

# TOTALDATA™: START MAKING BETTER USE OF DATA

*Helping organisations unlock the value of the strategic asset that is their data.*

## WHY TOTALDATA™?

Data – the lifeblood of the digital business – allows you to understand what is going on, both inside and outside the enterprise. To engage intelligently and appropriately with your customers, suppliers, workforce and other stakeholders. To be constantly alert to change and risk and opportunity. To take bold strategic steps, with the confidence of being able to remain viable and effective in a rapidly changing environment. At Reply, we don't just talk about Big Data, we talk about TotalData™.

## FOUR DIMENSIONS OF TOTALDATA™

There are four important dimensions – reach, richness, assurance and agility.



**REACH** is about the breadth and scope of data. Firstly, this means taking data from an ever-wider range of sources. In addition to your basic transaction and record systems, this may include picking up data from external sources such as social media, as well as sharing data with others in your ecosystem. It may also involve new technologies for

monitoring what is going on, such as face-recognition cameras, vehicle telematics and the internet of things.

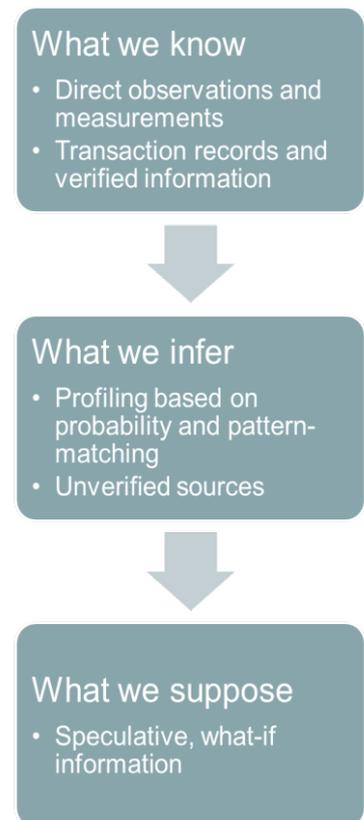
But data reach is not just about reaching backwards into more sources of data, it is also about reaching forwards to where the data can be most effectively used. The data needs to reach deep into the business process – to support both algorithmic and human action. And the data needs to reach outside the closed circles of Head Office to the “edge” of the organization – in other words, where your organization engages with your customers. And also proving useful information and insight to the customers themselves.

**RICHNESS** is about the detail and complexity of data. For example, a supermarket doesn’t just know how much you spend on groceries but how often you buy lemons. And might also know whether you picked up the lemons from the basket next to the fish or from the basket next to the gin. Technology allows more frequent data points to be captured and processed – for example, continuous monitoring rather than end-of-month stock checks.

If Reach means a broader range of data sources, Richness means greater interlinking of data from different sources. Sophisticated algorithms allow multiple independent data streams to be correlated – for example, when a customer visits your website shortly after a television advertisement was screened, there is a strong possibility that the advert may have triggered the visit, so that allows us to guess what kind of TV programmes the customer watches.

**ASSURANCE** is about quality and control, making the body of data more reliable – fit for purpose. But of course the enterprise has many different purposes for data: for some purposes, incomplete or out-of-date data may represent a larger problem than inconsistent or inaccurate data. So TotalData™ doesn’t mean rejecting data that fail to meet some quality standard, but managing the fact that data from different sources will be of variable quality, establishing processes to improve and filter data as required.

A customer profile may include both verified information and speculative information, and may be partially based on imperfect observation (for example face recognition) and unreliable data (for example Facebook links). We need to give appropriate weighting to weak signals and vague correlations (as in the example above, noting that a customer visits the website following a TV advert). Assurance therefore entails discipline on data provenance, labelling, verification and governance – understanding the status and confidence level of different items of data and information, complying with data protection, respecting customer privacy and consent.



**AGILITY** is about flexibility and responsiveness to change. How quickly can we make effective use of additional sources of data, how quickly can we detect and interpret weak signals, how strong are the feedback loops that improve accuracy and relevance of the insights? For example, we may be generating a bunch of insights about our customers, but what difference are these insights themselves making to customer engagement? Without rapid iteration, we should never be able to keep up with the ever-accelerating expansion of available data.

Moreover, Agility is the dimension of TotalData™ that enables the business respond to unforeseen situations/challenges. With Richness you may have better situation awareness than your competitors, but Agility gives your organization the ability to outmanoeuvre your competitors, because you can think faster and steer faster.

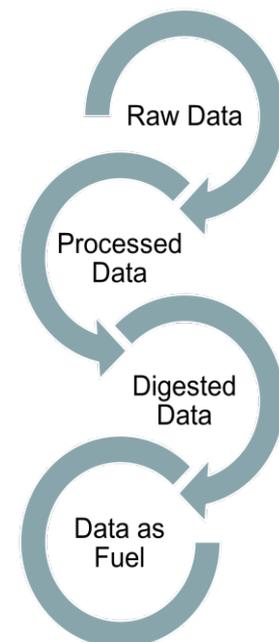
It is the combination of Reach and Richness that gives us Big Data – a flood of data generating a flood of weak signals. Organizations face a growing challenge to identify, classify and process both structured and unstructured data. And it is then the combination of Assurance and Agility that saves us from being flooded by Big Bad Data, and allows us to gain full business advantage from our most valuable asset, namely TotalData™.

## THE TOTALDATA™ VALUE CHAIN

People in the Business Intelligence and Analytics world sometimes talk about “actionable” insight. But this sometimes just means pushing information into dashboards and user-driven spreadsheets. So we think it is important to look beyond this point – we are not just interested in producing useful information, but making sure the information is used effectively. Hence the TotalData™ Value Chain, which goes all the way from Raw Data to “Data as Fuel” – extracting the business value from the data.

**RAW DATA.** Gathering data from inside and outside the organization. Sometimes we can pick up data directly from our own transaction systems, sometimes we can pick up indirect clues from other sources, such as social media. There is a stream of incoming messages and events that provide raw data for downstream processing. Note the importance of smart technology in mining rich interconnected data.

**PROCESSED DATA.** Data is verified, cleansed, refined, consolidated and stored in systems of record. Organizations usually wish to have a “single source of truth” on key items including customer and product, but this remains a struggle for many older



organizations, especially those with a history of merger and acquisition.

**DIGESTED DATA.** From the raw and refined data, we can produce a wide range of management information and insight. This is where we can benefit from the huge recent advances in Data Science and Machine Learning.

**DATA AS FUEL.** The management information and insight is used to support business decisions, drive business processes and deliver value to the customers. When good information is generated and distributed but not used effectively, this represents a value deficit: the final piece of value creation comes when we go from “actionable” to “actioned”, generating real business energy. Thus the value chain goes all the way from the original raw data to its effective consumption by the business.

Most organizations have a Chief Information Officer, and many now have a Chief Data Officer. But here’s a rhetorical question: is the CIO or CDO merely responsible for supplying data and information to the business, or should the CIO/CDO take some responsibility for the effective use of data and information across the business?

## HOW GLUE REPLY CAN HELP

**TOTALDATA™ STRATEGY.** Understanding the particular opportunities and challenges for your business. Establishing an enterprise-wide vision for data and information, and for supporting systems, platforms and technologies. Assessing the current state, identifying short-term and medium-term opportunities and priorities, creating a roadmap for an orderly progression towards an effective TotalData™ organization.

**TOTALDATA™ FOUNDATION.** For many organizations, there are some basic building blocks that need to be put in place. Understanding what data you’ve got, consolidating multiple data stores, establishing a single view of customer and product, building a metadata repository, establishing proper visibility and governance.

**TOTALDATA™ ENGINEERING.** Optimizing the end-to-end flow of data, implementing cost-effective and high-performance platforms, reducing blockages, delays and latency, addressing security and privacy issues. Establishing high volume data feeds from new technologies, including the Internet of Things.

**REAL-TIME INSIGHT.** Deploying the latest technology in data science and machine learning to generate high-quality actionable insight.

**ORGANIZATIONAL INTELLIGENCE.** Integrating business process management, decision support, knowledge management, social media and other collaborative technologies to embed intelligence into all parts of the organization. Transforming business capabilities and business services to create the intelligent business.

Finally, the TotalData™ story doesn’t assume an organization has sorted out the foundations before it attempts anything else. Different organizations will be at different

levels of maturity in sorting out the foundations, and many of those we work with still have a lot of challenges in this area. TotalData™ is not a step-by-step method but a practical framework. Although the foundations are important, you probably can't afford to wait until the foundations completely sorted out before you can even start to look for more insight out of the data. So in TotalData™, we encourage organizations to start making better use of the data now rather than waiting until it is in a perfect state.



Glue Reply is the Reply Group Company specialising in IT architecture, integration and data solutions that drive business value. Pragmatic in its approach, Glue Reply provides independent advice on the technology solutions that achieve clients' business objectives. Glue Reply's core proposition is to help organisations maximise the value from their business change and technology investments by helping them define, design, implement and resource best practice.

Glue Reply works with many companies as a trusted advisor as well as being known for getting stuck into the nuts and bolts of any technical challenge to ensure the desired outcome. Glue Reply's solutions drive operational excellence whilst preparing clients for business transformation, cost reduction and data exploitation.