Thunder & Lightning: Cognos & Tableau; Info Services & the IR Office

Keith Fortowsky and Miranda Pearson

(www.prairiefirephoto.com)

CIRPA Conference 2017

University of Regina

About University of Regina

- Fall 2017: **15,276** total students
  - 13,375 Undergraduate level
  - 1,901 Graduate level
- ERP System: Ellucian Banner
- Metadata: Data Cookbook (iData)
- Analytics and Reporting: new Cognos Analytics 11 implementation (Enterprise); Tableau Desktop for IR; home-built centralized reports via MS Access
- Tableau since v2.1 late 2006 ⇔ “Tableau Like” Cognos 11

Today's Topics

- (What is "Institutional Research / IR")
- IR / Marketing / Data Scientists – Info Services
- Ad hoc ⇔ Enterprise
- Spreadsheets & Pivot Tables => Tableau
- Live Demos: Tableau 10.3 and Cognos Analytics 11
- Feature comparison
- Comparison wrap-up

- Questions ??

IR / Marketing / “Data Scientists” ⇔ Info Services (IS)

- IR / MARKETING ⇔ SALES ⇔ OPERATIONS
- MARKETING – predictions of 60% of IT spend?
- Higher Ed Data Warehouse (HEDW) annual conference

Our office is in somewhat unusual position of leading the University-wide implementation of Cognos 11 … However, we feel that we are merely at the vanguard of an emerging trend – a much more prominent role for IR Offices in enterprise-wide Data Analytics.

*For example, the presenter first attended an annual HEDW (Higher Education Data Warehouse) conference in 2014 (Philadelphia), at which only a handful of attendees appeared to have an IR background. In contrast, at the most recent HEDW conference (May 2017 in Tucson), close to a **third** of attendees appeared to be from IR.*

IS vs IR / “Data Scientists”

Developers vs Data Scientists –
Different Approaches to a Common Goal

"For [developer] Bryan, project success is all about deliverables that are correct and repeatable, wherein the code correctly executes with unseen data. (Bryan jokes that the data science reproducible standard means the code ran once.)… In the end, it's all about correct, modular, automatable and maintainable."

Steve Miller & Bryan Senseman

Information Management (blog), March 2016

www.information-management.com/blogs/big-data-analytics/developers-vs-data-scientists-different-approaches-to-a-common-goal-10028416-1.html

Spreadsheets & Pivot Tables

ad hoc	Spreadsheet ⇔ Pivot Table ⇔ Database	Enter-prise

- 1979 – VisiCalc (Apple II)
- 1983 – Lotus 1-2-3 (PC DOS)
- 1988 – Quattro Pro (MS Windows) – **pivot tables**
- 1987/1990 – MS Excel (MS Windows)

? 1980 ?

First IT journal article re “death of the spreadsheet”

Live Demos

- Data Source spreadsheet
- Possible Excel pivot table demo

- Tableau 10.3 – **desktop** deployment (parts 1 & 2)
  Keith Fortowsky

- Cognos Analytics (version 11) – **server** deployment (pt 1)
  Filip Drascovic
  Practice Lead
  Newcomp, Toronto (www.newcomp.com)

Comparison Chart

	Cognos	Tableau
PRICE	$200K + $750	$750 + $200k
minimum	$15k – $20k	$750
Implementation costs	Start high	Start low
Community	IBM & commercial	Full ecosystem
Academic program?	No	Yes
Security	Enterprise	Ad hoc +
Enterprise Reporting	Yes but $$	** NO reporting **
Ux Architecture	Top down but poor	Bottom up but poor

Costs

	Cognos	Tableau
PRICE	$200K + $750	$750 + $200k
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Implementation costs	Start high	Start low

- Note that basic $750 Tableau Desktop can access pretty much any datasource via MS Access, ODBC, etc.

Community & Academic Program

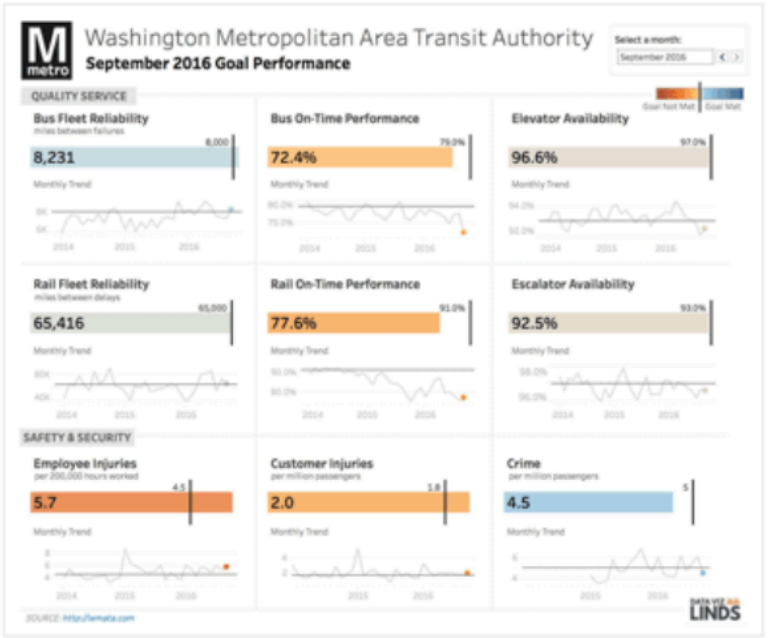
	Cognos	Tableau
Community	IBM & commercial	Full ecosystem
Academic program ?	No *	Yes
Tableau Public ?	-	Yes

- July 2017: **1 million** Tableau Public visualizations
- Tableau Academic – Free 1 year full license; training, etc. www.tableau.com/academic

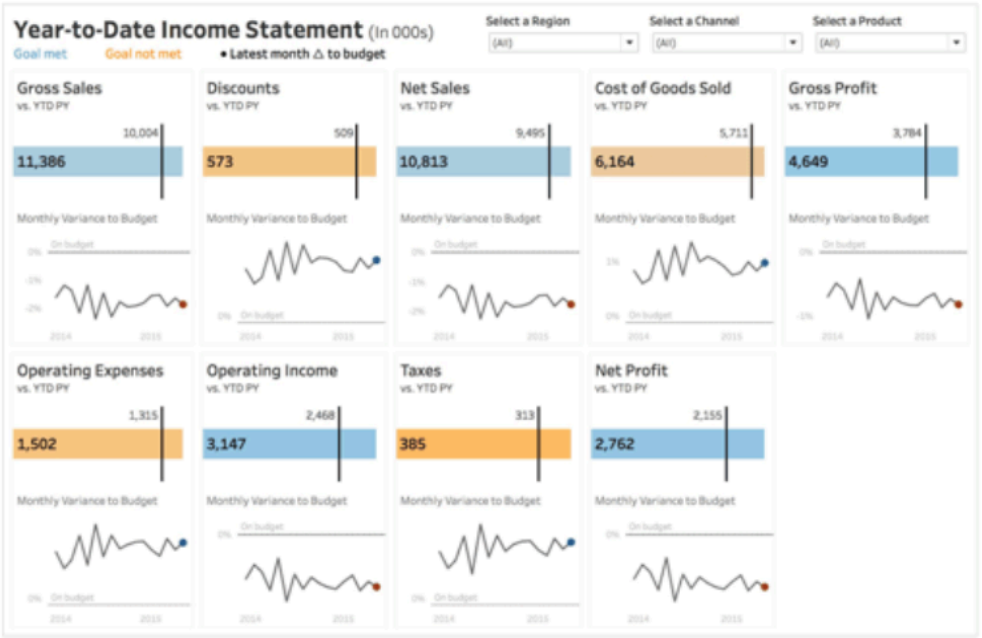
1. Steal like an artist

www.tableau.com/about/blog/2017/10/7-tips-and-tricks-dashboard-experts-76821

From public transport data...



... to reimagining financial statements



Austin Kleon, author of Steal Like an Artist, encourages us to embrace the influence of others. This holds true in designing dashboards as much as in any creative endeavor. Don't create your work in a vacuum: Take inspiration from as many places as you can.

A great example is Andy Kriebel's financial statement dashboard, based on the work of Lindsay Poulter. Lindsay's original design was applied to public transport data, and Andy

Public Health Intelligence http://publichealthintelligence.org

I'm looking for... Search

Global Peace Index 2008-2016

Submitted by martiner on Sun, 10/02/2016 - 15:07

This article presents information about the Global Peace Index (GPI), a measure of relative peaceful across 163 countries and territories from 2008 to 2016.

Tags:
GPI peace SDG

Read more Add new comment

Are You Really Tall?

Submitted by martiner on Sun, 08/07/2016 - 22:42

This article introduces a visualization tool that helps you to see if your are taller or shorter than the mean height of people o year of birth and country.

Tags:
adult height NCD NCDRisC

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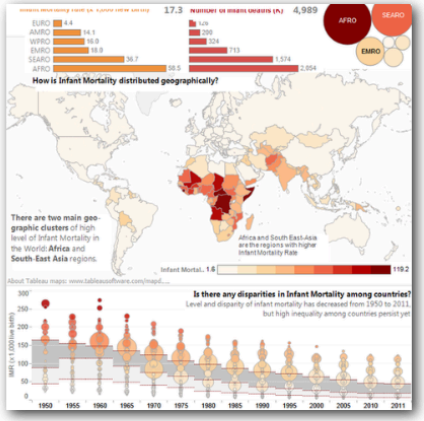

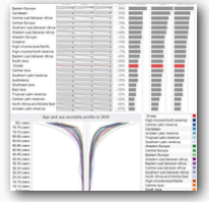

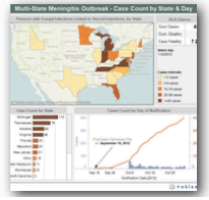

Tableau Reference Guide

SEARCH TERM

Graphing	Color	Calculations	Mapping	Data
Training Videos	Javascript API	Sound and Video	Tooltips	Server

Graphing

Creating a Lollipop Chart by Andy Kriebel
Creating a Lollipop Chart- How to (with Viz and Video) by Andy Kriebel
Dual Axis Chart with Overlapping Bars and a Line by Andy Kriebel
Moving Reference Line by Andy Kriebel
Dashed Lines by Michael Kane
Panel Charts by Andy Cotgreave
Panel Charts Improved by Joe Mako
How to Make Donut Charts by Ryan Sleeper
KPI donut charts by Andy Kriebel
Radial Treemaps and Bar Charts by Bora Beran
Radial Trees by Chris DeMartini
Radar Chart by Andrew Ball
Sparkbars with Information at the End by Andy Kriebel
Arrow Chart by Joe Mako
Marimekko Charts by Interworks
Network Graphs with NodeXL by Allan Walker

www.dataplusscience.com/TableauReferenceGuide/index.html

University of Regina

Blog

Early bird pricing now available for #Think2018

Blog

Your #Cognos Analytics Cloud Migration -

webinar delivered by the

IBM Analytics SaaS

Search

Tagged Interests

11.0.3 11.0.4 11.0.5
11.0.6 11.0.7 active report

- www.ibm.com/communities/analytics/cognos-analytics/blog/
- www.ibm.com/communities/analytics/cognos-analytics/
- https://developer.ibm.com/dwblog/2017/**cognos-analytics-resource-guide/**
- www.envisn.com/envisn-cognos-blog

Cognos
Analytics

Enterprise Features

	Cognos	Tableau
Security	Enterprise	Ad hoc +
Enterprise Reporting	Yes but $$	** NO reporting **
Ux Architecture	Top down but poor	Bottom up but poor

- Security = Licensing costs
- Enterprise = Dev costs
- (discuss Ux Architecture on final summary slide)

The Cathedral & the Bazaar

- Eric Raymond, 1997 re open source vs closed source

- "market towns" lead to Cathedrals …
- Cathedrals lead to markets ….
- Infrastructure in both

“Why IT Fumbles Analytics” (HBR)

Deploying analytical IT tools is relatively easy. Understanding how they might be used is much less clear. At the outset, no one knows the decisions the tools will be asked to support and the questions they will be expected to help answer. Therefore, a big data or analytics project can’t be treated like a conventional, large IT project, with its defined outcomes, required tasks, and detailed plans for carrying them out.

Harvard Business Review, Jan-Feb 2013
Donald A. Marchand and Joe Peppard
https://hbr.org/2013/01/why-it-fumbles-analytics

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Summary: current Cognos & Tableau at U Regina

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