

4 Must-have Tenets of Your Data Architecture

Key prerequisites for fully extracting insights
hidden in your enterprise data.



Executive Summary

Businesses that thrive and outpace their competition are better at prioritizing, preparing, and processing data; they ensure that all aspects of their data value chain lead to usable data. That task, however, is a heady one that's more easily said than done.

So how do such businesses fully capitalize on their data, in an effective and efficient manner?

They do it by strictly adhering to four tenets of their data architecture:



When enterprise data truly is “usable,” it's ready for analysis and can be used to make smart, timely business decisions.

To understand how to innately drive the utmost value from your data via a modern, new approach to enterprise analytics, let's discuss each tenet in more detail.

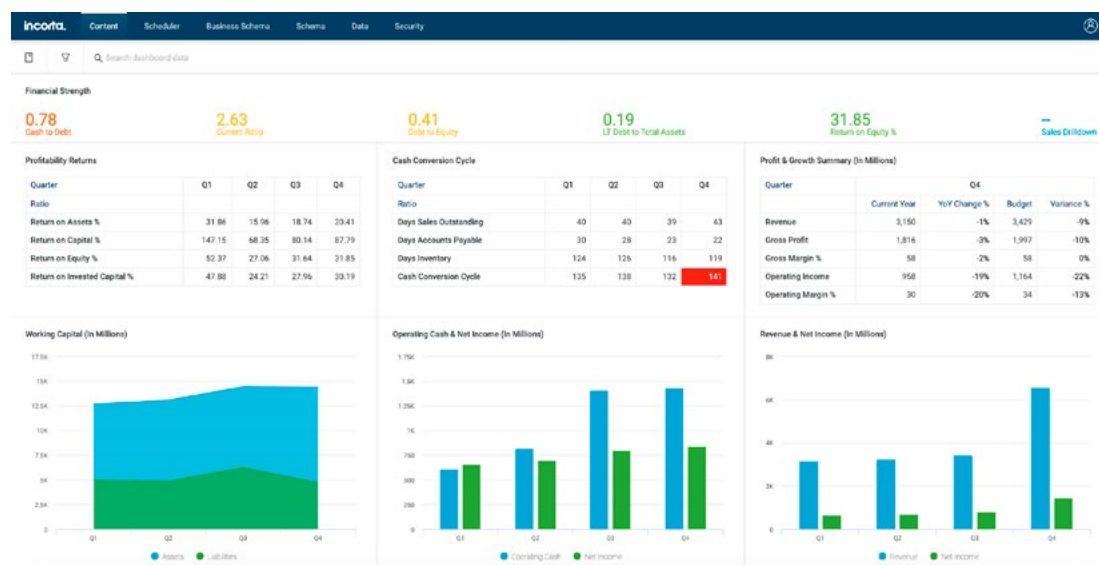
TENET #1

Business Context and Standardization

Data that's usable speaks the business user's language and is prepared in such a way that it meets all of the intelligence requirements the business sets for it. That means those preparing the data must be able to anticipate future needs, so they can build an analytics workflow capable of delivering correct answers to the questions business users will ask in the future, whenever and wherever those answers are needed.

In addition, when data is usable, definitions for key business metrics are clear and consistent, so misrepresentations that could negatively affect the business's success are avoided.

Lack of business context or standardization can lead to proliferation of unvetted and inconsistent business metrics. For instance, one of the biggest challenges in any organization is when finance metrics do not reconcile with individual function or department metrics. It is essential that the high-level KPIs (as shown in the dashboard below) align across the board in order to arrive at a consistent and concise outcome.



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“Incorta delivers new reports to senior management in only hours or days, compared to weeks previously. Plus, complex queries stay up to date and no longer negatively impact the performance of other users and other systems.”

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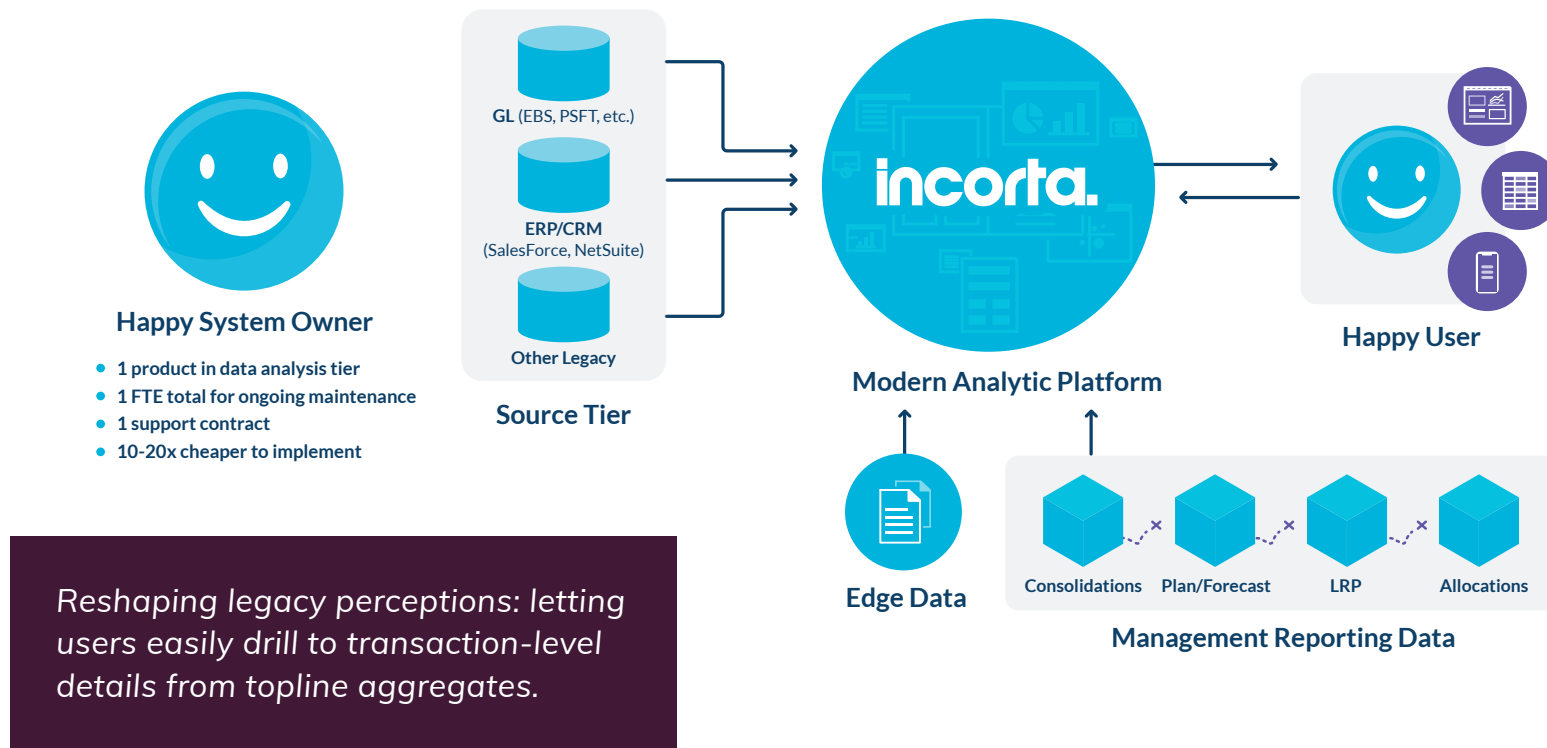
SR. ENGINEERING MANAGER, FORTUNE 10
CONSUMER ELECTRONICS MANUFACTURER

TENET #2

Complete Data Fidelity and Integrity

For data to be usable, its full depth and breadth needs to be captured and retained. That means avoiding data transformation processes—such as denormalization—that lose the key attributes and transaction-level details required to achieve actionable insights from data.

For complete data integrity, data fidelity needs to persist—regardless of the number or types of analyses it undergoes—so it effectively can be used to meet ever-changing business requirements. Users need to be able to easily access the data's rich details—including transaction-level information—at any time.



TENET #3

Self-service Ready

When data is usable, business users can get at it whenever and from wherever they want. The data they access is real-time—or as near real-time as deemed appropriate by the business—and it's accessible from whichever device they want to use.

Usable data also empowers business users to easily ask and answer questions, on their own, without any help from IT. And not by building a dashboard—that's merely a way in which data is presented. Usable data leverages metadata—descriptions of and contexts for data, such as data summarizing the column names and data types found within a SQL table—to make it easier for users to find and work with particular instances of data. Then, without needing to understand how data is modeled or the dependent relationships behind data, users can discover—and build analytics on top of—usable data in a self-service manner. They also can leverage a broad range of out-of-the-box visualizations and build advanced use cases for their analytics projects.

Lastly, self-service ready data makes data usable by letting companies easily embed dashboards into existing technology applications, such as Oracle E-Business Suite (EBS). This type of in-app experience presents data in a context-rich way and appeases users reluctant to adopt yet another tool.

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[With Incorta], it's very easy for a non-technical user to create and format the report themselves, without needing help from technical resources.

SR. ENGINEERING MANAGER, FORTUNE 10 CONSUMER ELECTRONICS MANUFACTURER

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Due to Incorta's self-service capabilities, IT no longer has to predict what business users are going to ask, but can instead create flexible frameworks that let business users slice and dice the data themselves.

AJIT OAK, SR. MANAGER OF BI



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TENET #4

Uncompromising Security and Governance

Like with any other enterprise application, data security and governance is of paramount concern when it comes to extracting value from your data. Data only can be considered truly usable when preset security guidelines—such as guidelines that determine which users may access data, what level of granularity they may access, etc.—persist and are documented accordingly throughout the data access and analysis process.

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We're using [Incorta] to report on HR data, so there's very sensitive data being manipulated and handled. It's critical we control who sees what data and when they see it, otherwise it becomes a privacy issue as well. Incorta gives us much more granular control over who is permitted to access and view data than the other options we looked at.

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Proceed with Caution!

Why It's So Easy for Data to Become “Unusable”

While the prerequisites might seem straightforward enough, anyone who's spent any time trying to analyze business data knows meeting all of them can be an insurmountable task, for three primary reasons:

1. Data complexity.

Enterprise applications are complex, each with its own intricacies. To achieve meaningful analytics, the data structures, table structures, and relationships between all of them need to be understood and applied to the project at hand.

2. Data volumes.

Exploding rates of internally and externally generated data—as well as the growing number of technology systems used by the business—are exponentially increasing the amount of corporate data to be managed and analyzed.

3. Custom blends of business applications.

Every organization maintains its own unique mix of business applications used for operational purposes, and each application may handle data sets, data granularity, and data transformation in drastically different ways. For data to become and remain usable, the data from these different applications needs to be synthesized (while remaining intact) and standardized.

With enough awareness and intention, however, it is possible to meet all four tenets of data architecture without suffering through a cumbersome, never-ending process to do it. The checklist on the next page can help guide you through the process.

Checklist

Data Architecture Must-Haves for Enterprise Analytics

Make sure any enterprise analytics platform you consider meets these must-haves for data architecture.

1. Rich Business Context and Standardization

- ✓ Maintains clear, consistent definitions for key business and operational metrics
- ✓ Is easily enriched using real-time, actionable insights
- ✓ Easily scales

3. Self-service Ready

- ✓ Enables easy, mobile access to rich data via a variety of devices, such as laptops, iPhones, and iPads
- ✓ Enables the easy embedding of analytic applications into other enterprise applications in near-real-time
- ✓ Empowers self-service discovery

2. Complete Data Fidelity and Integrity

- ✓ Provides access to transaction-level details, not just aggregates
- ✓ Doesn't change data shapes or forms—brings in data as-is
- ✓ Doesn't lose any data or data details during the transformation process

4. Uncompromising Security and Governance

- ✓ Fully secures data, both in-motion and at-rest
- ✓ Provides both object- and row-level security, so users only see data they're authorized to access
- ✓ Supports single sign-on (SSO)—such as Active Directory—that can integrate with current data architecture
- ✓ Maintains a detailed audit trail of all actions and tasks performed on data—by whom and at what time

Conclusion

Many enterprise tools and techniques claim to make data usable, but they're half-hearted boasts at best. That's because:

- Most require data to undergo a lengthy, complex process before it can be consumed by analytics applications;
- Many aren't trying to actually solve the complex problem of data usability—how to build a data flow and how to make data more usable—they're merely providing visualization tools; and
- They would have to employ a complicated mix of different tools and technologies to try to make data usable.

Only Incorta meets all four tenets of data architecture. And that's why only Incorta can empower today's enterprises to make the smart, timely business decisions needed to prosper in today's increasingly competitive world.

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We're an organization generating more than 10 times the revenue of 10 years ago, and Incorta has managed that growth flawlessly. The analytics solutions we've used in the past couldn't scale fast enough to handle that rate of expansion.

AJIT OAK, SR. MANAGER OF BI



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[Using Incorta] I can join data from multiple sources in an extremely easy manner that we would not be able to do with any other tools.

BHARATH NATARAJAN, BI ARCHITECT



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Watch the webinar [Maximize Your Analytics Impact](#) to learn why the most important measure of your dashboards' success is hidden in their usage data.



The Data Direct Platform™

ABOUT INCORTA

Incorta is the data analytics company on a mission to help data-driven enterprises be more agile and competitive by resolving their most complex data analytics challenges. Incorta's Direct Data Platform gives enterprises the means to acquire, enrich, analyze and act on their business data with unmatched speed, simplicity and insight. Backed by GV (formerly Google Ventures), Kleiner Perkins, M12 (formerly Microsoft Ventures), Telstra Ventures, and Sorenson Capital, Incorta powers analytics for some of the most valuable brands and organizations in the world.

For today's most complex data and analytics challenges, Incorta partners with Fortune 5 to Global 2000 customers such as Broadcom, Vitamix, Equinix, and Credit Suisse.

For more information, visit <https://www.incorta.com>