

Why data matters in application modernization.

Accelerate modernization with a data-first approach.

The need for application modernization.

Look around your organization today and you'll see more applications powering more business processes than ever before. But too often, this application abundance turns into application overload – and redundancy, conflict, and confusion abound.

When you're in charge of a portfolio of applications, you need to make sure they're delivering maximum productivity and ROI for the business. That means constantly updating, refreshing, and modernizing them (and retiring the ones you no longer need).

Of course, every application decision is also – even primarily – a decision about data.

Without a well-architected data management modernization system in place, you'll limit your ability to implement new applications – and, worse, you'll starve them of the data they need to deliver value.

With the average enterprise using more than 500 cloud applications¹, (in addition to the hundreds of legacy and modern on-premise software they may have) the potential for applications chaos is very real: Multiple redundant applications and countless instances creating an overlapping, conflicting, and altogether confusing data picture.

You are left with a confusing tangle of hundreds or even thousands of point-to-point data integrations. You've tried to rationalize this picture and migrate your way out of a mess, but manual, hand-coded tactics and 'tool of choice' approaches to data management aren't scalable or repeatable.

Done without a data-centric mindset, application modernization is doomed to fail, and you're stuck in this tangle of applications. The consequences aren't pretty:

- **Slow decisions / slow response**
- **Bad decisions**
- **Broken business processes**
- **Manual workarounds**
- **Lost productivity**
- **Poor customer service**
- **Bad publicity**

Data management: the modernization accelerator.

One factor whose impact on successful modernization cannot be underestimated is data management. Research by Gartner² and Bloor Research³ show that data-related issues are the major risk factor in complex application projects that require data migration.

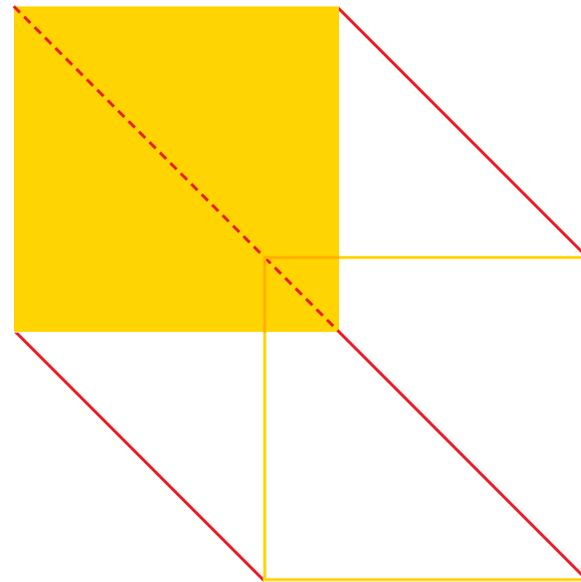
“Modern data migration projects often involve dozens (and possibly hundreds) of data sources, substantial diversity of the underlying technologies, and extreme volumes and complexity of the data involved. They also can impact many systems and processes that are indirect producers or consumers of the data involved. As a result, these efforts are time-consuming, expensive and risky.”
Gartner²

Done right, applications consolidation and rationalization help make enterprises agile, customer ready, and decision ready – and it can all be done with less pain, cost, and risk than a traditional migration or modernization program.

With a solid data management foundation, application modernization enables the business to respond to change and seize the opportunities offered by the latest software and cloud applications.

Get the data right and you’re in the best position to accelerate your application modernization.

This eBook takes you through a data-first approach to modernization for the application enterprise.



Risky business.

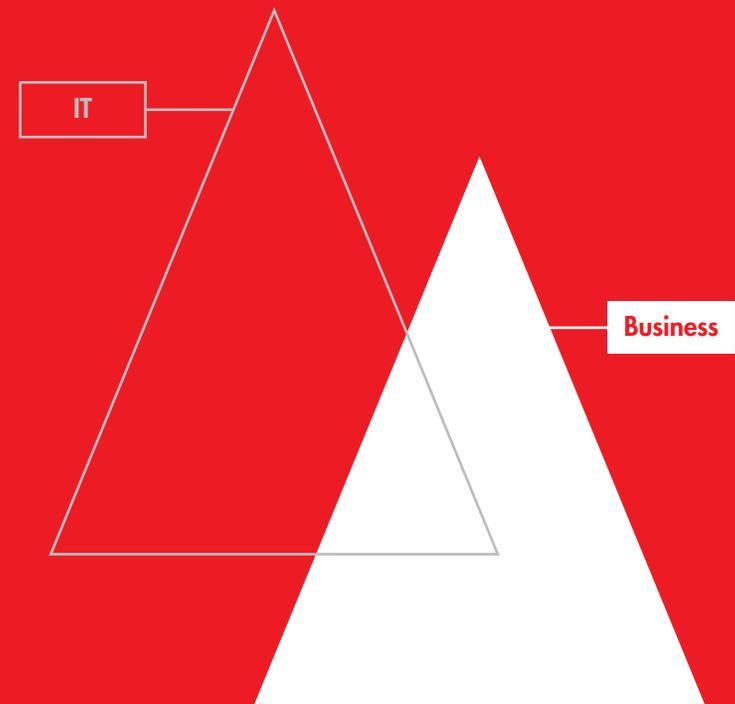
Designing, managing, and maintaining an application modernization program is a risky undertaking. And the biggest risk may well be your data and how you manage it.

"Through 2019, more than 50 percent of data migration projects will exceed budget and/or result in some form of business disruption due to flawed execution."
Gartner²

Risk is built into any application modernization program – how much depends on:

- The size and complexity of the application portfolio
- The number and complexity of the current data integrations
- The number of processes and people affected

And there are many potential cost pitfalls you need to sidestep throughout the program. They can be split into two buckets: **IT** and **business**.



Risky business.

IT costs

You're running parallel applications while you sort out any issues that arise, and multiple IT teams are working simultaneously to take care of them. All too often, deadlines will come and go and you'll still be funding these teams as the work runs over.

Then of course there's the ongoing cost of operating the systems themselves: people, power, cooling, and maintenance costs. Add the complication of legacy processes to the mix of legacy systems and you can see how costs mount.

Business costs

It's not just the IT cost of an overrunning project you need to worry about. It's the ripple effect that starts to look more like a blast radius.

The negative business impact can often grow into multiples of the IT cost. It can take the form of:

- Lost revenue
- Sapped resources
- Business disruption
- Angry customers
- Damaged reputation
- Leaked data
- Regulatory compliance problems

We've written an executive brief on this called **Is Your Data Application-Ready? Successful Application Go-Lives**. It shows what a successful application go-live looks like and gives some examples of real-life modernization nightmares. Here's a taste:

- A candy manufacturer missed out on Halloween season due to an ERP delay. The result was \$100 million in lost sales and eight points spooked from its stock price.
- A leading technology company's ERP implementation went five times over budget.
- A state payroll system had to be scrapped after more than \$250 million had been sunk into the project. The main problem here was bad data keeping the system from delivering on the business needs of the users.
- A large clothing manufacturer had to write off \$192 million against profits and the CIO was forced to resign due to a botched ERP project.

On top of all the immediate worries, there's the opportunity cost of not getting ahead with life after migration. And it's a perpetual cycle: modernization is never over, so delays now are compounded later.

Succeed and you're a hero. Fail and... you probably don't want to think about that. But there are further factors that will make or break your application modernization program – factors you can influence.

Speed up modernization,
stay efficient.



Speed up modernization, stay efficient.

Give yourself the best chance of getting it right first time by laying the groundwork for your modernization.

Use the right tools

Manual integrations with hand-coded solutions are not reusable or scalable, and are very hard to modify.

Bloor Research has found that standardizing on strong enterprise data migration tools substantially lowers project risk. This will improve your team's productivity (through using better tools) and cut project delivery time (through rapid prototyping, agile integration).

This table³ shows the increase in on-time, on-budget project delivery between 2007 and 2011 – presented side by side with changes in use of data tools and methodologies.

	Used in 2007	Used in 2011
Data profiling tool	10%	72%
Data cleansing tool	11%	75%
Formal methodology	72%	94%
In-house methodology	76%	41%
Projects brought in on time and budget	16%	62%

The increase in the use of standard profiling, cleansing, and methodology reduced the project failure rates from 84 to 38 percent.

Speed up modernization, stay efficient.

Challenge your own data optimism

You may be the kind of person who sees a half-full glass. But if your glass is half-full of garbage, what's there to be optimistic about?

Effective modernization demands that you get an objective handle on the truth. Take some time to think about any assumptions you may have formed about the current state of your data. Challenge them all and compare your expectations with reality. Here are a few common (mis)conceptions held by data optimists:

- My data is clean.
 - Actually, it's often filthy.
- I know where it lives.
 - It's all here...somewhere.
- It will slip snugly into the new system.
 - Square pegs, octagonal holes.
- I have all the data I need.
 - Maybe for the old systems, but not any more.

Collaborate or die

Failure to collaborate spells modernization fatality, and there are two channels of communication you need to keep open:

Business-IT alignment

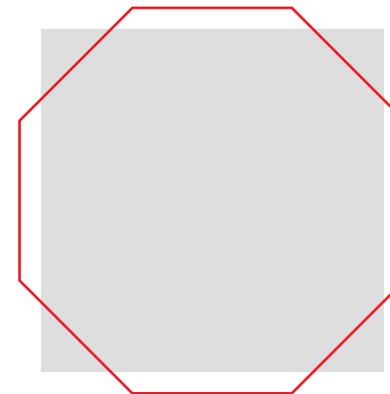
Make sure business and IT goals are aligned, and that both sides work together at all stages to achieve them. Remember, IT may be the ultimate guardians of the data, and they're the ones who know how to implement technical changes – but it's the business users who know what it really means, what the context is, and what impact errors could have on the front line.

Without either side, the program fails, so close collaboration is critical. Look for data management tools that specifically enable business-IT collaboration to speed up development and reduce errors.

IT-IT alignment

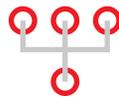
Don't let your existing expertise in other areas go untapped. You might not think to enlist your PowerCenter or Data Quality resource from the data warehouse side, but these skills are fundamentally transferable to application projects.

Your existing staff here have all the skills they need to perform modernization work. The only thing they don't know is your application data formats – that's information your application owners have. So bring everyone together and share that know-how.



Six characteristics of application-ready transformations.

Every modernization program faces unique challenges that reflect the business need it addresses. But transformations that succeed have some characteristics in common.



- 1. Systematic**
Process-driven, not ad hoc and reactive



- 4. Aligned**
Engaging business and IT



- 2. Repeatable**
Re-using skills and processes, not a one-and-done job



- 5. Automated**
Using the right data quality, testing and integration tools



- 3. Data-first**
Starting with clean, validated data in the right format



- 6. Governed**
Following best-practice policy

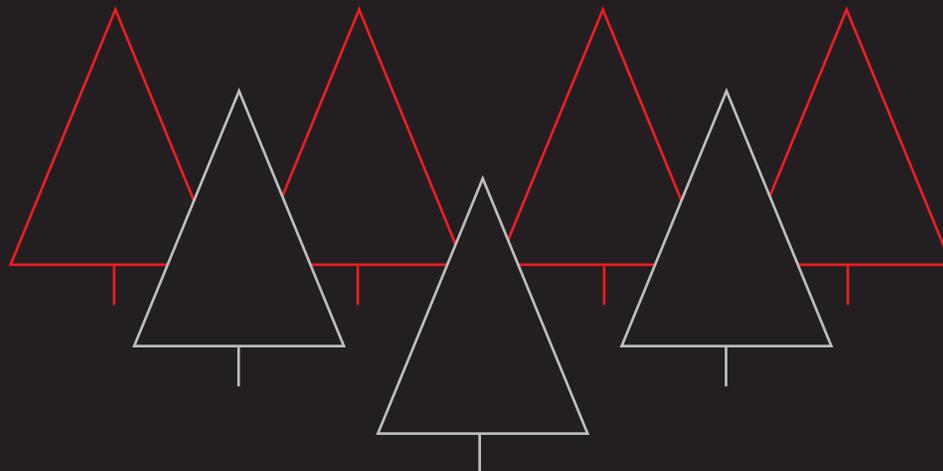
It's (still) the data, stupid.

As you venture deeper into the modernization process, you may find that you can't see the forest for the trees – or in this case, the data for the applications.

It bears repeating that you're not just migrating your applications but the data that feeds them. And as well as moving the data, you should be taking the opportunity to improve it as you go. Modernization is your chance to get hold of:

- **Better quality data**
- **Data from new sources**
- **Data from outside the organization**

It's about data processes, too. It's also an opportunity to revise company-wide processes, as automated by applications and data. The role of your people is up for review here, too – in particular to update best practices and share policies on how they should interact with data. Now is the time to secure a modernization culture in the teams on whom the whole program depends.



Beyond go-live.

Ticking all the tasks off your application modernization checklist is absolutely a cause for celebration.

But it's not a wrap party. Modernization doesn't end at application go-live. It's an evolutionary process and it never ends, for a number of reasons:

- **The business may require new, more modern applications.**
- **The business may want to leverage cloud applications.**
- **You may have to deal with M&A or divestiture.**
- **You may have to deal with a major corporate reorganization.**

Your data's usefulness has an alarmingly short half-life, so you can't afford to let it stagnate. Bloor Research estimates that data quality erodes at 1 to 1.5 percent per month if not actively managed.⁴

And there's a problematic culture in many large enterprises where legacy applications are kept running only because 'somebody might need the data.' In some cases the cost of supporting legacy systems can amount to half of an overall IT budget.⁵ These organizations can cut costs by archiving the data safely and retiring these old applications.

It's clear that when you're in charge of delivering and managing an entire application portfolio on time and on budget, you're never short of challenges:

From implementing new applications and fueling the whole portfolio with the most clean, current, and complete data, to retiring old and redundant ones.

Application portfolios will always need to be consolidated, rationalized, and modernized. And they will always need to be fed the best quality data. This may be a very good time to look at your overall data architecture. Would data modernization on a larger scale accelerate your business initiatives?

So if you want to become (and stay) an application-ready enterprise and you're planning your modernization program, you can leave the 'end date' field blank.

End date?

Data matters.

Application migration, modernization, and rationalization are high-risk/high-return initiatives.

The programs that go wrong tend to be the ones that think about the data implications too little and too late.

The healthiest, most successful modernizations are guided by leaders who realize that they're essentially data management challenges.

The good news: the data quality, integration, and management tools you need are available and ready to use.

Let's talk about feeding your application modernization program with great data.

Sources

1. 'Latest Enterprise Application Use Survey Results – More Use, More Risk', Ben Kepes, Forbes, 31 July 2014.
<http://www.forbes.com/sites/benkepes/2014/07/31/latest-enterprise-application-use-survey-results-more-use-more-risk/>
2. 'Best Practices Mitigate Data Migration Risks and Challenges', Ted Friedman, Gartner, 9 December 2014.
3. 'Lower Your Risk with Application Data Migration', Philip Howard, Bloor Research, April 2013.
4. 'Best Practices for Data Migration', Philip Howard, Bloor Research, May 2011.
5. NCC Survey of Companies with over 50 IT staff, ESG Research Report IT Spending Intentions Survey, January 2013.