

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.**



What decision-makers want...

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

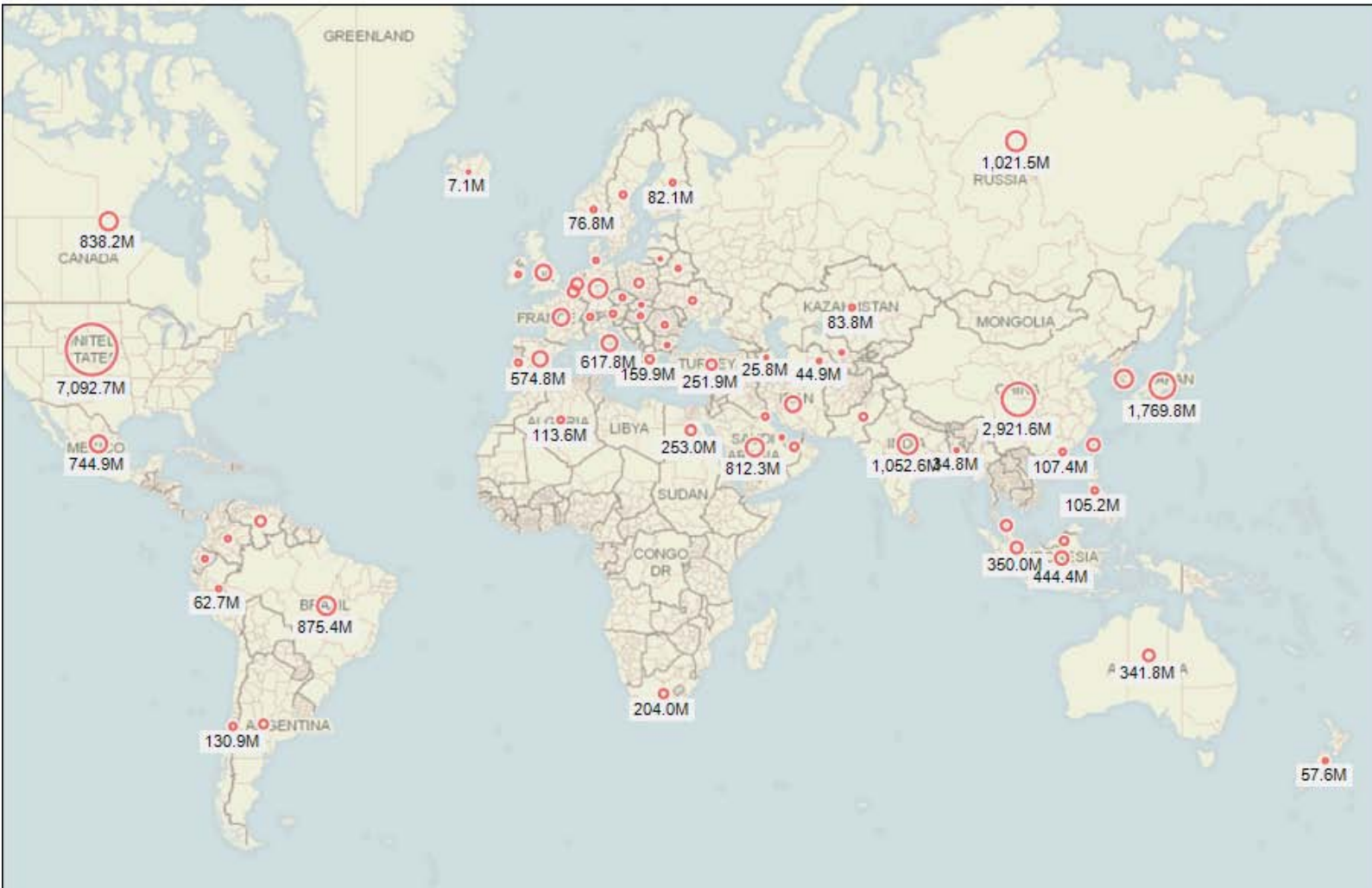
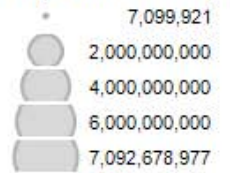
A world oil example

- 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!

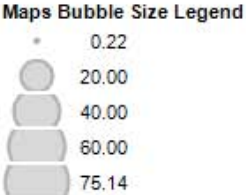
Map of Oil Consumption (2008)

Maps Bubble Size Legend



Map it!

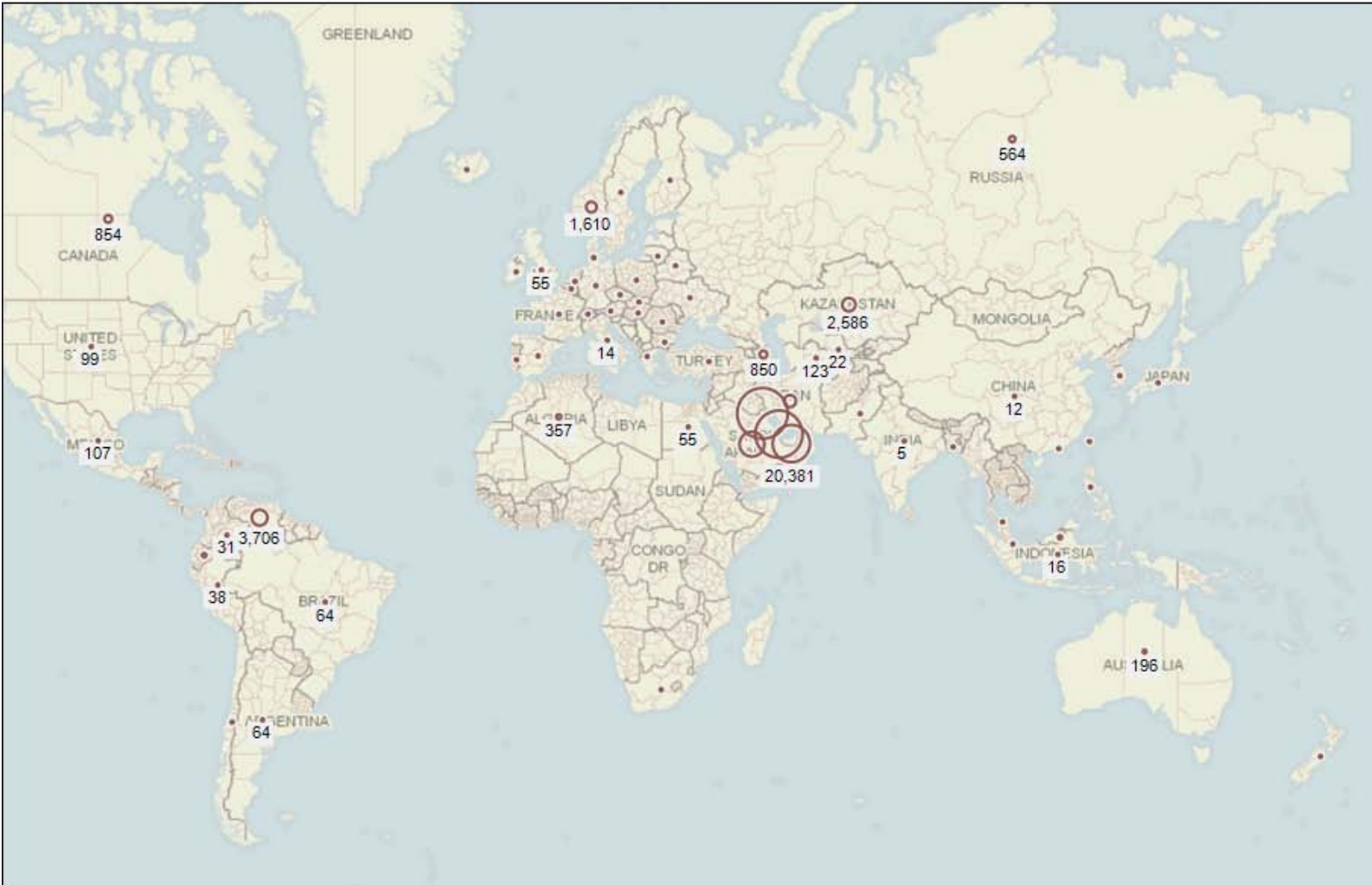
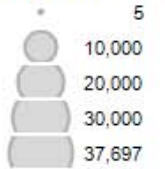
Map of Oil Consumption per Person (Abs) (2008)



Map it!

Map of Proven Reserves per Citizen (Barrels) (2008)

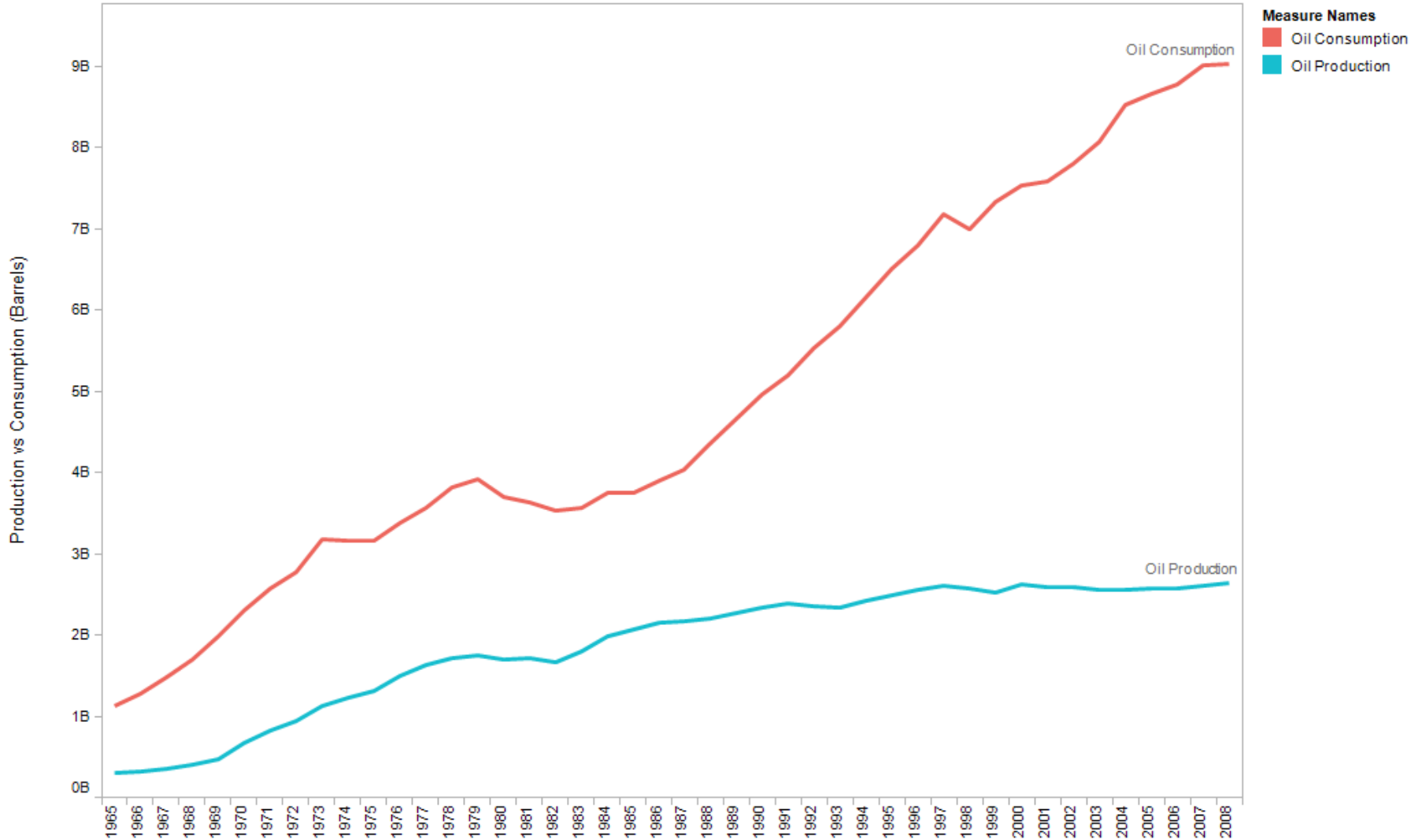
Maps Bubble Size Legend



Understand usage over time

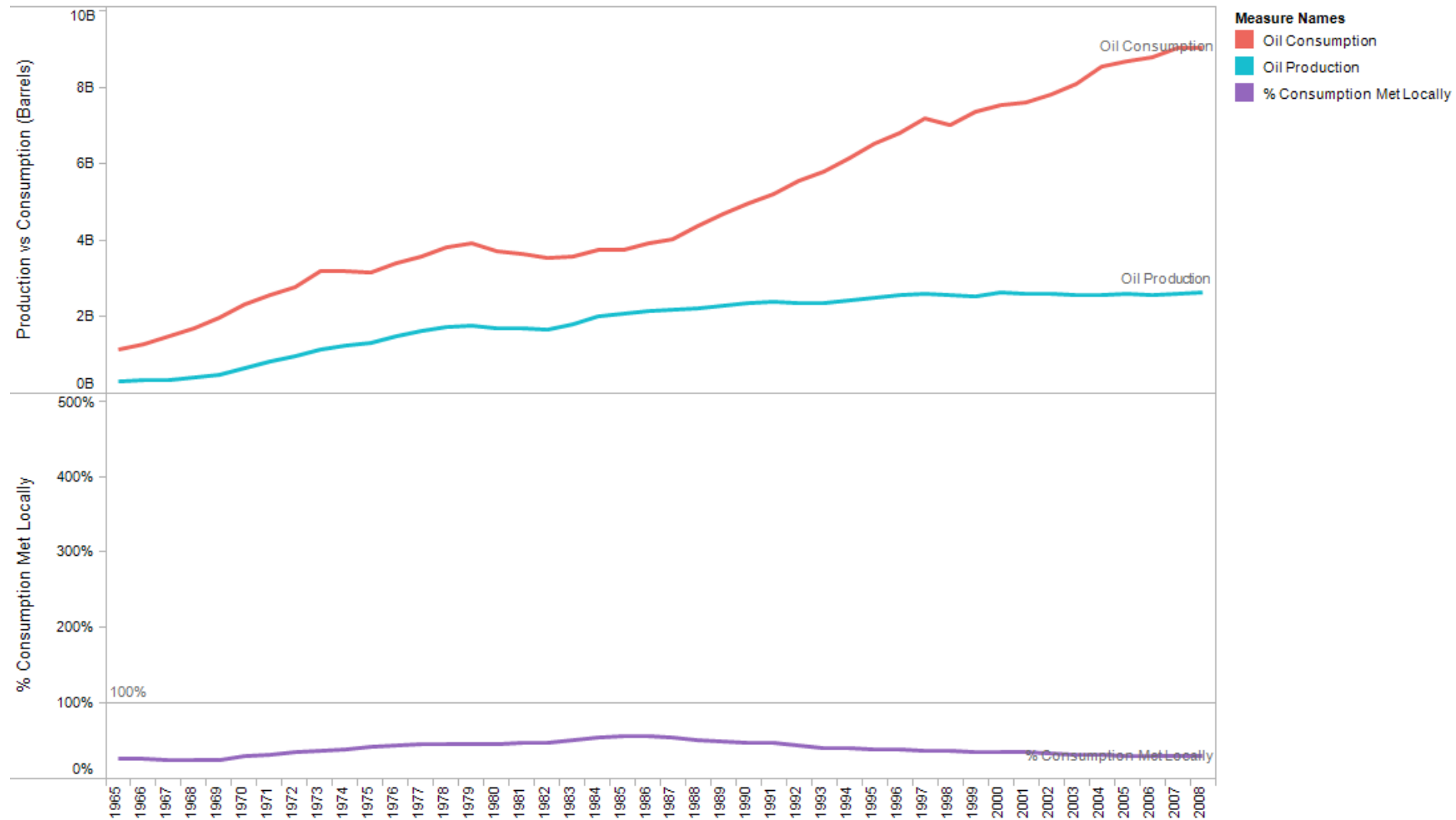
Asia Pacific (Including Australia)

Production, Consumption and % Need Met Locally



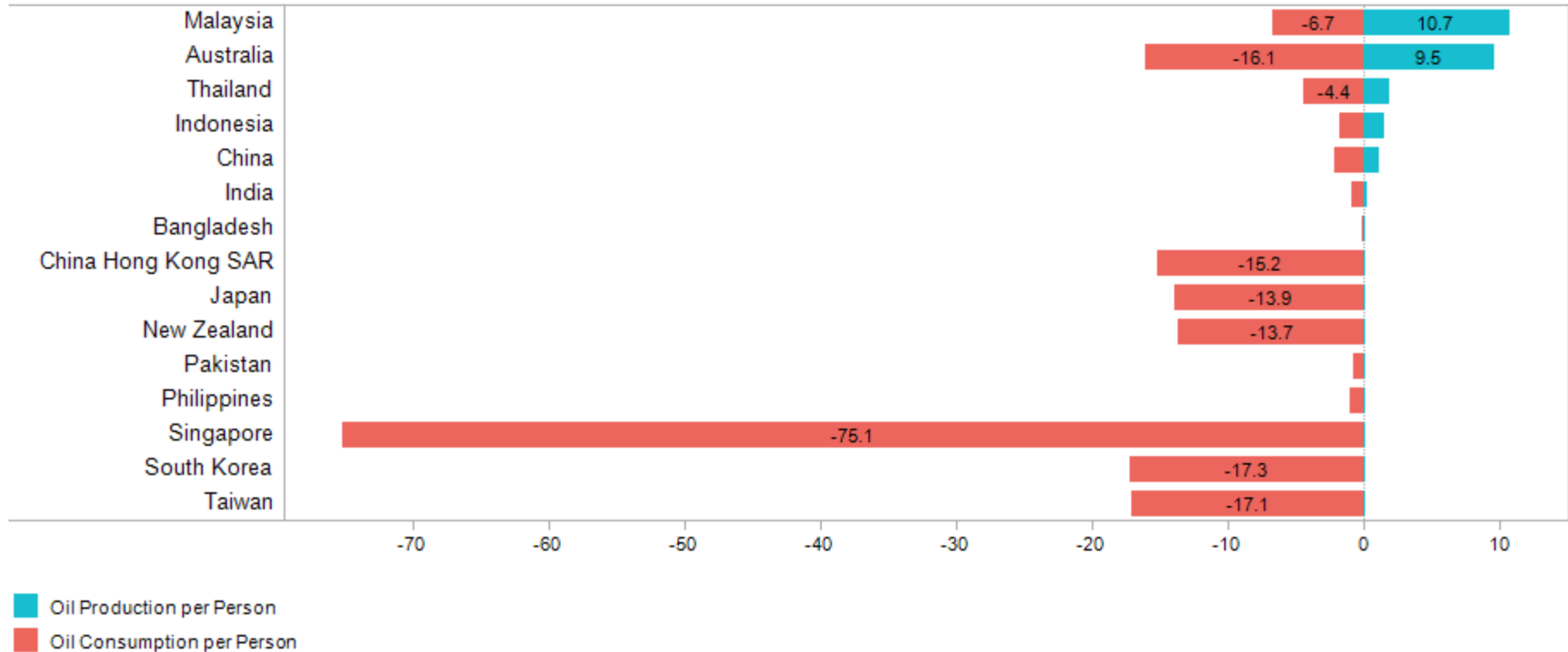
Even more informative Asia Pacific (Including Australia)

Production, Consumption and % Need Met Locally



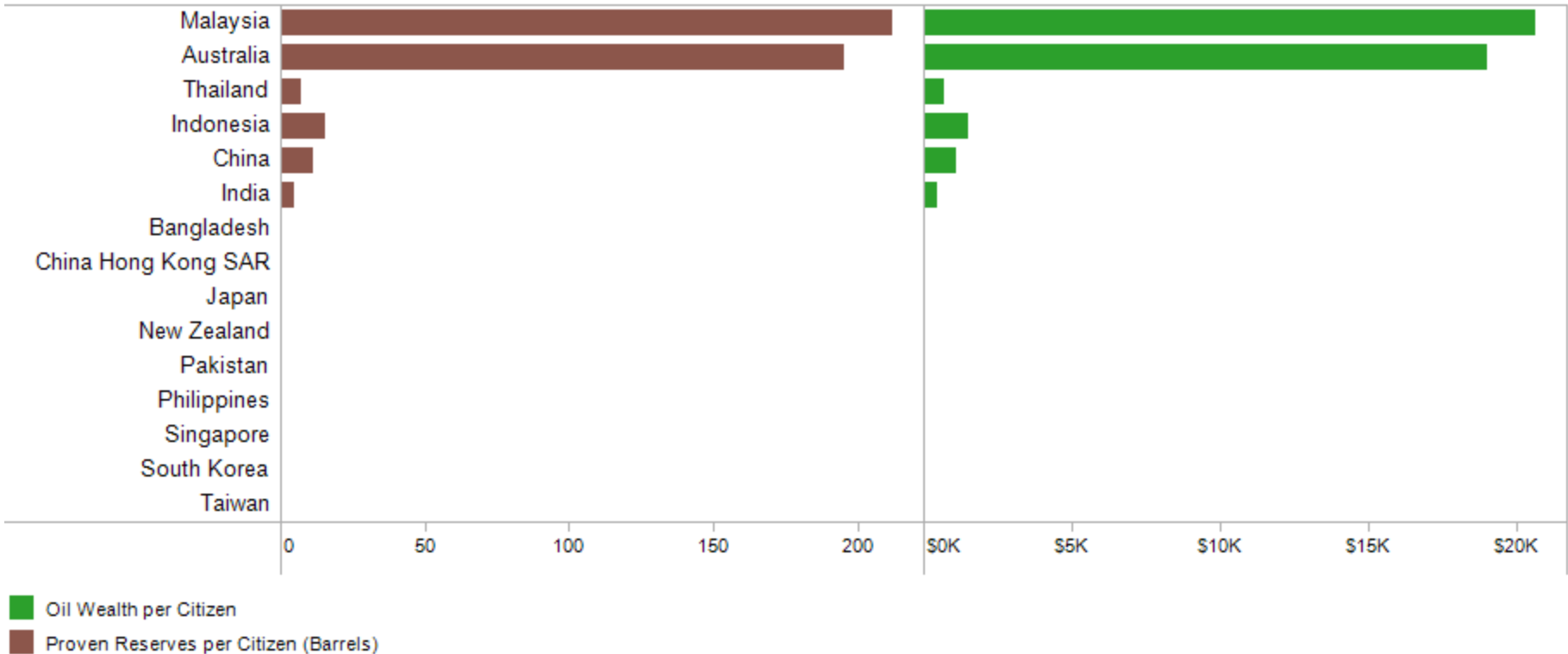
Examine consumption and usage per person (Asia Pacific)

Consumption and production per person (2008)



One more thought, how much is left and how valuable is it?

Proven reserves and oil wealth per citizen (2008)



Bring it all together

Oil - making it personal

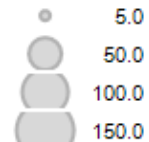
Region
Asia Pacific

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

Map Controls

Measure to Map
Proven Reserves/Person

Maps Bubble Size Legend



- Oil Production per Person
- Oil Consumption per Pe..
- Oil Wealth per Citizen
- Proven Reserves/Person

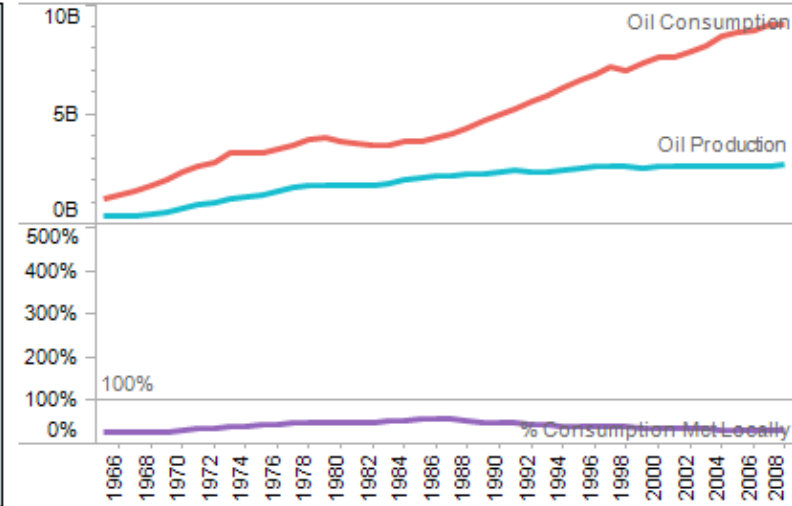
BP oil data from 1966 to 2008

Combined with world population data

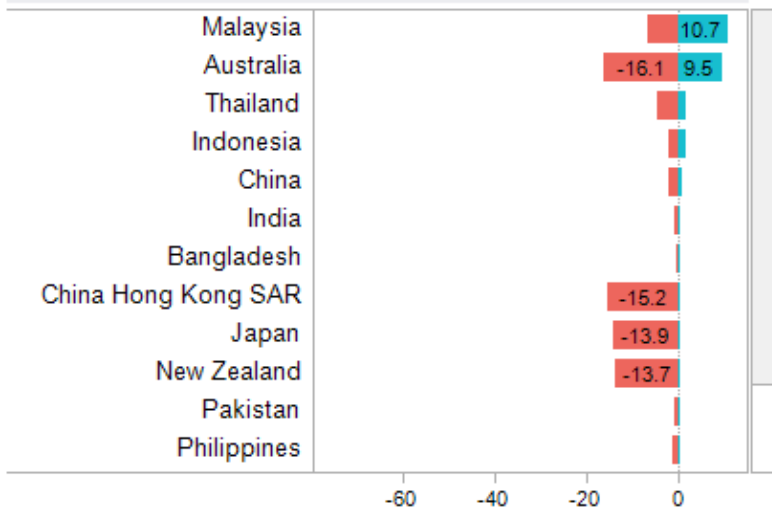
Map of Proven Reserves/Person (2008)



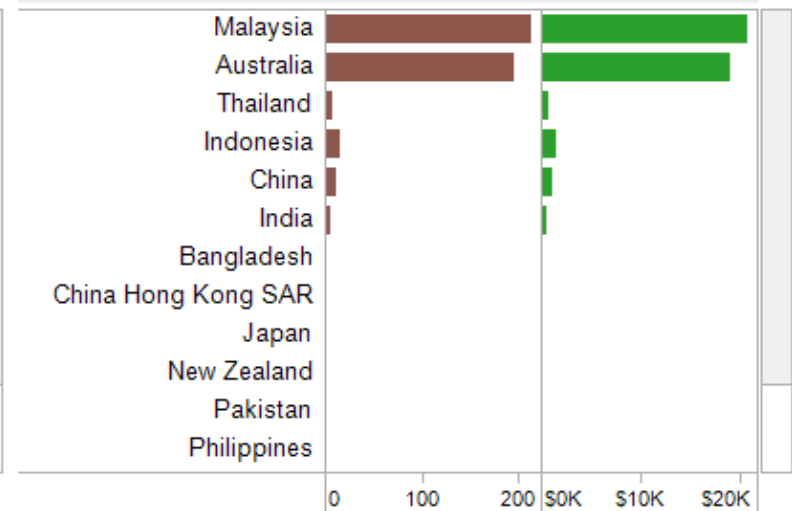
Production, Consumption and % Need Met Locally



Consumption and production per person (2008)



Proven reserves and oil wealth per citizen (2008)



Australia and New Zealand





Oil - making it personal

- Region**
Asia Pacific
- Country**
- Australia
 - Bangladesh
 - China
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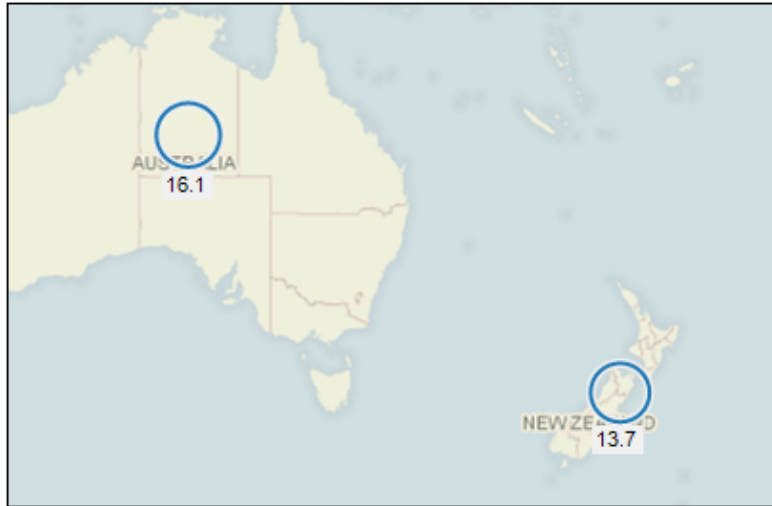
Map Controls

Measure to Map
Oil Consumption per Perso..

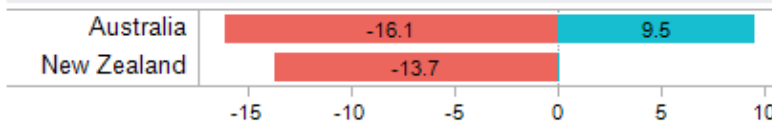
Maps Bubble Size Legend

-  13.661
-  14.000
-  14.500
-  15.000

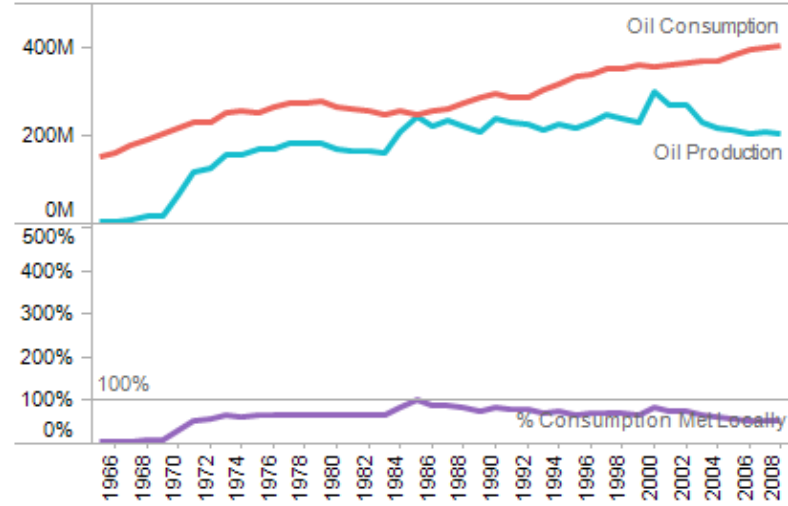
Map of Oil Consumption per Person (Abs) (2008)



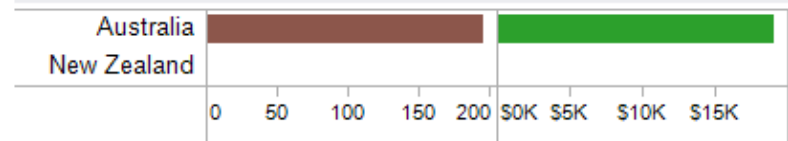
Consumption and production per person (2008)







Production, Consumption and % Need Met Locally



Proven reserves and oil wealth per citizen (2008)



-  Oil Production per Person
-  Oil Consumption per Pe..
-  Oil Wealth per Citizen
-  Proven Reserves/Person

BP oil data from 1966 to 2008

Combined with world population data

Versus China and India

Oil - making it personal





Region
Asia Pacific

- Country
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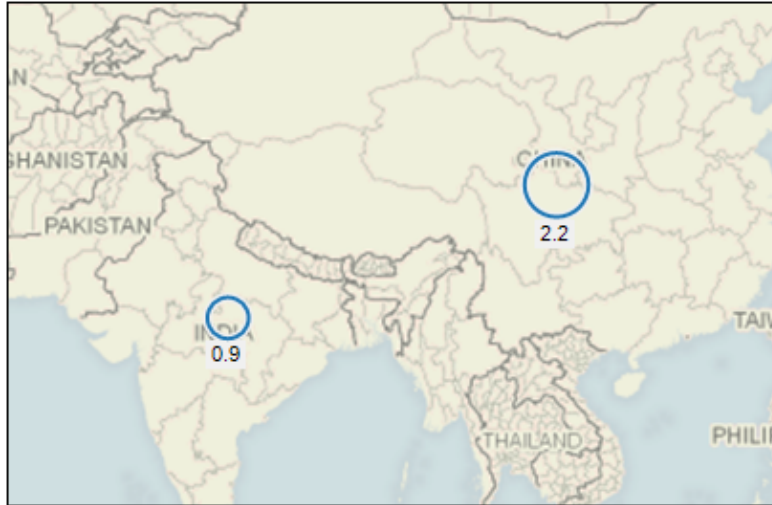
Map Controls

Measure to Map
Oil Consumption per Perso..

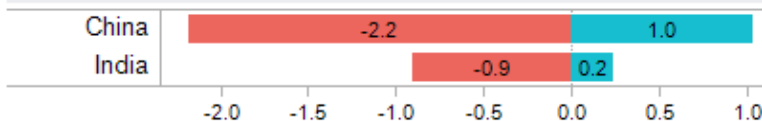
Maps Bubble Size Legend

-  0.910
-  1.200
-  1.400
-  1.600

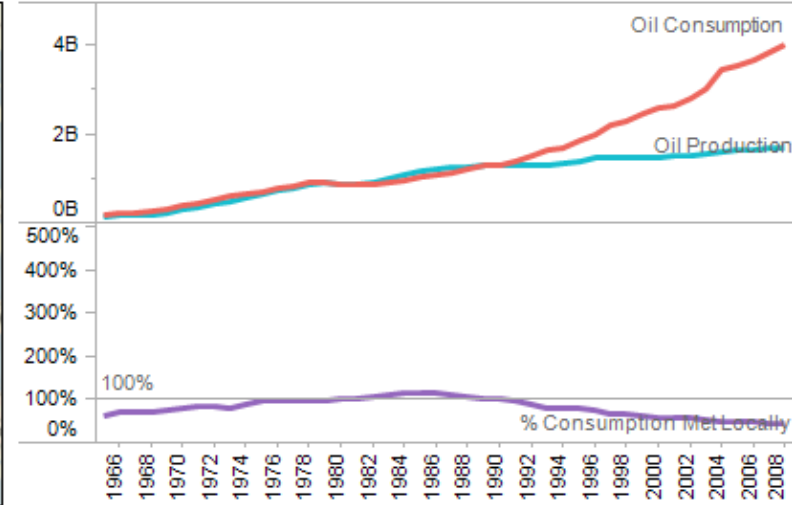
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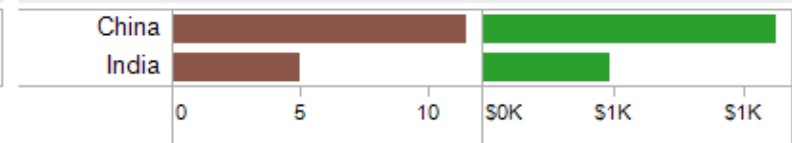
Consumption and production per person (2008)







Production, Consumption and % Need Met Locally



Proven reserves and oil wealth per citizen (2008)



 Oil Production per Person
 Oil Consumption per Pe..

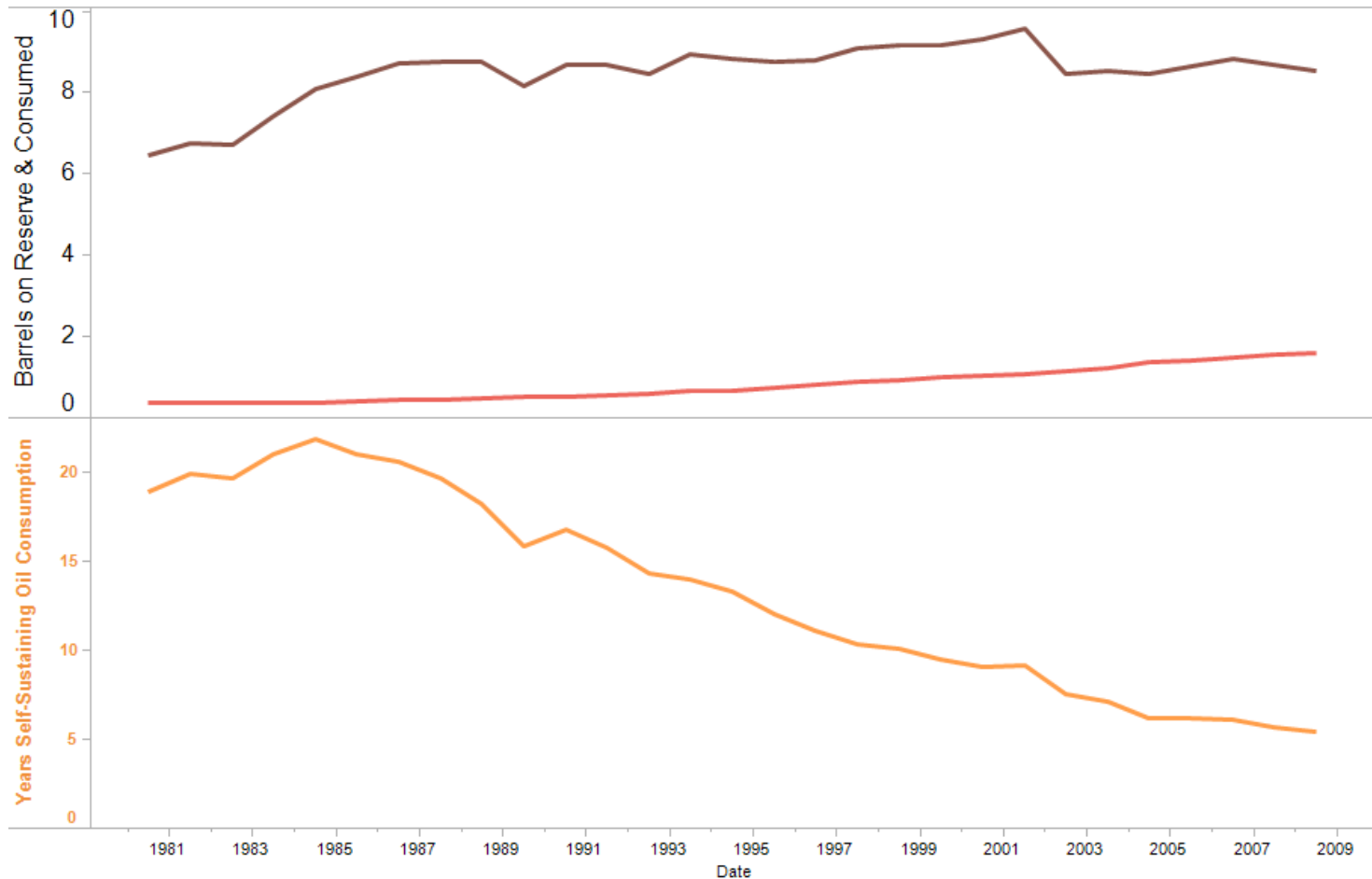
 Oil Wealth per Citizen
 Proven Reserves/Person

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>