

The University
of Southern Mississippi

College of Business

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business
SUCCESS**



Southern Business Administration Association

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Gaming Analytics Panel

Discussants

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Operational definition of analytics



an·a·lyt·ics

noun

plural noun: **analytics**

- the systematic computational analysis of data or statistics.
"content analytics is relevant in many industries"

-information resulting from the systematic analysis of data or statistics.

"these analytics can help you decide if it's time to deliver content in different ways"

Business definition of analytics



The field of data analysis. Analytics often involves studying historical data to research potential trends, to analyze the effects of certain decisions or events, or to evaluate the performance of a given tool or scenario. The goal of analytics is to improve the business by gaining knowledge which can be used to make improvements or changes.

Big data – fad or future?



big da·ta

Noun Computing

noun: **big data**

- extremely large data sets that may be analyzed computationally to reveal patterns, trends, and associations, especially relating to human behavior and interactions.

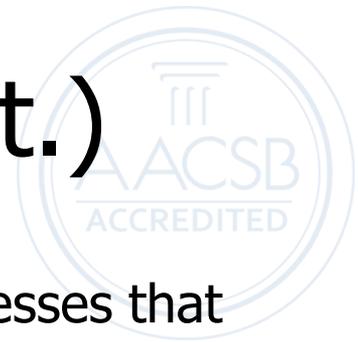
"much IT investment is being spent on managing and maintaining big data"

Current State of Analytics



- Business analytics is still in the emerging stage.
- Intuition based on business experience is still the driving factor in decision-making.
- Analytics are used as part of the decision process at varying levels, depending on the organization.
- Companies are looking to analytics to solve big issues, with the primary focus on money: reducing costs, improving the bottom line, and managing risks.
- Data is the primary challenge in the adoption or use of business analytics. Many companies continue to struggle with data accuracy, consistency, and even access.

Current State of Analytics (cont.)



- Many organizations lack the proper analytical talent. Businesses that struggle with making good use of analytics often don't know how to apply the results.
- Big data is driving opportunities for innovation in three key areas: (a) creating new business models; (b) discovering new product offers; and (c) monetizing data to external companies.
- Culture plays a critical role in the effective use of business analytics. Companies that have built an *analytics culture* are reaping the benefits of their analytics investments.
- Companies that don't get the data-driven culture right tend to fall behind their peers.

Source: White papers by Bloomberg BusinessWeek Research Services and Forbes

Data Science



- The sheer quantity of data generated over just the last few years far exceeds the entirety of the previously accumulated human historical data record.
- Even a decade ago, explaining data science to employers was challenging. Few people understood the value of a skill set that combines computer science, statistics, operations research, engineering, business insights and strategy — and the impact it can have on a business.
- Data science is still nascent and ill-defined as a field.

Shortage of Data Scientists



- Many data-driven companies are creating their own definition of data scientist depending on their infrastructure and needs. Nonetheless, most agree that data scientists should be quantitatively oriented and creative.
- In a 2015 KPMG survey of C-suite executives, 99% said that analysis of big data was important to their strategy for next year.
- A 2015 McKinsey study predicts that by 2018 the number of data science jobs in the United States alone will exceed 490,000, but there will be fewer than 200,000 available data scientists to fill these positions.
- Per the McKinsey study, global demand for data scientists is projected to exceed supply by more than 50% by 2018.

Casino Gaming Facts for Context



- Three simple elements are required to engage in gambling: consideration, chance and reward.
- 2015 global casino gamine revenue - \$160 billion
- 2015 United States casino gaming revenue - \$71 billion
- Number of gaming establishments in the United States at the end of 2015 - 1,511
- Average annual salary of casino worker in Nevada - \$46,306 (170,000 workers)
- Number of visitors to Las Vegas in 2015 – 42 million
- 2015 gross casino revenue in Mississippi - \$2.10 billion
- 2015 gross casino revenue on Mississippi Gulf Coast - \$1.14 billion

Uniqueness of Gaming Industry



- Generally, casino gaming is not a single core business – there are multiple divisions which all operate according to very different principles and on different daily cycles.
- Gaming restaurants and entertainment venues don't behave in the same way as the gaming floor or casino hotels – each has its own specific performance drivers.
- Yet gaming operators need to be able to gain an accurate overview of how all these businesses interact in order to make the right decisions.
- Because the industry moves so quickly and with large amounts of cash flow, they need this insight in real time, on a daily basis.

Big Data and Casino Gaming



- Gaming management systems allow casino operators to collect *significant* amounts of data about its Players Club customers and hotel guests
- Some examples of data collected are no. of trips, games played, time on device, spending patterns, total handle, average daily theoretical, etc.
- These data are typically analyzed and partitioned to determine the type and amount of loyalty club benefits offered to the customer

Primary Challenge with Big Data



- One of the primary challenges is capturing the tremendous volume of unstructured data (Facebook, Twitter, click screen data, text data, GPS and location data, blogs, etc.).
- These data are coming so fast that it is already stale upon receipt, like location data or a tweet that might have been missed.
- Must find ways to store data that are cheaper, flexible, faster, and scalable.
- One solution is to integrate *Hadoop*, a system designed specifically to capture and store big data. The program is built on a commodity and hardware infrastructure, so it is both relatively inexpensive and flexible (data don't have to be related or aligned neatly in rows and columns).

Data Mining



- Many casino operators have terabytes of data – everything from customer player card information to information about a customer’s room preference – and sifting through this information to discover meaningful connections would be an impossible task without data mining.
- These data also allow gaming operators to employ mining techniques to (a) create more efficient and effective marketing programs, (b) manage gaming inventory, (c) optimize hotel capacity, and, ultimately (d) optimize profitability.

Predictive Analytics



- Drawing on data from Players Club database, predictive models can set budgets and calendars for customers, calculating their predicted lifetime value in the process (gaming worth = no. of trips x avg. coin-in or handle per trip x hold % or house advantage).
- For example, if a gambler wagers less than usual because they may have skipped a monthly visit, the casino can intervene with a letter or phone call offering a free meal, a show ticket, or other gaming comps.
- With predictive analytics, gaming organizations can easily segment their customers and coordinate marketing campaigns to effectively target each segment across each outbound channel.
- By utilizing data from past campaigns and measures generated by the predictive modeling process, casino operators can track actual campaign responses versus expected campaign responses, which often prove wildly divergent. Learning from these trends increases marketing efficiency.

Predictive Analytics (cont.)



Ultimately, equipped with information about gaming worth and trip patterns, casino management can utilize predictive analytics to:

- Create optimal direct mail campaigns
- Create seasonal promotions
- Plan the timing and placement of advertising campaigns
- Create personalized advertisements
- Define which market segments are growing most rapidly
- Determine what patrons come together
- Determine what patrons are most/least likely to respond to an offer
- Determine what patrons are likely to abuse an offer
- Determine the number of rooms to reserve for wholesale customers

What We Do Know about Gaming Analytics



- A solid casino marketing foundation built around patron analytics will lead to improved marketing results by identifying the best patrons and the best ways to drive business from those patrons.
- All it takes is some creative thinking and hard work to uncover actionable information from the vast amounts casino data.
- This information can be used to improve response, revenue, and profit driven by marketing campaigns.
- The field of patron analytics in the gaming industry is still growing.
- Ultimately, the goal of casino patron analytics is to provide actionable results faster that can drive offers in real time and build stronger relationships between the casino and the patron.

Gaming Metrics Developed by BRG

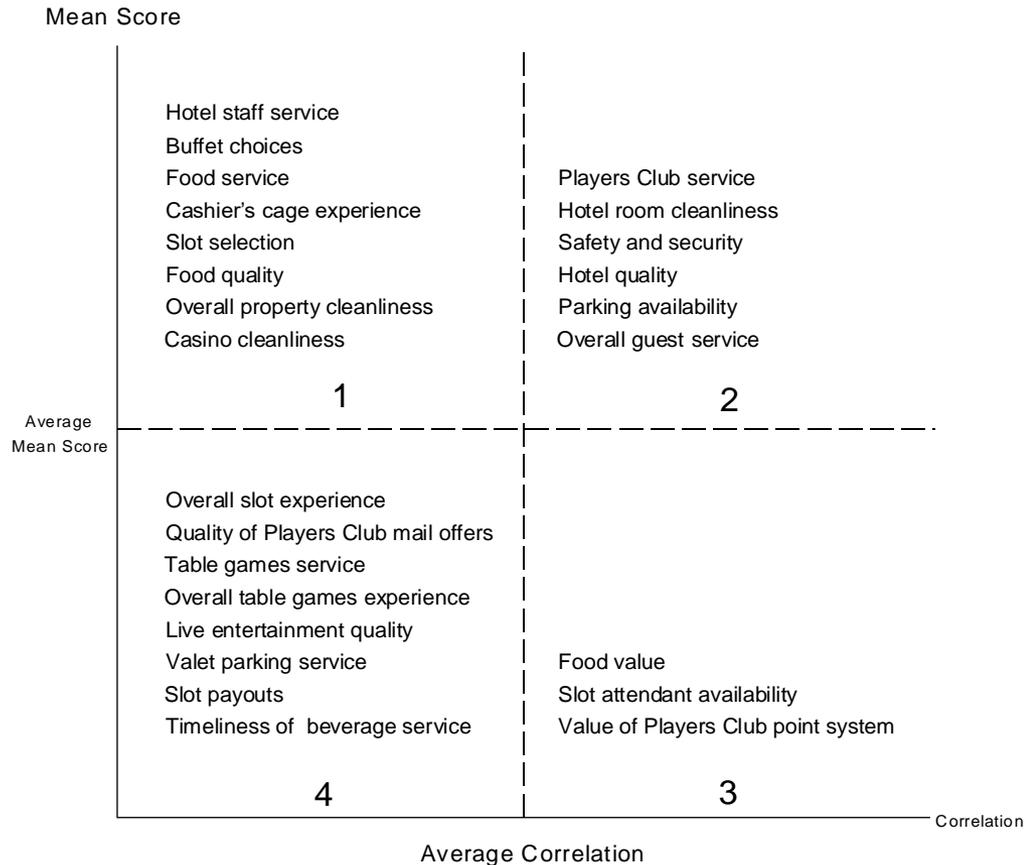


- Mean Summated Loyalty Index
- Composite Service Grade
- Capture Efficiency Ratio

Graphical Depiction of Importance vs. Performance



Quadrant Analysis



Managing Service Quality



Overall Guest Service

