



eBook

# How to Use Data Intelligence to Drive Better Business Decisions

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# Contents

## Introduction

- Flying high with data intelligence 3

## Know the Lay of the Land

- What is predictive data intelligence 6

## Orient Your Flight Map

- Understanding your organization's data landscape 7

## Fill Your Tank

- Finding the right data to fuel your mission 8

## Familiarize Yourself with Your Cockpit

- Understanding your business' data and its meaning 9

## Test Your Equipment

- Validating the quality of your information 10

## Perform Your Safety Checks

- Ensuring that your data is protected 11

## Monitor Autopilot Settings

- Governing AI and analytics models 12

## Load Your Cargo

- Setting up a data marketplace 14

## Takeoff

- Democratizing your trusted data through the cloud 15

## Conclusion

17

## Further Reading

19

## About Informatica

20

## Flying High with Data Intelligence

# Introduction

Prior to the turn of the twentieth century, men and women gazed upward with dreams of gliding through the clouds. In 1903, such dreams of flying took a massive step forward as the Wright brothers ushered in the modern era of aviation.

But just because they got off the ground doesn't mean they knew how to navigate their way from point A to point B.

It took time and technology to help them advance from blind missions that relied on manual inputs and split-second risky decisions. Fun fact: it would take a full decade before the first commercial flight got into the air with adequate reliability and predictability to enable trust and confidence as a routine activity.

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The journey to the cloud has proven much faster paced. The need to drive growth and innovation, improve customer experience, increase operational efficiencies and reduce costs are just a few of the reasons businesses of all sizes are spending more in the cloud.<sup>1</sup>

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<sup>1</sup> Flexera 2022 State of the Cloud Report

# Introduction (continued)

Just as significantly, organizations are moving more of their data to the cloud. Within the next year, more than half of organizations surveyed expect to run 56% of their workloads in the cloud.<sup>2</sup>

But although organizations are moving rapidly, they lack trustworthy information about how to reach their goals. It's been much like navigating in the dark over a treacherous ocean with very primitive controls.

Greater data fragmentation and complexity has made it difficult to deliver data when and where it's needed. To become truly data-driven and produce reliable results, today's organizations need to balance responsible use of data with the ability to empower data consumers of all skill levels to find, understand, trust and access the relevant data they need to achieve their business priorities.

As more organizations shift their data landscape to the cloud, having a guide to improving data intelligence is critical.

## What is data intelligence?

At its most basic, **data intelligence** requires a deeper understanding of data. With data intelligence, you are able to govern data to help assure important decisions are based on trusted, reliable and accurate data.

Just as aviation tools such as GPS and modern flight instruments have helped advance aeronautical achievements, it is crucial to possess a navigation guide that can help you understand how to assure that your data can be found, understood, trusted and accessed.

<sup>2</sup> Flexera 2022 State of the Cloud Report

# Introduction (continued)

Unfortunately, current data intelligence methods are failing to close the gap between data consumers and the data that needs to be shared to derive insights. These organizational challenges include:

- Rigid, manual, documentation-centric approaches that do not scale
- Low trust in data, hindering the ability to empower data consumers

- The inability to make trusted data easily available for consumption to drive business outcomes
- The inability to predict and recommend next-best actions to realize quicker value from data

Clearly, there's room to improve.

So how do we create the necessary foundation to get to the final destination?

## Pre-flight Checklist

**Here's a pre-flight checklist to help you prepare for the data-driven and analytic insights that can empower the far reaches of your organization.**

- ☐ Know the lay of the land
- ☐ Orient your flight map
- ☐ Fill your tank
- ☐ Familiarize yourself with the cockpit
- ☐ Check your equipment
- ☐ Do your safety checks
- ☐ Monitor autopilot settings
- ☐ Load cargo
- ☐ Takeoff

## What is predictive data intelligence?

# Know the Lay of the Land

We'll start with the basics: defining data intelligence as a common industry term. IDC's Stewart Bond, Research Director, Data Integration and Data Intelligence Software provided a detailed definition for the term.<sup>3</sup> Vendors and other analysts have added a number of permutations to this definition (such as predictive data intelligence). We'll start with IDC's version.

### IDC's current definition:

**Data intelligence leverages business, technical, relational and operational metadata to provide transparency of data profiles, classification, quality, location, lineage and context, enabling people, processes and technology with trustworthy and reliable data.**

Just as a pilot needs to know everything about the environment to ensure a safe flight — wind, temperature, geography such as mountains or oceans, the weight of the plane and what it carries — you also need to know everything that affects your data and its reliability.

What sets our definition of data intelligence apart is the ability to automate how environmental information is delivered through the power of AI- and ML-driven insights. Would you rather speculate on the fastest route to your destination, or have automated tools that can predict and advise you on the best route to take? Similarly, instead of searching for the data you need, you want the tools and insight that can proactively tell you what you need to know, and get you to your destination more quickly and reliably.

In the data governance world, **metadata** — the data about your data — provides you with the insights you need to get to your particular destination. In essence, it fuels your flight by

helping you understand business use, technical definitions, relevant applications, risk posture, quality and more.

Metadata gets you where you need to go when it's delivered efficiently to the right users, when they need it. Knowing how to rely on your data, how it's been used by other users and how it's related to other data helps to accelerate trustworthy data sharing. With predictive data intelligence, you can connect data producers and consumers to achieve comprehensive visibility as data is democratized for use and learn from consumption patterns to further optimize how data is managed and governed. And in this way, trusted data enables critical business and technical decision-making that drives value creation opportunities, as well as operational efficiencies.

Read on to find out more on how predictive data intelligence allows us to arrive safely at our destination.

<sup>3</sup> IDC, Defining Data intelligence: Intelligence about Data, Not from Data

## Understanding your organization's data landscape

# Orient Your Flight Map

**The second item on your checklist is to fully understand your organization's current data landscape and plans for the future. If you're like most organizations, you're probably planning to move applications and workloads from on-premises to both public and private clouds.**

But simply moving data and workloads to the cloud isn't enough. You must have a vision and perform continuous reinvention if you want to succeed. It's about transformation. The ultimate goal: to become more agile and prove adept at pivoting and scaling in uncertain markets.

With this goal in mind, many organizations are overseeing hybrid data landscapes to better control exposure, with more sensitive, business-critical, information kept on-premises and less risk for sensitive data in cloud data warehouses and data lakes. That's why it's essential to know your precise lay of the land today. What is in the cloud? What data warehouse or data lake? Which cloud? What is on-premises? In which data center?

And it's even more important to know where your organization is headed. To cloud-only status? Or will you stay hybrid?

And, above all, as a data leader for your organization, you need to understand your organization's plans for the data itself. How will it be used and is that context appropriate? What business or operational problems will it be used to solve? And maybe even more important — where is all of my data? Is it untapped potential or just a liability waiting to be exposed?



## Finding the right data to fuel your mission

# Fill Your Tank

**Without the right tools, this isn't easy. Having a thorough understanding of how that data is currently owned, managed and accessed is essential to get value from it.**

You need to be able to answer the following questions:

- What types or classes of data does your company have?
- Where is it distributed and with whom is it shared?
- Who owns it and what are their rights?
- What other data do they own that could be of value?
- Who has access to it?
- Can they easily get the data they need?
- Are users consuming data appropriately the way that you intend them to do?
- How valuable or risky is it to expose your data to your users?
- Can they rely on it qualitatively to make business decisions?

As a data leader, the most common question you get is: How do I find out about [fill in the blank]?

How do I find out about last month's sales?  
About inventory levels? About website traffic?

You need to be able to answer these questions. Only then will data begin to contribute to your organization's mission.



## Understanding your business's data and its meaning

# Familiarize Yourself with Your Cockpit

**This is similar to getting into a plane for the first time and making sure you understand the purpose of the cockpit instruments. If you don't understand data, you won't be able to help others take flight with innovative ideas on how to get the most value from it.**

So now that you know the *location* of the data, you must understand the data itself. Specifically, you need to know what it means. Unfortunately, it's unrealistic for every one of your business leaders to be able to read datasets in their native form and instantly understand them.

The goal here: to determine whether data is fit for use. What is its quality? Its trustworthiness? Where is it coming from? Or even more basically: what is it? Because different departments and divisions have different naming conventions. A "customer" may mean something different depending on whether you ask a sales professional or an inventory manager. And some of it may be in a technical language altogether unfamiliar to business users.

So, getting a baseline understanding of your data is critical. But gaining that understanding requires collaboration. There's no easy way

around it. You must sit down with your peers across lines of business owners as well as your technical staff and start documenting the meaning behind data, including detailed lineage.

This isn't easy. In a survey on data, Fortune 1000 companies actually saw a drop in the success of their data investments.<sup>4</sup>

Only 29.2% of businesses said they realized "transformational" business outcomes. Even more importantly, just 24% of executives said that they thought their organization was data-driven this past year, a significant decrease from the 37.8% of the prior year.

These are not good signs that businesses thoroughly understand what's in their cockpit — their data. It's time to collaborate and discover the meaning of your data so you can make the most of it.

<sup>4</sup> Big Data and AI Executive Survey 2021, The Journey to Becoming Data-Driven: A Progress Report on the State of Corporate Data Initiatives

## Validating the quality of your information

# Test Your Equipment

**Now that you know what your data is, you must test it — validate that its quality makes it fit for use.**

Not all data is created equal. Some of it is higher quality in that it contains fewer duplicates and errors. You can rely on it as being a source of truth.

This reliability is critical. You don't want to get halfway through your digital transformation and realize that you've been making decisions based on dubious information. No. You need data governance — tools and processes to ensure the reliability, trustworthiness and privacy of your data. Without governance, you can't rely on any business or operational outcomes based on data.

BARC's Data, BI and Analytics Trend Monitor 2022 found that data quality and master data management were the top data priorities of enterprises in 2022.<sup>5</sup>

But in a separate BARC survey on data-driven decision-making in business, fewer than half (48%) of respondents said that data is highly valued for decision-making.<sup>6</sup>

So now it's time to turn your attention to governance. Deploy the right-sized governance tools — based on business needs and self-service empowerment — to create the right organizational processes and culture.

Governance can get a bad rap sometimes, but by automating and right-sizing it, you'll have the confidence that your data won't let you down.

### Importance of Data, BI and Analytics Trends in 2021 (n=2,259)



Source: BARC. [http://barc-research.com/?page\\_id=4002&\\_\\_hstc=158107557.eb3c54dcb07965046d466769dfe972ae.1623573052047.1623573052047.1623573052047.1&\\_\\_hssc=158107557.2.1623573052048&\\_\\_hsfp=796561019](http://barc-research.com/?page_id=4002&__hstc=158107557.eb3c54dcb07965046d466769dfe972ae.1623573052047.1623573052047.1623573052047.1&__hssc=158107557.2.1623573052048&__hsfp=796561019)

<sup>5</sup> Top Business Intelligence Trends in 2022: What 2396 BI Professionals Really Think

<sup>6</sup> BARC, 14 Survey-Based Recommendations on How to Improve Data-driven Decision-Making

## Ensuring that your data is protected

# Perform Your Safety Checks

**Every time we board a plane, we assume that the flight crew has completed its essential safety checks. You have to do the same thing to ensure that your data is protected. There is nothing more critical. You want to be assured that trained professionals have checked every aspect of the plane you are on — mechanical, physical, digital. You need to pay the same amount of attention to your data.**

Questions you should ask yourself:

- Should this dataset be protected from misuse or loss?
- Or is it appropriate for my business users to access and consume it?
- Is it necessary to expose this data to meet a business value need?
- Does this dataset contain personally identifiable information (PII), and thus requires special handling?

- Is my organization at risk if I allow this dataset to be used outside of our policies?
- Have customers consented to having their data used except for specific purposes?

Data privacy — much like aviation regulations — is not to be ignored. It not only puts you at risk of making negligent decisions, but you could also be hit with severe fines and remediation costs if you aren't careful. Worse, your reputation will suffer if you have a data breach or abuse charge that makes headlines, which undoubtedly directly will impact revenues and customer loyalty.

However, rather than thinking of completely restricting your business users from accessing particular datasets, ask yourself if you could permit usage under certain conditions — perhaps by anonymizing sensitive data, while monitoring proper sharing and use. Develop opportunities for permissive use within appropriate context, instead of only restrictive

policies, to accelerate giving your users safe access and the ability to create value from the data. To achieve this, consider intelligence and automation to deliver the right level of trust and privacy based on each individual use case.

This isn't necessarily easy. A survey by **451Research** found that 74% of organizations currently struggle to implement data usage and access policies — necessary for data privacy — without hampering business user productivity.<sup>7</sup>

And, although enterprises are increasingly investing in tools that make accessing and using data easier, employees don't always feel they're fully prepared to use data effectively. Clearly, we need to build more trust and confidence, and that starts with improving data intelligence.

All the more reason to check your data and set appropriate policies for its use.

<sup>7</sup> MARTECH SERIES, "New Survey Signals Need for Smoother Implementation of Data Governance Technologies and Processes, March 22, 2021

## Governing AI and analytics models

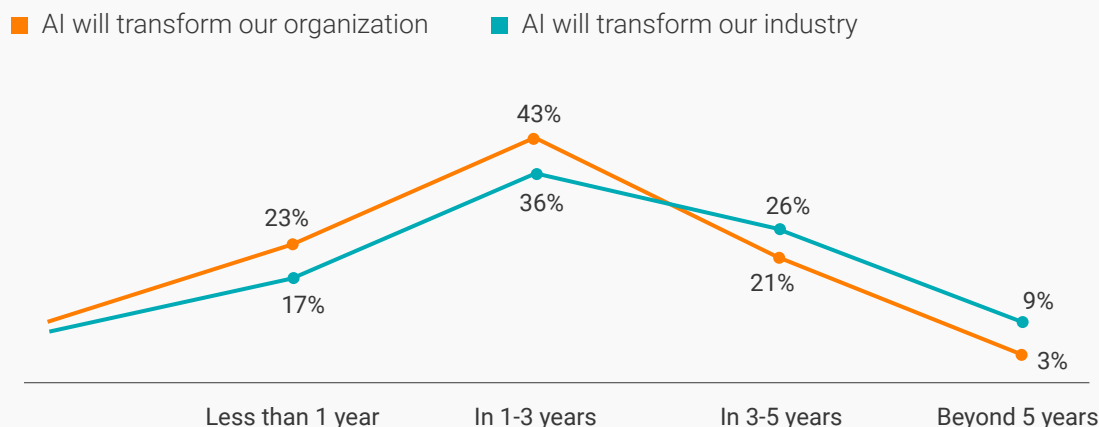
# Monitor Autopilot Settings

**It's not enough to have trusted, perfectly governed data. You have to do something to derive value from it. That means running analytics. And artificial Intelligence (AI) and predictive analytics are proving critical for a competitive edge.**

According to a recent Deloitte survey, 90% of respondents who identify as "seasoned" adopters of AI believe it is "very" or "critically" important to their business today.<sup>8</sup> This includes technologies that fit under the AI umbrella, such as machine learning, deep learning, computer vision and natural language processing.

Moreover, a full 71% of all AI adopters expect to increase their AI investments in the next fiscal year, by an average of 26%, with seasoned AI adopters investing even more. Indeed, 68% of seasoned AI users expect to spend more than \$20 million over 12 months.

### Both organizations and industries are poised for transformation in the near future



Note: Percentages may not total 100 percent due to a small number of respondents who answered "Don't know."

Source: Deloitte. <https://www2.deloitte.com/us/en/insights/focus/cognitive-technologies/state-of-ai-and-intelligent-automation-in-business-survey.html>

<sup>8</sup> Deloitte Insights, *Becoming an AI-fueled organization: State of AI in the enterprise*, 4th edition

## Monitor Autopilot Settings (continued)

But several layers of trust need to be earned before you can achieve these numbers.

First, your AI models and algorithms need to ingest only trustworthy and high-quality data to produce reliable analytic outcomes. We've talked about data governance already, and its importance to producing data worthy of basing decisions on.

But there's also another level of concern: do you trust the models themselves?

That's why governance of the AI models — understanding how each model performs, its inputs, outputs, its accuracy and, especially, reliability over time — is so important.

That's because these models aren't perfect. Don't let the term "artificial intelligence" fool you. They require human ingenuity, creativity — and caution — to do right. It's a fact that models can

"drift" over time: a predictive analytics algorithm that tells you which candidates to hire might work at first, then start producing less-useful results. Or, worse, could contain bias.

If you plan to let technologies such as predictive analytics and AI drive growth and innovation in your business, shouldn't you also ensure that the models themselves likewise be trusted to achieve desired outcomes? And not just today — but also trusted in the future?

To be successful, you need to ensure that both the data and the model are of sufficient quality, and remain that way. You need proactive approaches to catch drift as well as bias and other common AI and data science errors.

So, prior to takeoff, double check that autopilot settings are aligned with getting you where you want to go.

## Setting up a data marketplace

# Load Your Cargo

If you've reached this point, you're almost there: you have a trustworthy aircraft that will get you into the air — and into the clouds. You understand your data landscape and your data is trustworthy, governed, reliable and protected. Now it's time to do something with it.

This is where predictive data intelligence comes in. As the foundation for everything you do to empower data consumers, it's what supports all aspects of your flight mission: to provide trustworthy, reliable data for making exceptional business decisions.

But decisions don't happen in a vacuum. Decisions are made all across the organization — across all levels, from boardroom executives to front-line workers.

But this becomes a challenge when we're working all across the globe and formerly centralized organizations have scattered to the winds. You still need data to make your decisions and do your job. But you can't go across the hall to ask Sharon in finance about a certain dataset. Not when she's halfway across the country, in a different time zone, maybe even signed out for the day.

You need an automated way — in the cloud where your data is stored — to democratize access.

What you need is a marketplace for data. A self-service way to provide access to your organization's data consumers.

## Democratizing your trusted data through the cloud

# Takeoff

Here is where you use your data marketplace to democratize your trusted data through the cloud.

Now is the time to take advantage of technologies that allow you to move fast, be agile and work remotely or together — whatever works for your organization. This capability is critical for collaboration, and for nurturing thriving data communities. Companies that share data, context and analyses internally will come out ahead, as investments in these communities will help them be creative and come up with innovative solutions to address today's most difficult business challenges.

A *Harvard Business Review* study found that the ability to connect data points and to access and analyze data in real time were the top two priorities for leaders when it comes to data.<sup>9</sup>

### Leaders value game-changing data capabilities

More leaders say their performance is linked to how well they connect and analyze data, and they are more likely to have adopted advanced capabilities.

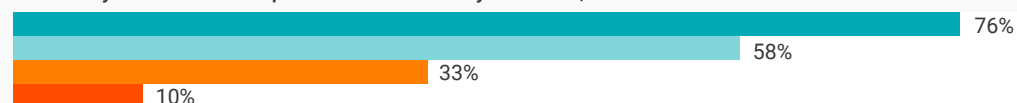
#### Leaders

- Extremely important to organizational performance and success
- Extremely mature capabilities within the organization

#### All others

- Extremely important to organizational performance and success
- Extremely mature capabilities within the organization

#### The ability to connect data points across a variety of assets, devices and services



#### The ability to access and analyze data in real time



#### The ability to automate data-driven insight with machine learning built into workflows



Source: <https://cloud.google.com/resources/hbr-turn-data-into-business-value-report>

<sup>9</sup> Harvard Business Review, Turning Data into Unmatched Value



## Takeoff (continued)

**Now that you're moving your data and your analytics solutions to the cloud, why not have that data marketplace that you just set up be in the cloud as well to simplify adoption and time to value?**

And your predictive data intelligence central hub? Let's ensure that's cloud native too.

Why do this? With a cloud-native/SaaS data marketplace and data intelligence central hub, you get unlimited scalability, elasticity, instant access, no downtime for maintenance or upgrades and lower operational costs, among other benefits.

With everyone and everything in the cloud — from your teams to your trusted data to analytics systems to storage — let's make sure that your decisions are ready to benefit from the cloud too.

Your centralized data marketplace in the cloud is how this happens. Data consumers can easily find, request and access data — on a self-service basis — armed with relevant business, quality and policy context to help match the best datasets for their business initiatives. Data owners can even quickly steer business analysts to the right datasets.

In other words, you can create a highly scalable data collection once and provision to users a thousand times over with ease, rather than replicating that effort repeatedly across legacy systems that aren't fit for purpose.

# Conclusion

Now that you've checked off everything on your pre-flight checklist, you can navigate the globe with clear skies.

## **Being in the cloud offers you enormous benefits.**

It's scalable with greater agility for on-demand workloads. It's cost-effective. It reduces the time to value of data initiatives. It can be secured and confidently accessed from anywhere by anyone as appropriate. And it can be updated regularly without effort, dramatically reducing total cost of ownership (TCO).

But we need to ensure we get the most out of the cloud with data governance best practices to optimize performance. Whether you are using (or are planning to use) one cloud, multiple

clouds or are taking a hybrid approach, data management is absolutely essential — and it's not going to be done for you.

Keep in mind that data storage vendors — even cloud-based ones — care about data retention and archiving for posterity.

But what if you seek something more? Say, the kind of value you can create with predictive data intelligence insights?

## Conclusion (continued)

### Fly higher in the cloud with predictive data intelligence.

With predictive data intelligence, you can help transform data-driven organizations, bringing people and data together by simplifying and automating the ability to quickly find, understand, trust and access data. And with a data consumer focus that improves data delivery, business outcomes can now be accelerated through insights that enable next-best actions.

Just as modern aviation tools were necessary to advance aeronautical achievements, today's data governance tools help automate how you quickly can navigate to your data and get it into the hands of the business leaders who need it to create value.

To help accelerate digital transformation journeys and create exponential value from data, today's organizations can benefit from predictive data intelligence, including the ability to:

- **Unlock immediate data value** with predictive recommendations and automation powered by broad and deep metadata intelligence — from their organization AND beyond
- **Empower data consumers and drive business outcomes** with a self-service data shopping experience linked to automated data delivery
- **Enable data understanding** with connected metadata, context and insight across the data value chain for all enterprise data — virtually any data source, any data type, any cloud
- **Deliver inherent trust in data** with automated, unified governance, catalog, quality and marketplace capabilities
- **Allow agile growth and scale** as business needs evolve with modular, cloud-native services powered by elastic and serverless execution

A single, unified solution in the cloud with integrated governance, cataloging, quality and marketplace capabilities, powered by broad and deep cloud-native metadata intelligence, provides the data foundation that modern data-driven organizations need to:

- Accelerate and automate **data governance** to deliver trusted data
- Enable **data sharing** programs that empower data consumers to engage with data
- Drive **analytics, AI** and business outcomes with the power of trusted data

With predictive recommendations and automation for data classification and curation, data applicability, sensitive data discovery, data relationship discovery, schema mapping and more, organizations no longer have to wait months or years to drive business value from trusted data. The ability to improve data-driven decision-making will have you flying in no time.

## Further Resources

- Data governance is a big opportunity for your business. Learn about the realistic steps that will take you there in our eBook, **Just Enough Data Governance**
- Discover how you can drive business growth with our eBook, **How to Fuel Data-Driven Business Success with Data Sharing**



# About Us

At Informatica (NYSE: INFA), we believe data is the soul of business transformation. That's why we help you transform it from simply binary information to extraordinary innovation with our Informatica Intelligent Data Management Cloud™. Powered by AI, it's the only cloud dedicated to managing data of any type, pattern, complexity, or workload across any location—all on a single platform. Whether you're driving next-gen analytics, delivering perfectly timed customer experiences, or ensuring governance and privacy, you can always know your data is accurate, your insights are actionable, and your possibilities are limitless.

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