Key Trends for Business Intelligence 2021

If anything positive emerged from 2020, it's this: adversity can speed up innovation years, or even decades, ahead of schedule. Technologies that were deemed futuristic and advanced, such as highly interactive videoconferencing and uninterrupted wireless networks, are now as mainstream as electricity. And apparently, there is no slowing down.

For this eBook series, we have sifted through this year's top business intelligence (BI) trends to bring you three significant ones:

- AI-driven dashboards
- Mobile BI
- Prescriptive analytics

Read on to learn how these key trends can unlock the potential of business intelligence to transform your company and its employees beyond 2021.

Contents:

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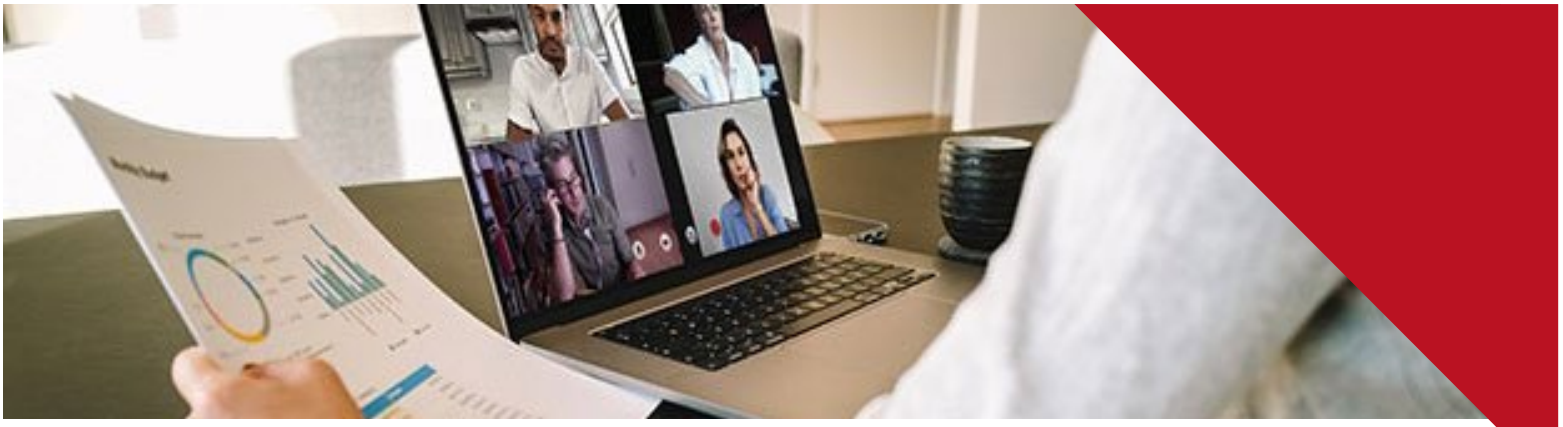

1 Three BI Trends for 2021: An Overview

Each day, new technological breakthroughs occur, and no sooner than a business embraces one, better ones show up the next day. The world of Business Intelligence (BI) is humming with new innovations, and in this eBook, we'll l ook at an overview of three key trends for analytics this year, knowing that by the time you finish reading, we may need to start all over with new ones.

Trend 1: Who's Driving This Dashboard? (BI Meets AI)

Dashboards are improving every day and have not only become more tailored to a company's needs but have also become a standard start to almost every worker's day. Yet AI will reduce our reliance on fixed dashboards to tell our data stories. Employees will soon receive "the data they need in their existing workflows.[1]" Moreover, these data experiences will become tailored and simplified, thus reducing an employee's dependence on data experts to either extrapolate or decipher big data. Finally, the data will be "available in the broader enterprise market to share the power of analytics to entire teams,[1]" whether or not the individuals or teams have special knowledge or training. Unlike on-premise software with limited data and processing capability, cloud-based analytics solutions will make data sharing experiences easier, both inside and outside the organization, which brings us to the next trend.

Trend 2: I'll Take My Data To-Go, Please (Mobile BI)

Whether we're on the beach, in the office, or in most cases today working from home and balancing video calls with the kids' homework, we should be able to access our data wherever and whenever we need it. "Office" environments have drastically changed over the past year, so it's no surprise that BI solutions are offering software-as-a-service tools like Qlik that include effective mobile capabilities. But wherever and whenever are only two key components to mobile BI solutions: whoever (the user) and whatever (the device) are components as well.

BI solutions are getting better at providing the best user experience regardless of screen size, interface design, and user skill. As the language of analytics becomes more simplified, the power to wield data now rests in the hands of every user in the business, from data experts to remote salespeople. Mobile BI is the classic have your cake and eat it, too. Merging where, when, who and what enables the new AI to push the information and data we need to our iPads, for example, while we have our first cup of coffee in the morning.

Trend 3: So, That's What Could Happen if I Make This Decision (Prescriptive Analytics)

Real-time data and predictive analytics are the talk of the town, but what if we could see into the future? Prescriptive analytics will take predictive analytics a step further and be the next big tool in achieving business goals. Being able to use past and present information to make data-driven decisions is one thing, but how about running scenarios to see just how those decisions will play out? Prescriptive analytics move us several steps beyond predictive analytics, allowing business to analyze possible outcomes of future decisions before they are even made. As prescriptive analytics becomes savvier, key business decisions will become savvier, too, and less time and money will be spent course correcting after a bad decision.

How will each trend help your business both adapt to a constantly changing landscape and build its reputation as a digital-savvy trendsetter? Grab a cup of coffee and read on....

1. Forbes Magazine: https://www.forbes.com/sites/googlecloud/2020/12/18/5-data-trends-that-will-take-your-business-forward-in-2021-from-google-cloud-leaders/?sh=7fb08dbf7439

2 Will AI Render the Dashboard Obsolete?

Imagine a future where the dashboard is not the first place executives go after they pour themselves a cup of coffee. Although dashboards will never truly disappear, artificial intelligence (AI) is on a mission to fundamentally transform them, and perhaps one day, render them obsolete.

I Want My Data My Way

Dashboards are still crucial for all businesses, and they probably aren't going away anytime soon. Still, for every "company power user who lives in their dashboards and cannot imagine a workday without them," there are countless other users who could benefit from data insights but will never become a "dashboard jockey or a BI expert." But as AI and machine learning tools evolve our user experience, the average user no longer has to. Creating data experiences outside the dashboard by embedding, customizing or integrating analytics into other platforms that users prefer is flipping the script[2] on how and where we utilize data in our everyday work routines.

Push Don't Pull

As AI improves, so does its delivery system for data and decision making. AI knows what we need to know, as well as when and where to deliver it. Often, we come to the data, usually launching our visit from the dashboard. But now, AI is beginning to push our data to us in our favorite app or our most used platform, possibly rendering the dashboard superfluous one day. This "shift to in-context data stories," driven by AI, "means that the most relevant insights will stream to each user based on their context, role or use."[3] Moreover, these insights should then integrate into our workflows and business processes and mobile devices, making it easier for us to take action without ever having to switch platforms, apps or even having to stay chained to our computers. Thus, when we receive alerts, we can take immediate action no matter where we are.

Mr. Owl, How Many Clicks Does It Take To Get to the Center of a Problem?

It shouldn't be more than three, according to Tootsie Pop's Mr. Owl and about every business user who wants an effective, accessible dashboard that can provide insights after only two sips of coffee. Dashboards are fundamental in providing users with key performance indicators (KPIs) and alerts, but how easy is it to drill down to determine the "why" of any issue? Soon, AI will do the drilling, and as long as we create "well-structured and well-defined metrics," AI will also learn what is and isn't important to the overall business strategy. In fact, "one can argue that there won't be any need for us to drill down at all -- we will simply ask a voice-enabled bot, like Qlik's Insight Bot, a drill-down question and have it fetch the answers we want, better enabling us to move from "dashboard gazing" to resolution and execution."[4]

My Analytics... My Screen Time...

Whether it's named Alexa, Cortana, or Coleman, AI continues to learn from our everyday data experiences, be they business or domestic. Most of us receive in our morning emails either a "Your Daily Briefing" or a "My Analytics" update from our designated AI, and the more we provide feedback on or work from those updates, the better AI becomes at not just assessing but anticipating our business needs. According to Forbes, "with the packaging of curated insights and autonomous actions" that AI has begun to deliver, "the role of today's dashboards will continue to diminish as the pursuit of fully-automated operations and digital transformation marches onward."

2. https://medium.com/@manrai.tarun/dashboards-are-dead-c1116cfebb60
3. https://www.gartner.com/smarterwithgartner/gartner-top-10-trends-in-data-and-analytics-for-2020/ .
4. https://www.forbes.com/sites/forbestechcouncil/2019/07/23/will-ai-kill-the-dashboard/?sh=549453531cb5

3 I'll Take My Data To-Go, Please: Mobile BI in 2021

Mobile Business Intelligence: The New Normal

The Mobile business intelligence (BI) market value is expected to top $20 billion by 2024[5]. And no wonder; we are a mobile working population, glued to our phones and now, even to our watches. But we've been programmed to expect that everything on our phones provides us instant gratification, yet mobile BI apps have long operated very differently to that. Due to the increasing demand for mobile access to corporate data, solution providers are funneling dollars and hours to evolving their desktop solutions to mobile apps that are simple to navigate, work easily with the touch or the voice, but most importantly, provide the user with instant gratification.

You Have Been Notified: Push Notifications as a Key Component for Mobile Apps

Mobile BI solutions for tablets, thanks to their larger screens, may allow you to do some deep data diving from your dashboard, but what happens when you must run an errand yet need to keep working? Simply stated, you move to your smaller phone screen, and at that point, probably "all you need are instantly actionable insights, preferably sent to you as a notification.[6]" The biggest feature trending for successful mobile BI solutions is providing the user with on-the-go, relevant, and actionable notifications.

Furthermore, these apps need to consider how we use our phones: we scroll quickly through headlines and information, we "like," we read in snippets, but most importantly, we text, not write. If you're on Aisle 3 by the pasta sauces when a key outlier impacts your company, you don't need to drill down for the 411; you need an immediate notification that allows you to respond quickly the same way you would respond rapidly to one from Instagram, Facebook or Twitter, preferably with only a tap, a hold-tap, or a swipe. Even better, a voice command. Having these key features built into your mobile BI solution allows you to access key issues within your jurisdiction and allows you to take action and forward that action to the right people at the right time. There, in Aisle 3, you just made a key corporate decision from your phone—instant gratification. The only decision left is which jar of sauce tastes more like homemade? Paul Newman or Prego?

Vacationing from your Desktop? "Packing" Only What's Necessary and Easy:

Exactly what information do you need on your mobile BI dashboard? Probably not everything that is included on your desktop's. It's like packing for a vacation; you aren't going to load the entire contents of your closet, vanity and bathroom into your suitcase. Having a mobile BI solution that allows you to personalize your tablet and your phone's dashboards to only what you need for your time away is a highly desirable feature.

Furthermore, your solutions app should be intuitive in sending you precisely the information you need while away from your office. Artificial Intelligence (AI), just like a home security system, will become even more an integral part of mobile BI to help better figure out what alerts or notifications you need while you're away. AI and machine learning (ML) will eventually decide what metrics and information is sent to your mobile BI device for you. With more employees working on-the-go, "traditional alerts triggered by pre-defined thresholds aren't enough in this new and competitive data landscape. You need automated data discovery to do the digging for you while you're away from your desktop, so you never miss a beat.[6]"

A Screen That Gets Me: Making BI Mobile Interfacing Easy to Manipulate for Any User

Is your mobile solution user friendly? Does the screen rotate? Does it respond easily to the touch. Does it offer voice control? And if so, can you communicate with it in a simplified language? Can you scroll quickly through headlines, landing only on those that need your attention at that moment? Can you easily return to the dashboard if you decide to dive deeper into a key performance indicator (KPI) or if you simply launch a page accidentally? Does the app have a collaboration tool that will allow you to send notifications to your team as well? For mobile BI apps to truly keep you productive while you're away from your desktop, the answer should be yes to all of the above questions.

Visualization, analysis, creation, collaboration and administration from anywhere. If these key abilities aren't available on a mobile BI dashboard, then we might as well stay attached to our desktops. Luckily, analytics software companies, like Qlik, have made huge strides in adapting their software to suit mobile BI dashboards. These new innovations will give users the freedom they need to make critical business decisions wherever and whenever they want, even if it's a quick dash to the store for pasta sauce.

5. (https://www.mordorintelligence.com/industry-reports/mobile-business-intelligence-market).
6. https://www.yellowfinbi.com/blog/2019/08/3-reasons-mobile-business-intelligence-apps-minimal-adoption-how-to-fix

4 Trending: Prescriptive Analytics Solving Business Problems with Minimal to No Side Effects

Real-time data and predictive analytics are the talk of the town, but what if we could see into the future? Prescriptive analytics moves us several steps beyond predictive, allowing businesses to analyze possible outcomes of future decisions before they are even made.

There Is No "Either/Or": Why We Need Both Predictive and Prescriptive Analytics

Both predictive and prescriptive analytics inform our business strategies based on collected data, but another major trend in business intelligence is the enhanced use of prescriptive analytics. So, what's the difference between the two? The difference between predictive and prescriptive is "the former forecasts potential future outcomes, while the latter helps us draw up specific recommendations."[7] Summing up:

- Descriptive analytics tells us what happened.
- Predictive analytics tells us what we should expect to happen.
- Prescriptive analytics, the final step, recommends which optimal course of action we should implement and measures its repercussions.

Even though predictive and prescriptive analytics look at future scenarios by consolidating and leveraging mined data, prescriptive takes a "more technological approach…by utilizing complicated mathematical algorithms, artificial intelligence and machine learning." As our data becomes cleaner and our AI smarter, prescriptive analytics has assumed a more integral role to the successful running of our business processes. According to Mick Hollison, chief marketing officer of InsideSales.com, we "shouldn't rely on just one or the other; when used in conjunction, both types of analytics can help [us] create the strongest, most effective business strategy possible." In today's increasingly competitive landscape, our businesses "will require prescriptive analytics to provide intelligent recommendations for the optimal next steps for almost any application or business process to drive desired outcomes or accelerate results."[7]

Soon, prescriptive analytics will allow companies to generate not just one but several viable "options and their respective potential outcomes,"[7] thus reducing the margin of error for a bad or costly decision. And as our data improves, our prescriptive analytics can alter its predictions and better tailor its suggestions, ultimately charting a better course for our company's future.

When Predictive and Prescriptive Analytics Work Symbiotically, What Does That Look Like?

Both types of analytics are used in our everyday lives. Take navigation apps for example: Motorists everywhere rely on GPS apps to go from point A to point B. So do small businesses that rely on delivery services, both third-party and in-house, to deliver goods in a timely manner. In this instance, predictive analytics can take existing travel data and map out a potentially faster route. When selecting an origin and destination in the navigation app Waze, for example, a multitude of factors are consolidated, and the app advises us on different route choices, each with a predicted ETA. This information can alter immediately if an outlier is registered, say a highway is suddenly reduced from four lanes to two due to an accident. "This is everyday prescriptive analytics at work," according to Thomas Mathew, chief product officer of Zoomph.[7]

So How Can We Optimize Our Analytics Programs?

Think Big But Start Small

Data analysis can be overwhelming, and our best insights often remain buried within it. Immanuel Lee, a web analytics engineer at MetroStar Systems, advised thinking big with our overarching analytics strategy but starting small tactically. "With the complexity of big data and the systems that manage and process [it], we can easily overlook the fact that sometimes, there's a solution in the simplest thing," he said. "Small wins will help earn support for long-term analytics projects."[7]

Create Rich Data Sets and Prove the Results Are Sound

Prescriptive analytics doesn't work without good data, and predictive analytics doesn't always account for alternate possibilities. The goal, according to Mathew is to drill down in our predictive analytics "to create richer information sets – for example, accounting for demographics such as gender and age – that will yield better results from our prescriptive recommendations."[7]

Arijit Sengupta, founder of Aible, advises not to act too quickly on the results of prescriptive analysis. We must fully understand the logic, or the "why" behind the analysis so we can prove our results are statistically sound. "Pretty graphs can be very compelling, but this is only software, after all, and its analytical power is only as accurate as the human who designed it and the data we feed it," he added. "It's critical that business users understand the 'story' behind the results and the prescriptive action suggested."[7]

Keep Our Systems and Software Current

As our business evolves, so should our systems and software. Both predictive and prescriptive analytics should be continuously updated with the latest data to improve predicted and prescribed actions based on real-time successes and failures.[7]

Most, but not all, modern business intelligence (BI) tools have built-in prescriptive analytics to provide users with actionable results that empower them to make better decisions. Be sure you are working with the right tools that give you access to this game-changing trend in BI.

7. https://www.businessnewsdaily.com/8655-predictive-vs-prescriptive-analytics.html#:~:text=Key%20takeaway%3A%20Predictive%20analytics%20uses,potential%20results%20of%20certain%20actions.

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