

# The New Data Dynamics

How to turn data into  
competitive advantage





# An opportunity wrapped in a crisis

If you haven't noticed something rather big happening to your business – in fact to every business, department, and discipline – welcome back from Mars.

The megatrends of the day, from cloud and social data to mobile and the Internet of Things, are all really just sparkly facets of a much bigger and more profound trend.

The datascape in which your business lives is changing dramatically.

This eBook is about these changes, what they mean for your business, and what you should be doing right now to rise to the new challenges.

- It's about recognizing and managing data as a strategic business asset.
- It's about moving from a purely app-centric view to a data-centric and app-aware perspective.

- It's about the new principles for every business or line-of-business that wants to harness the awesome power of data.
- And it's about what will happen to businesses that ignore these imperatives.

We call this set of challenges and strategies the **New Data Dynamics**, and we're convinced it's the single most important thing any enterprise can address right now.

If you've got apparently more pressing things in the center of your boardroom table, shove them aside. This is bigger.

# Data has changed for good

▶ Data has always been important to business. So why the big change? Here's why:

**There's far more data to collect and consider.**  
Think yottabytes, not megabytes.

**It's coming in from all directions.**  
Not five sources, five thousand. That means if it's structured at all (most isn't), it's multi-structured.

**A lot of it doesn't even look like data.**  
It looks like text or images or thumbs-ups or tweets...

**It doesn't only live in nice warehouses.**  
It lives in apps, cloud stores, distant servers, and email attachments.

**It's alive.**  
Data from sensors, transaction systems, and social media channels doesn't stand still. It streams.

**It's dark.**  
A huge amount of it is buried deep in your organization – hidden from view and out of the reach of your analytics.

**It's inter-related.**  
This isn't a random sample of the universe: it's all related to your business and your customers. Multiply that complexity.

**It's free-range.**  
It can't just be owned by any single application. It needs to flow freely to wherever you need the insight.

That's a lot of change. In fact:

Even if only one or two of these trends were big enough to worry about (they all are), your current data stacks, strategies, and infrastructures will put you at a serious disadvantage.

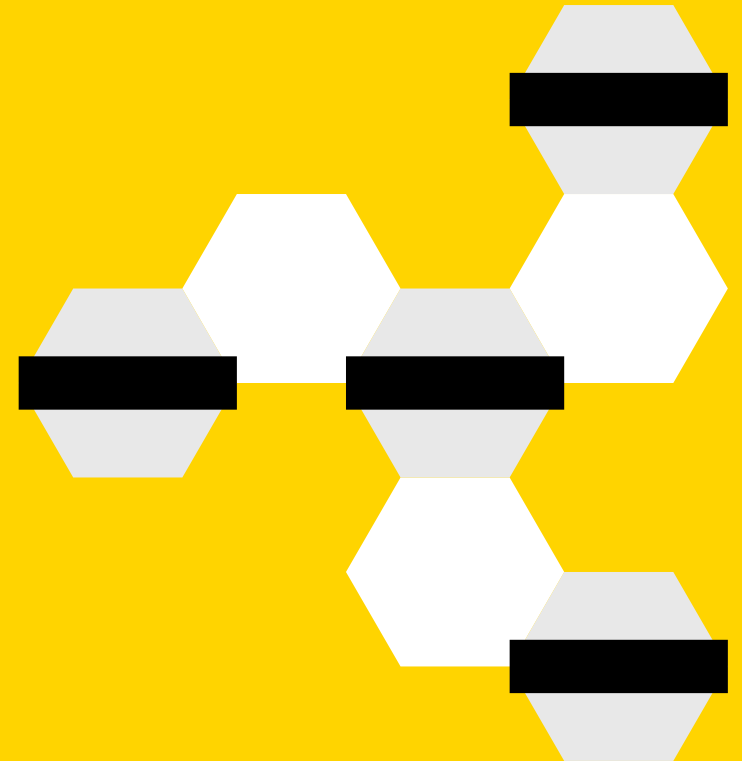
**And you don't want that.**

# App-centric blindness

The changes demanded by the new age of data amount to more than a new set of processes or technologies.

They call for a new mindset.

That means letting go of a fundamental perspective that every enterprise shares: the app-centric perspective.





# What app-centric means

Since the dawn of IT, applications have been the way that people automate their key business processes. Applications are where the data is created, accessed, managed, analyzed, and manipulated.

As packaged applications matured, they created their own centers of gravity – as if the application itself was the end instead of the means to better business performance and understanding.

In fact, most business professionals don't think 'data'; they think CRM, ERP, ecommerce, supply chain management, and business intelligence.

So it's natural that people and businesses still take this application-centric view into the new age of data. Natural but far from ideal...



# Why app-centric is limiting

An app-centric perspective is limiting because an application is a silo.

It may be integrated with other apps, but it's still a silo for data. It owns and controls the data it needs to perform its function. Most importantly:

The app decides how its data is structured – and will always optimize for its own needs.

That means its data structure won't be designed for easy connectivity or integration with other applications.

In a world where you only needed to worry about a few apps and data sources, this was a hassle. In the new age of data, it's crippling.

# Apples, meet oranges

A handy table to underline what data-centricity really means:



Old world of data	New age of data
Structured	All data
Batch	Streaming
Limited # of sources	Infinite # of sources
Low data volumes	Big data
Data at rest	Data in motion
SQL	SQL + NoSQL/ Hadoop/ HiveQL
App-centric	Data-centric and app-informed
Transaction-focused	Interaction-focused
Enterprise-only	Data from inside and outside
Known skills	New skill sets
IT vs. business	Interdependent IT & business
On-premise	Hybrid (on-premise and cloud)
Departmental silos	Whole enterprise

Again, you don't want to attack the challenges represented by the right-hand column with the tools and tactics optimized for the left.

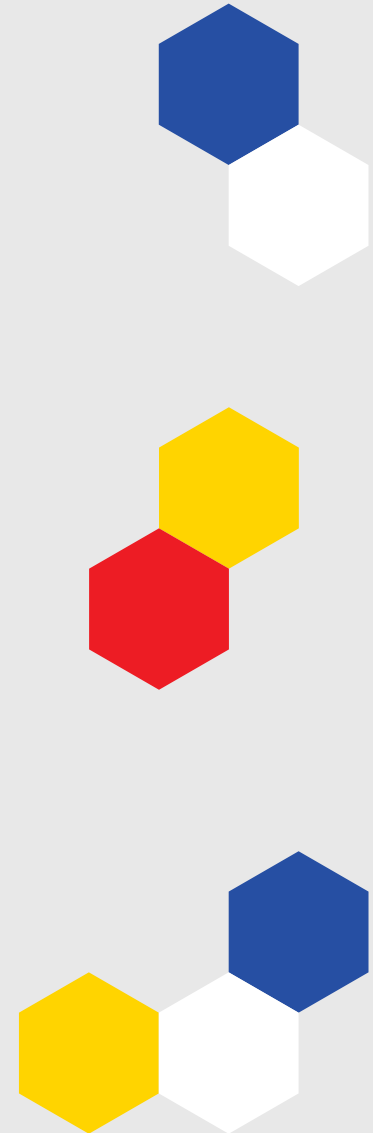
# What data-centric means

For data to become the strategic business asset that it must be, it has to be liberated from the application silos. Not divorced from them but abstracted from them.

When this happens, data can be structured and optimized for many different uses, not just for one application and business process.

That means it's accessible, usable and independent of the platform, application, or device that created it – and that integrations, provisioning, security, data quality, and management are handled intelligently and systematically, across all applications and use cases.

With this approach, data is ready to fuel everything your business does, from strategy and performance monitoring to how you build products and interact with customers.





# The data-centric dividend

**A data-centric view means your data is ready for anything.**

Ready to be deployed where the business most needs it.

Ready to be integrated into new applications.

Ready to be combined with other data sources.

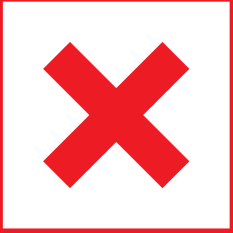
Ready to be pumped into new analytics, visualizations, and intelligence tools.

**Importantly, this switch is not at the expense of the app-centric view.**

You can still look at and optimize any data set in the context of an application. But now you can multiply the value of that data by ensuring it's prepared for a much wider role in your business.

That's the power of a data-centric perspective.





# Death to structure? Not quite

The new, unstructured, Hadoop-y world where data is available for every need will not happen overnight.

In fact, even though only about 20% of enterprise data is structured today, it's an important 20%.

The real world is a hybrid world, where SQL and No-SQL co-exist – and it will probably be that way for the next decade.

The new age of data is here. And it incorporates the old.

The difference now is that, instead of the data moving to the apps, the apps move to the data.

# The New Data Dynamics

**New Data Dynamics describes the essentials of this new approach to data. It makes it easier for your business to do five important things:**

- 1 Access and prepare data.**  
Discover important data sources, capture the data, and make it ready for insight.
- 2 Ensure data quality.**  
Establishing that strategists can create a single, high-fidelity version of truth for each critical data dimension: customers, products, suppliers, sites, assets...
- 3 Protect data.**  
Keeping sensitive data safe and regulation-compliant, using techniques such as data security, archiving, and role-based data masking and redaction.
- 4 Enhance data.**  
Adding value by capturing the context of the data (e.g., where it was shared, when, how, and by whom), and its connections (how it relates to other data sets), and augmenting it with new data and metadata.
- 5 Provision data.**  
Getting the right data to the right people, processes, or applications at the right time, in the right format, in the easiest way possible.

**These are the new imperatives for every enterprise – and New Data Dynamics is the discipline that can get you there.**

# The 10 principles of the New Data Dynamics



What does the New Data Dynamics look like? Like this:

1

**Embrace volume.**

One of the premises of Big Data is to go for the full fire hose rather than use the sampling techniques designed to make data manageable. With new data technologies, you may not need to sample. Go for it all.

2

**Prepare once, consume anywhere.**

The data-centric view means you do most of the data preparation once, centrally, so you can then deploy the data where it's most needed.

3

**Automate data management.**

Manual processes are too slow – and data skills are too rare – for the New Data Dynamics. You need the tools and technologies to automate as many processes as possible, from ingestion to tagging to structuring and provisioning.

4

**Standardize and document.**

Create golden masters of your most critical data dimensions (such as customers) and populate all key systems with it. Then capture and manage critical business definitions and concepts in a published glossary so everyone is working from the same hymn sheet.

5

**Capture relationships.**

No data point is an island. Uncover and capture the relationships between your data sets so you can see where the connections are and the underlying dynamics of your business.

6

**Measure quality.**

Data quality and hygiene can only be managed if they're measured. Assign responsibility, define your metrics, and track and report on them regularly, as if the data were a piece of gold on a manufacturing line.

7

**Secure smartly.**

Know where your sensitive data is and make sure it gets the same level of protection and safeguards no matter where it goes – from production to test, from on-premise to the cloud, from Minnesota to Mumbai. for it all.

8

**Enable self-service.**

If IT needs to get heavily involved every time a business strategist needs to prepare and provision some data, nothing will ever happen. Think about self-service models and tools that let non-technical users do it themselves (and iterate freely).

9

**Test before rolling out.**

Data flows and integrations are far too important to put into production without thorough testing and test data management, in an environment as close to identical as your production environment.

10

**Market your wins.**

Data people tend to be modest. That's not so good if you need to win more resources to fund your journey to the New Data Dynamics. Capture your wins and let key stakeholders know.



# The benefits of the New Data Dynamics

The New Data Dynamics isn't an abstract concept for data purists. It's a practical, hard-nosed discipline that rises to the challenges of the new age of data, so everyone in your business can:

**Ask better questions.**

Including many you could never ask before.

**Get faster, more accurate answers.**

So you can make better decisions.

**Improve any and all processes.**

Driving down costs and improving efficiencies.

**Delight customers.**

Because you understand them better – and treat them accordingly.

**Reduce the cost of compliance.**

While tightening up your controls and reporting.

Those aren't small benefits, they're huge ones. (And they're only a sample.)

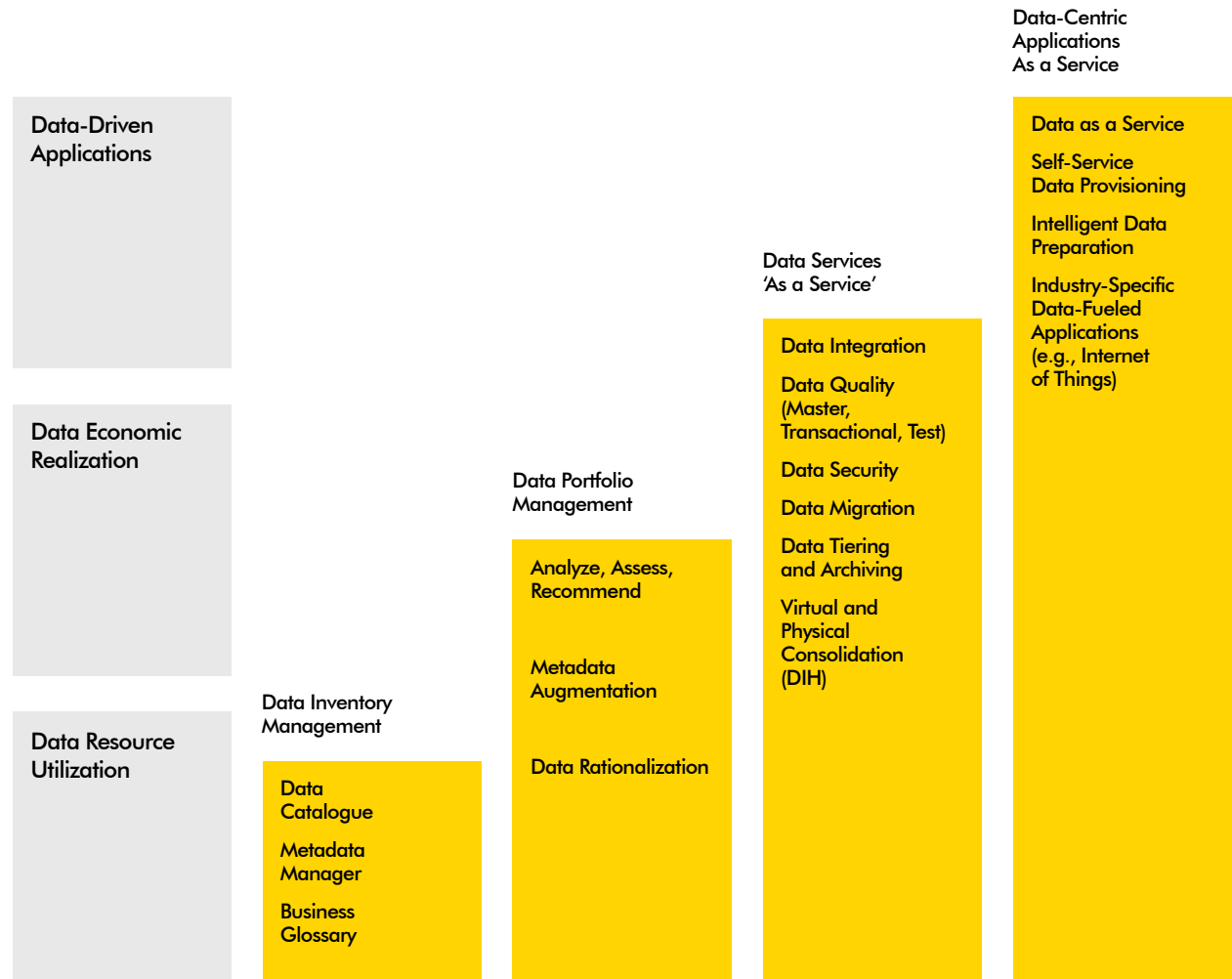
# Getting there The New Data Dynamics maturity model

The journey to the New Data Dynamics can and should be managed and systematic.

We've developed a Maturity Model to show the clearest steps and help you establish where you are today.

It would take a whole new eBook in itself to take you through the model (watch this space), but here's a peek:

## Data Resource Planning



## Intelligent Data Platform

## Conclusion

# Data matters now more than ever

The new age of data may well be one of the biggest inflection points in business history.

Trying to master the New Data Dynamics using yesterday's data strategies, processes, and technologies is the fast track to irrelevance.

But if you get it right, using the principles outlined here, you'll gain a serious advantage in the most important areas of your business.

One thing is clear: No discipline or department can afford to sit this one out.

But you weren't planning to sit it out anyway, were you?