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DATA GOVERNANCE ON BOARD

Air France-KLM is building
its MDM strategy on
top of a governance
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MASTER DATA MANAGEMENT (MDM) is a journey without end, but not without purpose. It is, moreover, a journey many large organisations across Europe are undertaking. In the process, they're discovering that MDM requires robust data governance as a sine qua non, and that the foundations of good governance are effective data integration and data quality programmes.

Such are the most salient findings of the three articles in this issue of *IT in Europe: Data Management & BI Edition*.

MDM programmes designed to ensure data consistency are gathering pace as organisations endeavour to [get more business value from their data](#) in terms of increased revenue and better customer insight. But IT executives tend to be dangerously ahead of other senior management in "getting" the value of the MDM journey.

Mergers often underpin MDM efforts. We look at the [experience of the European aviation industry](#) in this issue, with Air France-KLM and British Airways to the fore. Sound data governance emerges as a prerequisite for sustainable MDM from these case studies.

Within this narrative of the necessity of having a strategic plan for governance and MDM, there is room for more tactical gains at the business intelligence level. And so we discover parcel carrier GeoPost UK, owned by La Poste, making [cost and efficiency gains from open source BI software](#). The main driver? The company's CEO. ■



Brian McKenna

UK Bureau Chief, SearchDataManagement.co.UK

Data Governance Key to MDM Takeoff

Air France-KLM is looking to develop a sustainable master data management programme, and proper data governance has emerged as a bedrock prerequisite.

BY JESSICA TWENTYMAN

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LIKE MANY ORGANISATIONS managing huge stores of potentially valuable data, Air France-KLM believes it has much to gain from an effective master data management (MDM) strategy, both in terms of streamlining business intelligence (BI) processes and delivering reliable business insights to operational teams. At the same time, the airline group knows it has much to lose by rushing headlong into a decision on MDM tools and deployment strategies without carefully laying the groundwork first.

That's the view of **PHILIPPE PROFIT**, who runs Air France-KLM's business intelligence competency centre (BICC). For Profit and his team, he said, the time has come "to set a new bearing and to move in a new direction with BI," not least because of the need to achieve a greater level of consistency between the data held separately by the two airlines that merged in 2004 to create the Air France-KLM group.

Each company—Air France and KLM—has its own data on flights, crews, engineering and maintenance, ground services and commercial back-office operations. And both airlines have their own distinct histories in managing master data, Profit said.

So before embarking on an MDM project to marry the two sets of master data, Profit believes it is essential that a rock-solid data governance programme be in place. "Without data governance, effective use of data is always going to be limited, and any kind of conflict resolution in regards to master data will be a dead-end effort," he said.

That view is echoed elsewhere. Rob Karel, an analyst with IT mar-


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“Without data governance, effective use of data is always going to be limited, and any kind of conflict resolution in regards to master data will be a dead-end effort.”

—PHILIPPE PROFIT

ket research company Forrester Research, stated that “data governance roles, responsibilities, policies, processes and organisational alignment must be a prerequisite for any MDM architecture or technology decision.”

DATA GOVERNANCE MATURITY: NOT THERE YET

But while MDM maturity involves a critical dependency on data governance, the conversations that Karel and his team have with Forrester clients suggest that very few have achieved that level yet. In a November 2010 survey of 188 IT professionals with MDM experience, only 17% of those asked to rate their organisations on data governance maturity felt that a high level had been reached. Eighty-one percent, by contrast, said their organisations displayed “average” or “very low” maturity.

Like Air France-KLM, many organisations are interested in MDM: Forrester saw a 90% increase in MDM-related client inquiries between the start of 2008 and the end of last year, according to Karel—and that, he noted, doesn't include the significant growth in complementary inquiry topics, including data governance.

Karel expects the slow evolution of MDM to continue over the course of this year. "But most likely three or more years will pass before the barriers to adoption for MDM start to crumble for real," he said. "Organisational barriers like executive sponsorship, lack of data governance and lack of alignment with business priorities remain significant hurdles that won't be overcome quickly."

Karel's message is clear: Only when the business as a whole takes responsibility and accountability for the master data that affects business processes and decision making will MDM truly become a strategic investment that can deliver significant business value.

For many organisations, said Karel, there is still much work to do in getting the technical competencies and infrastructure in place for effective data integration before MDM can even be considered. Or as he put it: "Can you move data from point A to point B with integrity and confidence? The ability for your organisation to manage both the scheduled batch and near-real-time transactional movement of data from one system to another system serves as a critical enabler for a complex MDM architecture."

Improving data integration efficiency has become a major focus at

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Air France-KLM believes it has much to gain from MDM—but only if it does the required groundwork first.

another airline, British Airways, which over time will face new BI challenges arising from its acquisition last year of Iberia.

In a current project due to be completed later this year, BA is migrating the integration platform that it uses for shifting data from operational systems into its data warehouse, known as the BA Integrated Commercial Warehouse (ICW), from a single node to a multi-node grid architecture. The higher scalability and availability that this new architecture delivers will mean a big improvement in data ware-

housing service-level agreements (SLAs), according to Ian Johnston, IT operations manager at BA.

“Right now, our SLAs work on the basis that reports are delivered between 9 a.m. and 5 p.m., from Monday to Friday,” he said. “By moving to a multi-node architecture, we’re in a better position to deliver reports on a 24/7 basis, because we’ve now got failover options for data integration. In this way, the ICW becomes a 24/7

warehouse.” In addition, the upgrade will allow the company to extend its data integration activities into areas that it doesn’t currently support, such as crew rostering.

Going forward, Karel said, other organisations will need to invest in foundational data integration and data quality competencies, while continuing to evangelise organisational support for a formalised data governance and MDM programme.

“By moving to a multi-node architecture, we’re in a better position to deliver reports on a 24/7 basis.”

—IAN JOHNSTON

*IT operations manager,
British Airways*

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MDM, DATA GOVERNANCE ON THE HORIZON AT AIR FRANCE-KLM

At Air France-KLM, meanwhile, the groundwork for MDM continues. The BICC, a cross-functional organisational team, now comprises an executive steering committee, a data governance council and a team of data stewards operating in different parts of the business.

According to **XAVIER HENDERSON**, a senior consultant at Air France-KLM who specialises in MDM, the data governance council will be guided in its activities by the seven objectives of the “Data Governance Council Charter,” published by Jill Dyché and Evan Levy of Baseline Consulting in their 2006 book, *Customer Data Integration:*

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"We're very conscious that, once we start down this road, we can't stop—hence the role of data stewards in our governance efforts."

—XAVIER HENDERSON

Reaching a Single Version of the Truth. Above all, the role of the council is defining and putting in place standards, definitions, business rules and policies to help ensure that Air France-KLM's yet-to-be chosen MDM system will scale over time, Henderson said.

Data stewards, he added, are already in place across Air France-KLM's many business domains "but as yet without the overarching data governance piece that will tie their work into a coordinated, companywide strategy."

Once data governance policies and strategies are clearly defined—and only then—it will be time to move ahead with MDM. Henderson said he plans to start small by "focusing on noncritical systems in areas of the business where there are already some MDM achievements and skills."

And every MDM proof of concept that Air France-KLM performs will be accompanied by a clear business case. The proof-of-concept exercises will be split into two phases: Phase one will focus on data relating to marketing and communications, air traffic and ground services operations, while phase two will focus on finance and human resources.

“We’re very conscious that, once we start down this road, we can’t stop—hence the role of data stewards in our governance efforts,” Henderson said. These data stewards are responsible for the integrity of

data generated by their business units, along with its associated metadata. For example, it’s their job to ensure that each data element (such as a customer postcode) is clearly defined, gets used consistently and doesn’t conflict with other data elements.

That’s in line with guidance from Forrester, expressed in a report issued in February with Karel as the principal author, titled *Trends 2011: It’s Time For The Business To Own Master Data Management Strategies*. “Organisations,” the report said, “will need to consider MDM a multiyear, multiphase

effort that can and should start small, targeting the critical few lines of business, applications or geographies that can realise the quickest benefits—with additional parts of the business deriving value from a standardised MDM solution over time.”

But the MDM tool of choice at Air France-KLM is far from being decided. In fact, said Profit, it’s likely that several tools will be used, according to the needs of different business domains. “The way we’ll manage master data relating to engineering and maintenance, for example, will be very different from the way we’ll manage master data relating to customers,” he said.

For now, getting the data governance programme off the ground takes top priority. And getting it right is critical to Air France-KLM’s future business success, according to Profit. “Our data is valuable,” he said. “All businesses say that, but for us, it’s not just lip service.” ■

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—PHILIPPE PROFIT

BICC manager, Air France-KLM

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Corporate Focus on MDM Gets Sharper

Master data management programmes are gathering pace in more and more organisations. But a solid business case and high-level buy-in are musts.

BY CATH EVERETT

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INTEREST IN master data management (MDM) is “going through the roof,” in the words of one analyst, as organisations struggle to exploit a recovering global economy and comply with ever-growing regulatory burdens while hampered by poor-quality business data.

In fact, many enterprises have been attempting for a good 15 years or more to create so-called golden records or 360-degree views from siloed data held in transactional databases and applications such as ERP and CRM systems—often via data warehousing projects.

But it's only over the last five or six years that efforts have started being made to create a single, trusted, reconciled and consistent master file for different types of data—financial, customer or product information, for example—to serve as a common point of reference across the enterprise.

Following that path and adopting an MDM strategy can enable an organisation to “create common global views of data to ensure that everything is consistent,” said the master data lead at a large international engineering company that started its MDM programme in 2000. The ultimate aim is improving corporate reporting as well as the effectiveness of business decision making, added the MDM manager, who asked not to be identified.

According to **ANDREW WHITE**, a research vice president within Gartner's information management team, the appeal of that vision is such that, despite their complexity, MDM programmes have now “crossed the chasm” and are starting to move into a mass-market adoption phase, with “interest levels going through the roof.”

An online poll undertaken by Forrester Research in November 2010

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"[CFOs] are held legally accountable for the financial data that they're holding, and so they're usually very keen to ensure that it's valid."

—ANDREW WHITE

confirms this view. Of the 188 IT professionals questioned, 55% said they had already implemented or were in the process of implementing an MDM strategy, or they were expanding their existing MDM initiatives, often out of an initial pilot phase.

Uptake is particularly high among companies operating in deeply regulated industries such as financial services and pharmaceuticals, which were early MDM adopters. But MDM activity is also starting to spread to other sectors, including manu-

facturing, transportation and distribution, with many organisations being keen simply to get a better handle on their business performance.

During the global economic recession, the focus of most MDM initiatives was on trying to cut costs and boost internal process efficiency. But White said

that has changed: "There's been a shift back to where we were a few years ago, and the drivers are now revenue enhancement, improving customer service, business growth and regulatory compliance. So there's a much broader mix."

THE NEED FOR A ROBUST BUSINESS CASE FOR AN MDM STRATEGY

Because few CEOs or even business functional directors, such as sales, marketing or operations leaders, recognise that having a single coherent view of key corporate information is strategic for the ongoing competitiveness of their business, the likelihood is that IT or data management executives will need to make a solid business case to win them over.

Indeed, according to Forrester, 59% of MDM programmes that took place last year were driven by IT executives, while business managers took the initiative in a mere 30% of them. But for once, the finance director could prove to be a key ally.

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"IT typically hasn't got the authority to get the business to change what it's doing, so if you have an MDM programme driven by IT, it'll be an uphill struggle."

—ANDY HAYLER

"Buy-in at very high levels is required, but we've seen a lot of success in the office of the CFO," White said. "They're held legally accountable for the financial data that they're holding, and so they're usually very keen to ensure that it's valid."

Such buy-in, wherever it comes from, is crucial, not least because enterprise MDM programmes tend to be expensive multiyear initiatives that require large amounts of change management activity.

And that's something IT can't enforce on its own, said **ANDY HAYLER**, CEO of research firm The Information Difference. "IT typically hasn't got the authority to get the business to change what it's doing, so if you have an MDM programme driven by IT, it'll be an uphill struggle,"

Hayler explained. "MDM is not primarily a technical problem. At the heart of this is trying to get people to change the way they do things when they don't want to change or give up power."

But, as ever, when trying to build an effective business case, a key consideration is to link any arguments to the organisation's strategic high-level goals and objectives in order to define potential business benefits and demonstrate what success will look like.

For example, Chris Farnworth, lead information architect at Lloyds Banking Group, told attendees at IRM UK's annual MDM summit in London this spring that the organisation had been working towards a single view of its customers for the last 15 years. "Banks have evolved from being very account-centric to being customer-centric," he said. "The critical thing is how to do that, and MDM helps."

After a history of merger and acquisition activity, which included the purchase of Bank of Scotland owner HBOS, Lloyds found that by

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A LONG-TERM PROPOSITION: KEEPING MDM STAKEHOLDERS ENGAGED

ANOTHER THING to keep in mind, according to the master data lead at the large engineering company, is that MDM initiatives are inevitably long-term endeavours. "MDM is not a project but a journey, and it never stops, so it has to be sustainable from the outset," he said. "And because it's a building block for other things, it's important to keep stakeholders engaged."

As a result, he's always careful to attend quarterly meetings with senior business managers who sit on the organisation's MDM steering committee, in order to both update them on progress and make the business case for continued activity. The steering committee sets the MDM strategy and ensures that the ongoing work aligns with the firm's top business priorities.

"At stakeholder meetings, you have to show that doing this would enable that and continually reinforce that we can now do this but we couldn't do it a year ago," the master data lead said. "Regular communication is important because the risk is that stakeholders could lose focus over time."

The bottom line, he added, is that MDM success is measured over the long term. "There are no quick wins with MDM," he said. "If you just do a six-month splash and then leave it, it'll give you nothing." ■

2008, it had a total of about 2,000 applications. That was making any attempts at introducing business or underlying system changes “excessively complicated,” Farnworth said. By harnessing MDM, “we are trying to produce a common business model that gives us the flexibility to cope with all of those [disparate systems],” he added.

Another argument in favour of an MDM strategy is that many large companies have trouble obtaining straight answers to ostensibly straightforward questions, such as what are their most profitable customers, products or channels. They also often have no idea how much such failures to segment and analyse data effectively is costing them.

In the case of multinational organisations, this situation often comes about because each subsidiary has implemented a different instance of

the corporate ERP system, all employing different definitions of apparently standard terminology such as profit or margins. As a result, there may be “no consistent way of allocating costs and calculating profit margins across multinationals, as there are always little differences,” Hayler said. “But the aim of MDM is to try and fix all that.” ■

“Banks have evolved from being very account-centric to being customer-centric. The critical thing is how to do that, and MDM helps.”

—CHRIS FARNWORTH

*Lead information architect,
Lloyds Banking Group*

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Open Source BI Delivers the Goods for GeoPost

There's a strong case to be made for business intelligence investments in the transport sector. And for one parcel carrier, the business case was based on open source BI tools.

BY LINDSAY CLARK

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FROM A TO B. It sounds a straightforward proposition. But with a myriad of obstacles in between, logistics and distribution firms make an art out of getting it right for the right price. Journey times, legal requirements, traffic congestion, fuel consumption, maintenance costs and customer service quality all vie to influence the bottom line.

In these circumstances, you might think top-tier business intelligence (BI) vendors would be first in line to help transport companies negotiate the right route. However, best in class is not always the best fit with business needs, as one of the UK's leading express parcel carriers has found.

GeoPost UK, which is owned by French operator La Poste, was faced with a proliferation of performance data after a system that generated Excel spreadsheets from a multidimensional database was overtaken by business requirements. The company's use of data had become fragmented, and business users wanted to be able to find more detail on particular metrics, such as service problems or revenue blips.

Vernon Adams, GeoPost UK's head of technology architecture and strategy, said things started to become unwieldy after the users were given access to the data warehouse via Excel. "What happened then was that the user base built up their own information systems from that summarised database, and as the business has grown they want to go a bit lower and understand what has driven particular figures," Adams said.

“They are all producing information and applying their own filters and exceptions, and of course, you are getting a different picture from different parts of the business about the same information. So the business bought into the goal of having a single version of the truth, and that we invest in a new business intelligence system to enable reporting and analysis.”

What wasn't foreseen, though, is that the BI system would end up being based on open source business intelligence tools.

TOP-TIER BI SOFTWARE GIVES WAY TO OPEN SOURCE BI TOOLS

Initially, several leading BI vendors were invited to present their software to the board, using GeoPost's own data to create executive dashboards. However, the results were underwhelming, particularly as the most costly came with a £1.5 million price tag.

GeoPost could have afforded the required investment, Adams said, but the board members didn't see value in the proposals.

“I could see the guys in the board room thinking, ‘This is nothing special here; I'm not able to analyse this, and there's so many different tools,’” he said. “You start to look at the price, and with all the training, it was mounting up.”

Next port of call was open source BI tools. Adams found that although they didn't always have the bells and whistles of the top proprietary BI software suites, they were able to perform the same core tasks. And while the big-

name suites had been put together from different products, often following acquisitions of vendors, the open source BI offerings were built through open projects that Adams said were easier to deconstruct.

This allowed the GeoPost IT team, working with an open source management consultancy, to build its own bespoke dashboards, based on years of experience with internal business needs, and plug in open source BI and database software under the bonnet.

“I could see the guys in the board room thinking, ‘This is nothing special here; I'm not able to analyse this, and there's so many different tools.’”

—VERNON ADAMS

Head of technology architecture and strategy, GeoPost UK

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"I've been with the business a long time. I understand all the metrics and the management reports," Adams said. "It took some organisation to assimilate it, but we created a set of dashboards where 700 people are all looking at the data in the same way."

As a result, GeoPost UK's business analysts can see the direct links between operations performance measures, such as delivery times, and business metrics, such as profitability and level of service.

Each customer is quoted a delivery price based on a particular demand profile that includes volume of parcels, together with size and delivery distance, and so on. If the customer's use of the parcel service deviates from the profile, analysts can see that from the previous day's data, enabling them to adjust their way of working based

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BI CREATES OPEN ROAD FOR BETTER DECISION MAKING

SAVINGS ON FUEL COSTS are a potential quick win for business intelligence investments in the logistics and distribution industry (see page 17). But there's an even wider scope for BI to help transport firms with more sophisticated decision making, according to Gartner analyst Andreas Bitterer.

With greater computing power in cab, combined with satellite location data, there is potential for greater application of BI technologies to help improve customer service and reduce delivery costs, particularly with the larger firms in the sector, Bitterer said.

That includes real-time route optimisation, by which data about the locations of vehicles can be combined with traffic flow data to assess whether it's worth making changes to delivery routes to meet last-minute orders placed while trucks are in transit.

"I can decide that it makes sense to do a little detour and add a little time and cost but still be beneficial overall," Bitterer said. "That's quite a bit of algorithms that need to kick in to find out how we optimise the route. Not many firms do this, but those that do benefit from data mining and analytic capability."

Beyond that, he added, BI tools can help transport firms find the best locations for warehouses and distribution hubs by combining transport data with information from sales, human resources and other internal systems as well as external data such as property prices. ■

on the open source BI findings.

“We’ve introduced a number of operational processes which are driven now from the dashboards,” Adams said. “It’s had a significant improvement in the way that we manage at depot level and helped from a profitability and account retention point of view.”

Key to getting GeoPost UK’s managers to use the open source BI system was engagement right from the top. “The CEO is the main driver behind it. If we didn’t have the CEO buy-in, it would have been seen as an IT project,” Adams said.

HIGH FUEL COSTS STOKE BROADER INTEREST IN BI

The overall case for investment in BI technologies in the transport sector is compelling, not least because high oil prices have exacerbated one of the greatest cost pressures in the industry—that of fuel.

Gartner research vice president Andreas Bitterer said the proportion of turnover spent on fuel in the logistics sector is considerable. But he added that the fuel bill could be cut dramatically by recording operating data with on-board digital tachographs and analysing the data with BI tools, whether they’re commercial products or open source BI software.

“I’ve spoken to a trucking company that saved \$60 million in fuel,” Bitterer said. By assessing the influence of subtle differences in acceleration, breaking and engine revs, the firm was able to nudge driver behaviour by using incentives to encourage more efficient operation of vehicles.

“That kind of information is quite interesting because it has a huge impact on the fuel consumption of the truck,” Bitterer said. “If you are driving in a certain style, tyres and fuel last longer. Times by 10,000 or 50,000 trucks, that’s a lot of money. That’s total BI: using information to make business decisions.” ■

“If you are driving in a certain style, tyres and fuel last longer. Times by 10,000 or 50,000 trucks, that’s a lot of money.”

—ANDREAS BITTERER

*Research vice president,
Gartner*

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