

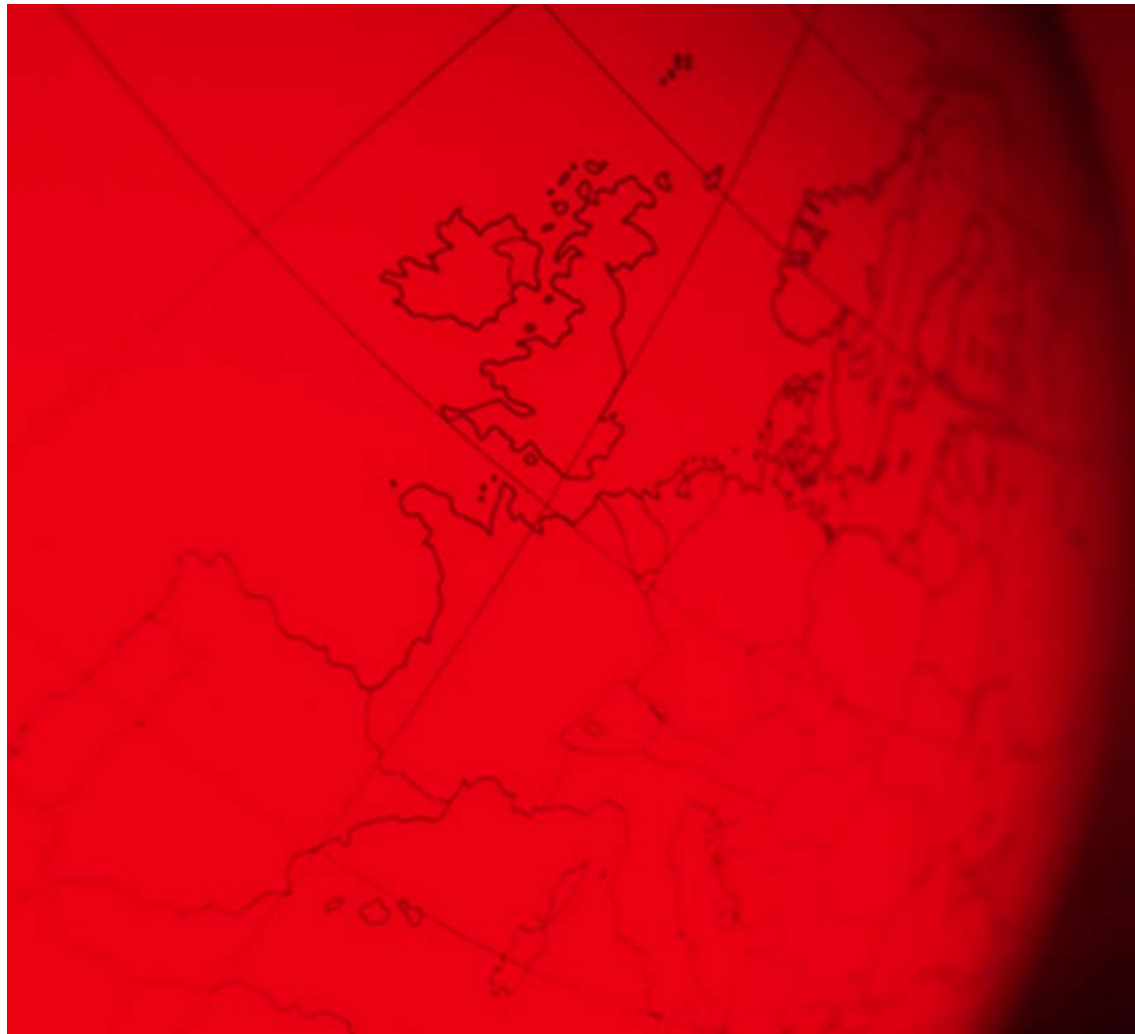


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GUIDEBOOK INFORMATICA



Corporate Headquarters
Nucleus Research Inc.
36 Washington Street
Wellesley MA 02481
Phone: +1 781.416.2900
Fax: +1 781.416.5252

Nucleus Research Inc.
www.NucleusResearch.com

THE BOTTOM LINE

Companies use Informatica to make data migration projects more standardized, repeatable, and consistent. Whether they are rationalizing, integrating, upgrading, or migrating to enterprise applications, teams can reduce project risk and cost and improve project predictability with Informatica.

SITUATION

As companies look to leverage CRM, ERP, and BI applications to improve productivity and deliver value, much depends on the accessibility and fidelity of the data that is within these applications. Most projects involve data extraction, loading, and validation phases, but the importance of properly migrating data from various databases and applications is often underemphasized in application deployment, rationalization, and integration projects. Project teams often rely on manual and inconsistent tools and practices when migrating data, which results in – at best – unpredictable and labor-intensive project schedules and – at worst – projects that fail to deliver.

Poor data migration, integration, and quality are common factors in failed or delayed enterprise application projects.

Companies have two choices when data migration problems impact a project: delay the project's delivery or reduce its scope. While delaying a project can have a short-term impact on company performance and IT's credibility, reducing the number or quality of data sources to be included has a permanent negative impact on the effectiveness of the application and the bottom line.

Informatica

Informatica provides data integration and quality software and services that enables companies to better manage data integration, migration, and quality.

Components include:

- Informatica PowerExchange, which enables the access, discovery, and integration data from a broad variety of applications, platforms, and databases. The solution is capable of accessing a broad variety of data types, including content from relational databases, semistructured data, and unstructured data.
- Informatica PowerCenter, which enables users to create data migration mappings for extracting, converting, and filtering data, in either batch or real time, using a graphical user interface. It supports a number of different applications and data formats and enables data migration without intermediary staging of data.
- Informatica Data Explorer and Informatica Data Quality provide tools for data analysis, standardization, and mapping. Data analysis tools enable identification, categorization, and quantification of low quality data. Data cleansing and parsing capabilities enable the cleansing, standardization, validation, enhancement, and enrichment of enterprise data, including customer, product, financial, inventory, and asset data. Data matching enables the de-duplication of records prior to a consolidation process.

Key benefits Nucleus identified from using Informatica include:

- Improved productivity. The automation of data-related architecture and development tasks means that less time is spent on labor-intensive tasks such as hand coding of mappings and reworking of applications because of data quality problems.

Nucleus found Informatica users can increase their productivity on data migration projects by an average of 30 percent.

- Shortened project cycle times. Spending less time on hand coding for data-related tasks means teams complete projects faster. More importantly, better data management prevents data problems from disrupting the critical paths of the projects they support.
- Better project deliverables. When project teams can automate the migration, integration, and quality control of data, they spend more time analyzing the data involved in a project. This enables them to better meet the original business requirements of a project, as well as maximize the amount and quality of data in a project.
- Higher ROI. When projects are completed faster, on time, and with maximum scope of data, they generate higher ROIs.

This guidebook is designed to help companies identify and understand the benefits of using Informatica for data migration and ways to maximize those benefits. As part of its research to develop this Guidebook, Nucleus analyzed the use of Informatica tools at a number of companies, including Lockheed Martin, RJ Reynolds, Virgin Media, Wellpoint, Thomson Financial, Scottish Power, and CapGemini.

FIVE BEST PRACTICES

Improving data migration is about more than productivity improvements and data mappings. It's also about making overall application projects less risky and unpredictable so that they can be delivered on budget on time, and without any reductions to scope. Nucleus found that companies followed a number of best practices in order to not only improve the productivity of the people who work on projects, but also to improve the quality, benefits, and deliverables of the IT projects that depend on data migration.

Maximize the productivity benefits

Informatica enables project team members — IT staff who build, develop, and test in order to complete data migration projects — to significantly improve their productivity because it replaces the old custom-code development model with a graphical user interface for automating the creation of data mappings and provides tools that automate the analysis, matching, and cleansing of data. Productivity is further improved because the mappings that Informatica creates are specifically designed for reuse. Companies that aggressively pursued reuse in Informatica improved not only productivity, but also project cycle times:

- *"I've done a few internal surveys about Informatica. People generally said they were able to work faster because of the graphical front end. Some people said productivity improved by as much as 50 percent."*
- *"Using Informatica meant there was no hand coding of mappings for developers. This shortened the project cycle time by about 50 percent."*
- *"Using Informatica, I can take on more work with the same headcount."*
- *"Because of data mapping in Informatica, and the fact that you can reuse the mappings, the data migrations are faster and stay off the critical path of the project it is part of."*
- *"It's a very visual solution. And it requires a lot less coding. This makes development easier, and it's easier to identify and fix programs."*

Nucleus found that using Informatica to improve productivity for data migration led to project cycle time reductions of up to 50 percent.

Keep everyone aligned on data objectives throughout the project

Because Informatica provides readily understood visual description of data flows, companies should use it to support conversations, collaboration, and greater alignment between IT and the business analysts who help define the end users' business requirements. Most of the customers Nucleus analyzed used Informatica-based data mappings as the basis for prototyping, as well as for conversations among project team members, business analysts, and other non-IT project stakeholders. Collaboration like this enables IT to establish, display, and fine tune its understanding of business requirements in a project. And because the collaboration is based on graphic depictions of data sets, applications, workflows with minimal technical language or jargon, it minimizes misunderstandings that can result in project rework.

ROI tip: Reduce rework by using Informatica's graphical depictions of data mappings to ensure alignment between IT and business analysts, so that end users get the project deliverables they want.

IT staff, business analysts, and project stakeholders benefited because Informatica enables collaboration in a number of ways:

- *"The mappings are very straightforward. It's easy to show, even to a non-technical person, the data mappings from source to destination. We often use it to confirm and fine tune business requirements."*
- *"There's increased confidence between the functional user and the developer, because you can see what mappings were selected and easily see what was done."*

Explore data migration issues early and often

Giving IT the support it needs for data migration is about more than rapidly developing code or moving data from their sources to their destinations — it's also about maximizing both the scope and usability of data in a project. Typically, IT projects that involve large volumes of complex data sets run into problems in the testing and deployment stages because teams spent too much time on tactical, labor-intensive tasks such as hand coding data mappings and not enough time analyzing the data and maximizing its quality and usability. The Informatica

customers Nucleus analyzed said that using Informatica helped them minimize project disruptions caused by data problems, and to keep data projects off of the critical paths of the projects they were supporting. Informatica users take advantage of better data usage by reducing rework, testing, and project cycle times:

- *"Informatica does validity checking on the data. It's the place where we first find the errors. It's better to find data problems this early in the process, otherwise you have to handle the items one-by-one when they are in the transactional system, which is a lot more expensive."*
- *"Informatica shortens our project cycle times by about 30 percent because you are getting a closer look at the data earlier in the project. This means there is less debugging, rework and finger pointing later on because of problematic data in the application."*
- *"There were gains around testing. You're not writing code, therefore you're not making coding errors, which are really hard to find and fix. It's not coding, there's more point, click, drag, drop, and less opportunities for error."*

A company that will save \$8 million a year by combining account records and accelerating accounts collection will lose \$400,000 annually if just 5 percent of the intended data is removed from the project due to data migration problems.

Increase project ROI by decreasing project risk

Improved productivity, better data migration, and accelerated delivery of projects that meet the original requirements of business users all add up to higher ROI. This is because projects that require the migration of large amounts of data are typically subsets of larger projects that have important cost reduction objectives and involve strategically important data sets or enterprise applications.

Nucleus found that the typical Informatica user was able to improve application deployment, upgrade and consolidation project cycle times by improving the quality of data and preventing data migration problems from disrupting the critical paths of their projects.

When it comes to projects with this scale and potential for cost reduction, accelerating project completion by even several months would result in ROI far greater than the productivity benefits for IT project team members. Companies used Informatica to achieve higher ROI in a number of ways:

- *"We used Informatica to consolidate from 6 billing systems to just one. So there was a huge ROI benefit. Because we used Informatica, the data migrations were kept off the critical path, there was no descoping of the project, and we delivered it a lot faster."*
- *"Informatica helped us more rapidly migrate away from 20 legacy finance applications. The annual maintenance that we'll eliminate is in the hundreds of millions. I don't know the hard numbers but there is lots of ROI."*
- *"We originally brought in Informatica as a standard ETL tool for an SAP migration project. Since then we've used it to retire 65 legacy applications and created interfaces with another 60."*
- *"We use Informatica's impact analysis to identify what data extracts will be impacted by a given change to source data. So you can estimate the scale of*

work needed. This is important – we plan our resources better, which leads to projects being on time, on scope, and on budget.”

If a telecommunications company is rationalizing its billing systems in order to eliminate \$5 million in annual support costs of redundant systems, accelerating this project by six months with Informatica will save \$2.5 million.

Update the role of data migration in your cost structure

In the case of projects that require extensive data migration, companies should look to Informatica tools to significantly reduce the cost of completing these labor-intensive tasks. Automation of data mapping — as well as data integration and analysis — increases the productivity of architects, developers, testers, and project managers. Additionally, improved quality of mappings, migrations, and data make projects less unpredictable. Companies should be careful to take advantage of these benefits by improving their project scoping and shifting towards fixed-cost budgeting for their projects.

Companies using Informatica should be careful to reevaluate the costs of their projects and collaborate with consultants on reducing costs:

- *“Our consultants saw the benefit of using Informatica. We have a complicated outsourcing arrangement, and we negotiated for the cost of the project to be reduced by the cost of our Informatica licenses.”*
- *“Once you’re using Informatica, make sure its benefits are built into the pricing of your consultants’ proposals.”*

FIVE FINE TUNINGS

Informatica changes the role of data migration from being a low-level tactical task to a function that can improve the scale, benefits, deliverables, and cost structure of the IT initiatives that data migration projects support. Nucleus found that customers followed a number of best practices that enabled them to maximize both the scale of benefits from Informatica and the breadth of IT staff and projects that achieve them.

Anticipate reuse opportunities

Reuse of data logic and rules created in Informatica results in significant productivity benefits. But this doesn’t happen automatically, because the creation of productivity-improving reusable assets involves a tradeoff. The larger the core functionality a reusable asset has, the less customization will be required for reuse. On the other hand, the smaller the core functionality an asset has, the more broadly it can be reused. IT staff should resolve this tradeoff at the outset of a project by analyzing its data sources and destinations in order to anticipate what kinds of data rules, logic, and mappings will be required. As assets are created, they should be set aside for reuse on a selective basis, so that the minimum number of reusable assets can accomplish the maximum number of tasks anticipated for that project. Once reuse is underway, these assets should be continually refined and improved.

As projects proceed, teams should take advantage of Informatica by pursuing an aggressively iterative approach. Creating reusable mappings without custom code means that it's easier to repeatedly convert and test data in order to continually improve the quality of the final deliverable of a migration project and reduce project risk.

End users had a number of best practices to both enhance reuse and minimize the amount of customization required when reusing mappings:

- *"We're using Informatica for a 2-year project. We're reusing the same mappings and rules from the beginning. We refine them, so they just get stronger and stronger as the project proceeds."*
- *"We minimize the amount of time creating code so that more time is spent analyzing, understanding, and defining the data being migrated."*

Aim for consistent adoption

The more broadly and consistently Informatica is adopted, the easier it will be to manage for reuse of mappings and rules, maximize the benefit of improved productivity, and earn ROI on an investment in Informatica. Broad and consistent use of Informatica also has tactical benefits, since consistency of adoption enables people to work on a broader variety of projects, exchange source code with one another, and collaborate more effectively. Companies that maximized ROI through broad adoption had applied a number of approaches:

- *"If you have lots of different applications, databases, and platforms, but you adopt Informatica narrowly, you're leaving some benefits on the table."*
- *"Consistency is really important. Without Informatica, forty developers map data forty different ways. If they're all on Informatica, there is a consistency in data transfer that leads to quality improvement for the overall project."*
- *"Before Informatica, I had my own library of programs I'd use. But someone couldn't look at my code or work in progress and know what I was doing. This is no longer the case."*
- *"Initially we adopted Informatica on a project-by-project basis. But then we broadened it out. First on a line-of-business basis, then departmentally."*

Champion adoption

Because Informatica is a visual-based development platform and its value relies in part on reuse of mappings and the automation of cleansing and matching, its adoption is sometimes resisted because IT staff tend to be far more comfortable with developing their own code from the ground up. Whether resistance is overcome with a mandate, a center of excellence, or championing, customers that Nucleus analyzed tended to maximize ROI if they were proactively managing the cultural shift that Informatica can cause:

- *"The person who implemented Informatica also champions it, and it benefits from a strong internal owner. Project teams often have imperfect knowledge, so it's good to have one person spreading the right word. He spends about 40 percent of his time championing and 60 percent on projects."*
- *"There is a cultural shift involved. It doesn't work to just give Informatica to a developer who spends 80 percent of his time in Java. So we use a center of excellence approach. It has 14 people who spend 80 percent of their time in Informatica. This is how we propagate adoption."*

- *"We have management policies in place stating that Informatica is now standard. Not everyone adopts. So you have to force the adoption while telling them they they'll get out of spaghetti programming if they adopt."*

Separate your projects from your vendors

In addition to being a vendor-independent platform, Informatica tools are completely interoperable with — and indifferent to — the broad variety of platforms it can encounter as sources and destinations of data. As a result, the platform has the effect of decoupling applications from one another.

Informatica's platform-independent nature also enables companies to decouple their enterprise application project objectives and resources from the vendors they purchase software from. In particular, many of the Informatica customers that Nucleus analyzed used the application for SAP data migration projects. Since people who are proficient in ABAP, SAP's proprietary development language, are both hard to find and relatively expensive, accomplishing data migration with an SAP-independent approach resulted in cost savings. Vendor independence and application decoupling resulted in a variety of benefits:

- *"Once all your connections are set up in Informatica, whether in, Teradata, SAP, or whatever, you don't care what the data sources were. But without Informatica, you'd need to know a lot more about Teradata or SAP."*
- *"Instead of doing data migration in ABAP, we do it in Informatica."*
- *"With Informatica, we went from being tactical to being strategic. You don't care about the source or destination application or platform, so there is a decoupling benefit. We are now well positioned to offer a generic integration service to the company as a whole."*

Use migration to get more value from your data

Most companies that have adopted enterprise applications such as CRM, BI, and performance management have been disappointed with their rates of adoption. But better data migration can be used to improve the ability of knowledge workers to access data through these applications. While companies may initially adopt Informatica for a specific migration-intensive project, users should look for opportunities to also use it to extend the value of existing applications and databases. This can be done by using migration to make the functionality of these applications available in more ways, over more platforms, and to more users. This will increase the ROI on not only Informatica, but also the enterprise applications that are being enhanced. End users used Informatica to extend the value of these applications in several ways:

- *"We're using Informatica as part of our BI architecture, and mainly around customer account data. We analyze churn, segmentation, and the levels of balances. We also use it to improve our credit analysis and collections."*
- *"We're using Informatica to create a real-time feed from our CRM system to a mobile workforce solution. So the 3,000 technicians out in the field in vans know where their next install is."*

MISSTEPS TO AVOID

Informatica enables the creation, use, and reuse of data migration assets. Because the emphasis on reuse can be fundamentally different than relying on traditional migration practices, end users should treat it as such. Nucleus found that companies were most successful when they realized the distinct differences and competencies of Informatica and avoided a few common missteps.

Don't be afraid of scale and complexity

Informatica users can maximize benefits by aggressively taking on projects with enterprise-level speed, scale, and complexity. The benefit here is in breadth. The more end users, applications, knowledge workers, and customers that benefit from an Informatica-enabled project, the higher will be the ROI.

End users provided a number of ways in which Informatica generated ROI in projects with scale and complexity:

- *"I had overall responsibility for a project that migrated us from six billing systems to Hanson Utility Billing. I used Informatica, and data migration was key to the success of the project."*
- *"We've expanded from batch processing of Informatica-migrated CRM data to real time. This is far more critical to our business and it's a way to take the ROI up a notch."*
- *"Informatica supports parallel processing, which means you can split data into large chunks and run it at once - so execution is faster."*

Expect to find data problems

Because Informatica provides so much visibility into data — and especially data quality — so early in a project, it enables quality improvement when data can be most readily and inexpensively corrected. But this can have the unintended side effect of bruising the egos of the departments and individuals who own data. This can create both a backlash against the validity of Informatica analysis and hamper championing and adoption. One user said, *"Wherever you find data quality problems, they're found by Informatica. It looks like the messenger that should be shot, or isn't right. But it's actually an early warning system."* Users should prepare for this and be ready to make the case that the early discovery of data problems reduces project timelines and increases productivity.

Don't underestimate Informatica as a risk reducer

Many of the Informatica customers Nucleus analyzed indicated that Informatica tools made their projects more predictable and manageable. Although IT leaders are managers of projects and IT staff, they are also managers of risk, and many of the projects they take on have a great deal of visibility and financial impact. When data-related tasks are improperly supported, data can be the most volatile part of a project. Project teams are often unable to test data or run it through an application configuration until close to the end of the project timeline. This means that if data hasn't been properly migrated, or if there are data quality problems, it can throw a project off its critical path close to the finish line. Companies should not only look to Informatica to manage this project volatility, but also point to this benefit when making a business case to justify its purchase.

Don't skimp on training

Successful and high-ROI use of Informatica requires users to change the way they collaborate, develop code, and complete data-intensive projects. This is a cultural change that can cause resistance in the form of ad-hoc or project-by-project adoption, which make financial benefits harder to achieve. In addition to championing adoption, mandating it, and using centers of excellence, Informatica users should be careful to properly train their staff.

At a minimum, IT staff members need on-the-job training from someone with formal training or a member of a center of excellence. Beyond that, formal training, provided by Informatica, can significantly increase the productivity benefits that can be achieved with Informatica:

- *"Informatica has a learning curve for most developers. In most languages there are few standards and developers bounce around in the code. But Informatica is source / target oriented, so training is important."*
- *"For basic proficiency, it's maybe a week of formal training, followed by some mentoring."*

CONCLUSION

At most companies, the importance of data migration to the deployment, rationalization, upgrade, and broad use of enterprise applications — such as ERP, CRM, and BI — is under appreciated. Because of a lack of championing and resources, project teams responsible for data migration typically lack the tools necessary to effectively and rapidly migrate large volumes of data. As a result, enterprise-application projects are often more unpredictable and risky than necessary. Eliminating this risk is important, because when data cannot be properly migrated, it often disrupts the critical path of these larger, enterprise-wide, high-ROI projects. When project teams respond to these disruptions by delaying or reducing the scope of a project, the costs can be significant.

IT managers who take on migration-intensive initiatives should look to Informatica to make their projects less risky, reduce costs, and shorten their project cycle times. Informatica enables users to migrate more data of a higher quality faster, which means that they can deliver their projects at a lower cost, on time, on budget, and without reductions to scope. When projects are delivered predictably and meet the original needs of the line of business, companies are more able to achieve enterprise-level, cost-improving objectives such as value chain tightening, eliminating redundant systems, and making data more universally available to end users.

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