

# Marketing Analytics

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- Some material adapted from: Sorger, Stephan. "Marketing Analytics: Strategic Models and Metrics. Admiral Press. 2013.

# Chapter 1.

# Introduction

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# Marketing Analytics: Models, Metrics & Measurements

Topic	Description
Definition (Broad)	Broad definition (but too vague): Data analysis for marketing purposes, from data gathering to analysis to reporting
Definition (Applied)	Techniques and tools to provide actionable insight - Models - Metrics
Models	Decision tools, such as spreadsheets
Metrics	Key performance indicators to monitor business

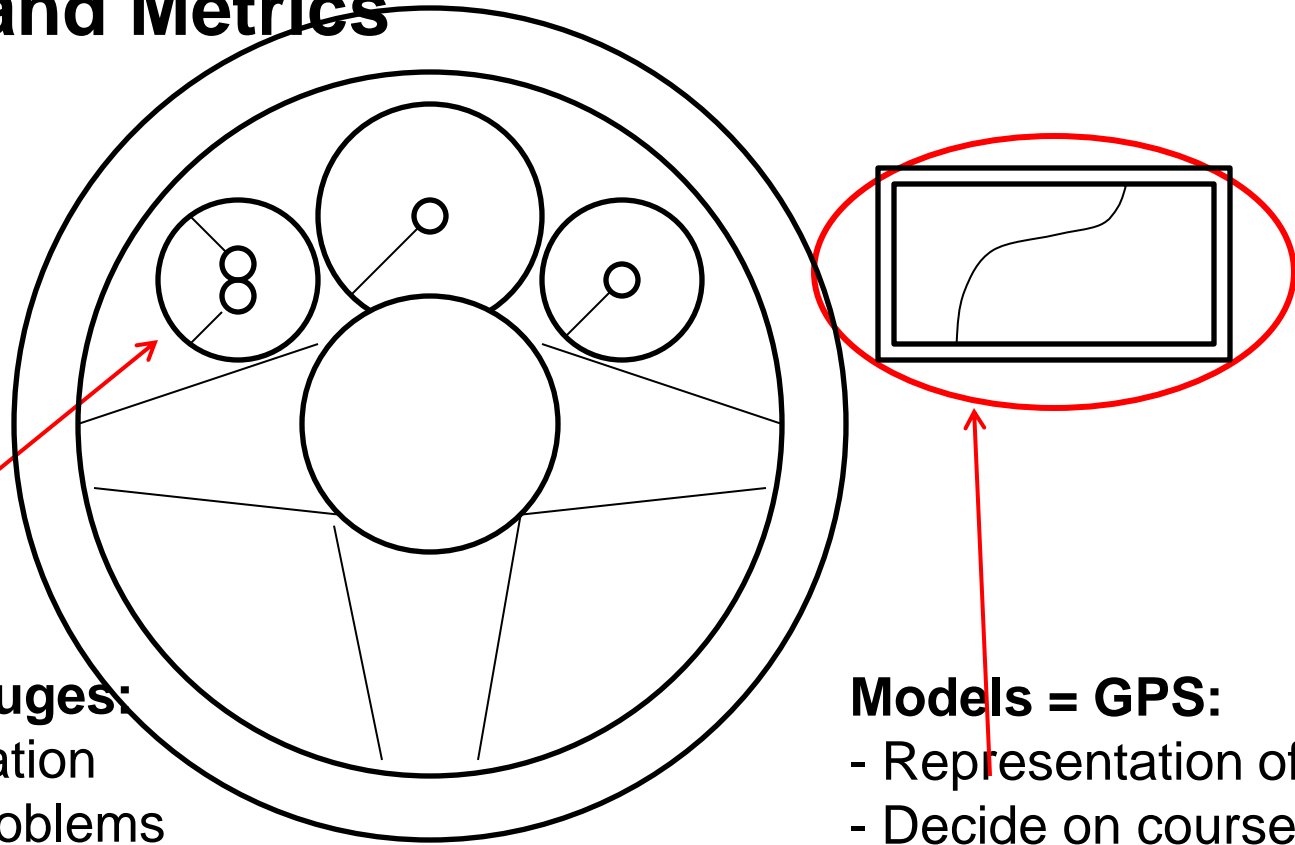
## **Models:**

Decision tools,  
like spreadsheets  
Example: Bass Forecasting

## **Metrics:**

KPIs to monitor business,  
like charts and graphs  
Example: Sales/ Channel

# Models and Metrics



## **Metrics = Gauges:**

- Monitor situation
- Diagnose problems

## **Models = GPS:**

- Representation of Reality
- Decide on course of action

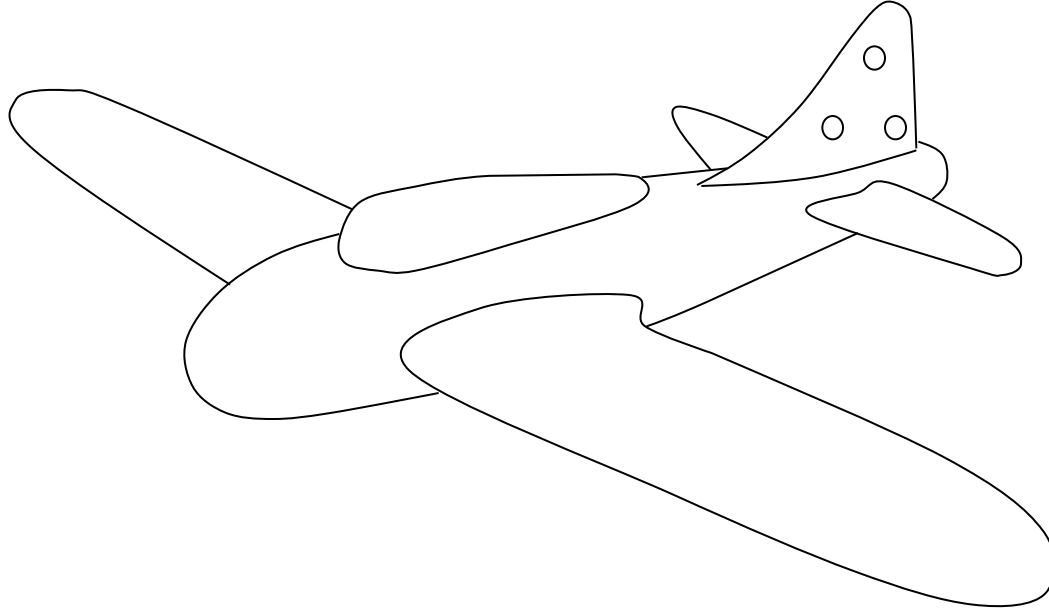
# Metrics Gone Wrong

Military leaders in World War II used metrics regarding airplane damage incorrectly

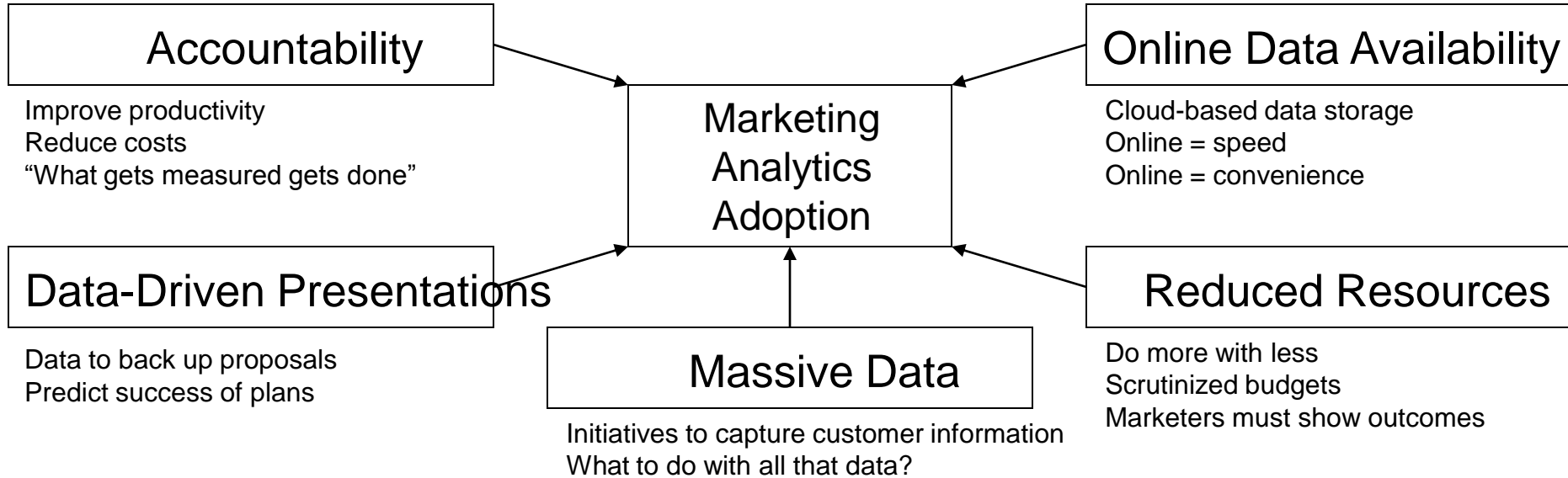
“Reinforce damaged areas”

Abraham Wald, a statistician skilled in analytics, said: Right Metrics, Wrong Conclusion

“Reinforce non-damaged areas” (fixing selection bias from studying only airplanes that returned)



# Trends Driving Marketing Analytics Adoption

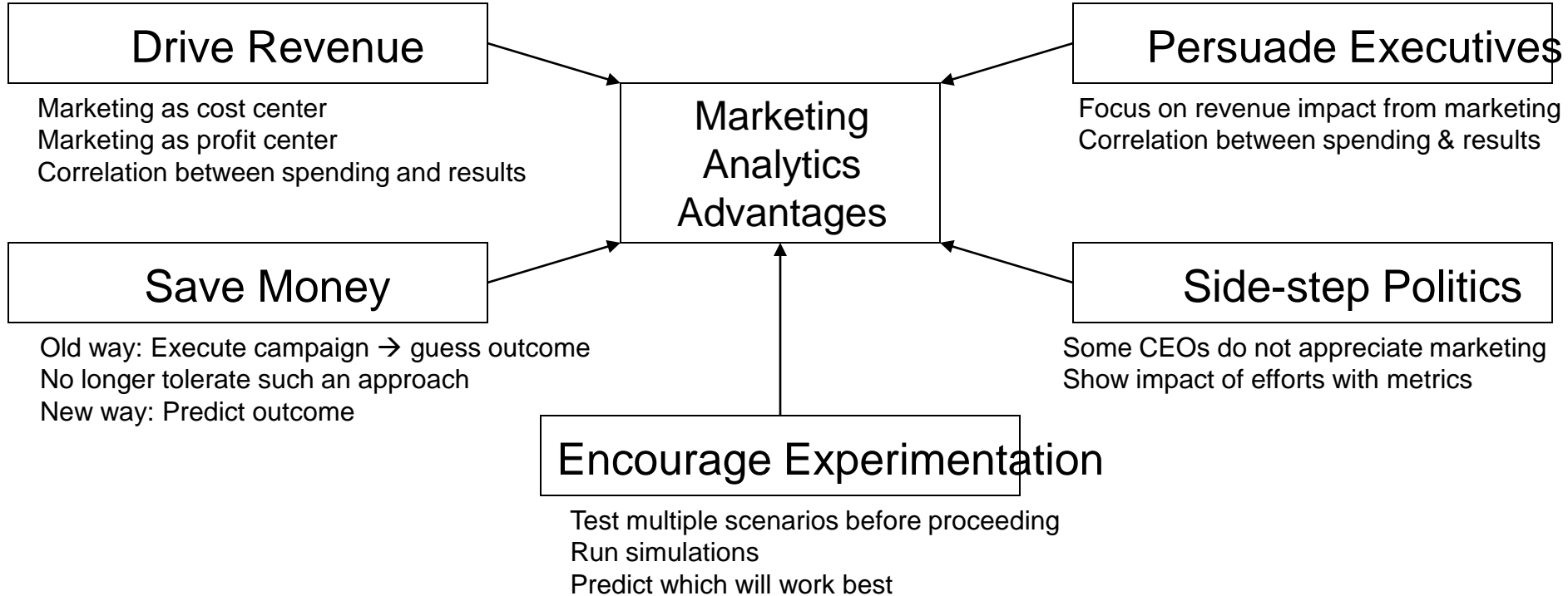


Before:  
Huge budgets



Now:  
Tiny budgets

# Marketing Analytics Advantages



# Models: What is a Model?

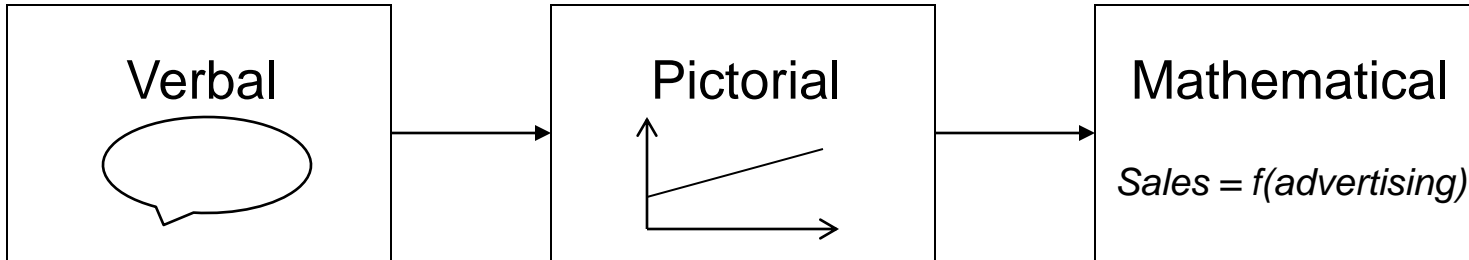
Topic	Description
Model	Simplified representation of reality to solve problems Example: Advertising effectiveness model
Purpose	Evaluate impact of input variables Example: Assess how advertising impacts sales
Decisions	Models provide guidance on marketing activities Example: Decide on ad budget to achieve objectives





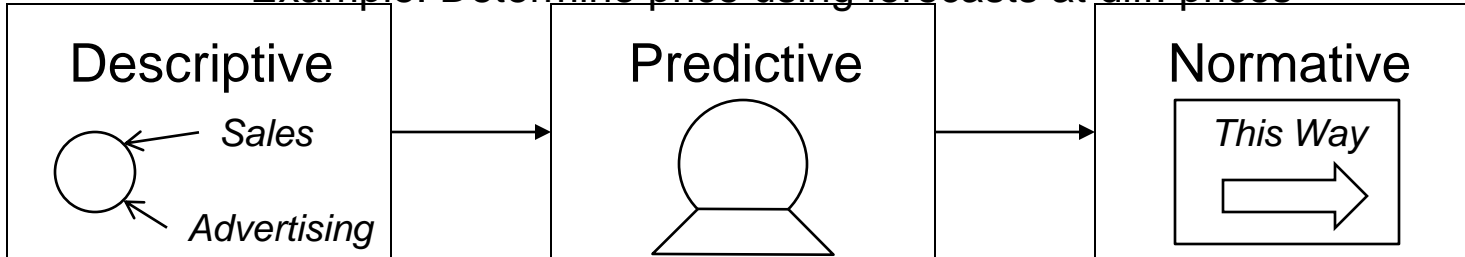
# Styles: Verbal, Pictorial, Mathematical

Topic	Description
Verbal	Expressed in words “Sales is influenced by advertising”
Pictorial	Expressed in pictures Chart or graph of phenomenon
Mathematical	Expressed in equation $Sales = a + b * Advertising$



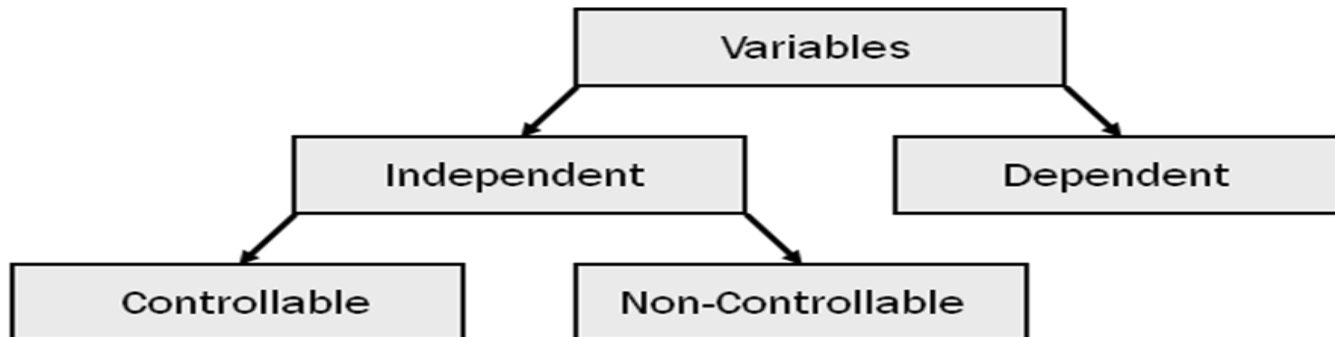
# Models: Forms

Topic	Description
Descriptive	Characterize (describe) marketing phenomenon Identify causal relationships and relevant variables Example: $\text{Sales} = a \cdot \text{Advertising} + b \cdot \text{Features} + c \cdot \dots$
Predictive	Determine likely outcomes given certain inputs Classic “What If?” spreadsheet exercise Example: Sales forecast model
Normative	Decide best course of action to maximize objective, given limits on input variables (constrained optimization) “Given X, what should I do?” Example: Determine price using forecasts at diff. prices

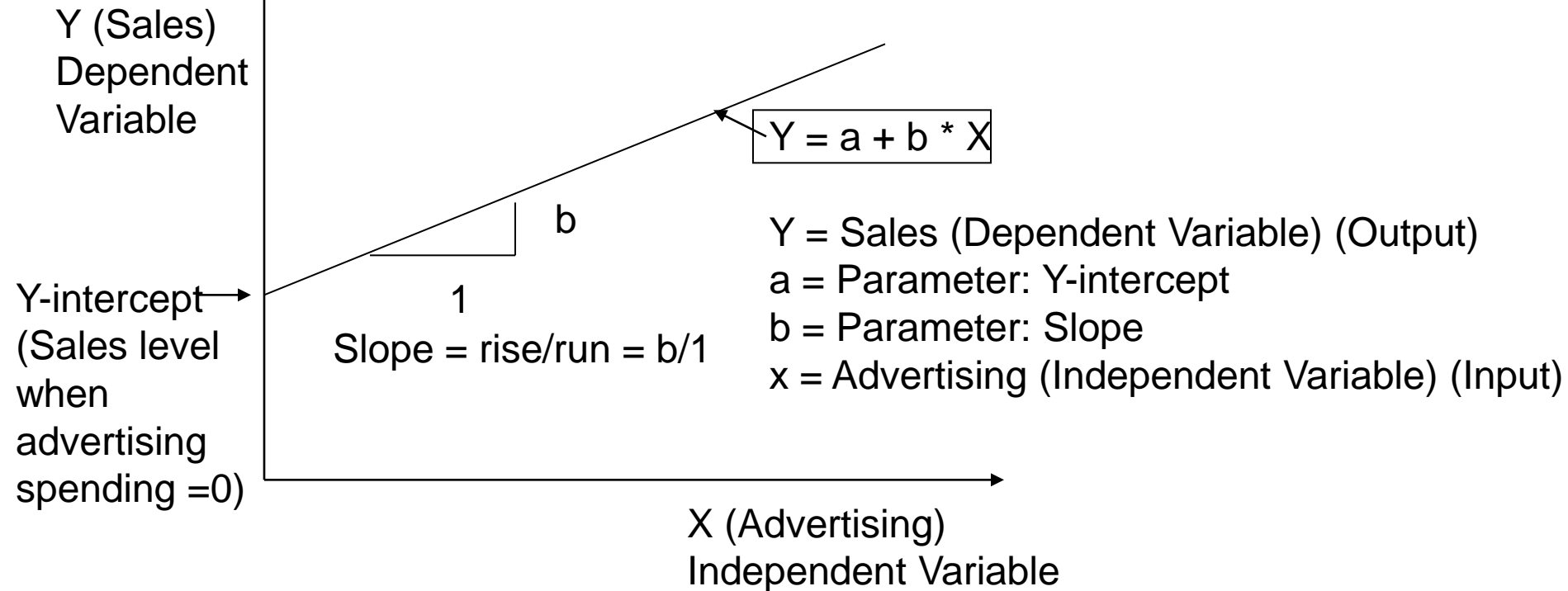


# Models: Variables

Topic	Description
Variable	Quantity that can be changed, or varied Examples: Advertising budget, Sales
Independent Variable	Variable whose value impacts dependent variable (x) Controllable: Advertising budget Non-controllable: Customer age
Dependent Variable	Variable representing marketing objective (y, or output) Responds to changes in independent variable For-profit: Revenue, Profit; Not-for-profit: Donations



# Models: Terminology: Linear Response Model



# Metrics

Topic

Description

Definition

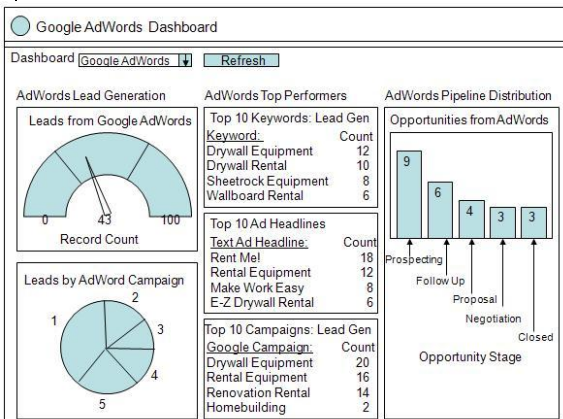
Business-oriented key performance indicators  
Examples: Sales per channel, Cost per sale

Purpose

Monitor and improve marketing effectiveness  
Take corrective action as necessary  
Example: Marketing expense as percentage of sales

Metrics Families

Groups of control metrics; Diagnostic & predictive info  
Example: Sales metrics: sales/industry; sales/product  
Marketing automation systems  
- Eloqua, Marketo, Pardot  
Salesforce automation systems  
Netsuite, Salesforce.com



## Metrics Dashboard

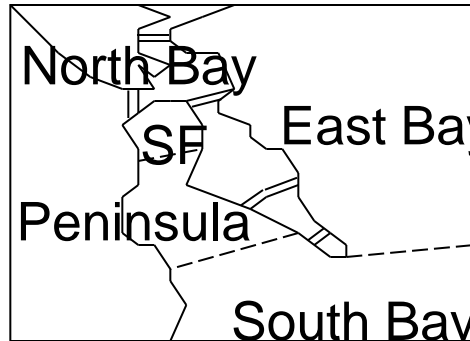
# Let's Get Started!

## Participant Introductions

- Name Say your name clearly so others can hear you
  - Reason for being here What you hope to learn in the course
  - Geographical area Desired geographical area for team meetings
- Listen for your area during introductions

## During Class Break

- Meet with Others Meet with others from your area during break
- Contact Info Exchange email addresses & phone numbers
- Get to Know Familiarize yourself with others during cases



## Example:

- Team 1: SF-Marina
- Team 2: SF-Downtown
- Team 3: East Bay
- Team 4: North Bay
- Team 5: Peninsula/ South Bay