Simple Business Dashboard Design Strategies

A Triumph of Insight over Technology

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Why a dashboard?

**Enlighten and empower your audience.**

Great dashboards should enable better decisions and inspire new questions in the business.

-*Stephen McDaniel*
The dashboard dilemma?

They are often more about technology and complex projects that take months.
What decision-makers want...

Rapid insights that help leaders steer the ship to solve critical problems.
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Rapid insights that help leaders steer the ship to solve critical problems.

I need simple guidance today and flexibility to adapt simple dashboards to dynamic business conditions in a matter of days, not months.
Creating a great dashboard

• What are the business goals?
  – Key questions that data can inform
  – Break down the questions into small but meaningful indicators or components

• Identify the minimal data elements required
• Pair the minimal with available data elements

• Create a plan to capture the missing data
Creating a great dashboard

- Simple is frequently better
  - Typically bar charts, line charts or bullet graphs
  - Simple interactivity, typically limited to filters
  - Definition of “simple” varies by audience

- Easy to interpret

- Stick with clear messages
  - Align view with a set of strategic priorities
  - Often useful to show targets or simple trends
Creating a great dashboard

• What story does your dashboard tell?
  – Will this excite and inform your audience?

• Can it be understood in less than a minute?

• **Is it personally meaningful to your audience?**

• Adjust your metrics and views to make it personally meaningful to your audience!
Using a dashboard tool

• Find a tool that is visual analytics oriented
  – Intelligent chart defaults is a big plus
  – Built for analysts, not programmers

• Build simple visuals for your questions

• Consolidate your views into a dashboard
  – NO programming should be needed
  – Bring together logical filters and highlighting
A world oil example

• 30 years of oil data by country
  – Consumption
  – Production
  – Proven reserves
  – And population by country

• Content to be featured in newspapers & blogs
  – A dashboard will be built for quick explanations
  – Start with frequent questions
  – BUT make it personally meaningful!
Map it!

Map of Oil Consumption per Person (Abs) (2008)
Map it!

Map of Proven Reserves per Citizen (Barrels) (2008)
Understand usage over time
Asia Pacific (Including Australia)

Production, Consumption and % Need Met Locally

[Graph showing production and consumption trends for Asia Pacific (Including Australia) from 1965 to 2008.]
Even more informative
Asia Pacific (Including Australia)
Examine consumption and usage per person (Asia Pacific)
One more thought, how much is left and how valuable is it?
Bring it all together
Oil - making it personal

Map of Proven Reserves/Person (2008)

Consumption and production per person (2008)

Proven reserves and oil wealth per citizen (2008)

Region
Asia Pacific

Country
✓ Australia
✓ Bangladesh
✓ China
✓ China Hong Kong SAR
✓ India
✓ Indonesia
✓ Japan
✓ Malaysia

Map Controls
Measure to Map
Proven Reserves/Person

Maps Bubble Size Legend
5.0
50.0
100.0
150.0

BP oil data from 1966 to 2008
Combined with world population data
Australia and New Zealand

Oil - making it personal

Map of Oil Consumption per Person (Abs) (2008)

Production, Consumption and % Need Met Locally

Consumption and production per person (2008)

Proven reserves and oil wealth per citizen (2008)

Map Controls

Measure to Map
Oil Consumption per Person

Maps Bubble Size Legend
- 13.661
- 14.000
- 14.500
- 15.000

BP oil data from 1966 to 2008
Combined with world population data
Versus China and India

Oil - making it personal

Map of Oil Consumption per Person (Abs) (2008)

Production, Consumption and % Need Met Locally

Consumption and production per person (2008)

Proven reserves and oil wealth per citizen (2008)

Map Controls

Measure to Map
Oil Consumption per Person

Maps Bubble Size Legend

Oil Production per Person
Oil Consumption per Person
Oil Wealth per Citizen
Proven Reserves/Person

BP oil data from 1966 to 2008
Combined with world population data
Beyond the dashboard- China and India

Reserves versus consumption per person
Years of self-sustaining oil reserves remaining

Measure Names
- Oil Consumption/Person
- Proven Reserves/Person
- Years Self-Sustaining Oil Consumption
Stephen’s Background

• **Author**
  – “Rapid Graphs with Tableau”
  – “SAS for Dummies”

• **Co-Founder of Freakalytics, LLC**
  – Freakalytics is a Worldwide Tableau Education Partner providing
    • Public training – learn the breadth of Tableau while incorporating solid presentation & dashboard design principles
    • On-site training
    • Expert dashboard design and analytic strategy consulting

• **Director of Marketing Analytics**
  – Netflix, Razorfish and REI
Stephen’s Background

• **Director of Software Development** - analytics
  – SAS

• **Technical Architect** - BI, analytics & data warehousing
  – Oracle, Brio, Takeda Abbott Pharmaceuticals, Pfizer, Bristol Myers

• **Senior Product Manager** - BI & analytics
  – Brio Technology and SAS

• **Statistician**
  – Six Sigma - pharmaceutical manufacturing
  – Biostatistician - AIDS, asthma, birth control, heart failure and allergies
Use this dashboard online!

• Interact with this dashboard and download it to make your own improvements!
  – http://www.Freakalytics.com/personal-oil

• Hosted by Tableau Public, a free service for public knowledge sharing via visual analytics
  – http://public.tableausoftware.com