



Business Analytics

Business Analytics Competency Center – Best Practices Guide

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Executive Summary

Data and analytics continue to be **key enablers for business innovation**. However, despite significant investments, organizations fail to maximize the return on their key assets that drive innovation: data, technologies, and people. Two elements for successful data analytics initiatives are a formalized strategy and executive business sponsorship. Analytics strategy development and alignment are critical, but a strategy alone is not enough; it must also be executed.

The creation and ongoing development of a business analytics competency center (BACC), sometimes referred to as a business intelligence competency center (BICC), BI center of excellence or analytics center of excellence, is a best practice to define and operationalize an organization's analytics strategy, align its analytics initiatives with corporate strategic goals, and ensure return on its investment.

BACCs are not new; they emerged in the mid-1990s but were more technology driven and focused largely on program management and reporting. 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.

“Successful deployment and use of business analytics solutions depend on a multi-pronged approach guided by a strategy that accounts for not just technology but also human and capital resources, business and IT processes, and data.”

Dan Vesset, Group VP, Analytics and Information Management, IDC,
“Implementing an Analytics Strategy to Accelerate Insight,” *IDC Analyst Connection*, September 2016



Reasons for Creating a BACC

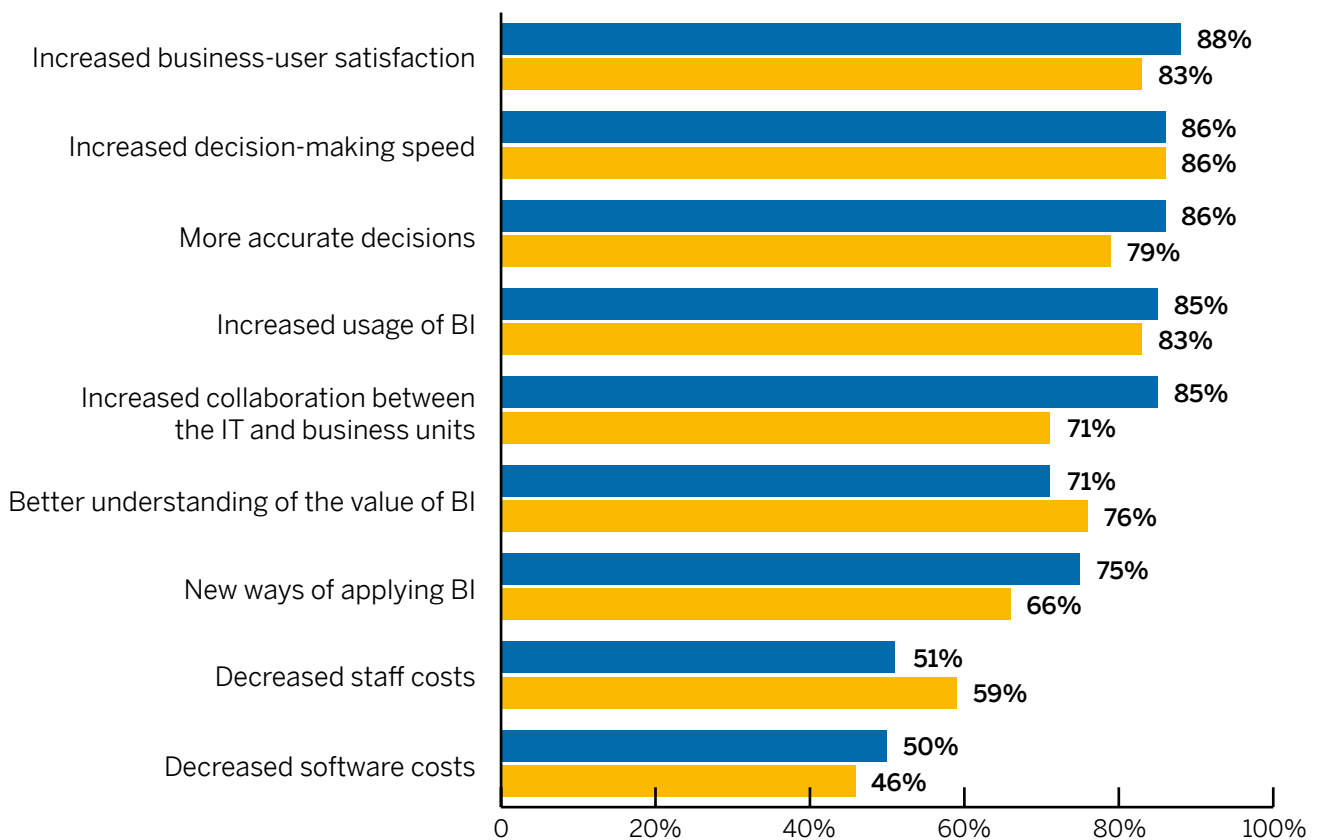
A *Computerworld* BICC survey showed the top five reasons for creating a BICC (see Figure 1):

- Increased business-user satisfaction
- Increased decision-making speed
- More accurate decision making
- Increased usage of business intelligence (BI)

- Increased collaboration between IT and business units

These reasons are still relevant today, especially in light of Big Data and increased user self-service.

Figure 1: Reasons for Creating a BACC



■ Large enterprise (more than US\$500 million in revenue) ■ Small and midsize enterprise (less than \$500 million in revenue)

Source: "How Companies Are Implementing Business Intelligence Competency Centers (BICCs)," *Computerworld*, April 2006

Organizations can ensure that their data assets, technologies, and people are maximizing resources for improved business performance through a strategic, programmatic approach to analytics that includes five key areas, all of which fall within the scope of a BACC (see Figure 2).

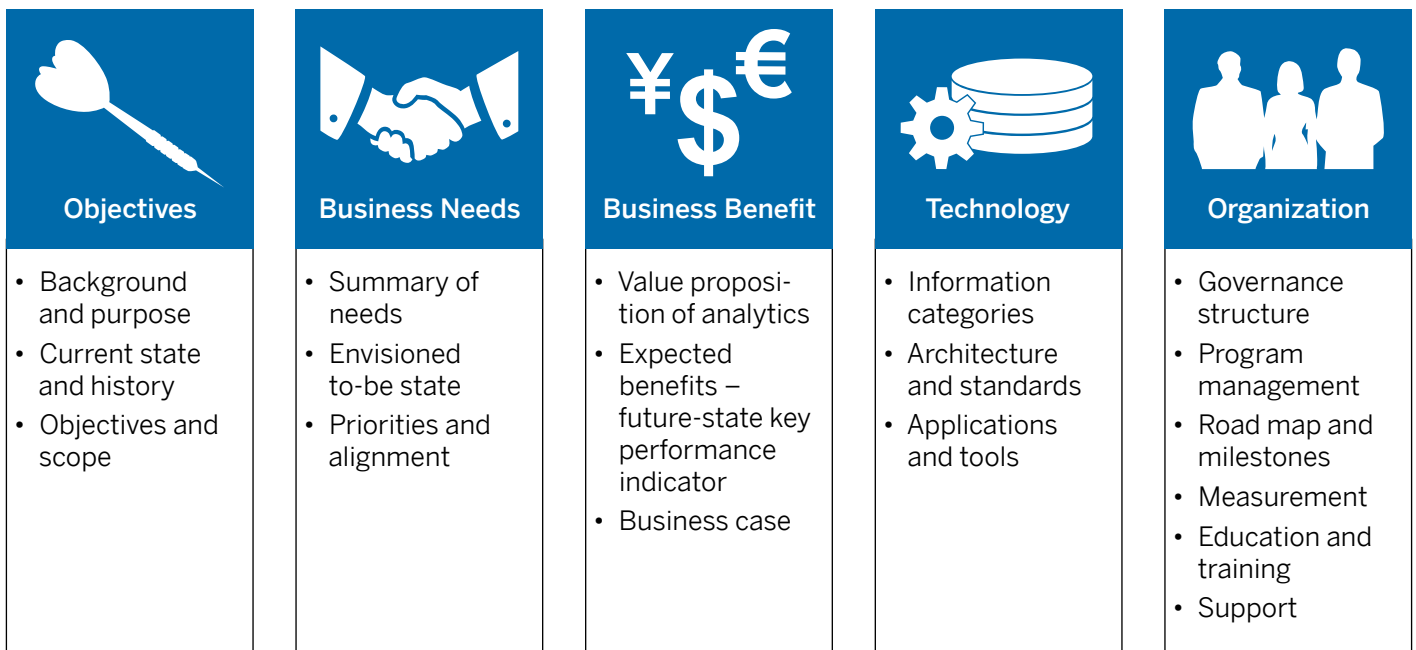
Very often, two key recommendations are made following an assessment:

- Creation of a BACC or improvement to specific areas of an existing BACC
- Development of a formal analytics information governance process

SAP has helped many customers understand and evaluate their current capabilities for each of these areas through an analytics strategy assessment or with strategic advisory services for analytics from SAP. An analytics strategy assessment helps customers understand their analytics maturity level and gaps, align their priorities, and create a road map to evolve their capabilities.

For more information on our analytics strategy assessment, visit the [Business Analytics](#) page on the SAP corporate Web site, [conduct a self-assessment](#), or [request a strategy workshop](#).

Figure 2: Building Blocks of a Rock-Solid Analytics Strategy – Analytics Strategy Framework from SAP



What Is a BACC?

A BACC is a cross-functional organizational team that has defined tasks, roles, responsibilities, and processes for supporting and promoting best practices in the effective use of data and analytics across an organization. It coordinates activities and resources to ensure that a fact-based approach to decision making is implemented throughout an organization. It has responsibility for the governance structure for data and analytics and for sustaining programs, projects, practices, software, and information architecture.

The BACC is also responsible for building the plans, priorities, infrastructure, and competencies that the organization needs for data-driven decision making using BI and analytics software capabilities. Some of these areas are technical functions, while others are business functions.

There are three important elements for an effective BACC.

DEVELOPMENT OF AN EFFECTIVE DATA AND ANALYTICS STRATEGY

This requires identifying key stakeholders and reviewing corporate strategy as it aligns with business needs and business and business-unit priorities. It also involves setting a strategic analytics vision for the organization.

BUSINESS AND IT PARTNERSHIP

Aligning with the IT development team, the BACC needs to identify the data and analytics strategic, programmatic, analytical, and technical skills required by the development team and confirmation of deployment capability. It also requires the identification of data and architectural scope and overlap. Last, it requires deployment of data and analytics tool sets by project type.

It should be noted that, even in today's environment of user data and analytics self-service, the IT team can and should play a key role in evaluating and recommending standardized solutions wherever possible for reducing overall corporate total cost of ownership as well as for improving common user-experience interfaces.



Create a BACC to define and operationalize your analytics strategy, align analytics initiatives with corporate strategic goals, and help ensure return on investment.

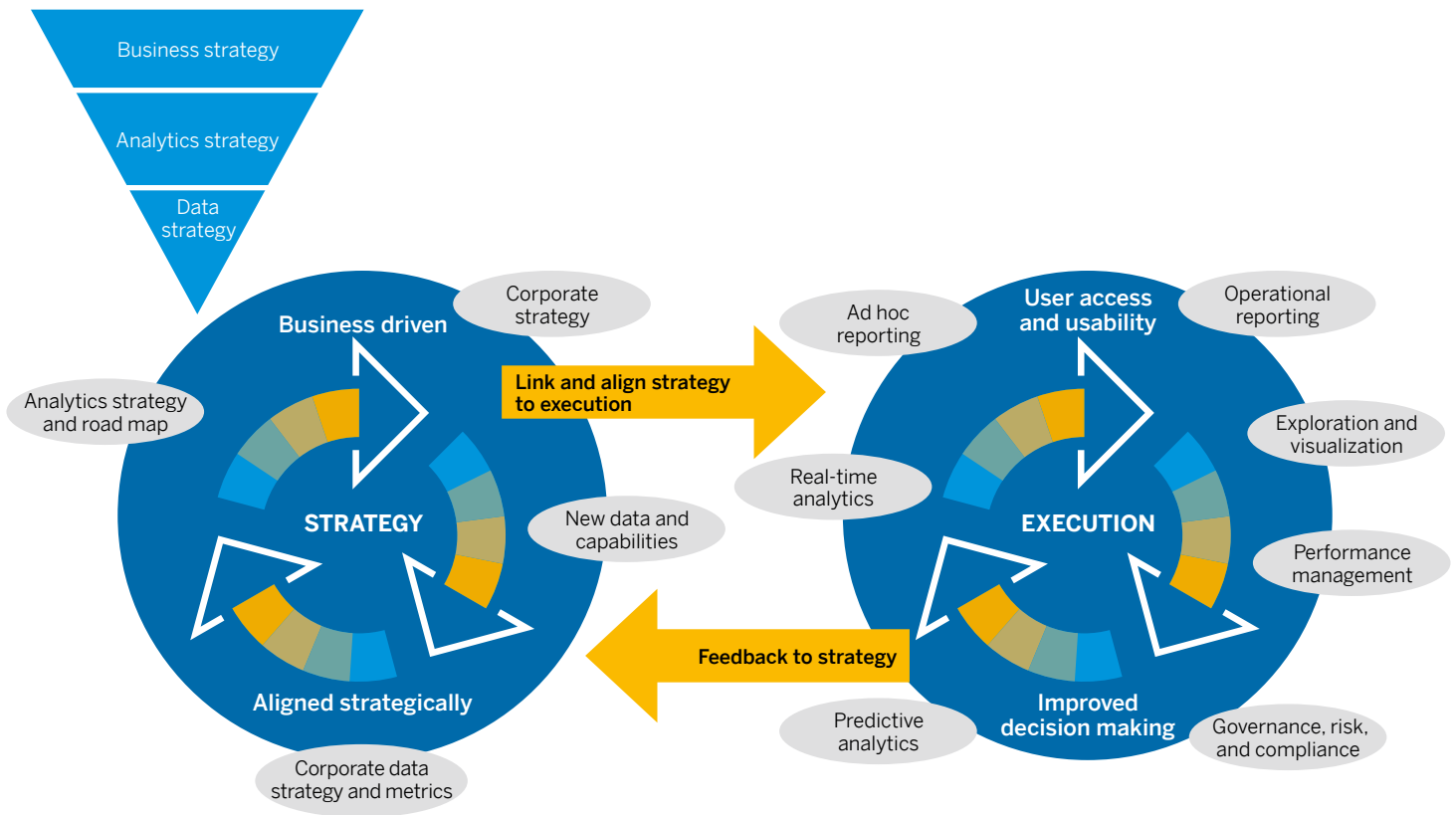
EXECUTIVE BUSINESS SPONSORSHIP AND SUPPORT

This essential element includes strategic business alignment, communicating analytics success stories, and ensuring committed funding.

These three elements work together to ensure the successful execution of an enterprise-wide data and analytics strategy.

Figure 3 illustrates the two aspects of a data and analytics strategy: moving from strategy to execution and providing feedback to strategy. The BACC participates in both areas.

Figure 3: Enterprise Analytics – Strategy and Execution



BACC Scope and Key Areas

The scope of a BACC is quite broad; it is responsible for multiple functions, including:

- Data and analytics strategy
- Business requirements, including alignment and prioritization
- Data analytics and program governance
- Information governance and stewardship
- Education, training, and communication
- Infrastructure and technology

Figure 4 illustrates the key responsibilities of a BACC. The following sections describe each of these areas in more detail.

DATA AND ANALYTICS STRATEGY

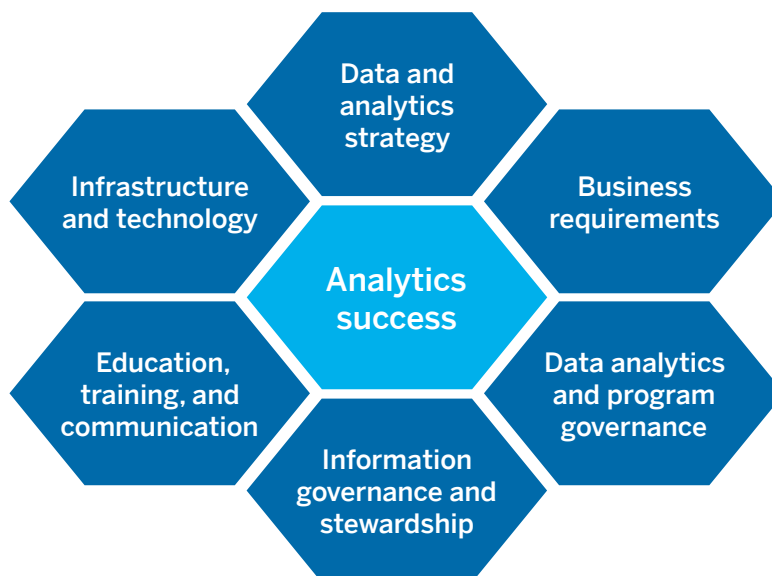
The BACC leads in defining the overall data and analytics strategy, including the organization's data and analytics mission statement and its objectives and scope. The strategy should

be formally documented and available to all stakeholders.

BUSINESS REQUIREMENTS

The BACC is responsible for documenting the business requirements, including use cases and corresponding business value. It is also responsible for prioritizing common or conflicting requirements. Business-requirement templates should be used to ensure consistency and completeness of definition. The requirements are defined by business analysts who may reside in the BACC or be extended members of the BACC within business areas. The BACC works in collaboration with the IT data and analytics development team on application development and technical architecture. The architecture is driven by the business requirements.

Figure 4: Responsibilities of a BACC

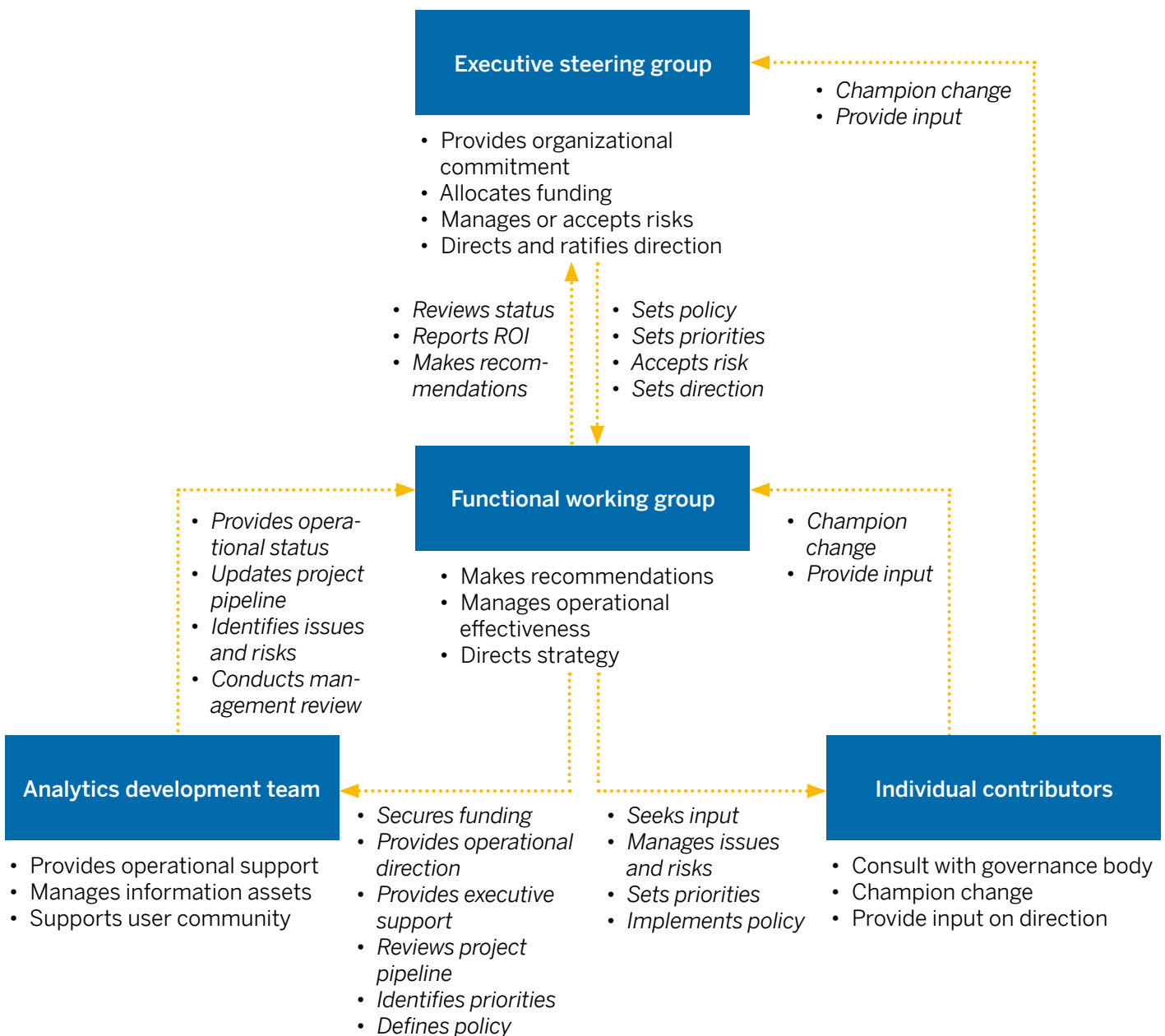


DATA AND ANALYTICS PROGRAM GOVERNANCE

The BACC leads the review of analytics projects or initiative requests through a governance structure (see Figure 5). Typically, a threshold (for example, 30 days) is used for prioritization of projects or requests within the analytics development team.

Another threshold is used by a functional working group for reviewing projects or requests that will take longer than the first threshold. Strategic projects and any significant investments are generally reviewed by an executive steering group.

Figure 5: Sample Analytics Program Governance and Interactions Model



INFORMATION GOVERNANCE AND STEWARDSHIP

The BACC leader may chair the information governance and stewardship function; the leader works closely with the chief data officer. Data and analytics project request requirements should include data definitions, calculations, validation tables, and so on. The initial requirements and ongoing changes are defined by data stewards, who are usually business analysts within line-of-business units. These same individuals are often also involved in master data management and operational or transaction data governance where the data originates.

SAP has created a Web-based [information governance capability assessment model tool](#) that can help you conduct a high-level self-assessment.

Data Management Team

A data management team within IT is responsible for the technical data management, information architecture, metadata management, data quality, data modeling, and database architecture and administration. The chief data officer, BACC, data management team, and users all work together for effective information governance and stewardship. Figure 6 illustrates how they work together and their primary, secondary, and tertiary responsibilities.

Figure 6: BACC, Data Management Team, and Other Roles

		Primary	Secondary	Tertiary
Development	Strategy definition	BACC	Users	Data management team
	Data ID and preparation	BACC and data management team	Users	
	Business intelligence tool evaluation and selection	BACC	Users	Data management team
Deployment	Development, implementation, and training	BACC and data management team	Users and tech support	
	Discovery and exploration	Users and BACC	Data management team	
	Access, monitoring, and analysis	Users	Tech support	BACC
	Operations management	Data management team	BACC	
	Sharing and collaboration	Users	BACC	Data management team
	Effecting of change	Users	BACC and data management team	

EDUCATION, TRAINING, AND COMMUNICATION

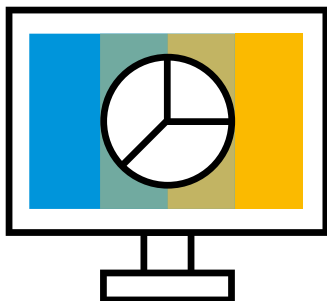
The BACC is responsible for the end-user tool-training program. It also coordinates with HR or other general corporate development areas for nontool skill development. General analytics tool training, as opposed to training on applications developed with tools, is often available from and provided by the analytics tool vendor(s) in a variety of options, such as virtual and live classroom training. Informal lunch-and-learn sessions and user groups round out formal training. The BACC usually provides second-level support, which generates valuable feedback for education, training, and additional user needs.

Continuous communication among all stakeholders is key to the success of the analytics program. An analytics portal or collaboration facility (for example, a wiki) and various two-way channels are needed. Communities of interest (COIs) and communities of practice (COPs) are additional knowledge management and feedback functions; they

are used for specific skills and best-practices sharing and are coordinated by the BACC. These are increasingly important areas, as self-service and advanced analytics become more pervasive in organizations. Specific special-interest groups often form for data mining, geographic information systems (GIS), text mining, visualization, and so on.

INFRASTRUCTURE AND TECHNOLOGY

IT owns the defining hardware components, tools, and underlying technologies upon which analytics applications are built. First-level user support is usually provided by IT. The BACC works jointly with IT and leads the review and selection of analytics tools needed to address the business requirements. Key roles in IT exist for enterprise architects, application architects, and data architects. A BACC technical liaison collaborates with these roles. IT also owns responsibility for systems availability and performance as well as data availability.



Ensure your data assets, technologies, and people are maximizing resources for improved business performance through a strategic, programmatic approach to analytics.

Organizational Models

A BACC can take several organizational model forms depending on the organization size, culture, and level of existing analytics maturity. Models can morph: organizations can start with one model and change to another as the BACC and organization change.

The four most common models are shown in Figure 7:

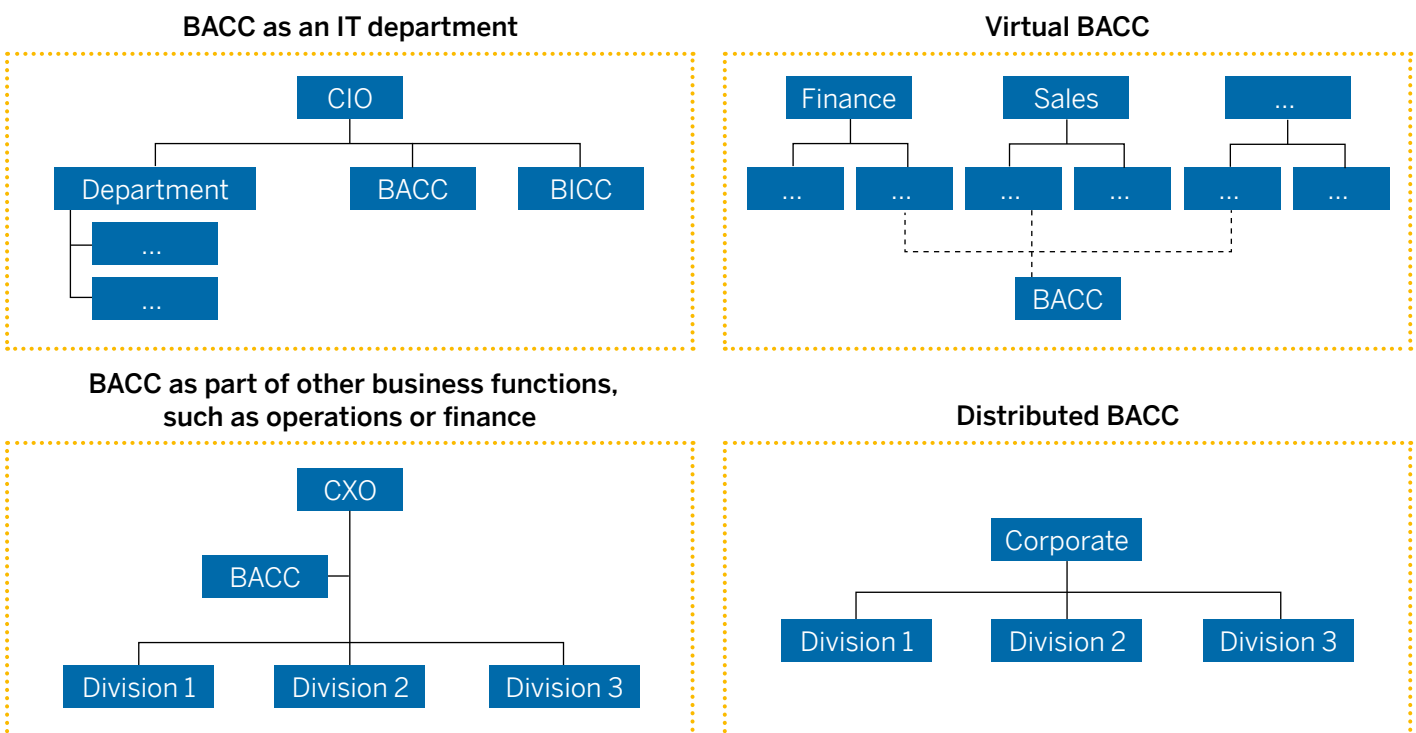
- BACC as part of IT
- BACC as part of other business functions, such as operations or finance
- Virtual BACC
- Distributed BACC

Many organizations start out with a simple program management office or shared-services environment but realize that this is not enough, as the people and process issues are not addressed at all or in enough depth. Some start out with a

virtual BACC model, as it is easiest to start up and requires the least funding or organizational disruption. Larger organizations, especially global ones, often use a distributed BACC model in which each country, region, or subsidiary has its own BACC, and overall coordination is provided through an umbrella corporate BACC. The most common model is a BACC that is part of IT. Each has its own advantages and disadvantages. The right one for your organization depends on your organizational culture and analytics maturity.

Note that some organizations have also established an advanced analytics competency center centrally under a chief analytics officer or within specific lines of business. We recommend using communities of interest or communities of practice to address specific user needs, such as reporting, visualization, predictive modeling, and GIS.

Figure 7: Common BACC Organizational Models



BACC = Business analytics competency center; BICC = Business intelligence competency center

Roles and Skills

Regardless of the organizational model used, all BACCs need certain key roles and skills.

ROLES FOR A BACC

Effective BACCs need to include a variety of roles, but only a few are required full-time within the competency center. Three to four full-time roles are usually required.

The leader:

- Promotes the value and the potential of data and analytics in the organization
- Drives user adoption
- Acts as a liaison between IT and the business, working closely with the executive business sponsor, executive steering committee, and working committees, as well as with IT
- Manages the BACC, vendor relations, and licensing
- Ensures that data- and analytics-specific standards and procedures are in place and adhered to

The technical liaison ensures that the technical architecture meets service-level agreements (SLAs) and aligns business and technical architecture, processes, and standards.

The business architect:

- Reviews business requirements and liaises with development team members to ensure analytics applications meet user needs
- Ensures that business views of the data are created to support user self-service and that supporting tools are in place and accessible – for example, a business glossary implemented and populated with business definitions and calculations

The training and communication manager:

- Leads the data and analytics training program development and administration
- Organizes COIs and COPs
- Manages internal communication channels such as a data and analytics collaboration site

Other roles, such as business analyst, data steward, and value analyst, are often filled by extended members of the BACC who are already performing these functions in their current day-to-day jobs in functional areas.

The business analyst:

- Documents business requirements
- Understands business rules and processes of the current organization
- Acts as a representative of the business-unit managers in day-to-day matters

The data steward is responsible for the overall activity on data quality improvement, establishing data quality goals and effecting change.

The value analyst is responsible for defining initial business value to be attained from the analytics project or initiative and for reviewing the actual value after implementation (usually a business analyst or cost-accounting analyst).

There are other key roles that are owned by IT but collaborate with the BACC, including **enterprise architect**, **solution architect**, and **data architect**.

SKILLS FOR A BACC

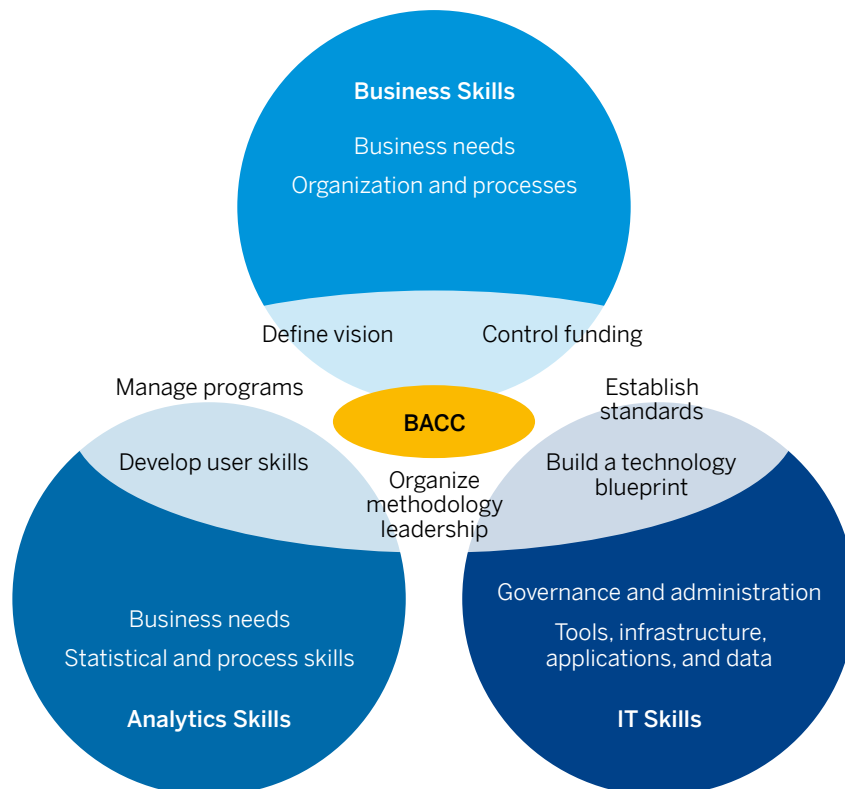
One of the components of a successful BACC is ensuring the members have the right mix of business, analytic, and IT skills (see Figure 8).

Business skills are needed to help business managers set and balance priorities by analyzing the consequences of choices and creating business cases. These skills provide an understanding of the organization's strategic business objectives and the role that action-oriented information plays in achieving corporate objectives.

IT skills ensure that the BACC understands the data and analytics infrastructure implications of business and analytics requirements. Those skills are also critical in understanding diverse data and analytics tools and technologies as well as the differences in design and access characteristics of diverse data sources.

Analytics skills help with researching business problems and creating models that help analyze these problems, as well as working with the IT department to develop insight into how to identify data for a specific analysis or application.

Figure 8: Business Analytics Competency Center (BACC) Skills Requirements – Business plus Analytics plus IT



Funding a BACC

Effective BACCs require continuous funding. A number of funding mechanisms can be used, but the most common are:

- Centralized – Funded from the corporate or IT budget. This gets buy-in from business without potential cost payback.
- Pay as you go (chargeback) – Funded based on a business unit's use of services. While a fair method, it may inhibit use and growth of the BACC.
- Allocation (cost center) – Funded by allocation or chargeback. This is not always considered fair by business units.
- Subscription – Funded based on the projected use of competency services or number of users. This requires negotiation between the BACC and business units.

Centralized management-level financing of BACCs is considered the most effective model, as it removes issues regarding allocation or chargeback and encourages the broadest use of the competency center.



A BACC can take several organizational model forms depending on the organization size, culture, and level of existing analytics maturity.

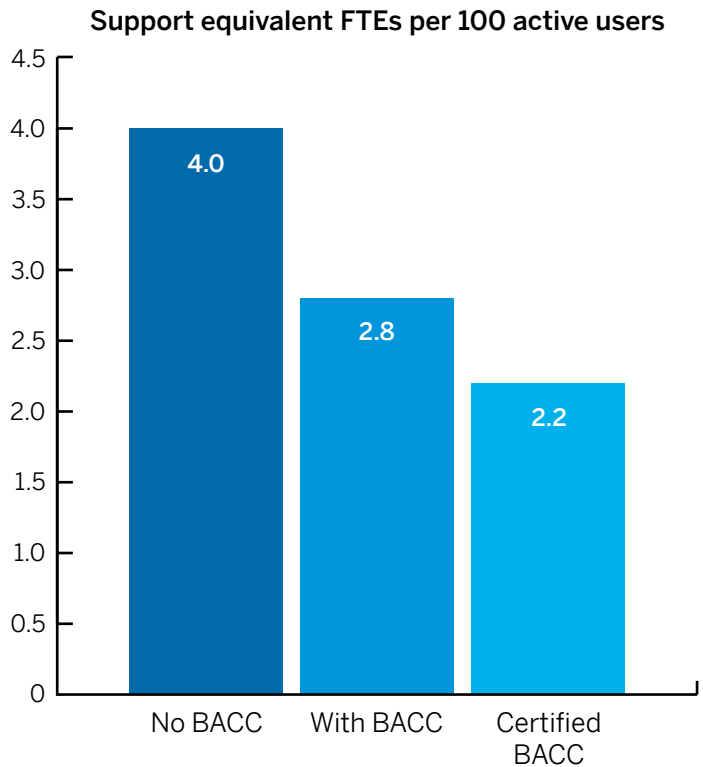
Demonstrating Value of a BACC

To justify funding, BACCs must demonstrate value. Organizations with competency centers attain a more significant return on investment from their data, technologies, and people than those without. Most organizations see a shift in allocation of existing BI and analytics budget from tactical to strategic projects that support strategic organizational goals. In addition, BACC effectiveness also increases.

SAP's value engineering benchmarks show that organizations with a BACC require only 2.8 FTEs to support every 100 users, versus 4.0 FTEs for those without a BACC (see Figure 9). In organizations with a BACC, BI IT teams and users are able to spend more time developing analytics and applying them in the business for improved business performance.

Analytics tool standardization, or rationalization, is one of the most basic goals of a BACC and the easiest way to demonstrate benefits to help justify the development of a competency center. Analytics tool standardization reduces the number of tools, ideally to a single corporate analytics standard suite. Additional products are licensed only when absolutely required.

Figure 9: BACC Effectiveness



BACC = business analytics competency center

Cost savings come from reductions in five major categories (see Figure 10):

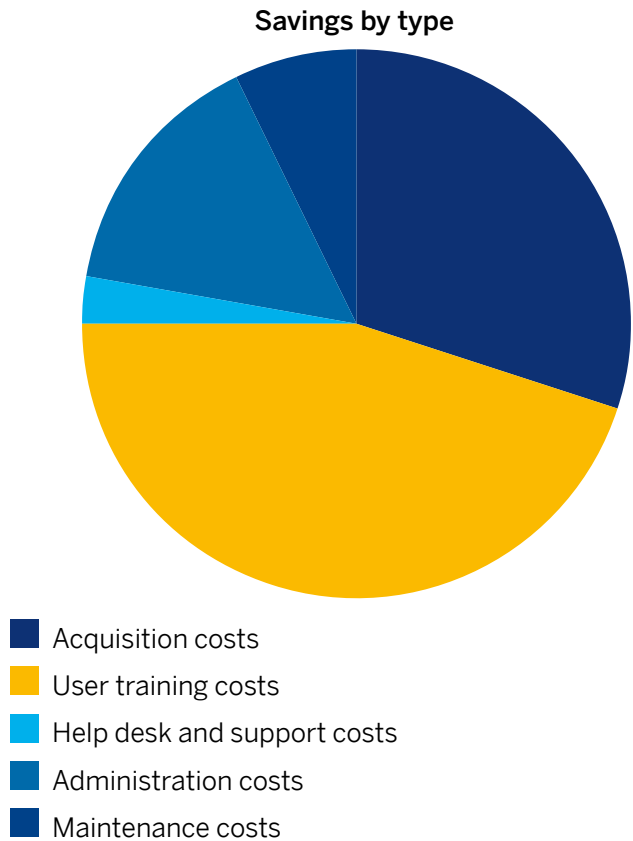
- Tool license acquisition costs
- User training costs
- Help desk and support costs
- Administration costs
- Maintenance costs

For sustainable funding and support, it is important that the return on investment and value attained from a data and analytics program be communicated. We estimate that up to a third of BACCs do **not** measure their effectiveness. The remainder use either qualitative or quantitative measures, or both. The most common measures include project success, user satisfaction, cost-benefit ratio, query performance, data quality, service-level agreements, and reduced license fees.

One way to plan, measure, and communicate the value of an analytics program and competency center is through a strategy map and scorecard. A BACC strategy map, balanced scorecard, and action plan should all be aligned:

- BACC strategy map should list specific objectives related to four key areas: financial, internal customer (users), IT service management, and learning (see [Figure 11](#)).
- Balanced scorecard should list the targets and measurements for each objective.
- Action plan should list specific initiatives and budgets supporting each target.

Figure 10: Cost Savings by Type



Results are based on an analysis of data entered in the [Business Intelligence Standardization Calculator](#).

In addition to a strategy map and scorecard, some organizations use a BACC dashboard, which shows tactical operational metrics, most often measuring delivered return or operational performance. These operational metrics should also be transparent and communicated regularly.

BUSINESS INTELLIGENCE STANDARDIZATION CALCULATOR

You can use our calculator to help estimate cost savings from reducing the number of BI and analytics tools.

Click [here](#) to launch the calculator.

Figure 11: BACC Strategy Map and Balanced Scorecard

Strategy map		Balance scorecard		Action plan	
Theme: Improve decision making					
	Objective	Measurement	Target	Initiative	Budget
<p><i>Financial</i></p>	<ul style="list-style-type: none"> Reduce analytics infrastructure costs Reduce analytics resource labor costs 	<ul style="list-style-type: none"> Number of environments Annual tool maintenance and support fees 	<ul style="list-style-type: none"> One <US\$75,000 	<ul style="list-style-type: none"> Analytics tool consolidation project Coterminous software license negotiations 	<ul style="list-style-type: none"> \$150,000 1 FTE supply management (80 hours)
<p><i>Internal customers</i></p>	<ul style="list-style-type: none"> Provide efficient and easier access to data Provide the latest analytics software functionality and capabilities 	<ul style="list-style-type: none"> End-user satisfaction survey Number of self-service knowledge workers Number of analytics services available 	<ul style="list-style-type: none"> 85% favorable 250 15 services 	<ul style="list-style-type: none"> Online user survey project Upgrade of SAP® BusinessObjects™ Enterprise solutions 	<ul style="list-style-type: none"> \$5,000 \$350,000
<p><i>IT service management</i></p>	<ul style="list-style-type: none"> Improve first-time incident resolution Develop online training programs Improve tracking of support incidents Reduce the number of help-desk intake channels 	<ul style="list-style-type: none"> Percentage of first-time incident resolutions Time to resolve incidents Number of online analytics training courses Number of help-desk intake channels 	<ul style="list-style-type: none"> 60% 4 hours 10 introductory, 5 advanced Two 800 numbers, online (Web or mobile) 	<ul style="list-style-type: none"> Analytics-specific education program Analytics incident-management improvement program Service-desk reengineering program 	<ul style="list-style-type: none"> \$150,000 \$150,000 \$200,000
<p><i>Learning</i></p>	<ul style="list-style-type: none"> Develop necessary analytics skills Develop a lab environment for innovation 	<ul style="list-style-type: none"> Number of repository entries Average rating of entry Availability of lab or sandbox 	<ul style="list-style-type: none"> 50 per month 4 out of 5 95.999% 	<ul style="list-style-type: none"> Repository incentive program Configured lab or sandbox environment 	<ul style="list-style-type: none"> \$50,000 \$100,000
Communicate		Measure		Execute	

Creating and Evolving Your BACC

If you are just now establishing a competency center, you can develop it using a two-phase process:

1. Definition and design – Current BI and analytics maturity capabilities baseline assessment that defines the BACC to-be design and a one-to-three-year competency center and BI and analytics strategy transformation road map
2. Development and deployment – Calibration, development, and deployment of your BACC

After conducting the first step, you will be able to appoint a competency center leader and select the right organizational model. The first phase will also deliver your required governance framework and a road map to incrementally evolve your BACC. A pragmatic way to launch your competency center is to define, document, and validate the application of standards and processes using a pilot-project approach, building out additional capabilities as you add projects.

If you already have a BACC, you should assess it and identify areas of improvement. Many organizations have started with a basic project management office, but they have been more technology focused. They are often looking to extend their focus to more business-related areas such as business requirements and alignment, data governance, and training.

Some questions you should ask yourself to determine if you need to update your BACC are:

- How well aligned are we with the business?
- Is our user adoption as high as we'd like it to be?
- How is our user satisfaction trending?
- What's our data quality and data confidence?
- Do we have a channel for regular, ongoing communication with business users?
- Do we have an effective program to onboard new employees for data and analytics?

Our analytics strategy assessment workshop can help you assess and identify gaps in your current organization and governance processes and prioritize areas of improvement.

VALUE ENGINEERING BICC BENCHMARKING SURVEY

In 2015, SAP conducted a BICC benchmarking survey.

Key findings include the following:

- More than 40% of organizations have a BICC in place, but 50% of them are relatively immature (less than five years old).
- Only 33% follow a best-practices-driven model for managing the competency center.
- Only 13% have a high degree of engagement with the business.

To see how you compare to other organizations, read the SAP Community blog about the [BICC benchmarking survey results](#).

ADDITIONAL BACC RESOURCES

Read more about [why a BACC is critical](#) to getting the highest level of competency in your analytics strategy.

Follow the “Everything You Ever Wanted to Know about BI Competency Centers” [blog series](#) on all-things BACC, including details on different organizational models for a BACC, visibility and funding, and how to get started or evolve your existing BACC.



How Can SAP Help?

SAP can help in the following ways:

- Analytics strategy self-assessment
- Analytics strategy assessment
- Analytics strategy best-practices workshop
- Strategic advisory services for analytics
- Information governance self-assessment
- Information governance best-practices workshop

ANALYTICS STRATEGY SELF-ASSESSMENT

This is a Web-based self-assessment tool that allows you to rank your top analytics business challenges by line of business, based on the most common ones SAP has defined by working with our customers.

ANALYTICS STRATEGY ASSESSMENT

This is an SAP-facilitated workshop that uses our four-step approach to developing a solid data and analytics strategy foundation. In step 1, we help you understand your current data and analytics business challenges and the business value of solving them. In step 2, we address the capabilities of your current data and analytics strategy program in the degree of formal definition and actual execution. In steps 3 and 4, we conduct a gap assessment and define a capabilities road map to close identified and prioritized gaps. The assessment of current data and analytics strategy capabilities often identifies gaps in processes that can best be addressed with a BACC.

ANALYTICS STRATEGY

BEST-PRACTICES WORKSHOP

Using our analytics strategy framework, we review best practices to define and execute a successful data and analytics strategy, discuss current gaps, and identify actions to close gaps. We also review the role of a BACC.

STRATEGIC ADVISORY SERVICES FOR ANALYTICS

Our strategic advisory services for analytics provide in-depth consulting services to help you create or evolve your BACC. Areas include the competency center charter, organizational form, key roles, effective metrics, and much more.

INFORMATION GOVERNANCE SELF-ASSESSMENT

This is a Web-based tool to help you assess your current-versus-desired capabilities and maturity for data organization and governance, data operations, processes, and metrics, including architecture, integration, and data cleansing, management, and retention based on our information governance capability model.

INFORMATION-GOVERNANCE BEST-PRACTICES WORKSHOP

Using our information governance capability model, we review best practices to define and execute effective information governance, discuss gaps, and define steps to close gaps, creating an “information as an asset” road map.

ADDITIONAL SERVICES

You can find more information about best practices for data and analytics strategy on our corporate Web site, where you can learn more about [SAP® Analytics solutions](#), conduct a [self-assessment](#), or [request a workshop](#).

You can find more information about [enterprise information management strategy](#), [the information governance capability model](#), and [self-assessment](#) on SAP Community.

You can also contact your account executive directly for more information on SAP Analytics solutions or to request a workshop.

Strategic advisory services for analytics are designed to provide an agile and adaptive analytics strategy that is treated as a living artefact to be continuously refined to meet enterprise objectives. The services address three key areas:

- Vision and business value for discovering the business drivers behind your organization’s need for an analytics strategy
- Technology alignment focusing on recommendations for improving and growing the end-to-end solution architecture
- Transformation road map describing how you can execute on the process, people, and technology recommendations as a set of projects and milestones



A successful BACC combines the right business and IT skills so managers can set priorities with the analytics infrastructure implications in mind.

More Information

SAP has several resources available to anyone interested in learning more about a data and analytics strategy and business analytics competency centers.

Visit the [Business Analytics Web page](#) to:

- Review our entire analytics solutions portfolio and product solution capabilities
- Learn what our customers are saying about using our solutions
- Understand how SAP Digital Business Services offerings can help you transform your business
- Stay current on SAP innovations in analytics with [Webcasts on SAP Analytics](#)

Keep up-to-date with the latest data and analytics thought leadership through these channels:

- [Analytics on SAP News Center](#)
- [Digitalist Magazine by SAP](#)
- [Blog on the SAP HANA® platform \(SAP HANA Blog\)](#)
- [Digital Business & Business Analytics](#)

Our [YouTube channel for analytics](#) offers a wide range of short videos to help show the value and impact of an overall analytics strategy and how a competency center fits within the strategy.



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