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Building the Modern Analytics and BI Team

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Introduction

We are living in an unprecedented time, a time driven by rapidly changing economic scenarios, the rise of digital native organizations and growing digital revolution, and emergence of transformative business models. At the heart of much of this revolution? Data.

Today, organizations collect, analyze, and mine data at an accelerated rate, creating new opportunities for powerful insights that deliver significant business impact. But such changes require a shift in the data landscape, which introduces new complexities for organizations as they navigate this new world.

In the past, people relied mainly on descriptive reports and dashboards to provide a snapshot of the business and understand "what's happening." At best, some organizations supported diagnostic, visual exploration to uncover why a metric was trending negatively. But these capabilities were largely reserved for data professionals and experts.

Around the world, the industry is moving toward democratizing the power of data. Critical to this effort is putting data in the hands of frontline workers at every level of the organization, not just analysts, so that they can explore and experiment with data to inform business decisions. These are the new decision makers.

Why you need to rethink your analytics team

Reports and dashboards have been a mainstay of the business intelligence industry for decades. Experts and analysts have invested millions of dollars and years of learning in specialty tools.

So why change? And why now? Two reasons: there's a new - and pressing - business imperative, and there are tectonic shifts in technology enabling new ways of working.

If ever we needed a forcing function to work smarter, faster, and more effectively, the global pandemic and extreme economic conditions it has created is that function. COVID-19 has accelerated organizational digital transformation plans, with 68% of organizations saying it has accelerated their plans a great deal.

Industries have been upended, supply chains broken, and economies shaken in unprecedented ways.

It is not business as usual, so it cannot be slow reports and dashboards as usual. There are myriad new questions such as:

- With record unemployment, what is the impact on bad debt and customers' inability to pay their bills on time? Which customers most need a payment plan or will cancel services?
- With restaurants and bars closed, how do I reroute food and beverage deliveries to new sales outlets?
- As we shift from brick and mortar sales to telesales, what products are the new best sellers? Which salespeople are better able to pivot to this model? Are my salespeople handling customers with the same empathy and enthusiasm as in-person sales?

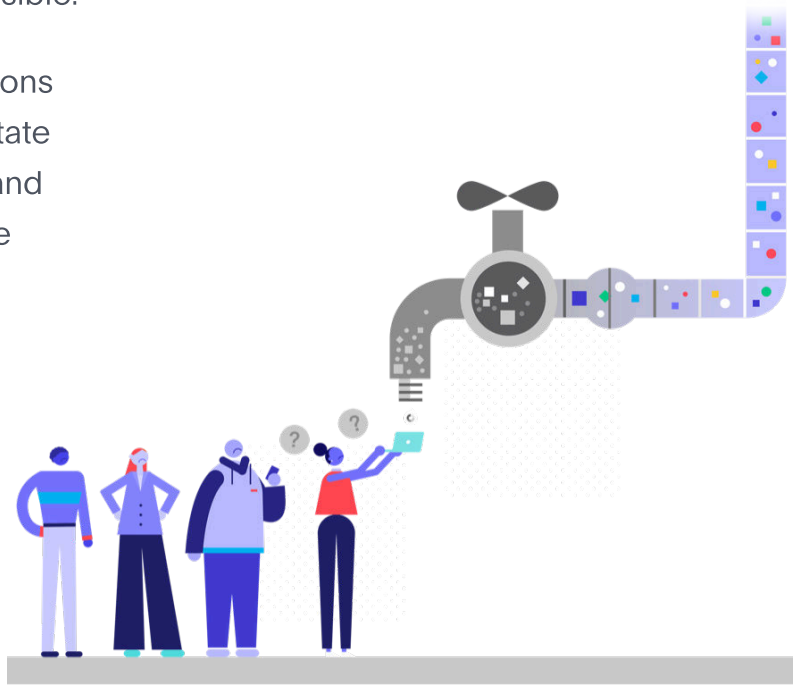
One analytics leader estimates 80 to 90% of reports are now useless. Even prior to COVID-19, the need to digitally transform was the primary catalyst for greater investments in data. As customers move to a digital world, the only way to really know and serve those customers is through data. Competing in this new world requires faster insights.

The adoption of 5G, IoT, and data at the edge will further add to the volume of data captured and the insights possible. As we create more and more data, the first generation self-service tools designed for small data sets on a desktop make gleaning insights from this data impossible.

Even prior to the pandemic, organizations were increasingly frustrated with the state of their data and analytics processes and capabilities. Organizations aspire to be data-driven, and yet, only 32% of organizations say they are.

The majority of business people (67%) say they either don't have access to relevant data or they are unsure they would know how to use data. A study by Harvard Business Review found 87% of organizations said they would be more successful if front-line workers were empowered with data. And yet, only 20% do empower these workers with data today.

This is not only a scathing indictment on the data and analytics industry, but also a reflection of the value for analysts who shake up their role and the technology they use to do it.



The analyst of the past

Today, the majority of an analyst's time is spent accessing and preparing data, with too little spent on insights and decision intelligence. There is a desperate need to flip this equation. The CEO of Alteryx surmised that most data analysts don't even like their jobs anymore as they recognize the impossibility of keeping up with demand.

An analyst has multiple roles, as shown in Figure 1 below.

Some of the key tasks of a data and BI analyst include:

- Identify and prepare the data to be analyzed
- Author and design reports or dashboard
- Conduct impact analyses for enhancements, changes in source systems, and data lineage
- Maintain existing analytical content and enhancement requests

BI and data analysts are often measured by:

- The number of reports and dashboards created
- Enhancement requests delivered
- Time to deliver analytical content

While a data or BI analyst may have more sophisticated technical and programming skills, a business analyst, such as a marketing analyst, supply chain analyst, or fraud analyst, has more domain expertise. Traditional business analysts tasks include:

- Understanding the scope of change or solution to be implemented from the customer and converting them into a list of business and functional requirements for the development team to take up implementation.
- Acting as a "translator" between the business and technical data teams. A business analyst is also expected to understand the business goals and end objectives of the changes or the solutions and contextualize the list of business or functional requirements accordingly.

A quick mapping of the roles across two axes of business versus technical and skills (specialist versus versatile) is shown in Figure 1.

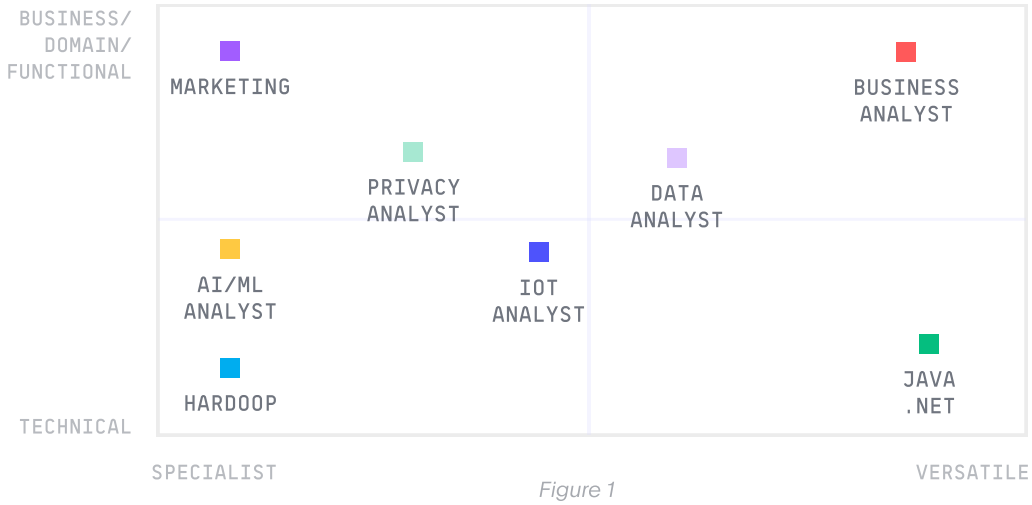


Figure 1

However, we believe this picture is changing. But that begs the question: What factors are driving the change and how will the new picture look?.

What does the modern analytics team look like?

As we delve into the future of some of these roles, clear contours start to emerge. The two most prominent trends that appear are:

- The roles are merging into a modern analyst with both domain expertise and analytics abilities.
- The roles are going to be supported by advancements in technology.

A new breed of analyst in-the-making has the following characteristics:

Explorer

Should be able to use data and uncover insights through leveraging technology. Explores all the new possibilities that they want to go and deliver. They will have an experimental mind-set.

Innovator and Evangelist

A person who can reimagine what's possible, who has design capabilities, the analytical skills, and is well supported by technology. They will be able to identify new areas to not only generate business value, but work with the management to realize it. Increasingly, the analyst of the future is expected to both understand and imbibe the nuggets of change management and help the organization to become "data driven" as an evangelist.

Business Problem Solver

The analyst of the future is no longer an order taker from the business but instead, is expected to identify, define, and resolve problems leveraging data. They show initiative and a deep understanding of the business strategy. Should be able to contextualize data to industry need with a value driven approach.

Insight Optimizer

Whereas many first generation BI analysts focused on basic report and dashboard creation, the analyst of the future is freed from the mundane and the repetitive to be able to work on high-level analytics. They may optimize insights less analytically savvy business people may have created, or they may create starting points to onboard new groups of business users as access to data is further democratized.

The measurements for these modern analysts have changed, too. These include:

- Business value added
- Extent to which an organization, department, or business unit is data-driven
- Frequency business users log into the analytics and BI application
- Rate of data fluency by role and job level

The following table compares the traditional analyst with the analyst of the future.

	Analyst Today	Analyst of the Future
Strategy	Responds to reporting requirements reactively	Drives analytics innovations proactively in support of key business initiatives
Charter	Provides descriptive analytics on subsets of data	Curates modern insight experiences across all data, and evangelizes business user adoption and data fluency
Expertise	Understands data and analytics tech	Understands data and analytics tech, and business strategy
Time	Prepares data, manages report backlog, and responds to dashboard fire drills	Develops sophisticated analytics solutions, builds reusable templates, and ingests untapped data sources
Content	Generates reports and dashboards	Architects a true self-service environment for the creation of interactive data stories; and performs in-depth anomaly, trend, and root cause business analysis
Value	Measures performance by the number of dashboards created, backlog reduced, and time to execute report requests	Measures impact by business benefits achieved, self-service adoption by non-technical business users, and use-case ROI
Growth	Pursues promotions down a narrow technical career path	Pursues promotions into more strategic roles across all parts of the business

What's holding leaders back?

The BI analyst once held so much promise and so much power, but has failed to keep pace with the demands of the business and with rapidly changing technology. Human nature and culture remain two of the biggest blockers to change.

In the absence of data and easy access to it, gut-feeling and experienced-based decision-making is the comfortable status quo. Human beings like routines, with the majority of workers being resistant to change. The process of a business person requesting a dashboard be created or modified has existed for years. Changing entrenched processes is hard - it may break relationships, routines, and roles. Power struggles may ensue over who owns what, and politics that emerge create friction.

Further, the process to access, clean, and transform the data into a meaningful report or dashboard can be a complex, arduous process requiring deep skill.

There is a pride of ownership that may exacerbate the perceived quality and value of the final product - what some Harvard researchers have dubbed "the IKEA effect."

Beyond this, though, fear remains the biggest blocker to change. Fear of failure, fear of loss of control, fear of an analyst having less value if the business user can get to the data themselves – all contribute to resistance to better ways of accessing data. Data may be used to punish bad performers, unconsciously encouraging people to data or ensure only a few have access through tightly controlled dashboards.

One BI project manager shared on LinkedIn his views on why an entire industry would rather perpetuate the inefficient dashboard design process that is heavily analyst-centric:

> “The methodology that has been implemented by ThoughtSpot might cut the overall cost of BI development by eliminating time consuming BI visualization dashboard development time.
>
> In fact, it might reduce BI project development cycle by at least 40%.
>
> In sum, it looks like ThoughtSpot is intimidating BI industries and forcing them to think critically and answer business asks effectively.”

AHMED YUSUF
BI PROJECT MANAGER AND DEVELOPER OF 15-YEAR
TORONTO, CANADA

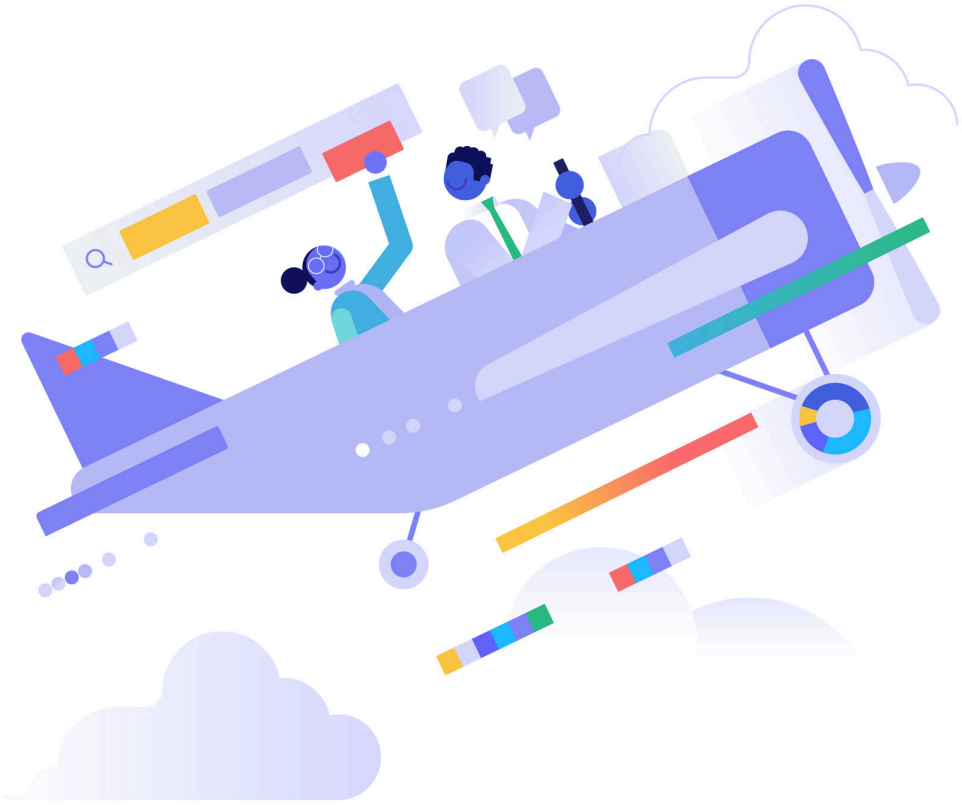
This culture of fear, lack of experimentation, power, and politics makes it difficult for individuals to embrace the new - whether a new role, new organizational model, or new technology that empowers the analyst of the future. A forcing function and strong leadership both within the data organization and the respective business units are required for the culture to evolve.

Taking your team from traditional to modern

If you are a CDO, BI director, or leader of an analytics team, taking your team from old school analysts to analysts of the future is required to stay competitive. Here's a blueprint to do so:

- Assess the blockers to change and be realistic about the effort to remove the cultural blockers.
- Shift BI from a cost center to a revenue driver by aligning incentives and funding to what delivers value, not protects the status quo. Teams funded by number of reports or dashboards produced are based on outdated funding models.
- Freeze software investments in legacy BI platforms. Use modern augmented analytics platforms for all new analytics initiatives.
- Prepare the business that they will no longer be spoon fed reports. Develop a joint change management plan.
- Evaluate the people and skill sets within your core team, identify gaps, and how to fill them. Likely, this will require investing in upskilling and reskilling with greater business skills, critical thinking, and data storytelling. Evaluate the readiness of business experts and invest in their upskilling in data and code-free analytics.

- Set expectations with business stakeholders that this is not business as usual and that they too must be prepared to share some of the data and analytics workload. Establish lunch and learns and ongoing analytics days that promote data fluency.
- Implement a promotional reward structure to encourage people to evolve.
- Expect conflict as new roles, ownership and operating models emerge.



What tech does your modern team need?

Evolving analytics professionals is only one half of the battle. The technology organizations utilize must evolve, too, in order to both free analysts to embrace the future and truly democratize data throughout the organization.

Cloud

Cloud provides agility in provisioning and maintaining software, elastic compute, rapid innovation, easier data sharing, and innovation in the industry at an accelerated pace. Cloud databases have been growing double digits for years and Gartner predicts that by 2022, public cloud services will be essential for 90% of data and analytics use cases. This elastic compute allows users to be added more rapidly than on-premises deployment models, making the concept of BI for everyone and analytics for the frontline workers a reality.

AI and Machine Learning

Greater use of AI and machine learning in preparing, cleansing, and relating data yields a faster time to value. AI is also used to generate insights without the aid of a data scientist. Insights are not constrained to that which SQL alone can produce.

Flexible data models

At one point in time, state of the art was having an enterprise data warehouse with well modeled star schemas. Now, alternative database storage options also support more flexible models, such as wide fat tables in columnar in-memory databases or key value pairs in NoSQL. The data lake does not replace the data warehouse, but instead, has become one more data store within the full data analytics landscape. Gartner refers to this as the logical data warehouse.

Simple to Use Interface

For the analyst of the future to spend less time authoring dashboards, they need an interface that allows for rapid fire questions and insight generation. The modern analyst needs agile data preparation and profiling tools to be able to ingest data from any data source, without an over reliance on IT.

Collaboration & Shareability

Once an analyst generates or fine-tunes an insight, collaborating in Slack and mobile to explore and understand the insight are key capabilities.

How ThoughtSpot and Infosys can help

Thriving with data requires the analyst of the future, enabled by modern technology to drive innovation, uncover hidden insights, and provide additional business value by fostering a data-driven culture via true self-service analytics. The analyst of the future is freed from the drudgery of manually tweaking a backlog of reports and dashboards to become a more powerful and valued analytics coach and insight optimizer within the business. The most successful organizations aren't waiting for this future, however. They're building it today.

With experience delivering effective change management and cutting edge technology, Infosys and ThoughtSpot are the perfect partner to help businesses embrace the future now. As a global systems integrator, Infosys has thousands of data and analytics professionals helping customers modernize their data and analytics processes, organization models and technology.

Here's how:

- **Business User driven approach**

  Business users are asking for insights, the existing program is stale and slow, not getting insights and answers fast enough.

- **Complexity & Scale**

  While ThoughSpot has a very strong product to support analytics, Infosys has been very strong on the system Integration skills. Together, they are able to provide the best combination of product & services to its customers. This is demonstrated in the picture below.

- **Complementary Skills**

  While ThoughSpot has a very strong product to support analytics, Infosys has been very strong on the system Integration skills. Together, they are able to provide the best combination of product & services to its customers.

- **Maturity and Business Value Assessments**

  ThoughtSpot sells its technology based on use cases that will yield the highest business value. ThoughtSpot and Infosys offer complementary data and analytics maturity and business value assessments to prioritize use cases and identify organizational blockers as part of an ongoing enablement and implementation approach.

Conclusion

Today, the world is looking for faster ways to turn data into insights, and those insights into action. It's an era of variety of data with unmatched speed and volume, coupled with people's changing requirements for decision making. Underpinning all of this are the new expectations from customers.

Organizations today need decisions to come to them, faster, deeper, and better, and this is leading to change in the job profile of the people who are enabling them. It's no longer about providing reports and dashboards but more towards running data and analytics in a more intelligent manner, amplified by the people working on them.

About ThoughtSpot

At ThoughtSpot, we believe the world will be a better place when it’s more fact-driven. That’s why we’re building the most innovative analytics platform in history. With search and AI-driven analytics, everyone can ask questions, get insights, and make better decisions.

ThoughtSpot