



# Sports Analytics I

Produced by Dr. Mario  
UNC STOR 390

# Survey Results: Demographics

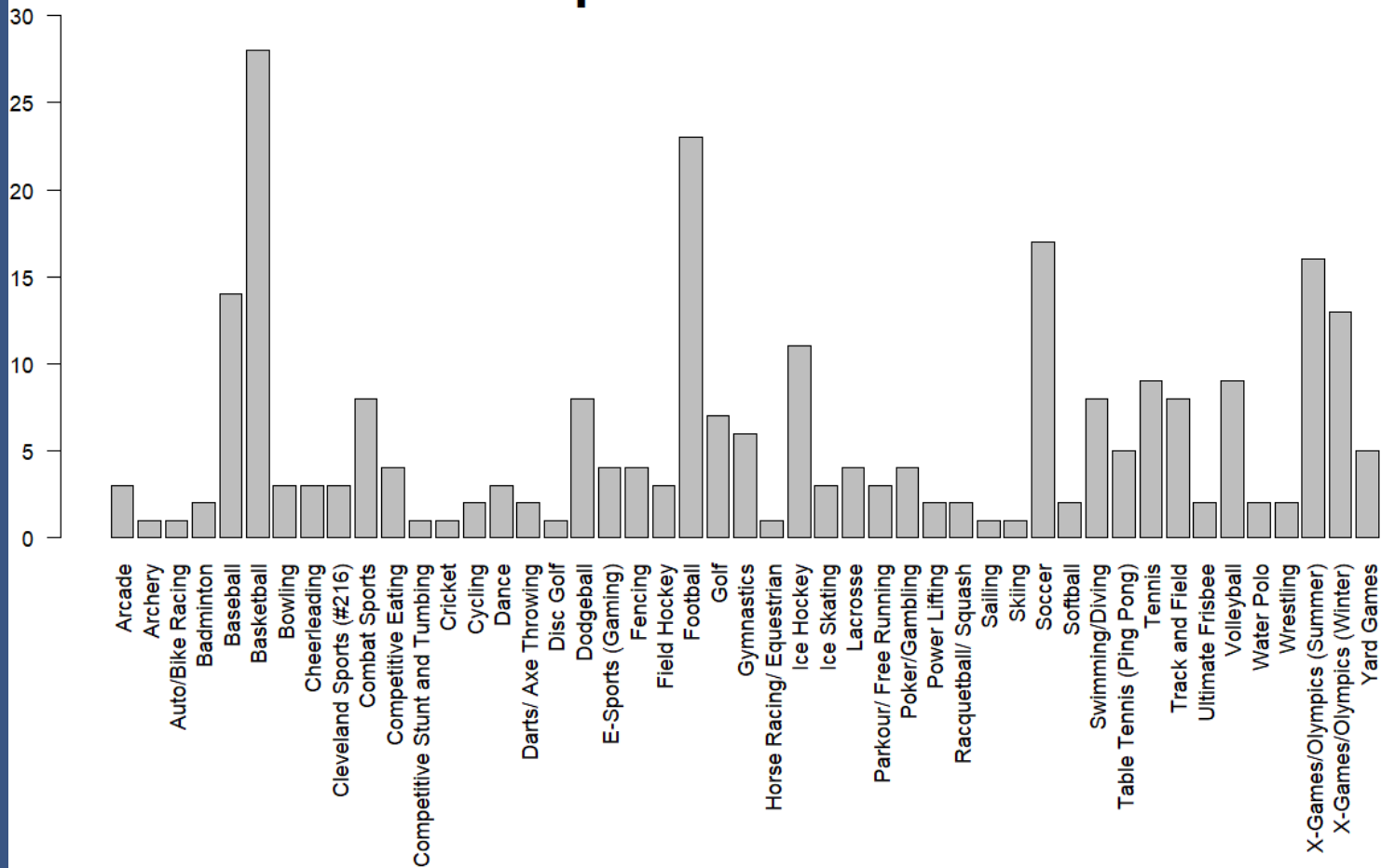
- 30 Responses
- Majority From the United States (29/30)
- Majority From North Carolina (19/29)
- Race Distribution
  - White (23/30)
  - Asian (4/30)
  - Black/African American (1/30)
  - Hispanic/Latino (1/30)





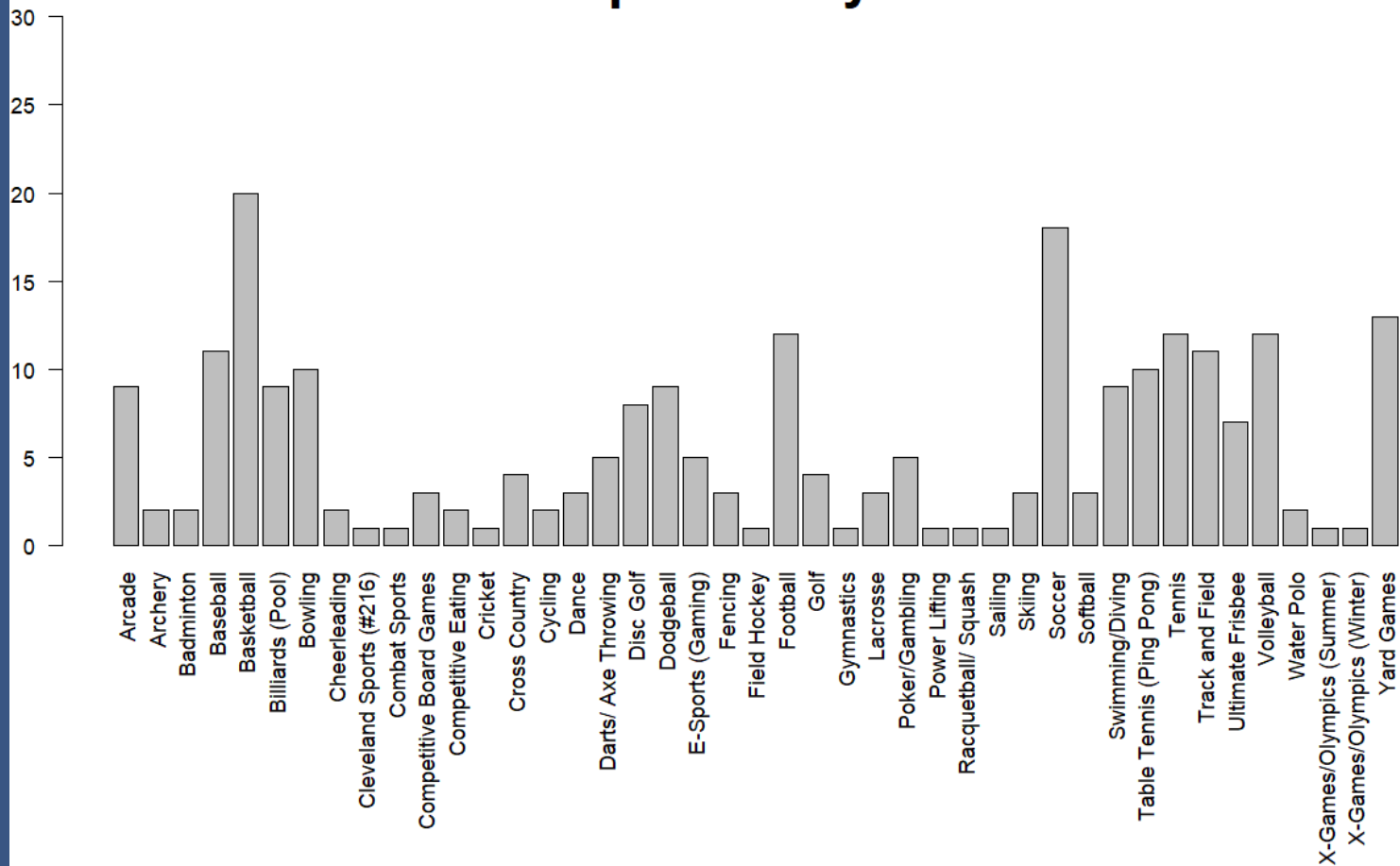
# Survey Results: Watched

Sports Watched



# Survey Results: Played

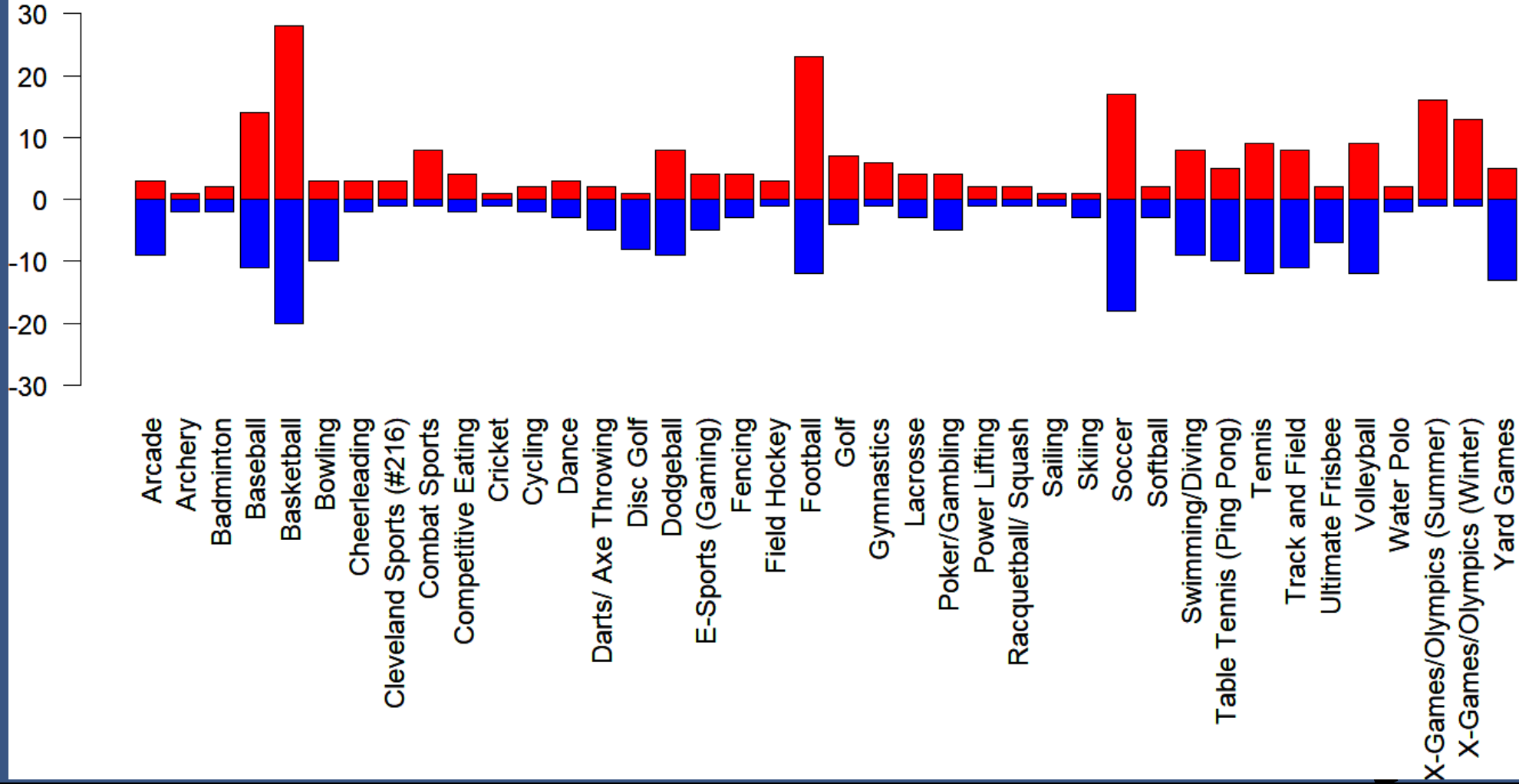
Sports Played



MARIO  
SPORTS MIX



# Survey Results: Combined





# Current Landscape of Sports

- Most Popular World Sports ([sportsshow.net](http://sportsshow.net))

- Based on 15 Criteria

- Global Fan Base
    - Viewership on TV
    - TV Rights
    - Internet Popularity
    - Social Media Presence
    - Number of Professional Leagues
    - Average Salary of Athletes
    - Sponsorship
    - Number of Countries
    - Biggest Competition
    - Relevancy Throughout the Year
    - Gender equality
    - Access to the General Public
    - Number of Amateurs
    - Prominence in Headlines



# Current Landscape of Sports

- Most Popular World Sports ([sportsshow.net](http://sportsshow.net))
  - Listed from Most to Least Popular
    - Soccer
    - Cricket
    - Basketball
    - Field Hockey
    - Tennis
    - Volleyball
    - Table Tennis
    - Baseball
    - American Football/Rugby
    - Golf



# Current Landscape of Sports

- Most Popular US Sports ([sportsshow.net](http://sportsshow.net))
  - Based on TV Viewership
  - Listed from Most to Least Popular
    - Football (38.8% Favorite, 111.9 Million)
    - Baseball (14.8% Favorite, 40.0 Million)
    - Basketball (15.3% Favorite, 30.8 Million)
    - Ice Hockey (3.8% Favorite, 27.6 Million)
    - Soccer (8.2% Favorite, 27.3 Million)

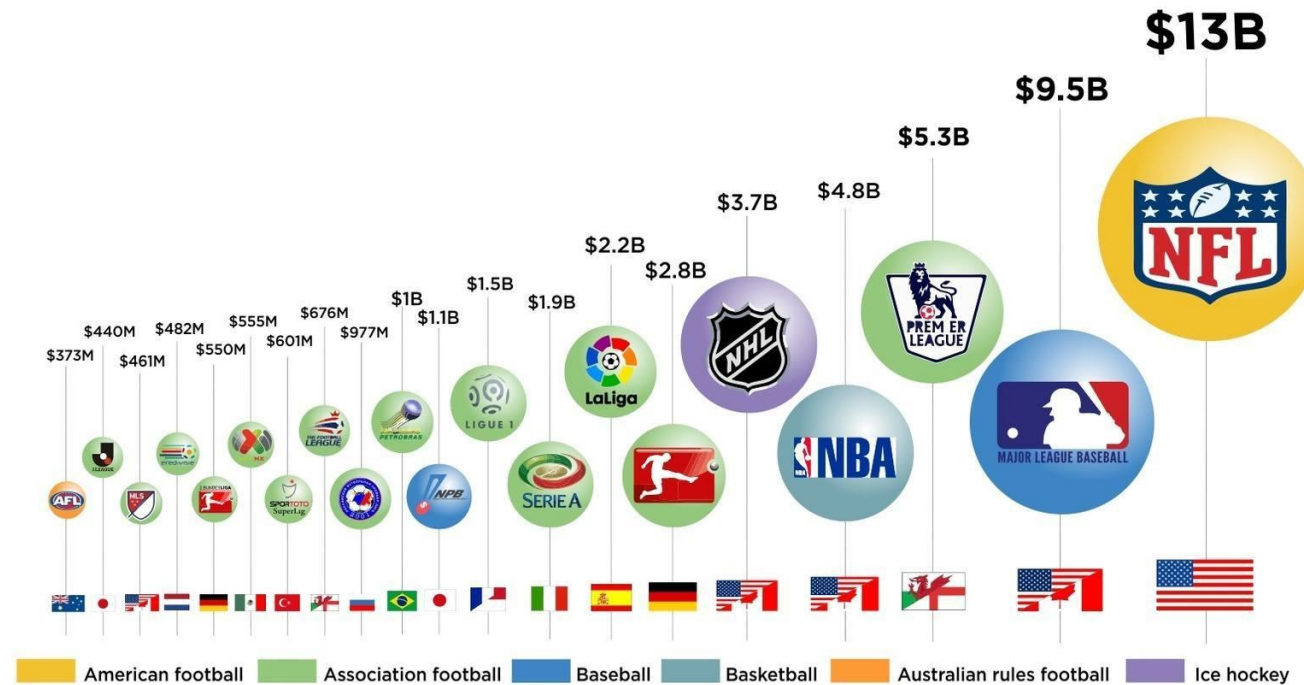




# Current Landscape of Sports

- Revenue in Sports Leagues (howmuch.net)

## Top Professional Sports Leagues by Revenue



Source: <http://howmuch.net/articles/sports-leagues-by-revenue>

howmuch.net



# Current Landscape of Sports

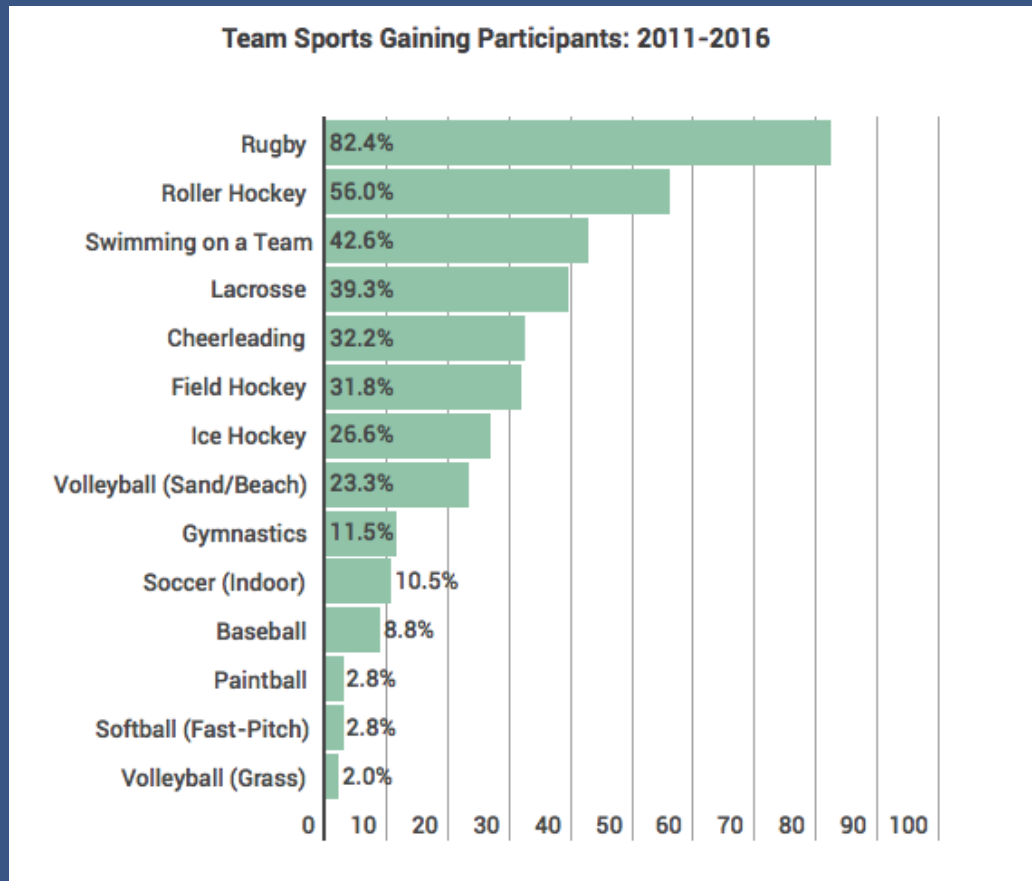
- Revenue in Sports Leagues (howmuch.net)
  - Majority Soccer Leagues (14/20)
  - Combined Soccer Leagues Revenue = \$19.4B
  - MLS is 18<sup>th</sup> on the List = \$461M
  - 4 out of top 5 are US/Canadian Leagues
  - NFL, MLB, NBA, NHL = \$31
  - US Diverse Interests = Spans 5 Different Sports





# Current Landscape of Sports

- Growth in Team Sports ([sisugaurd.com](http://sisugaurd.com))



Based on 2017 Annual Report  
On US Trends in Team Sports  
By Sports & Fitness Industry  
Association (SFIA)





# Current Landscape of Sports

- Growth in Team Sports ([sisugaurd.com](http://sisugaurd.com))
  - Increase of 10.9% Across All Sports (2014-2016)
  - Resilient Sports Based on Age of Participants
    - Soccer
    - Volleyball
    - Softball
    - Flag Football
  - Declining Sports Lost 9.3M Participants
  - Basketball Declined Most by 2.4M Participants



# Dope Quote

The most meaningful way to differentiate your company from your competitors, the best way to put distance between you and the crowd is to do an outstanding job with information.

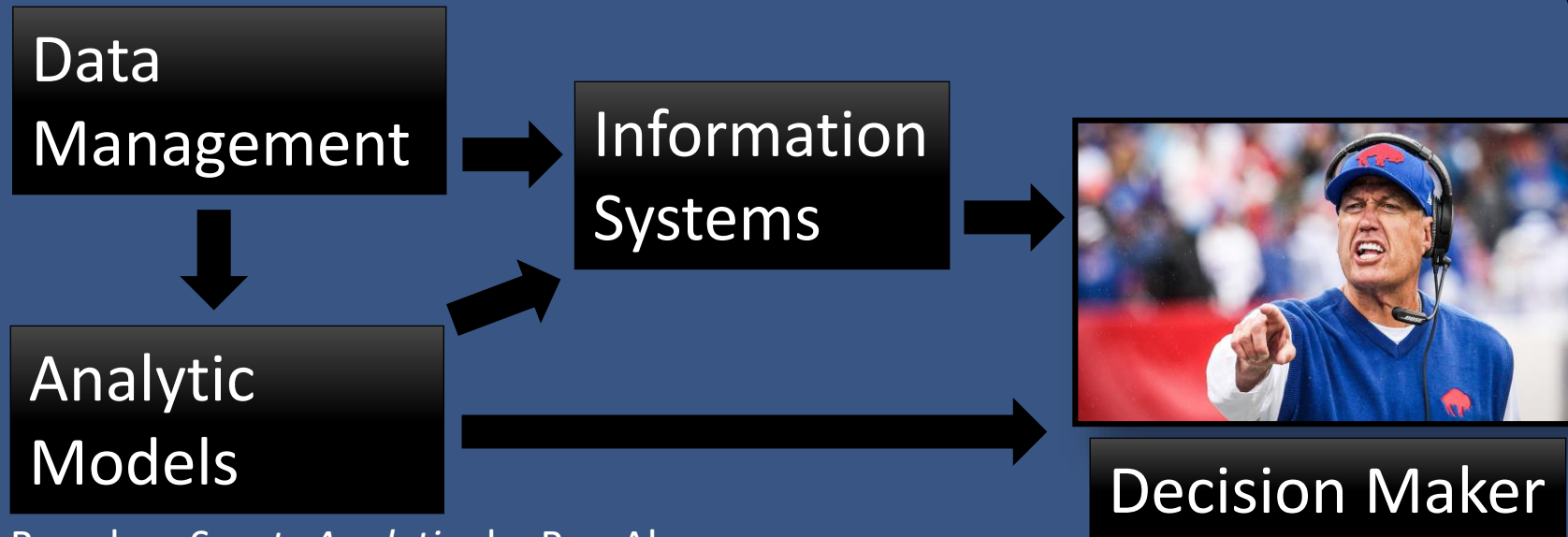
How you gather, manage, and use information will determine whether you win or lose.

- Bill Gates



# What is Sports Analytics?

- Defined by Ben Alamar
  - Data Management
  - Predictive Models
  - Information Systems



Based on *Sports Analytics* by Ben Alamar





# What is Sports Analytics?

- Purpose: To Aid an Organization's Decision Makers in Gaining a Competitive Advantage
- Goals
  - Save the Decision Maker Time by Making Information Acquisition Efficient  
(Data Management/Information Systems)
  - Provide Decision Makers with Novel Insight  
(Analytic Models)
- We are an Accessory to the Decision Maker



# What is Sports Analytics?

- Different Decision Makers
  - Off-the-Field: Profit Driven
  - On-the-Field: Performance Driven
- Skills for the Data Analyst
  - Competence – Ben Alamar
  - Leadership – Ben Alamar
  - Humility – Dr. Mario
  - Honesty – Dr. Mario



# What is Sports Analytics?

- Data Management
  - Different Sources: What are some examples?
    - Quantitative and Qualitative
    - Objective and Subjective
    - Text and Images and Video
  - Increasing Number of Sources
  - Increasing Volume from Those Sources
  - Data Needs to Be ... “Organized”  
“Centralized”  
“Streamlined”





# What is Sports Analytics?

- Analytic Models
  - Consider the Research Question or Problem
  - Identify or Create Dependent Variables of Interest
  - Incorporate All Information
  - Find Relationships (Linear/Nonlinear)
  - Goal: “Meaningful Insight”



# What is Sports Analytics?

- Information Systems
  - Mechanisms for Data Delivery
  - Organization and Presentation Matters
  - “One Version of the Truth” – Summarized and Centralized
  - Static: Automatically Generated Reports
  - Interactive: Computer, Phone, Tablet, and Web Applications



# Analytics In the Organization

- On-the-Field
  - Coaching
  - Player Development
  - Player Evaluation
- Off-the-Field
  - Sales
  - Marketing
  - Cap Management
  - Hiring
  - Public Relations and Social Media





# Analytics Across the Organizations

- Sports Analytics Use Survey (2013)
- Sample of 27 People (NFL, MLB, NBA, EPL)
- How Many Different Sources?
  - 1-2 (6.7%)
  - 3-4 (33.3%)
  - 5-6 (13.3%)
  - >6 (46.71%)



# Analytics Across the Organizations

- How Much Data is Centralized?
  - All (31.3%)
  - Most (37.4%)
  - Some (31.3%)
- How Much Data is Dependent on One Person?
  - Some (50.0%)
  - Most (43.7%)
  - All Data Centralized (6.3%)



# Analytics Across the Organizations

- Is Data Checked for Errors?
  - Always (31.3%)
  - Usually (37.5%)
  - Sometimes (18.8%)
  - Occasionally (6.1%)
  - Rarely (6.3%)
- How Many Database Programmers are Employed?
  - 0 (37.5%)
  - 1-2 (50.0%)
  - 3-4 (0.0%)
  - >5 (12.5%)





# Analytics Across the Organizations

- How Many Statistical Analysts are Employed?
  - 0 (20.0%)
  - 1-2 (66.6%)
  - 3-4 (0.0%)
  - >5 (13.3%)
- Roadblock: Difficulty Identifying Strong Applicant
- Difficulty in Both Hiring and Evaluating



# Analytics Across the Organizations

- Clear Process for Hiring/Evaluating Analysts
  - Strongly Agree (13.3%/14.3%)
  - Somewhat Agree (13.3%/14.3%)
  - Neutral (26.7%/28.6%)
  - Somewhat Disagree (13.4%/21.4%)
  - Strongly Disagree (33.3%/21.4%)
- Analytic Resources in Line with Strategic Game Plan
  - Strongly Agree (26.7%)
  - Somewhat Agree (33.3%)
  - Neutral (33.3%)
  - Strongly Disagree (6.7%)







# Final Inspiration

If you're not first, you're Cleveland.  
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- Mahatma Mario