Success Factors in Efficient Mergers & Acquisitions Activities: A Longitudinal Case Study from a Serial Acquirer and Divestor

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Abstract. In 2021, the global mergers & acquisitions (M&A) market remained strong, with transaction volumes reaching $5.9 trillion and an increasing number of large deals. Despite the strategic impact and the high priority of every transaction, many of them fail to deliver the anticipated value due to inferior implementation, both from a post-merger IT integration (IT PMI) and an IT carve-out perspective. This paper explains how one of the world's largest engineering companies (TURBO) has developed IT M&A capabilities to ensure both efficient post-merger IT-PMI and IT-carve-out projects. Their key to success relies on two principles, (1) standardization of the IT integration and respectively IT separation (carve-out) process, and (2) standardization of the enterprise architecture. By establishing these principles, TURBO managed to reduce both time and costs of its IT integration and IT carve-out projects by on average 40 %. Based on this case study, the paper synthesizes four success factors that can inform managers of M&A active organizations to successfully build IT-PMI and IT-carve-out capabilities.

Keywords: Mergers & Acquisitions (M&A), Post-merger integration (PMI), carve-out, enterprise architecture, capability, serial acquirer, serial divestor, case study

1 Motivation and Goal

In 2021, the global mergers & acquisitions (M&A) market remained strong, with transaction volumes reaching $5.9 trillion and an increasing number of large deals [1]. Despite these growing values and numbers of transactions, the M&A failure rate remains high [2]. A quarter to a half of the deals fail due to overpriced acquisition prices, too different company cultures or inferior execution of the post-merger integration (PMI) or carve-out project itself [3, 4]. An inferior execution

often causes a reduction of synergy potentials as well as exceeding project duration and costs and thus creates stranded costs for, e.g., redundant functions [5]. Since IT-related complexity has increased strongly within the last two decades, IT has evolved to a central role within PMI and carve-out projects, consuming roughly half of the total budget [6, 7].

Despite the large amounts of money and resources expended on acquisitions and carve-outs, and the abundance of research examining corporate performance during and after a deal, the factors determining the ultimate success of a transaction are still not well understood [8, 9]. Against this background, the study at hand takes an acquirer-centric as well as a divestor-centric view by explaining how one of the world's largest engineering companies – referred to as TURBO – has developed IT M&A capabilities to ensure both efficient post-merger IT-PMI and IT carve-out projects. Their key to success relies on two principles, (1) standardization of the IT integration and respectively IT separation (carve-out) process, and (2) standardization of the enterprise architecture, meaning the organizational structure and IT landscape and their interconnection. By establishing these principles, TURBO managed to reduce both time and costs of its IT integration and IT carve-out projects by on average 40 %. This is a big strategic advantage for the serial acquirer and divestor as it allows to capture more value from its 20+ annual acquisitions and divestitures. Based on that, the paper synthesizes four success factors that can support managers of M&A active organizations to successfully build IT-PMI and IT-carve-out capabilities. Applying these success factors might not only improve IT-PMI and IT-carve-out projects, but also increase operational efficiency for IT services and flexibility for corporate transactions. As for researchers, this study gives a detailed insight into operational practice of IT M&A, which offers starting points for further research.

2 TURBO – A Successful Serial Acquirer and Divestor

With more than 200.000 employees and revenues exceeding USD 50 billion TURBO is one of the largest engineering companies worldwide. As a multi-business organization, it operates in ten different industries, having more than 25 business units in many countries of the world. Due to its M&A active corporate strategy, TURBO has learned that it is indispensable to preserve knowledge about the M&A process and to use

its resources more efficiently. In 2006, the company has started several initiatives in line with an over-arching corporate strategic restructuring project to improve its M&A activities. Most of those initiatives were completed by 2013. As for IT, the goal was to cut the costs of IT integration and IT carve-out projects down to half of the costs at that time. To illustrate the core changes for achieving this goal, we compared six representative transactions, out of more than 150 transactions that were conducted in the past 13 years. The transactions were chosen for their comparability in size and complexity in order to evaluate the implications of TURBOs measures. Figure 1 illustrates the sequence of these six transactions, three integration (Int) and three carve-out (CO) projects.

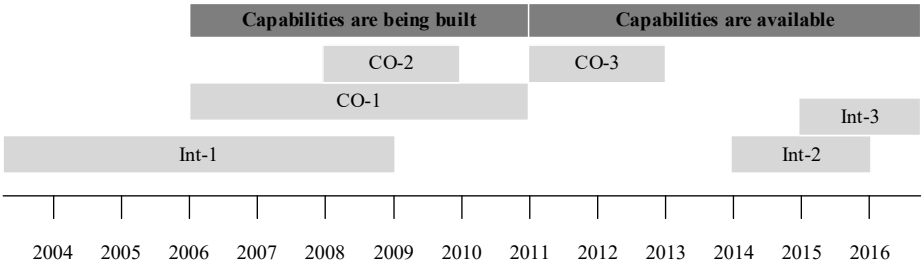

Fig.1. Timeline of selected and investigated M&A projects

2.1 Before 2006: Managing IT-PMI as Regular IT Project

In 2003, TURBO acquired Int-1 as part of an external growth strategy. Int-1 consisted of several rather independent business units located in multiple regions of the world. At this time, TURBO managed IT-PMI projects just as any other major IT project: Project goals were defined, a task and milestone plan were set up rather from the scratch, and a new team was assigned to the project. IT knowledge management and reuse of existing processes, frameworks and artifacts for IT-PMI and carve-out projects in those days was very nascent (Alpha), even though TURBO has already been very active in M&A previously.
As the business units of Int-1 were mainly stand-alone companies with own IT infrastructure, an independent IT application portfolio and even an independent ERP system for each of the business units, there were no major Day One challenges. Hence, the most urgent activity was to connect the acquired business units to the network of TURBO. Int-1

brought their own data center and servers into TURBO. Moreover, doing little outsourcing in general, they operated the entire IT by themselves, including service desk. Nevertheless, it took more than a year to connect the pre-existing business units of Int-1 to the TURBO IT landscape. But this was just the beginning of the IT integration, as the Global IT Director resumed: "*It took more than a year to only do those very basic things and then go in and actually integrate the IT landscape to somehow run TURBO standard applications in the area of SAP or in the area of engineering or anywhere. That started much later […]*" (Alpha). The actual integration finally took six years, including the implementation of standard applications (e.g., SAP systems) that suited both the parents existing business units and the acquired business units.

2.2 Building the Foundations for Efficient M&A Activities

Due to its M&A active corporate strategy, TURBO has learned that it needed to preserve knowledge about the M&A process and to use its resources more efficiently. Between 2006 and 2013, the company has started several initiatives in line with an overarching strategic restructuring project to improve its M&A activities. For IT, the goal was to cut the costs of IT integration and IT carve-out projects down to half of the costs at that time. This goal was mainly addressed by creating a new organizational structure, including a concentration of M&A knowledge within a staff function, and establishing standard M&A processes as well as standardizing the IT landscape.

Organizational Structure. TURBO switched from a business segmentation of five big sectors to twelve dedicated divisions (D) (figure 2). This restructuring also included the centralization of IT. Before that, IT was organized at different levels: Besides the central corporate IT, each of the five sectors had its own IT organization. The IT in every sector offered their own applications and services without necessarily being aligned to the corporate IT function. But then it has been centralized aiming to leverage synergies by bundling resources and expertise and thus reducing the overall cost of IT: "*The expectation and the clear ambition of this is that we should be able to reduce the total cost of delivering IT support for TURBO, globally. We are on a good way to do that. Maybe not necessarily due to the organization set-up as such, but probably that it's easier to implement new technologies such as cloud solutions or more central architecture solutions. And of course, if you*

have one global concept for cloud storage […] that leads to cost reductions […]." (Alpha2).

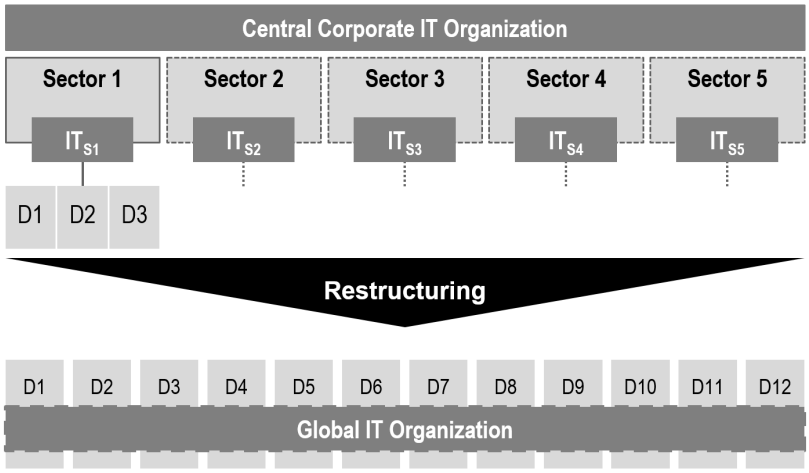

Fig.2. Corporate Restructuring and Centralization of the IT Function

Beyond the objective of realizing synergies across all of TURBOs divisions, the new centralized IT structure was also developed to improve IT governance for future M&A activities. Serial acquirers and divestors namely face the challenge of maintaining a well business/IT aligned enterprise architecture over time [10]. A strong IT governance will allow TURBO to maintain its business/IT alignment over a series of M&A activities.

Whereas the new organizational structure with its centralized IT landscape has several synergistic advantages, it also may have some disadvantages in the case of a divestiture where the acquirer requests a fully operational business. In that case, the IT landscape has to be rebuilt: "*[…] you have to remember that there is an effort. […] when you will sell a business, when you have to do a carve-out, you have to remember this and you have to calculate it into the business case for the M&A activity itself. And you also need to remember: What […] are the consequences in terms of – maybe license transfer and lead time […], you simply need to be aware of this boundary condition.*" (Alpha2).

Confirmed by the expert for carve-outs, this challenge needs to be considered while realizing all the advantages: Bringing a unit into the stand-alone mode, not only applications, infrastructure, and contracts need to be considered, but also organizational aspects, meaning the

whole enterprise architecture. In those cases, an organizational structure must be created and people be recruited since there is no dedicated IT organization in beforehand due to this high degree of centralization (Gamma).

However, the bundling of resources is a great advantage for both, integrations and carve-outs: Know-how can be much more easily retrieved: "*In the past, when we were ten different – more or less, not independent, but pretty isolated at least – IT teams, then it was very difficult to know if there were some best practices or somebody in another corner of TURBO that has done something similar, or if there were already similar applications existing.*" (Alpha2). The aspect of TURBO putting its IT strategy on a global scale becomes more relevant than ever: "*The advantages – of actually integrating and having one global IT architecture – really, by far, predominate the disadvantages when you have to do carve-outs.*" (Alpha2).

Standardized M&A Processes. To avoid setting up new M&A projects from scratch, TURBO has collected project plans and best practices from previous projects; and, based on that, TURBO developed standardized procedures for future transactions. This resulted in the Standardized Integration Plan (SIP) and the Standardized Divestiture Plan (SDP). Both consist of hundreds of milestones for the maximum-case and serve as guidelines for structuring corporate transactions within TURBO as well as for planning efforts and budgets. For each new transaction, the project setup now begins with analyzing which of the activities and milestones from the SIP or SDP are required and which can be omitted.

TURBO's attempt to increase the efficiency of its PMI and carve-out project executions also included the establishment of a staff department that concentrates its various M&A experts (from Finance to HR and IT) to coordinate its operational M&A activities. This department also has the responsibility to preserve TURBO's body of knowledge for M&A projects and thus to maintain and update the SIP and SDP.

Standardized Integration Plan (SIP). In 2005 and 2006, TURBO acquired other mid-sized companies in order to grow specific industries of its portfolio. During that time, the foundation for the SIP as a milestone plan was set for future transactions. This plan was intended to be as comprehensive as possible, covering all relevant issues of a PMI project, including the activities of the IT workstream. At that time, it still had the nature of a beta version. Its success led to a much more

mature SIP in 2008. The milestones are a result from lessons learned of previous projects and designed as a comprehensive checklist. As those refer to many topics it can be the case that – due to a project's smaller scope, complexity or integration strategy – not all milestones need to be taken into consideration. While some of the milestones are mandatory to ensure a successful integration, others might be just optional or not even relevant for a specific transaction. In customizing the SIP for a certain project, the respective activities can be planned in order to reach the milestones. Furthermore, it can serve as a source for reporting purposes by providing the possibility of tracking the progress in terms of milestones reached in relation to milestones set in total (Alpha).

Figure 3 illustrates how PMI projects are organized into work streams at TURBO. The SIP distinguishes between Business Work Streams and Functional Work Streams that report to the Integration Management Board. The Business Work Streams deal with issues such as the alignment of the business unit's strategy with the corporate strategy or realizing procurement synergies. For the case a business unit is a software company, all IT issues that are associated with delivering their software (the product) are located here and not as part of the Functional Work Stream IT. The three major Functional Work Streams are finance and accounting, human resources and IT. Other – not necessarily less important, but less complex – work streams are subsumed as Support Work Streams, dealing, e.g., with legal and compliance issues or real estate.

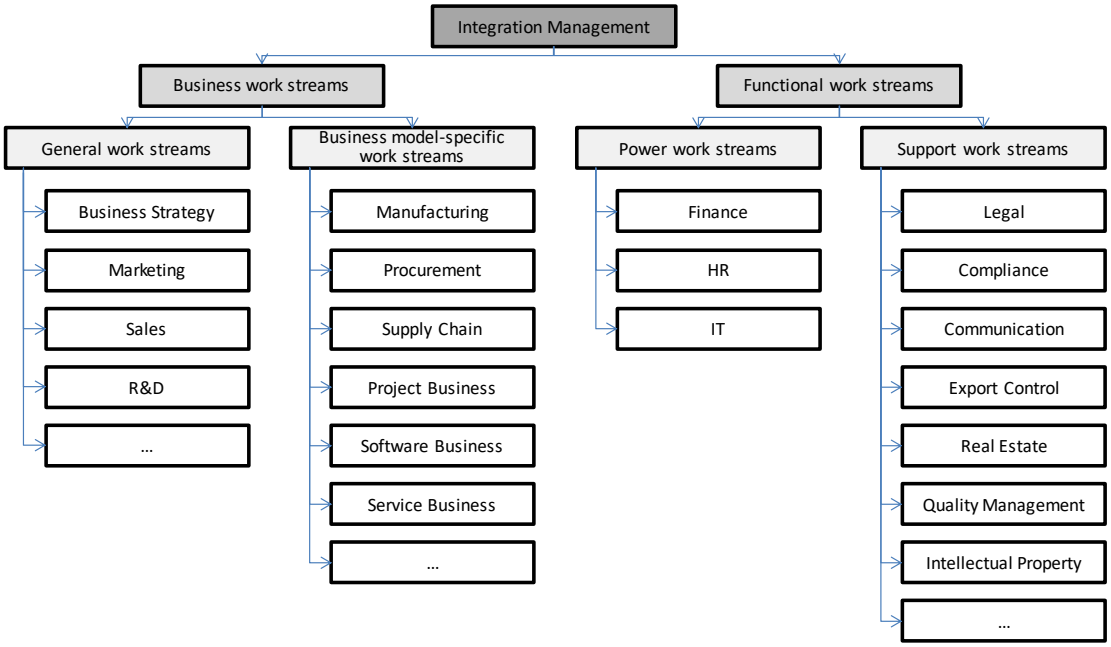

Fig.3. Standardized Integration Plan (SIP): Workstream Organization

Figure 4 shows an example of how the SIP further structures each work stream into work packages. Each work package team is headed by a work package leader who reports to the work stream leader.

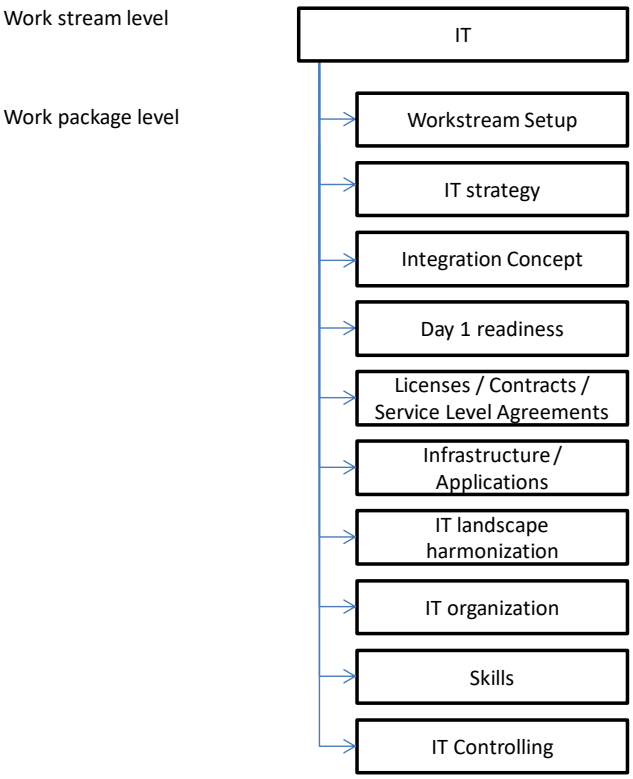

Fig.4. Standardized Integration Plan: Work package organization

For each work package, the SIP lists mandatory and optional activities. For each activity, a description as well as references to previous activities and other related items are provided. Related items may include templates or detailed task descriptions. Figure 5 illustrates an exemplary task description from the work package IT Controlling. As indicated there, the SIP is also used as a project progress-reporting tool.

Workstream:	IT
Item no:	51 2 3 2
Task name:	Establish IT integration cost controlling
Task description:	Documentation and controlling of relevant IT integration cost. Classification of costs into one-time and ongoing costs. Compare cost with recent cost estimation and give a structured overview of further integration costs.
Start date:	01.01.2016
Due Date:	30.09.2016
% complete:	80%
Task Status:	Ongoing
Task Owner:	[Name]
Status note:	Integration controlling is set up. Budget is somewhat fluid as all discussion and strategy planning is not yet complete and decided upon. Next financial year's budget to be decided on in Quarterly Business Review mid-November.
Milestone:	180 days critical
Mandatory:	Yes
Country:	Global
Predecessor:	None
Related items:	[Link]
Responsible department:	[Link]
Item Source:	[Link]
PMO Review:	[Link]
Priority:	Normal

Fig.5. Standardized Integration Plan: Work package description and reporting (example)

For large transactions, e.g., multinational business units, these activities are typically broken down by country, product or business line, depending on how the structure of the whole integration is set up: "*So you need to do the homework and actually define your global strategy, you need to define which applications are important to have on a global basis and then we use this as a template or as a base for integrating the new business.*" (Alpha).

Standardized Divestiture Plan (SDP). The SDP basically represents the same checklist-based guidelines, but for divestitures. It consists of various templates that evolved from the experiences from past carve-out projects. Depending on the respective category, lessons learned may additionally be manifested in wiki articles.

While talking about success and efficiency for conducting carve-outs within TURBO in general, the head of IT for carve-out projects explained the current lesson learned of standardization with regard to

processual changes: The procedure of separation needs to be standardized in order to make it more efficient and to avoid reinventing the wheel (Gamma). This is especially important as the parent organization typically bears the costs of the carve-out project and does not have any advantages from owning that business unit for an extended period of time, in particular, if that business unit creates losses [11].

Enterprise Architecture: Standardizing the IT Landscape. Along with the corporate restructuring and the centralization of the IT function, TURBO enforced a high degree of standardization of the IT landscape to enable economies of scale for providing IT services. Using the defined set of standard infrastructure, technologies and applications for all business units is the default option at TURBO. The system and application landscapes are standardized and preferably not individually created or adapted for certain business units. Individual solutions are only applicable, if there are market or regulatory requirements or if the costs would increase due to standardization, e.g., because of license cost. However, TURBO always tries to establish standards for more than just one business unit (Gamma).

A second pillar within TURBO's enterprise architecture leverages on the advancements in IT infrastructure virtualization and cloud computing. Initiated in 2010, cloud-based infrastructure services have been implemented by 2016. These allow for rapid tenant changes for all IT related objects into another corporate structure (see Figure 6). This concept proved to be especially useful for carve-out projects and figuratively been termed as "separation by mouse-click" as it eliminated the need to physically separate wires and networks.

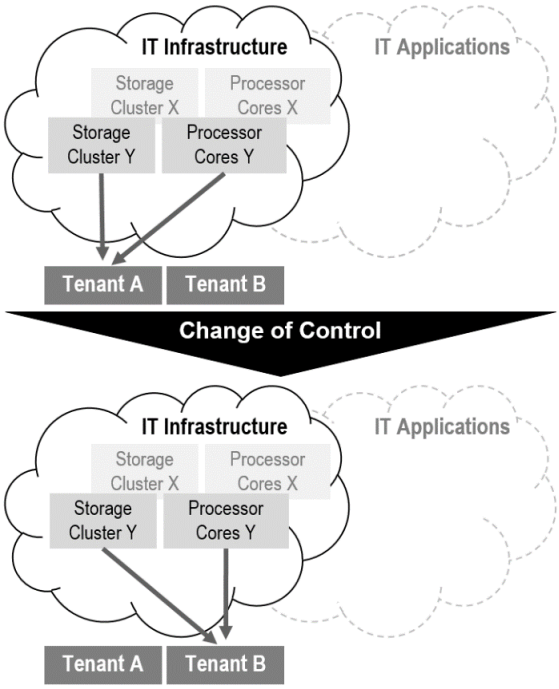

Fig.6. Rapid changes of tenants through cloud-based infrastructure after change of control

This paradigm shift has many advantages. It not only reduces operating costs and one-time costs for the work force that is separating the unit, it also reduces one of the biggest challenges in the sales process: negotiating the requirements on how to deliver the sold business unit, as the head of IT for carve-out summarizes: "*I believe that we gathered so much experience in terms of finding the right procedure and evaluating the given alternatives to state that getting to a common agreement with the buyer is the most critical one […]. Cloud-based infrastructure guarantees the unit to continue to operate anyways and thereby strongly counteracts this challenge […]. The responsibility is directly transferred to the buyer and the risk for TURBO to depend on the buyer has dropped*" (Gamma).

By using cloud-based services, a fully operational business unit can be handed over to the acquirer. The acquirer can then decide whether to continue using the cloud services or start the integration independently of TURBO. At the current stage, it is limited to infrastructure services, but TURBO is already working to provide cloud-based application (e.g., accounting) services. In future, this will mitigate the challenges

that existed during CO-2, where old, not cloud-ready monolithic structured applications hindered an easy, effortless switch between tenants (Gamma). It is also expected that the cloud paradigm will create benefits for PMI as standardized infrastructure (e.g., compute, network, storage) services of the parent organization can be deployed to the acquired business unit quickly.

2.3 After 2013: Leveraging M&A Capabilities

TURBO acquired Int-2 in 2014. The acquisition was reported as successful ("*[..] there was no business disturbance at Day One*" (Alpha)) and appreciated by the market. In fact, one of the biggest orders that TURBO received was a result from the integration of Int-2. This can be interpreted as great success (Beta). Int-2 was an international business with a couple of large subsidiaries with major operations in different countries and roughly 25 smaller locations that needed to be integrated. In total, roughly 2,500 employees were acquired with Int-2, representing approximately 5 % of the employees of its parent company. Before TURBO was able to integrate Int-2, it first had to be carved-out of the former parent organization.

Due to the high complexity of Int-2, TURBO required the IT environment to be completely separated from the vendor. The former parent organization was highly standardized in terms of having global applications across the entire operations worldwide by providing the same SAP system to everyone: "*They were using the same SAP systems; they were using the same engineering applications. So, they had very much on a global basis, which were hosted in one data center somewhere […].*" (Alpha). The separation from the former parent organization was implemented by creating a separate network for all the locations. Consecutively, a copy of each application was put onto servers in the interim network. From this independently viable company, TURBO began its integration activities.

While the scope of integration activities in each location depended on the size, the type of the business, and whether manufacturing was located there or not, there were also some things that needed to be accomplished at every location: e.g., basic IT infrastructure, network connection, providing emails as well as TURBO laptops. "*That had to be integrated step by step into TURBO by connecting the network to the TURBO network via firewalls. We had to give access to some TURBO*

applications for senior management and key people. We needed to be able to allow the acquired business to report their profit and loss. […] There were really some Day One activities that had to happen. But then the majority of the work [..] started with actually bringing everybody on board, giving everybody a TURBO email address, giving everybody a TURBO laptop, introducing the TURBO corporate reporting processes. All those things that are necessary for TURBO to actually operate – to have this company in the family." (Alpha).

During the preparation phase, the roadmap for the major applications was created: Among others, SAP, PLM, and engineering applications were planned. Within that phase – already during the third month – even though they were still using their own laptops, everyone had access to TURBO's email system (Active Directory). Also, access to the intranet was provided to a couple of hundreds of people via virtual client solutions. Those clients were installed on their own laptop. The goal was not to run applications, but at least to enable the usage of Microsoft SharePoint sites. After that, the full integration was made possible between June and September in 2015 by globally rolling-out standard laptops.

In comparison to Int-1, a rather similar IT PMI case, Int-2 was integrated much faster: six years vs. two and a half years. According to the Global IT Director, this can be attributed to two reasons in particular: the use of the SIP and standardized IT services: "*I could see the difference of having the documented standard integration plan as basis when we now did the Int-2 acquisition compared to when the Int-1 acquisition was done in 2003. Then it was much more of a Greenfield approach that somehow everything was done for the first time.*" (Alpha). At the time of the integration of Int-1, no standardized SAP solution was available for that business unit. This created a large integration effort, as a new SAP solution had to be developed. Now, standardized solutions are immediately available from the IT portfolio of TURBO's central IT (Alpha). These standardized solutions serve as building blocks for TURBO's business units and are only slightly adapted for, e.g., a new country to enable operations or address legal requirements. As of today, TURBO has a comprehensive portfolio of standardized solutions available for most processes and business models that need to be supported within TURBO. This enables the integration of the IT landscape in a significantly shorter time.

Towards the end of its strategic restructuring period, TURBO divested its internal IT service provider CO-3 in 2011. The potential buyer was not fixed at the beginning of the carve-out project. Hence, it was set-up as a standalone carve-out, meaning that the result would be an independent company with a full-fledged IT landscape. During the separation of CO-3 into a standalone entity, a strategic investor was found that wanted to fully integrate the business unit. This has shifted the requirements towards a commonly developed concept for a smooth integration. As CO-3 was an IT service provider, it became very important to stress the differentiation between horizontal and vertical IT. The first one being the IT for the daily business support, the latter being the IT services provided as IT company for the external market. The collaboration with the buyer's CIO was excellent and highly cooperative.
The IT carve-out was successful both in terms of separation and project management goals (time and budget). Central systems were documented in the enterprise architecture management tool very well as a side-effect of TURBO's IT-centralization endeavor. The quality of documentation of the decentral systems depended on the mode of operation from each subsidiary and the mentality of the respective country.
Due to the strongly entangled infrastructure within every country, the carve-out took one and a half years in total; and needed to be accompanied by many transitional service agreements (TSAs). Compared to CO-1, which took five years, this carve out was extremely faster. However, CO-1 was also a larger and more complex project. On average, TURBO was able to reduce the costs of their IT carve-out projects by 40 percent in 2016, compared to 2013. Now, IT only accounts for 35-40 percent of the entire carve-out costs. This success is mainly attributed to the new organizational structure and the consolidated central IT: Strategic business units can easily be put somewhere else; remaining interdependencies are a minor problem due to the use of shared services (Gamma2; Epsilon).

3 Success Factors

We have derived four key success factors from TURBO's restructuring program that build the foundations for efficient M&A activities (table 2). These success factors can be used by managers of M&A active organizations to successfully build IT-PMI and IT-carve-out capabilities.

Success Factor 1 – M&A staff function: Create a dedicated department that is responsible for all M&A transactions. While each acquisition or divestiture may be unique from a corporate strategic perspective (e.g., business model, intellectual property), all the analyzed transactions share a similar process. At TURBO, it was beneficial to establish a dedicated staff function that hosts various M&A experts (from Finance to HR and IT) and coordinates the company's operational M&A activities. Whereas this department is responsible for managing the PMI or carve-out project with its diverse work streams, functional experts from the regular departments or external actors (e.g., consultants) conduct the operational activities (e.g., data migration, network administration). This dedicated staff function also has the responsibility to collect lessons learned from past transactions, create and maintain standard processes or policies (see lesson 3) and thus preserve and expand the company's body of knowledge for M&A projects. For TURBO, establishing a dedicated staff function that is responsible for and is driving all M&A activities was key to build its M&A capabilities, without which all the other learnings would not have been possible (Alpha).

Success Factor 2 – Centralizing shared IT resources: Centralize shared IT resources to leverage synergies and optimize knowledge reuse. Consolidating IT services and building a central IT unit that serves the needs of the different business units benefits the overall efficiency of providing IT services due to economies of scale and an increased potential to identify IT-related synergies between business units at TURBO. TURBO has followed this approach as far as feasible. Only IT services that are specific to a single business unit or location are provided decentrally. The rest has been moved into the central corporate IT department. This is in line with Reynolds and Yetton [12], who developed a business-IT-alignment model for multi-business organizations, distinguishing between a corporate IT platform (IT strategy, shared resources) and a business unit IT portfolio of specific IT services that cannot be leveraged organization-wide.

At TURBO, such a centralized IT organization provides benefits regarding the reuse of existing standardized IT services for the newly acquired business. This not only leverages economies of scale for the business unit, but also allows integrating it faster without developing IT services twice. As the global IT director summarizes: "*I am sure, that*

in the past we were really inventing the same thing several times. Just because we were not aware about the existence." (Alpha2).
In addition, a strong central IT that positions itself as a service provider and builds up a corresponding IT service catalog is a promising way to combat shadow IT and its negative consequences. In this regard, it is important that the IT does not just start working when a new customer request arrives. Instead, it must proactively look at what new technologies are available on the market and consider how they can be integrated into a service offer. Then you create an IT at eye level, which is perceived as an enabler instead of just a supporter. In this way, the IT landscape can be planned and controlled in a targeted manner. The use of technical blueprints with recommended or permitted technologies combined with systematic life cycle management is crucial here. Centralized IT also reduces the effort of creating and maintaining a sufficient documentation of the IT landscape within the enterprise architecture management discipline. This is a valuable asset for carve-outs as a current documentation reduces critical challenges, such as the identification of affected information systems, and avoids unintended surprises throughout the project. However, for building a stand-alone business unit, the central IT services need to be duplicated. That is an effort that is easily plannable due to the experience with the shared service center, but, depending on the size of the business unit, might significantly increase operational IT costs for the divested business unit as economies of scale might not apply to that extent any longer.
Success Factor 3 – Standardized M&A Process: Develop and utilize standardized procedures for corporate transactions by providing guidelines as comprehensive checklists. This lesson refers to the concrete specification of the PMI or carve-out project. Since projects will have their peculiarities, it is even more important to cover all fields of actions that were really necessary in past projects. After making important activities and issues transparent as explicit knowledge, things may be declared as not relevant or not applicable for the current project. There are two particular advantages: First, potentially important actions are less likely to be left out. Second, it provides a structure for the design of the work streams commissioned with the execution of the transaction. Standardization per se is not a new concept, but the systematic utilization for sometimes seemingly very different projects is. Having developed and optimized standard procedures for conducting a PMI or carve-out from several past projects, TURBO has increased the

speed of the planning phase and ensured that best practices from previous projects were applied. Therefore, significant time savings could be observed.

Success Factor 4 – Leverage Virtualization Technology: Optimize infrastructure landscape by transforming it into a cloud-based solution and thereby make physical separation obsolete. Virtualization of the infrastructure and ultimately also the applications (e.g., as cloud services) enabled TURBO to easily separate businesses through pure administrative effort, i.e., by mouse-click instead of 'pulling the plug'. Equally for integrations, the main services can be instantly provided to a new unit due to the high scalability of cloud services. To be successful, this transformation of IT needs to be clearly defined as a strategic project for the business, not as an IT project. Additionally, this flexibility also needs to be designed into the contracts of service agreements and licenses with third parties (e.g., flexible up-/down-scaling) to avoid organizational barriers and stranded costs.

Summarized, cloud computing is both an enabler and a necessary prerequisite for standardization. With cloud services, IT infrastructures can be standardized across business units, which in turn enables standardized IT service management. In return, however, a lower degree of individualization must be accepted. Since not all applications and data can be moved to the cloud for legal, compliance or performance reasons, the creation and adoption of a cloud policy is important.

Table 2. Success Factors

#.	Success Factor	Specification	Rationale
1	Create a dedicated department that is responsible for all M&A transactions	• Set up a central global department responsible for PMI and carve-out projects • Align on clear responsibilities for M&A and carve-out transactions • Provide dedicated IT teams coordinating all IT work streams for specific projects	• Holistic project management • Body of knowledge for M&A projects • Resource pool for M&A projects
2	Centralize shared IT resources to leverage synergies and optimize knowledge reuse	• Cluster resources and resource know-how into building blocks (e.g., SAP, PLM, Network, Storage)	• Better alignment between corporate and IT strategy • One global IT architecture

		• Set up centralized knowledge platform and network • Continuously adapt and introduce experience from new projects into building blocks • Actively communicate and position knowledge in the organization	• Operational efficiency due to economies of scale • Reuse of existing solutions • Better documentation of IT landscape
3	Develop and utilize standardized procedures for corporate transactions by providing guidelines as comprehensive checklists	• Provide lists of action items for each work stream for PMI and carve-outs • Make guidelines and checklists customizable for specific project types • Alignment of IT perspective with all other areas (e.g., Manufacturing, Procurement, Finance)	• Consistency and completeness check for all action areas • Transaction speed • Project-generic and specific knowledge available • Alignment of IT project with overall integration project • Basis for project and milestone planning
4	Optimize infrastructure landscape by transforming it to a cloud-based solution and thereby make physical separation obsolete	• Transform to on-demand cloud platform for all services • Set up transformation as strategic project for all company departments and ensure ongoing use in future integrations and carve-outs • Adjust contracts for service agreements and licenses to be operated in the cloud • Ensure flexibility in the contract with the cloud service provider to avoid stranded costs	• Easy separation through administration instead of physical cut-off • Easy transfer of licenses • Fast provision of IT services to acquired business unit

4 Conclusion

After the strongest year in deal-making and a significant increase of the average deal price it is relevant – more than ever – to study M&A practices based on a success story. In this paper, we illustrate how a large M&A active engineering company has successfully used a strategic

reorganization to build up the capabilities necessary for efficient IT-PMI and IT-carve-out projects. The result was an average of fifty percent improvement in duration and forty percent improvement in cost. By achieving this, TURBO was able to realize synergies from acquisitions much faster and to appropriate more business value from its divestitures.

The success factors synthesized from this longitudinal case study can inform managers of M&A active organizations to successfully build up IT-PMI and IT-carve-out capabilities. Applying these success factors can not only improve IT-PMI and IT-carve-out projects, but also increase operational efficiency for IT services and flexibility for corporate transactions. Both goals are no longer a trade-off: On the one hand, we learned from TURBO that the application and infrastructure landscape must be operated efficiently and thereby produce only little costs. On the other hand, both must be flexible enough to enable carve-outs to be conducted quickly and costs to be kept to a minimum. This study gives researchers a detailed insight into operational practice of IT M&A, which results in starting points for further research.

In the end, the following remains to be noted: In this study, we have investigated selected M&A transactions of a specific company. Nevertheless, we believe that much of it is transferrable to other companies and industries. Regardless, an evaluation of the results in the narrower sense is still pending and must be the subject of future research.

Appendix: Methodology

We applied multi-embedded case study research. Case study research is useful, if a natural environment and current events need to be examined, which require multiple field investigations within a certain period. It is particularly appropriate if “how” or “why” questions are the focus of investigation and if the researcher has little or no control about the research object [13, 14]. This was the case for the M&A projects we studied. The goal was to identify capabilities that turned TURBO to a successful serial acquirer and divestor. Therefore, we retrospectively analyzed measures taken by TURBO, compared selected M&A projects in a timeframe of 13 years and discussed differences and major changes at TURBO that facilitated more efficient transactions. Project and document analyses as well as expert interviews served as data collection methods. The interview guidelines were based on three pillars: (1)

Cross-case experiences, (2) a concrete case study, and (3) architectural specifics about TURBO.

Within the pillar of cross-case experience, the main differences between transactions in the past were investigated. The differences were clustered by organizational, processual, and technological changes, referring to company structure, degree of standardization, and the technology in place. Thereby, various eras were identified that TURBO lived through during its transformation. Following that, a concrete case as one investigation point of the longitudinal study was examined through the case's background information, such as the participating parties, the transaction specifics, as well as its success factors, challenges and the lessons learned. Finally, the enterprise architecture of TURBO during and after the transaction was analyzed in detail. The questions referred to the architecture of the organization as a whole, its organizational structure, its business processes, its information systems, its technological building blocks, the focus of the architectural paradigm and process, the documentation, and the architectural fit and business IT alignment in terms of infrastructure, technologies, applications, and key data.

Representing the embedded units of analysis, six projects were analyzed. Given the nature of the interview guideline's third pillar, these investigation points were just one part of the evaluation. As a whole, it is not limited to the respective points in time: Organizational learning and architectural changes were explored over the whole period; in favor of that, the interview partners are highly cross-case and cross-industry experienced in that regard. Therefore, they are ideally suited to assess the overall changes at TURBO.

Each of the analyzed projects had a transaction volume of approximately one billion Euros. This enhances the comparability since these cases do not substantially differ from a monetary standpoint. Also improving comparability, the two main integrations were conducted on the same basis: Several locations were affected in terms of acquired businesses that needed to be integrated. Furthermore, those locations were stand-alone units. Typically, the interviewed experts hold high leadership positions at the case company or the former parent organization. The cases were thus chosen for enabling literal (i.e., predicting similar results), but not to prevent theoretical (i.e., predicting contrasting results) replication logics [14]. The results were verified by triangulating the identified concepts with different interviews and project

documentations. The interview sessions took place either in person or via telephone. Whenever appropriate, the laddering technique was applied, which follows a process of digging deeper by asking further (why-)questions [15]. Table1 gives an overview about the conducted interviews and experts:

Table 1. Overview of interviews and participating experts

#	Name of Expert	Company	Focus	Role	Relevant Experience	Duration
1	Alpha	TURBO S.A.	Integration	Global IT Director	13 years	60 minutes
2	Alpha (Alpha2)					40 minutes
3	Beta			IT Integration Manager	2,5 years	60 minutes
4	Gamma		Carve-out	Carve-out division: Head of IT	5 years	105 minutes
5	Gamma (Gamma2)					105 minutes
	Delta			Carve-out division: Head of Finance	Several years	
	Epsilon			Carve-out division: Head of HR		
6	Zeta	Parent-Int-2 (Engineering Company)	Seller	CIO	25 years (20 projects)	90 minutes

The gathered information was qualitatively analyzed, using an inductively developed coding scheme following Mayring and Fenzl [16]. The data was coded with the qualitative data analysis tool *MAXQDA*. The whole data analysis was an iterative process of (re-)coding data, splitting and combining categories, and generating new or dropping existing categories.

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