

aimViz™ for Gaming



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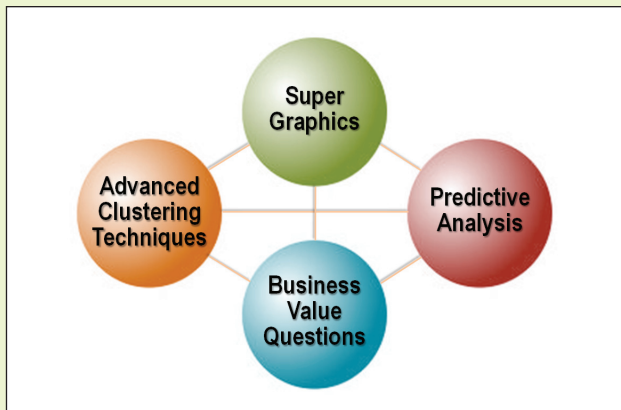


Figure 1 - The Four Components of aimViz

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Introduction

aimViz is the **revenue and customer analytics module** of BIS²'s gameViz™ solution. aimViz has been specifically designed and developed for casino operators to enable them to get new insights as to the most profitable patrons, and those which can be 'tapped' for additional revenue and profit.

aimViz draws together into one methodology four powerful techniques – Super Graphics, Advanced Clustering Techniques™, Predictive Analysis, and Business Value Questions (Figure 1).

Applying aimViz

By way of example, Figure 2 (refer to next page) shows recency and frequency of a casino's patrons on the Quartal Super Graphic. Of particular interest are those patrons in quadrant 0 who have high frequency but low recency (i.e., they have not been in recently). Typically, this might mean that these patrons are 'past due' on their next trip.

The important question that follows from this is that, would understanding the next 'due back' date provide a better ability to target those patrons who are 'past due' on their predicted trip?

Similarly, what is the expected value of that trip and what is the lifetime value of that patron? These questions and more, can be answered using the aimViz solution.

Introduction to gameViz

Today's gaming environment drives an unprecedented need to understand, analyze, and action the ever increasing mountains of patron and operational data. This, coupled with the need to make decisions faster and within a more complex environment, is resulting in casino operators demanding better tools for business analytics.

In response, BIS² has created Super Graphics, which represents the next generation of advanced data visualization tools for strategic, operational, and analytical users of gaming data.

The BIS² Super Graphics (contained within the gameViz solution) enables users to understand and take action in respect of their gaming data in a new way. Users can see a multitude of data points simultaneously to understand patterns, identify meaningful relationships, and gain new insights which were not previously possible.

gameViz, designed to improve casino revenue and profit performance, can be applied to most areas of your gaming business and consists of four key modules:

- 1. Revenue & Customer Analytics (aimViz™)** – get new insights as to the most profitable customers, and those which can be 'tapped' for additional revenue and profit.
- 2. Property Yield Management (propertyViz™)** maximize revenue and yield across the divisions and across properties. Easily see customers who play at one property and how much and when they play at other properties.
- 3. Gaming Floor Optimization (floorViz™)** – see customer segment preferences on the floor, which areas of the floor and machines are working, and which ones are not. Identify which groups of machines (market basket analysis) particular customers like to play, and when.
- 4. Advanced Gaming Floor Analytics (slotViz™)** – easily see which downloadable games / combinations are most popular, when and where. Rapidly determine the ROI and improvement opportunities with networked games and community gaming.

gameViz is a powerful, easy-to-use, gaming industry data visualization solution that allows casino operators to directly query their data, and enable them to see what they need to do.

Join the growing BIS² User Community and leverage a new paradigm in visual analytics—**gameViz**.

The aimViz Layers

aimViz consists of the layering of these techniques (Figure 3). The first layer (Data) is Advanced Clustering Techniques™ and Demand Modelling. The Advanced Clustering Techniques prepare the operational data by reducing the dimensions (i.e., collapsing attributes (columns) that are highly correlated), clustering customers with high similarities, and identifying clusters that contribute little additional information. The Demand Modelling component is used to create customer behavioral models (predictive analysis) for the clusters and patrons (i.e. next predicted visit date (due back), past due, likely to attrit, trip value and lifetime value).

The second layer (Visualization) is the Super Graphics that display the clusters using one of the visual designs, such as Quartal, Temporal, Spatial, or Pivotal. The user can visualize the whole to/from the part and visualize the forecasts.

The third layer (Insight) is Business Value Questions that result in delivering real value to the casino. The example questions on the left hand side of Figure 4 (refer to next page) drive the design of the specific Super Graphic, which will result in business insight. Would knowing these answers help with your casino operations and profitability?

Using the right technique is essential to any effective customer segmentation analysis. The aimViz solution includes Advanced Clustering Techniques and provides a robust method for creating meaningful customer segments.

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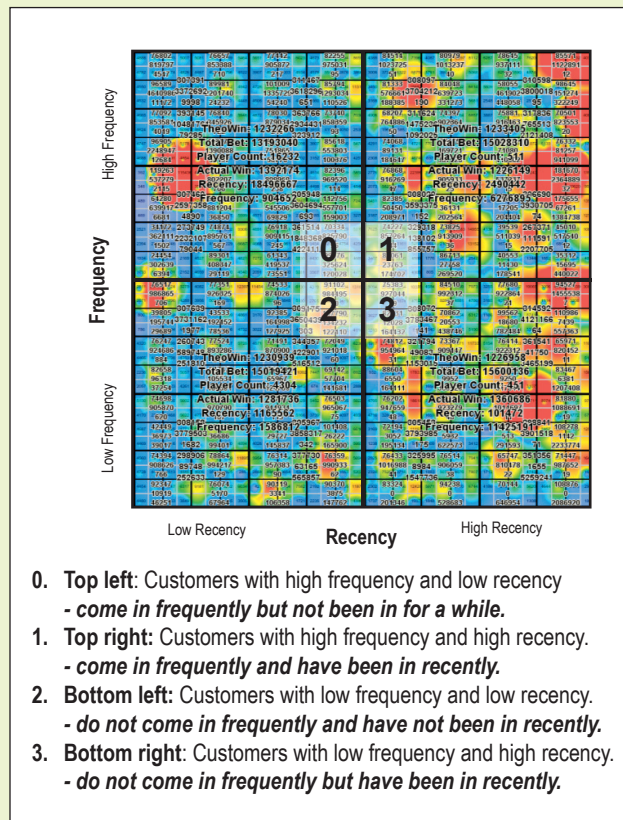


Figure 2 - Recency & Frequency Super Graphic Quartal

0. Top left: Customers with high frequency and low recency - **come in frequently but not been in for a while.**
1. Top right: Customers with high frequency and high recency. - **come in frequently and have been in recently.**
2. Bottom left: Customers with low frequency and low recency. - **do not come in frequently and have not been in recently.**
3. Bottom right: Customers with low frequency and high recency. - **do not come in frequently but have been in recently.**

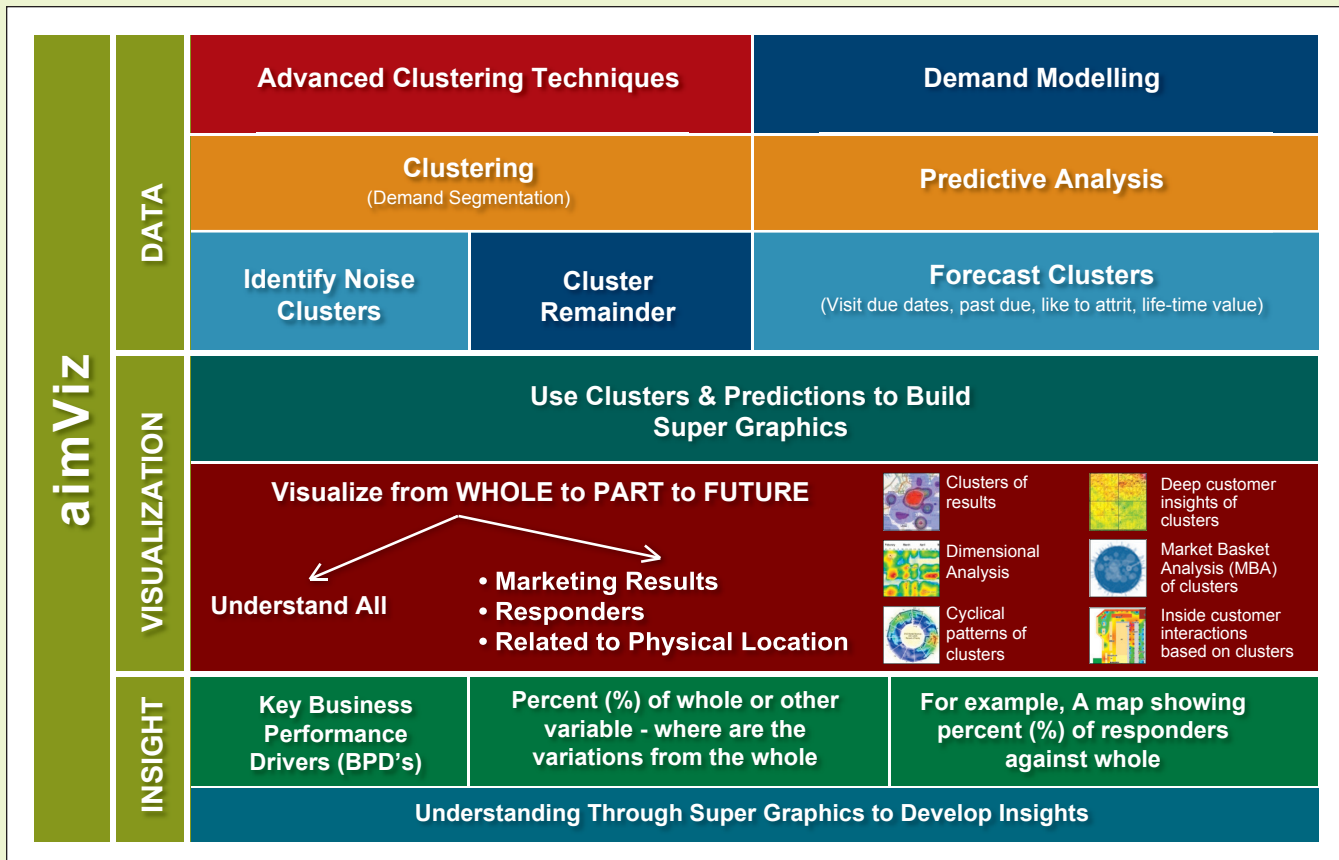


Figure 3 - The aimViz Layers.

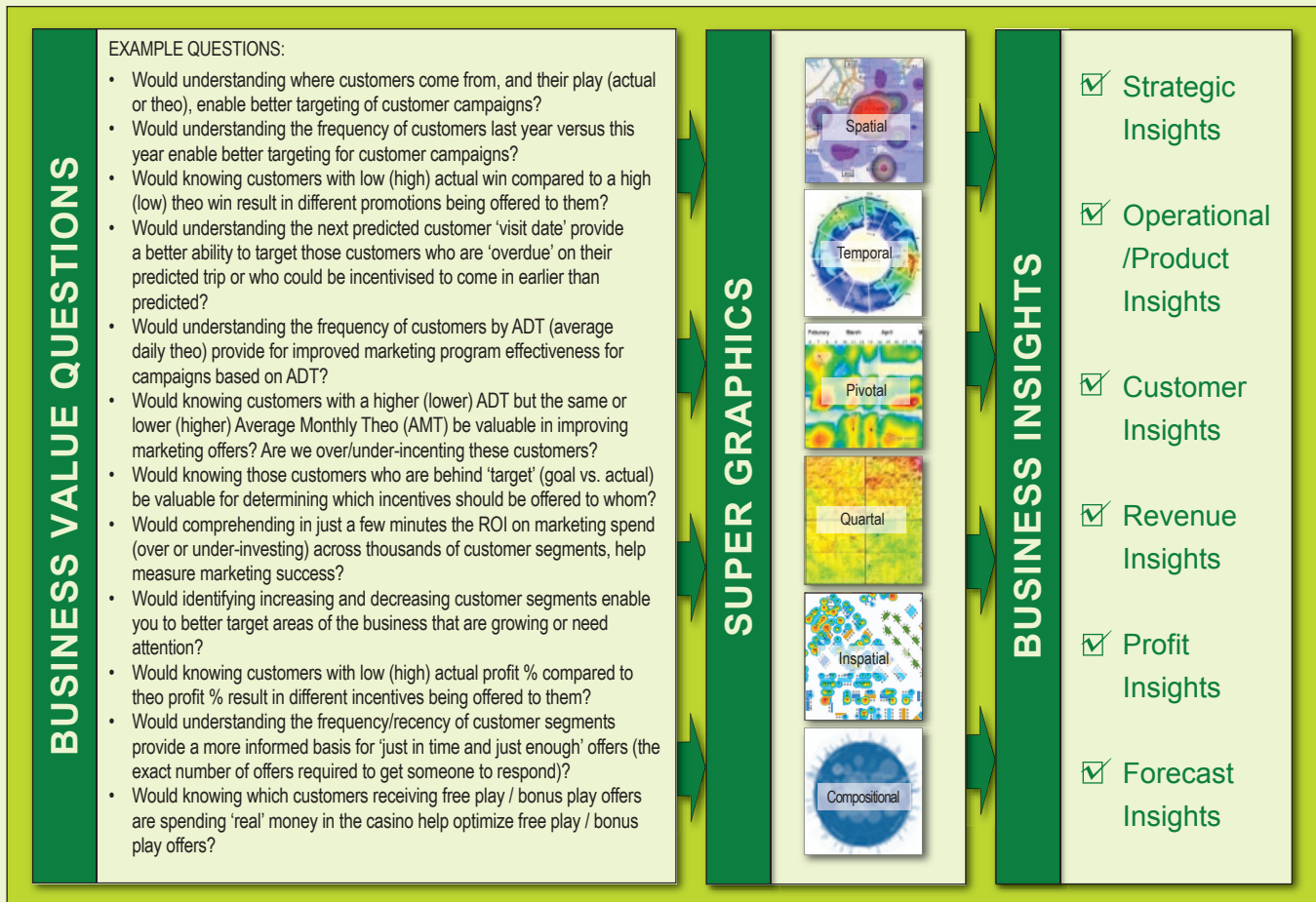


Figure 4 – Business Value Questions for Gaming

The aimViz Layers (continued)

In addition to aimViz, casino operators can use their own customer segmentation and selection tools to map selected customers to the Quartal Super Graphic, to better understand the characteristics of the selected customer groups and marketing campaign performance.

Once meaningful clusters are identified, they can be mapped and compared with other Quartal Super Graphics to show differences in behavior.

The ability to change what is displayed on the x and y axis of the Quartal picture makes the Quartal Super Graphic a powerful and intuitive customer segmentation, selection, and analytical tool.

The customer segments can also be mapped to either, or both, the Spatial Super Graphic™ (an outside geographic-based visualization) and the Inspatial Super Graphic (an inside casino floor-based visualization) to identify locational (i.e. geographic) differences in the customer segments and their patterns of play. Each of these Super Graphics provides new insights on improving customer revenue and profitability.

Key Points Summary

- aimViz is the revenue and customer analytics module of BIS²'s gameViz Solution.
- Specifically designed and developed for casino operators, aimViz enables new insights as to the most profitable patrons, and those which can be 'tapped' for additional revenue and profit.
- aimViz draws together into one methodology, four powerful techniques - Super Graphics, Advanced Clustering Techniques, Predictive Analysis, and Business Value Questions.
- Traditional BI tools simply lack the necessary power to handle the ever-growing volumes of gaming patron and slot machine data. Gaming operators must now seek out the new paradigm-Super Graphics-available within aimViz.

More About aimViz for Gaming

gameViz is a gaming industry-specific data visualization tool that allows you to directly query your data and see the results visually using innovative and powerful Super Graphics (Figure 5).

Join the growing BIS² User Community and leverage a new paradigm in visual analytics—Super Graphics.

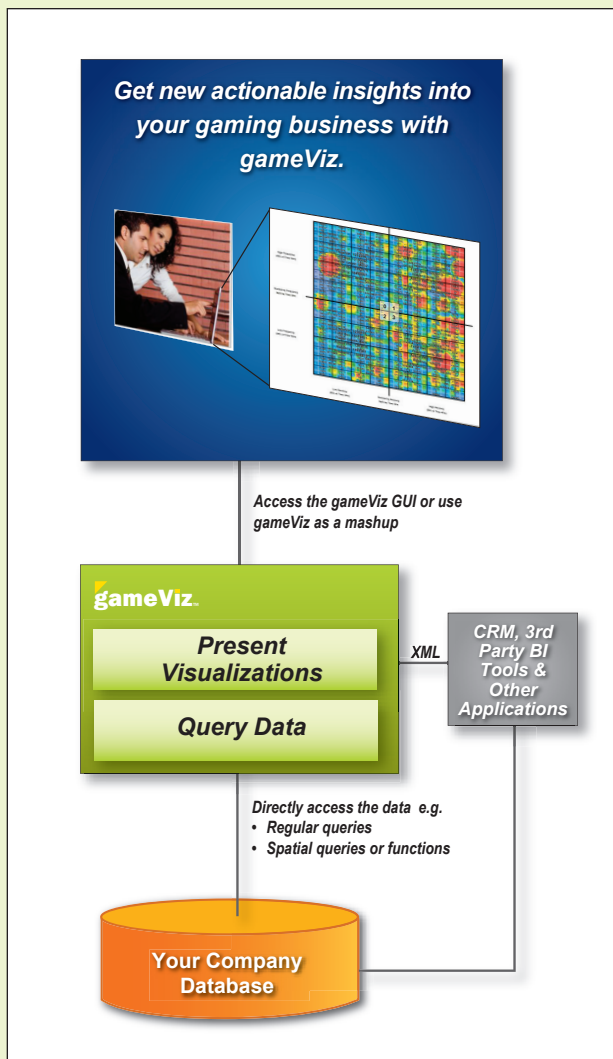


Figure 5 - gameViz Overview.

TOP 10 REASONS TO CHOOSE gameViz

- 1. Unique visual presentation methods** - allows users to comprehend a multitude of data simultaneously in a natural and easy-to-use way. Also enables users to capture their business in one single picture and then look at relevant detail where appropriate.
- 2. Extensive and expanding visual library** - extensive and expanding library of Super Graphics that have built-in data visualization expertise to enable users to create and use meaningful Super Graphics.
- 3. Framework for powerful industry solutions** - as a generic tool, gameViz provides a strategic and operational intelligence framework for powerful and value-based industry solutions.
- 4. Easy-to-use powerful technology** - simple, easy-to-use graphical interface that allows users to directly act on the data within the context of the advanced data visualization.
- 5. Unique underlying algorithms** - unique and patent pending algorithms that translate data and business performance drivers into easy to understand and useful visualizations.
- 6. Utilizes industry databases** - enables an organization to get more value from its existing investment in its industry data warehouse. gameViz interrogates the database directly without the need to create a separate database or cubes.
- 7. Rich Internet Application (RIA)** - web-based enterprise software that is deployable with only a URL.
- 8. State-of-the-art technology** - allows enterprises to use the gameViz client side Adobe[®] Flash[®] application or the enterprise's own mashup with the gameViz server side application.
- 9. Service Oriented Architecture (SOA)** - built using J2EE technology with USEful[™] and RESTful interfaces and deployed on IBM WebSphere[®] Application Services or JBoss EAP.
- 10. Leverages your existing investment in BI tools** - gameViz has been designed to work with most other major BI tools. gameViz provides the big picture whilst other BI tools can provide more detail. In addition, you can export cluster groups into your BI tool(s) for more in-depth analysis.

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