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Providing the right level of analytics self-service as a technology provider

Where are you in your level of maturity as a SaaS provider?

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Introduction

Success as a software vendor involves far more than getting a great idea for a new application. In order to be competitive, vendors need to develop software that meets users' requirements and is delivered in a timely, efficient way.

This is especially true with the Software as a Service (SaaS) channel. Delivering services and information through a web portal involves less time, expense, and effort than on-premises installation and maintenance. But delivering your services through the cloud means business users expect the same visual appeal and intuitive ease of use that they get from consumer sites.

Meanwhile, they still want the most advanced analytics, dashboards, and reports on the operations your software automates, plus hands-on access to data from every source imaginable.

But if analytics, reporting, and data integration aren't part of a vendor's core competency, that can pose a dilemma: Take the time and effort to develop those in-house, or work with another vendor to embed those capacities through off-the-shelf modules? And what level of reporting and analytics do you need to offer, in order to support your application's business purpose and meet customers' expectations?

At OpenText, we see this issue as a journey of several stages. Where an application provider finds itself will depend on its level of maturity as a SaaS provider. As it grows, it will generally work through the stages in this order:

• Build basic reporting and analytics solutions in-house

• Offer basic reporting and data visualization functions via off-the-shelf technologies from other vendors

• Add reporting and analytics that enable flexible user self-service

• Add advanced and predictive analytics

Choosing the right approach for a software vendor's current size and customer demands can offer these benefits:

• Speed time-to-market

• Reduce cost associated with multiple implementations

• Make their application successful by avoiding common pitfalls

• Turn data into a revenue driver

• Gain a competitive advantage

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Advantages

- Perceived low cost and fast time-to-market

Limitations

- Costly to develop and maintain
- Localized control
- Slow response to rapidly evolving user requirements and feedback
- Diverts resources from SaaS' core competencies

## Building data visualizations, reports, and dashboards in-house

In the early stages of growth, technology vendors develop a core competency around building a particular application. However, as the user base expands, the application provider soon hears that customers want them to add reports, dashboards, and analytics, for more insight and actionable intelligence.

Often, a vendor's immediate reaction is to build those reporting and analytics features in-house, because it seems the quickest, most resource-efficient way to go.

However, many software application providers underestimate both the impact of presenting better intelligence, as well as the effort required to deliver it. So they decide to develop their own BI and reporting solution using Java, JavaScript, JSP, or other custom code along with reporting and data visualization libraries. This means that the in-house development team needs to build an entire framework to access data, create reports and dashboards, and create all the capabilities to schedule, run, and view these reports.

As users become more sophisticated in their use of the application, they ask for new reports and dashboards or make change requests for existing content and/or the addition of new features. Since these applications have been developed using Java or JSP code from the ground up, it is time-intensive to create additional visualizations. New reports and dashboards can only be developed either by the application provider's engineering team, limiting the company's growth prospects and diverting resources from its core competencies, or the customer's IT department, taking up their own time and resources and lowering their overall satisfaction with the application.

Either way, in-house development of reporting and analytics capacities turns out to be slower and more expensive than a software vendor may have initially realized.

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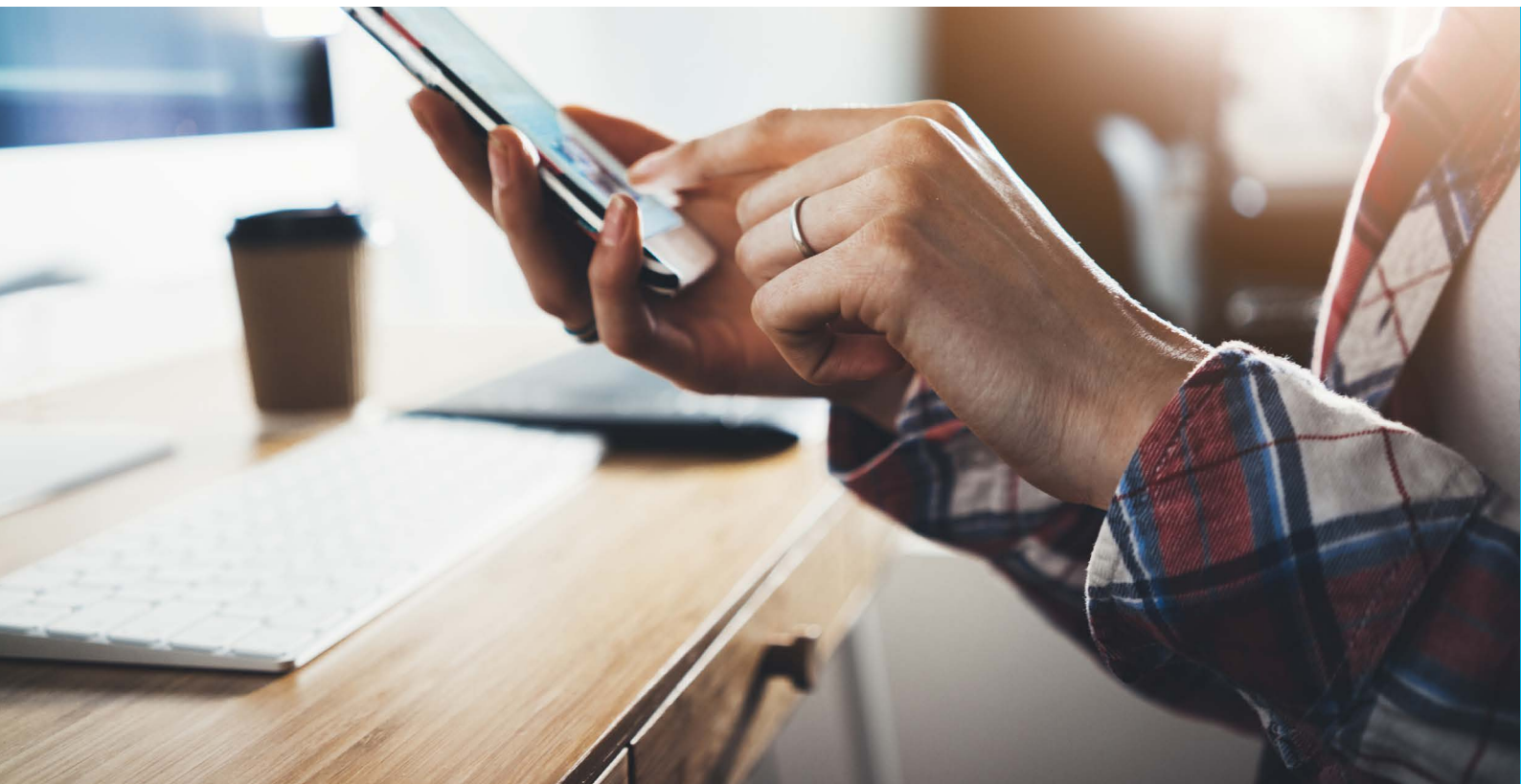
Considering off-the-shelf technologies

Advantages

- Better built-in reports and dashboards

- Infrastructure to store and deliver reports and dashboards

Limitations

- Continuous development to add or change reports and dashboards due to changing requirements

When software application providers realize that developing reporting and data visualization solutions in-house is ultimately too costly to maintain and places too much strain on their engineering resources, they often partner with a third-party business intelligence vendor, embedding their modules for reporting, dashboards, and analytics.

By leveraging an off-the-shelf technology, software applications providers can provide a much richer set of reports and dashboards. This offering increases the application's overall value by providing robust enterprise-grade functionality to help customers better understand their data and make informed business decisions.

However, while a robust platform will make it easier for IT teams to deliver new reports and dashboards, it will not stem the requests for new designs or modifications to existing ones, particularly around users' demands for self-service. As users increase, so do their demands, in both amount and variety. Soon, the application development team finds it must devote much of its time and resources to create and maintain new reports and dashboards to satisfy the broad spectrum of user needs. This is especially true for SaaS providers, whose customers are used to receiving frequent, flexible updates on similar schedules to their favorite consumer apps.

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Providing the right level of analytic self-service capabilities

Simply embedding off-the-shelf analytics components into a business application isn't enough, because a one-size-fits-all approach won't address all customer demands. Technology providers must also define data governance and security for each user.

"Governance" means that each user, based on their defined role and level of security, needs to see the data to which they are entitled. And they need to be able to slice and dice the data and view it in ways that can help them create actionable intelligence based on their particular business unit.

For example, the same basic report may be seen by multiple users, but a specific user may want to see the data sorted or filtered differently to show only a subset. Other users may want additional data elements or new computed elements. A way out of this dilemma, which also increases the longevity of reporting content, is to equip users with interactive capabilities that allow them to sort or filter data or create new computed columns or additional groupings on their own.

Meanwhile, some users prefer Microsoft® Excel® so strongly that they demand to export data to Excel and perform their analysis there.

The best BI solution provides both the right level of self-service and supports the needs for Excel devotees by delivering reports that not only preserve the formatting, but also the calculations used within the report, the charts, and the PivotTables, thus facilitating further analysis of the data.

With their immediate visual impact, dashboards are a popular way to quickly gain access to the most commonly used business metrics. Given that the business metrics will differ by business functions and roles, users will need the capability to personalize their own dashboards by selecting appropriate visualizations or even creating new ones.

Figure 1: An effective dashboard offers different data visualizations to help users understand the patterns and relationships in their information.

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SaaS providers must also define data governance and security. Each user must be able to see the data to which they are entitled and that data must be accurate. They must also be able to break it into smaller parts to help them create intelligence that will improve their business decisions. Each user must also have a tool that meets their skill set but gives them the same level of self-service as any other user.

Enabling users to answer ad-hoc questions

As application and report usage spreads throughout customer organizations, more business users want to create their own reports, dashboards, and data visualization gadgets against the application and be able to answer ad-hoc questions (that is, questions that occur to them during a project, rather than pre-built queries). Power users are often data-savvy but do not have the right skill set to write specific queries, such as SQL. This means the application provider will have to find a simple way for them to access application data, upload their own files, and drop visuals directly onto their dashboards.

Most software application providers take one of three approaches that enable end users to formulate ad-hoc questions.

1. The most typical solution is to create highly parameterized reports and dashboards.For example, users can change parameters, such as account names, date ranges, or network ID to zoom in on the required information. While they are not actually authoring a report or a dashboard, users do have a flexible environment to build queries on a self-service basis without relying on IT resources to build the report.

2. A second option is to integrate custom web-based design capabilities into an application. This approach typically uses a wizard-like interface that starts with a template and guides the user through a series of steps to specify the data source and formatting rules. Users can then create ad-hoc reports without switching applications. In this scenario, an underlying repository is needed to allow business users to save different versions of their designs, as well as share them with other users.

3. A third option is to embed an out-of-the-box design environment that can be fully branded and integrated into the application. This tool should have a drag and drop-style interface to invite users to build their own reports that can be shared with others.
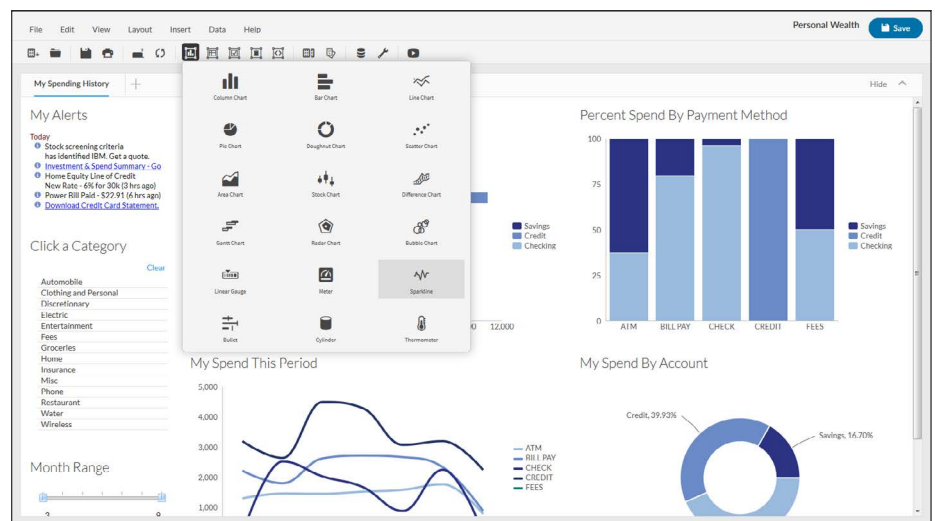

Figure 2: End users want the ability to build and personalize their own dashboards.

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However, all three approaches still face the same challenge: Most application databases are not designed to facilitate analytics and reporting, and sometimes applications require that all data access happens via an application layer. The technology provider will need to address this data access problem in order to simplify development of relevant content.

Regardless of the data access mechanism, the application will need to provide a friendly way for business users to construct queries on a self-service basis.

Adding advanced and predictive capabilities

Driven by computing power, cheap storage, the rapid development of the Internet of Things, and the social and mobile revolution–there has been an explosive growth of digital information over the past decade. Technology providers are quickly discovering the need to add an advanced analytic solution as part of their existing offering.

Advanced and predictive analytics is future-oriented and focuses on driving business decisions, anticipating and optimizing outcomes, and predicting behaviors. By capturing and analyzing historical data, businesses are able to make predictions and influence outcomes.

When technology vendors add advanced and predictive analytic capabilities, they empower their customers to uncover insights that:

- Anticipate and prepare for emerging trends and market developments

- Make proactive vs. reactive business decisions

- Discover patterns and relationships that inform better engagement

- Reduce risk and uncover fraud

- Optimize IoT-driven solutions

Technology vendors that offer their customers advanced analytics gain a competitive edge and have the option to offer this as a premium paid service. The problem here, as with adding other features, is that these sophisticated BI capacities may not be part of the vendor's core competency. In that case, the vendor may choose to embed analytics functions from a third party.

However, these extended functions often require processing millions of rows of data. If you are a SaaS vendor offering your solution via a web browser, you want to make sure the partner whose functions you embed into your solution offers reliable and secure data delivery and the scalability to handle Big Data.

Summary

As we've seen, application vendors are facing ever-growing demands for analytics capacities, including visually appealing reports and dashboards that let users build their own ad-hoc queries, without the need for constant IT support. Yet developing these capacities in-house can entail more expense, development time, and support burden than many application vendors are prepared for. This is especially true if they're offering their products through the SaaS channel, where customers have high expectations for agility, ease of use, and frequent feature upgrades.

Embedding analytics and reporting features from a trusted third-party provider can be a viable option for vendors that want a quick, resource-efficient way to boost their own applications' capacity with built-in business intelligence.

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However, embedding third-party modules is not a one-size-fits-all solution. Vendors need to consider their level of maturity as a SaaS provider, which will affect the scale, complexity, and level of interactivity of the analytic features they present as part of their overall application offering.

Further, they need as a partner a business intelligence vendor that offers powerful analytics and reporting functionality, with the same visual appeal and intuitive ease of use that consumer sites offer, plus robust scalability and security protections for their end users' data.

OpenText™ Analytics: Easy SaaS integration of world-class analytics and reporting

Consider the OpenText Analytics Suite, which offers white label integration that enables you to seamlessly insert ad-hoc reports, personalized dashboards, and insightful analytics into your SaaS applications. These are built on a feature of OpenText Analytics Suite called OpenText Magellan BI & Reporting, a powerful out-of-the-box data visualization platform and deployment server. Leverage this high-performance visualization and reporting technology to quickly build BI infrastructure components that serve up interactive, personalized content to users– branded with your look and feel.

Features:

- A powerful, secure, and embedded BI platform that scales to unlimited users as your business grows
- Easy-to-use data visualization tools that present real-time graphical summaries of your information and ad-hoc reports
- Fully interactive and intuitive applications with customized reports, animated visualizations, and analytical dashboards for real-time insights
- Multi-tenancy for easy management of multiple tenants sharing the same infrastructure
- 100-percent uptime, including High Availability feature for cloud deployment to support automated recovery
- Near-linear scaling, plus elastic clustering
- Flexible licensing for cloud deployment

The OpenText Analytics platform gives your customers' IT department full administrative and user management power to tailor interfaces and reports, but doesn't interfere with business users' intuitive, self-service access to data.

Because it doesn't rely on industry-specific or platform-specific technology, it's extremely flexible and can be incorporated quickly and easily into any SaaS product for any platform, desktop, or mobile and includes the industry's broadest set of APIs, including JavaScript, IDAPI, ODA, Web Services, REST, HTML5, and Highcharts. This lets you plug in a wide range of third-party visualization tools, data streams, and web gadgets to enhance your presentation.

Adding new features to your applications, in order to meet customer expectations and stay ahead of competitors, can feel like a rat race. But you can lower the effort and risk required by partnering with OpenText, a 25-year veteran of the technology industry with a vast range of existing partnerships.

OpenText Analytics will help you stay one step ahead. If you've got the vision for the next market-dominating app, we've got the OEM solution to make it a reality. We offer a highly efficient way to take your applications to the next level with interactive reporting and best-in-class embedded analytics.

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Learn more
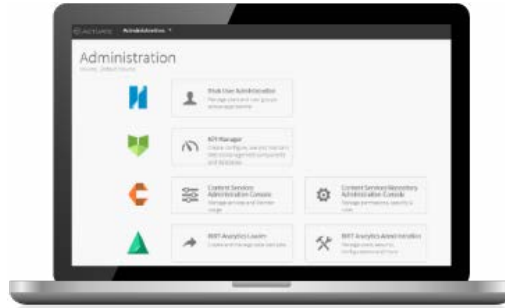
Get a guided tour of Magellan BI & Reporting

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