



SAP Analytics

## **Self-Service** with SAP® Analytics Solutions

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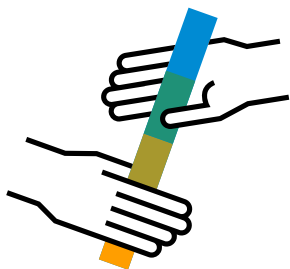
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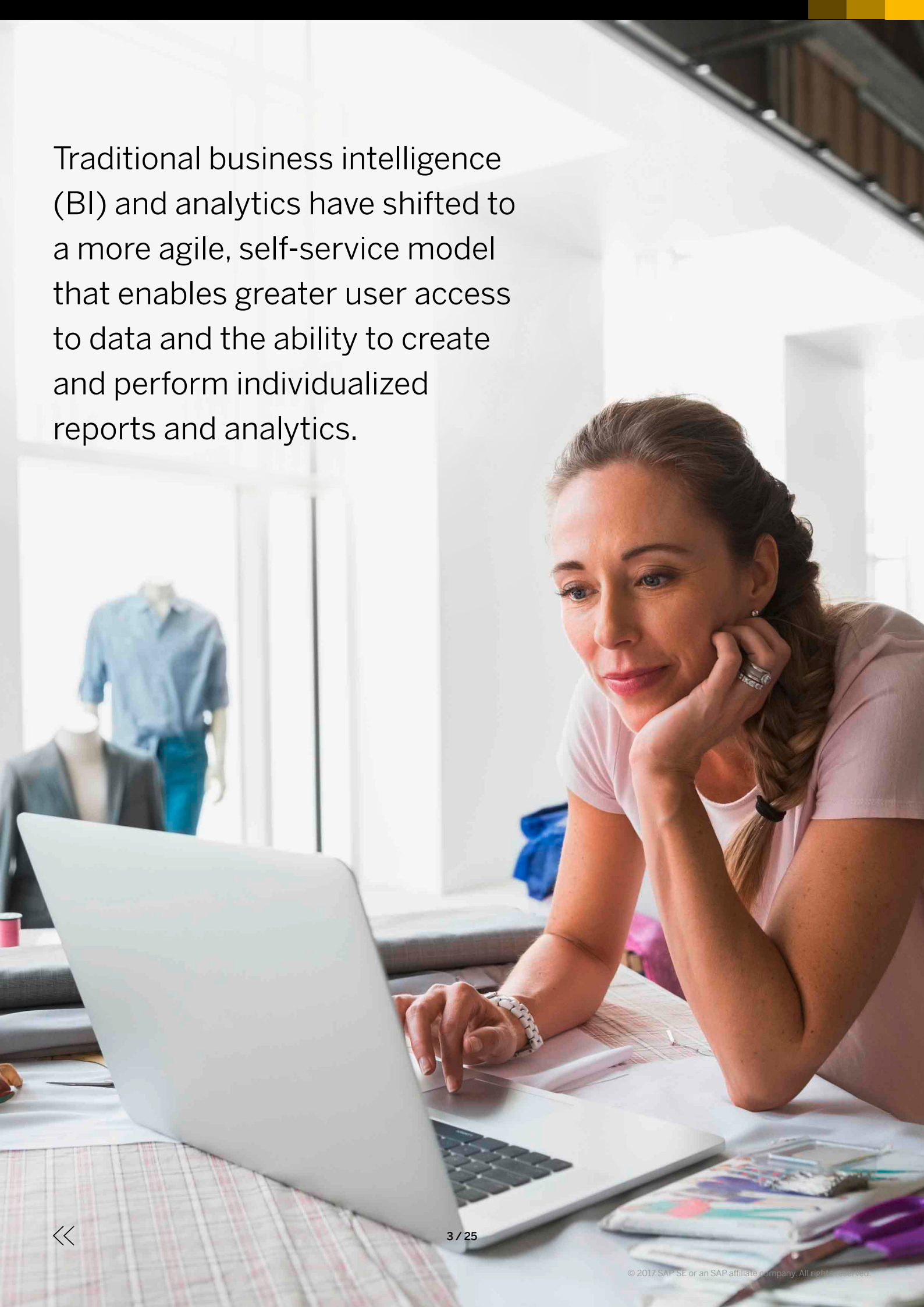
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23 Next Steps



The best way to ensure self-service analytics success is through **joint collaboration** between the business and IT.

Traditional business intelligence (BI) and analytics have shifted to a more agile, self-service model that enables greater user access to data and the ability to create and perform individualized reports and analytics.



# Overview of Self-Service Analytics

The shift to a self-service model for analytics is driven by three key factors:

- Dynamic business environment that demands increasingly timely analytics
- Business demand that puts a strain on limited IT resources
- Proliferation of self-service visualization, discovery, and data access tools

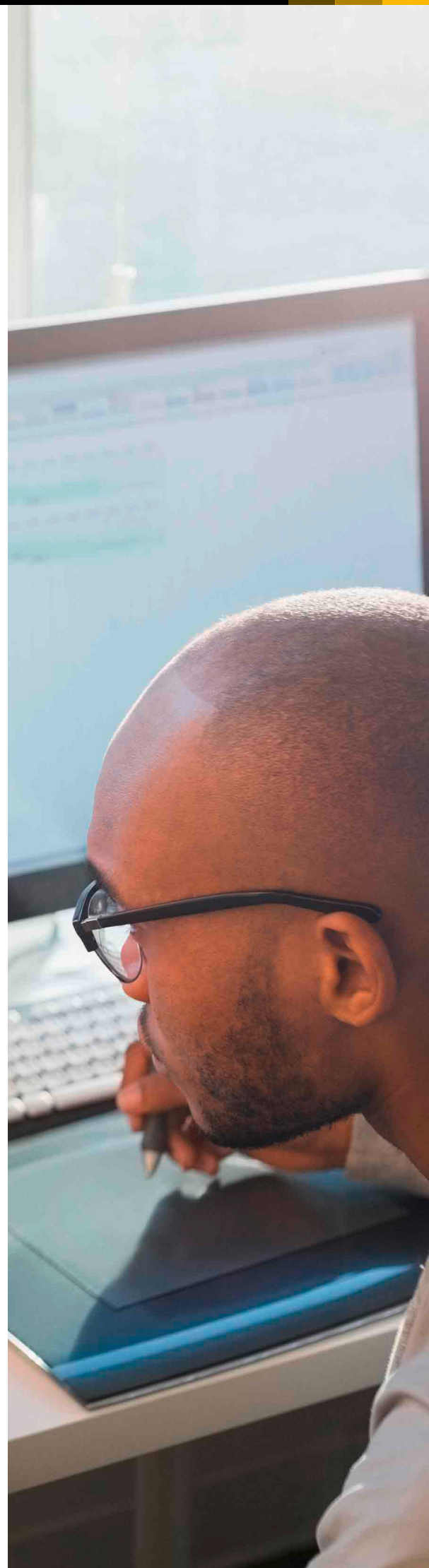
As self-service analytics become the norm, the role of IT is likewise shifting. IT is moving from developing all analytics to developing analytics that require more user expertise. This means IT must also support user development by provisioning trusted data, tool selection, user training and education, expert development services, and best practices. Successful self-service analytics are best enabled by a business analytics competency center (BACC).

Self-service analytics deliver increased user satisfaction and better IT resource allocation, but do not come without challenges:

- Data access and security
- Data quality and understandability
- Culture and change management
- Training, education, and support

Some IT areas may view self-service analytics negatively or be concerned about “shadow” IT and business users going rogue – for example, buying applications that may not conform to corporate standards or creating data marts that are not governed. Ideally, users should use corporate-sanctioned tools against sanctioned data.

Self-service is a reality that is here to stay. The best way to ensure business user agility, data governance, and lower total cost of ownership is through joint, win-win collaboration between the business and IT. The following chapters provide a framework for best practices to help ensure your shift to self-service analytics is a success.



# Self-Service Analytics Defined

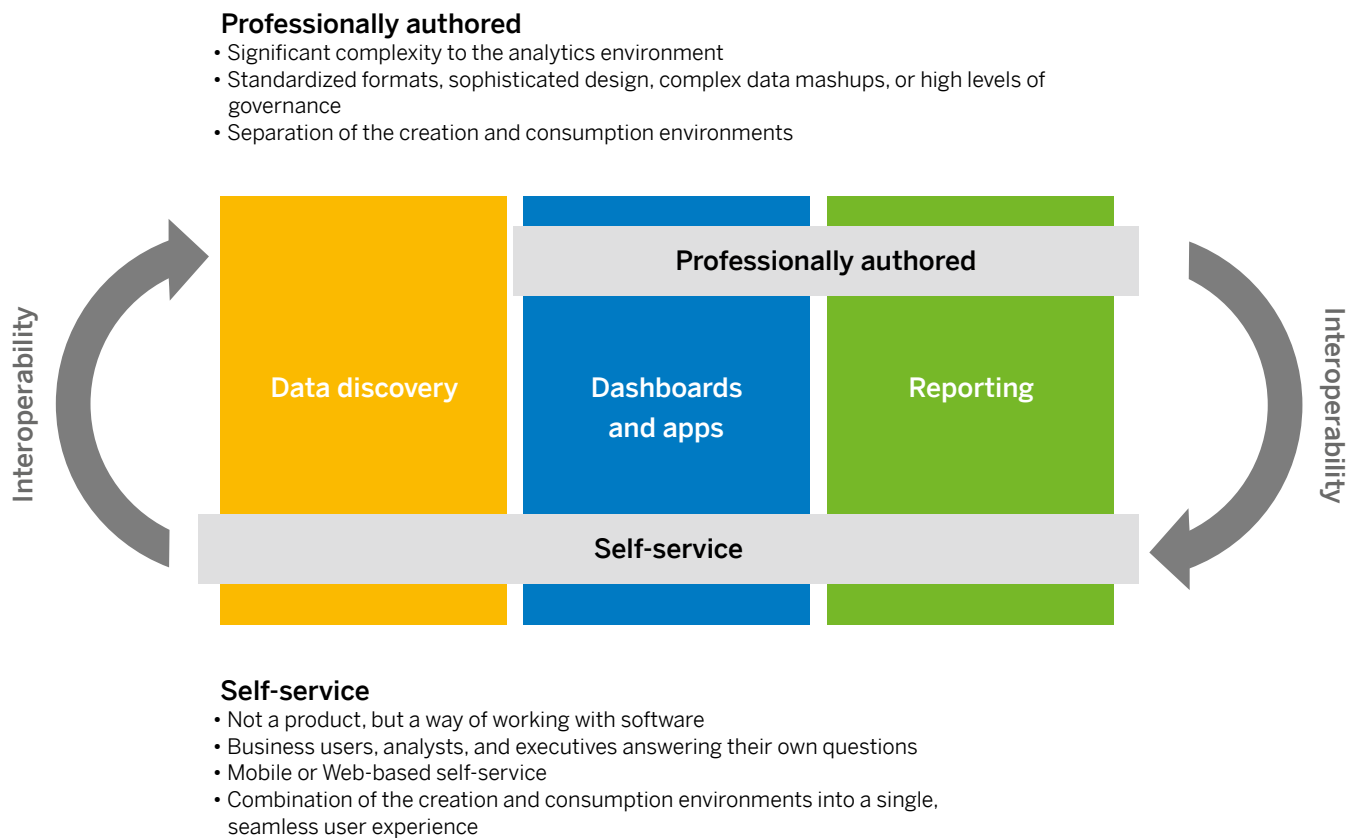
Although we've been talking about self-service BI and analytics for many years, market forces are changing both the priority of these offerings and the expectations of success.

The danger is that your internal customers are not accurately articulating what they mean by self-service analytics. Someone must highlight and clarify self-service requirements by clearly laying out expectations.

Today's self-service analytics are not the professionally authored operational reports that we've been creating for years. Nor is the definition constrained to data discovery, dashboarding, or operational reporting. Instead, it is an approach that crosses all of these pillars. The interoperability between professionally authored analytics and self-service is key because professionally authored reports can provide filtering and input controls that empower users to customize their results.

Figure 1 outlines what we mean by self-service analytics.

**Figure 1: What Are Self-Service Analytics?**



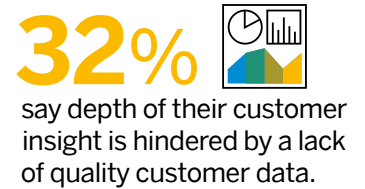
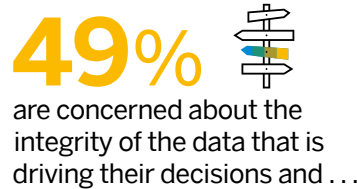
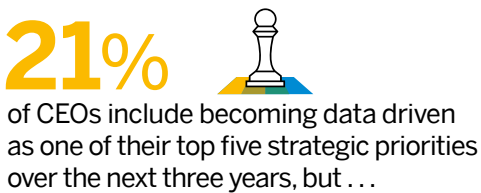
Despite the investment and conversation, we can see from Figure 2 that too many CEOs don't trust the data on which they are basing their decisions. Yet, despite this mistrust, we are still not seeing

interest in making sure their companies lead in data and analytics. To read more about this dilemma, you can refer to the [U.S. CEO Outlook 2017 study from KPMG](#).<sup>1</sup>

**Figure 2: CEO Views on Data and Analytics<sup>1</sup>**

**Do your data and analytics strategies help you run live?**

Does your CEO trust the data and analytics behind decisions?

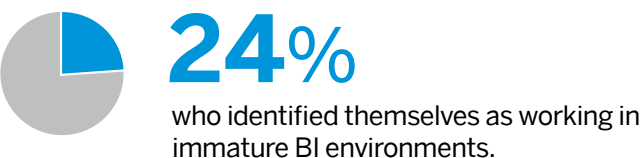


Lack of clear leadership and investment is not helping the problem. Even in mature organizations, users are generating their own content for analytics. In most cases, this user-generated content

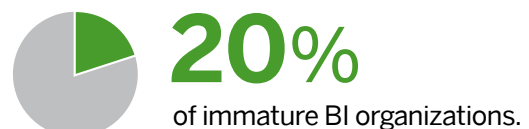
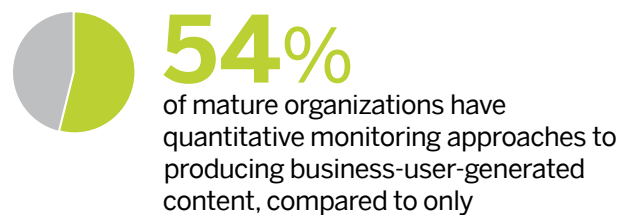
is being blended with curated enterprise content.<sup>2</sup> As we can see in Figure 3, these custom calculations and data are influencing key decisions.

**Figure 3: Business Is Using Custom Data and Creating Its Own Content<sup>2</sup>**

**Creating business-user-generated BI content**



**Leveraging user-generated BI content**



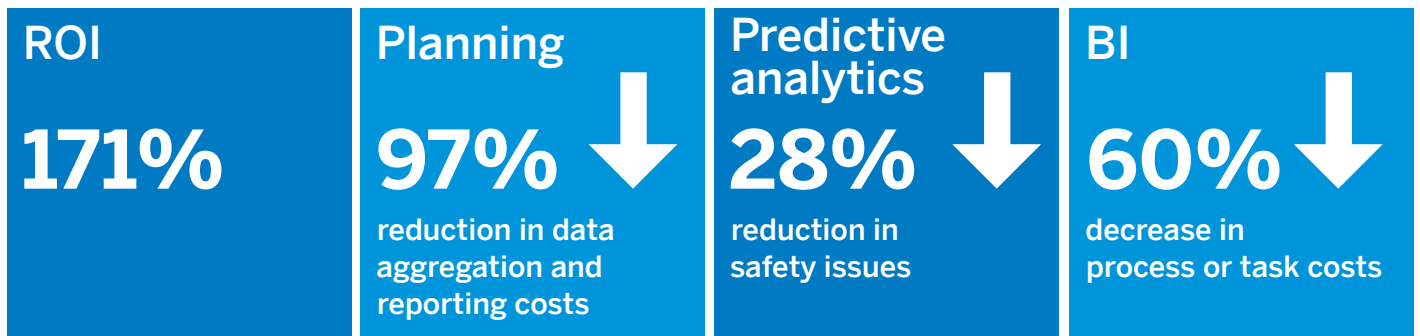
1. "Disrupt and Grow, U.S. CEO Outlook 2017," KPMG LLP, 2017, <https://assets.kpmg.com/content/dam/kpmg/us/pdf/2017/06/us-ceo-outlook-survey-2017.pdf>. This study analyzes the views of 400 U.S. CEOs from organizations with at least US\$500 million in revenue.  
 2. "Business-Driven Agile Enterprise Business Intelligence (BI): Transforming BI to Get the Best of Both Worlds," Forrester Consulting thought leadership paper commissioned on behalf of SAP, May 2014, [http://illumiti.com/landing\\_pages/business-driven-agile-enterprise-business-intelligence](http://illumiti.com/landing_pages/business-driven-agile-enterprise-business-intelligence). This study is based on in-depth surveys with 368 business and technology management professionals. (Registration is required to access the study.)

In 2016, SAP commissioned a study by Forrester Research on the value customers receive by implementing SAP® Analytics solutions. As demonstrated in Figure 4, the numbers are impressive.<sup>3</sup> Use these to your advantage when making the business case

for IT and business to join together for self-service analytics success.

Curious what the ROI would be for your company? Check out the [ROI calculator for SAP Analytics](#).

**Figure 4: Financial Summary Showing Three-Year Risk-Adjusted Results of Using SAP Analytics Solutions<sup>3</sup>**



A winning self-service analytics strategy starts with a **best-practices framework**.

3. Sean Owens (Project Director), "The Total Economic Impact of SAP Analytics – Cost Savings And Business Benefits," Forrester Total Economic Impact study commissioned by SAP, October 2016, [www.sap.com/documents/2016/11/ecf58efa-947c-0010-82c7-eda71af511fa.html](http://www.sap.com/documents/2016/11/ecf58efa-947c-0010-82c7-eda71af511fa.html).

# Self-Service Strategy

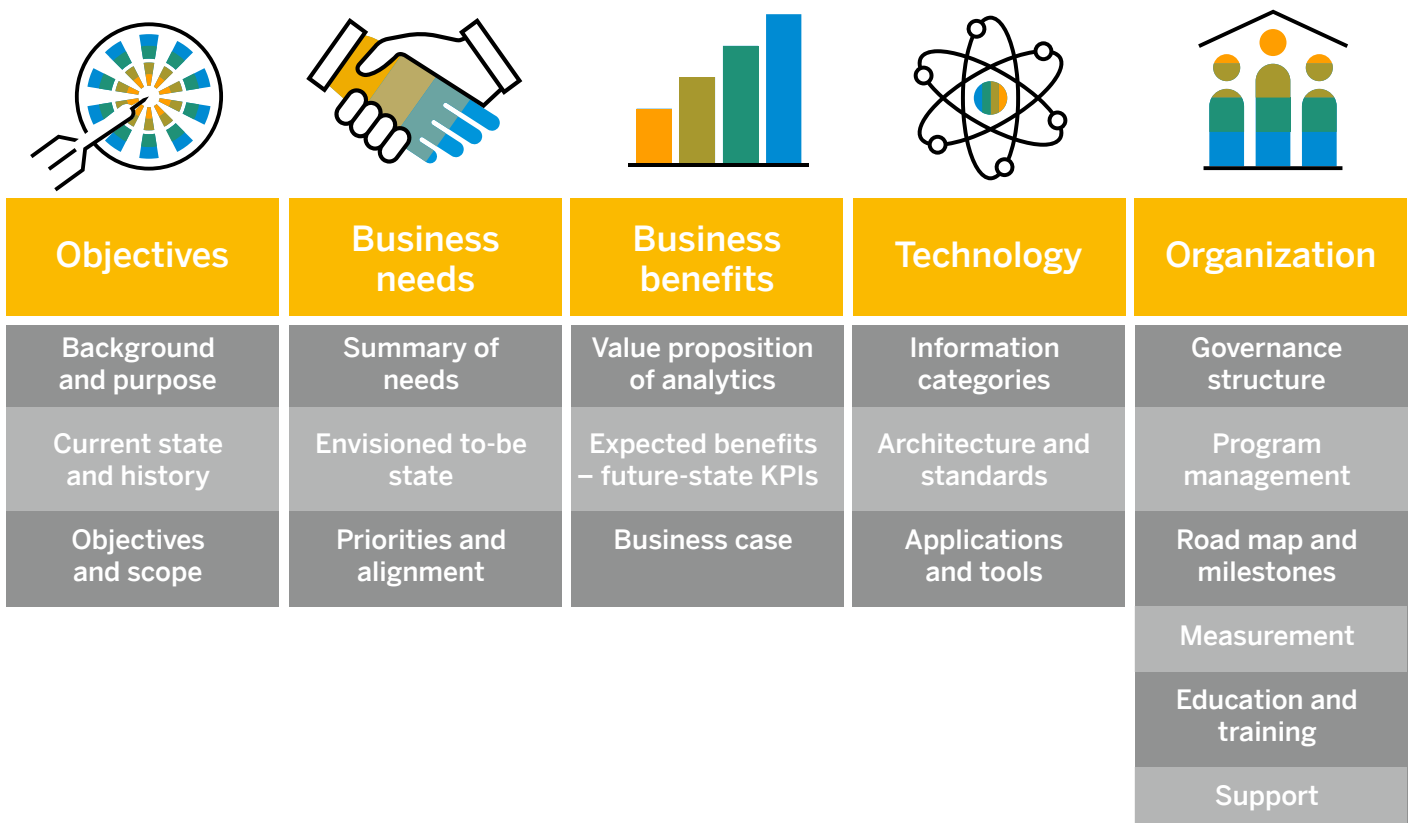
Successful self-service requires a best-practices framework. Self-service is a subset of your overall analytics strategy and can use the same best-practices framework, with a specific focus on self-service. The analytics strategy framework recommended by SAP covers five key best-practice pillars. Figure 5 elaborates on how you can adapt these for self-service.

For example, how many days did it take to develop reports, and what are the backlog statistics? A strong analytics strategy should address the background and purpose of self-service analytics. It should include both a broad objective, such as a corporate mission to be a data-driven business, as well as specific objectives, such as providing easier access to sanctioned data, enabling data exploration and analysis, and facilitating data-driven decision-making.

## OBJECTIVES

**Background and purpose:** Examine what led to this point and why self-service was introduced.

Figure 5: Five Pillars of a Rock-Solid Analytics Strategy Framework





**Current state and history:** It is important to establish the existing state of information access, analytics, and reporting used to support decision-making today and historically. For example, what is your current self-service state? What percentage of users can use self-service analytics today, and how has that evolved over time?

**Objectives and scope:** Examine the intent and the boundaries of your self-service goals. Where will you start, and where will you stop? What are your sanctioned internal and external data sources, data types, and analysis types? For example, would you allow exploration and departmental reports but not enterprise reports?

#### **BUSINESS NEEDS**

**Summary of needs:** Establish your key self-service needs by stakeholder group, such as line of business, functional area, group, or role.

**Envisioned to-be state:** Determine your desired reality of information availability, usage, and other benefits related to self-service.

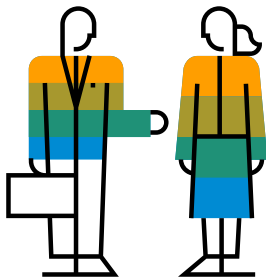
**Priorities and alignment:** Rank the importance of needs and goals to be addressed by self-service, including alignment with corporate strategy and other important initiatives.

#### **BUSINESS BENEFITS**

**Value proposition:** Ask what your organization expects to achieve with self-service. For example, do you want to increase decision-making through more real-time access to data and analytics with limited IT support?

**Expected benefits and future-state KPIs:** Target expected and desired KPI levels for self-service. For example, you could be aiming for 80% users trained and a 20% reduction in IT report requests.

**Business case:** Establish quantitative and qualitative estimates of self-service payback.



Different users have different roles and needs for **self-service analytics**. Understanding those differences is key.

## TECHNOLOGY

**Information categories:** Establish the groupings of information that self-service aims to create for your organization. For example, will you create sanctioned internal data sources and sanctioned third-party data sources?

**Architecture and standards:** Provide a description of the to-be system architecture, standards, and components for the self-service infrastructure, including an exploration sandbox for innovation and trying new data, tools, or technologies.

**Analytics tools and applications:** Make a list of existing or future self-service analytics tools and applications to be managed by corporate IT on behalf of the enterprise, as well as those that are for IT's own use. State clearly which tools are in and which are out of scope, and their characteristics.

## ORGANIZATION

**Governance structure:** Lay out the roles, organization, reporting relationships, and policies for self-service to ensure trusted data governance. For example, will you create a self-service steering committee?

**Program management:** Build a working program structure and establish policies to manage self-service, examining the various roles and how they interact.

**Road map and milestones:** Create a timeline with specific steps to create and evolve self-service. Include a duration of key projects or events required to measure progress and manage decision points, such as training and tool licensing.

**Measurement:** Establish the metrics and methodologies you will use to measure current and ongoing self-service success. For example, determine how many users have been trained, the number of active users, and a user satisfaction index.

**Education and training:** Make plans for training users and describe support organizations for self-service, including requirements, scope of education, goals, and leadership structure. For example, how will you name key, high-profile users? Be sure to include a community-of-interest structure based on specific user needs and capabilities.

**Support:** Document self-service support requirements for users, user applications, and tools.

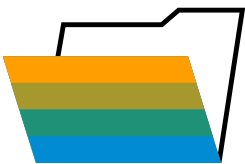
Read more about analytics strategy in the SAP e-book, [Analytics Strategy Best Practices](#).

# Business Analytics Competency Center

Successful self-service requires defining a strategy, but that strategy must also be operationalized. A business analytics competency center (BACC) or center of excellence (COE) is used to define and operationalize an organization's analytics strategy, align its analytics initiatives with corporate strategic goals, and ensure its return on investment.

The BACC concept is not new. Once called business intelligence competency centers when they emerged in the mid-1990s, they were more technology driven and focused largely on program management. As data has exploded and business-user self-service has grown, BACC responsibilities have expanded to include more business engagement for requirements, alignment, enablement, and business value.

Ultimately, the leader of a BACC is responsible for driving analytic adoption and working with the business to ensure the organization's overall data and analytics success. The leader works with the executive business sponsor or Chief Analytics Officer – a working relationship that often helps address and secure funding needed for the budget and other key challenges.



Clear documentation of requirements, services, responsibilities, and standards is **immensely helpful** to IT and users alike.

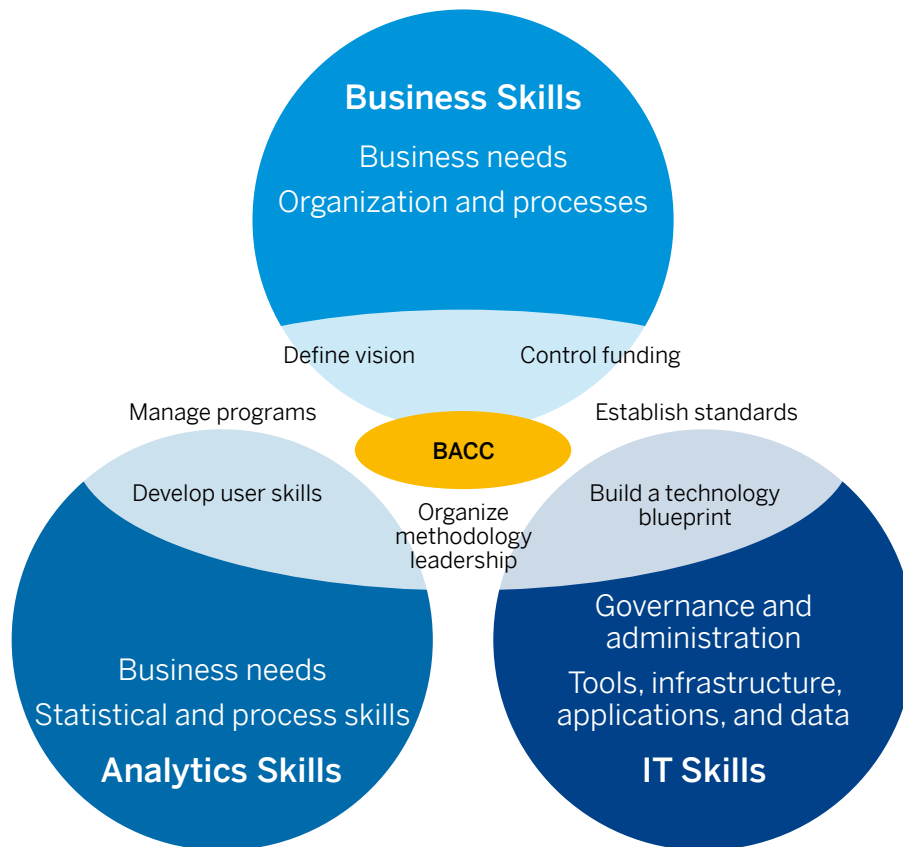


A BACC is a joint effort between the business and IT. It can take multiple organizational forms, but it always involves user participation. As demonstrated in Figure 6, members must have a combination of business, analytics, and IT skills.

A BACC is responsible for analytics training, development, and communication, including developing user skills – a critical element to self-service success.

Read more about BACCs in the SAP e-book, [Business Analytics Competency Center – Best Practices Guide](#).

**Figure 6: BACC Skill Requirements – Business, Analytics, and IT**



BACC = Business analytics competency center

# Adoption and Culture

Many organizations already have some form of analytics self-service and are continuing to make ongoing investments. Yet, despite these investments, organizations still face challenges in adoption, as shown in [Figure 7](#). According to Logi Analytics in its “2017 State of Analytics Adoption Report,” only 21% of business users have access to and also use self-service BI when they need it.<sup>4</sup>

The Logi Analytics report cites the top three challenges as:

- High cost of maintenance
- Dislike of switching to a separate analytics tool
- Difficulty using self-service analytics tools<sup>5</sup>

All three of these can be effectively addressed through a BACC. A BACC will also address the “elephant in the room,” namely, how to create a self-service culture and how to assess your current self-service analytics maturity and readiness. You cannot just throw self-service tools at users without training and governance structure and expect successful adoption.

4. “2017 State of Analytics Adoption Report: Annual Review of How Users Adopt Business Intelligence Tools,” Logi Analytics, 2017, [www.logianalytics.com/report/2017-state-analytics-adoption/?utm\\_medium=referral&utm\\_source=sap&utm\\_campaign=2017-soaa&cm=sap](http://www.logianalytics.com/report/2017-state-analytics-adoption/?utm_medium=referral&utm_source=sap&utm_campaign=2017-soaa&cm=sap). (Registration is required to access the study.)
5. Ibid.

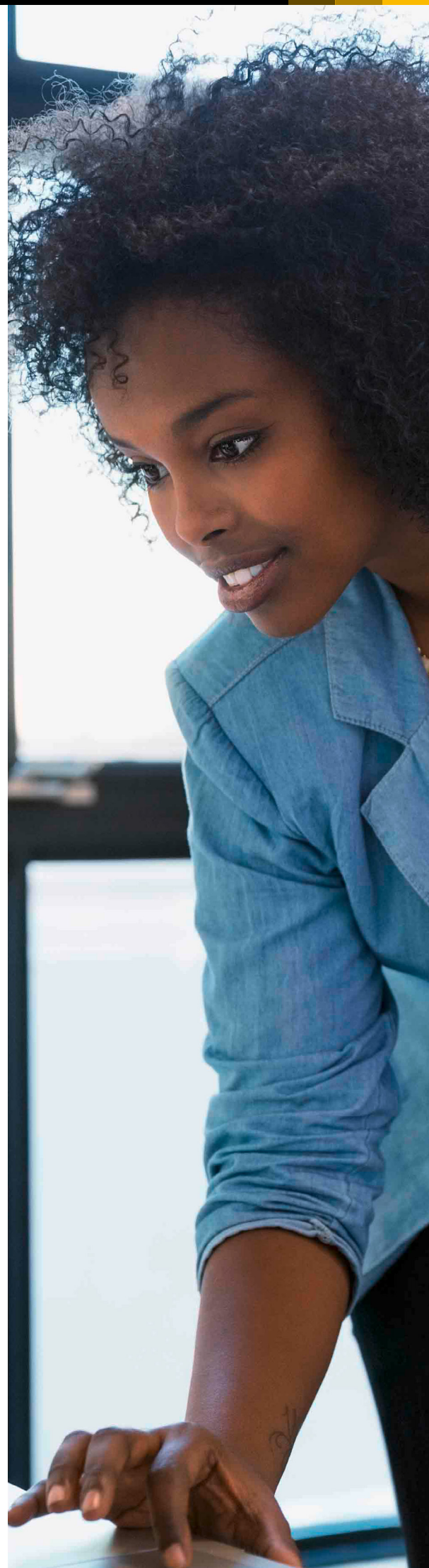
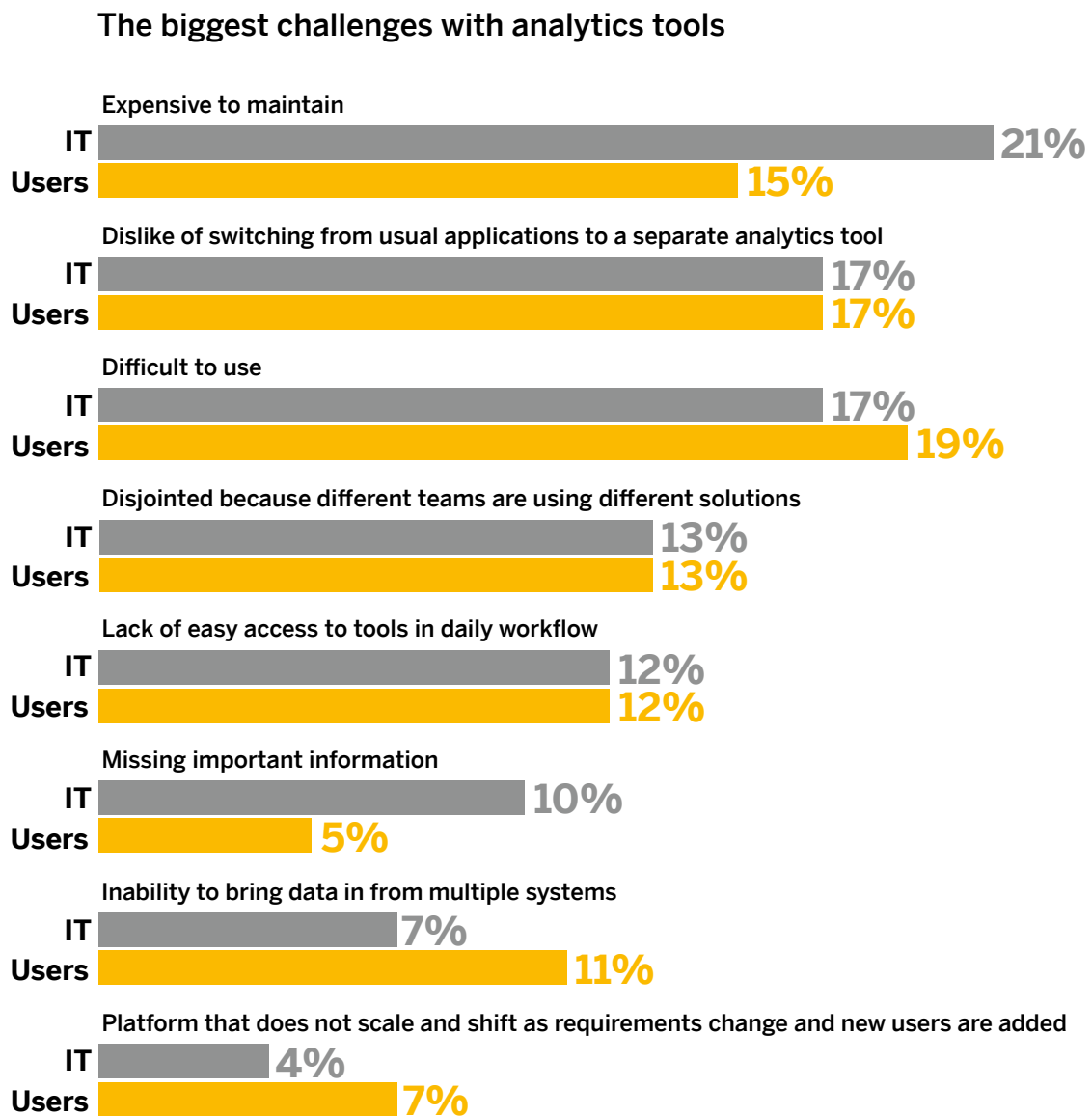


Figure 7: Challenges to Comprehensive Self-Service Analytics



Source: "2017 State of Analytics Adoption Report: Annual Review of How Users Adopt Business Intelligence Tools," Logi Analytics, 2017, [www.logianalytics.com/report/2017-state-analytics-adoption/?utm\\_medium=referral&utm\\_source=sap&utm\\_campaign=2017-soaa&cm=sap](http://www.logianalytics.com/report/2017-state-analytics-adoption/?utm_medium=referral&utm_source=sap&utm_campaign=2017-soaa&cm=sap). (Registration is required to access the study.)

# Users and Use Cases of Self-Service Analytics

Different users have different roles and needs for self-service analytics – and the understanding of self-service can vary based on those differences. The key is to make sure you are working with your BACC to identify how requirements change by use case and user.

The following are common use cases, grouped by user type. Make sure to clarify what your users mean when they request self-service capabilities.

**Decision makers:** These users do not want to spend a ton of time creating BI reports or stories. They want to consume, customize, and get results fast:

- Drill-down and filtering in dashboards and reports
- Mashup data from multiple data sources
- Easy-to-learn products
- Compelling visualizations
- Simple dashboards

**Dashboard composition creators:** These users are creating rich dashboards for decision makers and other business users to consume. They have deep technical skills.

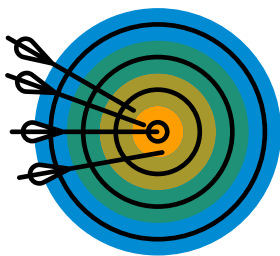
**Casual users focused on data discovery:** These users are finding insights and generating visualizations many times directly in their applications of choice, such as Microsoft Excel. They must be able to answer a new business question in 10 minutes or less.

**Self-service reporting users:** These users are in charge of their data and business but do not spend time thinking about BI best practices, standards, scheduling, or the enterprise implications of their creations:

- Easy access to data
- Ability to build ad hoc queries and format data as needed
- Ability to create simple reports
- Document-style output

**Predictive analytics users:** These are business analysts and other advanced business users who know their data well and can use predefined predictive models or even create their own prototypes for later refinement by a data scientist:

- Conduct what-if analysis
- Identify outliers
- Perform predictive forecasts
- Create “smart” groupings or segments
- Discover key influencers



Self-service analytics must be built on a flexible, scalable data strategy to **ensure success**.

**IT and administrators:** Line-of-business users and subject-matter experts are not the only user types for self-service analytics. IT and administrators use these tools as well and need to participate in the self-service BI system in the following ways:

- Securing the environment – Reporting data is quite valuable, so the self-service environment must support security standards.
- Ensuring scalability and performance – Self-service BI, by definition, should bring you an explosion of users. The systems you build to support 10 users in one geography for the first project will differ greatly from an enterprise-grade solution.
- Enforcing user access rights so the right people are looking at the right data
- Reusing user access rights so new, copied points of failure for user access are not introduced
- Scheduling maintenance and updates, which should take place during downtime
- Providing gated access to curated, enterprise sources in a way that respects user access rights
- Maintaining audit trails of licenses, users, and data use to support your BI strategy or initiative
- Monitoring system performance

**Power users and information governance users:**

These users are, of course, your most vocal proponents. They also need to participate in self-service BI in the following ways:

Power users facilitate use by casual users:

- Create templates in corporate colors
- Create custom extensions for data sources and visualization types that are unique to your company
- Create report pieces that can be used together to compose personalized reports or dashboards
- Analyze more-complex data sources beyond Excel
- Enable real-time data consumption
- Enable sensor data consumption

Information governance users work hand in hand with the analytics team:

- Ensure the best data is available and discoverable
- Validate metadata and description documentation so users understand what they are seeing
- Decide which data sources to promote to enterprise usage and which should be curated, with more governance procedures in place to verify quality
- Validate quality so the data is fit for use

The key to success is to quantify both the majority use cases and the critical use cases. Understand how the many faces of self-service BI can change depending on the situation.

To find out more about information governance strategy, explore the [information governance capability assessment model tool](#).



## SERVICES TO SUPPORT SELF-SERVICE ANALYTICS

Some companies still need at least a year of runway to plan system updates and upgrades. As the business requests new features, new charts, new data sources, and more, this lack of agility will be increasingly less tolerated. Instead, IT should function as an agency by offering services to support self-service analytics:

- Innovation services, including design thinking, digital disruption, live enterprise, and so on
- Training and support for best practices, some of which should be automated as self-service expands
- Data bureau, which should serve as an enterprise store for internal, external, structured, unstructured, and curated enterprise data
- Tools bureau, which should provide tools that satisfy a breadth of use cases for a wide variety of users
- Sandbox environments, which provide a governed playground of data and technology that gives business the chance to ask and answer new questions in new ways
- Marketing and community building, which should comprise 20% of your self-service budget
- Support for analytics collaboration that lets users pose questions and comment on workflow across BI tools
- Analytics on analytics to determine how the user base is expanding, license usage, and any impact to productive systems

The services you offer will be different for every organization, so you need to start by agreeing on responsibilities. For example, should ad hoc calculations happen in productive systems, master data systems, the enterprise data warehouse, the semantic layer, or within individual reports? Undoubtedly, the answer will vary depending on the type of calculation, but clear documentation will be of immense help to IT and users alike.

6. Thomas Jentsch, "Unlock the CMS Database with New Data Access Driver for BI 4.2 SP3," Blog on SAP Community, April 26, 2017, <https://wiki.scn.sap.com/wiki/display/BOBJ/Unlock+the+CMS+database+with+new+data+access+driver+for+BI+4.2+SP3>.

## IT: A KEY USER OF SELF-SERVICE ANALYTICS

IT can truly bring simplicity to self-service analytics:

- Free users from the unending redundancy of data preparation
- Provide the data and systems sustenance that self-service analytics need to satisfy decision-making

Here are some steps to start breaking through data constraints:

- Know your users and required functionality
- Identify special requirements beyond standard content
- Choose analytics tools that serve multiple use cases
- Converge administrative features onto a single platform
- Unlock the central management server with data access drivers (Read more on how to do this [here](#).<sup>6</sup>)

# Data Foundation

You need a data strategy for self-service analytics that includes a new, flexible, scalable data strategy. This self-service analytics data strategy should help identify key principles and tasks.

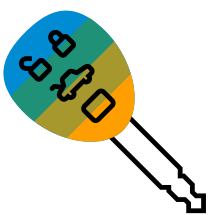
- Assist in finding the right sources
- Manage metadata for ease of consumption
- Perform routine cleansing and deduplication
- Promote to enterprise sources, with views
- Move and copy data as infrequently as possible
- Exclude archived and deleted information

Your data strategy should be shared with your information governance team, which needs to understand how data supports enterprise transactional and analytic data.

## ANALYTICS IN ACTION

Many SAP customers have established a data foundation to serve their businesses. For example, Alliander N.V. carries electricity and natural gas to 3.5 million customers. It is using SAP Data Services and SAP Information Steward software to improve data quality in its operational and analytical BI reporting, which is extending its data governance capabilities.

You can read the full Alliander story [here](#).<sup>7)</sup>



Strong information governance should be at the **core of your self-service analytics strategy**.

7. "Smart, Flexible Energy Supply for a Sustainable Society," SAP Customer Journey on Alliander N.V., <http://sap-espresso.com/viewStory/441>.

## INFORMATION GOVERNANCE

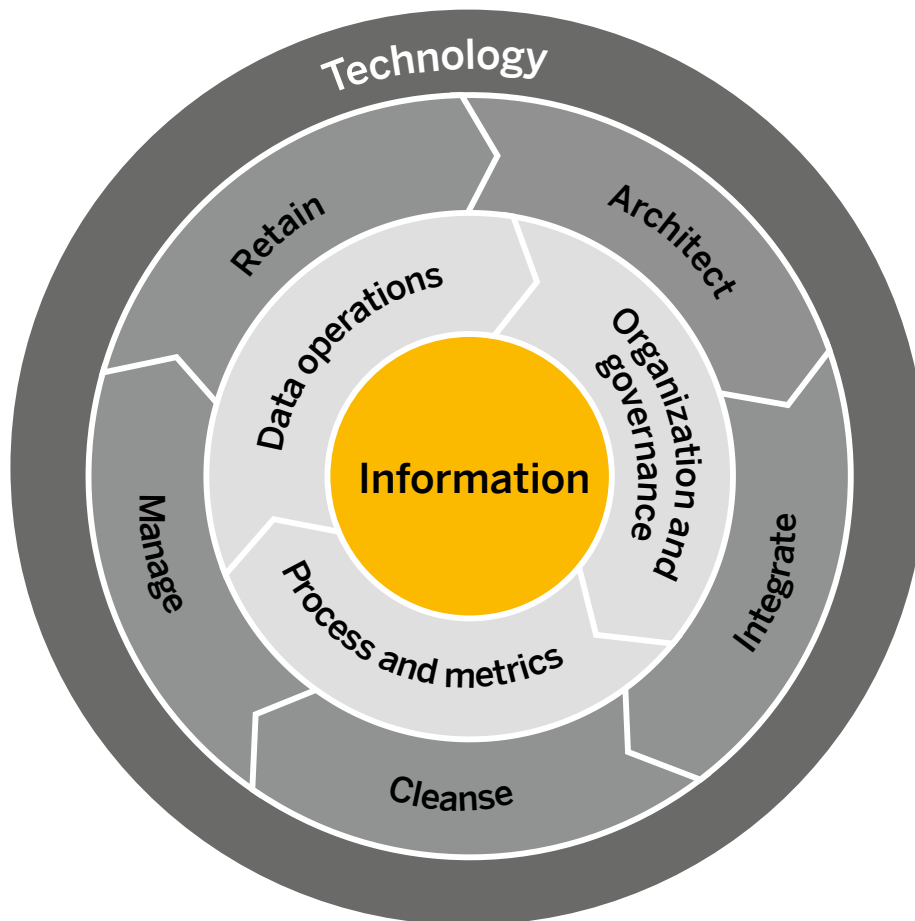
What do we mean by information governance?

In short, information governance is a discipline. As Figure 8 demonstrates, technology supports all of its key activities, but the majority of the work is not based in technology. Much like developing a self-service analytics strategy, an information

governance strategy includes defining processes and metrics for your data; understanding who can create, read, update, and delete the data; deciding which data is fit for which level of governance; and so on.

For a full explanation of the information governance model from SAP, check out [this blog series](#).<sup>8</sup>

Figure 8: Information Governance Model



8. Ina Felsheim, "New Information Governance Model from SAP," Blog series on SAP.com, July 8, 2014, <https://blogs.sap.com/2014/07/08/new-information-governance-model-from-sap>.

## DATA STRATEGY REQUIREMENTS

Self-service analytics will add new requirements to your data strategy. And, with increased data visibility, you will need a solid data strategy to ensure success:

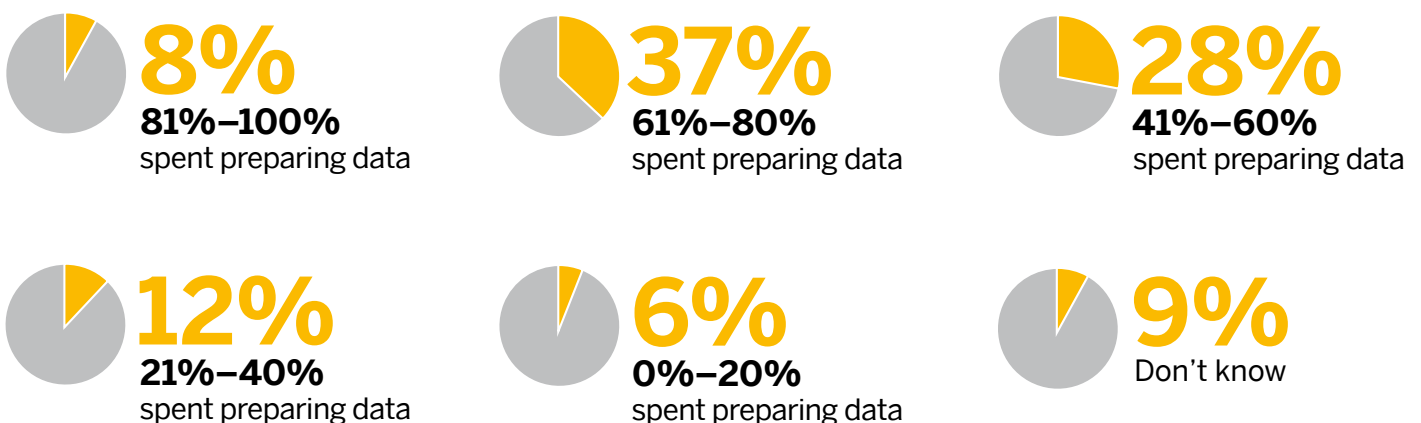
- Which data sets will be promoted to enterprise sources, and how will that happen?
- Where does cleaning and transforming take place?
- Where do calculations take place?
- Is there a feedback process in place for dealing with errors and inconsistencies found in the data?
- How will you move the data to avoid creating silos?

- Are your user permissions for sensitive or out-of-area data set appropriately?
- How will you share common reference data and enrichment sources?
- How will you manage third-party data sets such as analyst numbers or demographic data?

A key dimension is the data preparation required for analytics activities. As demonstrated in Figure 9, this can be as much as 80% of a company's analytics effort, according to a 2016 TDWI report.<sup>9</sup> Although often time-consuming and tedious, it is important to remember that inconsistent data preparation can result in your users spending up to 80% of their time preparing data on a one-off basis.<sup>10</sup>

Figure 9: Time Lost to Inefficient Data Prep

Thinking of your organization's most recent BI and analytics projects, what percentage of the total time was spent preparing the data compared to the time spent performing analysis and data interaction?



Based on answers from 372 respondents

9. David Stodder, "Improving Data Preparation for Business Analytics – Applying Technologies and Methods for Establishing Trusted Data Assets for More Productive Users," best-practices report published by TDWI and sponsored in part by SAP and Intel, Q3 2016, [www.sap.com/documents/2016/07/acad3eca-7a7c-0010-82c7-eda71af511fa.html](http://www.sap.com/documents/2016/07/acad3eca-7a7c-0010-82c7-eda71af511fa.html).

10. Ibid.

# Training and Education

Self-service ease of use does not mean that no training is required. Certainly, intuitive tools are more user-friendly, but training and ongoing communication are a must. It is important to classify user roles and define a minimum training curriculum for each one.

Even if a new business user has self-service analytics development skills, onboarding is critical. Users will need to familiarize themselves with data sources, available tools, and the development standards within the organization.

Organizations are always constrained by budget and the talent resources needed to design and deliver effective training. Savvy organizations use a mix of methods, using as much self-training and “free” training as possible. They begin by building training wikis or intranets for the basics. They also add training mentors and communities to facilitate mentoring, and build knowledge management repositories based on questions and answers posted to collaboration sites. Finally, they include more-traditional, structured training using computer-based training, video tutorials, Webinars, and classroom training.

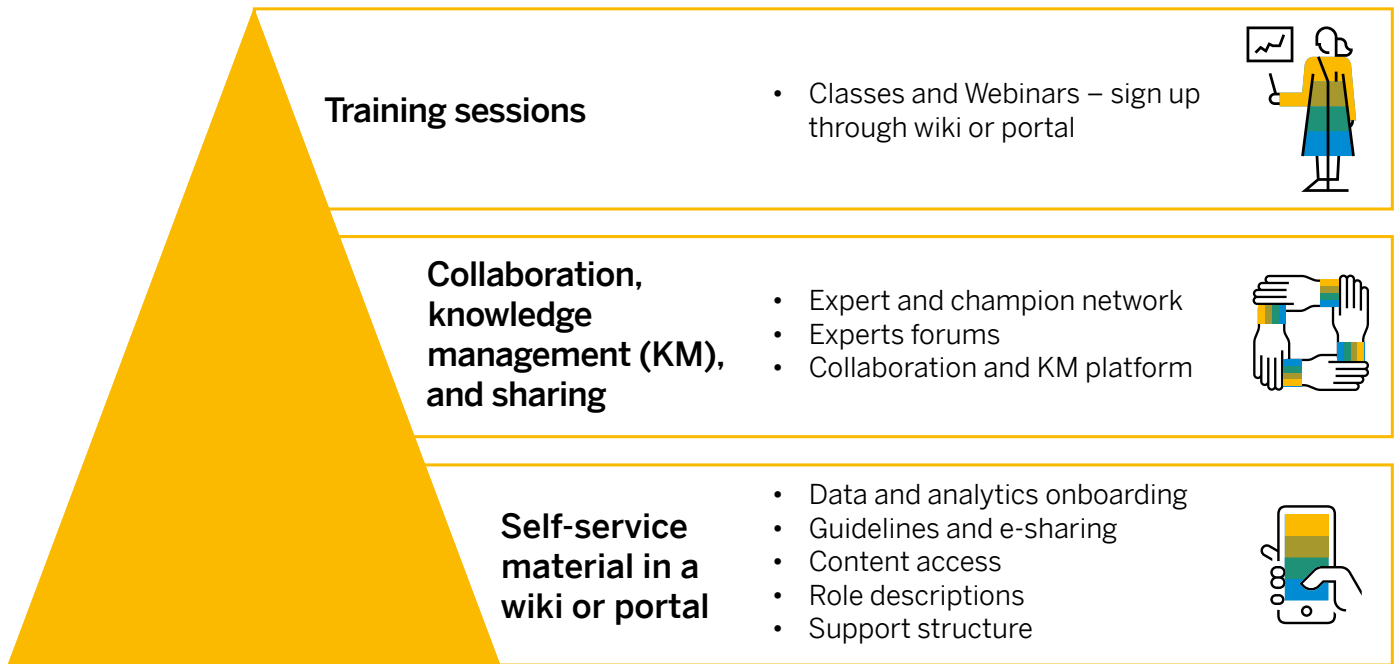
**Figure 10** is based on a model shared at ASUG Annual Conference in 2015 by SAP customer Tetra Pak International S.A., which has a BACC and addresses its training as part of the BACC model.



To ensure wide user adoption and ease of use, **training and ongoing communication** are a must.



Figure 10: Self-Service As a Training Baseline at Tetra Pak



#### TIPS FOR SUCCESSFUL TRAINING AND EDUCATION:

- Take advantage of training resources and [official product tutorials for SAP® Analytics solutions](#) available in SAP Community
- Review support tickets to identify specific topics that may warrant more focus in your training program

# Next Steps

Although self-service analytics may seem overwhelming, there are some best practices to help you start.

- Interview key business stakeholders. You can start by taking the [analytics strategy assessment survey from SAP](#).
- Interview the “data oracles” in your organization. They know which data is the most reliable, where it is, and how it has transformed over time.
- Document key use cases, owners, and availability of data for each business area.
- Assign back-of-napkin priority and impact assessments to key use cases. Note that this should not be a six-month process. Get the most important, rough statistics. For example, how many users have a given problem? How much time does it cost them? And what is the fully loaded labor cost you are losing?
- Find use case overlap and critical outliers across multiple business areas.

- For those use cases with the most overlap and greatest impact, chart functionalities against available technology to execute.
- Establish a cost and priority road map.

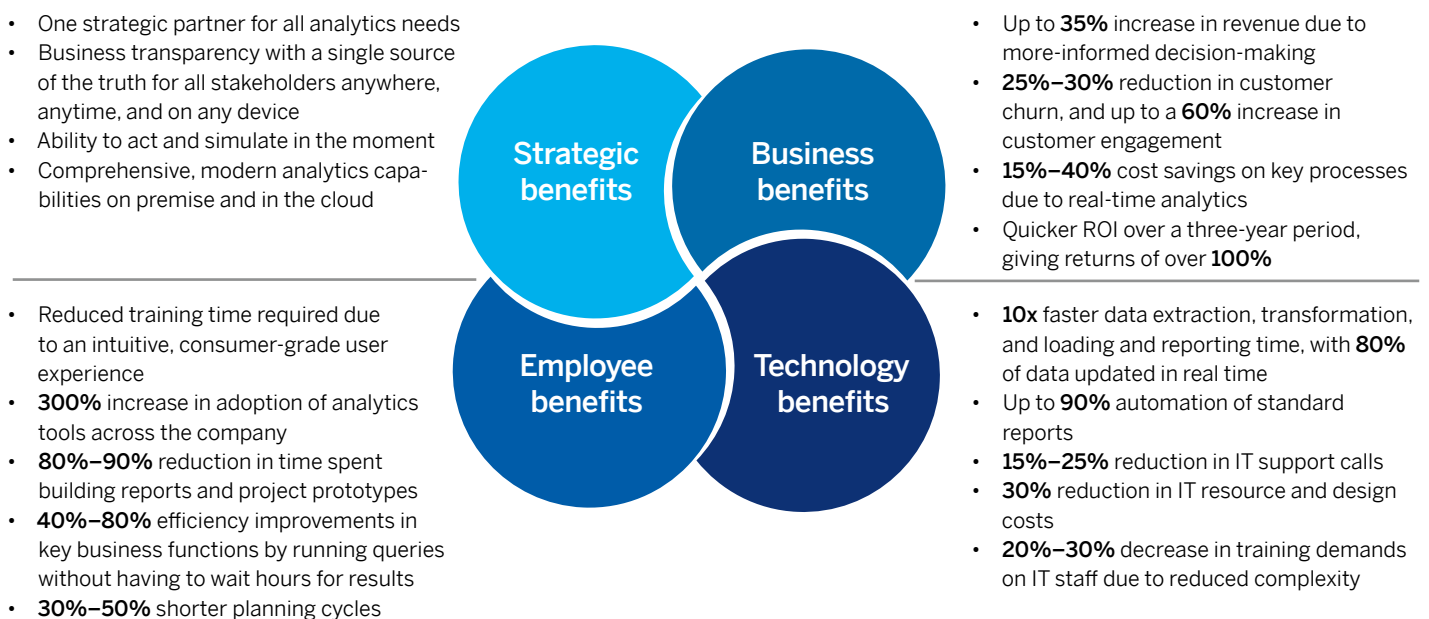
After a quick three-year road map is documented, communicated, and aligned, then – and only then – should you start slotting in available technology. Keep in mind that we are often quick to throw technology at a problem we haven't yet defined.

## HOW SAP CAN HELP

As demonstrated in Figure 11, enterprises that use solutions from the SAP Analytics portfolio see value across four key dimensions:

- Strategic benefits
- Business benefits
- Employee benefits
- Technology benefits

**Figure 11: Benefits of Using Solutions from the SAP Analytics Portfolio**



Benefits are based on proof points or conservative outside-in benefit estimates from SAP customers using SAP® Analytics solutions. As each enterprise is at a different level of maturity, our recommendation is to work with SAP to determine the value proposition for your enterprise.

There are many different use cases and different solutions to choose from, as outlined in the table below.

Capability	SAP® Solutions
Create simple dashboards with input controls	SAP Lumira®
Create enterprise-grade dashboards and BI applications	SAP Lumira
Embed analytics directly into Microsoft Excel and PowerPoint	SAP Analysis for Microsoft Office
Create beautiful visualizations and infographics	SAP Analytics Cloud SAP Lumira
Create document-style output with input controls	SAP BusinessObjects™ Web Intelligence®
Enable sharing, governance, security, scheduling, and scalability	SAP BusinessObjects BI platform
Share analytics via mobile device	SAP BusinessObjects Mobile SAP Roambi®
Create and run simple predictive analytics	SAP Predictive Analytics SAP Analytics Cloud

For an overview of these solutions, read this [solution brief on the SAP Analytics portfolio](#).

[Check out this brochure](#) to find out more about how the SAP Analytics portfolio can help your business.

One of the key questions to ask yourself is, “What is my cloud strategy?” In most cases, you may have a blended environment of cloud and on-premise

applications and data. For guidance on how to be better, faster, and smarter in this hybrid BI environment, read the [research paper from Blue Hill](#).<sup>11</sup>

To calculate the value of SAP Analytics solutions for your company and quantify the costs of deploying on premise versus in the cloud, use our [value calculator](#).

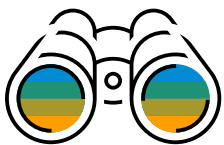
11. Hyoun Park, “Eight Key Questions Business Managers Must Consider for Cloud and On-Premises Analytics,” Blue Hill Research, January 2017, <https://d.dam.sap.com/a/xOnPD/Whitepaper%20-%20Cloud%20vs%20OnPrem%20Analytics.pdf>.



Here are a few additional tools to help you get started:

- Run a holistic analytics strategy workshop. Find out how at this link: [www.sap.com/bistrategy](http://www.sap.com/bistrategy)
- Establish your data strategy with an information governance assessment workshop. Find out how at this link: <https://blogs.sap.com/2014/07/09/self-assess-your-capabilities-for-executing-on-an-information-governance-strategy>
- Explore the quick win of a cloud analytics solution at this link: [www.sap.com/products/cloud-analytics.html](http://www.sap.com/products/cloud-analytics.html)
- Get ready for the newest innovations by upgrading to the latest BI solutions. Schedule a BI upgrade technical workshop today.
- Dive deeper with a two- or three-day technical workshop on SAP Lumira® software.
- Play with the sample data sets that ship with SAP Lumira or the data-set examples for the SAP Analytics Cloud solution.
- Check out tutorial videos on our [YouTube playlist](#) and [SAP Community](#).

To find out more, contact your SAP representative or click Contact Us at [www.sap.com/products/analytics.html](http://www.sap.com/products/analytics.html).



Establish a three-year road map that **defines your business needs** before you start investing in technology.



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