

Visual Analyzer and Best Practices for Data Discovery

BIWA Summit 2016

Tim VlamiS and Arthur Dayton

Tuesday, January 26, 2016



Agenda

- Understanding the foundations of data discovery
- Discovery scenarios
- Discovery frameworks
- Using Visual Analyzer to discover data insights

VlamiS Software Solutions

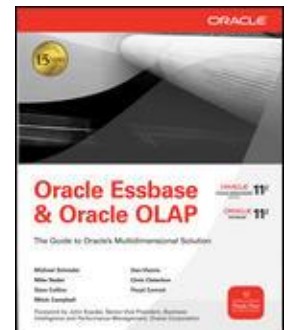
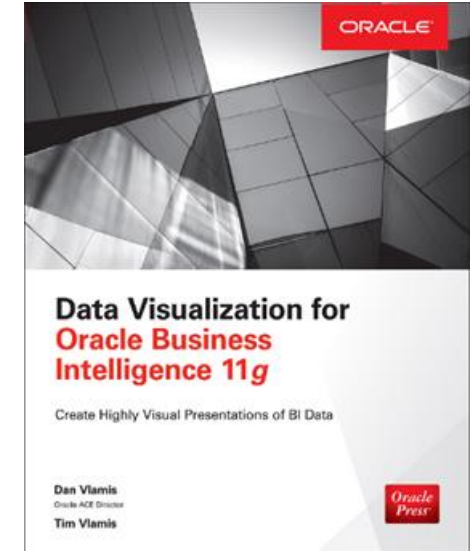
- VlamiS Software founded in 1992 in Kansas City, Missouri
- Developed 200+ Oracle BI and analytics systems
- Specializes in Oracle-based:
 - Enterprise Business Intelligence
 - Data Warehousing
 - Data Mining and Predictive Analytics
 - Data Visualization
- Multiple Oracle ACEs, consultants average 15+ years
- www.vlamiS.com (blog, papers, newsletters, services)
- Co-authors of book “Data Visualization for OBI 11g”
- Co-author of book “Oracle Essbase & Oracle OLAP”
- Oracle University Partner
- Oracle Gold Partner

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Tim Vlamis and Arthur Dayton



- Tim (business analyst and academic guy)
 - 25+ years in business modeling, valuation, and scenario analysis
 - Oracle ACE
 - Professional Certified Marketer (PCM) from AMA
 - Adjunct Professor of Business, Benedictine College
 - MBA Kellogg School of Management (Northwestern University)
 - BA Economics, Yale University
- Arthur (IT Architect and hands-on expert)
 - Financial Accounting background
 - 10+ years developing with Oracle software
 - Many years as an Oracle customer
 - Adjunct Technology Professor at University of Nebraska



Foundations of Data Discovery

- Discovery 101 - Simple and multiple regression
 - A regression models the past relationship between variables to predict their future behavior
 - One independent variable is **simple regression**
 - Two or more independent variables is **multiple regression**
- What's new about the technology that makes discovery easier and how is it different from last generation BI tools?
- Data discovery needs to come to masses because of the 3 V's



Discovery Scenarios

- Familiar with data, looking for new insights
- Add new contextual data to find new relationships
- New to a data set, true exploration

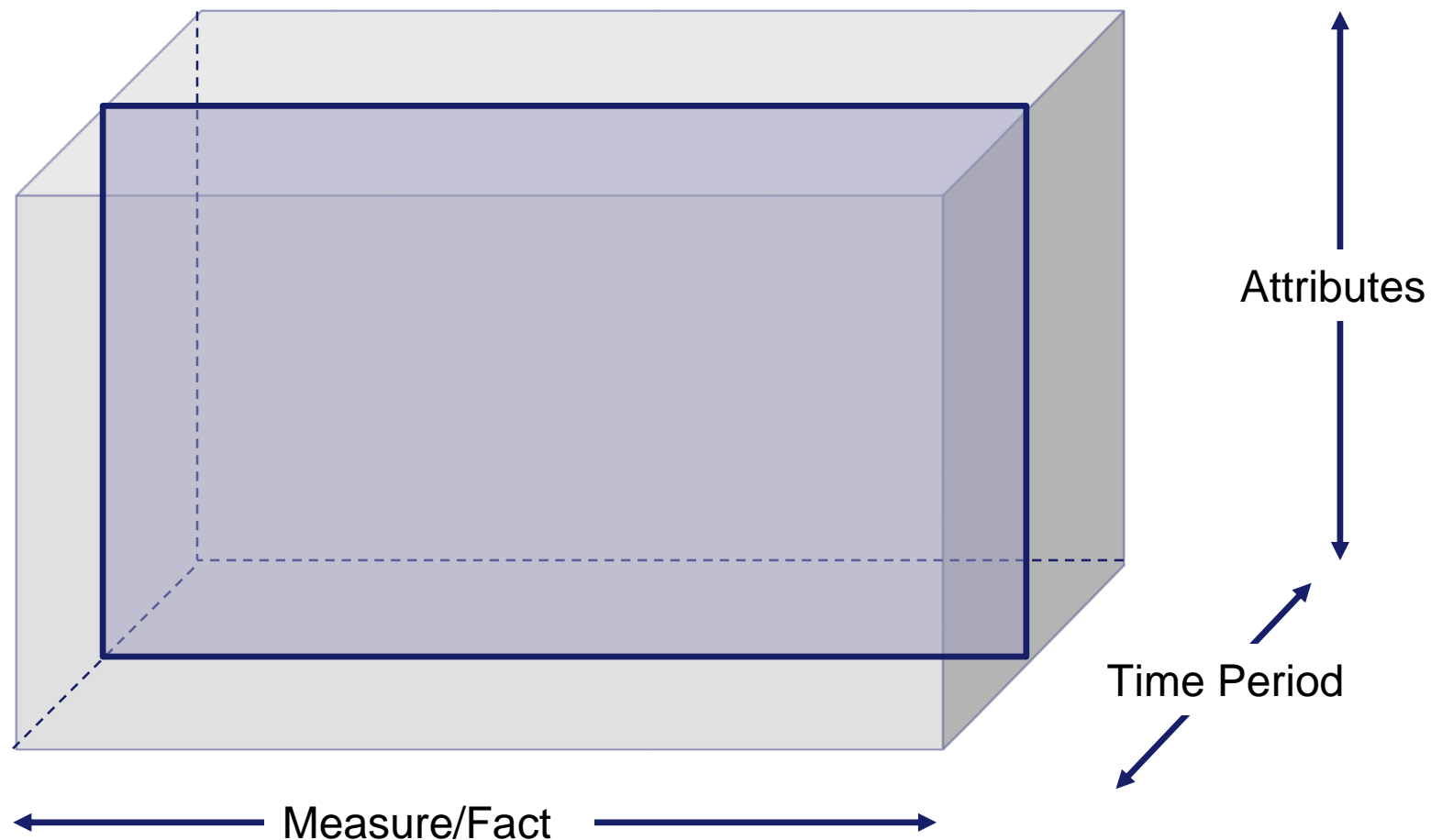


An Example Useful Framework

Position Analysis	Performance Analysis	Flow Analysis
static	period of time	period of time
descriptive	results	change in single asset/resource
relative/comparative	fixed vs. variable	sources and uses
balance sheet	P&L	cash flow
strength/weakness	bottom line/zero based	change over time
portrait	motion picture	narrative

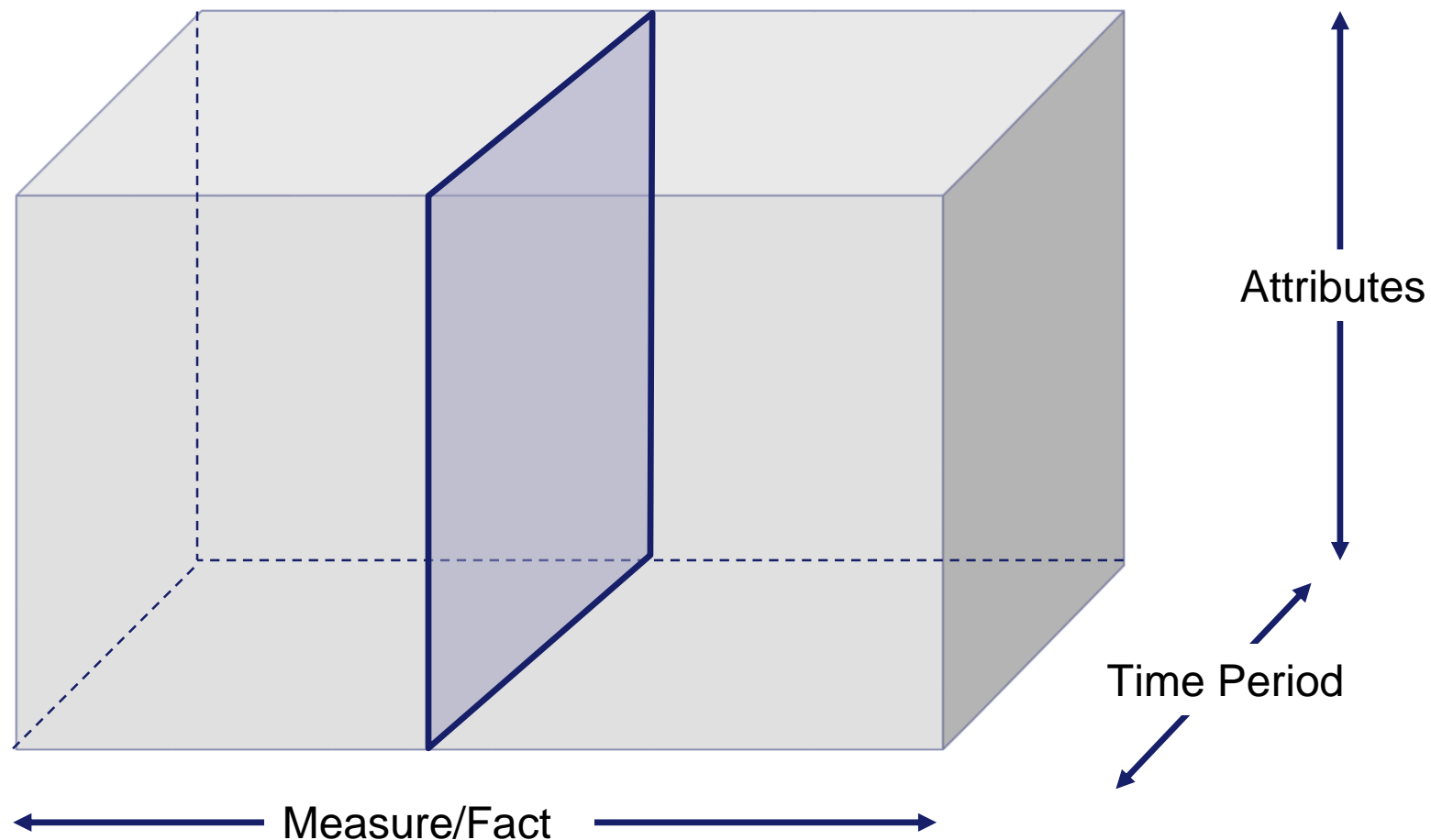


Position Analysis



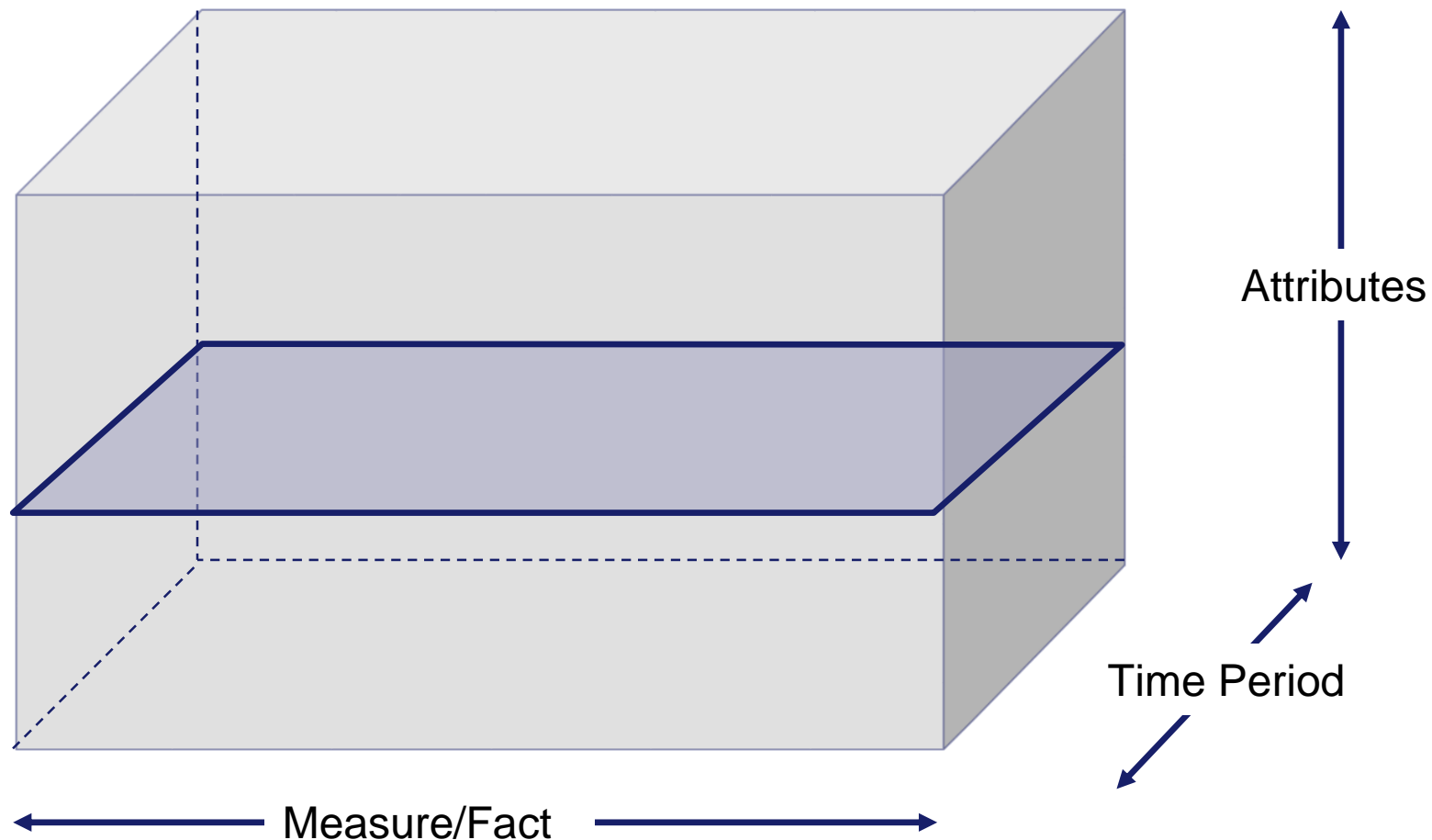


Performance Analysis





Flow Analysis





Well Established Frameworks

- Key Performance Indicator (KPI) Development (business)
- Root cause analysis (science)
- Diagnostic analytics (science)

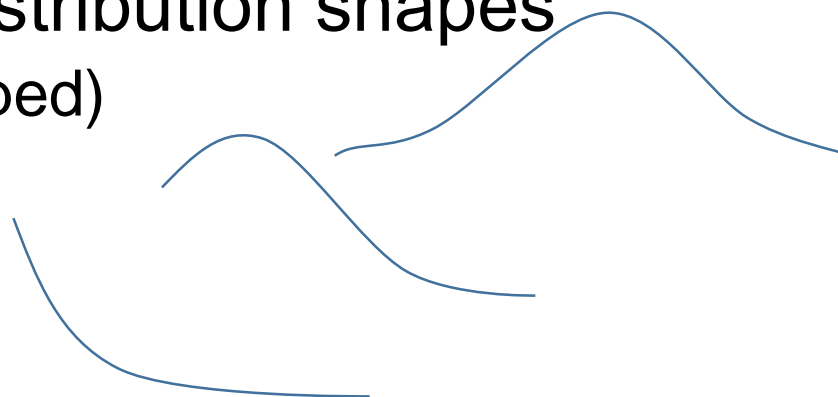


Second Demo



Understanding Measures for Exploration

- Aggregation method is important
- If use average, also add a bucketed measure
- Compute differences
- Understand data's natural distribution shapes
 - Normal distributions (bell shaped)
 - Log-normal distributions
 - Exponential distributions
- Average has strong meaning only for normal distributions
- Outlier identification & treatment are important for non-normal distributions





Starting with Data Discovery

- Begin either with a specific question or a framework
- Avoid “wandering around”
- Most of your visualizations will not produce new insights
- Move quickly through visualizations
- Be prepared to open a lot of browser tabs



Finding is not Explaining

- Process of interaction has a huge impact on the contextual understanding of an insight
- When someone discovers something, they believe it more
- Human Cognition Biases



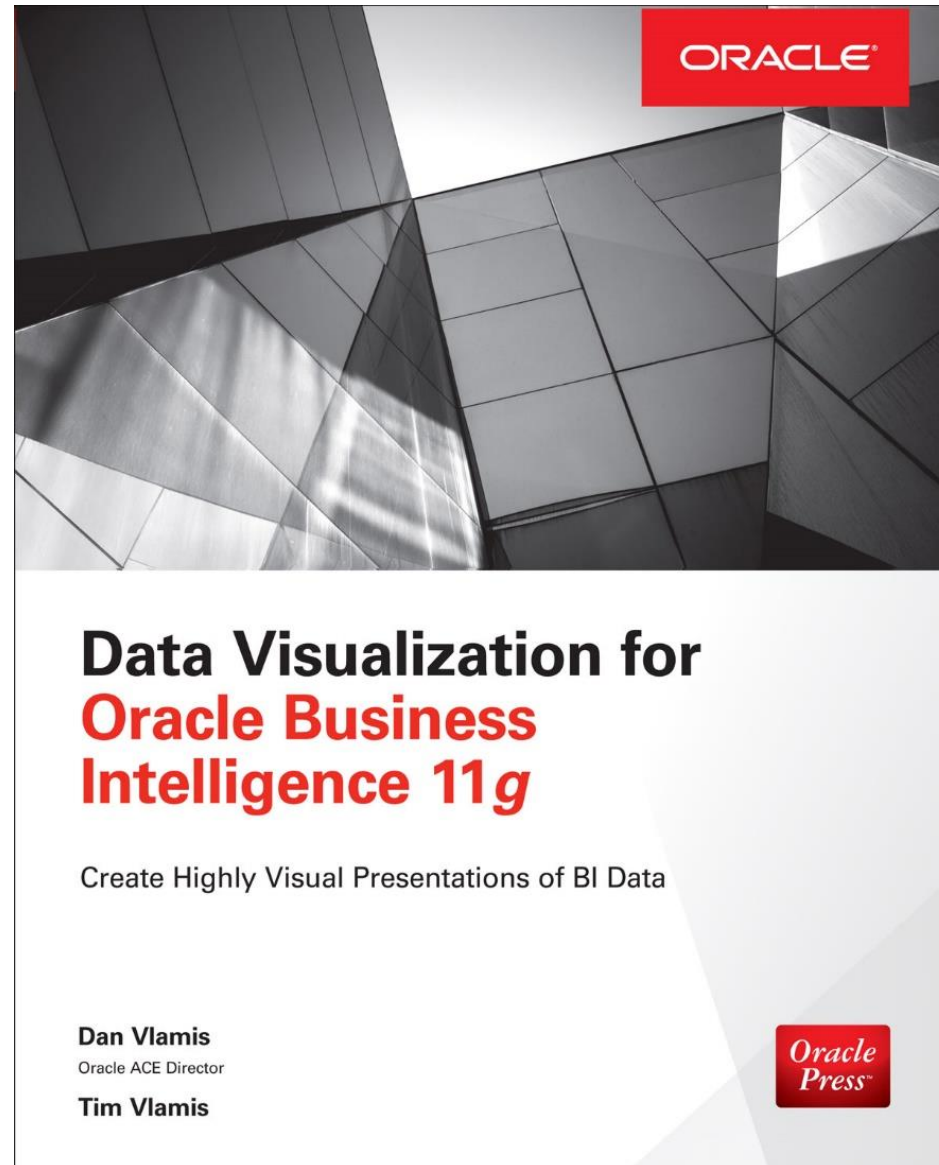
Oracle Cloud Test Drive

- **Free** to try Oracle BICS, Oracle Advanced Analytics
- Go to www.vlamis.com/tdcloud
- Runs on Oracle Cloud
- Test Drives for:
 - Oracle BICS
 - Oracle Advanced Analytics (initially Oracle Data Mining)
 - More test drives to be added
- Once sign up, you can access for 24 hours
- Click by click script included, but can go “off road”
- Faster and easier than official Oracle “trial web account”



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Thank You!

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