A Customer 360° View Applied To The Business Side of The Sporting World

Great Lakes Analytics in Sports Conference
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Presented by Shawn Gerou
@Fanalyticsports

Socializing analytics to the sporting world!

About Us

Fanalyticsports is a sports consulting firm focusing on providing business intelligence solutions and socializing the data driven approach to winning.

- 8+ years of experience in analytics working with Top Tier Consulting firms to drive business decisions.
- Tableau Iron Viz Competitor 2017, “Traveling the Road to the Final Four”
- Sports Journal of Economics Author of, “MLB Attendance Demand and Interleague Play”
- Ticketing contract signed Dec. 2016, finalizing two more contracts for August 2017.

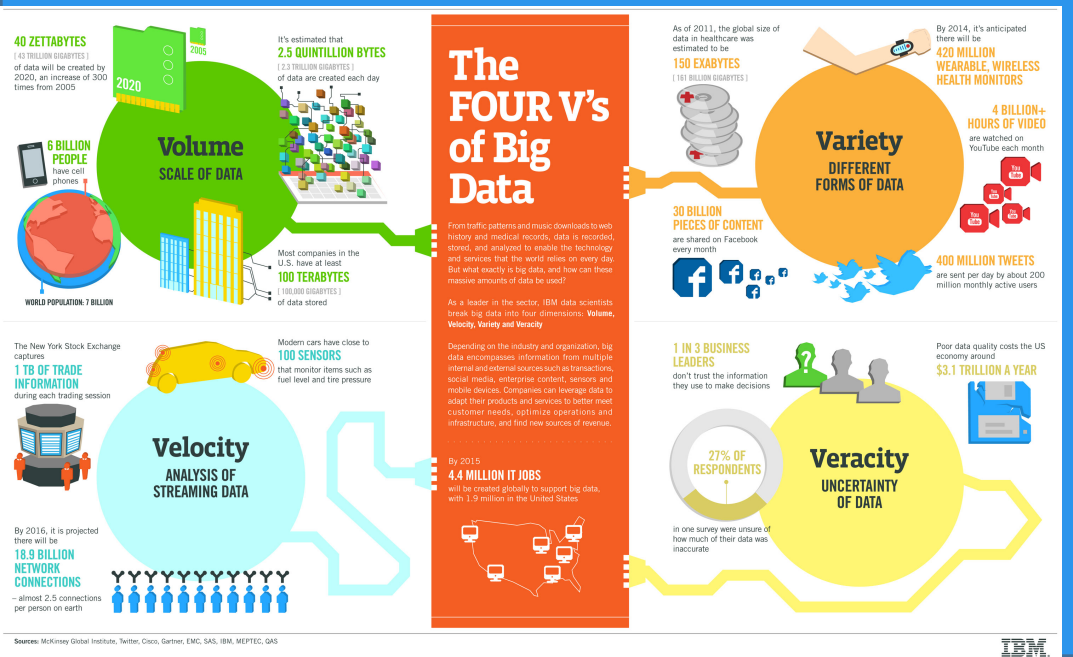
Shawn Gerou
CEO/Founder

A Customer 360° View Applied To The Business Side of The Sporting World

- **Current landscape and trends in Data and Analytics.**
- What is the Customer 360° View?
- Examples and Use Cases.

Trends and Current State

- Twitter search on analytics and business intelligence brought back the following.
- (https://github.com/fanalyticsports)



- 2.5 quintillion bytes of data is being created per day. (1 QT has 18 zeroes)
- ~500M tweets per day, 350 users upload Facebook photos.
- Majority of this data is unstructured.

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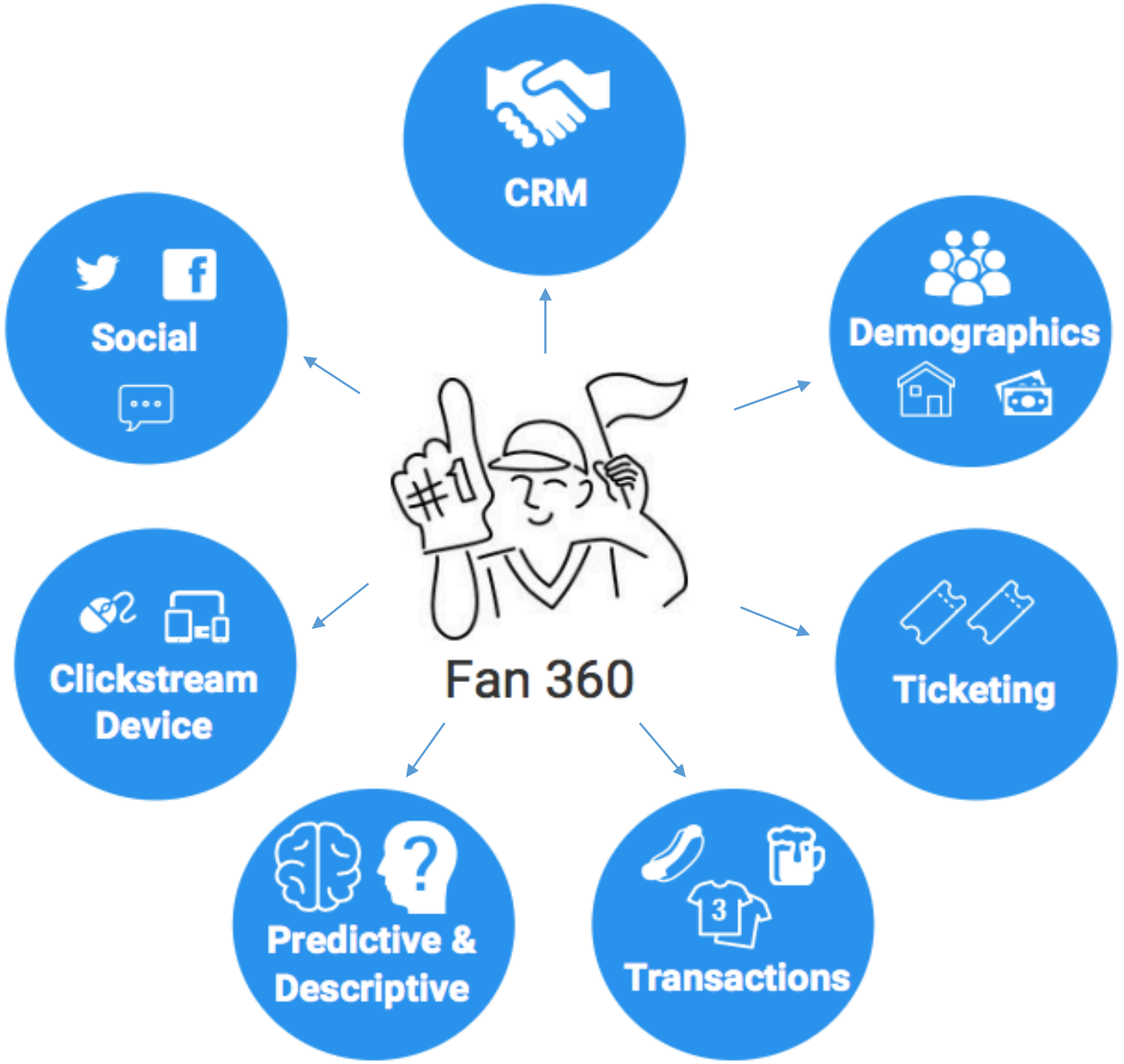
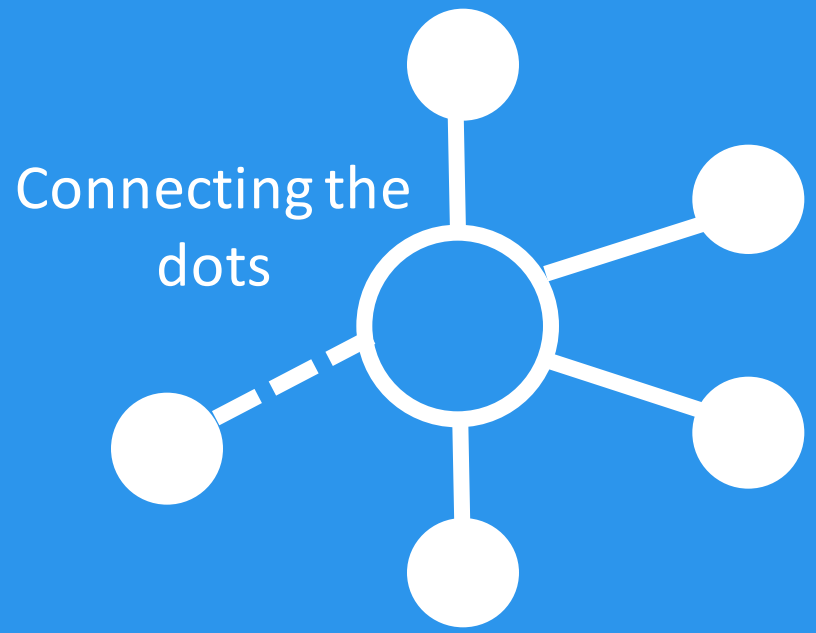

CRM
Social
Demographics
Clickstream
Device
Fan 360
Ticketing
Predictive &
Descriptive
Transactions

Things to Remember

- Connecting the data dots not only helps lead business initiatives but improves analytics and reporting.
- Relate your data points back to an entity and determine how best to determine that entities identity. (Player, Fan, Household, etc.)
- Start small with key initiatives in mind.
- Think outside the box. (SOW, LTV, Customer Journey ex.)
- Build, Refine, and Test.



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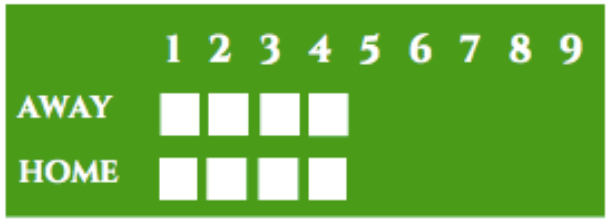
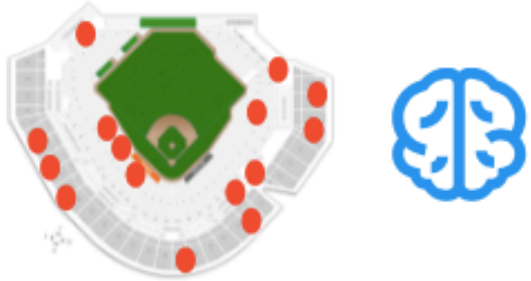
By connecting the dots and implementing an in-game ticket exchange we were able to increase revenue by +$1.3M dollars.

Joe and his two sons check into a baseball game

Connecting our ticketing data with our CRM we see that Joe is sitting in Section 426 Row 12 and is married with two kids and has a birthday coming up next month.





At the end of the 4th inning the stadium notices the following seats are empty. It runs an algorithm to determine the best price to offer seats to Joe based on his Game Day Wallet

Joe receives a push message from his phone and swaps his tickets out for third row seats costing an extra $30/tix.

Meanwhile back home, Joe's wife logs onto her computer and receives a birthday reminder email showcasing a sale for 4 tickets to an upcoming game.

Determining a Game Day Wallet

What exactly do we mean by game day wallet?

- Total spending ability of a fan for a given day. (Total daily spend)
- Total attainable opportunity for given game. (Game is just one one area of spend)
- Realistic attainable wallet by what the best customers spend. (Actual spend)

Actual Spend<=Daily Game Spend<=Total Daily Spend

Actual Spend ≈ Daily Game Spend

Approaches to estimating wallet (Unobservable quantity)

- Survey of customers to obtain values (Sampling issues, response bias)
- Clustering approach to obtain best fans across ticket and game segments. (Assumes segmented best fans spend the majority of their wallet.)
- Quantile Regression (Overfitting and bias possible.)

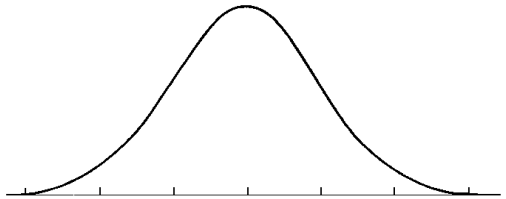
Modeling a Fan's Wallet

Fan's Wallet Algo

- K-Means for fitting the best fans by segment.

$$\arg\min_{\mathbf{c}} \sum_{i=1}^{k} \sum_{\mathbf{x} \in c_i} d(\mathbf{x}, \mu_i) = \arg\min_{\mathbf{c}} \sum_{i=1}^{k} \sum_{\mathbf{x} \in c_i} \|\mathbf{x} - \mu_i\|_2^2$$

- Evaluate clusters by segment for fit and check distribution of variables.



- Model Actual Spend by segment by using the best fans for each group.
- Apply Model scores to every fan within it's segment to create a Wallet score for each fan.

$F_w = c + \beta_1 * \text{GameSeg} + \beta_2 * \text{TicketSeg} + \beta_3 * \text{DOW} + \beta_4 * \text{PriorSpend} + \beta_5 * \text{Age} + \beta_6 * \text{Age}^2 + \beta_7 * \text{INC} + \beta_8 * \text{INC}^2 + \beta_9 * \text{Consess} + \ldots\ldots\ldots\ldots + \text{Error}$

Fan 360 Applied to Other Examples

- LTV applied to Sponsorships.
- Abandoned Cart (Product/Ticketing)
- Personalized concession/vendor offers.
- Journey Mapping. (Outreach programs for New and Existing Fans)
- Dynamic Ticket Pricing Optimization.
- Optimized channel marketing.

Questions?

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