



## Business Embedded Analytics

### Aha! – Competitive Business Outcomes

Business has become increasingly dynamic, complex and uncertain. Old approaches based on “tribal knowledge” are no longer effective and can lead to disasters. Analytics have been proven to provide competitive business outcomes for market leading companies such as Amazon, American Airlines, Google, Netflix, and Progressive Insurance, among others, in a very short period of time.

The market for analytics is growing. More and more companies are realizing that analytics are essential, not optional. This paper will explore the gap facing the analytics market, the need for a complete system as the solution, why it is the right time for it, how Aha! has met the market need through its Axel Services Platform, and some big, real world results that signal a bright future for the 93% of business users that do not use analytics today.

### The Analytics Market Gap

Today’s business landscape finds even the most credentialed managers and business analysts recognizing that their knowledge, experience and wisdom are just not enough to optimize the performance of their businesses. Complex and relentless forces continuing to change the landscape are globalization, massive information access and interconnection, the explosion and low latency of data, the dynamics of customer experience and behavior, scarcity of capital, shifting distribution channels, employee skill shifts, cost competition and the beat goes on.

Ironically, today’s analytics landscape finds only a 10% adoption rate of analytics tools in organizations. While billions of dollars have been spent by IT organizations structuring, collecting, and managing data, analytics is still not on the IT agenda and has not been for the past 30 years. While some notable companies have chosen to compete based upon using analytics; analytics and the implementation of insights are still isolated to the few within most companies.

In today’s business landscape, there is a resolute call to action for new classes of analytics to be meshed with the entirety of a company’s processes and people, and yet there is an unprecedented disconnect between business users, their data, and analytics software.<sup>1,2</sup>

Today’s analytics technology and adoption challenge is not unlike others. One example is CRM. CRM had its roots in the 1980’s with the advent of database marketing, which evolved in the 1990’s into the closed loop that not only provided better customer service but the incentives given to customers for their loyalty such as credit card points and frequent flyer programs. However, other tools needed for CRM such as sales force automation and contact management were being adopted, isolated from each other, as well as being isolated from marketing automation.

<sup>1</sup>Andrew Hood, Managing Director of Lynchpin, “Analytics’ reputation is in tatters. Millions have been invested by large corporations around the world in analytics software that does not give business the answers it promised.... There is a massive disconnect between analytics and what business needs”

<sup>2</sup>Mark Smith, Ventana Research CEO and VP of Research, “Despite the investment in business intelligence, the majority of organizations still use spreadsheets and email to optimize performance and struggle to communicate and collaborate to plan and improve.”



History shows that it was really in the early part of this decade that true CRM systems were introduced and CRM came of age with dynamic, near real time databases and applications that dealt with the granularity of information needed for each customer. Internet oriented CRM solution companies became instrumental in providing cooperative applications and customer views between sales, customer services, and marketing within an organization. CRM is now used by hundreds of thousands of businesses.

Analytics technology can certainly take its cue from CRM. A complete system is needed to embed analytics into the very fabric of a business. Today's technology of SaaS/Cloud architectures, post relational database, the semantic web, open source software, and very cheap multi-core processing have opened the way for a complete and powerful analytics system for business.

The system must provide the most fundamental and transformative capability for the 93% of business users not using analytics today in their day to day jobs. It must be;

- **Relevant:** The full range of analytics must be available to users as business process based KPI models; KPIs known by business users.
- **Near Real Time:** Business users need to be able to proactively forecast, predict, and model outcomes and take action when the business needs it.
- **Able to Unite Strategy with Operational Execution:** Views and the inter relationships of strategy to operational analytics based KPIs must be combined in a single data driven taxonomy to provide collaboration and actions from the C- suite to the call center and back again.
- **Closed Loop:** Predictive analytics and models must be used in a closed loop not only to validate and recalibrate them, but more importantly to close the loop between the business process and the analytics driven action.
- **Self Service and Adaptive:** Providing business users with easy to use, secure, visualization and interactive automation to build and benefit from model based actions based upon the very business processes in which they are participants.

There is a resolute call to action for new classes of analytics to be meshed with business processes and people. Aha! has answered by creating and delivering a complete analytics system for business users.

## Axel - A Service Platform for Embedding Analytics into the Business

Axel is a new generation services platform created to embed analytics within businesses in an active form that allows businesses to understand and use them on a near real time basis in order to compete more effectively.

Axel accomplishes this goal by providing a platform that measures analytics performance by establishing KPI (Key Performance Indicator) hierarchies in viewable and actionable KPI bullet graphs with user customizable views; by providing an analytics expressions language (Aha! Expressions) for easily calculating KPIs from metric data; by offering click-to-forecast and click-to-data functions for rapidly analyzing data trends and variances; by providing predictor views of KPIs models for quick what-if analysis; by enabling rapid use of simulation, optimization, or scoring models with a click-to-model capability; and by incorporating self service customizable dashboards for continuous reporting and viewing of summary results. The platform's effectiveness is enhanced by its establishment as a SaaS (Software as a Service) instance which effectively increases collaboration across geographic and organizational boundaries. The platform's effectiveness is further enhanced by its Aha! Data Services, a publication/subscription



data SOA (Service Oriented Architecture) that significantly speed highly secure data acquisition and integrity checking.

### **At-A-Glance KPI Hierarchies:**

Using Axel's proprietary KPI hierarchy taxonomy, trees of KPIs are viewed as bullet graphs (small bullet-shaped graphs showing the maximum, minimum, average, current, and goal values of each KPI). KPIs exist for lower levels of detail on branches further out on the trees with rollups to company or organizational KPIs existing at the tree's base. By evaluating KPI relationships at a glance with these views, including self service customized views, insight is given to analytics anomalies and their cause and effect relationships.

### **Aha! Expressions Language:**

A high-level language for defining KPI models makes KPI and goal development fast and easy. Metrics can be pulled directly from tables with simple reference statements, month-to-date and year-to-date values can be derived with a single function reference, rolling averages and historical values can be used by referencing time intervals or specific dates, and of course mathematical calculations of any kind are accommodated through straightforward expressions. Data integrity is accounted for directly in Aha! Expressions by recognizing missing values and setting default values or merely recognizing them as missing, allowing rollup references to ensure a single source of data truth is used consistently, etc.

### **Click-to-Forecast, Click-to-Data:**

By simply clicking on a KPI, an Axel user pulls up the data in graphical form for any date range indicated in the control boxes. Mousing over the graph, the user can view all of the individual data point values. Clicking on a forecast tab, the Axel user activates forecasting capabilities. Offering linear, exponential, or power-function fitting, the user can visually forecast based on any time period chosen. This allows a visual forecasting where business users can take into account their knowledge of market trends, seasonality, expected future changes not reflected in the past, etc. For more sophisticated forecasting, the Axel platform will export all of the data points chosen straight to the user on demand.

### **Click-to-Predict:**

If the Axel user wishes to see how the business might be affected by change, the Axel Predictor function can be invoked. By manually changing metrics and KPIs the Axel user can immediately see their effect across all KPIs in the model. Price changes, marketing campaigns, new product introductions, etc. can be "what-if'ed" for immediate high-level impact viewing.

### **Click-to-Model:**

The Axel platform accommodates invoking mathematical models when detailed analysis or optimization modeling is required, or for cases where KPI data indicates predictive models (such as customer scoring models) need to be recalibrated. Capacity simulation models to identify the ability to handle customer growth, optimization models to indicate advertising media changes, etc. can be invoked from the platform. Large simulation models (on customer data files, e.g.) can be performed utilizing a cloud computing instance returning summarized results that are incorporated back into Axel data.

### **Dashboards:**

The Axel platform provides dashboards for those that want bottom-line summaries, colorful bar charts, dials, and bulbs that can be related to specified goals. The Axel platform differentiator is that the dashboards are check-box



customizable and have all the data readily available and continuously, to avoid the time consuming data extraction and verification associated with ad hoc reporting. Dashboards are unique to each individual user, accommodating individual preferences.

### **SaaS:**

The Software as a Service feature of Axel exists for on-demand users and enterprise users alike. Since Axel is true multi-tenant, the platform ensures data privacy and security in a public environment, and ensures transparency and ease-of-use when being used internally. Axel users can have a role of administrator, user, viewer or data administrator with individual authorizations. New users are added in seconds by an administrator who establishes the user id (identified by an email address) and an initial password on the fly. Individuals are authorized to view only those KPIs and data metrics that they have access to. Check-box entry of authorizations is done at time of account initialization, but can be easily changed at any time by a system administrator. Because of its product architecture, Axel can be up and running in weeks with minimal IT involvement.

### **Aha! Data Services:**

A highly secure publication/subscription set of services exist within Axel for improved (faster, more reliable) access and enrichment of analytics data. Connectors for over 500 file types are available and a complete stable SOA for data handling in production environments is provided. Data integrity and time-to-access are critical success factors in any analytics implementation. The Axel platform addresses data with great emphasis for that reason.

## **Real World Results**

Axel has made some big impacts on several companies by enabling them to capture their key performance analytics and now manage them in an active, near real-time and closed-loop system.

Near real-time availability of analytics provided by Axel allows companies to gain results through analytics that would not be possible otherwise. For example, a major healthcare payer took advantage of the near real-time availability of its analytics in its campaign to gain and retain healthcare policy holders. Their annual campaign to gain new member policies occurred over a 6-week period from November 15<sup>th</sup> to January 1<sup>st</sup>. Typically their analysis of campaign results and the campaign's effectiveness would take place once the campaign was complete. However, with Axel, they were able to track trends daily and discovered a problem with their verification call process within the first two weeks of the campaign. This quick recognition allowed the problem to be corrected for the final four weeks of the campaign. Total disenrollment improvement for new and existing members was worth over \$43 million NPV.

Closed-loop analytics, a primary focus of Axel, gives companies the ability to close the loop and verify the accuracy of their predictive analytic models. This has historically been difficult to do. A major communications company is using Axel to predict and track the effectiveness of its proactive fiber builds. Axel enables the company to manage the ROI associated with its fiber builds by individual location and various market rollups and to validate the accuracy of its predictive revenue models against real results. Axel also allows the company to optimize its sales and marketing campaign spend by tying campaign investments to realized revenue.

By making analytics active, Axel removes the need for BI tools and ad hoc reports. The healthcare payer completely relied on the Axel SaaS (Software as a Service) active analytics dashboards and bullet-graph representations for their analysis, reporting, and actions. No ad hoc reports, auto-generated email notifications, or other forms of reporting were needed. A large facilities-based CLEC is now introducing Axel for its business management performance analytics and is replacing all of its customer retention and customer loyalty (Net Promoter Score) reporting with a single instance of Axel. Axel will allow the CLEC to completely automate what was previously requiring large amounts

of employee resources, to make results available on a daily basis across multiple organizations, and to actively manage their retention programs via the analytics available in Axel.

## Conclusion

Complex and relentless forces will continue to mark the business landscape. Embedding analytics within the business fabric will be critical to growth, profitability and ultimately business survival. Organizations that implement analytics for all of its business users will be able to optimize their competitive business outcomes.

There is a call to action for new classes of analytics to be meshed with the entirety of a company's processes and people, and an unprecedented disconnect between business users, their data, and analytics software. Aha! has uniquely answered this call with the delivery of Axel, a new generation analytics services platform; a complete system created to embed analytics within businesses in an active form that allows business users to understand analytics and use them on a near real time basis.

For more information on how you can embed business analytics within your company today, please contact Aha! at: [sales@ahasoftware.com](mailto:sales@ahasoftware.com).

Aha! Business Embedded Analytics Positioning Paper

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Aha! Software  
9137 E. Mineral Circle  
Suite 180  
Centennial, Colorado 80112  
303.945.3318  
email: [sales@ahasoftware.com](mailto:sales@ahasoftware.com)

