



THE FUTURE OF REPORTING

RESEARCH STUDY



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MODERNIZING ENTERPRISE REPORTING TO MEET CHANGING NEEDS

Recent years have seen extensive interest in topics around explorative BI such as advanced and predictive analytics. **Modernizing and optimizing enterprise reporting** – or classical BI – has not been a similar priority for many of today's organizations, even though it constitutes the **backbone of information supply** for decision support. It is an increasing challenge for organizations to deliver **high quality yet more flexible** reporting solutions and applications in less time.

Many reporting systems today are failing to provide adequate support to users while much of the content created is unused or lacks relevance to the most important business questions. Building and maintaining traditional solutions is expensive and fails to satisfy users in many cases. Today's **data-literate users** want **governed** and **scalable self-service BI** functions to answer critical business questions and to **get the most out of their data assets**.

Technological **innovations** and their increasing proliferation are **shaping enterprise reporting** and BI. Most prominently, **machine learning** (ML) enables improvements in various fields. It allows new forms of consumption and interaction with BI content through **natural language queries** (NLQ) run through chat-bots and other conversational interfaces on any device. ML allows non-statisticians to leverage **advanced and predictive analytics** to detect hidden patterns and correlations in data, increasing the depth of analyses conducted. **Natural language generation** (NLG), again powered by ML, supports users in understanding patterns and explains causing factors. ML helps users **prepare data** to enhance reports and to select appropriate **visualizations** in visual analysis and dashboards. **Cloud**, with containerization, **APIs, microservices** and **mobile** have been hot topics in BI for some time now. Their elevated level of maturity makes them attractive for an increasing number of

existing solutions. The mix of these and further developments creates **attractive architecture options** and significantly **extends the reach** of reporting and BI beyond the borders of internal deployments.

Modernizing and optimizing enterprise reporting applications to **support shifting and increasing demands** is vital to continuously **deliver trusted information for decision support** in rapidly changing environments. This study investigates current and future challenges with information delivery and how organizations plan to improve their enterprise reporting to gain benefits from their **data treasures**.

Larissa Baier & Robert Tischler
Würzburg, Germany, June 2019.



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MANAGEMENT SUMMARY



Only a minority of companies say they have a **modern reporting landscape** and regularly base decisions on data. In fact, most companies struggle with data-related problems, organizational issues or outdated BI and analytics infrastructures which ignore more recent usage scenarios such as explorative analytics on big data sources. These problems become even more obvious when contrasted with modern infrastructures built in the **cloud** and micro services as well as the challenges caused by exploding data volume and variety.

Finally, the highest **pressure** evolves from competition. Companies must **react quicker** than ever to changing demands from their customers to keep pace with their competition. **The time has come to modernize** today's reporting landscapes and **base decisions on information** rather than gut-feeling – the legacy of the past must be overcome to reach **the future of reporting**.

The BARC survey 'The Future of Reporting' is based on a survey of over 600 participants worldwide from 58 countries across a range of industries.

01 FLEXIBILITY IN INFORMATION USAGE AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING

Although a **common data model** consisting of aligned structures and measures is needed for consistency and governance, it will not grant business departments the freedom required to efficiently analyze and interpret data. Architectures and modern tools which enable business users to **search, prepare** and **analyze** data will pave the way to reacting promptly to market changes. Business users who consume pre-defined content require greater **flexibility** in data navigation as well as **personalized** content distributed over a vast number of different channels.

02 MODERN REPORTING TOOLS MUST FOCUS ON BUSINESS USERS

Business users will be the major creators of reports and content in the future. They require **intuitive and modern tools** which can support them in data analysis and report creation tasks. Technologies to increase automation and **efficiency** such as machine learning help users to speed up their work. Increasing reuse of content powered by device-agnostic creation prevents report explosion even in large and decentralized environments.

MANAGEMENT SUMMARY



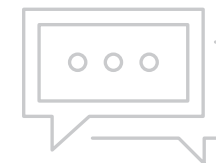
03 FACT-BASED DECISION-MAKING REQUIRES TRUSTED AND MANAGED DATA

Data management has always been a challenge for companies. The most prominent challenge is to overcome multiple and conflicting definitions for KPIs which is typically addressed with rigid and **strongly centralized** control. **Data quality** is seldomly handled in source systems in a way that meets the needs of **decision support**. As the number of sources, volume and variety of data increase, data-related issues are felt more strongly. Therefore, state-of-the-art and future-proof architecture concepts and tools are needed to deal with these challenges.



04 INSPIRING ACTION FROM DATA IS THE HOLY GRAIL OF REPORTING AND BI

Managers are a key element in establishing **data-based decision-making** as the new norm in their organizations. All employees need appropriately **prepared** information that is **easy to retrieve** and to grasp. Especially laggards must catch up on regularly supplying their management and operational staff with relevant information.



ACTION ITEMS



Gleaned from BARC's experience in the market and results from this survey – based on end user feedback – we offer you recommendations to improve your enterprise reporting and BI to the next level.



01 IMPROVE CUSTOMER ORIENTATION THROUGH MODERN TECHNOLOGY

Improving **customer orientation** is a mantra for many companies. The customers of enterprise reporting and BI are its consumer. Therefore, **consumer orientation** is the single **most effective lever** you have, to improve the benefits gained from BI.

Implement **modern tools** with **intuitive** interfaces to **simplify** content **consumption** and **creation**, allowing more employees to analyze data for relevant patterns and trends to inform their decisions. Make sure content is **easy to understand** and retrieve for **everyone**, make sure it can be consumed **anywhere**.

Mobile BI apps are supported by most BI tools, yet they are **not used pervasively**. This will and must change. With this, we will see **a shift in consumer expectations** towards more interactive yet guided apps available everywhere.

Natural language search and queries make BI easy to retrieve and accessible to everyone. The combination of NLQ and mobile BI is even more powerful and opens new ways of interaction. Deploy NLQ and mobile BI to equip every employee with actionable insights everywhere.

Easier access and consumption lead to higher information use. Higher use leads to greater benefits and greater benefits lead to higher use.

ACTION ITEMS



02 MODERNIZE DATA MANAGEMENT TO GUARANTEE HIGH DATA QUALITY

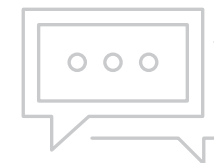
The increasing number of **sources** to integrate as well as growing **volume** and **variety** are the top challenge for enterprise reporting today and will continue to **grow** in the future. **Modernize your data management** to cope with this challenge and to address insufficient **data quality** in source systems as well as rising expectations from business users. Applying **state-of-the-art** technology and processes to ingest, integrate and distribute data is the approach pursued by most companies today to stay ahead of **increasing requirements**.

It is crucial to simplify data **consumption** and **access** for all users to support self-service requirements. Maintain a comprehensive **data catalog** to make data treasures easy to find. Linking data to **business metadata** is crucial for data governance. Leverage the power of the **user community** and collaboration to describe data assets and **comment** on the data's use and usefulness.

03 HELP ALL EMPLOYEES TO LEVEL-UP THEIR DATA SKILLS AND TO COLLABORATE

There is **a lot to gain** from reporting and BI if **all business users** can use data to inform their decisions. **Educate** and support business users to increase their **data literacy** and equip them with increasingly valuable skills.

Educate your IT and BICC so they can fully occupy their **new roles** in governed self-service environments. Their focus will shift from development-oriented tasks to **consulting and supporting** business users, from building reports to **curating data**.



ACTION ITEMS



04 DEPLOY SELF-SERVICE AND ACCOMPANYING GOVERNANCE MEASURES

Leaders trust in the advantages of self-service BI. They already offer self-service capabilities like **ad hoc** analyses and reports more often than others. Nevertheless, their number one initiative to **enhance** their enterprise reporting is deploying self-service capabilities to more users. The same should be true for your future **reporting** and BI landscape.

Governed self-service BI is the key to **gleaning relevant and timely insights** from data- connected and integrated. Only pervasive **standards** guarantee a stable foundation for **collaboration** and content **reuse**, making BI efficient and more effective.

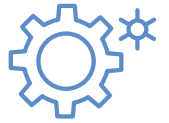
Decentralize content creation to support **data-driven decision-making** in every corner of your organization. Emphasize data **governance** measures and deploy tools that support decentralized BI built on a **stable foundation**.

05 MANAGEMENT MUST PROMOTE DATA-DRIVEN DECISIONS

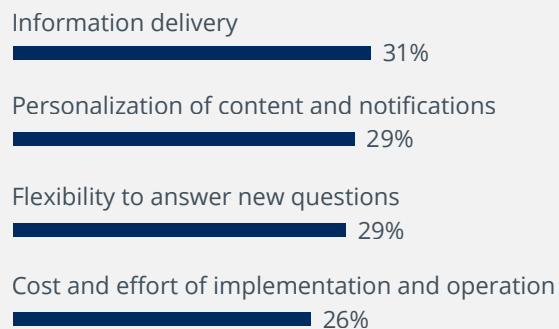
If more **decisions** are **based on data**, the importance of managers paradoxically grows. It is the managers who must demonstrate every day that **facts trump opinions** – even if it is their own opinion.

Managers must be aware of their duty to **open the space** for discussions based on data to inform decisions. This will **include more employees** in decision-making and will ultimate lead to better decisions – for the **benefit of the whole organization**.

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING



INFORMATION DELIVERY MUST BE USER-ORIENTED AND FLEXIBLE



Top 4 most dissatisfying issues in reporting today (n=601)

Centralized data management and reporting environments are typically used to gain tighter control and governance over companies' information treasures. The downside of this concept however is the lack of agility for business departments which have distinct reporting needs. Therefore, many highly centralized deployments struggle with shadow BI systems spawning in different areas followed by a loss of control over governance and consistency. To overcome the downsides of centralized and decentralized approaches,

companies must define a suitable mix of both. Consistent data structures are vital in both worlds, critical reports should be part of the centralized and governed area, but beyond that there must be more freedom for business departments to run their own analyses. More than ever, high flexibility is crucial for organizations to catch up with the pressure arising from the environment they compete in. Additionally, they must react quicker than ever to changes in customer behavior and deal with the data-related issues described below.

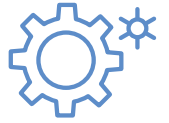
Besides fixing data management challenges, business departments must be able to access and work with all data easily and quickly. To deliver on new requirements in time, it's vital to have data-literate employees equipped with tools that facilitate analysis and content creation such as reports and dashboards. If not done right, report and dashboard creation involves numerous tools and experts, is tedious and prevents information from being distributed in a timely manner.

Recent innovations have sped up the chain of information processing and presentation, making enterprise reporting cheaper and more valuable. At the same time, they have introduced new ways to increase the flexibility to support business users in quickly answering their questions in a self-reliant manner. Business analysts need easy-to-use tools to quickly provide reliable and understandable information for decision support with the goal of taking the right action in less time. Ad hoc reporting and analysis are evergreens in BI, but the large-scale application of artificial intelligence and machine learning speeds up analysis and content creation.

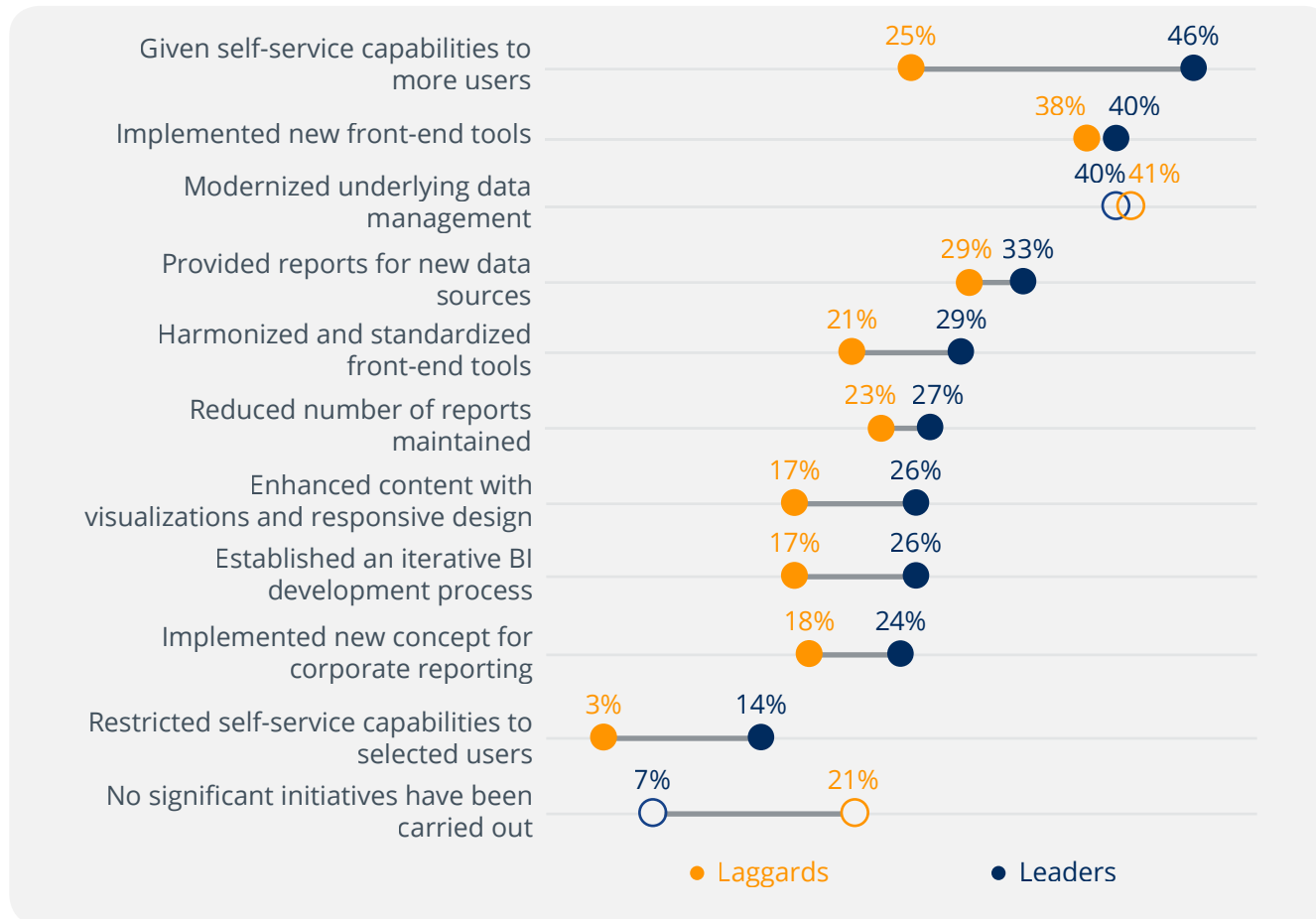
60%

of participants say that tools need to be easy to use for content creators.

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING



LEADERS INVEST IN SELF-SERVICE BI FOR DECENTRALIZED CONTENT CREATION



A close look at initiatives run by leaders¹, compared to laggards² shows the right actions to take to improve your reporting. Leaders invest strongly in both data management and front-end related topics. Their top priority addresses one of the issues with the lowest satisfaction, namely to offer increased flexibility to answer specific business questions to more users by providing self-service BI.

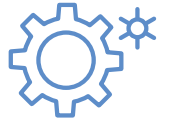
Contrary to the trend of increasing the number of BI front ends deployed, experts expect fewer challenges from information spread across multiple front-end tools in the foreseeable future. The key is to get data governance and data management right to publish consistent data to the right tool for every use case. Other tool-related challenges will also decrease in the future – following a steady trend in a maturing market.

1 ● Companies that are better in their enterprise reporting than their competitors.

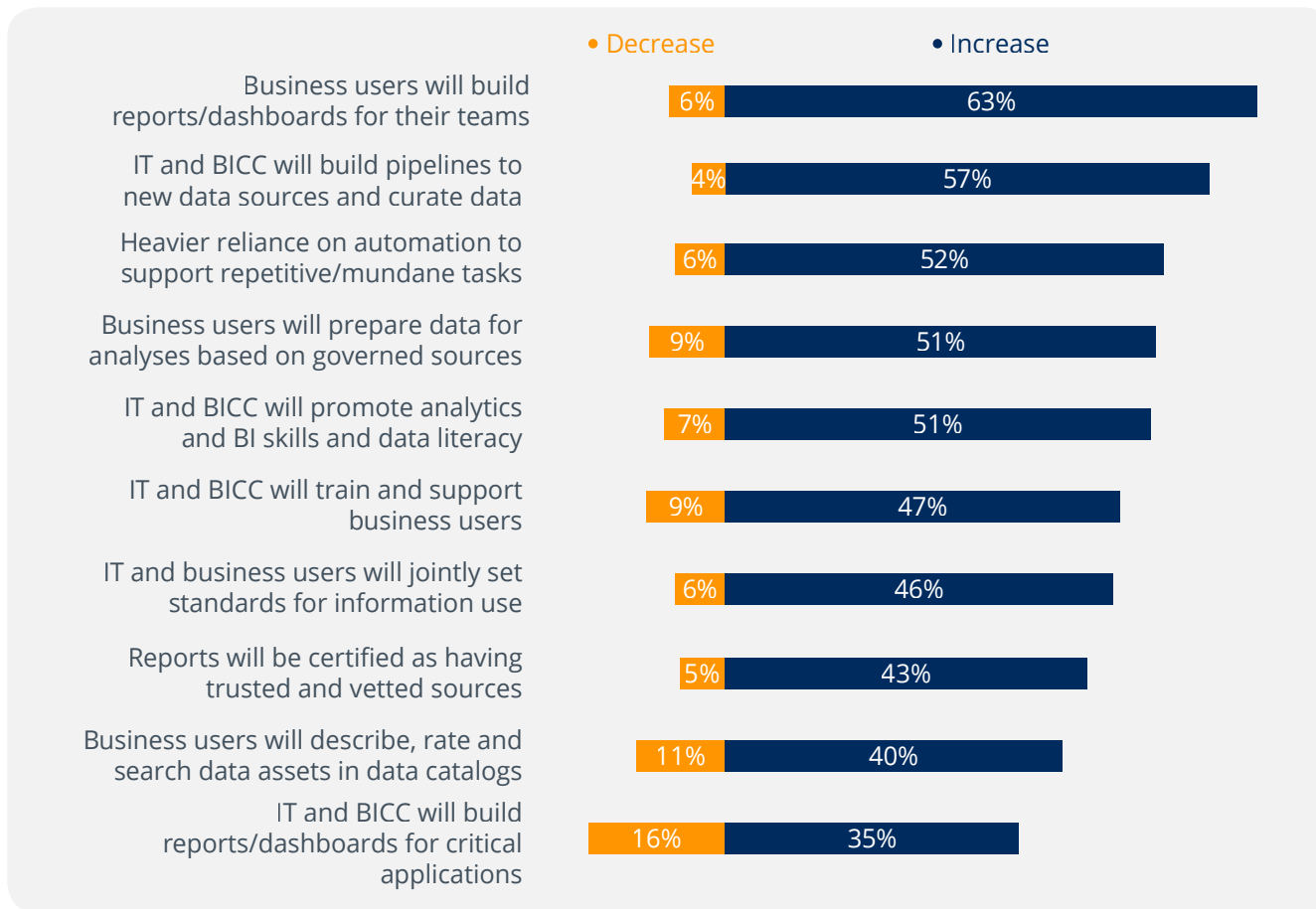
2 ● Companies that are worse at enterprise reporting than their competitors.

Which approaches has your organization pursued to enhance its reporting in the last 24 months? Per leaders/laggards (n=185)

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING



IT AND BICC BECOME INTERNAL CONSULTANTS IN SELF-SERVICE BI



How will your BI organization and processes change in the foreseeable future? (n=575)

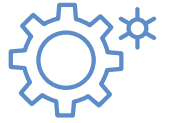
Laggards know that they must increase their efforts. They plan to invest more in self-service BI and optimize their environments by harmonizing front ends, reducing the number of reports to maintain – a clear challenge considering the request for highly personalized content delivery, but necessary to build enterprise-wide platforms.

Modernizing and decentralizing enterprise reporting is not solely a question of tools and technology. Accompanying organizational changes are vital to ensure success.

Decentralizing requires business users to self-reliantly build content for their peers. They must be supported properly and equipped with well-structured data and straightforward tools. They are also at the center of building communities of practice to share knowledge and to collaborate vividly.

Laggards are aware that they must broaden the scope of functions available for business users. They say that business users will increasingly prepare data to find answers to their own challenges.

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING

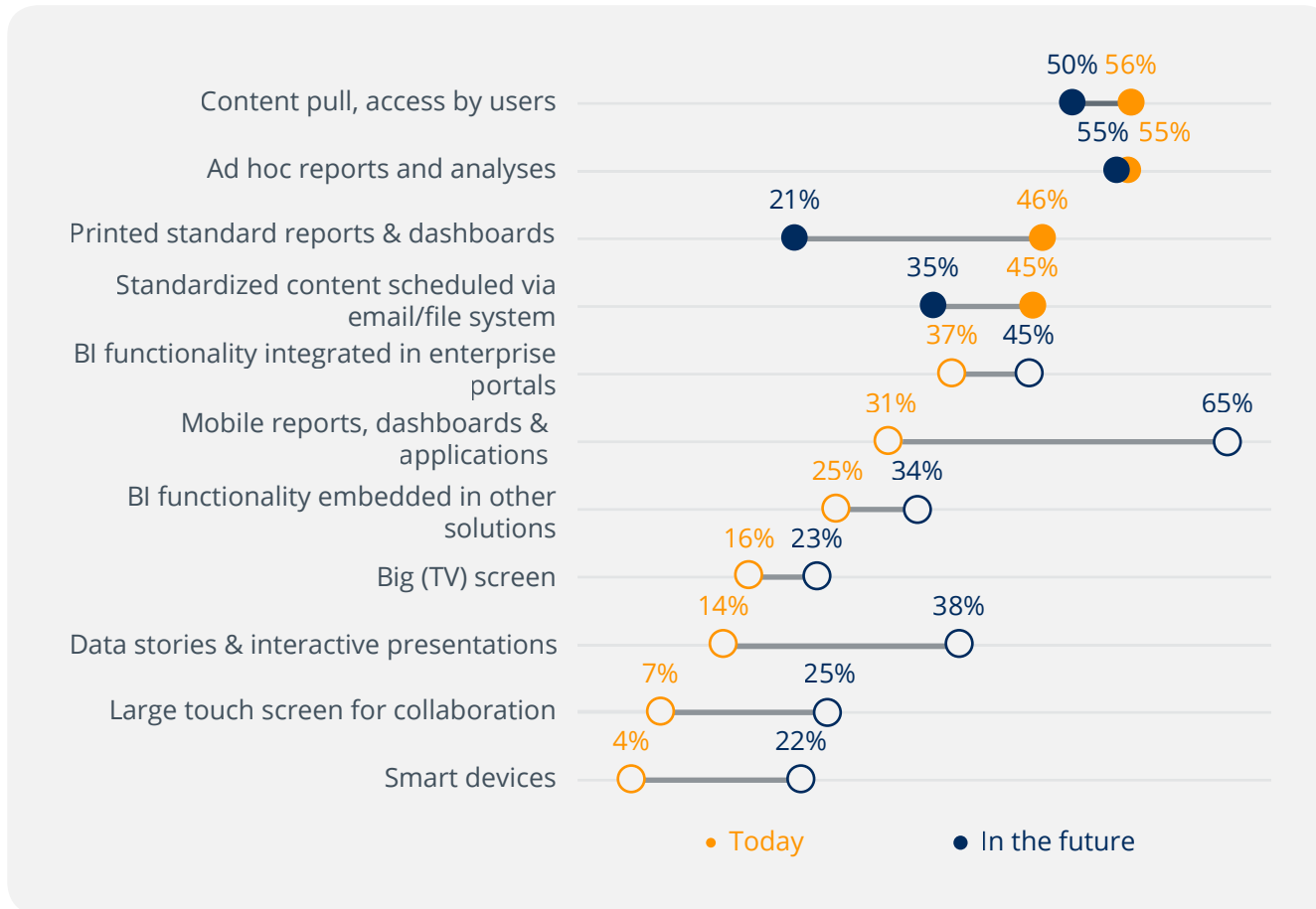


SUCCESSFUL ENTERPRISE REPORTING REQUIRES CONSUMER-ORIENTED DISTRIBUTION

The future role of the BICC is expected to change from building content to providing data and supporting business users working with self-service tools. Certifying reports after rigorous vetting and testing and cataloging data assets are important approaches to governing decentralized BI.

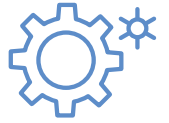
Users are drowning in reports but starved of relevant insights. Critical information reaches recipients too late or gets overlooked in the sheer amount of notifications. New, interactive ways of visualizing and presenting information increase the usage and benefits of reporting and BI.

There will always be a need for highly optimized and purpose-built content – be it on paper, on screen or any other device. Interactivity is important but not always required. When presented wrongly, it will prevent smooth and easy usage.

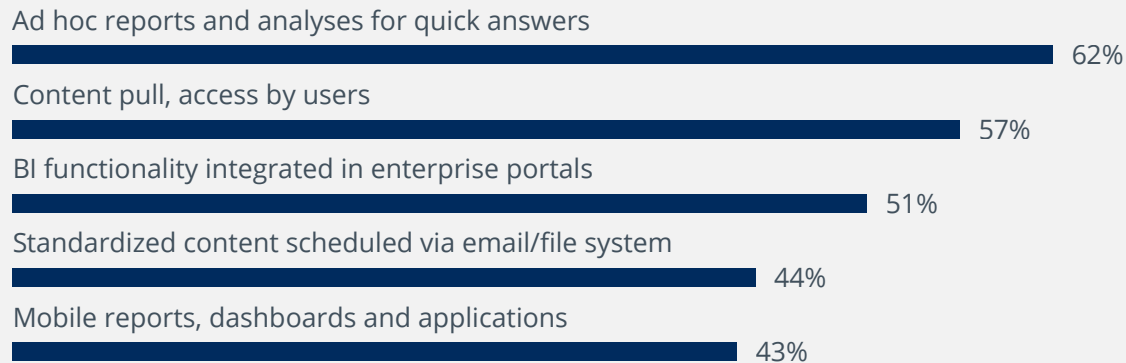


What are the most important distribution channels and reporting types in your company today and in the future? (n=603/602)

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING



LEADERS OFFER MORE CHOICE AND MORE INTERACTIVITY TO USERS



Leaders: Top 5 distribution channels today (n=90)

On average, leaders have

4 distribution channels
in use today.

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Mobile devices will become the premier channel to consume analytics and BI content

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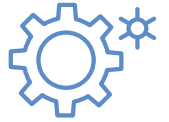
The vision of content distribution for leaders and laggards is rather similar, but leaders are already quite close to what's pursued. Printed reporting will become much less important while mobile devices will become the premier channel to consume analytics and BI content.

Mobile front ends are deemed relevant by most participants, but their usage is still relatively minor. Offering tailor-made distribution

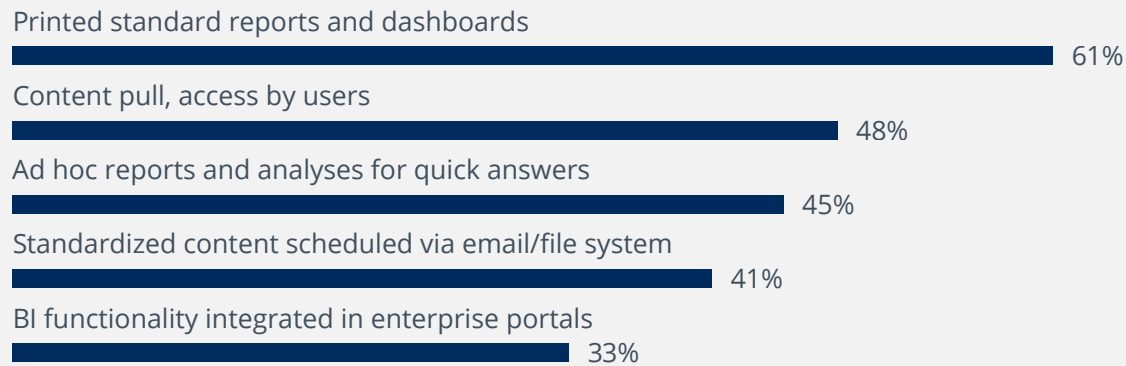
channels is highly important for the success of enterprise reporting. Mobile access will play an increasingly important role in that area.

Leaders take a distinct approach to delivering information to end users: They offer more distribution channels than laggards to satisfy the needs of all user groups, each with their particular requirements.

01 FLEXIBILITY AND PERSONALIZATION ARE THE KEY TO THE FUTURE OF REPORTING



LAGGARDS MUST FAVOR FLEXIBILITY FOR AD-HOC USE OVER STATIC CONTENT



Laggards: Top 5 distribution channels today (n=95)

Besides stronger provision of ad hoc reporting and analysis capabilities, leaders put greater emphasis on embedding BI functionality in operational systems to support users with information in business processes.

Laggards still rely heavily on pushing static information to users. While offering fewer distribution channels to choose from than leaders, printing is the only distribution channel used more frequently.

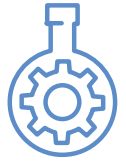
On average, laggards have

3 distribution channels
in use today.

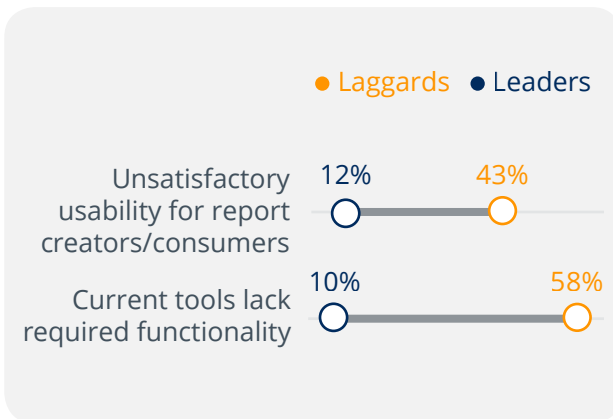
61%

of laggards rely on printing reports.

02 MODERN REPORTING TOOLS MUST FOCUS ON BUSINESS USERS



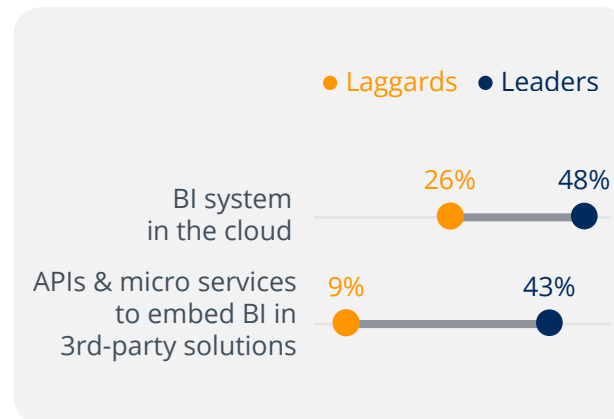
MODERN TOOLS ARE VITAL TO ENHANCE USABILITY FOR REPORT CREATORS AND CONSUMERS



What are the most important challenges for your enterprise reporting environment today? Per leaders/laggards (n=185)

Tackling the challenges of enterprise reporting and efficiently offering suitable content distribution requires innovative technology. The modernization of reporting landscapes includes the use of up-to-date front-end tools which help business users to find insights in a self-reliant manner.

Besides the ongoing demand for fast response times and performance, business users require



Which of the following technology trends do you use or plan to use within your reporting landscape? Per leaders/laggards (n=173)

intuitive and code-free environments to speed up report creation and analysis. Modern tools incorporate artificial intelligence (AI) and machine learning (ML) functionality to simplify analytics tasks such as data preparation, analysis and report creation. ML can help query data through natural language queries, suggest possible steps when preparing data and analyses or detect hidden patterns.

ML is on the wish list of many organizations but, despite its potential, it is still only used by a few. The future use of natural language generation and queries is hard to predict. The technology has huge potential for shifting the perception of interaction with reporting and BI, but many respondents say that it is not relevant to them.

On average, companies have

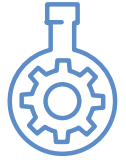
3.4

distribution channels in use today and

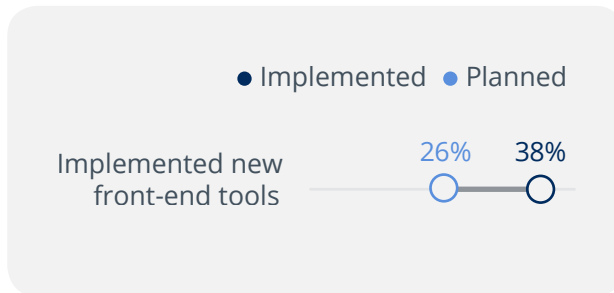
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distribution channels planned in the future

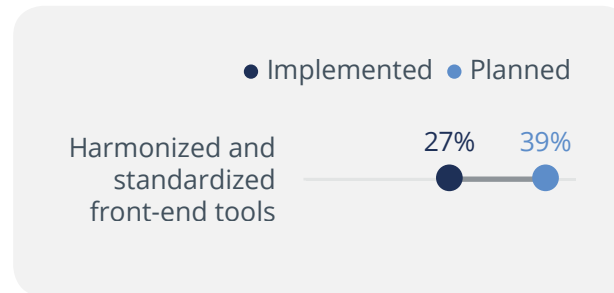
02 MODERN REPORTING TOOLS MUST FOCUS ON BUSINESS USERS



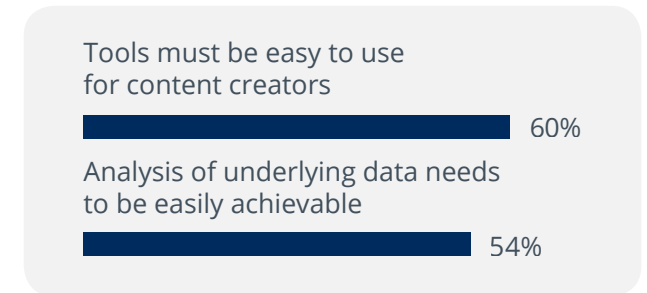
HARMONIZATION IS PLANNED BUT NEW TOOLS ARE IMPLEMENTED



Which approaches has your organization pursued to enhance its reporting? Implemented vs. planned (n=599/599)



Which approaches has your organization pursued to enhance its reporting? Implemented vs. planned (n=599/599)



What must be achieved in order to enhance the support of decisions and decision-makers? (n=603)

As the number and variety of distribution channels for information is increasing, business analysts must be empowered to create content once and share and reuse it across different channels. Reusability of visualizations and reports is vital for preventing report explosion in the future.

“ Leaders often implement new front ends to support flexibility ”

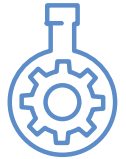
Information use is more prevalent in the operational parts of businesses. Rising demand for mobile BI and embedded BI indicates that organizations are increasingly adopting and using information throughout their value chains.

Extended use of reports and information implies their provision on all sorts of devices, leveraging all available technologies to provide suitable distribution channels for more and more users. BI content must be embedded directly in source systems to inform decisions in operational scenarios beyond the information held in a single system. Analytical

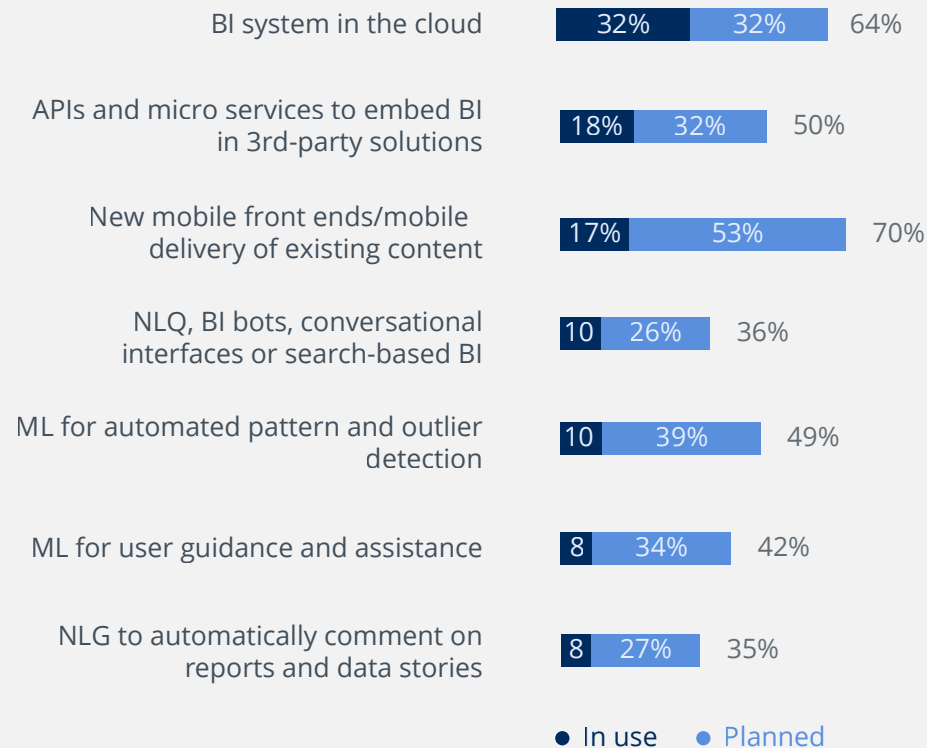
information and recommended actions complement the features of the source system. Through embedding, BI is able to support employees in all departments. BI on mobile devices, large screens and TVs can be used to display information relevant to core processes such as production.

Leaders emphasize incorporating analytical information into all systems to reach and support more employees. Embedded BI paves the way to reach operational staff with information and facilitate data-based decision-making around the organization.

02 MODERN REPORTING TOOLS MUST FOCUS ON BUSINESS USERS



MOBILE BI WILL BE THE NEW NORM FOR CONSUMING BI CONTENT



Which of the following technology trends do you use or plan to use within your reporting landscape? (n=559)

Mobile is seen as one of the most important distribution channels. Many organizations plan to implement new mobile frontends or improve publishing to mobile devices. Futureproof tools must therefore provide capabilities to create content and easily adapt and deploy it to any target environment.

Customers increasingly consider cloud as the way forward to provide flexibility in enterprise reporting as it requires less support from IT. Cloud is used by nearly 50% of leaders or organizations from North America. Most new implementations in this region leverage the cloud in some form.

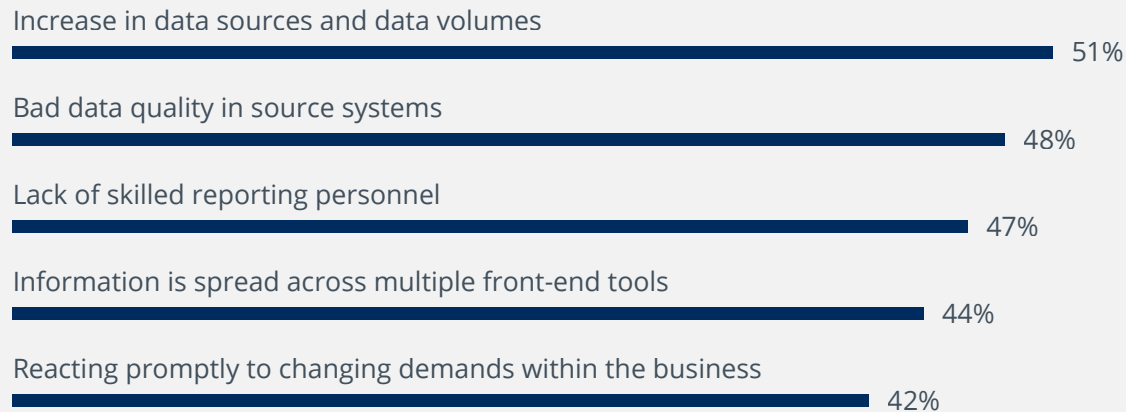
48%

of leaders benefit from BI in the cloud.

03 FACT-BASED DECISION-MAKING REQUIRES TRUSTED AND MANAGED DATA



GROWING NUMBER OF SOURCES WITH DUBIOUS DATA QUALITY PUT STRAIN ON DATA MANAGEMENT



What are the most important challenges for your enterprise reporting environment today? Top 5 answers (n=603)

When comparing leaders and laggards, leaders experience few problems with the tools they use. However, front-end tools are causing a lot of user dissatisfaction in laggard companies. Therefore, it is crucial to be equipped with the right tools to enhance reporting and gain advantages in business.

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Data is the most critical aspect of every company's reporting landscape

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Data must be the foundation of decision-making and is therefore the most critical aspect of every company's reporting landscape. With increasing pressure on data management caused by a growing number of data sources, the volumes and variety of data must be managed through state-of-the-art concepts.

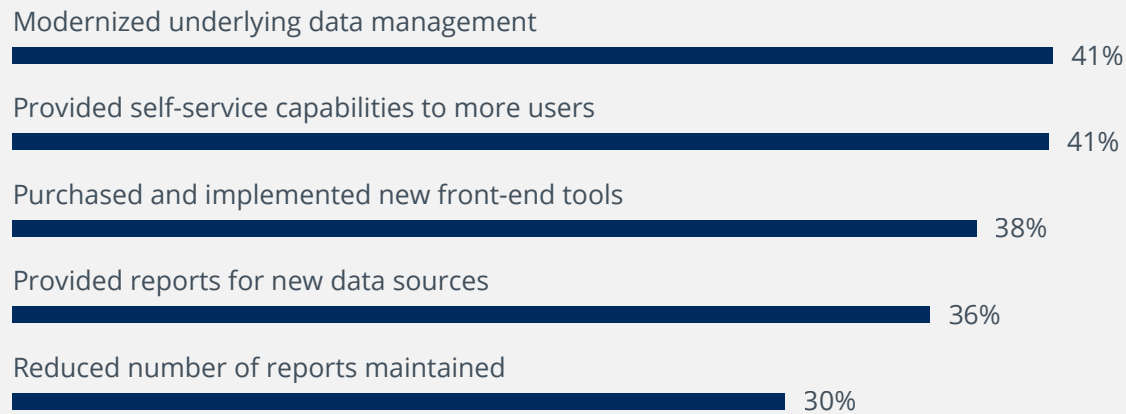
Organizations invest in modernizing their data management to cope with the increasing number of sources. Harmonizing and cleansing data from a plethora of sources to reach the desired level of data quality causes strain on data management. Providing correct and relevant data for reporting is an often-unsolved issue and remains a problem for many organizations.

Data management is the foundation of every reporting and BI solution. Diverse needs require specialized tools and concepts. A very important concept to provide a sustainable foundation is a central store of trusted data with shared meta-data and business rules where one can find the right data quickly.

03 FACT-BASED DECISION-MAKING REQUIRES TRUSTED AND MANAGED DATA



MODERN DATA MANAGEMENT CREATES A SOUND BASIS FOR DECISION SUPPORT



Which approaches has your organization pursued to enhance its reporting in the last 24 months? Top 5 answers (n=599)

Another growing challenge related to the rising amount of data sources is finding and using relevant information, ideally via a business user friendly interface. Therefore, technologies support customers in these tasks and offering functions for search, cataloging and semantics-building will become more and more important in the future.

Companies also struggle to complement trusted data with new data sources needed for ad hoc analyses. Concepts for both centralized and decentralized work with data must mature to provide organizations with the required level of flexibility in data management and usage.

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Natural language search, cataloging and extensible semantic models will become vital in the future

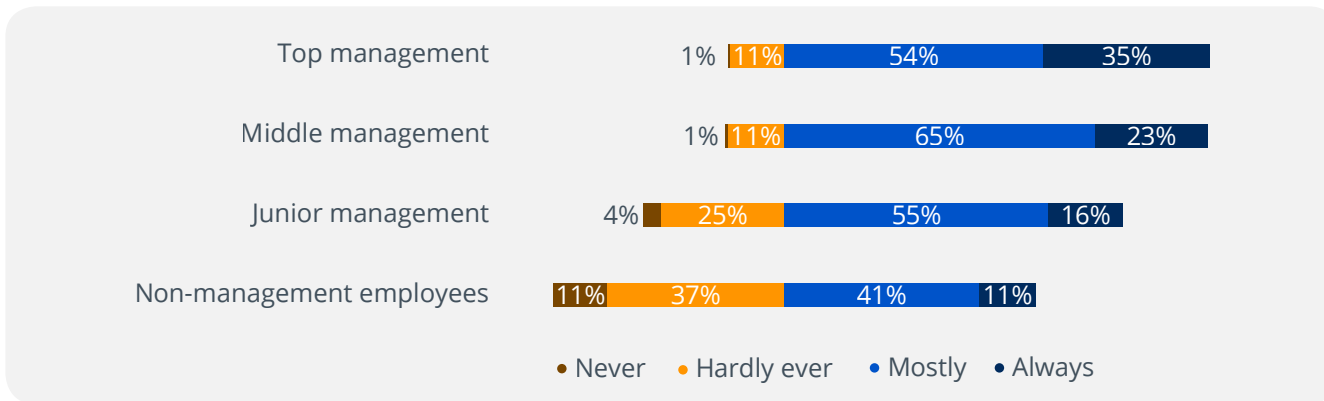
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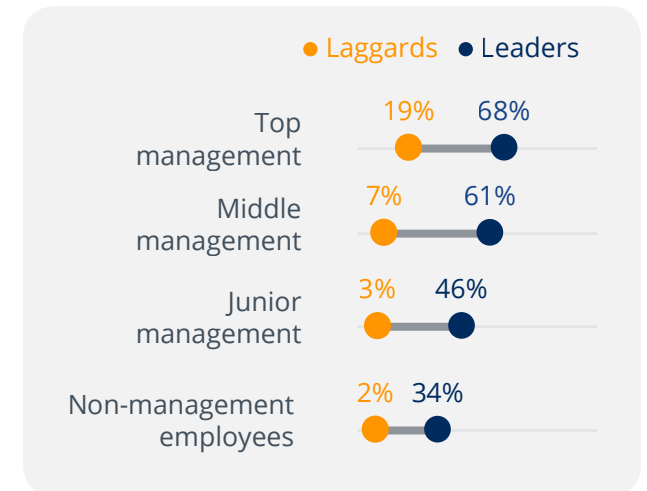
04 INSPIRING ACTION FROM DATA IS THE HOLY GRAIL OF REPORTING AND BI



INFORMATION SUPPLY FOR MANAGERS IS DECENT BUT MUST BE IMPROVED



To what extent are decision-makers effectively supported by enterprise reporting? (n=603)



To what extent are decision-makers effectively supported by enterprise reporting? Per leaders/laggards and by "always" (n=185)

A large portion of companies today fail to deliver value add for decision-making and process optimization through their enterprise reporting. They are groping in the dark and so is their management – drowning in data but starved of information.

Top and middle management are supported well with information in most companies. But laggards fail to properly support management with data. Decisions in these organizations are rarely ever

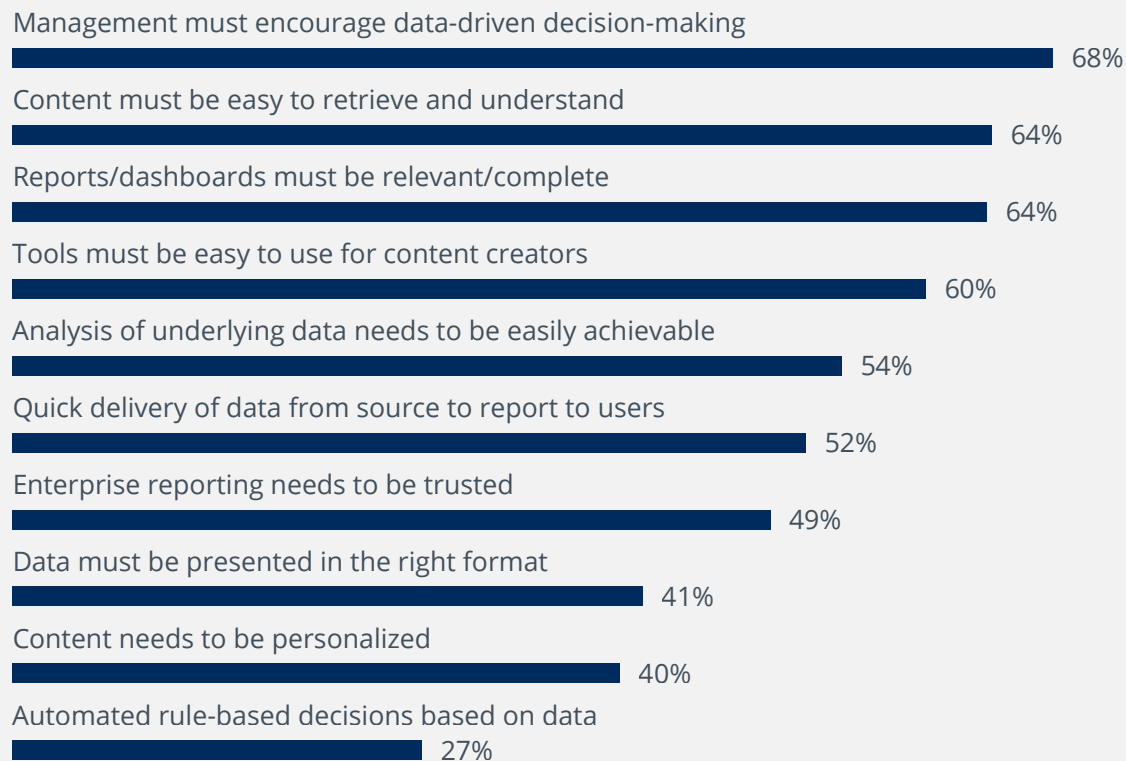
based on solid evidence from data but rather on gut-feeling. Companies that fail to act based on evidence given, will fail to address the customers most likely to buy their products or will have difficulties optimizing their production processes. This will deteriorate their position in the market. Acting based on data is imperative in competitive markets and in a complex world. Claims about the usefulness and benefits of enterprise reporting to support decision-making vary significantly between leaders and laggards.

Leaders are **3.5x** more likely to always support their top managers with data for decision-making.

04 INSPIRING ACTION FROM DATA IS THE HOLY GRAIL OF REPORTING AND BI



MANAGERS MUST VALUE DATA FOR DECISIONS OVER THEIR OWN OPINION



What must be achieved in order to enhance the support of decisions and decision-makers? (n=603)

There is a gap between these groups when comparing who is always supplied with information properly. With a factor above 10x, the gap is wide for middle and junior managers as well as non-management employees who need to be supported in operational decision-making. The latter group of employees in particular needs information to actively take part in organizational development by contributing new ideas and needed actions based on their front-line experience with customers, suppliers and other business partners.

Providing managers and operational staff with information will impact decision-making but needs additional initiatives to encourage fact-based decision-making at all levels and actions based on insights gleaned from reporting.

Organizations agree that management support is a key element for a better information culture. Improvements in tools, organizational structures and data management will boost the modernization of reporting.

04 INSPIRING ACTION FROM DATA IS THE HOLY GRAIL OF REPORTING AND BI



CONCRETE ACTIONS DERIVED FROM REPORTING WILL LIFT ITS POTENTIAL

TOP 3 APPROACHES OF LEADERS

1

MANAGERS MUST PROMOTE DATA-DRIVEN DECISION-MAKING

2

TOOLS NEED TO BE EASY TO USE

3

CONTENT DISTRIBUTED MUST BE EASY TO UNDERSTAND

TOP 3 APPROACHES OF LAGGARDS

1

REPORTS MUST BE RELEVANT

2

CONTENT DISTRIBUTED MUST BE EASY TO UNDERSTAND

3

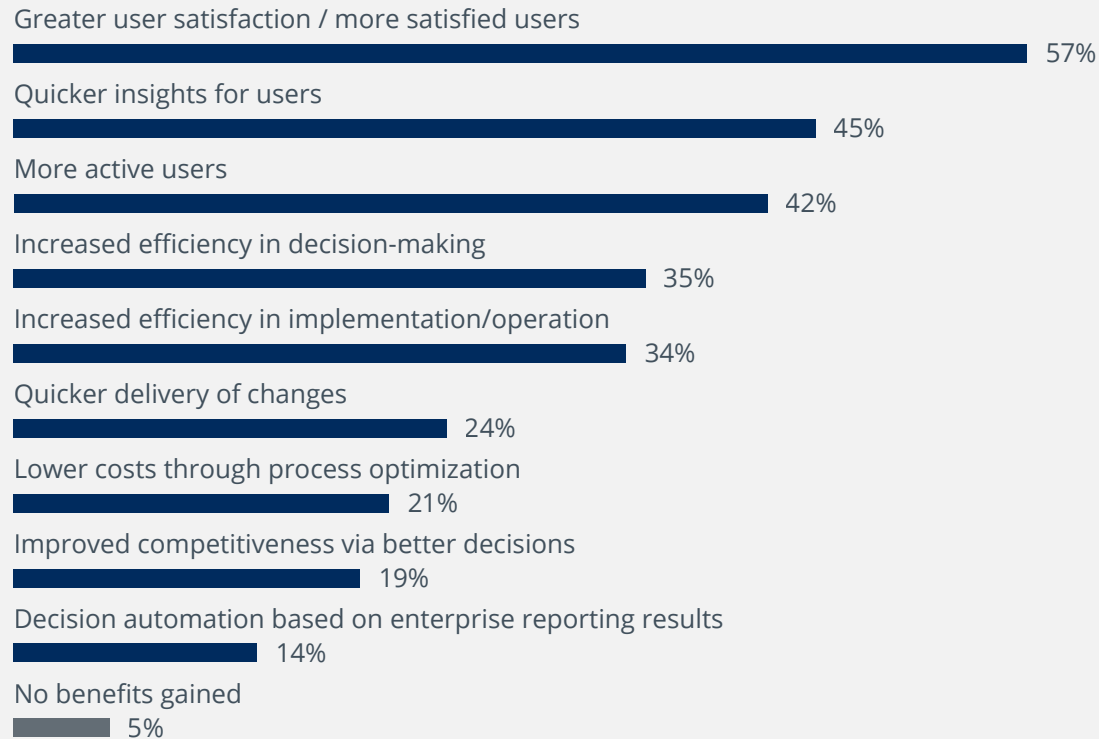
TOOLS NEED TO BE EASY TO USE

However, it requires managers to ignite changes and show willingness to value facts for decision-making over their own opinion. Therefore, they have the responsibility to base their decisions on reliable and relevant data. They need to be supplied with a trusted, relevant and complete view of their business problems because good decisions must be fact-based. The information supply must be complemented by a decision and action culture within a company. Passive use of reports and dashboards will not lead to needed improvements or benefits for the company. Concrete action items derived from reported shortcomings will lift BI to the level of its potential.

Leaders and laggards face different challenges when it comes to using data for decision-making. Laggards must make reports more pervasive, relevant and complete. Content must be delivered on time and be easy to consume and understand. Leaders are a step ahead. They say managers must promote data-driven decision-making by employing it themselves and valuing the evidence-based contributions of others when considering their actions.

THERE'S A LOT TO GAIN

FROM CLOSING THE ENTERPRISE REPORTING SATISFACTION GAP



Which benefits and improvements have you gained through the approaches your organization has pursued to enhance its reporting?
(n=555)

In many companies, enterprise reporting and BI is based on outdated and scattered architectures grown over years. Customers regularly report

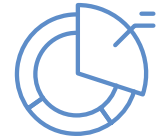
major challenges with data management, data quality and governance. Painful issues in data management and reporting are becoming ampli-

fied, as the number and variety of data sources and the volume of data increases. IT and business users alike struggle with complex data structures. The latter are searching for the data sources they need and more intuitive, user-friendly ways to access and analyze the data.

The modernization effort pays off: Organizations that invest in modernizing their enterprise reporting can reap significant benefits. Modernizing solutions enhances the outcome derived from enterprise reporting: Better support for decisions, reacting to changes faster, delivering relevant insights and cost efficiency.

Almost all initiatives conducted have yielded results: Providing more flexibility and self-service generates a greater number of active users and higher levels of user satisfaction. Quicker insights and better efficiency in decision-making are direct results of optimizing the front and back ends. More employees use data to inform decisions in successful companies than in other. These leaders run more modernization initiatives than laggards. As a result, the level of benefits reported by leaders top those reported by laggards.

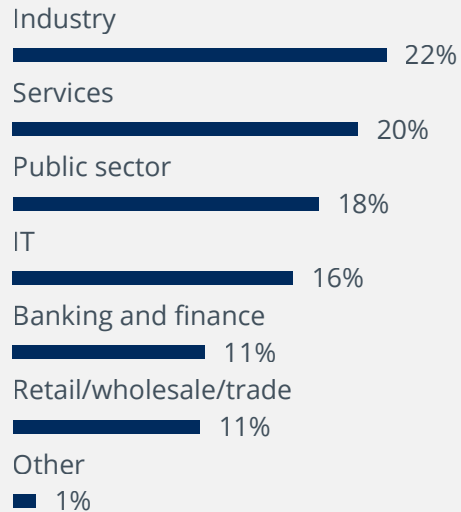
DEMOGRAPHICS



WIDE RANGE OF INDUSTRIES AND COMPANY SIZES

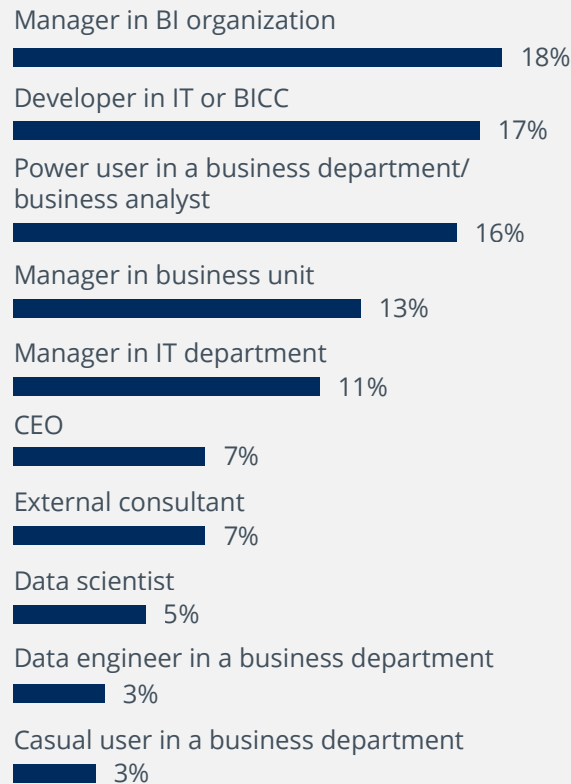
The online survey was carried out in March and April 2019. It was publicized via websites, events and BARC's email newsletter with more than 600 participants from a wide range of company sizes and industries taking part.

INDUSTRY



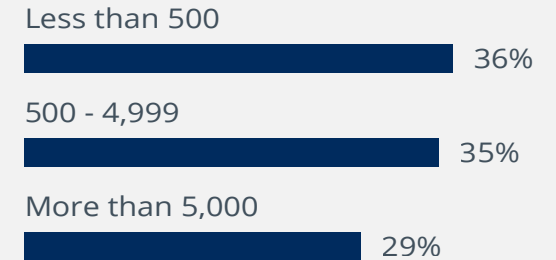
Which of the following best describes your organization's industry sector? (n=603)

POSITION



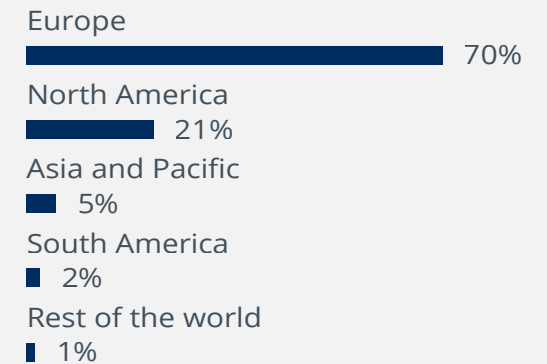
What position do you hold in your company? (n=603)

COMPANY SIZE



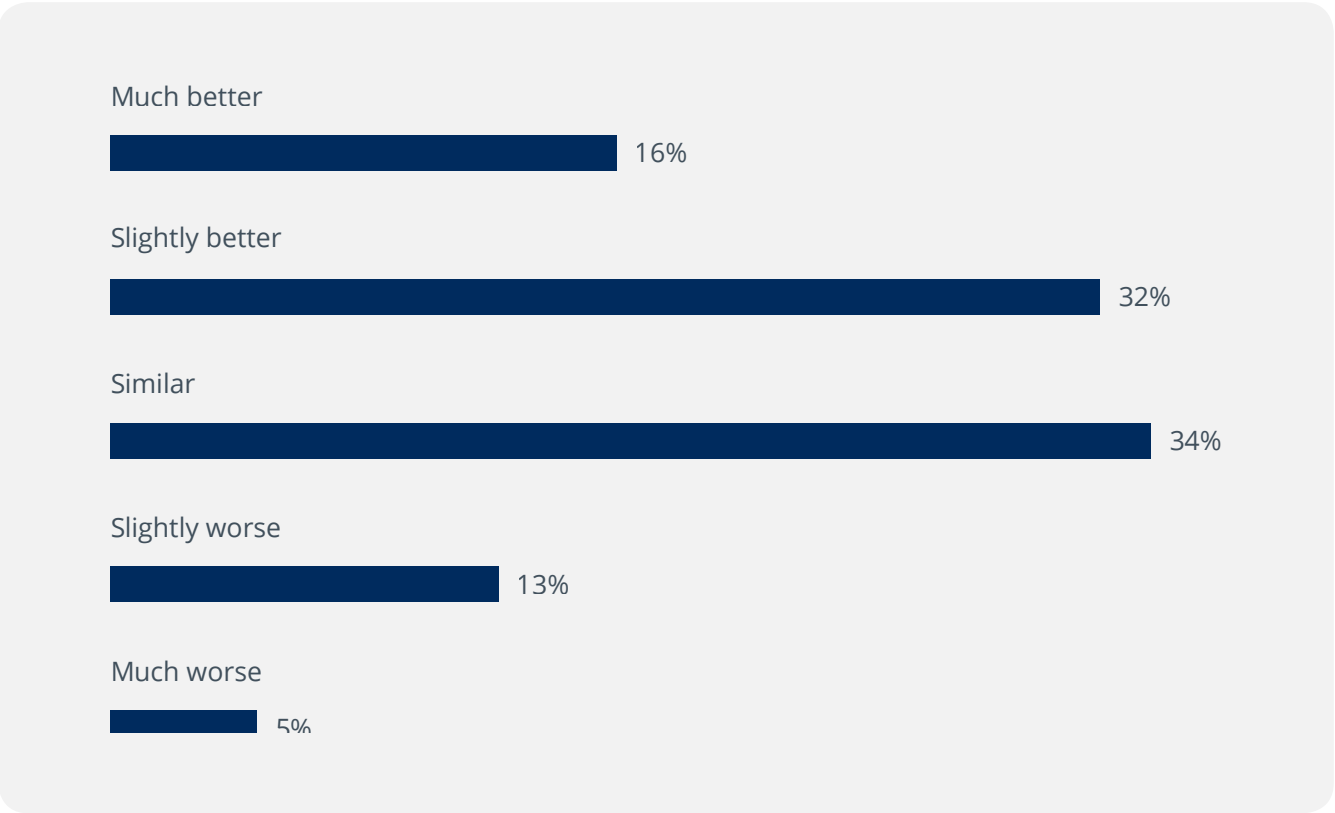
How many employees does your company have? (n=603)

REGION



In which country are you located? (n=603)

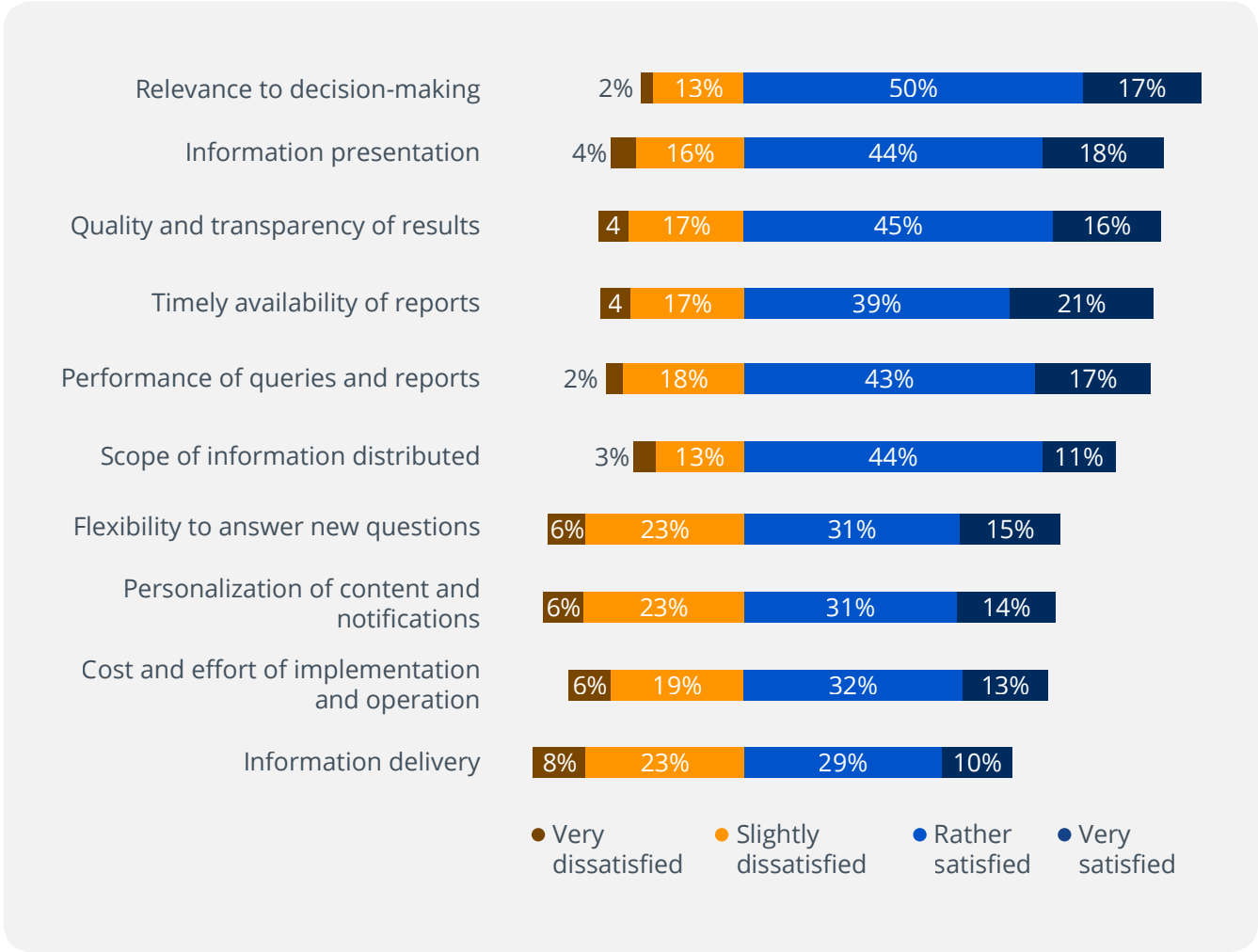
LEADERS AND LAGGARDS



How good is your company's enterprise reporting compared to your competitors? (n=546)

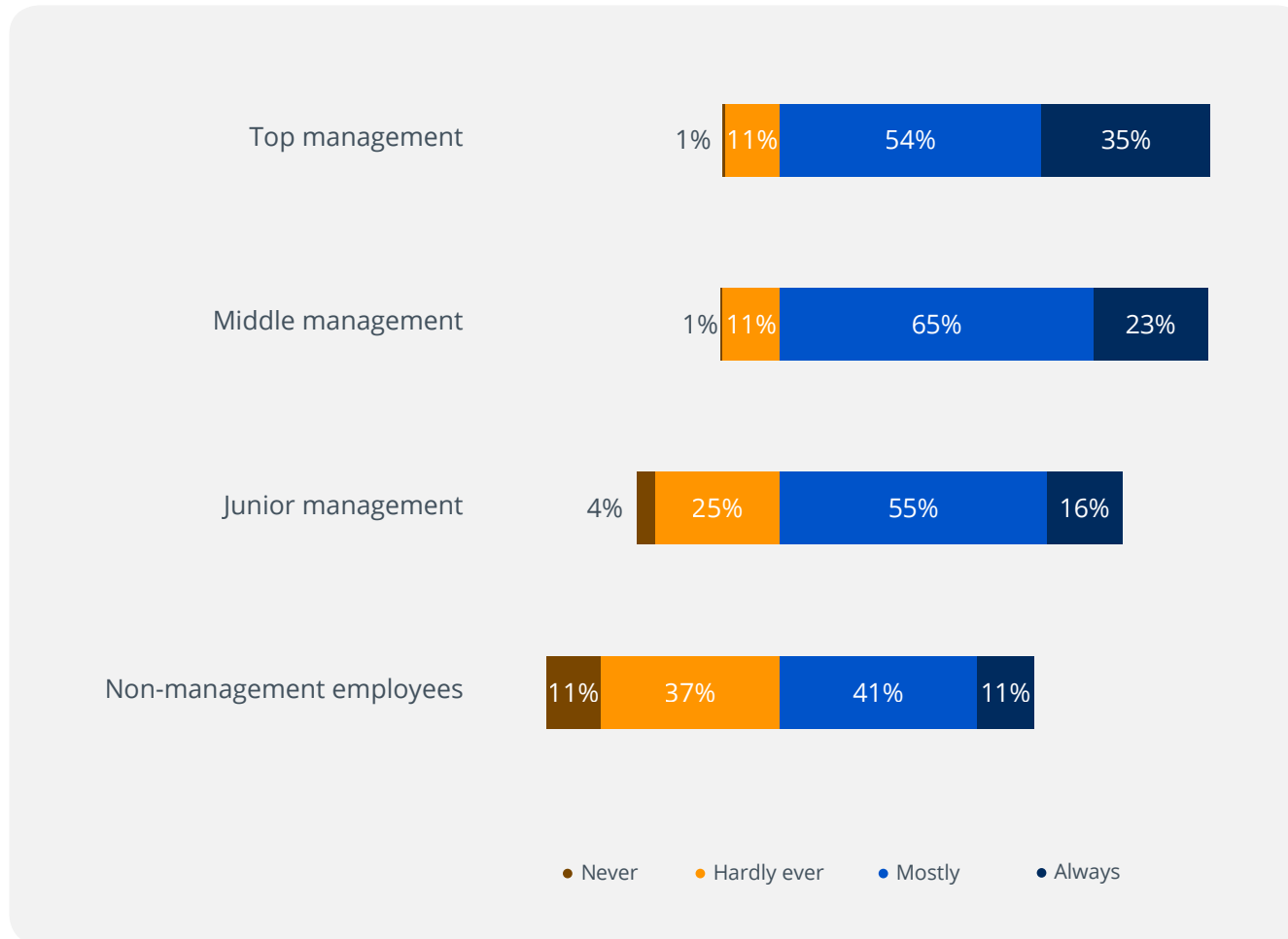
We divided the sample into “leaders” and “laggards” in order to identify differences in terms of distribution channels, approaches and challenges in reporting. This division was made based on the question “How good is your company's enterprise reporting compared to your competitors?”. Companies that are much better in their enterprise reporting than their competitors are referred to as “leaders” (12 percent) while those who are slightly or much worse at enterprise reporting than their competitors are classed as “laggards” (20 percent).

APPENDIX: ALL RESULTS



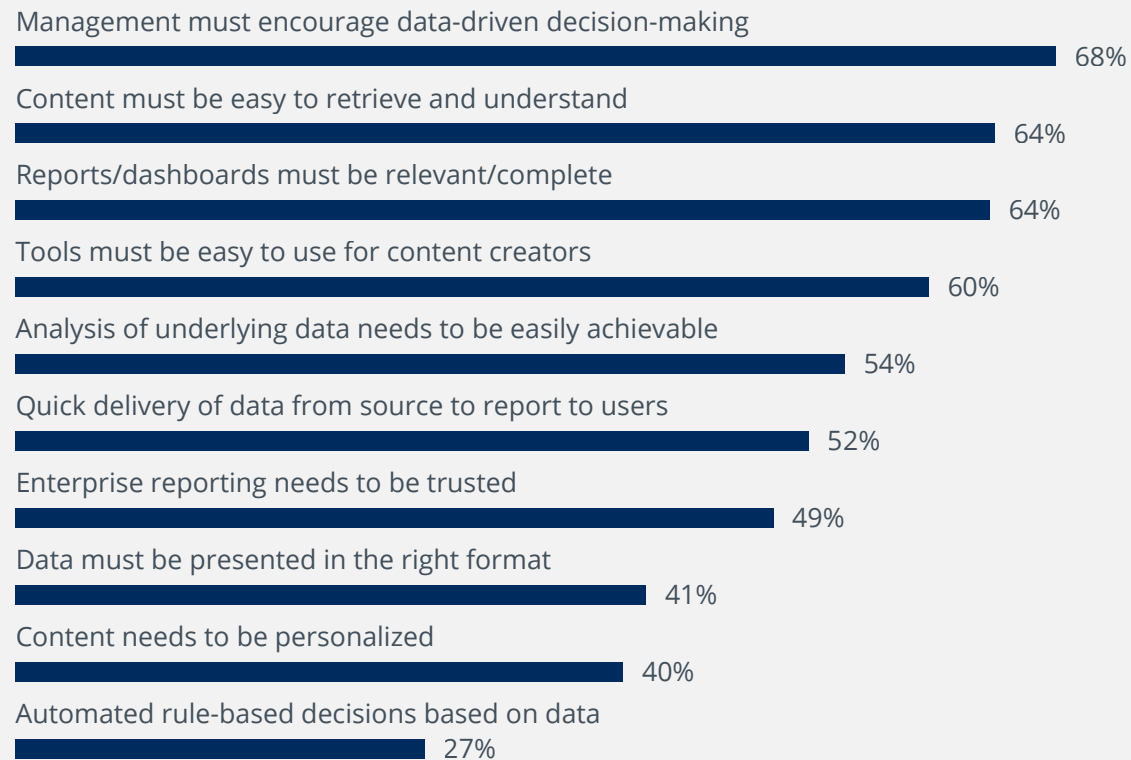
How satisfied are you with the following aspects of your enterprise reporting? (n=601)

APPENDIX: ALL RESULTS



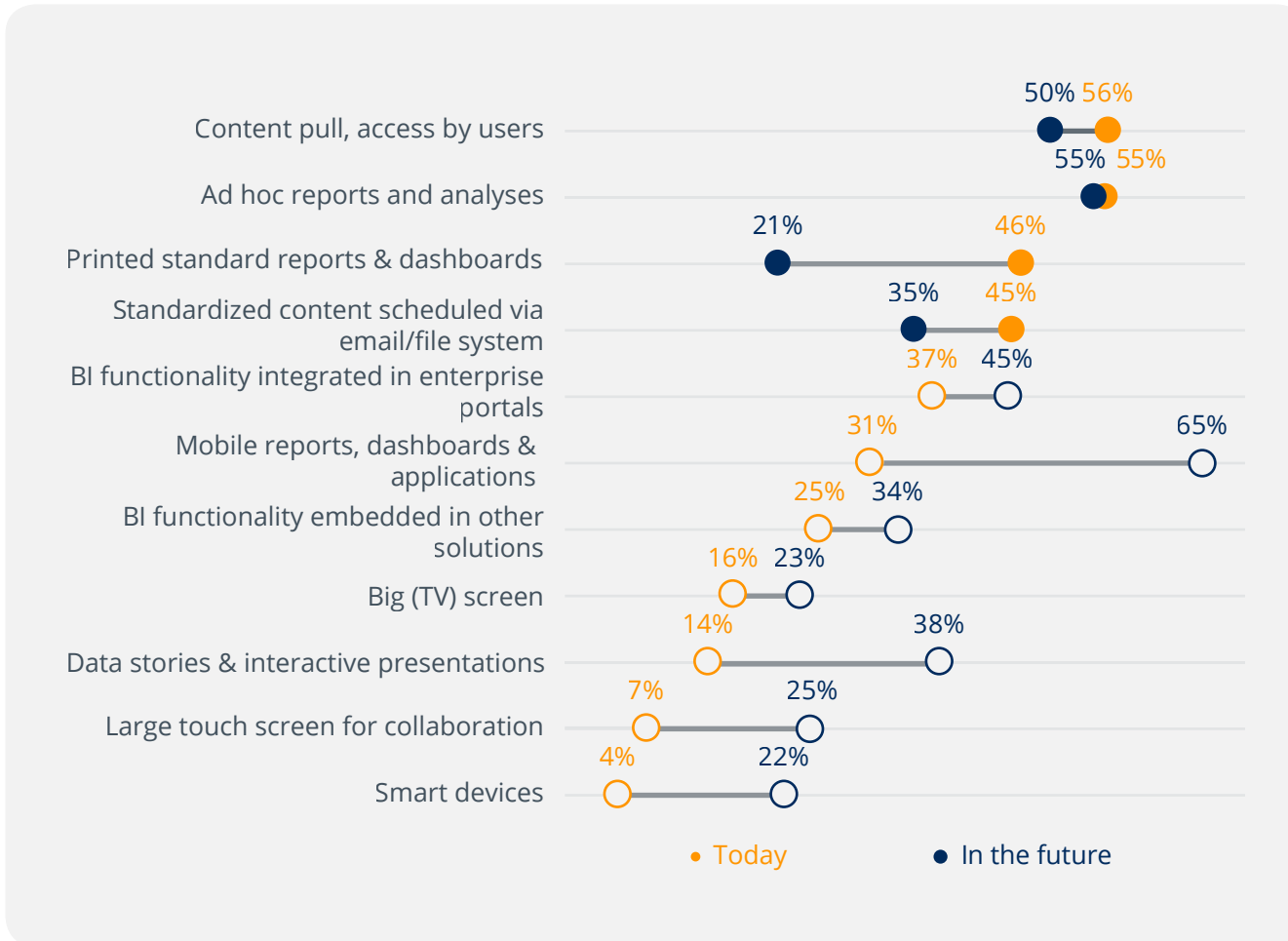
To what extent are decision-makers effectively supported by enterprise reporting? (n=588)

APPENDIX: ALL RESULTS



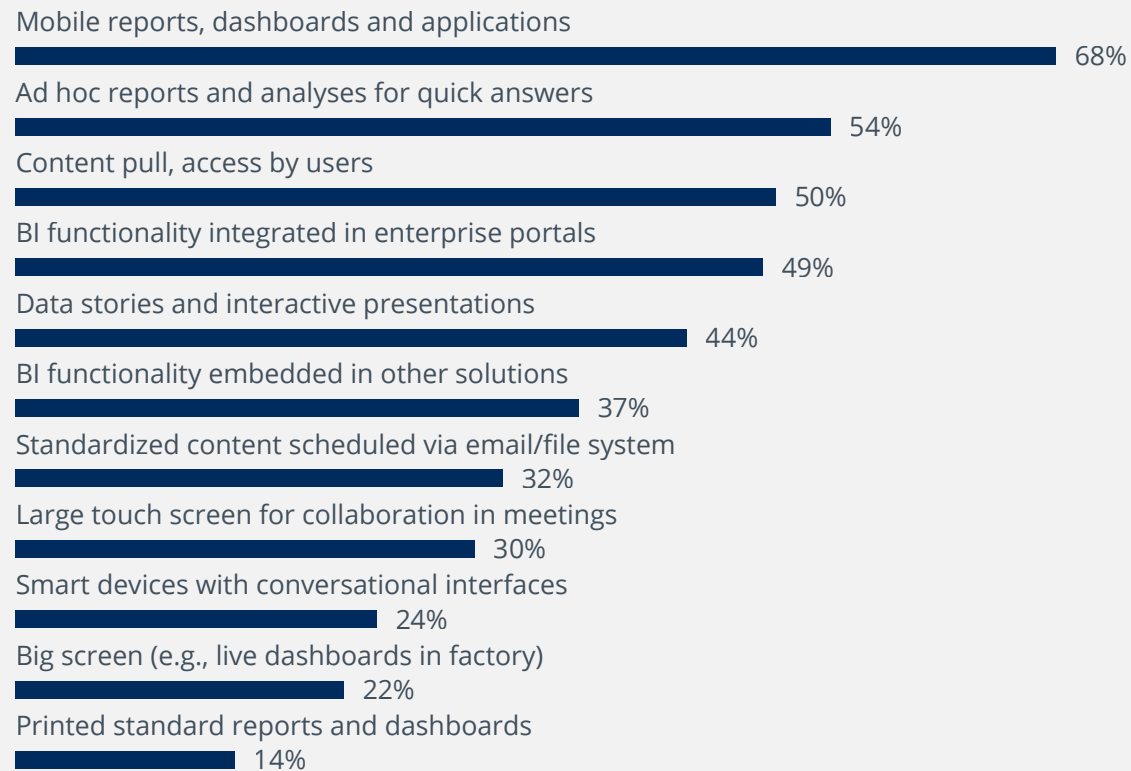
What must be achieved in order to enhance the support of decisions and decision-makers? (n=603)

APPENDIX: ALL RESULTS



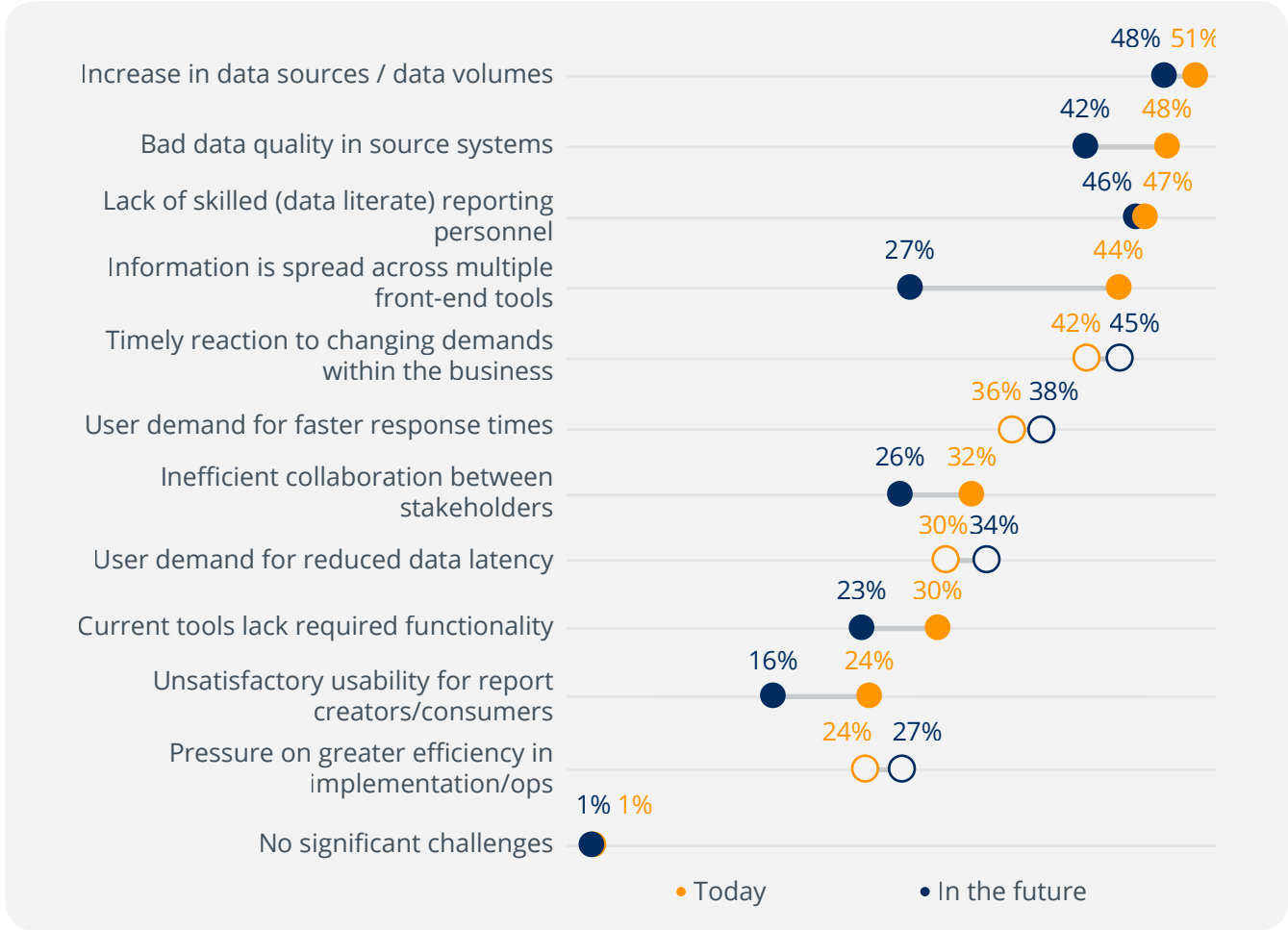
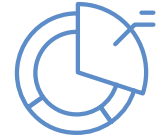
What are the most important distribution channels and reporting types in your company today and in the future? (n=603/602)

APPENDIX: ALL RESULTS



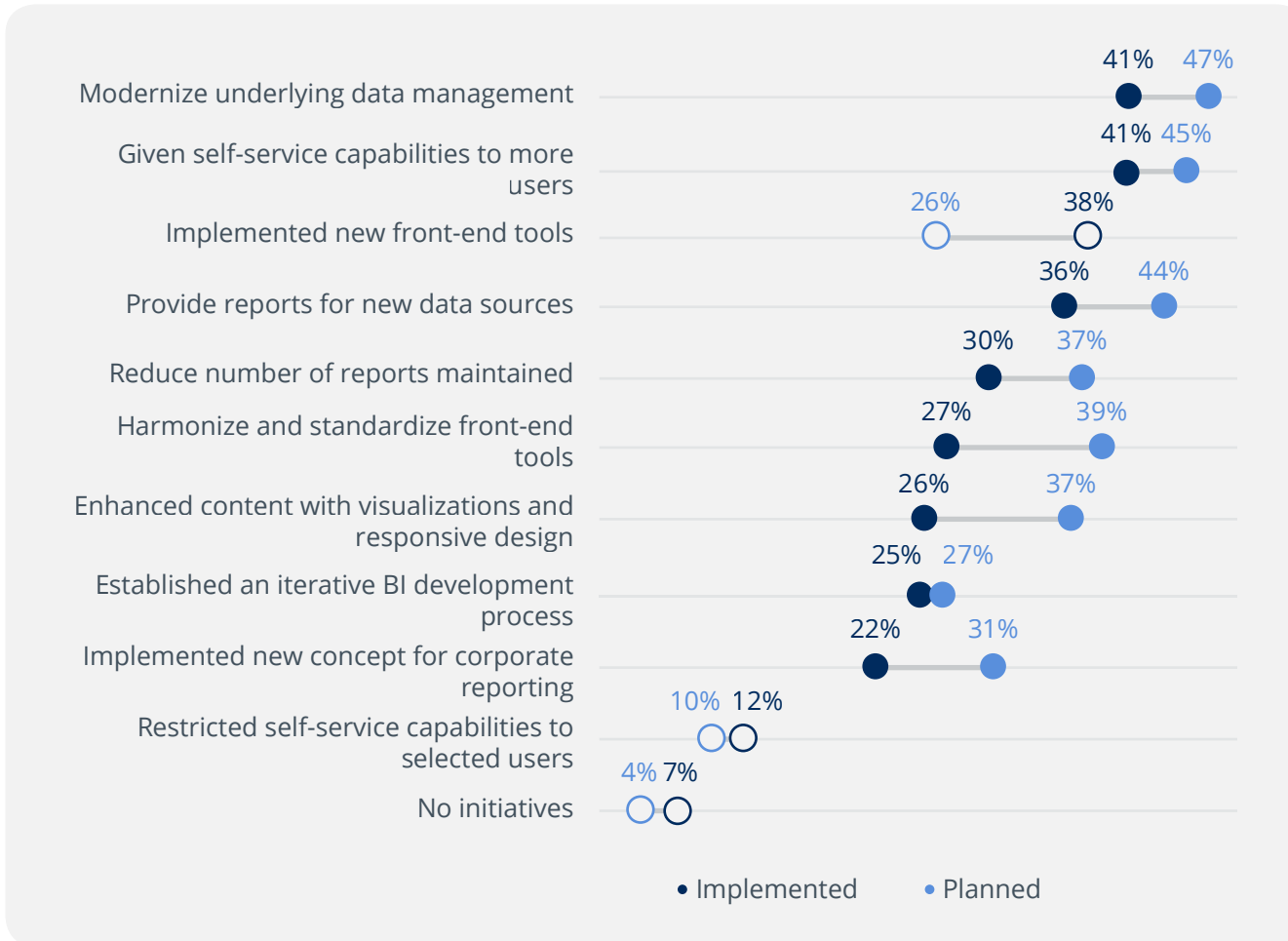
Ideally, what should be the most important distribution channels and reporting types in your company? (n=602)

APPENDIX: ALL RESULTS



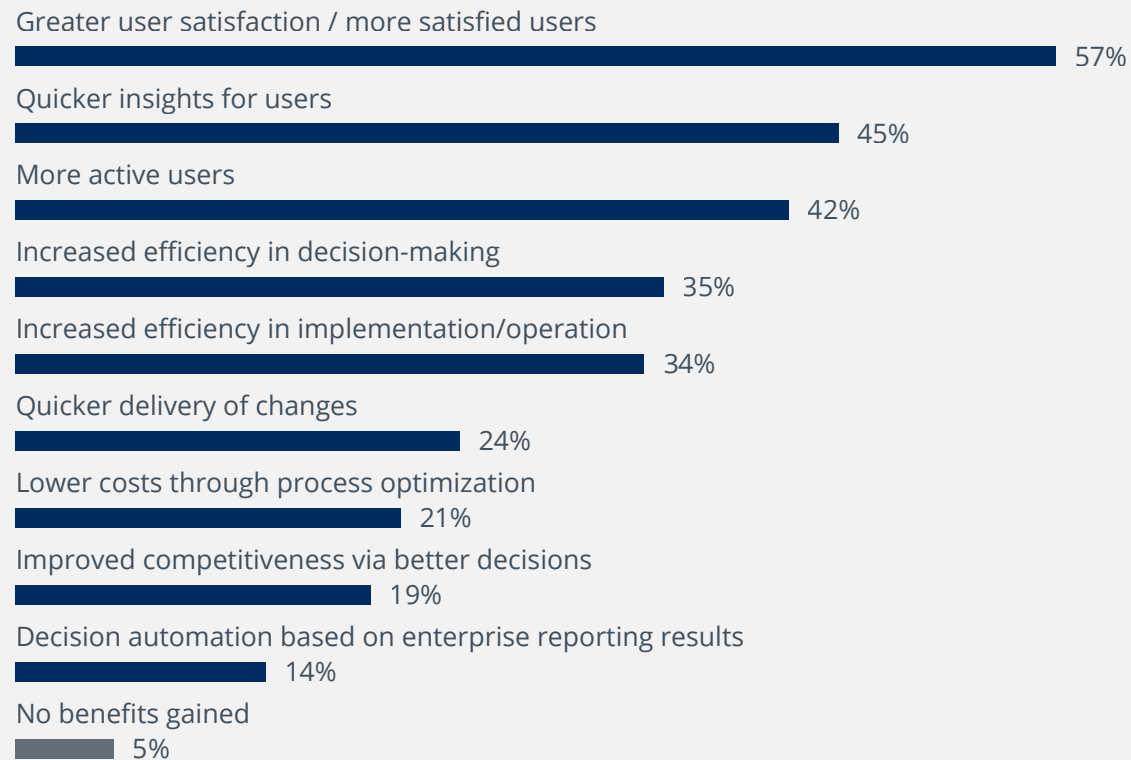
What are the most important challenges for your enterprise reporting environment today and in the future? (n=603/602)

APPENDIX: ALL RESULTS



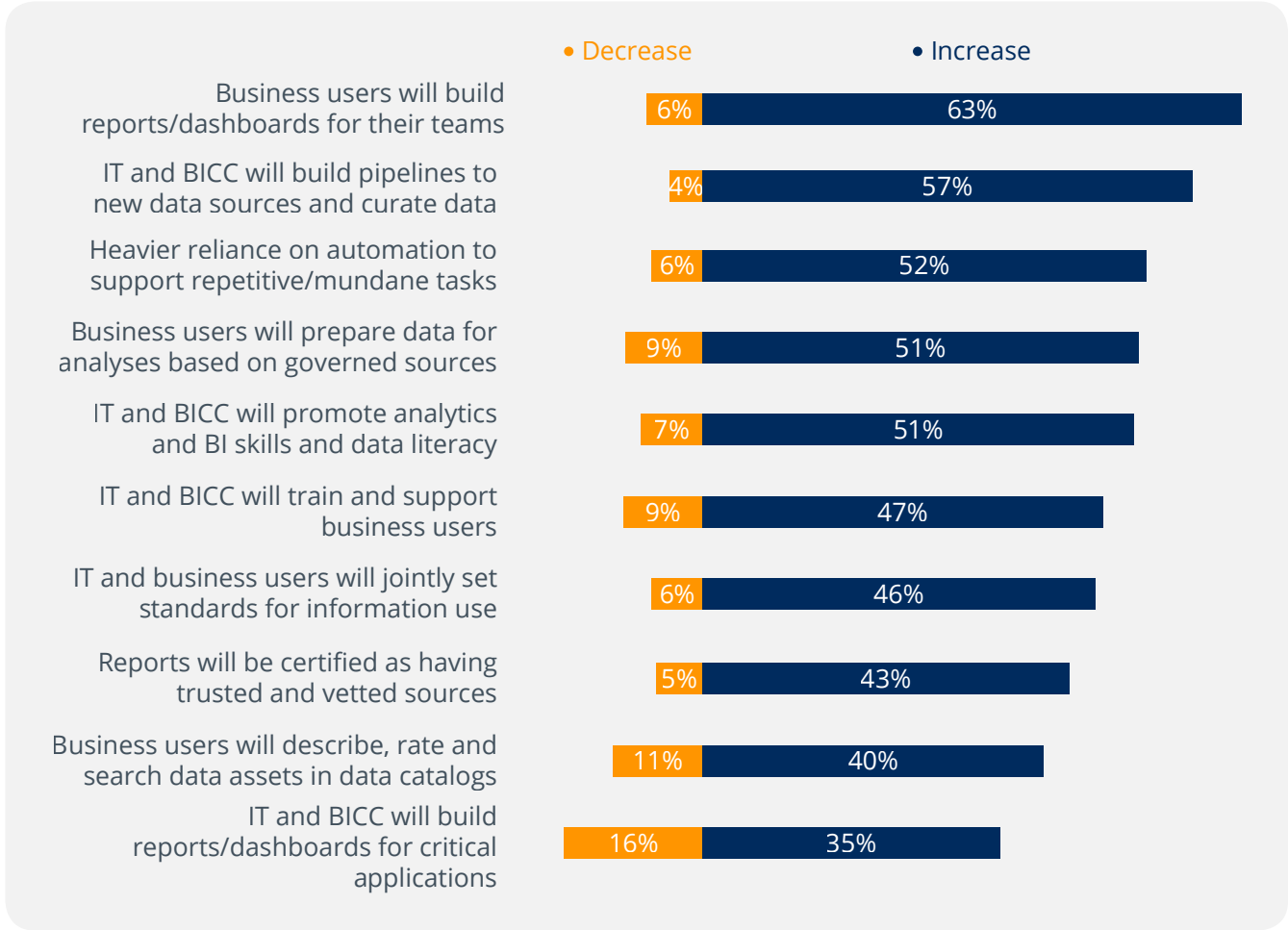
Which approaches has your organization pursued to enhance its reporting in the last 24 months? / Which approaches is your organization planning to pursue to enhance its reporting in the future? (n=599/599)

APPENDIX: ALL RESULTS



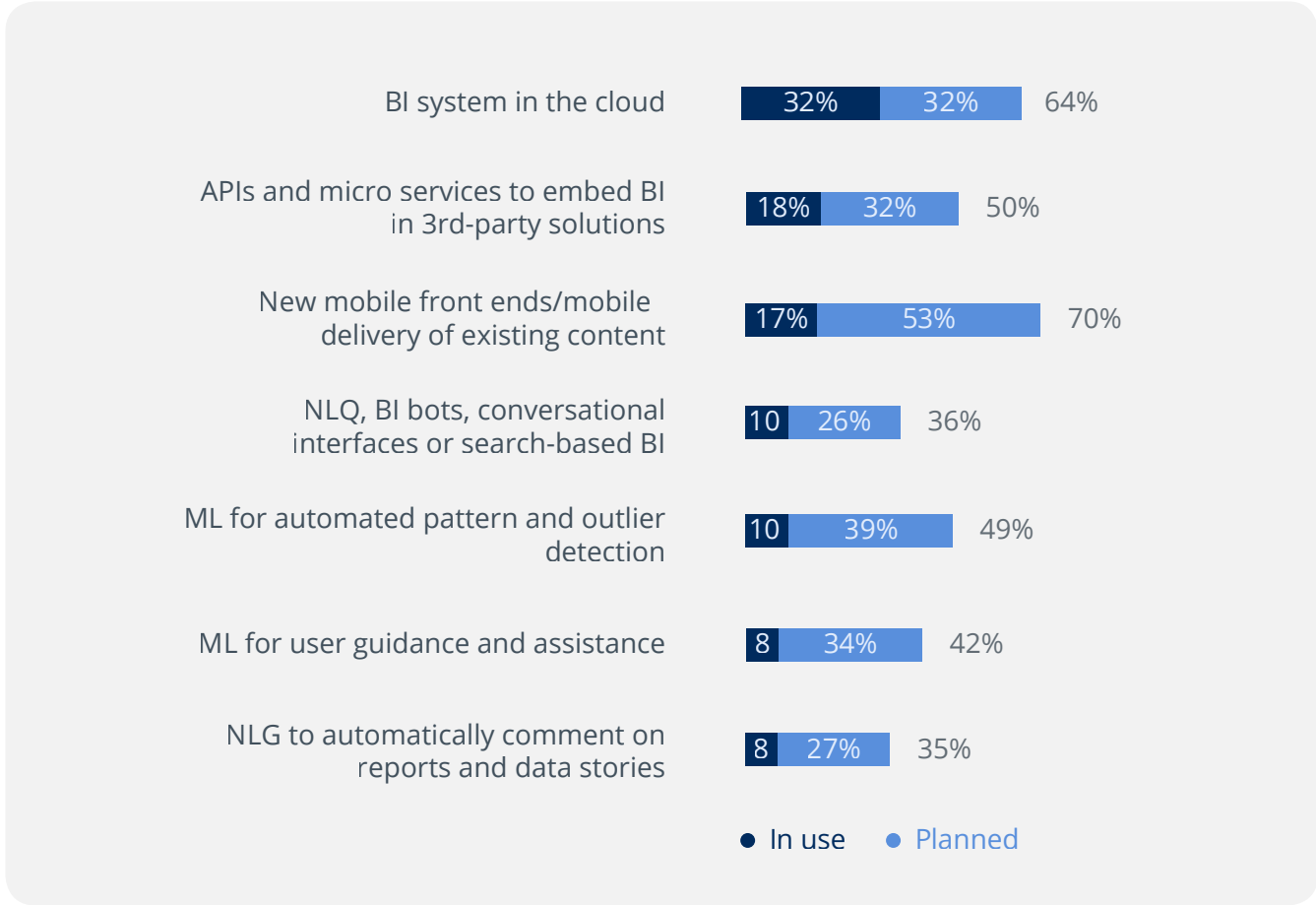
Which benefits and improvements have you gained through the approaches your organization has pursued to enhance its reporting?
(n=555)

APPENDIX: ALL RESULTS



How will your BI organization and processes change in the foreseeable future? (n=575)

APPENDIX: ALL RESULTS



Which of the following technology trends do you use or plan to use within your reporting landscape? (n=559)

BARC – GUIDANCE FOR DIGITAL LEADERS

ABOUT BARC

BARC is a leading enterprise software industry analyst and consulting firm delivering information to more than 1,000 customers each year. Major companies, government agencies and financial institutions rely on BARC's expertise in software selection, consulting and IT strategy projects.

For over twenty years, BARC has specialized in core research areas including Data Management (DM), Business Intelligence (BI), Customer Relationship Management (CRM) and Enterprise Content Management (ECM). BARC's expertise is underpinned by a continuous program of market research, analysis and a series of product comparison studies to maintain a detailed and up-to-date understanding of the most important software vendors and products, as well as the latest market trends and developments.

BARC research focuses on helping companies find the right software solutions to align with their business goals. It includes evaluations of the leading vendors and products using methodologies that enable our clients to easily draw comparisons and

reach a software selection decision with confidence. BARC also publishes insights into market trends and developments, and dispenses proven best practice advice. BARC consulting can help you find the most reliable and cost-effective products to meet your specific requirements, guaranteeing a fast return on your investment. Neutrality and competency are the two cornerstones of BARC's approach to consulting. BARC also offers technical architecture reviews and coaching and advice on developing a software strategy for your organization, as well as helping software vendors with their product and market strategy.

BARC organizes regular conferences and seminars on Business Intelligence, Enterprise Content Management and Customer Relationship Management software. Vendors and IT decision-makers meet to discuss the latest product updates and market trends, and take advantage of valuable networking opportunities.



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SPONSOR PROFILE: BOARD

ABOUT BOARD

BOARD is the #1 decision-making platform. Founded in 1994, BOARD International has enabled people from more than 3,000 companies worldwide to have a transformative impact on their business by rapidly deploy Business Intelligence, Corporate Performance Management, and Predictive Analytics applications on a single unified platform. BOARD allows companies to intuitively play and create with data to produce a single, accurate, and complete view of business information, gain actionable insights, and achieve full control of performance across the entire organization.

BOARD provides a seamless solution for the support, control and management of core processes such as:

- Reporting and Business Analytics
- Budgeting, Planning & Forecasting
- Profitability Modelling and Optimization
- Simulation and What-if Analysis
- Scorecarding and Strategy Management
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Thanks to the BOARD platform, global enterprises such as Coca-Cola, Deutsche Bahn, DHL, KPMG, Puma, Siemens and ZF Group have deployed end-to-end decision-making applications at a fraction of the time and cost associated with traditional solutions.

Headquartered in Chiasso, Switzerland, and Boston, MA, BOARD International has branches in the US, UK, Germany, Italy, Spain, France, Benelux, Nordics, UAE, Singapore, Australia, India, Japan, China, Mexico, Argentina and a worldwide network of distributors and certified partners.



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SPONSOR PROFILE: IBM

ABOUT IBM

IBM has been a household name in technology solutions for over a hundred years, consistently developing world-changing applications like Watson AI. IBM is committed to the Business Analytics space, prioritizing continual advancement of solutions like IBM Cognos® Analytics.

Cognos Analytics is for data explorers who are obsessed with finding and making actionable decisions based on their data. With features like intuitive self-service, Cognos Analytics makes AI-infused data accessible to anyone, regardless of their experience level. IBM believes that allowing everyone from data scientists to small business owners to glean meaningful insights quickly is key to unlocking the true power of business intelligence. Users can find answers that others cannot, using AI and machine learning, while unearthing information that may not be obvious or expected using pattern detection. They can create and easily share stunning, system-recommended visualizations in diverse formats and reduce the time for data preparation.

Cognos Analytics is available both on-premises and in the cloud, with capabilities like automated data preparation, an AI Assistant that allows data explorers to ask questions and receive answers in plain language and to verify and combine data sources with automated modeling. Sharing data is simple with report bursting or subscriptions, as well as living data stories with interactive components, voice overlays and more. Cognos Analytics provides the same experience on a desktop, laptop, tablet or other mobile device, allowing users to take their data with them on the go. The ability to leverage embedded geospatial-mapping capabilities in dashboarding and reporting delivers a greater depth to data explorations.



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SPONSOR PROFILE: SAP

ABOUT SAP

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SPONSOR PROFILE: TABLEAU

ABOUT TABLEAU

The Tableau Platform essentially consists of the four products Tableau Desktop, Tableau Server, Tableau Online and Tableau Prep:

Tableau Desktop is an easy-to-learn and easy-to-use application and 10 to 100 times faster than traditional solutions. Use your natural ability to spot patterns and trends and get to visual insights in a matter of seconds. Connect to and query your data without writing a single line of code. Use Drag&Drop to change the view intuitively, following your line of questioning. Whether you measure your data in petabytes or billions of rows, Tableau delivers self-service analytics for everyone at the speed of thought.

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even embedded in your company portal. Cooperate by commenting on dashboards and stay up to date with data-driven alerts and dashboard subscriptions.

Tableau Online is the fully hosted version of Tableau Server. That's Business Intelligence faster and easier than ever before. Publish dashboards from Tableau Desktop for colleagues, partners and customers alike. Empower your organization to find answers within minutes, regardless of time and place.

Tableau Prep is our smart and intuitive solution for data preparation. Use intelligent functions to take the sting out of common challenges in data prep. The result of any action is immediately visible, even with millions of rows of data. Functions for easy sharing and collaboration reduce friction and bridge the gap between prep and analytics, delivering better results for your business.



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SPONSOR PROFILE: ZOHO

ABOUT ZOHO

Zoho is the operating system for business—a single online platform capable of running an entire business. With 40+ apps in nearly every major business category, including sales, marketing, customer support, analytics, accounting and back office operations, and an array of productivity and collaboration tools, Zoho is one of the world's most prolific software companies. More than 45 million users around the world, across hundreds of thousands of companies, rely on Zoho every day to run their businesses, including Zoho itself.

Zoho Analytics is an integral part of Zoho's suite of business applications. It is a self-service BI and analytics software that allows users to create insightful dashboards and visually analyze any data. Zoho Analytics features an AI powered assistant that allows users to ask questions and get intelligent answers in the form of meaningful reports.

Zoho Analytics supports a wide variety of visualization options in the form of charts, pivot tables, summary views, KPI widgets and customizable

dashboards. It offers readymade connectors to cloud and on-premise databases, and many popular business apps which includes the likes of Salesforce, Zendesk, Google Ads, Stripe, QuickBooks, Xero etc. All the business app connectors come with a set of prebuilt reports and dashboards that provide immediate ROI. Zoho Analytics enables users to blend data across business processes and functions, to get end-to-end insights.

Zoho Analytics makes collaboration easy as all the reports are dynamic, interactive, and can be accessed online. Zoho Analytics is available both on the cloud, and on-premise. It has native mobile apps for both iOS and Android. Zoho Analytics also offers white label solutions either in the form of a standalone portal, or, as an embedded analytics tab within another business app.



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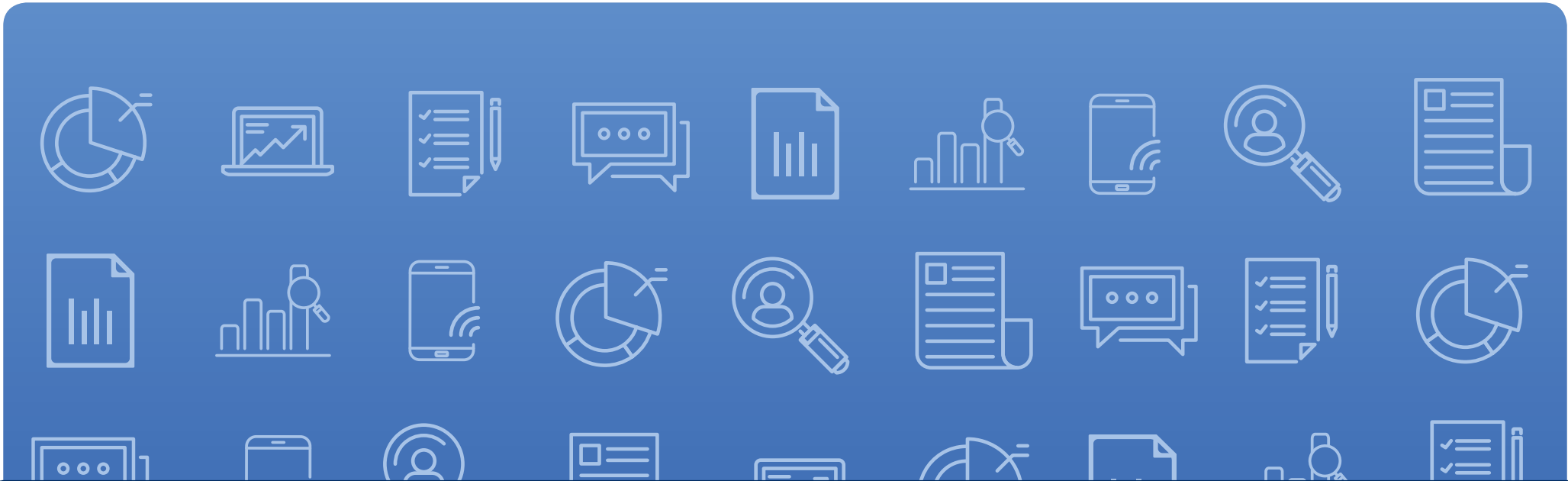
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Larissa Baier is a Senior Analyst Data & Analytics at BARC. She is responsible for the Score product line and product manager for the BARC Score Enterprise BI and Analytics Platforms. Furthermore she is co-author of various market analyses, including the studies “The BI Survey”, “The Advanced Analytics Survey” or “BI Manager” as well as a lecturer on BI topics. She specializes in decision supporting information systems with a focus on BI front ends. As a consultant, she supports companies in the software selection process as well as in strategic BI questions about the BI front end portfolio, including architecture and usage scenarios.



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