The Northdoor Data Warehouse Accelerator

This white paper discusses how a single source of consistent, high-quality data is vital in the digital economy, and explains the challenges that enterprises typically encounter when trying to build a data warehouse.

To help enterprises overcome these challenges—which include a lack of internal experience, low data quality in source systems, and ongoing scope creep that drives up cost and timescales—Northdoor offers a proven solution for data warehousing.

Combining highly experienced consultants and field-proven automation tools, the Northdoor approach reduces risk, accelerates deployment and cuts costs by up to 80 percent, ensures flexibility to manage scope changes, and provides reliable up-front information on costs and potential pitfalls.

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Competitive advantage from data

In the digital economy, success increasingly hinges on the ability to turn vast quantities of data into business insight at high speed. Gartner maps out a path from data to insight, from insight to action, and from action to impact; for your employees to go on this journey, you first need to organise all of the data at your disposal.

Whatever your ultimate strategic goal—increase customer engagement, transform offerings and services, optimise operations, boost employee performance—data is the key.

Marshalling your information resources will enable not only faster awareness of the current opportunities and risks, but also predictive analytics, whereby you can use data to steer the business more intelligently.

Becoming a data-driven enterprise depends on gaining access to a centralised repository of high-quality, well-governed data, delivered in real time from all relevant enterprise systems.

Naturally, this data must be stored securely and in compliance with privacy regulations such as the UK GDPR. It must also be easily accessible by business users, typically through intuitive reporting tools and at-a-glance performance dashboards.

- 91% of global executives say effective data and analytics strategies are essential for business transformation.
- 80% of organisations say their organisations are struggling to become mature users of data and analytics.
- 55% of organisations name data silos and data management difficulties as the biggest challenges to data and analytics strategies.
- 51% of executives rank self-service analytics for business users at the top of their investment priorities.[1]

Multiple versions of the truth

Most companies use a diverse array of different applications and databases, usually built up over time as dictated by business requirements rather than according to an overarching plan. As a result, valuable data is typically spread across numerous systems, both on-premises and in the cloud, and held in multiple different structures and formats. This is far from just a technical problem; even where two departments are using the same technology and data formats, they may have different definitions and standards for what is essentially the same data. In such scenarios, different reporting systems can produce wildly different versions of the truth, muddying the waters and preventing accurate and timely decision-making.

In response to the issue of siloed operational systems, some software vendors have introduced off-the-shelf solutions to map reporting and analytics tools directly to source data. However, while these tools can deliver immediate results, the lack of underlying control and reconciliation means that multiple versions of the truth will persist.

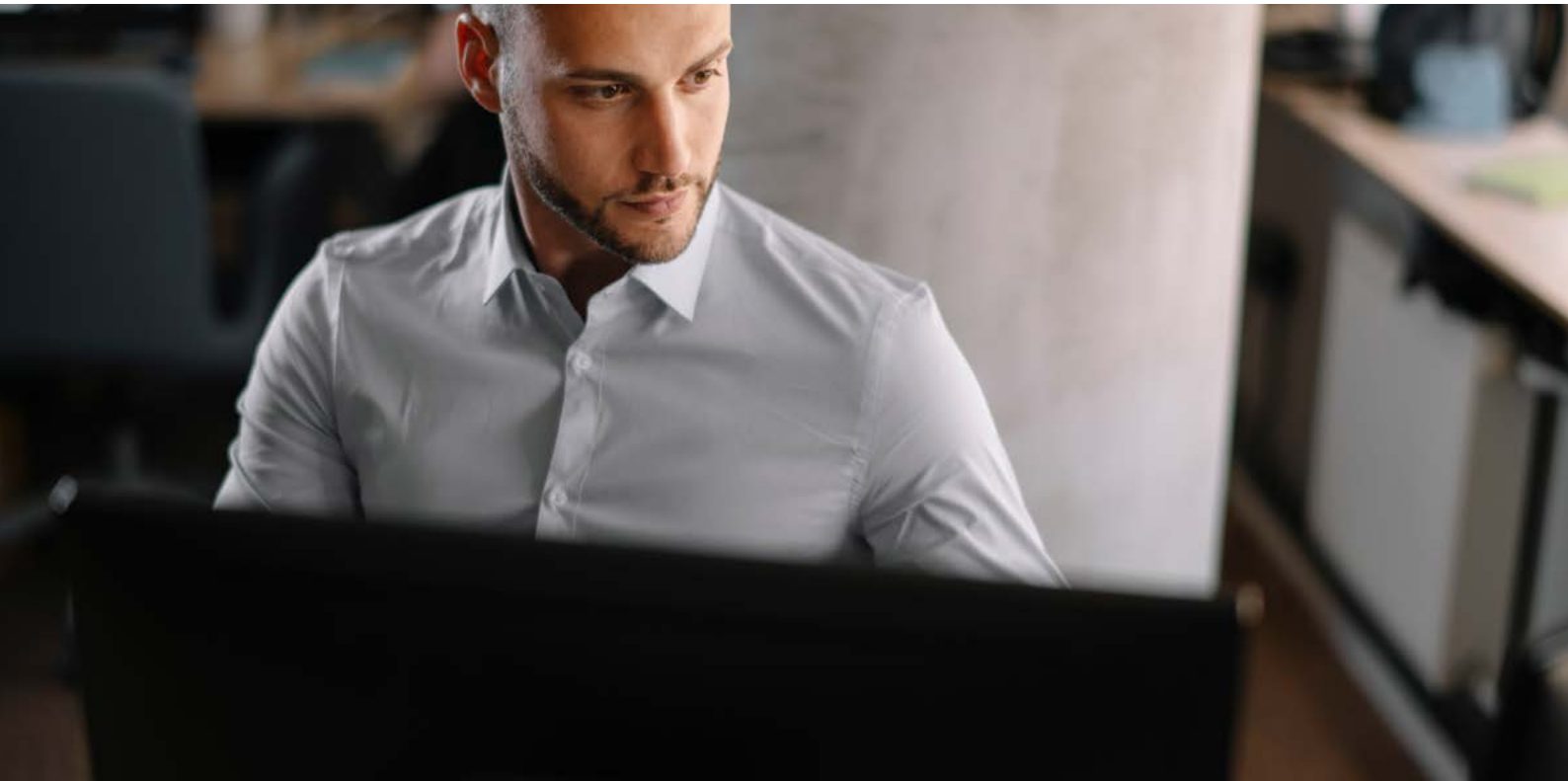
By contrast, data warehouses are designed to deliver a single version of the truth—even if operational systems remain in departmental silos, use different data models and definitions, and store data in multiple formats. Essentially, the data warehouse concept is to create a flexible layer of abstraction on top of the existing systems, extracting and transforming the data they hold according to business rules, thereby building a centralised store of consistent information.

So much for the theory...

As many enterprises have found to their cost over the years, the gap between the promise of a data warehouse and its actual value can be extremely wide. Data warehouse projects have one of the worst reputations in the industry for overrunning on both budget and planned timescales, for failing to deliver the promised outcomes, and for rapidly becoming obsolete as business requirements change.

The sheer scope of a data warehouse project means that it is likely to be beyond the internal competence of most enterprises. Even if a company has people with the appropriate skills in-house, it may not be able to commit them full-time to a data warehouse project. Equally, because they lack experience in delivering data warehouse projects, companies often jump into building a technical solution before completing the necessary groundwork around data standards and data quality.

At the start of a data warehouse project, it may feel as though there are too many unknown factors around both the sources of data and the end goals, raising concerns that the solution will not deliver the desired outcomes. Unknown factors also naturally translate into worries about spiralling cost and timescales. Furthermore, ongoing changes in a company's organisational structures, business processes, market position and strategy can make the end goal into a moving target. The long timescales associated with traditional data warehouse projects means that your business will continue to evolve while the data warehouse project works towards a defined outcome.



The need to adapt the project in-flight to these changes ramps up the cost and introduces delays, creating a vicious circle: adapting a conventional data warehouse as requirements change takes time, leaving the system further and further behind what the business wants.

A data warehouse must be approached as an evolving entity—not as a single, one-off goal. Aside from tackling the considerable technical challenges in simply getting a data warehouse up and running, companies must also create the right organisational structures, procedures and habits to ensure that the data warehouse continues to deliver value in the longer term.

The best-practice approach

When planning a data warehouse, it is vital to put the right foundations in place before you start building anything. This means discovering and analysing the current data resources, classifying the data they hold, identifying data-quality issues, mapping out the target transformations, building validation procedures, and so on. To avoid later creep in both scope and cost, you should identify as far as possible where all the source data is, and the different types of business insight that are sought.

However, it is important not to be too exhaustive: the organisation and the business requirements will inevitably change during the lifecycle of the project, such that there is a limit on the returns from time and effort invested at the outset of the project.

The 80-20 rule may be useful here: most of the value of a data warehouse will come from a sub-set of the most commonly used data, so you should look for quick and big wins rather than trying to solve every potential challenge at the outset.

You should plan to take advantage of best-of-breed solutions for data discovery, classification, validation and reconciliation; they can handle much of the heavy lifting, keeping your project team focused on the end goals.

It is critical to plan and execute an agile approach to delivery, ensuring that your data warehouse project can adapt to the inevitable changes in scope and target outcomes at low cost. With this in mind, you should also design organisational structures and processes to manage, maintain and develop the data warehouse as an ongoing concern.

No two data warehouse projects are exactly alike, and there are no absolutely prescriptive recipes for success. There is significant value in having access to highly experienced consultants who have delivered successful data warehouse projects for other enterprises. These consultants will have seen and overcome many different project pitfalls, and will be able to draw on their past experience to resolve challenges in your project.

The Northdoor Solution

Drawing on decades of experience in helping blue-chip companies turn data into insight, Northdoor has built a packaged, repeatable approach to creating and managing data warehouses. Armed with tooling and frameworks developed through numerous customer engagements, Northdoor experts can take businesses from a blank sheet of paper all the way through to a functioning, scalable data warehouse—rapidly, reliably and at relatively low cost.

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- Automated tools and processes
- A proven methodology developed over multiple engagements
- Experienced consultants with deep expertise across all relevant domains: business analysts, data modellers, architects, data scientists, business intelligence experts; dashboard, visualisation and reporting experts
- Full project ownership—commitment to delivering a working solution
- A simple and clear process for managing change during the project and beyond
- An intuitive project dashboard for progress and issue visibility
- Robust project governance and reporting.

A key differentiator in Northdoor's own tooling for data warehouse projects is the use of source data mapping and translation. Our solution is target-driven: we analyse the warehouse table columns to determine the data required from the source. This enables an initial discovery phase on an agreed set of source data, scoping and sizing the data warehouse, and providing early insight into potential data quality and integrity issues. If at this initial stage you decide that the likely project cost will outweigh the benefits, you will have incurred only a tiny fraction of the total costs and gained a valuable understanding of your source data.

The Northdoor data warehouse tools

NDEX-Accelerate Advanced Data Discoverer

- Finds relevant data quickly across multiple source systems
- Identifies data quality issues at the outset
- Identifies potential Personally Identifiable Information (PII) and other sensitive data fields
- Delivers clear reports on the data landscape and potential challenges.

NDEX-Accelerate Automated Target Mapping

- Enables focus on target rather than source data
- Identifies gaps in data given the targeted insights
- Enables agile methodology, permitting easy and cost-effective adaptation to change during the project lifecycle.

NDEX-Accelerate Automated Data Validation & Reconciliation

- Automates data-type validation checks from the target system
- Ensures data meets business rules
- Helps implement complex validation rules.

Extensive automation delivers speed, consistency, accuracy and low implementation costs.

Benefits of the Northdoor approach

The value of the Northdoor Data Warehouse Accelerator rests on three pillars: speed, agility and proven outcomes. While a traditional data warehouse project can last three years, Northdoor typically delivers in less than 12 months, while saving up to 80 percent of project costs. Our agile approach enables organisations to keep an open mind, adapting the developing data warehouse to unknown future requirements as the project proceeds. And our track record of success with major data warehouse projects for blue-chip companies gives us the experience to manage any unexpected bumps in the road.

During the implementation phase, Northdoor automation tools and methodology reduce the cost and timescales for a typical project to just 20 percent of those for a manually developed solution. In addition, you can also expect to reduce the impact of scope changes during the project—for example, new source data or analytics requirements—by 80 percent.

Once your data warehouse is up and running, the Northdoor tooling remains in place under a perpetual licence, enabling you to automatically implement amendments to your warehouse model as business requirements change. In addition, Northdoor can provide a cost-effective, fully managed service for maintaining and supporting your data warehouse, or can execute a complete transfer of skills to make you self-sufficient.

Northdoor's high-speed approach helps avoid the major challenge caused by scope creep, which is that business objectives may have completely changed by the time the data warehouse is delivered. Our agility helps our customers to keep an open mind, adapting their developing data warehouse to emerging requirements as the project proceeds. We reduce risk further by providing a clear estimate of the likely costs and issues before the project begins in earnest—not least so that you can understand and address potential data-quality issues before you embark on a major project.

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northdoor
Store IT ◦ Protect IT ◦ Use IT

Embrace the advantages of better insight:

- Engaged customers
- Empowered employees
- Optimised operations
- Transformed products and services.

To find out more about how the Northdoor Data Warehouse Accelerator can help you seize the benefits of consistent, high-quality business intelligence rapidly, cost-effectively and at low risk, contact Northdoor today.

References

1 “Understanding why analytics strategies fall short for some, but not for others”, Harvard Business Review Analytic Services, MC214861019

www.northdoor.co.uk info@northdoor.co.uk +44 207 448 8500