Wisdom of Crowds®
Business Intelligence Market Study Excerpt

2021 Edition

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Introduction

In 2021, we mark the 14th anniversary of Dresner Advisory Services and the 12th edition of this report. Our thanks to all of you for your continued support and ongoing encouragement.

Since our founding in 2007, we worked hard to set the “bar” high—challenging ourselves to innovate and lead the market—offering ever greater value with each successive year.

At the time of publication of this report, the COVID-19 pandemic continues to affect millions worldwide and impacts businesses and how they leverage data and business intelligence. As our data collection took place during Q1 of 2021, the data and resulting analyses continue to reflect the pandemic’s impact.

Through this period, we separately conducted specific COVID-19 research, which is not reflected in this report but is available on our blog at no cost. Additionally, we will continue to collect this data.

As organizations strive to make sense of the changing market conditions and work to determine how best to proceed and invest in their businesses, we hope that this report will provide guidance and offer direction.

We wish you and yours the best as we manage through this challenging time.

Howard Dresner
Chief Research Officer
Dresner Advisory Services
Executive Summary

- Operations, Executive Management, and Finance most often drive business intelligence direction in organizations.
- Executives, followed by managers and individual contributors are the roles most often targeted for BI; customer targeting is increasing, and successful BI organizations target broader audiences.
- "Better decision-making" is the top objective for BI; cost-cutting/efficiency and revenue goals are next most important.
- Top BI achievements mirror top goals, but organizations realize efficiency and customer service gains more often than revenue goals.
- Penetration of BI within organizations improves over time with higher percentages of users; expansion plans continue to be bullish.
- The uptake and longevity of chief data and chief analytics officers remains modest but shows slow improvement; plans to name a future CDO or CAO are also modest.
- Organizations with a CDO and/or CAO are seen as more "effective." CDO/CAO connections to "BI success" are tenuous, but "BI achievements" improve with a CDO and/or CAO. Very large organizations account for the most long-tenured CDO/CAOs; reporting structure for CDO/CAOs varies.
- Most organizations use more than one BI tool, and there is an increase in the average number of tools.
- Familiar technologies including reporting, dashboards, and data integration remain the most important BI initiatives.
- Most organizations have high internal common trust in data and governance and high "maturity in insight creation and sharing".
- Success with BI is improving and best measured via user feedback. Contributors to success include executive support, communication, and collaboration. Lack of a supporting culture is the top obstacle to success.
- The great majority of organizations increase or maintain BI budgets.
- Most BI tools are in place five years or less, and longevity is shifting. A majority of organizations do not replace existing BI tools. When they do, functionality and modernization are the main reasons.
Analysis and Trends

Departments/Functions Driving Business Intelligence

We asked respondents which functional roles drive business intelligence “always,” “often,” “sometimes,” “rarely,” or “never” (fig. 1). The results show a breadth of influence. In 2021, survey respondents say Operations, Executive Management, and Finance are the most influential roles. Each of these is at least 63 percent likely to “often” drive BI, and 82-90 percent is likely to at least “sometimes” drive BI. Operations and Executive Management are the top drivers in many of our flagship studies, and Finance exerts increasing influence over time. While functional influence often rolls up to a centralized program or strategy, we observe that BI deployments and influence are widely distributed in organizations.

![Functions Driving Business Intelligence](image-url)

**Figure 1 – Functions driving business intelligence**
User Roles Targeted for Business Intelligence
By a significant margin, Executives remain the most likely primary (64 percent) and overall targeted users of business intelligence in 2021 (fig. 2). After this, a second tier of middle managers, individual contributors, and line managers all are between 76-80 percent likely to be primary or secondary targeted users. Targeting thereafter trails off significantly. Customers are about 53 percent likely to be targeted as primary or secondary users, a figure that falls to 37 percent for partners and just 22 percent for suppliers.

Figure 2 – Targeted users for business intelligence
Objectives for Business Intelligence

In 2021 (and throughout the 12-year history of our study), the non-specific goal of “better decision-making” sits well atop respondents’ business intelligence objectives (fig. 3). We can casually observe that this goal (which we associate with organizations seeking general improvements wherever they may be found) is far more likely to be “critical” (52 percent) compared to any other objective. A second tier of quantifiable objectives that includes "improved operational efficiency/cost savings" (“critical” to 30 percent) and "growth in revenues" (“critical” to 32 percent) is next most important. The top five objectives are, at minimum, “very important” to large majorities of respondents. Least important is "compliance/risk management" which, coincidentally, was an early promoted benefit of adopting business intelligence. In this regard, while compliance is certainly an organizational governance requirement, it is only loosely associated with business intelligence objectives.

Figure 3 – Business intelligence objectives

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Business Intelligence Objectives 2017-2021

Across the last five years of our study, objectives for business intelligence remain mostly steady by rank (fig. 4). Among these, we see “better decision-making” the only objective that consistently holds weighted-mean value > 4.0 (“very important”). Only “compliance/risk management” finds scores below 3.5, the midway point between “important” and “very important.” In 2021, we observe narrowly changing scores for objectives (see following chart for year-over-year details), with all values below all-time highs mostly seen in 2018-2019.

Figure 4 – Business Intelligence Objectives 2017-2021
Penetration of Business Intelligence Solutions

Over time, we see an ongoing and positive development in the improving penetration of business intelligence usage (measured as percentage of total employees). Fig. 5 compares penetration of BI through the years 2015-2021 and finds low-level penetration decreases as higher levels climb. Between 2015 and 2021, the lowest level (< 10 percent) declined most (from 35 percent to 25 percent), and 11-20 percent penetration fell from 22 percent to 20 percent. The next four levels of penetration all grew noticeably. For example, 21-40 percent penetration increased from 16 percent to 20 percent, 41-60 percent penetration grew from 10 percent to 14 percent, and 61-80 percent penetration doubled from 4 percent to 8 percent.

Figure 5 – Business intelligence penetration 2015-2021
Technologies and Initiatives Strategic to Business Intelligence

Familiar BI technologies—reporting, dashboards, data integration, data warehousing, and data preparation—top the list of technologies and initiatives strategic to business intelligence (of 44 topics under our study) in 2021 (fig. 6). Second-tier initiatives (some with rising importance) include enterprise planning, governance, data operations, and cloud. The lowest priorities in 2021 include voice and video analytics, complex event processing, edge computing, and Internet of Things.

Figure 6 – Technologies and initiatives strategic to business intelligence
Contributors to Success with Business Intelligence

We asked respondents to choose from a selection of contributors to success with business intelligence (fig. 7). This year, the most-cited contributors are: “support from senior management or other BI champions,” “good communication/collaboration between those developing/supporting BI solution and those using it,” and “a culture that understands and values fact-based decision-making.” These findings are nearly identical to 2020 and suggest thoughtful groundwork in the form of planning, executive sponsorship, and business transformation that values a data-centric organization and includes user involvement and feedback. It is interesting that these contributors rank ahead of “reliable, trustworthy data,” and well ahead of issues specific to tools and technology. Though a minor contributor today, we are monitoring the topic of data literacy to contribute greater contributions to success with BI.

Figure 7 – Contributors to success with business intelligence
Business Intelligence Market Models

Starting in 2015, we developed two new models for examining and understanding the business intelligence market. Using quadrants, we plotted aggregated user sentiment into x and y axes.

Customer Experience Model

The customer experience model considers the real-world experience of customers working with BI products on a daily basis (fig. 8). For the x axis, we combine all vendor touch points—including the sales and acquisition process (8 measures), technical support (5 measures), and consulting services (5 measures)—into a single “sales and service” dimension. On the y axis, we plot customer sentiment surrounding product, derived from the 12 product and technology measures used to rank vendors. On the resulting four quadrants, we plot vendors based on these measures.

The upper-right quadrant contains the highest-scoring vendors and is named “overall experience leaders.” Technology leaders (upper-left quadrant) identifies vendors with strong product offerings but relatively lower services scores. Contenders (lower-left quadrant) would benefit from varying degrees of improvement to product, services, or both.

User sentiment surrounding outliers (outside of the four quadrants) suggests that significant improvements are required to product and services.
2021 Business Intelligence Customer Experience Model

Figure 8 – Customer experience model
Vendor Credibility Model
The vendor credibility model considers how customers “feel” about their vendor (fig. 19). The x axis plots perceived value for the price paid. The y axis combines the integrity and recommend measures, creating a “confidence” dimension. The resulting four quadrants position vendors based on these dimensions.

The upper-right quadrant contains the highest-scoring vendors and is named “credibility leaders.” Trust leaders (upper-left quadrant) identifies vendors with solid perceived confidence but relatively lower value scores. Contenders (lower-left quadrant) would benefit by working to improve customer value, confidence, or both.

User sentiment surrounding outliers (outside of the four quadrants) suggests that significant improvements are required to improve perceived value and confidence.
Domo Detailed Score

![Domo Detailed Score Diagram](image)

**Figure 10 – Domo detailed score**

With scores above the overall sample, Domo has improvements across virtually all categories of measurement including sales, product, technical support, consulting, and integrity. It is an overall leader in both the Customer Experience and Vendor Credibility models and is best in class for integration with third-party technologies and ease of installation. It maintains a perfect recommend score.
About Howard Dresner and Dresner Advisory Services

The Wisdom of Crowds® Business Intelligence Market Study was conceived, designed, and executed by Dresner Advisory Services, LLC—an independent advisory firm—and Howard Dresner, its President, Founder, and Chief Research Officer.

Howard Dresner is one of the foremost thought leaders in business intelligence and performance management, having coined the term “Business Intelligence” in 1989. He published two books on the subject, *The Performance Management Revolution – Business Results through Insight and Action* (John Wiley & Sons, Nov. 2007) and *Profiles in Performance – Business Intelligence Journeys and the Roadmap for Change* (John Wiley & Sons, Nov. 2009). He lectures at forums around the world and is often cited by the business and trade press.

Prior to Dresner Advisory Services, Howard served as chief strategy officer at Hyperion Solutions and was a research fellow at Gartner, where he led its business intelligence research practice for 13 years.

Howard conducted and directed numerous in-depth primary research studies over the past two decades and is an expert in analyzing these markets.

Through the Wisdom of Crowds® Business Intelligence Market Study reports, we engage with a global community to redefine how research is created and shared. Other research reports include:

- Analytical Data Infrastructure
- Cloud Computing and Business Intelligence
- Data Preparation
- Data Pipelines and Integration
- Data Science and Machine Learning
- Embedded Business Intelligence
- Enterprise Performance Management
- Guided Analytics
- Natural Language Analytics

Howard ([www.twitter.com/howarddresner](http://www.twitter.com/howarddresner)) conducts a bi-weekly Twitter “tweetchat” on alternate Fridays at 1:00 p.m. ET. The hashtag is #B IWisdom. During these live events, the #B IWisdom community discusses a wide range of business intelligence topics.

You can find more information about Dresner Advisory Services at [www.dresneradvisory.com](http://www.dresneradvisory.com).
About Jim Ericson
Jim Ericson is a Research Director with Dresner Advisory Services.

Jim has served as a consultant and journalist who studies end-user management practices and industry trending in the data and information management fields.

From 2004 to 2013, he was the editorial director at Information Management magazine (formerly DM Review), where he created architectures for user and industry coverage for hundreds of contributors across the breadth of the data and information management industry.

As lead writer he interviewed and profiled more than 100 CIOs, CTOs, and program directors in an annual program called “25 Top Information Managers.” His related feature articles earned ASBPE national bronze and multiple Mid-Atlantic region gold and silver awards for Technical Article and for Case History feature writing.

A panelist, interviewer, blogger, community liaison, conference co-chair, and speaker in the data-management community, he also sponsored and co-hosted a weekly podcast in continuous production for more than five years.

Jim’s earlier background as senior morning news producer at NBC/Mutual Radio Networks and as managing editor of MSNBC’s first Washington, D.C. online news bureau cemented his understanding of fact-finding, topical reporting, and serving broad audiences.