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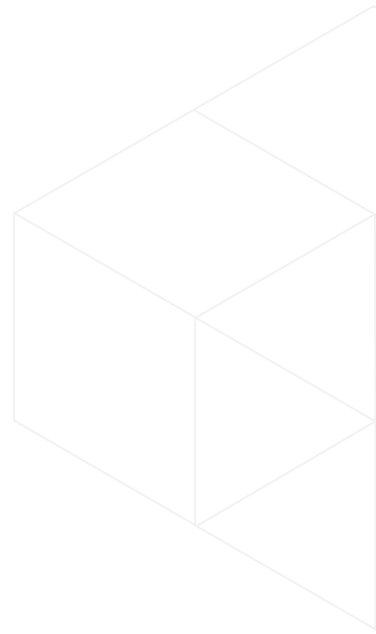
How to accelerate operational reporting and analytics for Oracle E-Business Suite (EBS)

The best way to maximize your Oracle EBS investment, no data modeling or reshaping required.

Direct Data Mapping's unique approach.

Oracle E-Business Suite (EBS) delivers incredible value to businesses.

What Oracle EBS does not offer, however, is a high-performance, quick-to-implement analytics solution that seamlessly combines data from multiple sources in an instant. Many EBS customers are stuck using multiple legacy tools and high-cost professionals to generate even the simplest reports, and are unable to modernize and migrate to more cost-effective platforms.

But the demand for faster, easier, and near-instant reporting and analytics have dramatically increased over the past decade, placing tremendous pressure on CFOs, CEOs, and IT leaders.

Without a unified data solution, today's leaders are constantly under pressure when trying to make real-time competitive decisions and course corrections. They're left to rely on stale data from a fixed patchwork of existing reports that are too difficult to change.

It doesn't have to be this way.
With Incorta, Oracle EBS customers have a better, more modern option for analyzing and understanding their data—with no data modeling and no complex transformations. Incorta empowers users to make smarter, faster decisions by readily accessing up-to-date data and building the comprehensive reports they need, all through self-service.

With so many companies storing their ERP and other core business data across so many different systems today, these challenging scenarios are becoming all too common. Most still resort to paying a small fortune to teams of highly skilled data engineers who manually stitch everything together. That's not only exorbitantly expensive; it's also far too slow to keep up with the pace of business in today's world.

The realities for Oracle EBS users

Many organizations continue to derive value from Oracle EBS, utilizing the enterprise resource planning (ERP), customer relationship management (CRM), and/or human capital management (HCM) applications.

After build vs. buy evaluations, many enterprises realize that investing in an off-the-shelf analytics solution would provide faster time-to-value than building custom data marts. That's why Oracle BI Applications (OBIA) on Oracle Business Intelligence Enterprise Edition (OBIEE) has been the preferred solution of choice for Oracle EBS customers for the last decade.

However, as Oracle EBS deployments mature, today's global brands realize they need more than basic reporting and are facing the difficulties of this legacy technology:

- The labor costs for OBIA/OBIEE are high owing to all the layers and skills involved including data engineering, database administration, data warehouse design, and BI development.

- Most reports built by IT require creating new queries and data source knowledge which restricts business users from getting the data access they need.

- Data model and ETL changes often take months due to a constant shortage of resources and a backlog of business requests.

- Meaningful reports take hours to generate, with reports already outdated by the time the business users receive them.

- There is no easy way to integrate and analyze data from the growing number of cloud-based applications used by enterprises.

Despite the rapid adoption of modern BI and Analytics solutions, and the limitations of legacy, on-premises solutions, it can feel impossible to let go of entrenched systems.

Oracle's EBS analytics options

While Oracle offers a range of business intelligence and analytics solutions meant to provide business with a smooth upgrade path, the reality is an unfortunate mix of legacy and emerging products, each requiring different tradeoffs:

Oracle Business Intelligence Enterprise Edition (OBIEE)

Customers running on-premises with big investments in OBIEE may continue to upgrade and leverage Oracle BI Applications (OBIA).

Pitfalls:

OBIA is end-of-life, with no new development and no migration path.

Typical customizations make it expensive and time consuming to address new requirements or migrate to another Oracle BI solution.

Oracle Analytics Cloud (OAC)

Customers migrating to Oracle Cloud Applications can use OAC optionally supported by the new Oracle Analytics for Applications (OAX).

Pitfalls:

There is no clear migration path from OBIEE as none of the transformations built for EBS translate to Fusion Applications

Only a couple of models are currently supported by OAX

Providing a consolidated data view during migration is nearly impossible due to the complexity and cost involved.

Oracle Transactional Business Intelligence (OTBI)

Customers who have successfully migrated to Fusion Applications can use OBTI to directly query the transactional database and avoid ETL and building a DWH.

Pitfalls:

OTBI is for Fusion Applications only, and will not scale to large user populations.

Since Oracle Cloud Applications are provided in standalone pillars, OTBI reporting is also constrained to that application silo.

OTBI is not a complete solution and has no end-user reporting capability.

As Oracle EBS customers mature along their applications and analytics journey, their requirements grow from operational reporting to real-time, cross functional and cross-entity business intelligence that fosters growth and agility.

Unfortunately, none of the available Oracle BI solutions alone can meet these requirements.

The limits of hybrid reporting solutions

As a result, many teams will endure in a hybrid environment of both cloud and on-premise applications for the foreseeable future, grappling with these less-than-ideal options for delivering operational analytics:

Enhancing existing, on-premises data marts.
This is done to support ongoing changes to on-premises data sources, all while bringing source data on premises from cloudbased applications.
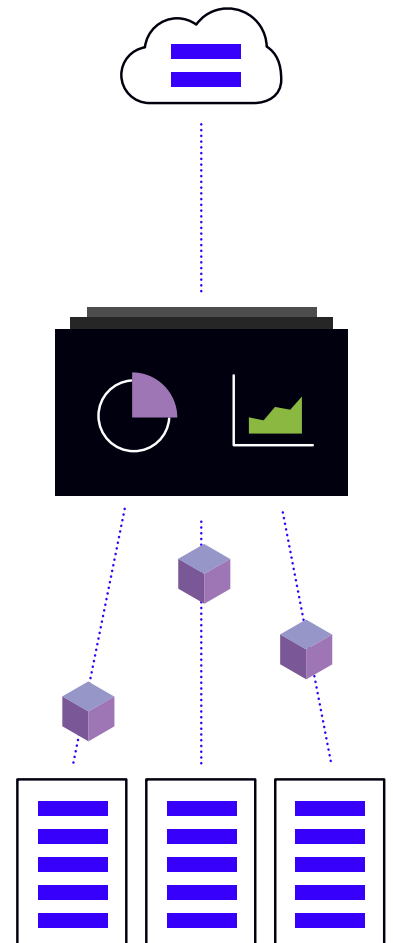
The Problem:
To achieve this, teams need to continue building additional ETL/ELT maps using legacy data integration tools—adding even more complexity to an already-overburdened data platform.

Building an entirely new data pipeline on top of a modern, cloud-based data warehouse platform.
These modern, cloud-based data warehouses provide separation of compute and storage, and unparalleled elasticity in the cloud.

The Problem:
Migrating to a cloud-based data warehouse is labor-intensive and time consuming, and moving data is only the beginning of cloud-based data warehousing: you must migrate schema, data, metadata, ETL processing, users, and applications, and then continue to live with most or all of the same pitfalls associated with traditional data warehouses.

A modern approach to reporting on EBS data: analytics on a scalable, modern platform

When exploring what could revolutionize how teams approach EBS data, there are a few requirements that are clear, albeit challenging.

The smartest solution will support data for mixed-mode, multi-source analytics.
This is because a modern enterprise has both on-premise and cloud based applications from multiple application vendors. This requires a unified, conformed data model for enterprise reporting across all source applications.

The most user-friendly solution will empower business users via easy access and secure data sets.
It should enable self-service analysis, so business users can find their own answers to complex business questions in real time.

The best solution will enable a more scalable and robust analytics architecture.
Your solution should be able to aggregate massive amounts of complex data in real time—all without using a data warehouse or reshaping data into analytical formats for major time savings across an organization.
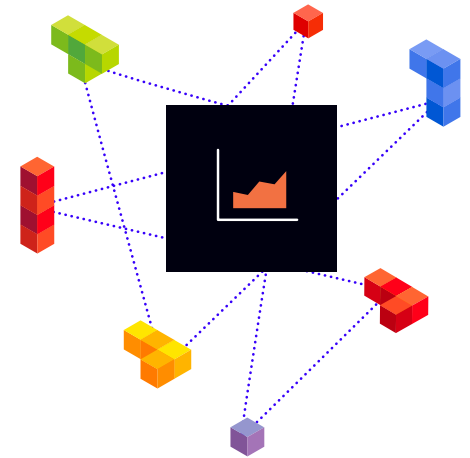
A breakthrough solution: enterprise data reimagined

Skip Time-Consuming Data Modeling and Complex Data Reshaping. To break through the constraints of traditional BI, you have to approach the problem in a fundamentally different way. What if you could skip the data modeling and reshaping process altogether, and pull data in its source form, with all the details and data securely intact?

Incorta does just that by challenging the belief that star schemas need to be part of the foundation of modern enterprise platforms. To achieve this result, Incorta brings together three fundamental technology developments:

Incorta's Direct Data Mapping™ engine

Allows you to query large, complex datasets with subsecond query response time, creating much faster and more meaningful data outcomes.

Incorta loads full copies of all application data without additional modeling, flattening or reshaping

It provides full data fidelity by capturing data at the most granular level, allowing you to drill into details using interactive dashboards.

Incorta allows you to leverage your existing infrastructure

(on-premises or in the cloud) without needing specialized hardware. You'll also still enjoy enterprise-grade capabilities, such as premier security, high availability, and disaster recovery.

The core of the breakthrough: Direct Data Mapping technology

At the heart of Incorta's breakthrough solution, you'll find its Direct Data Mapping engine. This engine's ability to scale analytics for large and complex data sets eliminates the need for data modeling, the unnecessary parts of ETL, and pre-aggregations. Instead, Incorta dynamically ingests data from multiple sources in real time. And, because it can analyze in subseconds large data sets that require hundreds of joins, **it doesn't force users to design star schemas or flatten data sets.**

Incorta Direct Data Mapping lets IT ingest source application schemas in their entirety, without needing the parts of ETL that ingest only subsets of the source. With the entire data set already inside Incorta, business users can feed their data curiosity with self-service analytics.

Incorta Gives Organizations:

Accelerated time-to-value.

Deploy in days or weeks, not months. Generate new reports in minutes or hours, not weeks or months.

Self-service reporting and analytics.

Make better decisions faster with the availability of sourcelevel data granularity, combined with all relevant history; plus, cross-functional and role-based analytics.

Top-line to transaction data access.

Drill from top-line analysis down to transactions without any data inaccuracies because preaggregations and summarizations no longer are necessary.
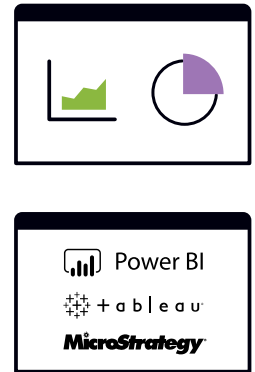
Incorta's direct data platform

Any data source • **Revolutionary performance** • **Any visualization tool**

Open & durable data lake, integrated Spark,
schema and semantic layers, data lineage

Diagram: where Incorta fits in the scheme of an enterprise stack (with no star schemas required).

Next-generation Oracle EBS data enrichment

With Incorta, you can enrich data without having to transform it.
While Incorta does not reshape data into a dimension model, it still provides a rich set of capabilities to enrich enterprise data in an easier and more elegant fashion.

That's because, on top of Incorta's Direct Data Mapping—which eliminates the need for schema development, modeling, and reshaping—Incorta's native, built-in support for Spark makes it easy to support powerful data enrichments without needing another integration tool.
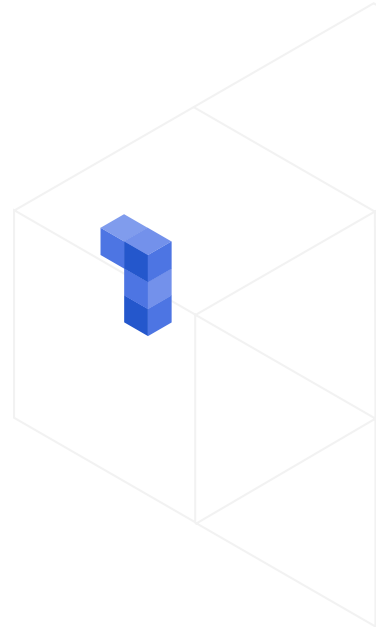
For example: Snapshots: Creating a snapshot of "point-in-time" data. A snapshot table holds the same transactional data as its source system, with additional fields for tracking the date of extract. A collection of these snapshots with a fixed cadence like daily, weekly, monthly can be used for rear-view trend analysis. For example, weekly and monthly trends for inventory, or Accounts Receivables aging by month.

Slowly changing dimensions: Preserve historical data by creating records of dimension changes. For example, rear-view analysis might require the employee location at a certain date in the past. By supporting Type 2 slowly changing dimensions, Incorta can retain the full history of values, along with exactly when the values of a chosen dimension attribute changes in the source system.

A good example of this scenario is when an employee is transferred to a new location. Incorta maintains the full history of the data, which can be joined to other records by the change date.

Enterprise-grade data and object security: Data governance is a critical requirement to support enterprise analytics. In many cases, the security model has to be rebuilt in an enterprise data mart. Incorta can leverage source objects to help define row-level data security by organization, business unit, department, etc. Similar logic can be applied to provide secured access to objects like dashboards, and to logical and physical schemas.

Advanced analytics: Incorta enables you to build advanced analytics, such as predicting Accounts Receivable defaults, inventory stock outs etc. Incorta makes this possible by leveraging Spark and its machine learning frameworks.

Incorta data apps: Pre-built analytic applications for Oracle EBS

With Incorta, Oracle EBS users can look forward to another encouraging break from the norm: pre-built analytic applications, with pre-built content that's both broad and deep, and spanning several functional areas.

These pre-built applications expedite an organization's migration from legacy reporting tools and drastically speed time-to-value, giving users immediate access to logically grouped content areas and several sample dashboards by persona to help answer their critical business questions.

Incorta:
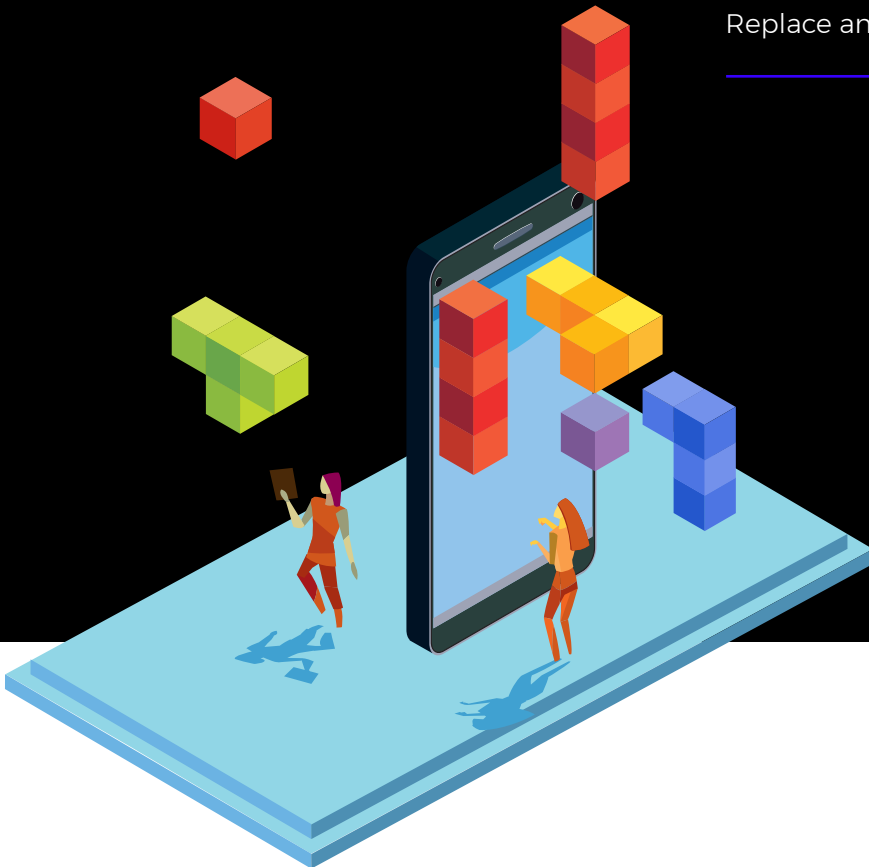# a flexible tool
for any EBS
environment

Deploy operational reporting on top of on-premises Oracle EBS or cloud-based data stores

Use Incorta as a data management layer between an enterprise data lake and self-service analytic tools

Augment an existing data warehouse and use Incorta to build future reporting and analytical applications (including self-service apps)

Build reporting and analytical apps in Incorta, using other external analytic tools like Tableau, Power BI, Microstrategy, etc., for visualization

Replace an existing data warehouse solution

Incorta in action
SHUTTERFLY ⓘⓝⓒ

Incorta has been deployed in some of the largest and most complex enterprises in the world, delivering to them in just weeks (or, in some cases, days) monumental impact based on their enterprise application data.

Online Image Publisher faced an eight-figure stockout problem.
Shutterfly is one Oracle EBS customer that faced monumental inventory reporting challenges. For Shutterfly, stockouts were an eight-figure problem that rose to the board level. Operating leaders knew they had a stockout problem and knew the enterprise had the data to solve it, but the limitations of Oracle's EBS tools made it impossible to put the right data into the hands of the people that needed it.

Shutterfly buyers and planners spent hours each day running reports on data from EBS, then combining them together, in a futile attempt to gain up-to-date insight into their inventory. This hodgepodge reporting mix of Excel spreadsheets and Oracle tools was inefficient and unreliable, and made it almost impossible to access key data points stored in Oracle EBS, such as those related to stock outs and excess and obsolete (E&O) inventory.

Results for Shutterfly
With Incorta and its revolutionary direct data mapping technology they:

- Generated full payback in one quarter

- Reduced stockouts by more than 90% (vastly exceeding their original goal of just 50%)

- Deployed five Incorta-powered, customized analytical applications in just six weeks for true, real-time data access

- Solved inventory issues at the busiest time of year with user-driven, self-service analysis

- Empowered users to build their own dashboards and gain new insights at any time without any help from IT

What appealed to me most about Incorta is its ability to make changes quickly throughout the process. We don't have to define everything we want up front. Incorta has really delivered on that—we go back and add things we didn't originally think about, and it's been quick and painless.

RACHEL MCCUTCHEON
Director of Supply Chain Management & Procurement at Shutterfly

Incorta in action

BROADCOM®

Global Technology Leader wanted self-service operating analytics.
As a global technology leader, Broadcom needed flexibility from all its analytics solutions. But its enterprise data complexity and bogged-down, traditional BI stack led to headaches. For instance, it typically took three to four months just to deploy a new business report that integrated data from Oracle with data from other enterprise applications.

The Broadcom executive team wanted self-service reporting in Excel to improve their strategic decision-making and business agility.

Results for Broadcom
With Incorta and its revolutionary direct data mapping technology they:

- Streamlined key processes and reduced BI wait times from weeks to seconds

- Gave over 300 users instant, self-service access to operating analytics in Excel, with intact source-level data fidelity and security

- Generates new analytical applications in days instead of months, and provides business users with quick access to information following acquisitions

- Significantly reduced the time and labor required to maintain and manage tech stack systems

> *It used to take 8 to 12 weeks to get a report from request to production. With Incorta, business users can do that on their own, instantaneously.*
>
> **BI SENIOR MANAGER AT BROADCOM**
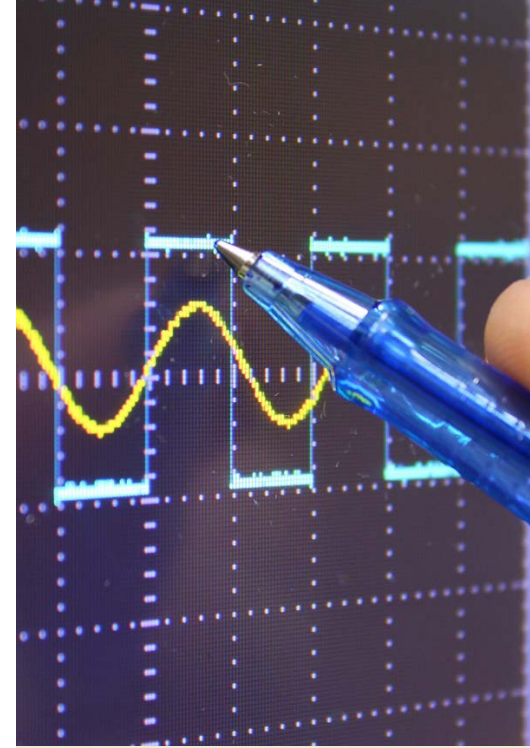
Incorta in action

∿ KEYSIGHT

Keysight Technologies needed access to Oracle EBS data in real time.
The recognized leader in electronic test and measurement equipment innovation for 75 years knew its outdated reporting strategy was costing its business time and money. Keysight leaders couldn't make timely, data-informed decisions on their Oracle EBS data. They couldn't easily modify existing reports, or quickly integrate critical data from M&A activities. And IT teams needed to re-capture and re-deploy their valuable time while phasing out inadequate reporting technologies.

Results for Keysight
With Incorta and its revolutionary direct data mapping technology they:

- Achieved one-second response times on queries run against 700 million records and 40 tables

- Reduced M&A integration timelines from 12 months to a few weeks, and now delivers revenue reports that run or refresh in only one minute (versus the 6+ hours previously)

- Made it possible for users to do aggregation and detailed analysis in the same report, and add new fields to a report or dashboard as needed, instead of waiting for quarterly refreshes

- Freed up 13 technical resources by eliminating performance tuning and time-consuming database maintenance

One of the biggest benefits of Incorta is the elimination of performance tuning. In the past, we were always worried about which index to add to which table, etc. It's extremely painful and requires a lot of resources. So not having to tune the database has been a complete game-changer for us.

BHARATH NATARAJAN
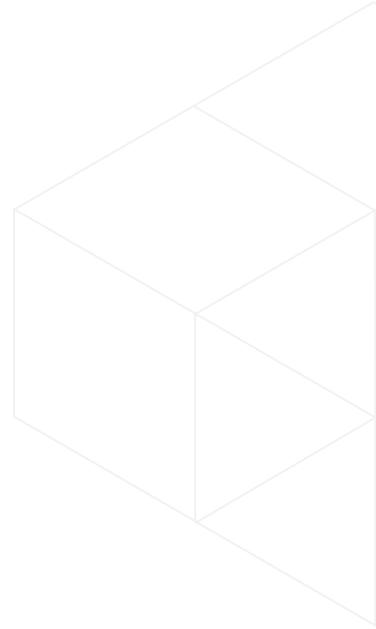Business Intelligence Manager and Senior Architect at Keysight Technologies

Conclusion

With tens of thousands of tables, hundreds of functional modules, and often thousands of users, Oracle EBS can have a weighty impact on an enterprise's IT infrastructure. Incorta's modern data analytics platform bypasses the complexities of legacy data warehousing methods to give EBS customers the analytics and reporting they've waited for. With Incorta, Oracle EBS users at today's leading global brands are making smarter, faster decisions by readily accessing fresh, real-time data and building the high-performance reports they need, all on their own.

To see Incorta in action, register now for one of our upcoming weekly demo webinars. You'll get a 360° view of our platform from our leading data experts, analysts, and engineers.

See firsthand the power of Incorta—
Register today at incorta.com/virtual-hands-on-lab-series

ABOUT INCORTA

Incorta provides a unified data and analytics platform that makes it quick and easy to unlock the full potential of data from multiple complex source systems by making it instantly ready for analysis. Backed by GV, Kleiner Perkins, M12, Prysm Capital, Telstra Ventures and Sorenson Capital, Incorta empowers the most forward-thinking companies to tackle their toughest data challenges, from innovators in the midmarket to Fortune 1000 category leaders such as Broadcom, Comcast and Shutterfly. For more information, visit www.incorta.com.