

Data visualisation as a tool for engagement with research

Daniel Ellis and Dr Tim Hobbs

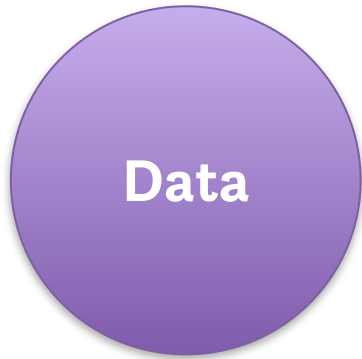
ISCI Conference - Cape Town, 2015





- Introduction to data visualisation (5 mins)
- Approaches and basic rules (5 mins)
- Application to our work (5 mins)

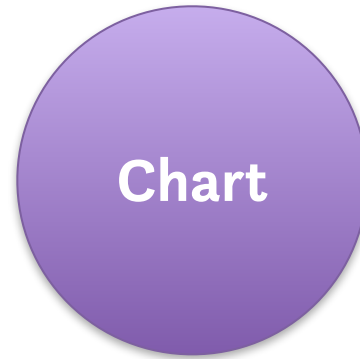




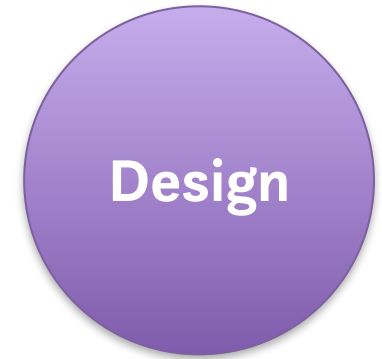
Quality
&
Interest



Tailored
to
audience



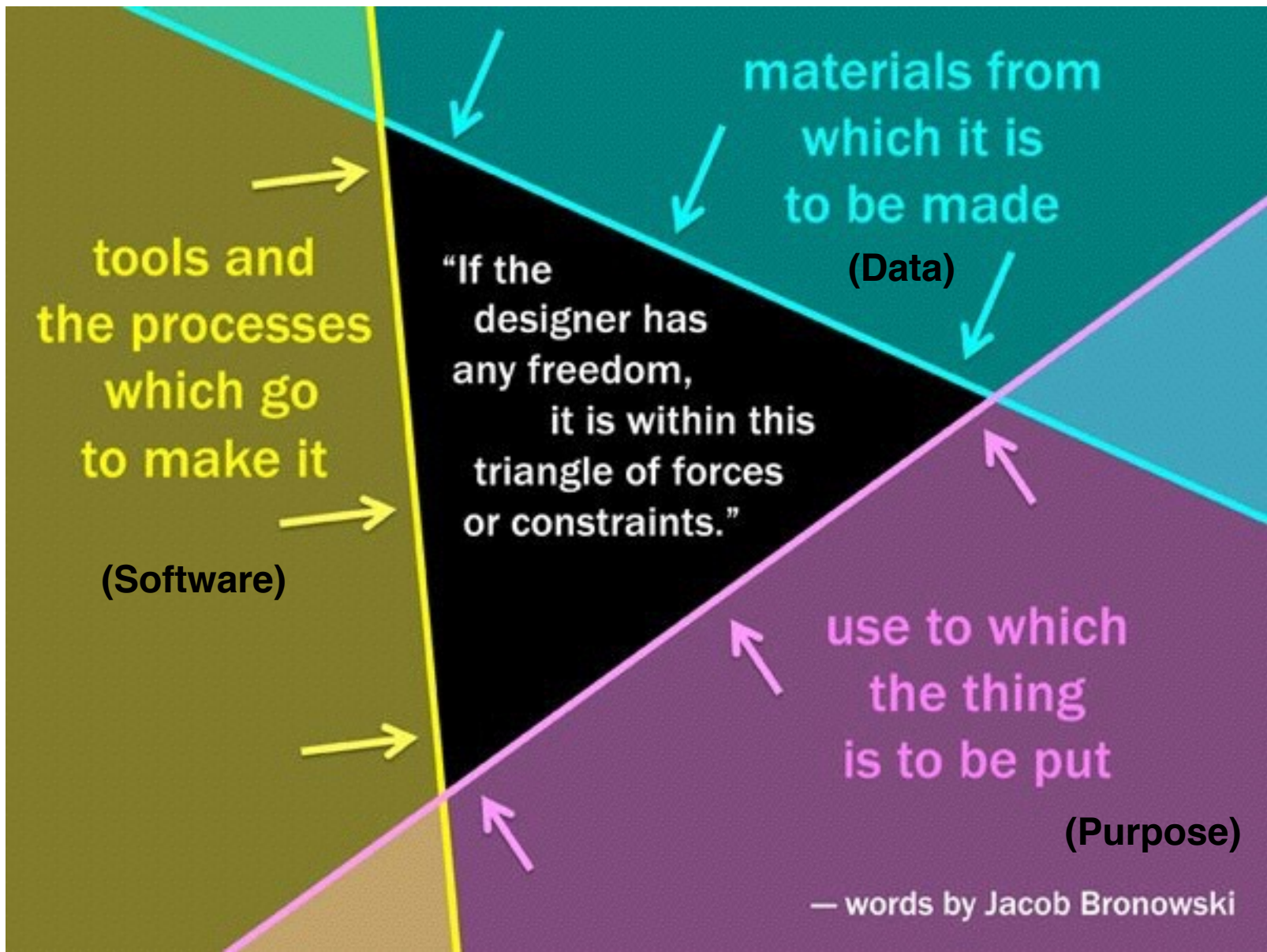
Interesting
&
Appropriate



Colour,
space &
text

What is Data Visualisation?





Design constraints



Tufte

- Present all data
- Minimal design
- Loyalty to data



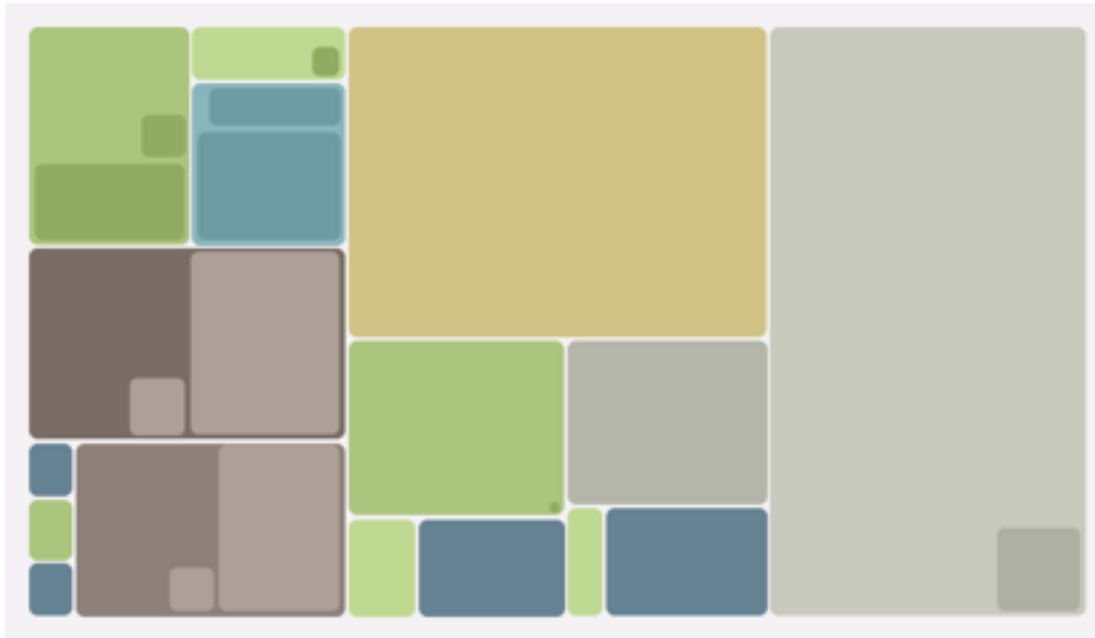
<http://www.edwardtufte.com/tufte/>

Two Approaches



McCandless

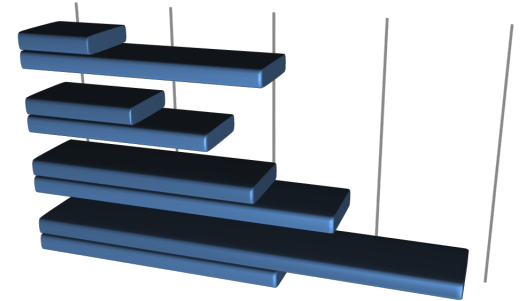
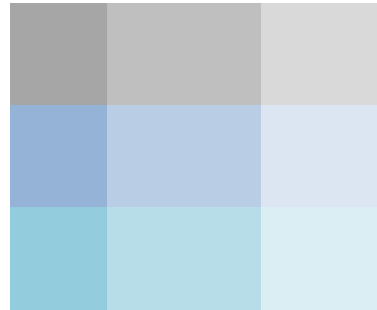
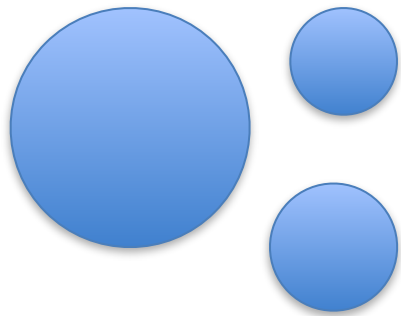
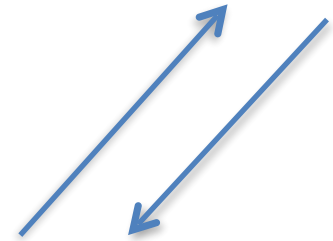
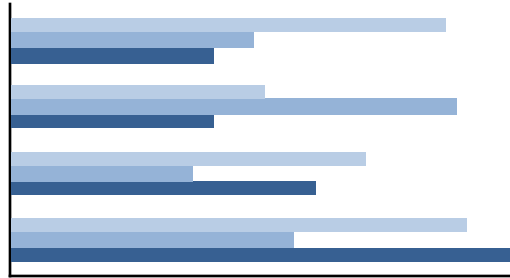
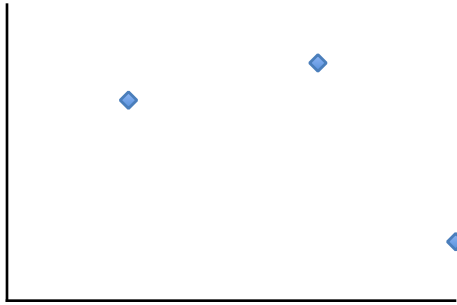
- Selective data
- Emphasis on story with design
- Loyalty to audience



<http://www.davidmccandless.com/>

Two Approaches





Skau, Harrison & Kosara (2015)
Bateman, Mandryk, Gutwin et al (2010)

Basic Rules

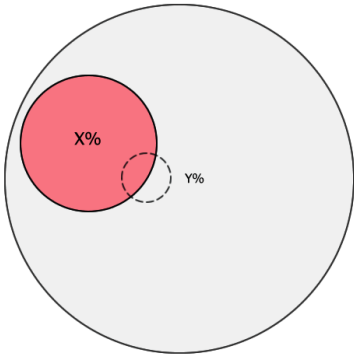


The visualisation or series of visualisations are designed to tell one story or in such a way as to guide the audience to use the data to answer set questions

Specific Purpose



Use this chart to reflect upon the degree to which current targeted service provision meets the needs of children in the wider community. Consider implications for prevention, early intervention and targeting of services to identified need.



1. The grey circle represents children aged 9-16 across the local authority as a whole.
2. The red circle represents the proportion of children aged 9-16 with 'high need' across the local authority as a whole.
3. [Click here](#) to view the proportion of children aged 9-16 in contact with targeted services and the overlap with the 'high need' group.

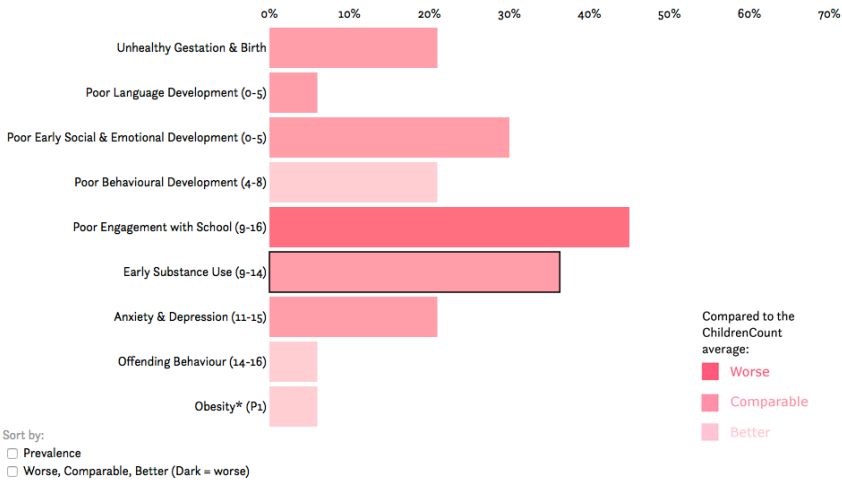
Learn more

Expand this pane to learn more about ChildrenCount and how to use the data provided in these pages.

[Download the technical appendix and supporting data here](#)

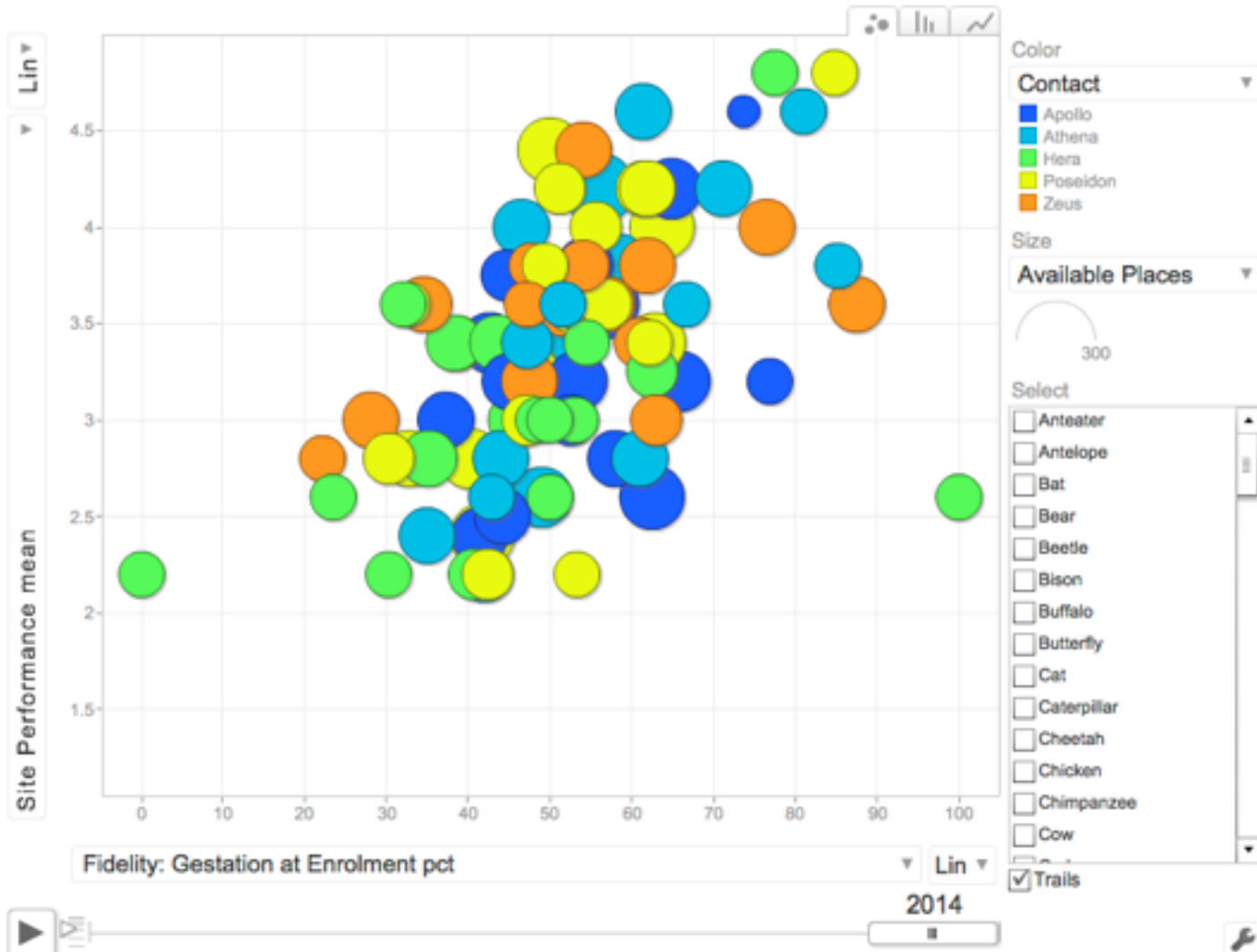
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Needs and Services



The visualisation is designed to display as much of the data of interest as possible in the same place to enable the user to interact with it and answer their own questions using the data.





Data: NPCanondata • Chart ID: MotionChartIDNPC • googleVis-0.5.3
 R version 3.0.2 (2013-09-25) • Google Terms of Use • Documentation and Data Policy

Static examples



- Design must always fit purpose
- Data & Story key starting information
- Humans as designers

[Seeing data project](#) (Kennedy & Field et al, 2015)



Inspiration:

<http://www.informationisbeautiful.net/>

<http://www.visualisingdata.com/>

<http://www.theguardian.com/data>

<http://www.gapminder.org>

Tools:

<http://d3js.org/>

<http://www.rstudio.com/>

<http://datavisualization.ch/tools/selected-tools/>

<http://www.tableausoftware.com/>

<https://color.adobe.com/explore/newest/?time=all>



Questions...

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