



White Paper

Understanding AI and What It Can Do for Your Fleet



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What is AI?

Artificial intelligence (AI) is a mainstream topic, both in our daily lives and in the business world where we strive to be efficient. AI is not new but in recent years, advancements in AI and machine learning (ML) have driven system optimization and control engineering.

Most people could describe AI in layman's terms as a technology that processes data efficiently to give us answers.

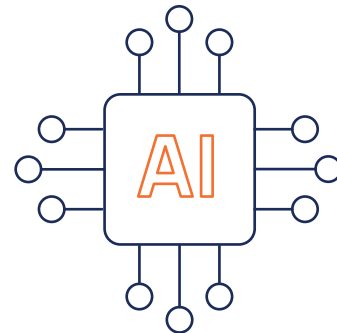
When it comes to the business world, we turn to AI with questions that are difficult, if not impossible, to answer using our personal knowledge or even with some existing tools and technology. Human minds—and some systems—are limited in the amount of data they can process and the correlations they can extract from it.

AI has no such data processing and correlation constraints. It can therefore establish trends and patterns from petabytes of data to provide powerful answers to the interrogations you have. AI also has a 'learning' capability thanks to the increasing amounts of data it accumulates over time, which allows it to provide increasingly accurate answers.

Books have been written on the subject of AI and provide thorough descriptions of what it involves. However, for the purpose of this whitepaper, in a nutshell, AI—or a system that is AI-powered—harbors these characteristics:

- an unlimited data processing capacity
- the ability to correlate data and recognize trends and patterns
- a learning capability with increasing amounts of data to provide answers that improve over time

With this in mind, let's now look at how AI can serve trucking fleets.



The Potential of AI for Your Fleet

You're likely already collecting some degree of information and using reports to monitor your fleet operations today. Chances are though, that you can only observe the state of things and must rely on your gut and experience as to the reasons behind what your reports tell you. You then take corrective measures, again, based on your expertise.

Organizations have been successfully keeping their businesses profitable this way for years. But what if you could do more, or at least get the same results with much less effort?

AI-powered technology can transform the firehose of data you likely handle every day and do not fully leverage. In fact, industry professionals are starting to agree that integrating AI into fleet management will be necessary to remain competitive.

AI can boost your organization's profitability by helping you focus less on corrective and tactical measures and more on strategic planning and incentives. Imagine greater decision-making power with less effort.

Let's now concretely explore exactly what AI-powered technology can do, and how ISAAC is giving fleets more knowledge and power than ever before.

Systems that make good use of AI can:

- ✓ explain the underlying factors behind the results you observe
- ✓ recognize patterns and trends your current systems can't
- ✓ present you with precise, relevant insights you can act upon
- ✓ help you act proactively instead of correctively

“AI is about that volume of data we now need to be productive and stay competitive with the rest of the world. This is where AI now assists us in enhancing that productivity and finding patterns. It's the heart of the strength of AI.”

Corey Cox
Senior Vice President of Innovation, Tandet Group



ISAAC's AI-Powered Analytics

Analytics and business intelligence (BI)—like artificial intelligence (AI)—are not new. In fact, they have been around for longer, helping companies make sense of raw data, crunching it to render clear visual representations that support decision-making.



Coupled with what AI offers, analytics and BI bring unprecedented power into the mix with processing capacity and machine learning (ML) capabilities that retain and leverage every new bit of data it ingests. This makes every new insight more and more precise over time and can eventually allow for predicting outcomes.

This is the promise of ISAAC Analytics. Nothing less. ISAAC's AI-powered Analytics is here, and it holds great power for trucking fleets.

Data as a solid foundation

Why is ISAAC Analytics so powerful? A core reason lies in its foundation—data.

Petabytes of high-quality data are collected each year through ISAAC's platform. Data is the key to any reliable AI, BI, or analytics system, and ISAAC excels when it comes to the volume, quality, and variety of collected data points.

In fact, [ISAAC meets the 5 V's of big data requirements](#).

Volume: gathering data in sufficient quantity

Variety: having multiple information types

Velocity: collecting the information in a timely manner

Veracity: having accurate, reliable data

Value: providing relevant data for establishing trends and correlations

From its beginnings, ISAAC has focused on data and leveraged its power to build data-driven systems that support sound decision-making for fleet professionals. With the right data already in hand, ISAAC was well positioned to hit the ground running for leveraging AI when the team began to build ISAAC Analytics in 2021.

Game-changing features

With big data as a foundation, we also need a solid infrastructure to bring out its power and make it easy for trucking professionals to use.

ISAAC's dedicated Data Science team and AI experts have worked with participating fleets for these past years to fine-tune a BI and analytics platform that takes decision-making to another level.

What game-changing features can ISAAC Analytics users expect?

Insightful dashboards for every need

Dashboards are available to cater to the needs of all decision-makers, from fleet executives to compliance & safety managers and operations & driver managers.

Interactive dashboards that explain the 'why'

Users can drill down on dashboard metrics to see what lies behind the top-level figures, to explain contributing factors and help apply the right measures and support strategic planning.

A variances overview to guide exploration

A dashboard of variances—called 360° Insights—sits at the heart of ISAAC Analytics to tip off executives and managers on what warrants investigation. It serves as a compass for better targeting their efforts.

Increasingly precise insights over time

ISAAC Analytics' AI-powered learning capabilities 'remember' every piece of data collected when analyzing trends, making the insights increasingly precise over time and helping you make better decisions.

Cutting-edge metrics with more power

AI brings added power to advanced analytics and enables metrics fleets could only hope for until now. Bringing these innovative metrics to life is the goal of an ongoing innovation program—called ISAAC AI Lab—conducted by ISAAC's data science team with selected fleets.

A concrete metric example is ISAAC's "fuel equivalent" metric, which reveals a truck's "true" fuel consumption, independent of factors such as load weight, itinerary type, weather conditions, etc., boiling it down to make it meaningful. This can be a game changer for pinpointing the best-performing trucks in a fleet and informing strategic decisions.

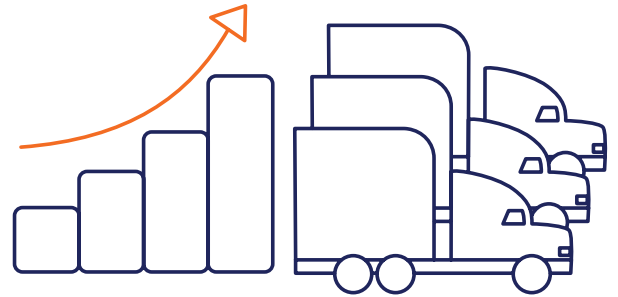
This is just one of a long line of groundbreaking indicators that will help fleets better strategize and remain competitive in the future of trucking's AI-infused landscape.

Serving fleet professionals

With impressive volumes of quality data and a high-performing BI platform built by true experts, fleet management just got easier using ISAAC Analytics.

The experience and expertise of trucking executives and managers are still crucial as they ultimately make the decisions. However, ISAAC Analytics does the heavy lifting, providing highly curated, actionable information at the right time to help managers and executives take the right measures to keep operations smooth and the company profitable.

When it comes to having dashboards that provide the required insights, one size does not fit all. This is why ISAAC Analytics caters to the various objectives of fleet professionals, whether for keeping an eye on profitability, on compliance and safety, or general team performance in day-to-day operations. Let's take a closer look.



An Eye on Profitability

Fleet professionals need a regular overview of the company's productivity and profitability at a global level. They have no time to review countless reports and lines of data to find answers, so they need a tool that highlights potential problem areas and allows them to steer things in the right direction. They're looking to answer questions on aspects such as asset utilization and fuel efficiency.

- Do we have many sitting vehicles? What is the average truck mileage, month over month, year over year, per terminal or division?
- Are the recent operation changes showing the expected improvement?
- Which trucks perform best in terms of MPG, independently of the load, road, or driver?
- What is the fuel efficiency with heavy loads versus lighter loads? Should we adjust our rate for different load weights?

Variations talk

ISAAC Analytics' 360° Insights dashboard is designed specifically to signal fluctuations worthy of attention. It serves as a compass guiding executives and managers in where to invest their strategic efforts. Significant changes to metrics relating to fuel economy, asset utilization, and safety are highlighted—all at the chosen level of detail, whether fleetwide, by terminal, vehicle, or driver.

The screenshot displays the ISAAC Analytics 360° Insights dashboard. The left sidebar contains navigation links: Tracking, Critical Events, HOS, Inspections, Documents, Reports, Analytics, 360° Insights, Fleet Performance, Driver Performance, Critical Events, Fuel Economy, ISAAC Coach, Fleet, Trips, Security, Tablet Access, and ISAAC Documentation. The main content area is titled 'ACTIONABLE AI INSIGHTS' and features a table with columns for Granularity, Value, Metric, Change, Dir, and Impact. The table lists insights for various drivers, including Brett Noriega, Robert Egan, Alejandro Bowling, Isaiah Maurer, Abigail Emery, Agustin McLaughlin, Agustin Morton, Alexcia Meyers, Alisha Nash, Allie Clemens, Alyson Dodds, Anahi Valle, Angeline Templeton, and Annalisa Walters. A callout box highlights a decreasing trend in ISAAC coach score for Driver Alejandro Bowling (#5565) from June 12th to June 28th. The right sidebar includes filters for Impact (Negative, Positive), Granularity (Driver, Driver Terminal, Fleet, Vehicle, Vehicle Terminal), Metric (Critical Events w/o ADAS, Driving Distance (Driver), HOS Driving Time, ISAAC Coach Result, Long Idle), and Role (Executive, Operations, Driver Manager, Safety, Fleet).

Granularity	Value	Metric	Change	Dir	Impact
Driver	NOT DEFINED NOT DEFINED	Critical Events w/o ADAS	70.8%	↗	⚠
Driver	Brett Noriega	Critical Events w/o ADAS	79.2%	↗	⚠
Driver	Robert Egan	Critical Events w/o ADAS	166.0%	↗	⚠
Driver	Alejandro Bowling	ISAAC Coach Result	23.7%	↘	⚠
Driver	Isaiah Maurer	ISAAC Coach Result	18.0%	↘	⚠
Driver	Abigail Emery	HOS Driving Time	23.7%	↘	⚠
Driver	Agustin McLaughlin	HOS Driving Time	353.9%	↗	⚠
Driver	Agustin Morton	Long Idle	400.5%	↗	⚠
Driver	Alexcia Meyers	ISAAC Coach Result	10.5%	↗	⚠
Driver	Alisha Nash	HOS Driving Time	0.0%	→	⚠
Driver	Allie Clemens	ISAAC Coach Result	9.6%	↘	⚠
Driver	Alyson Dodds	HOS Driving Time	10.5%	↗	⚠
Driver	Anahi Valle	HOS Driving Time	6.4%	↗	⚠
Driver	Angeline Templeton	ISAAC Coach Result	10.9%	↗	⚠
Driver	Annalisa Walters	Long Idle	69.2%	↘	⚠

• Driver Alejandro Bowling (#5565) had a decreasing trend in ISAAC coach score, with a decrease of 24% from June 12th to June 28th over a 16-day period.

Click to view the ISAAC Coach Result metric page

An Overview of the Business

It's also crucial to keep an eye on the organization's posture and best strategy when it comes to compliance and safety, healthy cost control, and fleet asset acquisitions.

ISAAC Analytics dashboards offer a comprehensive overview of the key metrics to help keep things on track and invest in fleet assets wisely. You get a year-over-year view of global figures showing how the fleet is generally performing with metrics such as:

- number of critical safety events on the road
- distance traveled by the fleet's vehicles
- sitting vehicles
- fuel economy
- fuel consumption linked to idling

Again, it's easy to drill down to the level of desired detail and see meaningful data correlations that help fine-tune your decisions.

Thus, executives and managers no longer have to sift through mountains of data in order to uncover actionable insights—they have all they need right at their fingertips. They can protect the organization for example, by avoiding nuclear verdicts due to security risks that ISAAC Analytics signals early on and can be avoided. Quick access to meaningful cost variables supports them in being proactive and keeping the business profitable.

“You can make decisions faster with fewer people.”

Ryan Tilley
Vice President, Tandet Transportation Group



Safety & Compliance: Proactive Power

Safety & compliance are key to a fleet's success. To be proactive, you need up-to-date information to help spot trends and take corrective actions before problems develop. When negative trends emerge, you need a tool that helps answer questions such as:

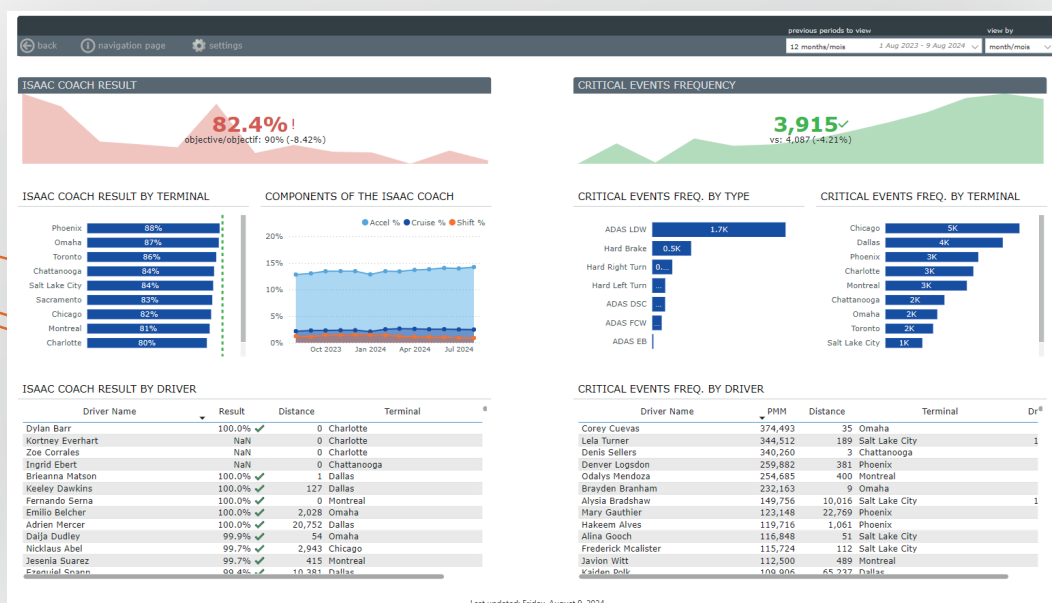
- Is the fleet experiencing many critical events that can be correlated to:
 - ISAAC Coach scores signaling risky driving practices?
 - A higher number of driving hours among the drivers involved?
- Are the policies implemented having the desired impact, with critical events decreasing? Can the impacts be observed fleetwide or more so in specific terminals?
- What are the most common HOS violations, and where are they occurring? Can new policies help reduce them?

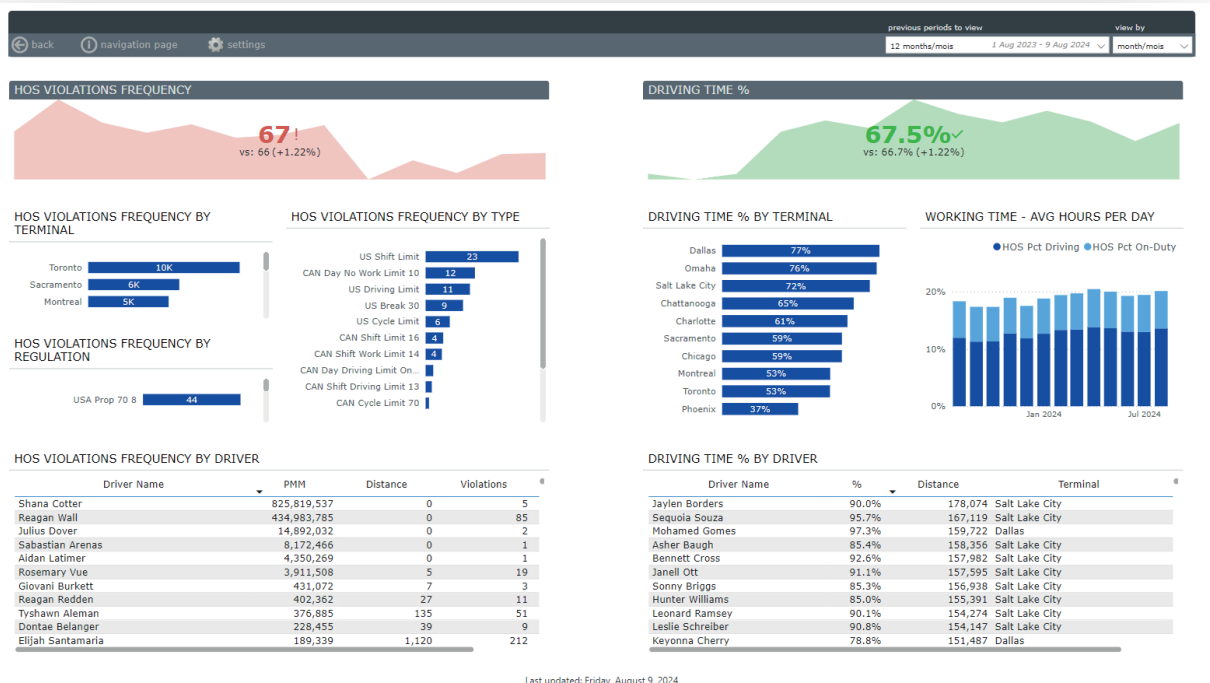
With ISAAC Analytics dashboards themed around driving behavior, HOS compliance, and safety incidents, safety officers can compare metrics between terminals to see where to focus their efforts.

They can drill down to discover insights such as:

- what critical road incidents, specifically, are on the rise
- which drivers are contributing to the downward trend
- possible geographic areas with higher incident rates

The latter insight may indicate that outside factors, such as poor road conditions, tight urban surroundings, or high traffic, are at play. In such a case, a change to route planning may prove more helpful than additional training.





Ensuring a fleet complies with regulations and monitors safety is key to profitability and durability. Major safety incidents can bring a company down when a nuclear verdict ensues, adding to the tragedy of lives lost during a major crash. Fleets have every reason to equip compliance and safety managers with advanced, intuitive tools that help them be proactive in every way.

“Safety is not a short-term game. The critical nature of the BI dashboard is the time-horizon data: the changes that happen year over year. That aggregation of data shows you your improvements over time. You can’t measure safety improvements every day. You want to get incrementally better every day, but you can’t actually see that every day. You can only see that over time.”

Ryan Tilley
Vice President, Tandet Transportation Group

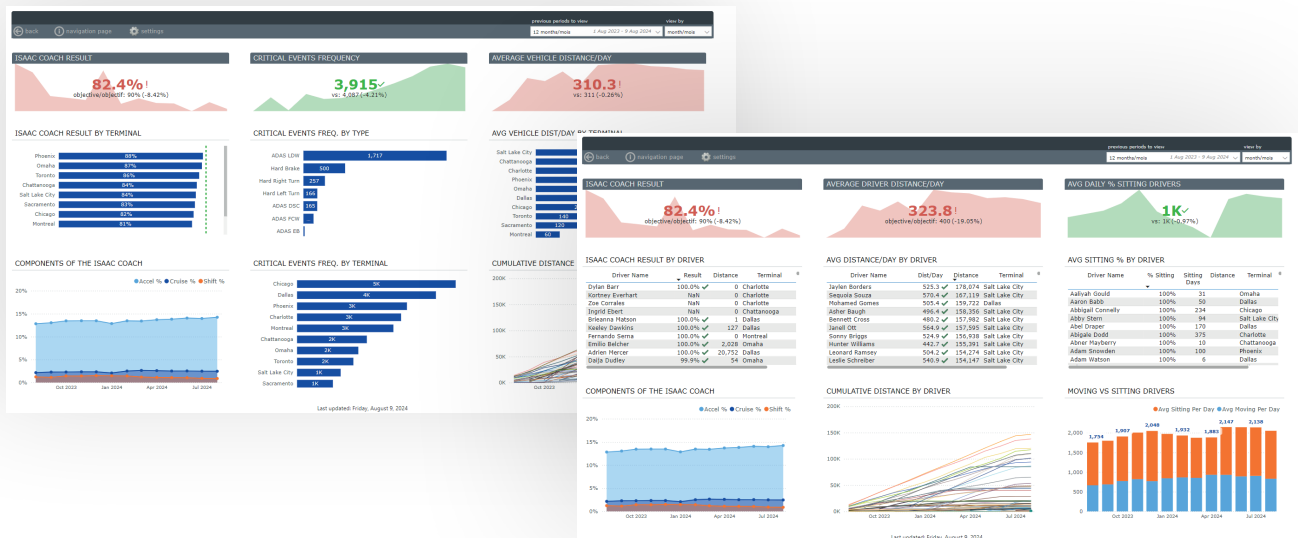


Keeping Operations Smooth

Watching fleet performance across the board on a daily basis, with an eye on the future to keep operations flowing, is no small task. It requires tools to support both tactical day-to-day actions, as well as preventative and more strategic measures. It means ensuring truck and trailer utilization is optimal and drivers are also safely covering the miles and thriving.

ISAAC Analytics supports operations on the above-mentioned aspects, again, with intuitive, interactive dashboards that provide a reliable view of fleet performance. By zooming in on which terminals, drivers or trucks are getting the best or worst results, managers can uncover the reasons and act where it counts.





ISAAC Analytics allows them to answer pointed questions such as:

- Where are the best ISAAC Coach scores showing up in the fleet? Are top results found at a specific terminal applying a winning recipe that can be copied?
- Is fuel consumption mainly related to driver behavior, or rather weather and road conditions?
- How well—or poorly—are different trucks performing in various geographic areas or routes?
- Speeding-wise, are any drivers clear outliers in the speed they travel at?

Fleets can rely on precise, concrete insights when using ISAAC Analytics to monitor operations. At the click of a button, managers have the metrics enabling them to work with drivers to keep safety top of mind, to keep a watch on sitting trucks and trailers to optimize asset utilization, and to keep costs in check.

“We’re learning lots of things. We were aware of many aspects reflected in the data, but seeing the figures confirms what we thought. The value of the tool is that we have the information at our fingertips, so we can use it and talk to our teams to improve operations. It becomes easier to say, for example, not only that we’re not using our trucks to the maximum, but also how utilization is not optimal. And that supports our improvement efforts.”

Nim Phabmixay

Planning and Transformation Manager, Molson Coors Beverage Company



How Fleets Can Truly Leverage AI



“I don’t think it’s for fleets to try to leverage AI, but for vendors like us to leverage AI to make it more usable for our end users. That’s really what ISAAC is pushing and why we have an AI team. To provide tools to our client base so they can leverage AI across our platform.”

J.S. Bouchard
Chief Product Officer, ISAAC

For fleets to truly leverage AI and boost their decision-making power and profitability, they need not become AI experts. However, they must carefully choose the technology provider with whom to partner.

Fleets can make sound technology choices by grasping what AI entails and remaining critical of potential providers’ claims.

To avoid being blindsided by smoke and mirrors, keep the previously mentioned key elements of AI top of mind when searching for an AI-powered solution.

- True big data with the 5 V’s, to feed AI’s strong processing capacity
- The ability to correlate data and recognize trends and patterns
- A learning capability to provide answers that improve over time.

The people factor is also important to consider when choosing a provider—the team of individuals and level of expertise behind the AI-powered platform you are evaluating. Remain aware of the human infrastructure and expertise that can support you as you onboard as a user and for the future. Technology moves fast, and AI is no exception. Seek out an organization you see has a vision and is invested in developing AI-based features as the technology evolves over time.

At ISAAC, we’ve been enjoying the AI-powered journey while developing ISAAC Analytics these past years with participating fleets. Our 10-member Data Science team is solely dedicated to developing AI-powered analytics and is committed to helping our fleet clients leverage the very best this technology brings in the years to come.

Your Fleet Future Powered by AI

Trucking fleets have every reason to tap into the power artificial intelligence brings. It is the way of the future to help your business remain profitable and stay competitive in freight transport.

Data is power. And AI, with its virtually unlimited processing and learning capabilities, brings the insights hidden within this data, to the hands of fleet professionals for acting on.

“It’s simply not possible for us as humans to rationalize, analyze, and find productive, effective use out of all of that data. It is only possible really through the use of AI to understand that many patterns.”

Corey Cox

Senior Vice President of Innovation, Tandet Group



AI, when we think of it, is about people. It saves people time, and reveals information that would have otherwise not been considered by people making decisions. In the end, the decision is ours.

“AI is there to take additional amounts of information and boil it down to what you need to address. At the end of the day, you’re still the one managing, but using your information better and making better decisions.”

J.S. Bouchard

Chief Product Officer, ISAAC

With ISAAC Analytics, the power of AI is real. Why not reach out to an ISAAC expert today and take the first step toward powerful, actionable fleet intelligence right at your fingertips?





Together, we simplify **trucking**

Talk to our experts to harness the full potential of your team
isaacstruments.com/request-demo

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