Making analytics a first-class healthcare citizen: lessons from Oracle customers
Ovum view

Summary

Technology is being increasingly baked into enterprise strategies and operations, whether in manufacturing, interacting with customers, diagnosing illnesses, or running a hospital. However, for most organizations, there is little or no uplift in IT budgets. In fact, many are expected to do more with less. This presents a real conundrum for CIOs: in addition to running the business, they are handed a growing number of transformational tasks.

The silver lining in this cloud is that such pressure is forcing much-needed change, with enterprises casting a sharper eye on what is not working, inefficiencies, and barriers to progress ranging from duplication to organizational structures and siloed information systems. It also means making the business case more effectively for investment in the people, process, and technology critical to this change.

Analytics (within which we include business intelligence) is arguably at the heart of this, as organizations seek more insight into what is going on and what potential incremental improvements and more substantial changes can be made. We recently heard from a number of Oracle customers working in different verticals about their analytics experiences. In this research note we discuss the major highlights and outline some of the critical steps taken by two healthcare organizations in their journey to make analytics a first-class citizen.

Repositioning for impactful analytics is as much about survival as leadership

Intelligence is useless if you cannot action it. That is why effective analytics is as much about changing data culture, building usage cases, and internal repositioning as the technology itself. Many healthcare organizations are at the start of this transition as they move toward more insight-based care and operations, at a time when systems are also coming under significant cost pressure.

The organizational and process changes that they must make are very similar in principle, if not in detail, to those underway in other verticals. Proctor and Gamble’s experience of transitioning into a much more proactive, “real-time” company has entailed elevating business intelligence to the heart of strategy and operations. This involves substantial internal restructuring including the creation of a central intelligence hub, where teams from across the organization – product development, sales, marketing, and supply chain – make decisions based on real-time customer and sales data. A similar theme emerges at Intel, where sales leaders have partnered more closely with social media and analytics teams to design new processes and hone performance. Results have been highly tangible, with a reduction in cost per qualified lead from $300 to $25 in three years and a 75% improvement in lead conversion.

This repositioning is occurring at a time of flat or constricting IT budgets. CIOs in different verticals testify that the shift to insight-led business is no longer the preserve of market leaders, but essential to stay competitive and optimize ICT investment. This last point is critical. Customers expect and need to do more with IT with little or no extra budget, or as Intel’s CIO diplomatically put it, “budget pressures give us an opportunity to be thoughtful as to where we place their bets.”
There is some leeway in shifting IT spending to areas such as analytics from commodity infrastructure as costs decline. This process however, primarily involves instigating difficult change: taking a harder look at vendor capabilities, making judicious use of cloud, and moving to a modular and simplified overall information management and data infrastructure environment.

Repositioning for effective analytics: two healthcare enterprise perspectives

The analytics universe is vast, with multiple interdependencies and moving parts. This, combined with the large number of source systems and the expanding volume and variety of data in healthcare (ranging from financial to genomic), means the transition to the pervasive use of insights to improve performance and efficiency is a very long and complicated journey. However, there are common concrete fundamentals that are critical to building a strong foundation, framework, and capacity to deliver and utilize analytics. Some of these we explore below through the experiences of two large US healthcare providers: Ascension Health and Lahey Health.

Data foundations and internal resource alignment at Ascension Health

Ascension Health is one of the largest integrated healthcare providers in the US: it has 101 acute care hospitals with 22,229 beds and 155,000 associates, and operating revenues of around $17bn, which roughly equates to healthcare spending in Scotland. Its information challenges typify those faced by organizations incorporating all aspects of care (acute, long-term, community, and pharmacy), namely multiple source systems and information silos.

Ascension launched what it refers to as Project HEART (which stands for Healthcare Enterprise Analytics Re-platforming our Technology) to create the core elements required to support business intelligence development. These will be critical in the shift to integrated care and population health management, and consist of:

- restructuring to create a business intelligence competency center (BICC), which Ascension refers to as its Ministry Intelligence Center (MIC)
- optimizing and expanding internal information management resources with clearly defined roles for business intelligence analysts and extract, transform, load (ETL)/integration teams, and creating a dedicated role for training and business intelligence advocacy
- creating a cost and quality data mart with 13 principal source systems.

In addition to Oracle’s Healthcare Data Warehouse Foundation (HDWF), Oracle Healthcare Analytics Data Integration (OHADI), and Business Analytics Warehouse (BAW) from Oracle Business Intelligence Analytics (OBIA), which it is using with PeopleSoft, Ascension Health is deploying Oracle Business Intelligence Enterprise Edition (OBIEE). Ascension testifies that mapping and integration have been an uphill challenge, due to the number and complexity of its systems and the limited expertise available in HDWF and OHADI due to their relative newness. Conversely, the process of health data integration (HDI) mapping has provided valuable insight into the quality of its data. As well as OBIEE for general analytics, Ascension plans to use Endeca for specialized users.

The scale of integration and data complexity faced by Ascension Health is substantial, but the core principles of integration, data rationalization, and internal restructuring are critical to any organization seeking to move toward an insight-driven model. Project HEART also means Ascension Health will be able to start weeding out duplications of installs and rationalizing application deployments.
Making the business case for analytics at Lahey Health

Lahey Health, which provides acute and primary care and generates annual revenues of $1.55bn, has been expanding over the past few years. The organization has made significant strides in improving efficiency with IT, and business intelligence in particular is playing an integral role in driving growth and further efficiencies. Critical to this has been C-level support in recognizing that analytics must both inform and justify strategies and tactics for changes across supply chain, finance, human capital management (HCM), and clinical domains. A good example of this is the drive for standardization and cost savings. Lahey anticipates potential savings of $52m over the next few years by improving supply chain management (SCM), for example. However, without robust business intelligence from all departments, the rationale for change and the details of this change become much hazier.

More often than not, deployment of analytics within healthcare starts with business intelligence, using predominantly historical data at an individual departmental level, often in finance, with a limited set of source data and users. As usage and scope increases, this approach, and further work, becomes unsustainable without greater executive buy-in to the benefits of elevating it not only within IT but throughout the organization. Lahey Health’s experience underlines the criticality of a consistent cross-departmental approach to analytics, from supply chain to finance and clinical departments, in order to create the main key performance indicators (KPIs) used by their management team.

As analytics become more critical, organizations will have to increase spending on a more centralized technical-support approach to manage what Lahey refers to as “the non-trivial complexity” of applications. This additional spend can be mitigated somewhat by seeking greater economies of scale and standardization within the business information stack. It also means assessing product capabilities more rigorously – bringing electronic health record (EHR) data into more powerful next-generation warehouses, for example: Lahey integrates its Epic EHR data into an Oracle data warehouse. The company has also deployed PeopleSoft, and it is looking to provide this and other applications as a platform to external organizations that it acquires or partners with.

Finally, Lahey is making efforts to close the loop and ensure analytics data is acted upon and investment is not wasted, thereby ensuring that analytics has permanent, not temporary, first-class citizenship within the healthcare enterprise.

Appendix

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Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum’s consulting team may be able to help you. For more information about Ovum’s consulting capabilities, please contact us directly at consulting@ovum.com.
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