FINANCE ANALYTICS:
BUILDING HIGH-PERFORMANCE STRUCTURE, TOOLS, AND TEAMS
SPECIAL ACKNOWLEDGEMENTS

APQC wishes to acknowledge and thank the survey and interview participants in this study for their time to share their practices and insights regarding this important topic.

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INTRODUCTION

Analytics has become an essential competency for today's finance teams. This development derives from the convergence of two trends. The first is that finance is increasingly asked to contribute to strategic planning and execution. The second is that data has become integral to decision making across functions and at all levels of the organization. If CFOs want to make a meaningful contribution to the organization's strategic direction, the expectation is that they will do so with data-based insights.

Finance analytics is the process of searching for and gathering meaningful insights from financial data, often in combination with other business data, to inform decision making. APQC's 2020 Financial Management Priorities research found that finance analytics is both a top priority and a top challenge for the function this year. The driver of prioritization is clear: Analytics offers tangible bottom-line benefits, as McKinsey and others have repeatedly shown. Finance analytics can positively impact a range of business outcomes including risk mitigation, improved customer satisfaction, and cost savings.

To understand more about what's driving current challenges around finance analytics—and how leading organizations overcome them—APQC examined the reporting structures, talent practices, tools and techniques, and outputs of finance analytics teams. We surveyed a diverse population of 200 finance professionals across industries and global regions and conducted expert interviews to unlock additional insights.

Overall, the research shows that finance analytics maturity is accelerating. A majority of those surveyed have been engaging in finance analytics for six years or more, and nearly all said that analytics has resulted in multiple positive outcomes including better reporting and insights, improved business results, increased stakeholder satisfaction, and reduced risk. Organizational support for analytics is also on the rise, with 71 percent of those surveyed reporting that investment in finance analytics has increased over the past three years. This is consistent with broader trends in APQC's Data and Analytics research. As analytics becomes pervasive, organizations are stepping up their investments in the tools and talent necessary to do it.

While there is much to applaud, questions remain about whether finance analytics programs have matured quickly enough to meet leadership's growing demand for data-based insights. The research found that some organizations are struggling to make the leap from good to great, while a few are lagging dangerously behind. To help organizations at every level accelerate their finance analytics success, APQC examined finance analytics practices holistically—in terms of structure and service delivery, people, processes and practices, and tools and technology—and identified key drivers that are statistically associated with higher effectiveness ratings by survey participants of finance analytics efforts.
STRUCTURE AND SERVICE DELIVERY

In terms of structure/service delivery, most organizations deliver finance analytics via a centralized model, or in a hybrid model that leverages a centralized governance team or center of excellence combined with decentralized resources embedded in business units. Only 18 percent have a fully decentralized structure (Figure 1).

This reflects the growing maturity of finance analytics. Centralized governance provides strategic alignment, accountability, and consistent communication and implementation planning for finance analytics work across the enterprise. APQC’s broader research on analytics programs finds that, across functions, such programs are typically hybrid. This helps organizations combine the holistic perspective and control of centralized governance with the flexibility and insights into the business needs provided by decentralized implementation.
One of the most common hybrid finance analytics structures is a “hub-and-spoke” model wherein a centralized center of excellence (CoE) serves as the “hub” and is linked to “spokes” embedded in the business. For example, in a global telecommunications company that employs this model, the CoE owns more strategic analytics and executes multivariate tests recommended by the spokes to produce insights such as profitability models and strategic pricing information. “In this case, the integrity of the pure data analysts is protected in the hub, while the needs of the business are leveraged through the spokes,” reports Jackie Wiles of Gartner.

Some organizations structure advanced analytics in shared services centers. Oil and gas firm Royal Dutch Shell, for example, is moving many FP&A-related activities like analysis and reporting from various parts of the Upstream business to business operations centers in Finance and Data Operations. A team of about 60 people working in a regional center in Krakow now performs high-level FP&A analytical tasks and prepares reports supporting Upstream business finance that are ultimately delivered to Board-level leaders. This approach has reduced costs, improved standardization, and enabled more consistent and consolidated delivery of reports for board-level leaders.

Others have established advanced analytics shared services centers that service a variety of functions. One example of this comes from technology company Hewlett-Packard (HP), which established its HP Global Analytics center to drive data-driven decision making across sales, marketing, supply chain, finance, and HR. This allows the organization to employ more holistic, end-to-end data analysis and integration to understand patterns that unlock revenue growth, margin expansion, and improved cash flow.

I don’t think there should be a singular owner of analytics in an organization. Every function should have analytics capabilities—it shouldn’t be something coming out of finance or a center of excellence alone...Finance might be the function to link it all together, but it needs to be much more of a joint system now.

—SCOTT WALLACE, director of transformation services, eCapital Advisors
Case-in-point: Cementos Argos

To gain competitive advantage and support better decision making, cement manufacturer Cementos Argos set up a dedicated center for business analytics. The organization invested in top talent for the center, which includes business analytics and data science teams (both of which have individuals with advanced degrees). With its combination of technical expertise and business acumen, the center has standardized and streamlined key finance processes, improved the governance and accessibility of organizational data, applied big data capabilities through Azure and Power BI, reduced costs, and developed tools that provide deeper insight into customer behavior and profitability.

The business analytics center's teams report to the director of corporate finance, who in turn reports directly to the CFO (Figure 2). For Cementos Argos, housing this powerful group within finance was logical. “In finance, most of the decisions are made using data. We wanted to be able to dig into that data and use more advanced tools to get better information, which will ultimately support better decisions,” said Carlos Angarita, senior director of corporate finance at Cementos Argos.
A wide majority of respondents engage in a low level of outsourcing for finance analytics, which APQC defines as outsourcing 20 percent of tasks or less (Figure 3).

What percentage of your organization's finance analytics activities are outsourced to a third-party vendor?

(Figure 3 | N=200)

There are several reasons why organizations keep finance analytics in house. For one, finance analytics teams can use technology tools like robotic process automation to handle transactional tasks (and therefore resulting in less need for outsourcing). Keeping finance analytics skills and knowledge in-house can also cultivate a culture of analytics and data-based decision making across the organization. Additionally, for many organizations, the insights unlocked through analytics are simply too valuable to outsource. As Gloria Macias-Lizaso Miranda wrote for McKinsey, “AA [Advanced Analytics] will effectively become the ‘brain’ of the organization, so companies should be careful not to outsource too much. Top-performing companies often keep analytics that provide a competitive advantage—such as pricing analytics—within the organization.”
Finance analytics talent is in high demand, and in some markets, demand has outstripped supply. Finance teams need to be thoughtful and strategic if they want to acquire, retain, and grow analytics talent. Most survey respondents source finance analytics talent both internally and externally, which not only provides the organization with fresh talent but also allows them to take advantage of the experience of existing employees (Figure 4).

Where Do You Source Finance Analytics Talent?

- **Internal candidates**: 15%
- **External hires**: 13%
- **Both**: 65%
- **Don’t know**: 7%

(Figure 4 | N=200)

Smart organizations think broadly when seeking finance analytics talent. APQC found that finance analytics professionals have diverse backgrounds. While most have direct experience in the finance function and in analytics, many also have experience in business/operations, IT, sales, marketing, and customer service (Figure 5).

Other important backgrounds and experiences mentioned by respondents included advanced degrees and certifications, experience with emerging technologies, backgrounds in mergers and acquisitions or economics, and experience in other functions such as HR.

Where Do You Source Finance Analytics Talent?

- **Finance function/Finance process**: 97%
- **Analytics**: 89%
- **Business or operations**: 79%
- **IT or database**: 60%
- **Sales, marketing, or customer service**: 50%
- **Engineering**: 29%
- **Other**: 7%

(Figure 5 | N=200)
Whether sourcing talent internally or externally, it is crucial for organizations to identify key skills in their hiring criteria. When APQC asked organizations about the skills they look for in finance analytics talent, business knowledge and communication rose to the top. This makes sense, as these are core skills for success in any function. More importantly, though, a majority also said they focus on data visualization and statistics/math skills (Figure 6).

KEY SKILLS

Which are the most important skills that you look for those staff engaged in finance analytics?

<table>
<thead>
<tr>
<th>Skill</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business knowledge</td>
<td>94%</td>
</tr>
<tr>
<td>Communication</td>
<td>92%</td>
</tr>
<tr>
<td>Data visualization</td>
<td>85%</td>
</tr>
<tr>
<td>Statistics/Math</td>
<td>69%</td>
</tr>
<tr>
<td>Specific statistical or software package familiarity</td>
<td>50%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
</tr>
</tbody>
</table>

(Figure 6 / N=200)

APQC’s research shows that investing in technical analytics expertise pays off, as we identified a statistically significant relationship between statistics skills and statistical software package knowledge and overall effectiveness ratings for their finance analytics efforts by survey respondents. Similarly, McKinsey reports that high-performing organizations are more likely to include data-related proficiencies in their hiring criteria.
TECHNOLOGY ACUMEN

Organizations need finance analytics professionals who have a base level of proficiency with the tools and technologies that enable finance analytics (beyond spreadsheets, which is a baseline). Some example tools, software packages, and programming languages mentioned by survey respondents in terms of desired skills proficiencies include the following.

- Alteryx
- Oracle products
- JBA
- IBM Cognos
- Minitab
- Power BI
- Python
- R
- SAP
- SAS
- SQL
- Qlik
- Tableau
- Visual Basic

DEVELOPING ANALYTICS TALENT

First and foremost, finance must create an environment wherein professionals have time to do analytics. This is still a struggle for finance teams. For example, APQC has examined time allocation within the finance function over the past decade, and unfortunately, we find that many finance teams still spend most of their time on pre-value-added tasks (Figure 7). If this is the case in your organization, APQC recommends that you explore process improvement and robotic process automation to free up employees’ time for more value-added work.

What percentage of time are FP&A professionals spending doing the following activities?

Finance analytics professionals need to be provided with opportunities to continuously refine their skills and knowledge. APQC found that finance analytics programs offer a variety of professional development opportunities to staff including in-house formal trainings, stretch assignments and action learning projects, and reimbursement for external conferences, certifications, and coursework (Figure 8). Professional development is a wise investment. Not only has APQC’s human capital research found that employee development is a positive factor in employee satisfaction, engagement, and retention, but in this study APQC also identified a statistically significant relationship between overall analytics effectiveness scores and formal in-house training as well as reimbursement for external/university coursework.
What professional development opportunities do you offer to finance analytics staff?

<table>
<thead>
<tr>
<th>Professional Development Opportunity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal training offered in-house</td>
<td>82%</td>
</tr>
<tr>
<td>The opportunity to participate on stretch assignments or action learning projects</td>
<td>79%</td>
</tr>
<tr>
<td>Reimbursement for finance analytics-related conferences</td>
<td>72%</td>
</tr>
<tr>
<td>Reimbursement for certifications</td>
<td>63%</td>
</tr>
<tr>
<td>Reimbursement for related external or university coursework</td>
<td>62%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

(Figure 8 / N=197)

APQC recommends building a strong partnership with HR to develop current analytics talent and build bench strength for the future. Note that analytics competencies are increasingly critical not just within finance analytics, but across finance. The Institute of Management Accountants (IMA), for example, recently added new technology and analytics competencies—including information systems, data governance, data analytics, and data visualization—into its IMA Management Accounting Competency Framework. McKinsey reports that at high-performing organizations, employees at all levels, including frontline staff, are educated on data concepts.

The finance analytics team itself can also be a powerful force for disseminating analytics skills across the function. In addition to offering workshops, webinars, and other trainings, the finance analytics team can participate in job rotations and mentoring assignments that help people in other areas of finance learn about analytics and vice versa. Pharmaceutical and medical device company Johnson & Johnson’s FP&A Center of Excellence, for example, serves as a “talent incubator” that provides analytics training and development opportunities for finance professionals across the organization.
Case-in-point: Verizon

Telecommunications company Verizon has a finance capability model focused on three core skills that all finance employees are expected to demonstrate regardless of their role:

1. DATA PROTECTION:
The ability to ensure that customer and organizational data remains secure and stable. Competency in data protection requires an understanding of processes, policies, governance, and controls to protect internal and external data.

2. DIGITAL DISRUPTION:
The ability to embrace emerging technologies and techniques to make finance work more efficiently.

3. PROJECT DESIGN AND EXECUTION:
The ability to complete projects on time and within budget with good communication and risk assessment practices.

Along with these three core capabilities, each finance role is associated with up to eight sub-functional skill capabilities, which range from financial analysis to investor relations management. In training and developing its finance talent, Verizon practices a 70-20-10 learning model, which is designed to provide employees with real-world experiences that help them cement what they learn in formal training (Figure 9).

Verizon offers finance employees a variety of digital resources to help them craft their career journeys. Through the organization’s finance talent development Web page and career development portal, finance employees can chart their own career journeys and acquire new skills and certifications. These tools help employees stay abreast of new trainings, resources, and online networking opportunities.

Certifications are definitely part of perfecting your craft and showcasing your knowledge, but it’s also important to have hands-on experience and to network and learn from others.

—DAWN SIEH, PH.D., finance talent development manager, Verizon

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APQC’s research finds that finance has some room to grow when it comes to employing the most advanced analytics practices. Our Trends in Data Analytics research examined analytics practices across finance functions overall and found that only about one in four finance functions use the most advanced form of analytics: prescriptive analytics (Figure 10).

**PROCESSES AND PRACTICES**

**TYPES OF ANALYTICS**

**DESCRIPTIVE ANALYTICS** uses business intelligence combined with existing data to provide a vision of what’s currently happening around the business. Common statistical methods for descriptive analytics include mean, median, mode, frequency, distribution of discrete data points, and percentile rankings.

**PREDICTIVE ANALYTICS** uses historical data and algorithms to predict outcomes of various “what-if” scenarios to help predict future events or trends. Forecasts and statistical models are used in this form of analytics to judge and provide recommendations about what could occur.

**PRESCRIPTIVE ANALYTICS** uses optimization or embedded decision rules to determine what should be done in a certain situation. This form of analytics is the most advanced, as it uses insights gleaned from predictive analysis to recommend business decisions or actions that are likely to produce a specific result given particular variables, inputs, and objectives.
Compared to other functions, finance is roughly in the middle of the pack when it comes to using prescriptive analytics. Usage of this advanced form of analytics is significantly more prominent in marketing, operations, and corporate strategy. Finance has much to gain from incorporating more prescriptive analytics, as this allows teams to quickly anticipate and prepare for emerging trends and scenarios.

APQC also examined the usage of different analytics approaches for key finance processes. We found that most finance analytics teams leverage descriptive analytics for transactional processes, but some are delving into more advanced analytics (Figure 11).

It’s no good just to be looking at your end-of-cycle KPIs like customer acquisition cost (CAC) or customer churn. It’s way more interesting to know like three or four months in advance if you’re trending to a nasty CAC place, and if you know that in time, maybe you can turn some dials and affect that beforehand and drive some action.

— DARREL COX, CFO, Vena Solutions
In some of the more strategic finance processes—such as planning, budgeting, and forecasting and treasury—a majority of respondents use predictive and descriptive analytics. However, more than one third also leverage prescriptive analytics for these processes (Figure 12).

APQC recommends that finance analytics teams explore further usage of predictive and prescriptive analytics, especially for strategic processes. Predictive and prescriptive analytics facilitates forecasting in planning/budgeting and treasury, and fraud analysis for internal controls. It is notable that prescriptive analytics is strongest in internal controls. AI and cognitive technologies are enabling organizations to make great strides in identifying outliers and preventing fraud, for example.
ADVANCED ANALYTICS EXAMPLES

// FP&A: With advanced analytics and machine learning, FP&A teams can build models that quickly calculate figures and identify patterns. For example, the FP&A team at media company NBCUniversal built a machine learning algorithm that augments its annual forecasting process, while the FP&A organization at a global tech company (that participated in a blinded case study) uses machine learning patterns to find new customers for products and flag potentially fraudulent transactions.

// Internal Controls/Audit: KPMG estimates that 60 to 70 percent of today’s manual controls will be automated within the next decade. Advanced analytics allow finance organizations to develop automated controls that often outperform manual approaches. This has huge bottom-line implications: A large financial services firm (that participated in a blinded case study), identified and recovered $3.4 million in unbilled deductibles through the use of automated controls.

// Credit and Collections: Big data analytics helps finance teams identify and monitor credit risk indicators. Agricultural services company Cargill, for example, built a central data platform that allows the organization to automatically monitor credit intelligence data to predict, identify, and minimize credit default risks. Stakeholders can view these insights at any time through interactive self-service dashboards.

// Travel and Expense: Advanced analytics can help organizations prevent fraud and optimize spend in T&E. As IDC’s Kevin Permenter explains, advanced analytics allows organizations to pair T&E data with data from finance, sales, and HR to pinpoint the most valuable travel opportunities, adjust T&E policies when needed, and better understand the business impact of T&E.
In order to harvest the true power of analytics, finance analytics teams must leverage a wealth of organizational data well beyond finance. Fortunately, APQC found that a vast majority of finance analytics programs incorporate non-finance data into their analysis, most commonly operations, sales, and supply chain data. About one third also leverage external data on industry, competitors, market trends, and benchmarks (Figure 13).

Which type of data do you leverage for finance analytics?

- Business operations: 91%
- Sales: 76%
- Supply chain: 68%
- Marketing: 66%
- Human resources: 64%
- Customer service/Customer experience: 46%
- External data (please specify): 35%
- Other (please specify): 10%

(Figure 13/ N=177)
APQC recommends that finance analytics teams strive to incorporate as much applicable data as possible to unleash the true power of analytics. Disconnected data systems, spreadsheets, and manual processes inhibit the ability of the analytics team to deliver insights to corporate leaders needed at the speed they need them. Being able to “pull” data from other systems will not be enough; instead, analytics teams should understand and incorporate other data sources before there is an imperative to do so. This will ensure that analytics teams and CFOs can clearly explain trends, relationships, and anomalies to help leadership make data-based decisions.

There are strategic, cultural, and technical challenges that can prevent organizations from adopting more advanced forms of analytics and incorporating diverse organizational data. To that end, APQC has identified the following key success factors.

In an ideal world, finance analytics should cut across all functions of the business because finance sits at the center of the data and the center of the business.

—SCOTT WALLACE, director of transformation services, eCapital Advisors
KEY SUCCESS FACTORS: STRATEGIC AND CULTURAL

Help leaders set the tone. When the organization’s top leaders advocate for analytics, people pay attention. Finance analytics teams should provide leaders with support, training, and dashboards to help them understand analytics and get comfortable leveraging it in their decision making. “Leadership need to be analytics evangelists for the entire organization and they really need to stand behind it,” said Jay Giannantonio, enterprise performance management advisory principal, of Column5 Consulting. “You have to secure funding and resources for analytics, and that comes from decision makers at the top.”

Define your strategy. As with any business initiative, strategy is key for successful deployment of analytics. McKinsey found that the creation of a strategy is both the number-one-challenge and reason for companies’ success with data and analytics. APQC recommends using value path analysis to develop a strategy that aligns analytics with organizational goals.

Cultivate a data-driven culture. APQC finds that even though organizations are making great strides in maturing and investing in their analytics programs, many still struggle with the culture shift necessary to embed analytics into how decisions are made across the organization. To make this shift, organizations need strong change management that engages employees and helps them feel like analytics is happening with them, rather than to them.

Ignore the obvious. Too often, organizations use analytics to explore what leaders already know. As Jim Rushton of Armeta Analytics explained, most leaders already know their “stars and dogs”—that is, their top and bottom markets or customers—so there is no point in wasting time and effort reiterating that information. “Let’s use analytics to get everything in the middle, because that’s the volume. This is where we’re going to find that competitive advantage,” said Rushton.

Focus on moving the needle. Analytics can generate a wealth of reports, but do not generate hundreds of reports simply because you can. The power of analytics does not reside in the volume of data it makes available or a tool’s “drill down” capabilities, but rather how an organization uses these capabilities to make better decisions.
To create a culture of analytics or data-driven decision making, you still have to focus on the people, culture, and processes, in addition to the technology, that need to be managed. I think one of the biggest challenges for many organizations is that they look at technology as a solution and not a tool, which leads them to think that bringing in new technology will fix all their problems. If they don’t have the right foundation in place in terms of those other elements, an organization won’t get very far regardless of the technology.

- BRIAN KALISH, principal and founder, Kalish Consulting
KEY SUCCESS FACTORS: TECHNICAL

Ensure data quality. APQC, McKinsey, and KPMG all find that data quality is closely tied to effectiveness. Our research found that data quality is the number-one focus area for finance analytics programs, and 57 percent of respondents focus on it to a great extent. Simply put, clean data is an essential prerequisite to effective analytics. Bad data leads to bad decisions, and difficult-to-aggregate data leads to slow (and sometimes, still bad) decisions.

Standardize data definitions and tools. Standardization is one of the most important keys to successful analytics—without it, you’ll never really know if you’re comparing apples to apples. APQC recommends establishing standard data definitions as well as cleaning up and maintaining the integrity of key tools, such as the chart of accounts.

Integrate or consolidate systems. Disconnected systems create a lot of busywork and frustration, because they force analytics teams to manually integrate and cross-check data. Non-integrated systems can also prevent organizations from becoming truly data driven as stakeholders argue over which system’s data is accurate. The best-case scenario for most organizations is to use adopt a fully integrated cloud-based system. Software company Kainos Group, for example, moved to a single cloud-based system for finance and HCM. According to Kainos Group Head of Finance Peter McKeon, “Having finance and HCM on one platform ensures one source of truth for all HR and financial information, increases the buy-in across the business, and reduces the number of errors or reconciliations required.”

APQC’s statistical analysis found that analytics effectiveness scores were significantly correlated with higher levels of focus on data quality and access, master data management, standardized processes, and integrated systems.

“Effective business intelligence is the product of data that is scrubbed, properly stored, and easy to find. When your organization uses raw data without proper management procedures, your results suffer.”

— SHELBY BILTZ, Content Marketing Team Lead, Sisense

Each organization has its own unique assemblage of data sources, technology tools, and legacy systems. As such, some technical challenges are beyond the scope of APQC’s research. Organizations seeking deeper and more tailored support for technical challenges should explore bespoke solutions from current vendors, potential vendors, and professional services firms.
Ensuring data quality is no small task. GlaxoSmithKline’s tax organization took control of its data quality by joining the organization’s “End-2-End” data program, which includes a comprehensive governance structure with data office leads, data owners, and data stewards across multiple functions. According to GlaxoSmithKline, the key drivers of success were:

- **Top-down empowerment that provides a clear mandate to drive change,**
- **including relevant targets in individual performance objectives,**
- **Setting data quality standards and quantifying baseline metrics,**
- **Partnering with non-finance functions to create a “data dictionary” with standard definitions,** and
- **Establishing a global process ownership role for tax.**

According to GlaxoSmithKline’s VP Global Head of Tax Operations Samantha Matute, improving tax data quality has changed how tax is viewed within the organization. “It’s a little like respect—it’s earned not given. We have put a few structural things in place to facilitate that change over recent years but it’s the ‘How’ not the ‘What’ that’s made it successful.”
TOOLS AND TECHNOLOGIES

A wide majority of survey respondents use Excel and ERP accounting modules in their finance analytics programs. A substantial number have developed their own in-house tools for finance analytics, while 39 percent use off-the-shelf finance analytics software (Figure 14).

What technologies or software vendor packages do you use for your finance analytics efforts?

- **Excel/Spreadsheet packages**: 97%
- **Finance and accounting modules of a commercial ERP system**: 73%
- **Internally-developed**: 48%
- **Commercially-available software for finance analytics**: 39%
- **Statistical packages (e.g., SPSS, SAS, R)**: 21%
- **Other**: 6%

(Figure 14 / N=200)

The prominence of Excel is unsurprising. This software is a staple in almost every organization around the world, and in the right hands, it’s a powerful tool. However, there are many reasons organizations should consider using automation and moving beyond Excel alone for analytics. As Insight Software notes, a single formula error or incorrect function can invalidate an entire spreadsheet. Issues also arise as spreadsheets move across people and business areas, amplifying formatting challenges and creating the possibility that data can be lost. Certain cells and information can be also be hidden in a spreadsheet, and if users do not know where to look, vital information can be omitted from their decision making. With automation, these human errors can be prevented.
Many finance analytics programs that leverage technology enablers improve their ability to develop and deliver data-based insights. More than half of survey respondents leverage online dashboards, mobile capabilities, and interactive self-service for finance analytics (Figure 15).

APQC identified a statistically significant correlation between robotic process automation (RPA), interactive self-service reporting, and mobile capabilities and overall effectiveness ratings for analytics. RPA is a huge factor across finance, and a majority of finance functions already use it to streamline transactional processes such as auditing expense reports and processing vendor payments. But RPA doesn't just save time; it can also enable analysis of massive amounts of business data. It can help finance analytics teams integrate large datasets from other functions (e.g., operations, sales, supply chain) and external sources into financial planning, budgeting, and forecasting.

(Figure 15 | N=188)
Interactive self-service dashboards and querying capabilities enable users across the organization to access data when and where they need it for decision making. Leaders can explore financial results, visualize data in the formats they’re most comfortable consuming, apply restraints relevant to their goals, and dig into the drivers of results and variances. Workday found that only one out of four finance teams are making self-service data broadly available to leaders, which is a huge missed opportunity to add value. Dashboards are not just for leaders, however. McKinsey finds that high-performing organizations make self-service reporting tools available to frontline employees as well. This empowers employees and helps build a culture of data-driven decision making across the organization.

Like self-service dashboards, mobile capabilities put analytical insights at the fingertips of decision makers. Mobile is clearly valuable for organizations wherein employees travel to clients and job sites around the world, but it’s also an asset for smaller and even single-location organizations. During a meeting, mobile ensures everyone at the table can pull up the data, even if they forgot to bring their laptops or print out a report.

Currently, only about one third of organizations are leveraging the power of cognitive computing for finance analytics. Cognitive computing—which includes machine learning, natural language processes, and artificial intelligence (AI)—provides tremendous benefit to the finance team. These tools allow finance professionals to sort through, and discover insights within, massive amounts of structured and unstructured data. They can also help automate transactional processes, which enables the function to dedicate more time and resources to decision support. APQC expects adoption to increase as these tools become more commonplace and as more vendors are embedding cognitive computing and AI into their solutions.
MEASURES AND EFFECTIVENESS

APQC recommends monitoring a balanced set of measures to evaluate the effectiveness of any effort, and fortunately, this is the case among today’s finance analytics programs. The survey found that organizations use a mix of measures to capture the value of the efforts and manage their programs, notably business results and accuracy, as well as user measures such as frequency of consultation and utilization, satisfaction, and success stories (Figure 16).

How does your organization evaluate the effectiveness of its finance analytics efforts?

- Business measures or results: 86%
- Prediction or model accuracy: 83%
- Frequency of consultation in strategic decision making: 82%
- Customer/Stakeholder satisfaction: 80%
- Output utilization or consumption: 73%
- Qualitative success stories: 70%
- Number of analytics service requests: 52%
- Other: 6%

(Figure 16 | N=199)
When we asked organizations about the overall effectiveness of their efforts, we found that a majority rate their programs as effective or very effective at creating insights to solve organizational challenges. However, there are opportunities for the remaining third of organizations to improve their analytics effectiveness in finance (Figure 17).

**How would you rate the overall effectiveness of your organization’s finance analytics efforts?**

- **Very effective**: 24%
- **Effective**: 46%
- **Average**: 25%
- **Ineffective**: 3%
- **Very ineffective**: 2%

*Figure 17 | N=200*
DRIVERS OF EFFECTIVENESS

APQC found that the following practices are significantly more prevalent for those survey respondents which rate their finance analytics efforts as very effective, versus other survey respondents:

<table>
<thead>
<tr>
<th>DRIVER</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data and Process:</strong></td>
<td>Very effective finance analytics teams focus on data quality, standardized processes, data access, master data management, and integrated systems to a great extent. Comparatively, those respondents that rated their finance analytics as merely “effective,” “average,” or “ineffective” only put a strong focus on standardizing processes and data quality.</td>
</tr>
<tr>
<td><strong>Skills and Development:</strong></td>
<td>Very effective finance analytics teams have secured statistics/math skills and statistical software package knowledge. They also invest in delivering formal in-house trainings and reimbursing employees for external/university coursework.</td>
</tr>
<tr>
<td><strong>Technology:</strong></td>
<td>Very effective finance teams use RPA, interactive self-service, and mobile capabilities. The relationship between effectiveness and mobile capabilities is particularly strong.</td>
</tr>
</tbody>
</table>
CONCLUSION

Finance analytics maturity is increasing, although there are still some opportunities for improvement. More and more organizations are adding the talent and tools necessary to generate analytical insights that drive decision making in and well beyond the function. However, those that are behind the curve still have some time to catch up if they act quickly and strategically.

The best place to start is with the data. Clean, standardized data is the most vital prerequisite for analytics. The next step should be talent, and here, organizations must be smart. Securing external talent can be expensive (and sometimes, it’s worth it). But remember that all finance professionals are numbers people at their core. If you take a finance person with strong knowledge of the business and train them up in analytics, you get a win-win-win: the organization spends less money acquiring talent, finance shows it’s a place where employees can learn and grow, and the employee gets the opportunity to join an increasingly in-demand field.

Lastly, if you are not already doing so, ensure that you are maxing out the full capability of existing tools and technologies already in-house. If needed, investigate and pilot new tools and technologies to enable finance analytics. New tools are becoming increasingly more prevalent and more affordable to organizations of all sizes, and a key satisfier for finance analytical talent is making sure that they have the tools that they need to do their job well. This will ultimately help the business make more impactful and informed decisions.
APQC surveyed 200 finance professionals from across industries and around the globe (Figure 18). The survey population was primarily comprised of large organizations. One third of participants represent organizations with more than 10,000 employees (Figure 19), and more than half report annual revenues of $1 billion or more (Figure 20). Most respondents are senior-level professionals, with more than two thirds at the manager level or above.
SURVEY DEMOGRAPHICS

Organization Size in terms of Employees

- 100,000 or more: 6%
- 50,000 – 99,999: 5%
- 10,000 – 49,999: 22%
- 1,000 – 9,999: 50%
- 501 – 999: 5%
- 250 – 500: 7%
- Fewer than 250: 7%

(Figure 19 | N=200)

Organization Size in terms of Revenue

- $20 billion or greater: 7%
- Between $15 billion and $20 billion: 3%
- Between $10 billion and $15 billion: 2%
- Between $5 billion and $10 billion: 8%
- Between $1 billion and $5 billion: 37%
- Between $500 million and $1 billion: 44%

(Figure 20 | N=200)

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