2016 STATE OF EMBEDDED ANALYTICS REPORT
The Fourth Annual Executive Review of Embedded Analytics Trends and Tactics
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Business intelligence and analytics expert, speaker, and author

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Foreword

By Wayne Eckerson
Business intelligence and analytics expert, speaker, and author

For many years, I’ve been saying the future of business intelligence (BI) is embedded. To drive home the point—and to be a tad provocative—I’ve added that the best BI is invisible. That is, it disappears into the fabric of the applications that business people use every day to do their primary work.

This only makes sense. People want insights in the context of the applications they use to make decisions and take action. They don’t want separate applications, one for insights and another for action. And when analytics lives in silos, it may spawn nice charts and trend lines, but it rarely drives the business.

Embedded analytics closes the last mile of BI, conjoining insight and action into a single workflow. Embedded analytics helps turn BI from a reactive endeavor into a proactive one.

This is undoubtedly why 51 percent of commercial software providers and 37 percent of non-commercial application developers who responded to the 2016 State of Embedded Analytics survey from Logi Analytics say that embedded analytics is “very important” to their customers. An even greater validation is that application providers say that analytics comprises 45 percent of the median value of their entire application.

The best research validates what everyone suspects, but can’t confirm. Now I have facts to back up my assertions about the importance and value of embedded analytics. So thank you, Logi Analytics, for conducting groundbreaking research that shines light on the future of BI.
Introduction

The fourth annual State of Embedded Analytics Report by Logi Analytics provides insights for executives, product managers, and technology leaders on why and how organizations are embedding analytics capabilities into their applications.

Survey respondents included members of product management, product development, software engineering, IT, and executives from both commercial independent software vendors (ISVs) and Software as a Service (SaaS) providers as well as non-commercial IT-managed applications used by internal staff and partners.

The majority (75 percent) of respondents were from North America, with 23 percent from the United Kingdom. Twenty-six percent are customers of Logi Analytics.

The 2016 report explores this year’s findings and provides context around the strategic vision, business case, and implementation approaches for embedding analytics. For more information, please contact us at info@logianalytics.com.
Increasing User Adoption with Embedded Analytics

CHALLENGE: ORGANIZATIONS WANT TO BECOME DATA-DRIVEN AND EMPOWER EVERYONE WITH ACTIONABLE INTELLIGENCE.

- But only 22% of employees utilize business intelligence (BI) or analytics tools in their organizations

WHY IS USER ADOPTION SO LOW?

Top barriers to adoption of analytics tools include:

- Forcing end users to leave their preferred business applications to view analytics
- Providing solutions that are difficult to use or require too much support
- Lack of speed for seeing benefits and results

SOLUTION: EMBEDDED ANALYTICS

- Embedded analytics is the integration of analytics content and capabilities inside the applications workers use every day.

WHAT IS EMBEDDED ANALYTICS?

Embedded analytics is the integration of data analytics capabilities within business applications. Historically, embedded analytics has focused on OEM and SaaS vendors. But today, more and more organizations are embedding analytics in their own applications to help employees make data-driven decisions.

Embedded analytics helps users work smarter by incorporating relevant data to solve high-value business problems and create a more efficient user experience.

This is in contrast to traditional BI, which focuses on extracting insight from data within the silo of analysis. Embedded analytics strives to bring together insight and action into the same context by integrating analytics deeper and deeper within business applications and workflows.
Why Is Embedded Analytics on the Rise?

**IT'S WANTED.**

87% of users want analytics embedded inside their applications.

**IT'S USED.**

43% of application users utilize embedded analytics regularly—twice that of traditional BI. This number is expected to jump to 52% within two years.

**IT'S VALUED.**

45% of an application’s value is tied directly to data and analytics available in that application—a jump from 35% just two years ago.

What's in it for commercial ISVs and SaaS providers?

They can make money...

93% of commercial software and SaaS providers say embedded analytics has helped them increase revenue.

... a substantial amount of money.

Respondents say they charge 24% on top of their core offerings for embedded analytics—up from 15% two years ago.

Also: Embedded analytics acts as a differentiator for companies in their markets, and improves the user experience of their products.

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How to Succeed with Embedded Analytics

TAILOR THE FUNCTIONALITY TO YOUR USERS
The top three capabilities for embedded analytics, as shown in this year’s report, are:

1. Dashboards
2. Self-service data analysis
3. Reports

Also keep an eye out for advanced analytics. Advanced and predictive analytics is making the biggest jump in popularity and will soon rival the big three in importance.

HOW CAN YOU ENSURE EMBEDDED ANALYTICS IS SUCCESSFUL?

Focus on Integration.
- Successful embedding requires integration with an application’s security, UI/UX, and workflow.

Embed Deeper.
- Application providers consistently reveal that embedding analytics deeply into the workflows of their applications gives them the best chance to achieve their strategic objectives—namely, improving user satisfaction, enhancing the user experience, increasing revenue, and differentiating their products.

Once you decide to invest in embedded analytics, you can’t afford to go it alone.
- The top reason for embedding a third-party analytics product is to focus internal resources on your core product.

Do your homework when shopping around.
- The top evaluation criteria for embedded analytics are functionality, ease of integration, and then price.

FOCUS ON CRUCIAL FUTURE TRENDS
- Infused analytics will become the standard.
- Self-service is expanding to include every user.
- Advanced analytics will become more operationalized.
Embedded business intelligence and analytics is a strategic initiative for many organizations. For those looking to increase adoption of analytics, embedding analytics into users’ preferred applications provides an instant way to get information into the hands of more people within the context of everyday work.

For application providers, embedded analytics adds value to their products. Business applications become sources of vital information for both running the organization and guiding the decisions workers make every day.

IN PART 1 OF THE REPORT, YOU’LL DISCOVER WHY:

- **The majority of applications have embedded analytics.** Two-thirds of all applications have embedded BI and analytics capabilities. If you choose not to embed BI into your applications, you risk being left behind.

- **Embedded analytics is vital to all industries.** Application providers across a wide spectrum of vertical industries embed analytics today.

- **Commercial software and SaaS providers lead internal IT application providers in adoption.** We see throughout the survey that these providers have a deeper appreciation for embedded analytics compared to their counterparts in IT because BI is essential to the business.

- **Executive management and product managers drive embedded analytics initiatives.** Embedded analytics is much more than a technical exercise; it plays a strategic role and is often driven by a company’s executives.
Two-thirds of all software applications embed BI and analytics. Commercial ISVs and SaaS providers lead with 77 percent adoption.

A key trend throughout this year’s report is that commercial software providers have a deeper appreciation for embedded analytics and are driving adoption compared to their counterparts in IT.

This is likely because commercial software vendors can drive revenue and create a competitive differentiator through embedded analytics, which gives them a more vested strategic interest in this product area.
Embedded Analytics Permeates All Industries

The enthusiasm for embedded analytics knows no bounds. We see business intelligence and analytics capabilities embedded into every type of business application, from ERPs and CRMs to customer-facing portals.

What’s more, companies of all sizes see value in embedding analytics into their applications. And embedded analytics has relevance to a wide range of industries. What we see below are the top ten industries embedding analytics in their applications.

INDUSTRY BREAKDOWN

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare</td>
<td>77%</td>
</tr>
<tr>
<td>Education</td>
<td>76%</td>
</tr>
<tr>
<td>Utilities</td>
<td>75%</td>
</tr>
<tr>
<td>Business Services</td>
<td>74%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>72%</td>
</tr>
<tr>
<td>Retail</td>
<td>71%</td>
</tr>
<tr>
<td>Technology</td>
<td>71%</td>
</tr>
<tr>
<td>Construction</td>
<td>68%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>65%</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>63%</td>
</tr>
</tbody>
</table>
Embedded Analytics Has Become a Strategic Initiative

This is the first year we have seen executive management tied with product management as the top individuals driving embedded analytics projects within organizations. These leaders are increasingly giving embedded analytics the credit it deserves as a strategic initiative because they are seeing the benefits it can provide.

Q: Who was the primary driver of your decision to add business intelligence and analytics to your application?

- CEO and/or Executive Management: 36%
- Product Management: 36%
- Development Staff: 16%
- Customers: 8%
- Competition: 3%

Implementing an embedded analytics project that significantly impacts your product is usually a group effort involving executives, product management, developers, and many different roles in between. If you don’t involve these key stakeholders from the very beginning, and if you lack a strategic vision, your path may be riddled with hidden obstacles.

Dive deeper in the Definitive Guide to Embedded Analytics
User expectations have no doubt been shaped by modern consumer applications and mobile apps. From Google to Amazon to Netflix, today’s apps are optimized to provide vast amounts of information that help shape our daily lives and decisions, all while packaged in intuitive, engaging user experiences. End users now expect the same seamless experience from their business applications.

IN THIS SECTION, WE’LL EXPLORE TWO KEY TRENDS:

Users want embedded analytics. The majority of end users want embedded analytics in their applications, making it an additional source of value for your customers and workers.

Users employ embedded analytics. Forty-three percent of users actually employ embedded analytics on a regular basis—and that number will jump to 52 percent within two years. Embedded analytics has proven itself as a way to not only expand the user adoption of analytics, but also as a way to grow the overall usage of an application.
Analytics has become imperative to business success. Ninety-four percent of commercial ISVs and SaaS providers and 80 percent of non-commercial application providers say that embedded analytics is important to their users. It’s becoming more and more clear that users expect business intelligence inside the applications they use every day.

Why Is Embedded Analytics Growing? Because Users Want It

87% OF ALL APPLICATION PROVIDERS SAY THAT EMBEDDED ANALYTICS IS IMPORTANT TO THEIR CUSTOMERS

Analytics has become imperative to business success. Ninety-four percent of commercial ISVs and SaaS providers and 80 percent of non-commercial application providers say that embedded analytics is important to their users. It’s becoming more and more clear that users expect business intelligence inside the applications they use every day.

KEY FINDING:

Note the 20-percentage-point gap between user need (the 87 percent figure on this page) and implementation of embedded analytics (the 67 percent figure seen earlier). The desire of application providers to close this gap is a core driver for the continued investment in embedded analytics we see later in the report.

To succeed, any embedded analytics project must focus on delivering value to the end user. That means having a clear understanding of how the user will benefit from improved insights and an optimized user experience for the business process and analytical tasks at hand.

Q: How do your customers view the importance of BI and analytics within your application?

COMM ISV/SAAS

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Somewhat not important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>51%</td>
<td>43%</td>
<td>5%</td>
<td>1%</td>
</tr>
</tbody>
</table>

NON-COMM APPS

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Somewhat not important</th>
<th>Not important</th>
</tr>
</thead>
<tbody>
<tr>
<td>37%</td>
<td>43%</td>
<td>11%</td>
<td>9%</td>
</tr>
</tbody>
</table>
Users Want It – Which Is Why Adoption Beats Traditional BI

User adoption of embedded analytics continues to exceed that of traditional business intelligence. For a long time, the ceiling for end-user adoption of CIO-sponsored traditional BI tools has been 30 percent (as reported by industry analysts such as Gartner). Even in the 2015 State of Self-Service BI Report, we found that only 22 percent of business users had access to and utilized self-service BI tools when they needed them.

Q: What percentage of the application’s total user base employs business intelligence and embedded analytics on a regular basis today? In one to two years?

43% today
52% in 1-2 years

With an average 43 percent user adoption, embedded analytics offers a clear path to increasing the pervasiveness of business intelligence and the data-driven decision making within an organization.

In addition, application providers continue to estimate that user adoption of embedded analytics will grow over time, exceeding half of all users within two years. This optimism is a phenomenon we have seen in surveys from years past, and expect to continue to see.

EMBEDDED ANALYTICS ➔ BETTER ADOPTION ➔ LONG-TERM SUCCESS

Embedded analytics is not just about driving adoption of BI, but also about driving general usage of software applications. All application providers want to increase usage of their products and make their applications stickier. Higher usage rates make applications more essential to customers and extend the life of the products. For commercial software providers, usage translates to more sales and renewals. Embedded analytics is an important way of driving user adoption.
Part 3: The Transformational Power of Embedded Analytics

In the previous sections, we’ve covered how users crave analytics, and how they can benefit from business intelligence and analytics being embedded inside the applications they use every day. We’ve also discussed how, in turn, companies can transform themselves into data-driven organizations where analytics improves decision making at all levels.

IN THIS SECTION, WE FOCUS OUR ATTENTION ON THE APPLICATION PROVIDERS AND THEIR PRODUCTS IN ORDER TO GAIN A DEEPER UNDERSTANDING OF HOW THEY BENEFIT FROM EMBEDDED ANALYTICS.

You will see how:

- **End users value embedded analytics.** Forty-five percent of an application’s value is tied to data and analytics, increasing from 35 percent just two years ago.

- **Embedded analytics drives revenue.** The vast majority of commercial software and SaaS providers have increased revenue through embedded analytics, charging 24 percent on top of their core offerings.

- **User satisfaction increases with embedded analytics.** Increasing consumer satisfaction is the top strategic benefit for internal IT application providers and the number two strategic benefit for commercial software providers (second to increasing revenue).
Application providers report that analytics makes up a relative value of 45 percent of the overall application. This is a substantial value that simply cannot be replaced with any other functionality today, and the value is only increasing—two years ago, respondents cited it at 35 percent.

For those building a business case for embedded BI and analytics projects, this is just one of a few different ways to think about the value in a quantitative manner:

- Another way to calculate value is to identify the number of users who are currently affected or could be impacted by analytics in your product, and use that data to build a business case.
- For commercial software providers, when consumers are demanding better analytics capabilities and customer retention is at risk, another way to quantify value is to consider how revenue is impacted by having such capabilities in your product.
Embedded Analytics Drives Revenue

93% OF COMMERCIAL ISVS AND SaaS PROVIDERS SAY EMBEDDED BUSINESS INTELLIGENCE AND ANALYTICS HAS HELPED THEM INCREASE REVENUE

For commercial software and SaaS providers, embedded analytics can mean big bucks. Ninety-three percent of commercial software providers say that embedded analytics has helped them drive sales and increase revenue.

And the follow-up question is, naturally, “How much can we charge?” While many factors go into pricing decisions for any set of software features, survey respondents report they charge 24 percent on top of their core offerings. This is virtually identical to the figure reported last year.

THE MEDIAN VALUE SOFTWARE PROVIDERS CHARGE ON TOP OF THEIR CORE OFFERINGS FOR EMBEDDED BI AND ANALYTICS: 24%

KEY FINDING:

Note the amount that software providers can charge (24 percent more) is less than the total value of analytics in any application (45 percent). This indicates that customers expect some embedded business intelligence capabilities included with the product—that minimal functionality is considered table stakes. We predict a growing appetite to pay for advanced capabilities such as self-service functionality, advanced and predictive analytics, and incorporation of additional data sets for data enrichment and benchmarking.

From the packaging standpoint, embedded analytics capabilities provide a distinct value proposition and, as such, are typically offered separately in tiers or as add-on options. Bundling analytics in an all-inclusive offering continues to be the least popular approach.

Q: How do you package BI and analytics with your offering?

COMM. ISV/SAAS

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiered (analytics capabilities are packaged into different editions, each one with increasing functionality)</td>
</tr>
<tr>
<td>Add-on option (customers add analytics as a separate option)</td>
</tr>
<tr>
<td>All-Inclusive (every customer has access to all analytics capabilities)</td>
</tr>
</tbody>
</table>
For commercial software providers building a business case for embedded analytics projects, it is important to understand the wide range of strategic benefits that may be realized. When looking at the results in the chart below, you can see that it’s not just about driving revenue (though revenue is still clearly top of mind).

Respondents believe analytics can help from sales, marketing, and product positioning perspectives. This reinforces the substantial value of embedded analytics and confirms that commercial software providers can benefit in many ways.

### Strategic Benefits for Commercial Software Providers

It’s not just about revenue...

For commercial software providers building a business case for embedded analytics projects, it is important to understand the wide range of strategic benefits that may be realized. When looking at the results in the chart below, you can see that it’s not just about driving revenue (though revenue is still clearly top of mind).

Respondents believe analytics can help from sales, marketing, and product positioning perspectives. This reinforces the substantial value of embedded analytics and confirms that commercial software providers can benefit in many ways.

**COMM. ISV/SAAS**

**Q:** Describe to what extent embedded business intelligence and analytics helps you to:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Strongly Agree</th>
<th>Slightly Agree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase overall revenue</td>
<td>60%</td>
<td>33%</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>Improve customer satisfaction</td>
<td>59%</td>
<td>33%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Differentiate your product</td>
<td>55%</td>
<td>37%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Increase user adoption of product</td>
<td>55%</td>
<td>36%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Improve user experience</td>
<td>53%</td>
<td>39%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Shorten sales cycle</td>
<td>53%</td>
<td>37%</td>
<td>9%</td>
<td>1%</td>
</tr>
<tr>
<td>Generate more leads</td>
<td>52%</td>
<td>41%</td>
<td>6%</td>
<td>1%</td>
</tr>
</tbody>
</table>

![Chart showing responses to embedded analytics benefits]

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Benefits for IT Application Providers

User satisfaction is top of mind

**NON-COMM. APPS**

**Q:** Describe to what extent embedded business intelligence and analytics helps you to:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Strongly Agree</th>
<th>Slightly Agree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve customer satisfaction</td>
<td>60%</td>
<td>33%</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Improve user experience</td>
<td>53%</td>
<td>40%</td>
<td>7%</td>
<td>4%</td>
</tr>
<tr>
<td>Attract new users</td>
<td>53%</td>
<td>31%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Extend the life of an existing application</td>
<td>49%</td>
<td>43%</td>
<td>7%</td>
<td>1%</td>
</tr>
<tr>
<td>Increase user adoption</td>
<td>49%</td>
<td>40%</td>
<td>9%</td>
<td>2%</td>
</tr>
<tr>
<td>Differentiate the application from competitors</td>
<td>47%</td>
<td>44%</td>
<td>7%</td>
<td>2%</td>
</tr>
</tbody>
</table>

While non-commercial application providers in IT may not be able to directly drive revenue like their commercial counterparts, they can still benefit in other ways from embedding BI and analytics inside their applications. For instance, top of mind for IT is user satisfaction and user experience. Also important is usage of the applications they manage and maintain. IT views embedded analytics as a way to breathe life into their applications and drive user adoption.
Part 4: Key Steps for Making Embedded Analytics Work

Now that you’ve seen what embedded analytics can do for both end users and the business, what comes next? These are the key steps for analytics success:

- **Invest in embedded analytics.** Two-thirds of application providers plan to invest in embedded analytics over the next 12 months. Consider yourself warned: Even if analytics isn’t in your plan, it’s certainly in your competition’s roadmap.

- **Get executive sponsorship.** As we saw earlier in the report, embedded analytics projects are primarily driven by executive leadership and product management. So make sure you have their buy-in when assembling the team.

- **Look for outside help.** It is common to rely on third-party products to help add embedded analytics capabilities to your application. This allows you to focus internal resources on your core application and get to market faster.

- **Tailor functionality to specific user needs.** Not all of your users want the exact same capabilities. While dashboards, reports, and self-service analysis remain the most commonly implemented ones, it’s important to tailor capabilities to your specific user needs and roles. This allows users to reap the most benefit from your application quickly and easily.

- **Think differently about how deeply to embed analytics.** Infusing analytics into the workflow of applications has shown to most frequently increase user satisfaction, drive revenue, and create a competitive differentiator. Still, most application providers simply do not embed analytics as deeply as they should.
No Stopping Investment In Embedded Analytics
Most applications will see upgrades in the next year

65% OF ALL APPLICATION PROVIDERS WILL INVEST IN EMBEDDED BUSINESS INTELLIGENCE AND ANALYTICS OVER THE NEXT 12 MONTHS

The majority of application providers plan to invest in embedded analytics over the next 12 months—even those who already embed analytics. Again, commercial software providers show their enthusiasm for embedded analytics and expect to invest at a greater pace than their counterparts in IT.

Q: Do you plan to invest in embedded BI and analytics over the next 12 months?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM. ISV/SAAS</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>NON-COMM APPS</td>
<td>53%</td>
<td>47%</td>
</tr>
</tbody>
</table>

For those applications that already have embedded analytics, many application owners indicate dissatisfaction with what they have. To improve the value of their offerings and meet consumer demands, these owners plan to upgrade their embedded analytics in the near future.
Don’t Go It Alone: The Value of Third-Party Products

Top reason: Maintain internal focus on core application functionality

When faced with adding BI and analytics into an application, developers typically start by coding themselves. Many free and low-cost options can assist here, including charting libraries and open-source alternatives. However, internal resources alone cannot keep up with user demands or the pace of innovation.

In this year’s survey, the top reason for integrating a third-party product to deliver BI and analytics functionality is so that internal development teams can maintain their focus on core application functionality.

Survey respondents recognize the majority of the value they offer is tied to their core application; as such, third-party business intelligence and analytics tools provide enough value and functionality so they can continue to focus on their core application competencies.

“[We] definitely made the right decision to buy rather than build analytics dashboards, as we have been able to cut the implementation time dramatically.”

– Jeremy Pile
Muddy Boots

Try the Build vs. Buy ROI Calculator
How to Choose a Solution
Functionality tops the evaluation criteria

When shopping for a product to embed into your application, you have plenty of factors to consider. In our survey, we set out to discover which criteria are most important to application providers.

Q: How important are the following factors in choosing a third-party provider to embed BI and analytics within your application?

For the fourth year in a row, functionality is the top evaluation criteria for embedding third-party business intelligence and analytics products. Coming in at a close second is the ease of integration.

In this chapter, we’ll explore the top two criteria—functionality and integration—by taking a look at which capabilities are most important within those buckets, and how these capabilities are embedded inside applications.
Embedded Analytics Functionality
Predictive analytics makes its move

Q: What types of business intelligence and analytics capabilities do you offer within your application?

- Dashboards: 68%
- Self-Service Reporting and Analysis: 57%
- Static and Interactive Reports: 55%
- Predictive Analytics: 46%
- Benchmarking: 41%
- Mobile Access: 40%
- Writebacks and Visual Workflows: 32%
- Big Data: 28%

In terms of functionality, we see an increase in the adoption of predictive analytics this year, with it moving closer to the top tier of capabilities. While interest in advanced and predictive analytics has existed for a long time, these capabilities are increasingly moving out of the hands of data analysts and becoming more operationalized for the benefit of more business users.

Ranked above predictive analytics in current adoption, we see that the top three classic BI and analytics capabilities—dashboards, reports, and self-service analysis—are also the most popular embedded capabilities, with each being deployed in over half of all applications.
Integration: Embedded Analytics Maturity Model

Embedded analytics is the integration of analytics capabilities within business applications. The goal is to help users work smarter by incorporating relevant data to solve high-value business problems and create a more efficient user experience. This is in contrast to traditional BI, which focuses on extracting insight from data within the silo of analysis. Embedded analytics strives to bring together insight and action into the same context by integrating analytics deeper and deeper within business applications and workflows.

The Embedded Analytics Maturity Model shows the different ways software providers embed analytics within their applications. When inserted across more integration points in the main application, analytics becomes infused as a natural part of the application workflow.

<table>
<thead>
<tr>
<th>Application</th>
<th>UI</th>
<th>Security</th>
<th>Data</th>
<th>X</th>
<th>X</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embedded Analytics Maturity Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Layers of the process application integrated with analytics

Standalone Analytics Application
Analytics in a separate application from the process application

Gateway to Analytics
Embedded access - single sign-on from process application to analytics

Inline Analytics
Analytics appear inside the process application (e.g. “reports module”)

Infused Analytics
Analytics embedded within core workflows and application functionality
How Analytics Is Embedded Inside Applications Today

Year-over-year trend points to deeper integration

Q: Which best describes how you have embedded business intelligence and analytics within your application?

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standalone 0</td>
<td>Not embedded - Analytics is a separate application from your application</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Gateway 1</td>
<td>Embedded access - Single sign-on from your application to a separate analytics application</td>
<td>21%</td>
<td>12%</td>
</tr>
<tr>
<td>Inline 2</td>
<td>Embedded in UI only - Reports and dashboards appear inside your application</td>
<td>45%</td>
<td>53%</td>
</tr>
<tr>
<td>Infused 3</td>
<td>Embedded in UI + workflow - Analytics drive and guide usage of core application functionality</td>
<td>29%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Inline analytics, in which analytics content and capabilities are integrated with the data, security, and UI of the application, is the most popular form of embedding, making up 53 percent of all implementations. This popularity is likely related to the fact that most third-party analytics applications can be embedded in this way. Infused analytics, in which analytics is embedded within the application workflow, makes up 31 percent of implementations.

What we also see materialize in the year-over-year comparisons is the trend toward deeper embedding over time. Specifically, we see the adoption of both inline and infused analytics increasing, while standalone and gateway implementations are decreasing.

What’s more, deeper integration equals greater strategic benefits—which provides the main reason solutions continue to mature in their transformation to analytics applications.
Deeper Embedding Boosts User Satisfaction & Drives Revenue

When we compare the strategic benefits of analytics to the way analytics is embedded in an application, we find some interesting correlations that inform the future direction of embedding. Specifically, for each of the four different ways of embedding, the charts below display the percentage of application providers who strongly agree that embedded analytics helps to achieve their strategic objectives.

For example, the top chart shows that 73 percent of commercial ISVs and SaaS providers who infuse analytics in their applications strongly agree embedded analytics helps them increase revenue. At the same time, only a quarter of commercial application providers offering analytics as a standalone capability strongly believe they are delivering on any of the top three strategic benefits we identified earlier: increasing revenue, improving end-user satisfaction, and improving product differentiation.

Overall, we see that deeper embedding is tied to greater realization of each of the top three strategic benefits.

While infused analytics is not for all applications, these results give application providers more reason to seriously consider how analytics can be integrated as a more natural, intuitive part of their products.

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**COMM. ISV/SAAS**

- **Standalone**: 25% (25% Strong Agreement)
- **Gateway**: 40% (49% Strong Agreement)
- **Inline**: 55% (57% Strong Agreement)
- **Infused**: 73% (66% Strong Agreement)

- **Increase Overall Revenue**: Strong Agreement
- **Improve Customer Satisfaction**: Strong Agreement
- **Create a Competitive Differentiator**: Strong Agreement

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**NON-COMM. APPS**

- **Standalone**: 25% (13% Strong Agreement)
- **Gateway**: 50% (46% Strong Agreement)
- **Inline**: 55% (49% Strong Agreement)
- **Infused**: 84% (76% Strong Agreement)

- **Improve Customer Satisfaction**: Strong Agreement
- **Improve User Experience**: Strong Agreement
- **Attract New Users**: Strong Agreement

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Embedded analytics is a dynamic industry with new capabilities emerging constantly. These are our predictions on what will drive the evolution of embedded analytics over the next few years.

**Embedded Analytics Predictions**

**PREDICTION #1: INFUSED ANALYTICS WILL BECOME THE STANDARD**

Businesses are moving to the infused analytics model, in which analytics is a core component of all software applications. Within three years, it will be impossible to tell the difference between an application and the analytics content embedded within it. Just as B2C applications embed analytics as a natural part of the user experience, B2B applications will continue to move from bolt-on approaches to more infused implementations. Users will only have to use their preferred application, not two or more applications, in their daily work.

**PREDICTION #2: SELF-SERVICE EXPANDS TO INCLUDE EVERY USER**

The demand for self-service analytics will extend from tech-savvy users to more and more non-technical users who demand analytics access within their preferred business applications. As a result, the user experience will move front and center to empower these non-technical BI users.

Your product management and development teams must embrace the challenge of delivering self-service even more so than managed reporting. You will need to empower your users to ask their own questions of the data, as well as provide the dashboards to help them answer a few key questions—and the sooner you get started, the better.

**PREDICTION #3: ADVANCED ANALYTICS GETS OPERATIONALIZED**

Over the next five years, we will see analytics capabilities themselves become more sophisticated. Organizations will graduate from descriptive and diagnostic analytics—describing what’s happened and diagnosing issues—and move toward more predictive and prescriptive analytics. They will focus on what the future holds and how the business can prepare itself for tomorrow.

While embedded analytics tends to be primarily descriptive and diagnostic in nature, interest in predictive analytics continues to grow among application providers. Prescriptive analytics is the most difficult to implement, and wide adoption is expected much further out, in the next eight to 10 years.

Ready to see embedded analytics in action? Sign up for a free on-demand demo here
About the Report

The Logi Analytics 2016 State of Embedded Analytics Report aims to provide insights to executives, product managers, and technology leaders on why and how organizations embed analytics capabilities within their applications. We delve into the strategic vision, the business case, and the implementation approaches for embedding analytics.

At Logi Analytics, our vision is to create a smarter world by making analytics available to everyone. The traditional approaches to business intelligence are fading, marred by a long track record of expensive and ineffective solutions. In order to create data-driven organizations, applications must bring data and insights to life in an agile, intuitive, and resource-efficient way.

Serving the analytical needs of end users is about much more than creating beautiful charts. Analytics capabilities must also be available when and where users need them most—contextualized where the action actually takes place—which is inside the applications, systems, and processes that run a business. This ultimately results in a delightful user experience that simultaneously informs and drives action based on insight.

IT’S ABOUT CREATING ENGAGING APPLICATIONS WITH EMBEDDED ANALYTICS THAT USERS LOVE.

While our customers leverage the best practices we’ve developed through our extensive experience in the space, we also recognize the need to incorporate a broader intelligence to expand our view of embedded analytics. So, we endeavor every year to independently discover the current “state of embedded analytics.”

What’s exciting for us at Logi Analytics is that ALL companies are becoming software companies, and ALL software applications are becoming analytics applications. As more companies and developers adopt this point of view, we anticipate more compelling and intuitive business applications to come to market.

About Logi Analytics

Logi Analytics is the leader in self-service analytics, delivering tools designed to meet the needs of users, IT, and product managers. At Logi, we are re-imagining how software can empower individuals, and the organizations and products that serve them. From interactive dashboards to ad hoc queries and visual analysis, Logi enables users to explore and discover insights and make data-driven decisions.

More than 1,750 customers worldwide rely on Logi. The company is headquartered in McLean, Virginia, with offices in the U.K. and Europe. Logi Analytics is a privately held, venture-backed firm. For more information, visit LogiAnalytics.com.
Appendix

Survey Methodology

Logi Analytics fielded our 2016 State of Embedded Analytics Survey in January 2016. Data collection took the form of an online survey, to which there were more than 500 complete responses from business and technology professionals.

Survey respondents included product management, product development, software engineering, IT, and executives at companies of all different sizes.

Seventy-five percent of respondents were from North America, and 23 percent were from the UK. Twenty-six percent of the respondents identified themselves as customers of Logi Analytics.

To request further information about the design or methodology of this survey-based study, please contact us at info@logianalytics.com.

### TYPE OF APPLICATION

<table>
<thead>
<tr>
<th>Type of Application</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>A commercial application or Software-as-a-Service used by customers</td>
<td>278</td>
</tr>
<tr>
<td>An internal application used by company staff or partners</td>
<td>244</td>
</tr>
</tbody>
</table>

### NUMBER OF EMPLOYEES

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-50</td>
<td>21%</td>
</tr>
<tr>
<td>51-100</td>
<td>16%</td>
</tr>
<tr>
<td>101-250</td>
<td>11%</td>
</tr>
<tr>
<td>251-500</td>
<td>14%</td>
</tr>
<tr>
<td>501-1000</td>
<td>13%</td>
</tr>
<tr>
<td>2501-5000</td>
<td>7%</td>
</tr>
<tr>
<td>5000+</td>
<td>12%</td>
</tr>
</tbody>
</table>

### TOP 10 INDUSTRIES

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>15%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13%</td>
</tr>
<tr>
<td>Business Services</td>
<td>9%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>8%</td>
</tr>
<tr>
<td>Construction</td>
<td>8%</td>
</tr>
<tr>
<td>Consumer Goods</td>
<td>7%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>6%</td>
</tr>
<tr>
<td>Retail</td>
<td>4%</td>
</tr>
<tr>
<td>Education</td>
<td>4%</td>
</tr>
<tr>
<td>Utilities</td>
<td>4%</td>
</tr>
</tbody>
</table>
Additional Findings

How long did it take you to add business intelligence and analytics to your application?

![Bar chart showing percentages of time taken to add BI and analytics.](chart)

- 4% < 1 month
- 24% 1-3 months
- 38% 3-6 months
- 14% 6-12 months
- 20% More than 1 year

Have you realized positive ROI from embedded business intelligence and analytics?

![Bar chart showing percentages of ROI realized.](chart)

- 65% Yes
- 15% No
- 20% Not sure
Do you have a UI/UX designer or team of designers?

COMM. ISV/SAAS: 69% Yes, 25% No, 6% Not Sure
NON-COMM APPS: 42% Yes, 45% No, 13% Not Sure

Do you adhere to an agile software development methodology?

COMM. ISV/SAAS: 65% Yes, 26% No, 9% Not Sure
NON-COMM APPS: 40% Yes, 39% No, 21% Not Sure

Who are the end users of the application?

NON-COMM APPS: 60% Internal Employees, 27% Both, 12% External Partners, Suppliers, and/or customers