

TechEd

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Big Data Visualization

Suman Sundar & Vidya Sagar Dudipala

Accenture

Speakers



Suman Sundar
Technical Architect



@sorpion7

accenture



Suman Sundar
Technical Architect



@vidya084

accenture



Data Visualization

Wikipedia

Data visualization or data visualisation is a modern branch of descriptive statistics. It involves the creation and study of the visual representation of data, meaning "information that has been abstracted in some schematic form, including attributes or variables for the units of information"

Types

Scientific Visualization

Real world objects with spatial properties

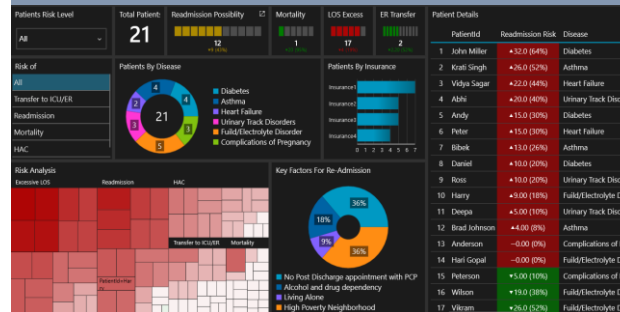
Ex: 3D MRI Scan, etc.,



Information Visualization

Representing business data using statistical charts & graphs

Ex: Bar chart, Pie chart, etc.,



Infographics

Narrative representation of information



Why Big Data Visualization is different?

Business Need

- ✓ Self-service analysis
- ✓ Real-time reporting
- ✓ BYOD enablement
- ✓ Touch optimized results

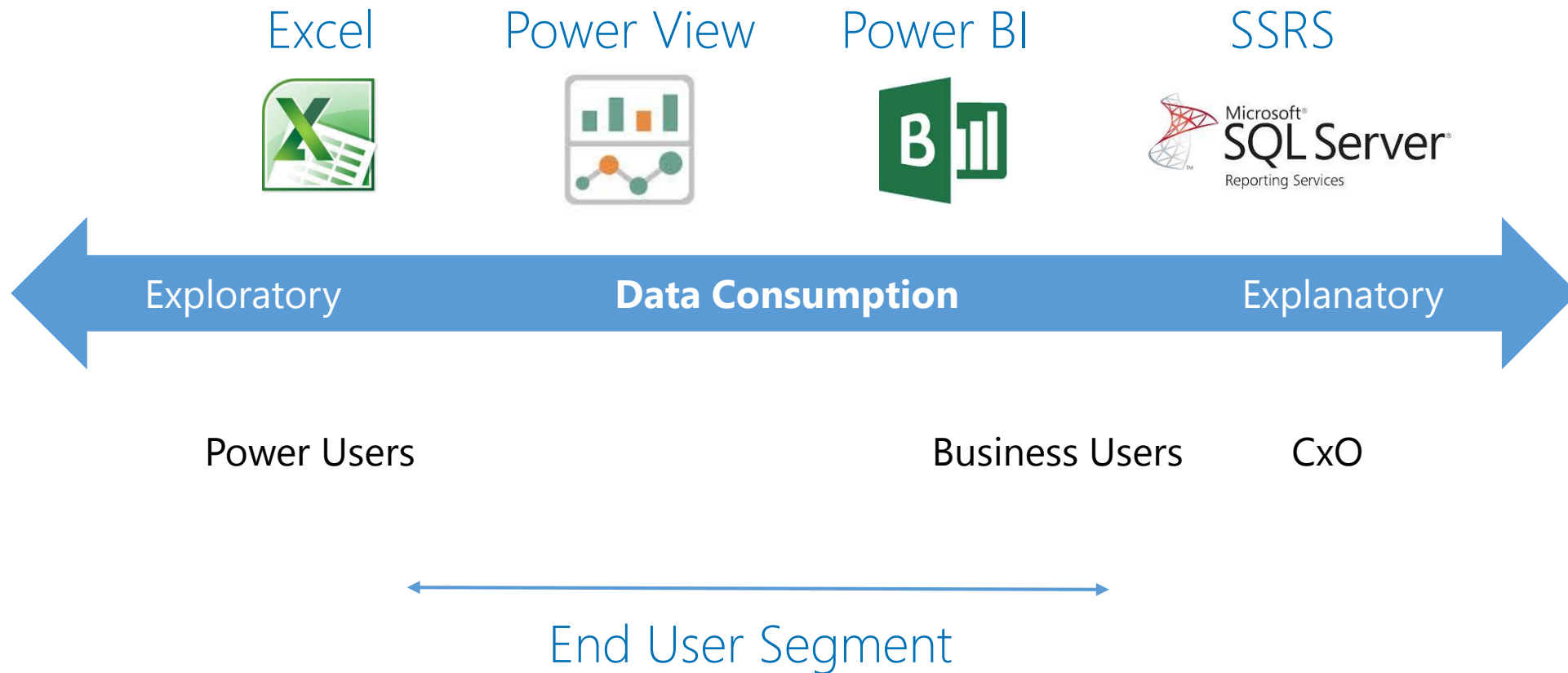
Challenges

- 👍 Volume
- 👍 Variety
- 👍 Velocity

Consideration

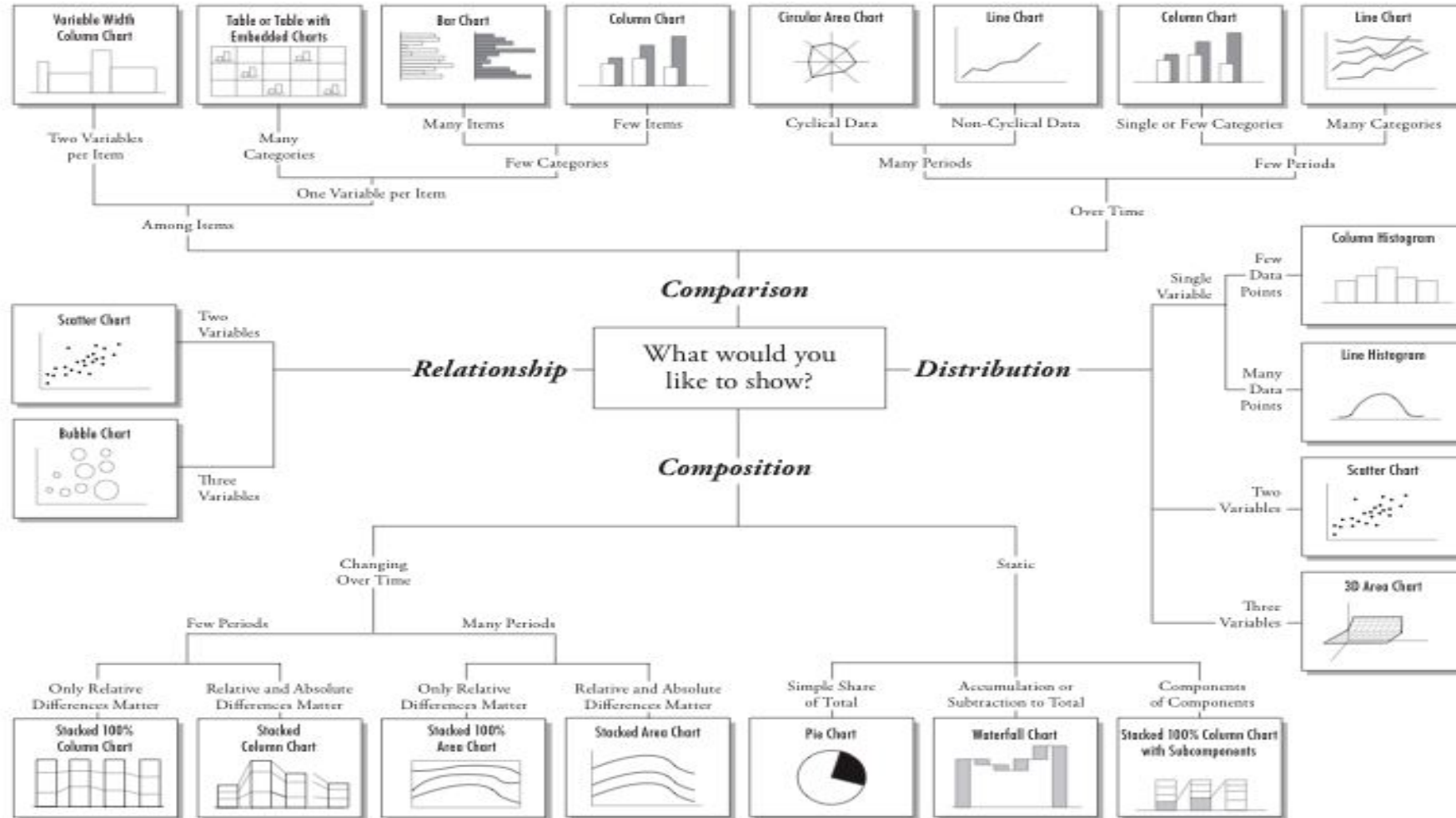
1. Data reduction
2. Parallel query processing
3. Right tool selection

The End user, Data usage & Microsoft tools



What chart to use?

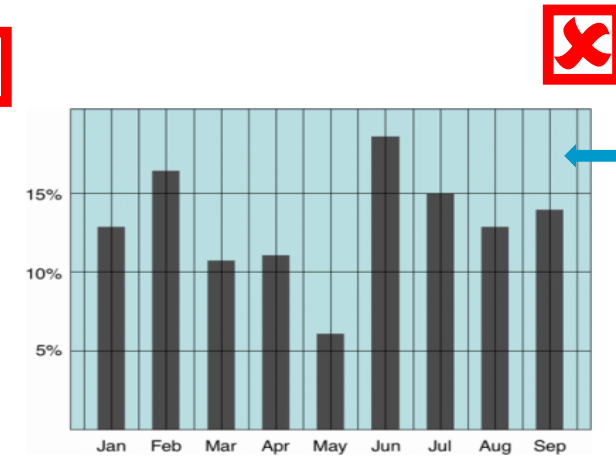
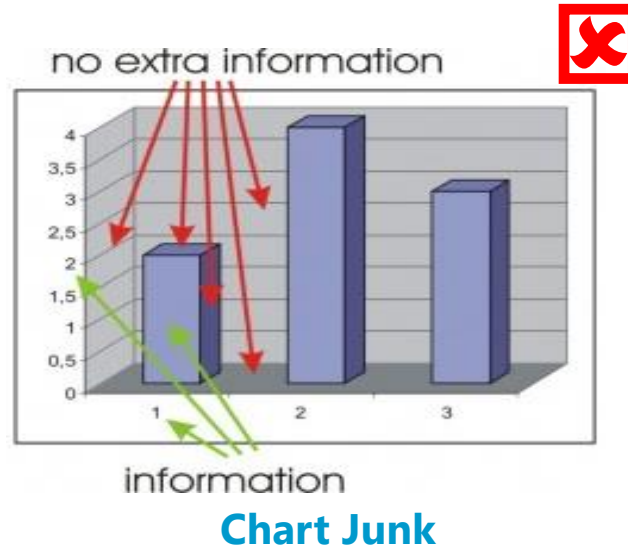
Chart Suggestions—A Thought-Starter



Data-Ink Ratio

Remove Chart Junk

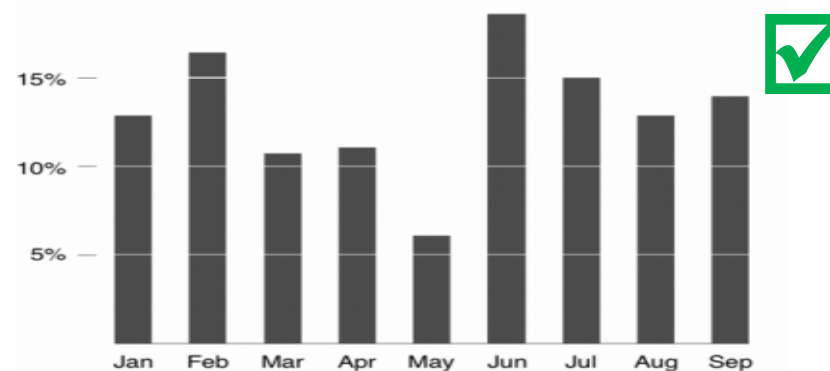
Chart Junk is unnecessary or confusing visual elements in charts and graphs that do not add value.



Low Data-Ink Ratio

Increase Data-Ink Ratio

"Amount of ink used to display data" divided by "total ink used on visualization".



Road to success

Prototype



Sampling a prototype of the overall solution can help the customer envision the business benefits towards successful roll out

Training



Not every business end user is comfortable with data visualization at the first time

Agile



Agile methodology helps achieving quicker and better visualization results due to the iterative and flexible approach

Demo



Airline & Airport
Sample



Weather mash-up



Flight schedules



Economic and other
data

Big Data



HDInsight



Visualization



Touch Analytics

To summarize

Data Visualization Principles

- Why Big data visualization different
- Challenges
- Considerations

Working with Big data

- Using HDInsight
- Extraction using Hive

Visualizing Big data

- Using Excel Hive connector
- Using Power BI
- Using Avanade Touch Analytics
- Using Power Maps

References

Related references for you to expand your knowledge on the subject

- HDInsight Extraction using Hive- <http://azure.microsoft.com/en-us/documentation/articles/hdinsight-use-hive/>
 - Power BI - <http://www.microsoft.com/en-us/powerbi/default.aspx>
 - Avanade Touch Analytics - <http://www.avanade.com/en-au/offerings/pages/avanade-touch-analytics.aspx>
 - Power Maps - http://blogs.office.com/2014/10/08/6-cool-ways-use-custom-maps/?WT.mc_id=Blog_PBI_General_DI
- Customer Maps - http://blogs.office.com/2014/10/08/6-cool-ways-use-custom-maps/?WT.mc_id=Blog_PBI_General_DI

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[@sorpion7](#) (Suman S)
[@vidya084](#) (Vidya S)

Email:

suman.sundar@accenture.com
vidyasagar.dudipala@accenture.com



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