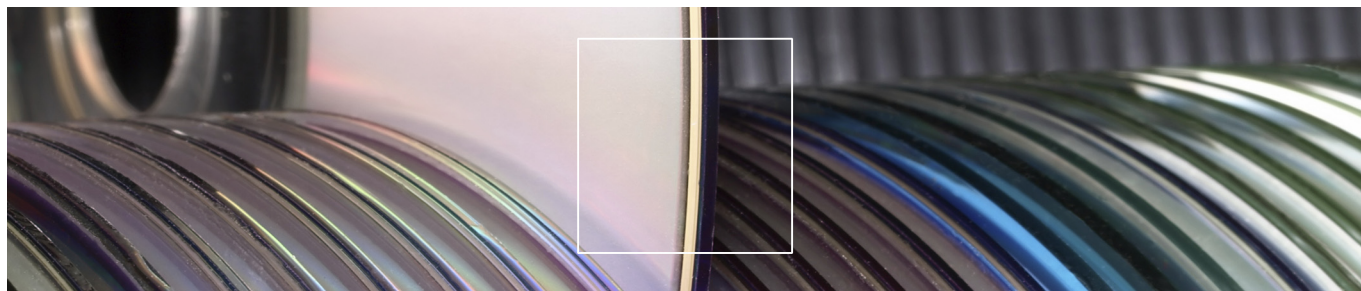# Mastering IT separation

A methodology for carve-outs and de-mergers

Corporate restructuring is one aspect important for private equity carve-out strategies to increase the value of a business. De-merger projects that split up a company to increase market visibility or operational flexibility need to consider corporate restructuring, too. Since IT has evolved into a "business enabler" it comes into focus of carve-out and de-merger projects. IT redesign has proven to support corporate restructuring activities. But how to master the complex separation of IT processes and systems needed? Arthur D. Little has shown that the process of IT separation can be managed effectively using a standard IT project methodology, adapted to accommodate the specific challenges of separation. This approach not only delivers effectively separated IT systems, but also has potential to increase the value of a business while simultaneously reducing IT costs.

Over the past 15 years, private equity has been the fastest-growing source of corporate finance. However, the recent credit crisis makes new private equity investments harder to come by and management and value creation of the existing portfolio is getting more important for private equity firms. Equally, many companies are now seeking to maximize the value of their business and are undertaking de-merger projects, with the aim of improving the market visibility or operational flexibility of their businesses.

Corporate restructuring has an important role to play in both these scenarios. Since IT has evolved from a supporting business task into a "business enabler" it is nowadays a driver for business success and sustainability that needs to be dealt with in carve-out or de-merger projects.

IT separation is concerned with separating a business's IT from a company's core structure without damaging the remaining business. Yet this brings complex challenges with it. Questions that might immediately arise include: How to manage IT separation projects? How should existing data be divided between the new entities? How complex will the process be – and how is it best managed? What about system replacements and new resources?

These are difficult questions, but finding the right answers will be fundamental to the future sustainability and success of any carved-out or de-merged businesses. Arthur D. Little has developed a methodology for managing IT separation that, in addition to rationalizing existing systems, creates a significant opportunity to enhance the resulting IT. Our project examples show that enhancements gained by IT separation can reduce IT operational costs by up to 50%, although a significant initial investment in implementing change is required.

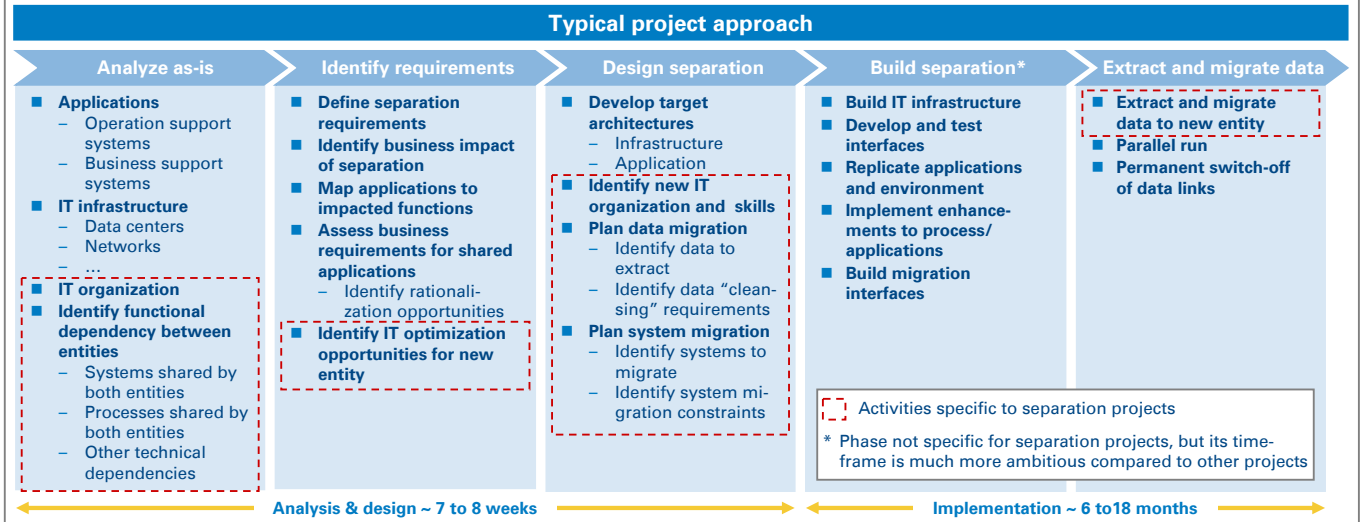## IT separation with an adapted IT project methodology

Arthur D. Little has demonstrated that IT separation projects can be carried out successfully using a standard IT project methodology modified to address the distinct challenges presented by IT separation. Figure 1 shows the five phases of the methodology used by Arthur D. Little and highlights (in the red boxes) the activities specific to IT separation projects:

- Identify functional dependency (IT separation complexity)
- Identify opportunities to optimize IT
- Identify new IT organization and skills
- Planning and migrating data

1. IT separation complexity

The complexity of an IT separation project is determined by the degree to which the IT systems of the two entities are dependent on each other. Complexity is driven primarily by the degree to which applications are shared or integrated. The number of applications, the technical environment in which they are used and the volume of transactions managed by these applications also have an impact on complexity and business risk.

Figure 1: Typical project approach with specific challenges imposed by IT separation

Typical project approach				
Analyze as-is	**Identify requirements**	**Design separation**	**Build separation***	**Extract and migrate data**
■ **Applications** – Operation support systems – Business support systems ■ **IT infrastructure** – Data centers – Networks – … ■ **IT organization** ■ **Identify functional dependency between entities** – Systems shared by both entities – Processes shared by both entities – Other technical dependencies	■ **Define separation requirements** ■ **Identify business impact of separation** ■ **Map applications to impacted functions** ■ **Assess business requirements for shared applications** – Identify rationalization opportunities ■ **Identify IT optimization opportunities for new entity**	■ **Develop target architectures** – Infrastructure – Application ■ **Identify new IT organization and skills** ■ **Plan data migration** – Identify data to extract – Identify data "cleansing" requirements ■ **Plan system migration** – Identify systems to migrate – Identify system migration constraints	■ **Build IT infrastructure** ■ **Develop and test interfaces** ■ **Replicate applications and environment** ■ **Implement enhancements to process/ applications** ■ **Build migration interfaces**	■ **Extract and migrate data to new entity** ■ **Parallel run** ■ **Permanent switch-off of data links**

⌐¬ Activities specific to separation projects

* Phase not specific for separation projects, but its time-frame is much more ambitious compared to other projects

← Analysis & design ~ 7 to 8 weeks → ← Implementation ~ 6 to18 months →

For example, if the de-merged or carved-out entity is already an independent regional business unit, separation complexity will be fairly low because of the few interfaces with other business units. In this case, replicating the IT environment can be a relatively straightforward process. However, if applications are tightly integrated and entities rely on a centralized IT service, IT separation effort increases significantly. In such environments – which are the most common – new interfaces will usually be required, and their development will have a direct impact on the project's timescale and budget.

Figure 2 identifies a list of complexity drivers and associated questions that provide a solid starting point for assessing IT separation complexity. The impact of IT separation on the IT architecture (the information systems, the technical architecture, and the technical infrastructure) can often be assessed by quantitative means, such as number of shared applications, number of servers and locations and number of environments. Any system dependencies identified will affect separation complexity directly.

This approach does not work for the business architecture. The business architecture comprises fields of analysis such as business model and strategy, business processes and the information architecture. Here, questions arise as to whether a business link will still be in place after the de-merger, or whether a de-merger will force changes to the business processes. Qualitative methods are required to answer these questions and demand more time than quantitative techniques.

2. Opportunities to optimize IT

IT separation projects provide the opportunity to re-consider a company's IT capabilities from both a business perspective, shaped by strategic business questions, and a technology perspective, focused on improving IT capabilities through technology enhancements and innovation.

Although not a primary focus of IT separation, IT optimization and rationalization effects are nevertheless significant. For example, for one client Arthur D. Little was able to reduce operational costs

Figure 2: Drivers of IT separation complexity

Level of analysis		Driver of complexity	Likely impact on IT separation	Key question
Business architecture	**Business model & strategy**	■ Dependency/ degree business model of parent company is shared with demerged entity	◑	■ Is a business link still in place after the de-merger?
	Business processes	■ IT governance ■ IT staff & skills ■ Functional dependencies between business processes ■ Business process reengineering opportunity	○ to ●	■ Is the de-merger forcing changes to business processes? e.g. : – New functionalities, process rationalization, functional interface changes, …
	Information architecture	■ Volumes of customers/ transactions	◑	■ Are there many different categories of data record instances (e.g. different products)?
		■ Different products (tariffs,...) ■ Different categories of customers ■ Business units/ geographies	◑	■ Are there high volumes of data instances? ■ What is the current state of the data to be extracted? Who owns which data?
IT architecture	**Information systems**	■ # shared applications ■ # proprietary applications ■ # outsourced applications ■ # interfaces per application	●	■ Are there many shared applications between the two entities? ■ How many proprietary applications (not shared) which will have to be replicated?
		■ # lines of codes per systems	○	■ How many applications are outsourced? ■ How many interfaces for each application?
	Technical architecture	■ # servers and locations ■ # shared servers ■ Complexity of middleware (disparate, commonalities,...)	◑	■ Does the technical architecture need to be rebuild and formatted from scratch ? ■ Are there opportunities to upgrade the systems environments and are there compatibility issues?
	Technical infrastructure	■ # environments	◑	■ Are any data centers outsourced? ■ Physical ownership of servers, …

Impact on IT separation   ○ Weak   ◑ Medium   ● Strong

of €3 million for IT applications by about 50%. The payback period for the €3.2 million invested was three years. Figure 3 illustrates the details.

In the case of a commercial de-merger or carve-out, however, there is rarely an opportunity for real IT rationalization or optimization in the first phase. Commercially driven de-mergers focus on a quick separation of IT with a minimum impact on end-users. Any system optimization is a by-product in early phases but may be reconsidered towards the end of the de-merger process together with the question of IT rationalization (Figure 4).
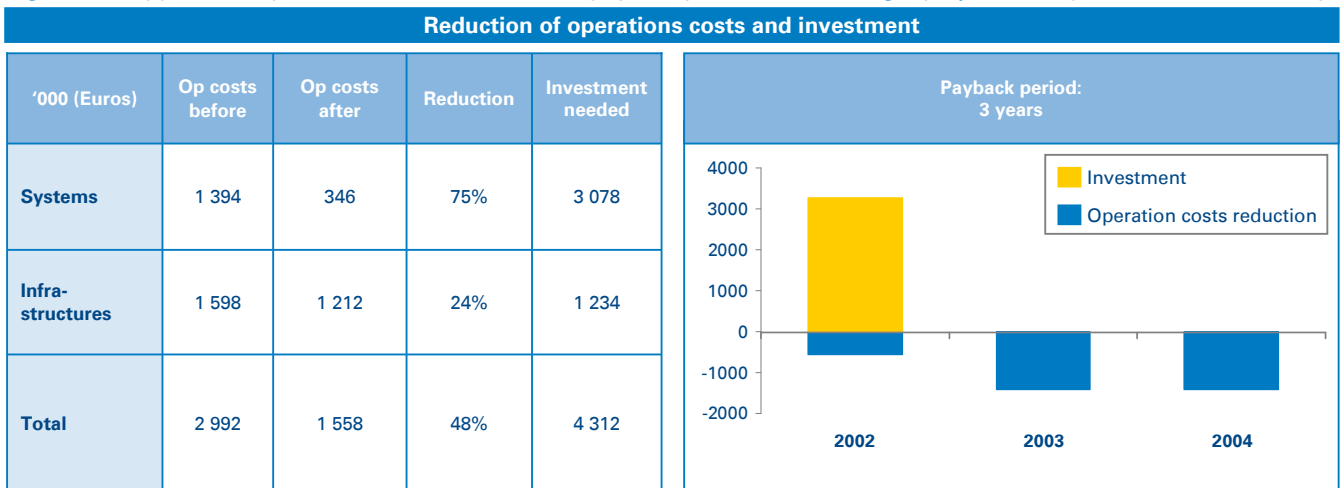
3. New IT organization and staff skills

Establishing a clear organizational structure from the very beginning is a key requirement for IT separation success. Arthur D. Little's experience indicates that the de-merged entity should lead the separation project. The role of the parent company is to deliver separation services based on a clear cost model. An IT separation agreement between the two entities is valuable for establishing agreement on key issues. These issues include a list of infrastructures and agreement on ownership, the cost of transferring hardware and software, and the price of any services to be delivered by the parent company after the separation. The parent company's staff should support the efforts of the new entity, but should not have a leading role in the separation process.
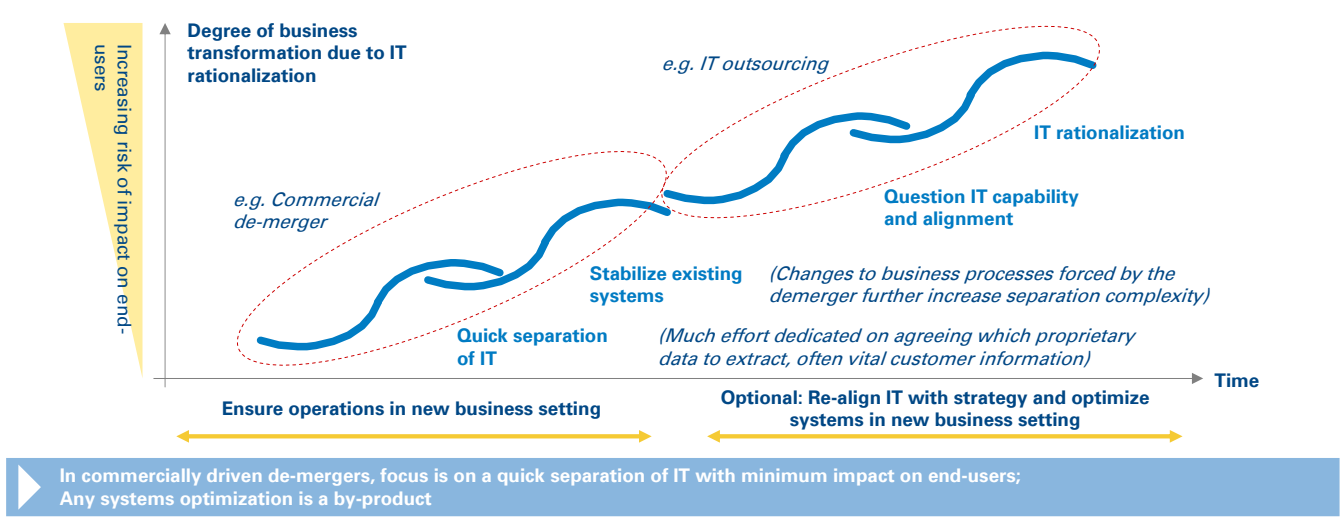
Besides developing the new IT organization, securing IT skills and building the governance structure of the new entity is important. These aspects are easily overlooked because of their non-technical nature within a technically dominated IT separation project. Depending on the old and new hardware and software infrastructure, hardware technicians and system specialists will need to be transferred to the new entity or newly hired to support technologies or tasks that were not present in the parent company. Due to the significant changes that result from IT separation in terms of organization and processes and the tight time constraints, new staff should be hired early so as not to delay separation once new systems are in place.

Figure 3: IT application operational cost reduction and payback period of a de/merger project in the pharmaceutical industry

Reduction of operations costs and investment

'000 (Euros)	Op costs before	Op costs after	Reduction	Investment needed
Systems	1 394	346	75%	3 078
Infra-structures	1 598	1 212	24%	1 234
Total	2 992	1 558	48%	4 312

Payback period: 3 years

Source: ADL case work

Figure 4: Time constraints prevent from IT rationalization in the first phase of a commercial demerger project

Increasing risk of impact on end-users

Degree of business transformation due to IT rationalization

e.g. IT outsourcing

e.g. Commercial de-merger

IT rationalization

Question IT capability and alignment

Stabilize existing systems

(Changes to business processes forced by the demerger further increase separation complexity)

Quick separation of IT

(Much effort dedicated on agreeing which proprietary data to extract, often vital customer information)

Time

Ensure operations in new business setting

Optional: Re-align IT with strategy and optimize systems in new business setting

In commercially driven de-mergers, focus is on a quick separation of IT with minimum impact on end-users; Any systems optimization is a by-product

4. Planning and migrating data

One of the final and most critical aspects of IT separation is data extraction and migration to the new entity. Arthur D. Little has identified a five-step methodology to tackle data migration challenges and assess complexity drivers, such as data model complexity and data volume.

The first step in data migration planning is to identify the data that must be extracted or replicated. This stage includes addressing issues such as application changes or legal ownership of data. Next, the migration specification is developed. It defines the actions needed to migrate the data successfully, for example, which are the relevant databases and how data will be consolidated before migration. The complexity driver for these first two steps is the complexity of the data model, not the volume of transactions.

The three remaining steps involve the transfer of the data to the new entity. Before data migration takes place, a test migration system is built and may incorporate either migration tools provided by ERP vendors or custom developments. The data is then "cleansed" before being transferred, in the final step, to the new application environment. The major complexity driver of data migration is data volume, as the higher the volume of data the greater the number of migration exceptions that are likely to occur. Methods or processes need to be established to resolve migration exceptions either automatically or manually.

Summary

IT separation is a complex process, yet Arthur D. Little has shown that an adapted standard IT project methodology can provide an effective framework for managing IT separation successfully. A careful assessment of the complexity of the separation is an important component of this approach and underpins effective project planning and the allocation of appropriate time and resources.

Arthur D. Little has carried out IT separation projects across a wide range of industries, where our project methodology has been proven to deliver successful IT separation and, for many clients, significant IT optimization benefits. The key elements of our approach are:

- Apply an adapted IT project methodology with five clearly defined steps

- Assess IT separation complexity with a list of key drivers to determine functional dependencies

- Identify optimization potential of the newly build entity

- Let the new entity be in charge of the IT separation process

- Define a clear IT separation agreement between parent company and new entity

- Precisely plan data migration and prepare for exceptions

- Extract and migrate data to new entity

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