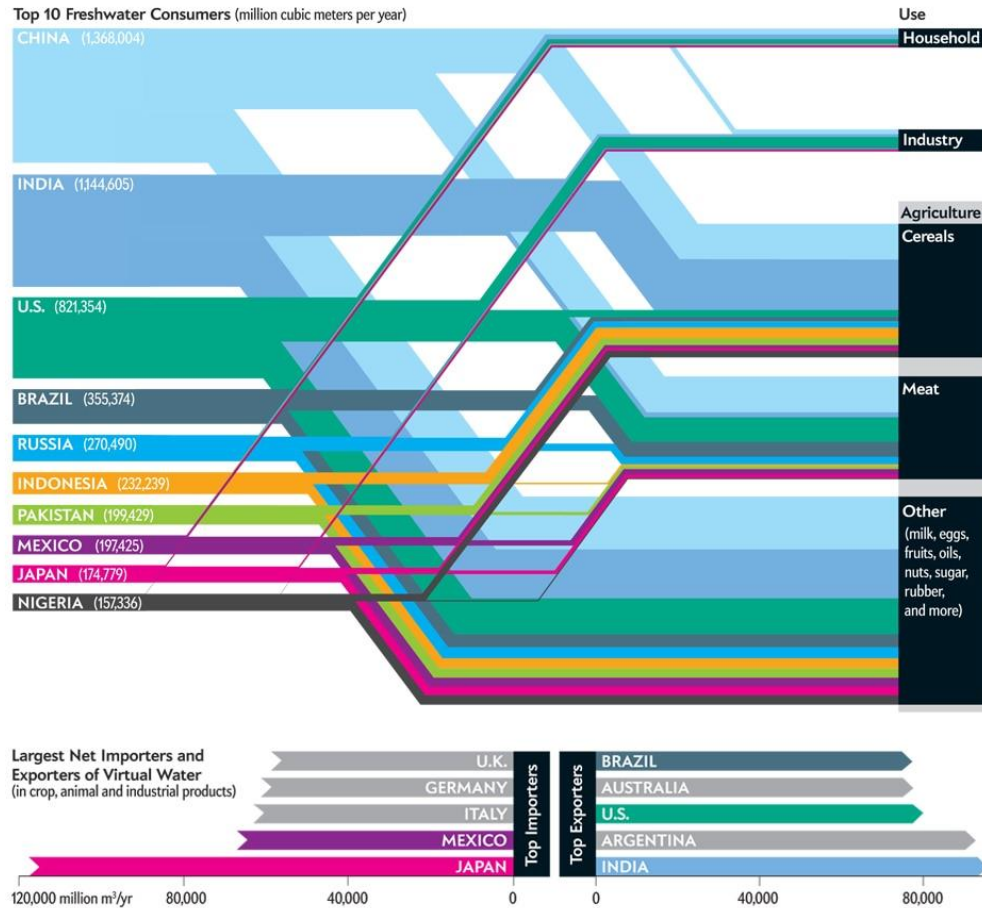
Type of Dashboard

Conducting Explanatory, Exploratory and Diagnostic Analysis
Visually

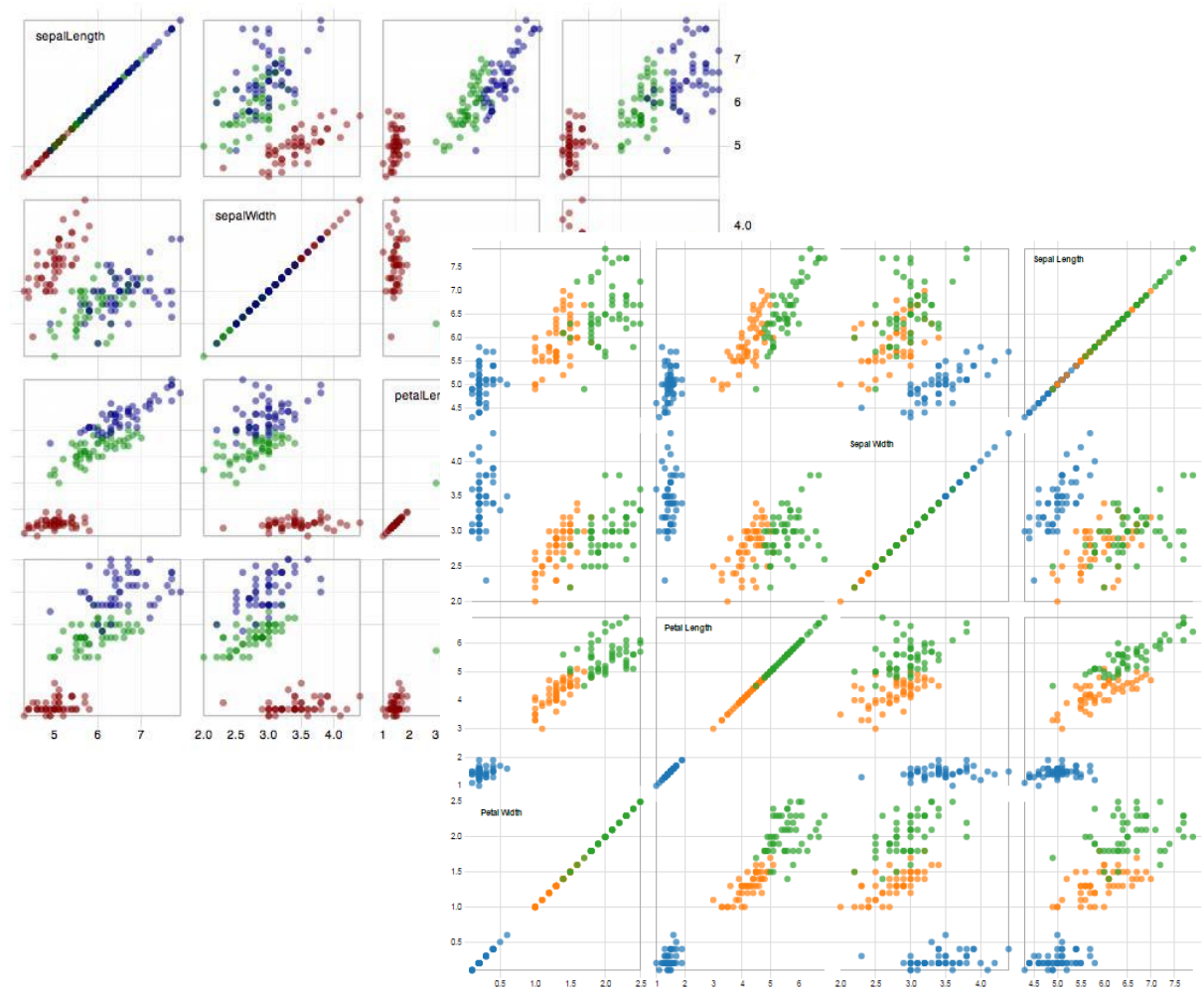
Strategic (Executive), Analytical & Operational Dashboards

Data Visualisation

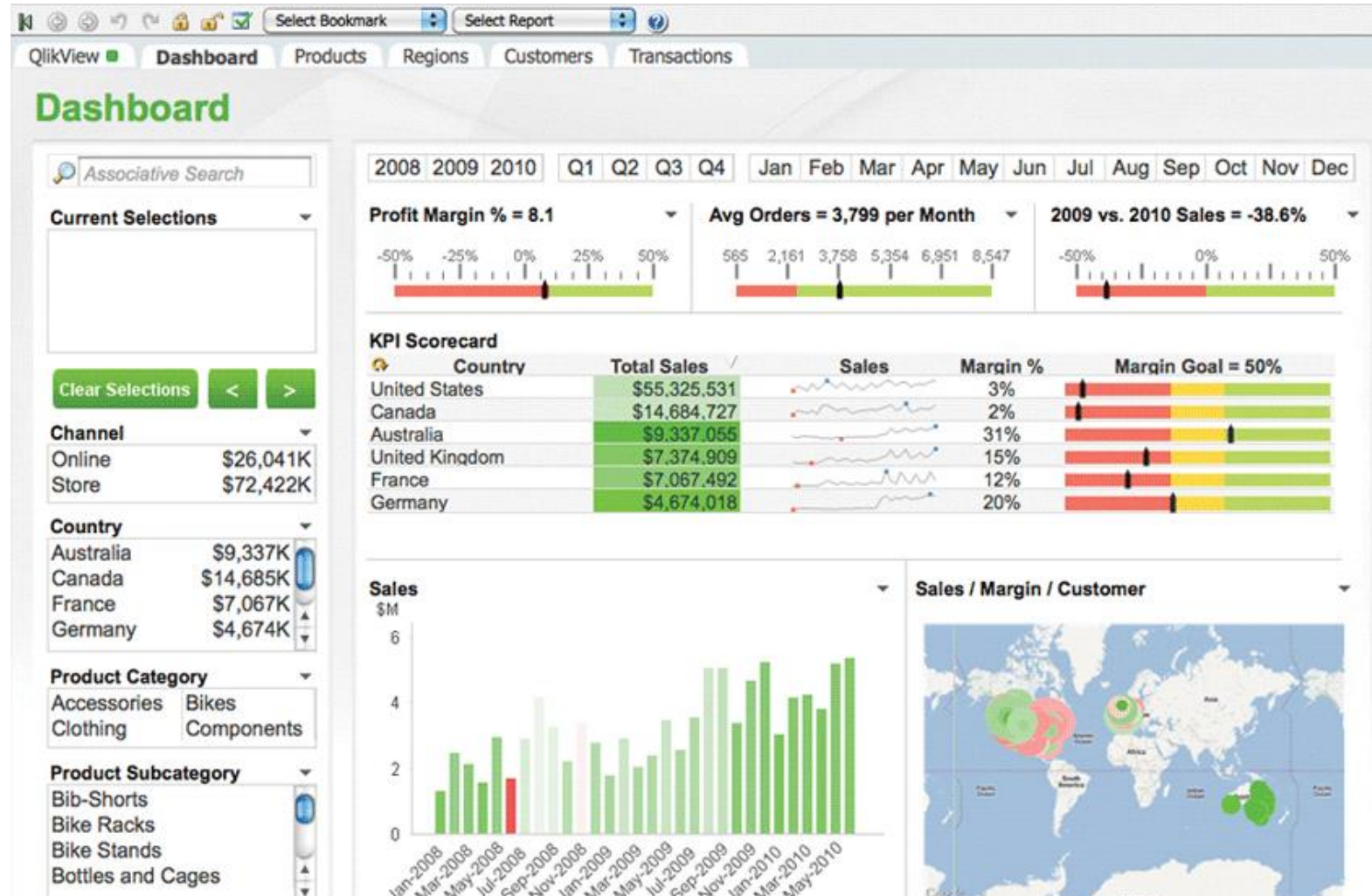
Explanatory vs Exploratory



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



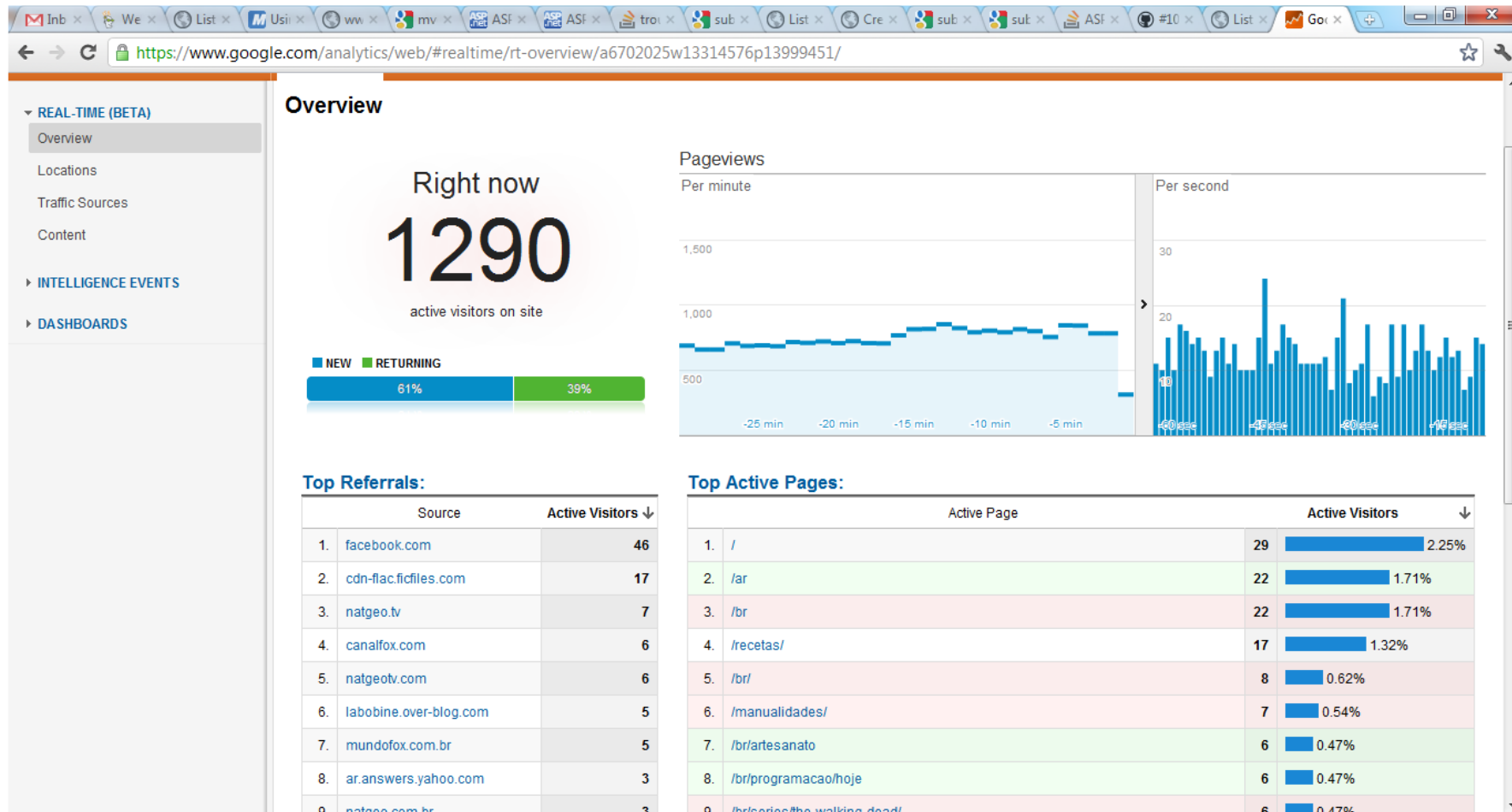
Executive Dashboards



Analytical Dashboards



Operational Dashboard



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

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

Dos and Don'ts

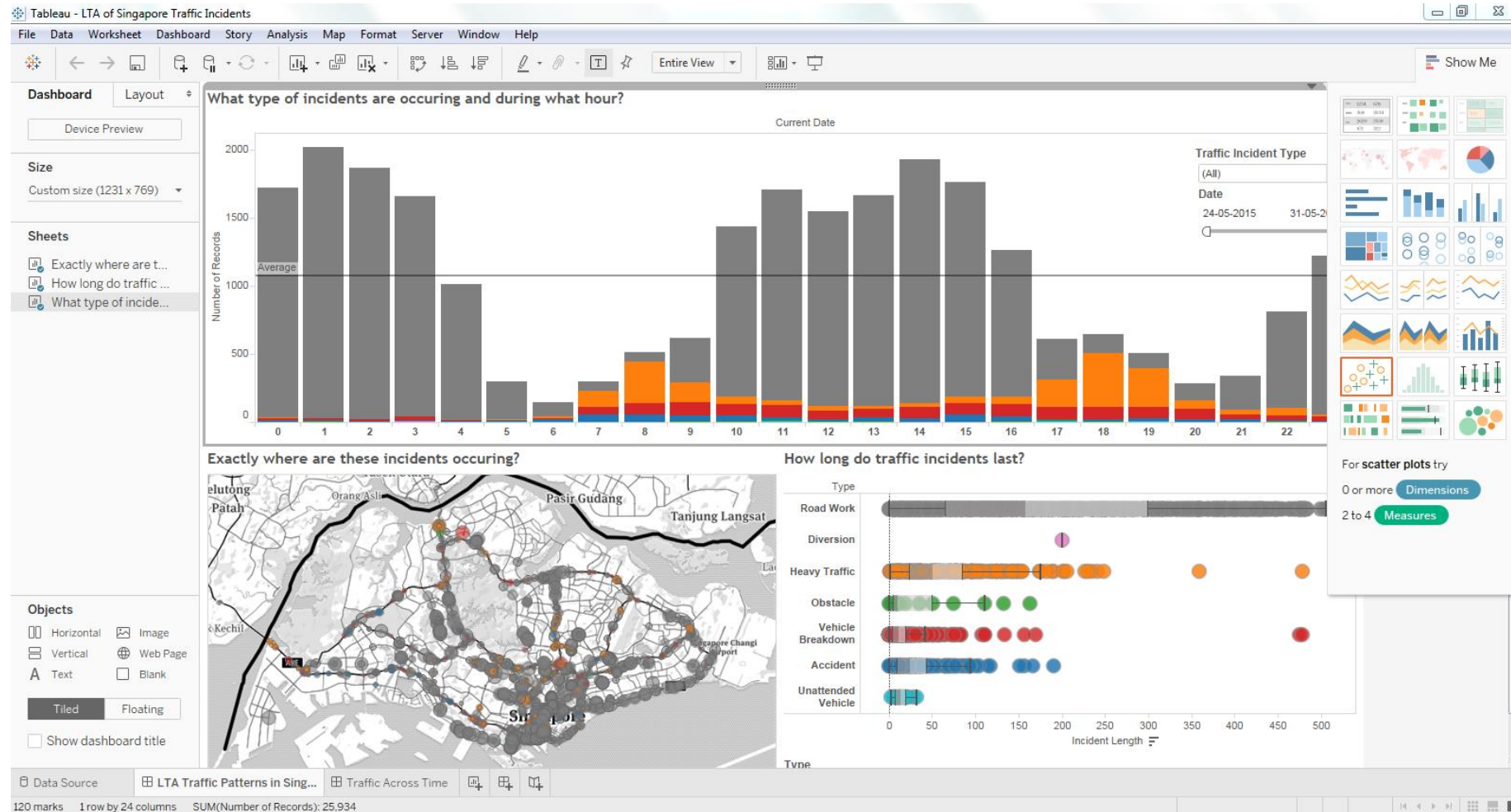


Dashboard <u>dos</u>	Dashboard <u>don'ts</u>
✓ Define the dashboard's purpose , i.e. what is being measured, how accurately and over what period of time.	✗ Exceed the boundaries of a single screen . Users must be able to view key data without scrolling down or across.
✓ Create a simple and clear dashboard , e.g. use a neutral colour pallet.	✗ Misuse or overuse visual effects on items which do not require a high level of attention, e.g. do not highlight less important information with borders, colour and 3D.
✓ Highlight important information using formatting effects which capture the user's attention, e.g. bold lines and bright colours.	✗ Consider the design as final . Dashboards are dynamic and should be updated as business requirements change.
✓ Position the most important content in the upper left quarter of the screen as this area attracts the most attention.	✗ Size content larger than necessary . The size of information should reflect its importance, i.e. less important content should be allocated less space.
✓ Position the least important content in the lower right-hand corner as this area attracts the least attention.	✗ Separate content unnecessarily . Dashboards should be viewed as a whole, i.e. 'the big picture', not fragmented pieces of information, e.g. do not insert borders around individual graphs.
✓ Highlight relationships between data through grouping, enclosing information via borders and/or using a consistent look and feel, e.g. use a standard colour palette.	✗ Include content which does not meet the dashboard's objectives , e.g. limit decorative features such as animated images that occupy screen space and detract from key information.
✓ Select the most appropriate media of display , e.g. use tables to view and compare individual values, precise values and quantitative information containing more than one unit of measure (avoid 3D pie charts).	
✓ Organise data according to meaningful subsets ; rank by importance and sequence of data.	
✓ Provide sufficient context to explain quantitative information, e.g. supplement data by including comparative measures such as a target or history.	
✓ Make dashboards interactive , e.g. drill through functionality to obtain a deeper level of understanding.	
✓ Ensure the design meets the requirements of the target audience through regular engagement during the design process.	



SIBI dashboard look and feel

Dashboard: Traffic Incidents Monitoring



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

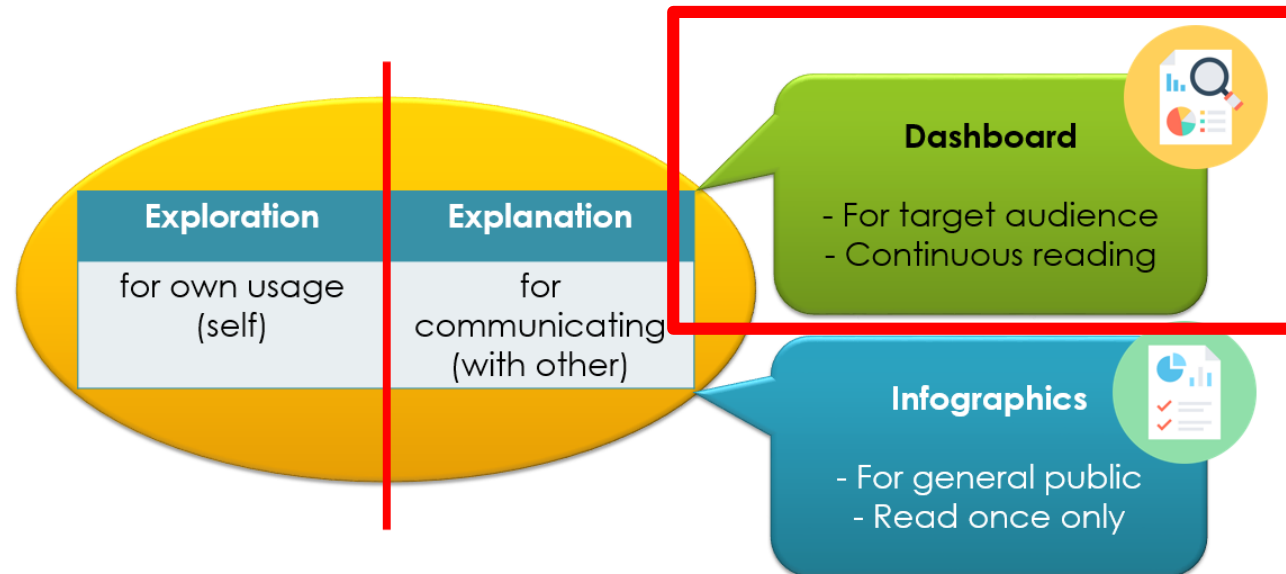
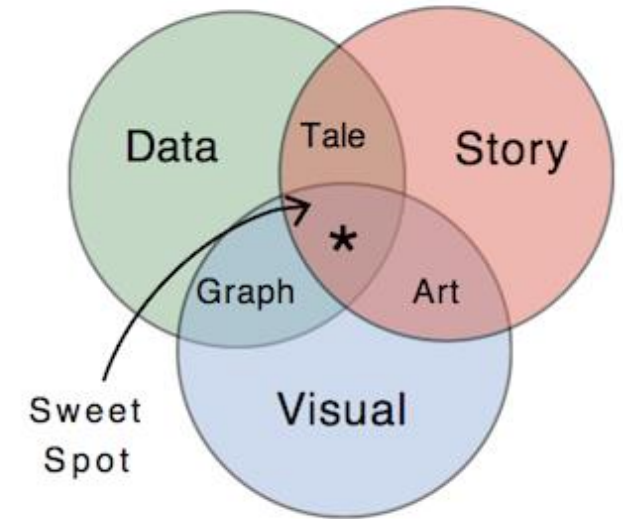
Dashboard: Doctors Scorecard



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

Summary

- Common Design Pitfalls
 - Dos and Don'ts
- Dashboard Design
 - Best practices





Build your Story with Dashboard

