

WHITEPAPER

Accelerating Analytics with Direct Data Mapping™

Real-Time Analysis of Complex Business Data



Analytics: Expectations vs. Reality

There's a major disconnect in today's analytics world, one that frustrates companies, business users and IT alike. It looks something like this:

Business User

Ideates what they believe is a simple business requirement:

"I want to add sales data to my existing financial and manufacturing reports, and be able to drill into daily transactions."



Time expectation:
1 day

IT Team

Responds with the unfortunate reality:

"I have to create complex join queries of billions of data records—even then, the data accessible to the business user will be yesterday's data, and a user can only view the summary level of transactions."



Time requirement:
Months

Most businesses begrudgingly accept this expectations divide—and the delays caused by it—as a necessary evil, one that can't be overcome. For most, analytics of complex business applications means a data warehouse is required, even though the resulting reports and query results will still be hours or even days old.

This assumption was true before. But it's not true anymore.

Today, there's a new, better way to approach your analytics initiatives, one that bypasses the time-consuming, expensive data preparation stage altogether.

By tapping analytics expertise gained from working for industry giants Oracle and Microsoft, Incorta founders invented unique analytic technology

that opens the door for a more powerful—yet simpler—approach to enterprise analytics. This approach reduces the time it takes to build and iterate on complex analytic applications, and encourages users to easily dig into and analyze the data on their own.

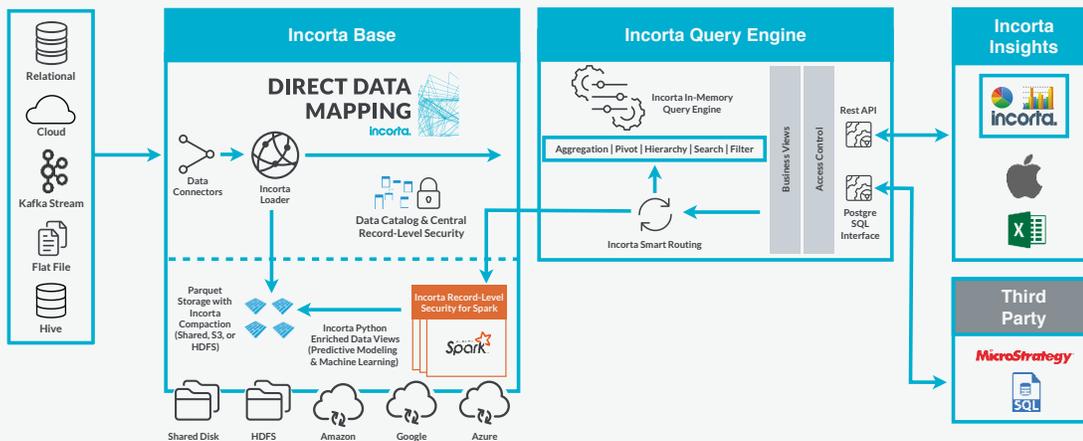
In this new world, users can make better business decisions by readily accessing up-to-date information stored in multiple databases and building the high-performance reports they need, on their own. Reports get created quickly, data stays in exactly the same shape as it exists in the source database, and costly data manipulations become a thing of the past.

This new approach is called Direct Data Mapping™. And it's only available from Incorta.

Direct Data Mapping's Unique Approach

Direct Data Mapping delivers real-time analytics on top of original, complex, transactional data—such as data commonly found in ERP systems—so you no longer have to know ahead of

time how to design the data tables, pre-define the questions you want to ask, build star schemas, transform data prior to analysis, or involve IT to build everything for users.



Leveraging today's modern technologies, Incorta has built a comprehensive architecture that powers its unique approach.

With Direct Data Mapping's unprecedented join performance, you can easily bring all complex tables into Incorta's analytics platform and map your data directly, which:

- Eliminates the need for a data warehouse and its associated star-schema iterations and relational-based queries
- Allows IT to easily aggregate and secure complex data
- Enables all users to view joined data in real-time
- Empowers non-technical business users to access a centralized data repository to analyze the data any way they want, on their own, without delay
- Delivers faster performance on complex data than other solutions

Direct Data Mapping accomplishes these seemingly insurmountable feats by meeting what we believe are the four core tenets of a modern analytics platform:

- No data left behind
- Speed and simplicity
- Secure, governed self-service
- Focus on the user

Let's look at each one in more detail.

No data left behind.

For complete business insight, an analytics platform needs to easily add new data, make changes to existing data and connect to all of a company's data sources. As a result, Incorta:

- Connects out-of-the-box to:
 - Big data (Hadoop, Hive, Kafka, NoSQL)
 - Cloud applications (Salesforce, ServiceNow, NetSuite, etc.)

- Databases (Oracle, MySQL, SQL Server, DB2, Teradata, etc.).
- Relates tables based on their existing, complex relationships residing in the source system
- Leverages 1:1 data mapping to preserve data's original shape and security parameters
- Persists data as parquet files in HDFS, allowing it to be leveraged by other Big Data tools

Speed and simplicity.

The primary barriers to speed and simplicity when it comes to analytics are the tedious processes of transforming/re-shaping/flattening the data and creating complex joins. Incorta overcomes these hurdles by:

- Utilizing 1:1 data mapping, which eliminates the need to reshape data via ETL
- Delivering sub-second aggregations and filters across complex relationships, allowing analysts to slice/dice and summarize data through dashboards, at the speed of thought
- Encouraging complex relationships featuring many tables while delivering blazing-fast join performance

Secure, governed self-service.

The questions we need to ask of our data changes all of the time, every day. Today's analytics needs to empower non-technical business users—the subject matter experts of their domains, such as sales, marketing and finance—to dig into up-to-date data without limits, asking new questions whenever needed, while abiding by the company's security parameters. Because of this, Incorta:

- Gives IT a centralized analytics platform that integrates with existing security systems, granting non-

technical users secure access to data based on user- or role-based permissions

- Copies data's original security settings from each source application accessed to reduce security risks created by attempting to rebuild security parameters
- Eliminates the need to transform or reshape data prior to analysis
- Relates data across silos
- Allows IT to build and implement complex business rules to secure and control access of data

Focus on the user.

While analysts yearn for easier access to up-to-date business data, they usually don't want to learn yet another complex tool to get the insights they need. As a result, Incorta:

- Provides a simple user interface in its own platform
- Also allows each analyst to consume data in the fashion they prefer, using the tools they already love—Tableau, R, Excel, etc.
- Delivers secure, up-to-the-minute data and ad-hoc summarizations and calculations at blazing speeds
- Serves data to any SQL-compliant front-end or provides access to data through Incorta's own visualization tier
- Maintains security centrally in the Incorta platform, rather than in each tool

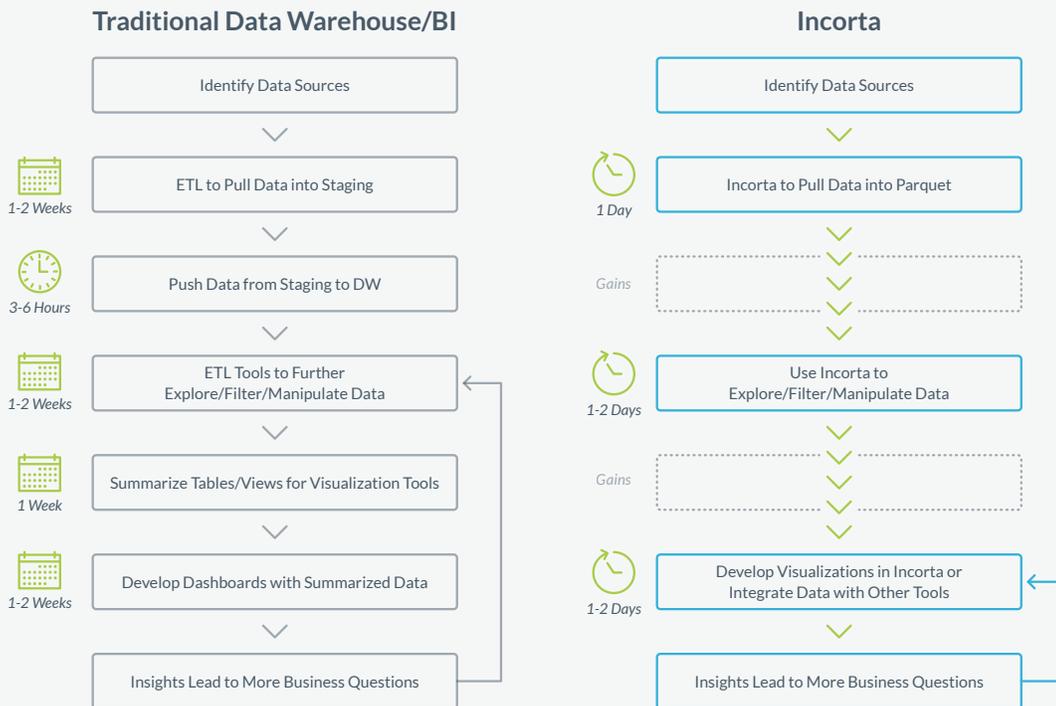
Benefits of Direct Data Mapping

A more flexible, exploratory experience and conversation with the data.

- Engages users in an interactive dialogue/conversation with the data—rather than watching a pre-recorded presentation—so they can follow the data down every path in an unfettered way
- Enables users to shift more nimbly and quickly to meet ever-changing business and reporting requirements since a pre-aggregated data cube is not needed

Dramatic acceleration in building new reports and dashboards.

- Eliminates need to pre-aggregate and pre-calculate data—no data transformation or data warehouse required
- Maps data directly, in a 1:1 manner, keeping it in the original form that exists in the source database (100 tables in CRM = 100 tables in Incorta)
- Receives data via the dashboard in a highly optimized way that mimics a data tree structure (with totals and subtotals), without needing to flatten the data



Incorta Direct Data Mapping eliminates traditional pre-aggregation requirements delivering dramatically faster analytics and reporting.

More flexible, accurate analytics delivered 10–100 times faster than other solutions.

- Receives query responses in seconds, rather than minutes or hours
- Runs reports against many joins very quickly, without degraded performance
- Leverages fresher, more frequently updated data (for example, every 15 minutes)
- Empowers non-technical business users to create and update reports on their own, without needing IT involvement.

Inheritance of existing security policies from source applications.

- Eliminates vulnerabilities related to users downloading data to endpoint devices
- Reduces risks created by attempting to rebuild in-place security settings

Lower total cost of ownership (TCO).

- Enables businesses and users to roll out new analytic applications in days, not months
- Eliminates the need to rebuild security settings for each datasource leveraged
- Lets companies enjoy a simpler, streamlined analytics approach of a single Incorta server, versus the typical, traditional approach consisting of star schemas, ETLs, professional services assistance, a waterfall project management methodology and an expensive analytics appliance

Conclusion

The analytics revolution enabled now by Incorta's Direct Data Mapping is long overdue. Still commonly used today are legacy approaches defined decades ago when storage was expensive. At that time, vendors (and the companies they served) prioritized low disk usage, rather than fast data processing, as their top goal.

But storage isn't cost-prohibitive anymore. And overcoming the join performance issue isn't impossible

anymore. Now, an entirely new analytics paradigm is open to you, one where analytics is simplified and insight is dramatically accelerated.

It's time to get back to solving the original problem you faced then and still face today: making better, faster business decisions by readily accessing and understanding accurate information securely stored across multiple databases.

See firsthand the power of Incorta—schedule a personalized demo at www.incorta.com/demo.



About Incorta

Incorta's enterprise analytics platform aggregates complex business data in real-time, bypassing the need for a traditional data warehouse. Powered by the industry's first Direct Data Mapping™ Engine, Incorta provides unprecedented query performance and eliminates costly join operations altogether. Incorta reduces from months to days the time required to roll out new analytics applications, and reduces query and reporting times from hours to seconds. Backed by GV (formerly Google Ventures), Incorta is deployed in the Fortune 10 and powers analytics for some of the world's largest and fastest-growing companies.

To learn the fastest way to what matters, **visit www.incorta.com** or join the conversation on **Twitter @incorta**.

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