

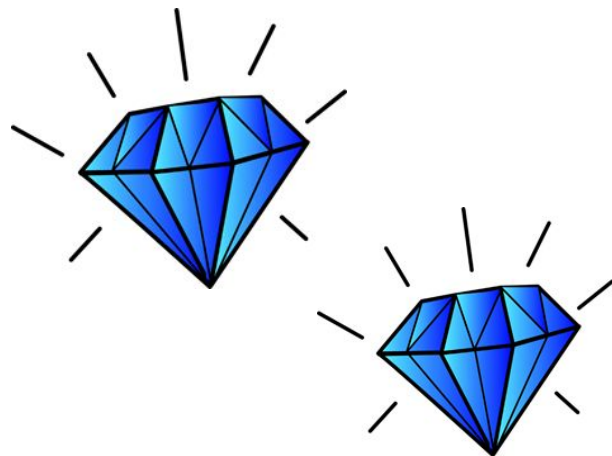


Finding the Diamonds in Your Data Coal Pile

Vonda Durrer, University of Virginia, vd9k@virginia.edu

Terri Hall, University of Notre Dame, thall2@nd.edu

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Be Data-informed rather than Data-driven

Data-driven -- An activity/decision is based solely on data, rather than intuition or personal experience. Only one piece of the puzzle guides decision-making. Perceived as more authoritative, less collaborative, can be scary to folks, use carefully.

Data-informed -- striking a balance in which human expertise and understanding of information is used in conjunction with data to guide decision-making. Gut and experience raise alarm that data may need cleanup

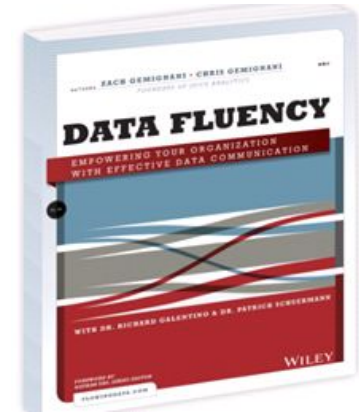
From “Be Data-Informed, Not Data-Driven, For Now” by H. O. Maycotte

<https://www.forbes.com/sites/homaycotte/2015/01/13/data-informed-not-data-driven-for-now/#74ceaba5f5b7>

Books we recommend

Data Fluency

– By Zach Gemignani and Chris Gemignani,
Founders of Juice Analytics with
Dr. Richard Galentino and Dr. Patrick Schuermann



The Accidental Analyst: Show Your Data Who's Boss

– By Eileen McDaniel, PhD and Stephen McDaniel



We're all Data Consumers



- ❖ You and Me 😊
- ❖ We consume data everyday all day without even realizing it
 - ❖ Checking the weather – review the data, determine what clothes to wear
 - ❖ Buying lunch – you review the data on the menu, items, ingredients, calories and price to make a data informed decision
- ❖ Research administration data is no different
 - ❖ Is our funding up or down this year
 - ❖ When are financial reports due
 - ❖ What does the data tell us about faculty productivity in research

Challenges of Making Sense out of the Data

❖ Cleanup – continuous

- ❖ How many people do you have “cleaning” data?
- ❖ How much time is spent reviewing and vetting data?

❖ Definitions – not documented, change over time

- ❖ How many of you have a central place to store data definitions?
- ❖ Has the way you define data changed over time?

❖ Data is a shared responsibility – reporting is only as good as the data... garbage in/garbage out

❖ Quality control – better with systems, not so good without technology

- ❖ Does your pre-award system talk to your post-award system?

Research at the University of Virginia

For FY 2017

Proposal volume =
2,661 for \$1.5B

Award volume =
1873 for \$353M

Expenditures as reported in
NSF HERD survey = \$ 470M



Research at the University of Notre Dame



For FY 2017

Proposal volume = 1252 for \$748M

Award volume = 688 for \$138M

Expenditures as reported in
NSF HERD survey = \$ 212.8M

As Research Grows, so do Data Requests

How much have we grown in past year, last 5 years, last 10 years?

Who are the top 10 sponsors providing our funding?

Which faculty members are most successful with proposals?

Which faculty members need help or a nudge to become more active?

Is there more collaboration? Within our University and outside it?



Information Teams - Dedicated Resources are key

University of Virginia (5)

1 Director (Vonda)

1 Assistant Director

2 Senior Data analysts

a. Functional expert

b. Analytics expert

1 Data analyst (technical expert -
Python, SQL)

University of Notre Dame (4)

1 Director (Terri)

2 BI Analysts /Systems support

1 Full stack developer (technical
expert in Python, SQL, etc)

Dashboard demo's

We'll show you how the dashboards
we've developed to
answer these questions and more.

Tips on using the data to find your diamonds

- ❖ Know your audience
- ❖ Answer: how can I tell this story to help the audience clearly see it
- ❖ Question any assumptions about the data, remove bias
- ❖ The layout should present the data in a way that grabs attention
- ❖ Anticipate and welcome questions the data will invite
- ❖ While it is true that data comes out of operations, if you want the strategic advantage, then data should drive operations

Data starts the conversation...

1. The data doesn't provide all the answers... rather it usually causes more questions
2. An understanding of the data will empower people to ask more meaningful/analytical questions
3. Final result - diamonds!

