

# **BUSINESS-IT ALIGNMENT IN THE ARAB WORLD – IS THERE A FAST TRACK TO MATURITY?**

*Complete Research*

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## **Abstract**

*This research investigates how companies operating in emerging markets and investing in latest IT solutions can be supported in developing maturity in business-IT alignment faster than their predecessors in developed countries. It follows up the consultant perspective through documenting ex-post the participant's observations, reflected through participant objectivation, to analyze the activities conducted, the obstacles faced and the success reached while trying to mature business-IT alignment in selected companies operating in the Arab World. From the five cases included in the sample, evidence was found that specific consultant's interceptions can indeed "fast-track" the needed improvement in business-IT alignment, especially when the sense of crisis in the company creates a readiness to embrace the change and the subsequent benefits are obvious enough to those involved to sustain the newly reached maturity level. However, the personality and behavior of the CEO, the attitude of middle management, and the corporate culture as a whole may obstruct all efforts of "fast-tracking" any time, especially when the actors involved adhere to traits deeply rooted in the region's autocratic traditions.*

*Keywords: business-IT alignment, IT maturity, multiple case studies, Arab World*

## **1 Introduction**

Throughout the last decade IT vendors have been pushing their products and services into the Arab World, and corporations operating in the region are trying hard to catch up and scale up their information infrastructures for improving operations and competitiveness. These corporations have only recently gained access to networking capabilities, just as the whole environment in the Arab World is just now developing into a "Networked Society". For all local actors, aligning business and IT is a rather new challenge which they have to master swiftly in order to make best use of the available technology (e.g. ERP systems) and not to lose the value of their IT investments. At the same time, organizational culture in Arab countries has a tradition of relying heavily on internal hierarchies, often preventing horizontal communication and trust building as prerequisite for efficient and effective cooperation across intra- and inter-organizational boundaries.

Throughout the last decades scientific literature has provided a plethora of insights regarding IT leadership, IT governance, and business-IT alignment, much of which has entered today's university textbooks and has been framed as "best practice" guidance for practitioners on the side of IT users, vendors, or consultants. However, the availability of scientific knowledge and "best practice" alone cannot boost the process of maturing the business-IT relation, especially in a region that has only a very short history of corporate and national information infrastructures and that is still shaped by persisting organizational hierarchies – such advancements need actors and actions which implement the change against all resistance inside the corporations.

Empirical data and subsequent analysis is still scarce regarding business-IT alignment in Arab countries. This paper seeks to fill the gap through analyzing and comparing multiple cases in which one of

the authors has been involved as a consultant throughout the last ten years. These cases cover different industries in Egypt and beyond, all of them focusing on the process of improving the degree of maturity in the business-IT alignment. Following up on the consultant's participant observation, a process of 'participant objectivation' is conducted to analyze the actual consultant's contribution on "fast-tracking" the alignment maturity process in a given environment, and which environmental factors have been standing against such attempts.

The following section reviews the relevant literature as far as needed to create an appropriate theoretical lens and methodological approach for the analysis of the cases. Subsequently, the cases and the case study approach are briefly described, before presenting the cases and the analysis itself. The conclusion relates the results back to the literature and discusses practical implications as well as limitations and future research.

## **2 Related Research on Improving Business-IT Alignment**

This section examines the extant literature with the objective to create an appropriate theory-based perspective for empirically assessing and analyzing our unit of study, i.e. the process of improving the degree of maturity in the business-IT alignment. The underlying assumptions are that (a) this type of maturity and its development can be assessed, and (b) stakeholders can intentionally interfere to advance such development. The literature review first focuses on business-IT alignment before concentrating on conceptualizing and measuring maturity and identifying the research gap.

### **2.1 Business-IT alignment**

The relation of business and IT has remained a frequently revisited topos in the IS literature for several decades, including publications providing a to-date literature review and a (re-)framing of the research agenda (e.g. Chan and Reich 2007a/b, Aversano et al. 2012, Jentsch and Beimborn 2014). Agreements among researchers include that business-IT alignment is still and will continue to be highly relevant and that research is still far from being able to explain, predict, and/or prescribe all the relevant phenomena. Continues drivers behind this stream of research are the strong indication of a positive relationship between successful business-IT alignment and firm performance, as well as the apparent lack of a 'silver bullet' for explaining and prescribing the road to success (Luftman and Kempaiah 2007).

In the literature we find a duality of alignment conceptualization (Chan and Reich 2007a, p. 310): "The first is alignment as an ongoing process, which requires specific IT management capabilities, encompasses specific actions and reactions and has discernable patterns over time. The second is alignment as an end state, which focuses on the antecedents, measures, and outcomes of alignment."

Most researchers agree to consider these two approaches as complementary; however criticism has been voiced towards the whole field of research on business-IT alignment that it is still too distant from what happens in practice. This gave rise to a research stream dubbed strategy-as-practice or strategizing for IS (cf. Peppard et al. 2014). These approaches entail taking the perspectives of IS professionals, managers, executives, and consultants as the starting point for research (instead of a given [IS] theory). They seek to shed light on the social and micro-strategic dimensions of how actors in the field are trying to achieve their goals.

For example, Arvidsson et al. (2014) distinguish the challenges of alignment of organization's strategic intent and IT capabilities, successful IT implementation, and the actual realization of strategic intent. In order to understand the alignment processes in detail they focus on the organizational capability to enact IT-enabled change through "transforming and re-configuring local practices to align both system use and related organizational practices with the strategic intent" (p. 47). While Arvidsson et al. seek to detect more precisely the broken link between business strategy and IT implementation in practice ("strategy blindness"), the focus of this research is on those activities that can successfully transform and re-configure local practices towards improving alignment.

The communication and understanding among key actors, such as between CEO and CIO (e.g. Johnson and Lederer 2010), has been on the research agenda for many years. In fact, publications on the shared understanding among business and IT stretch over different fields, each emphasizing different set of concepts (Jentsch and Beimborn 2014). However, Peppard et al. (2014, p. 5) conclude that “if we are really going to understand these micro processes and the actual practice of IS strategy then researchers will have to get their hands dirty.” That means, not only the unit of study is recommended to shift closer to the practitioners but also the research methods are to be applied much more on the inductive side, encouraging reflexivity based on ‘participant objectivation’ (Splitter and Seidl 2011, with reference to Bourdieu). According to Bourdieu (2003) ‘participant objectivation’ aims at objectivizing the subjective relation to the object, which the researcher develops through participant observation, based on systematically reflecting the professional standpoint of the researcher and his/her interest in trying to objectivate.

While such strategy-as-practice perspective entails a shift in focus and method compared to previous IS strategy research, it has been argued (e.g. Whittington 2014) that such development does not contradict existing approaches but should rather lead to an enhanced joint research agenda.

## **2.2 Conceptualizing and measuring maturity**

The degree of strategic “fit” between business and IT is a dynamic relation in every organization. However, since the fit is considered to be an important antecedent for business success, organizations are in need for conceptualizing and measuring the degree of intended alignment, which is also called maturity.

Maturity research and maturity models have a prominent place in IS research ever since the success of the Capability Maturity Model for assessing an organization’s ability to conduct software development projects in the 1990s. In the center of any maturity-related research is always the concept of capability: “The capability to build and maintain strategic intent is central to any successful IS strategy.” (Arvidsson et al. 2014, p. 46).

Maturity with respect to IT strategy implementation has been conceptualized and measured broadly for a whole set of business-IT alignment criteria (Luftman and Kempaiah 2007, Khaiata and Zualkernan 2009) or specifically for certain aspects of strategy implementation such as IT governance (e.g. Simonsson et al. 2010). Maturity develops over time, and for observation and analysis purposes researchers often define different maturity levels which can be used to examine capability status at a certain point of time as well as the change of maturity over a period of time. The framework provided by Luftman (2004) includes six IT-business alignment criteria pertaining to maturity in communications, competency/value measurement, governance, partnership, scope & architecture, and skills. These criteria can be used to assess the different maturity levels defined as (from 1 to 5): initial / committed / established / improved / optimized. Evidence from industry studies shows that, while overall maturity scores are on the rise, there are significant differences between different industries as well as between maturity perceptions by different stakeholders within the same organization (Luftman and Kempaiah 2007).

Luftman and Kempaiah (2007, p. 166) argue that developing alignment maturity means crossing ‘a line’: “When organizations cross it, they have identified and addressed ways to enhance IT-business alignment.” The authors claim that the alignment maturity model developed by Luftman is both descriptive and prescriptive, i.e. that CIOs can use it to improve their organization’s alignment maturity. However, after studying antecedents for alignment in detail, Chan et al. (2006, p. 40) conclude: “There is no one ‘standard’ method for improving alignment.”

## **2.3 Research gap: how to boost alignment maturity?**

So far, little research has been conducted how such improvement processes unfold in practice and what are the contributions of the various actors (e.g. CEO, CIO, IT vendors, IT consultants) and/or the

obstacle they are facing on this road. The rare publications in this direction – i.e. those focusing on activities/process for improving the degree of maturity in the business-IT alignment as their unit of study – follow up certain cases over a long period of time (e.g. Arvidsson et al. 2014) or try to perform retrospect analysis of the development (e.g. Baker and Niederman 2014, Wang et al. 2011). Cases are usually sampled from well developed countries, a comparative case study in emerging markets (e.g. Wang et al. 2011) is already the exception, and no research is available for investigating such issue in the Middle East or the Arab countries, respectively.

Luftman and Kempaiah (2007) found in their sample of 200 mainly Global 1,000 organizations in the United States, Latin America, Europe, and India that most organizations are at the third maturity level, i.e. where the alignment is already established between IT and business and focused on business objectives. Their sample did not include any companies from Arab countries or Middle East in general. However, given that market penetration of enterprise systems and other technology for the ‘digital firm’ has been lacking behind in that area, it is plausible to assume that organizational readiness is also much behind when trying to establish business-IT alignment in order to create value with these technologies just as their global competitors do. Establishing business-IT alignment does take time and effort – however, companies in emerging markets do not have the luxury of a lengthy learning experience and waiting long for their technology return-on-investments.

Gartner<sup>1</sup> had estimated the IT spending in the Middle East to reach a total US\$ 211 billion in 2014 (an 8 percent increase from 2013), with expectations to reach US\$ 243 billion by 2018, which would represent 5.6 percent of worldwide IT spending. At the same time, the Middle East has been identified as one of the ten global clusters, which displays cultural coherency according to the dimensions performance orientation, assertiveness, future orientation, humane orientation, institutional collectivism, in-group collectivism, gender egalitarianism, power distance, and uncertainty avoidance (Javidon et al. 2006). In particular, the same research found that leaders from Egypt, representing the Arab region in the study, are seen as a distinct group and a different breed, looked at by employees with superiority. In view of the significant growth rates as well as cultural distinctness, the practical question is, from the perspective of the IT vendors and their clients, how these companies in this region can be supported in developing maturity in business-IT alignment faster than their predecessors in developed countries. From the research perspective, it needs to be investigated what kind of interceptions by internal stakeholders (e.g. CEO, CIO) or external stakeholders (e.g. IT vendor, consultant) can / do have an impact on “fast-tracking” the alignment maturity process in a given environment, and which environmental factors are standing against such attempts. This research seeks to answer both of the above questions, albeit only following up the interceptions of the consultant, i.e. the activities conducted, the obstacles faced and the success reached while trying to mature business-IT alignment in companies operating in Arab countries.

### **3 Following up Alignment Efforts: 5 Cases in Egypt and beyond**

Findings of this research are based on a multiple case study approach, refined through a participant objectivation process. The research approach is described in the following subsection, after which the cases are introduced and the consultant’s interception traced towards advancing the business-IT alignment maturity.

#### **3.1 Research approach**

Our unit of analysis is the consultant’s activities in a corporate process for improving the degree of maturity in the business-IT alignment. Beyond the actual activities we are interested in the related

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<sup>1</sup> Press release of April 1, 2014 (<http://www.gartner.com/newsroom/id/2696917>)

drivers, perceived priorities, obstacles faced, and success reached, in order to be able to relate the activities to the maturity gains within the given organizational environment. The research approach consists of three steps, described in more details below:

1. identifying and describing, through participant observation, the IT-related events triggering the consultant's entry and the solution reached in the selected cases
2. identifying and describing, through participant objectivation, the consultant's contribution to the maturity process
3. analyzing / interpreting the data of step one and two

*1. Participant observation in the selected cases:* Collecting the data through participant observation and the initial retrospect description has been performed solely by one author who has more than 20 years of experience in the ICT industry, with consulting experience exceeding ten years covering several Arab countries as well as different industries, including MNCs. Both authors filtered the consultant's portfolio based on the criteria that the company in focus is medium or large (i.e. number of employees exceeds 250) and 'locally grown' (i.e. not a multi-national), has significant market share or even leadership in its industry, and the scope of consultancy was related also to aspects of IT-business alignment. The below five cases (see table 1) remained in the sample, and for preserving a reasonable degree of confidentiality the firms' identities are not revealed.

Industry	Country	Market coverage	Consultancy duration
Retail	Egypt	Local to Egypt	2005-10, and 2012-14
Transportation	KSA	Regional	6 months in 2006
Printing & Packaging	Egypt	Local to Egypt, with exports regionally	2006-10
Food Manufacturing	Egypt	Local to Egypt, with exports regionally	2008-10
Telecommunication	Egypt	Subsidiary of a regional player	6 months in 2014

Table 1. Sample of cases included in study

Although this sample is obviously biased towards cases from Egypt, we have no reservations regarding generalization of findings: Egypt represents the largest population of the culturally coherent 'Middle East' cluster (see 2.3), having influenced the media landscape and culture of the region for decades, and still sending most of its qualified expatriate workforce to the Gulf and other Arab countries.

*2. Participant objectivation of consultant's contribution:* the other author sent a set of questions to the participant observer, asking for the following in each of the observed cases:

- Initial perception of alignment maturity (based on the Luftman framework)
- Main consultancy activities conducted
- Motives, intentions, and maturity vision as drivers behind consulting activities
- Priority setting for activities to be conducted first, others later or to be excluded from agenda
- Obstacles faced in organizational environment while conducting activities
- Perceived indicators of achievement in maturity progress by end of participation
- Perceived contribution / importance of consultant's activities

After initial written reply, two further interviews were conducted with the participant observer for clarification and ensuring that consultant's situated experience and rationale can be related to visible action and observable indicators. The second author then summarized the results which were endorsed by the participant observer before publication.

*3. Analysis and interpretation:* Description and insights from participant observation and objectivation are interrelated to find out (a) to what extent and through which type of interception the consultant had contributed to the corporate maturity development which otherwise might have taken much more time, and (b) what are the recurrent main obstacles, especially with respect to the region and culture from which the companies originate and in which they operate. While it remains a limitation of this research to include only one participant observer, the objectivation process and subsequent analysis should be bolstered in the future by including cases from various consultants.

### **3.2 Cases calling for interception: IT troubles and solutions**

#### *Retailer*

The company is a combined hypermarket department store in the country, covering 40,000 square meters in Western Cairo. Established in 2005, it employs more than 2,500 people and has an average of 45,000 visitors a day; with more than EGP 2.5 billion annual sales volume. Retailers use economies of scale to keep prices low. Their business model is based on low overheads, a result of expansive stores located on the outskirts of cities (where property prices are lower) coupled with sales of large volumes of goods at low profit margins. The savings are passed along to the consumer. As the company continues to move into big retail prominence, developing the IT structure of the organization played a major role in this success story.

In 2005 top management decided to adopt a local ERP system, without seeking expert opinion. On the first day of opening the first store, the ERP system stumbled causing worst ever start to the retailer. In 2005 the newly hired IS consultant established a committee which selected Oracle J D Edwards. During the ERP implementation the hardware sizing was determined by the vendor (IBM). However, this was not implemented as top management decided to cut the total budget. In the first day of the Oracle J D Edwards go-live, the system crashed due to server failure and only going back to original hardware recommendations recovered the situation.

Now, seeking and ensuring alignment, corporate management has adopted a strategic planning approach to ensure that CEO, CIO, and IT Manager are in line to achieve major objectives including: support daily operations (effective, accurate, integrated and error free automated system), support customer satisfaction (analysis of sales and the understanding of the client's data after recording it in databases), attract and retain distinguished employees, support decision making: raise the productivity of the institution through the support of decision-making, reinforce the direct and electronic relationship with suppliers, reduce risk of operations (a dedicated unit was created within the IT department), reliance on advanced technology.

#### *Car Transporter*

Traveling habits in the Kingdom of Saudi Arabia (KSA) have created the largest market for car transportation in the Arab World (about two billion Saudi riyals, & still increasing), and the company in focus owns the largest fleet of carriers in this region in order to fulfill more than daily 1000 shipping contracts, including approximately 2500 bills of lading daily between the main branches. At the time of writing the paper, the group extends also to Syria, Lebanon, and Jordan.

Over the years, the company has focused on how to maintain business leadership in order to achieve safe and fast transportation. Till 2006, the company has been dealing with IT as a technical support department. However, the business growth faced a lot of difficulties in dealing with various locations/branches and the necessity to move car documents between them and the headquarters. From there it emerged a need for a system with the capability to serve specific sectors in the organization, in addition to providing reporting throughout various functions at the company.

The implemented solution is based on clustered Dell servers running Windows and connected to over 270 Windows clients. The database management system used at the backbone of the system is Sybase Adaptive server, whereas clients use SQL Anywhere. There is replication between the server at the headquarters and the (client) branches. Throughout the replication (every 30 minutes), branch data is sent to the server and aggregated to create the most up-to-date database, and then sent back to the branches. This means every branch has the most recent version of the client list, truck availability, and new shipping contracts so that any customer is able to deal with any branch at any time.

All business processes are now facilitated by the shipping system, and the knowledge extracted from the central database has enabled the management team to make sound investment and operational decisions and therefore helped the business maintain its success and leadership in the Kingdom. IT helped the company to maintain growth and leadership in the transportation industry, regionally.

### *Printer and Packager*

The company has led the revolution of the Printing and Packaging industry in Egypt. With the headquarters located in Alexandria, the company occupies an area of 40.000 square meters and employs more than 700 employees. It has managed to obtain international quality certificates e.g., ISO 14001 and BRC/IOP. The company has two main business units: offset factory as well as flexible factory.

The company is the approved supplier to the biggest international companies in the field of fast food. The company produces paper cups for cold and hot drinks, ice-cream packages in all different shapes and sizes, eight-cornered carton boxes to pack sandwiches and burgers, different shapes and sizes of fried potatoes boxes, wrapping paper for sandwiches and fast food (treated with wax or laminated with aluminum), printed multi-layered paper bags with heat sealing for bottom and side-seam.

Despite the company being successful, the challenges it had been facing were really mounting, including:

- absence of a reliable infrastructure, network, servers, storage, and even PCs
- lack of an IT department structure
- competitors have taken serious steps in becoming digitally-enabled
- information loss has taken many shapes e.g. lost orders, inaccurate inventory, and lack of integration between functional departments

Till June 2006 the company has never had an IT department and relied on separate PCs with end-user designed excel sheets to facilitate the work duties. From July 2006, the company CEO decided to go digital, hired an IT consultant and endorsed implementing a new IT infrastructure. In 2006, after reviewing different ERP systems and scoring them against the company requirements, Oracle E-Business Suite was chosen as the best ERP to meet the company information and business requirements, and an implementation vendor was selected to start the project including Oracle Financials, inventory management, manufacturing, sales and marketing, order-management, and procurement. To ensure ERP implementation success, the company focused on the following success factors:

- focus on the business process requirements
- project management documentation
- post-implementation performance measurement
- CEO and IT consultant are both included in the project steering committee
- ensure adequate training and change management

After one year of implementation, only two modules went live, the financial and HR modules. Remaining modules went-live within another year. To reduce the risk the company has taken the following steps: 1) Identify key persons from all functional areas who will act as change agents and take the responsibility of persuading other employees of the importance of the system. 2) Train users to use the new system and understand how the new business processes will be affected. 3) Foster end-user project participation by involving more employees than just senior management in the decision, analysis, and implementation. After two years of implementation of various technologies and solutions, the following has been achieved: facilitation of day-to-day activities, minimized paper work, reduced investment risks, process integration, people integration, strengthened competitive position, improved efficiency and productivity, better customer services, efficient inventory handling, established strategic relationships with multi-national corporations.

### *Food Producer*

This Egyptian company, with more than fifty years in food business, is a family-owned and run business. Its name has become synonymous with a range of quality fresh and frozen products in domestic as well as international markets. The group is structured into four legal entities, all active in the production and marketing of a range of products e.g., natural pure ghee, natural butter, processes cheese, cheddar cheese long life juices and long life milk and flavored milk.

In year 2006, one of the entities Food Co has decided to implement a local well-known Egyptian ERP system. In 2008, two years after beginning of the system implementation, the company started to witness unprecedented growth and hence then it was realized by top management that this has not been the right choice, as it could scale-up to meet the business growth demands. While ERP systems usually retire after a period of maturity and value adding to the business, in our case study the retirement of local ERP system preceded even its full go-live date.

For making a new ERP selection decision the newly recruited external IT consultant recommended establishing an IT Steering Committee which then decided on a selection procedure based on short-listed systems and a simple multi-attribute rating technique. Later, the decision was made to implement SAP ERP. The decision was made based on engagement of business managers and that helped to bring their buy-in. However, the implementation has faced a set back as the organization change management was decided to be owned by the CEO, and only when later the CEO assistant was assigned the role of a change manager the project started to move forward.

### *Telecom Operator*

The Telecom Operator has strong presence (in various countries) across the Arab World, and beyond. Senior managers at the company point directly to the company's understanding of consumer needs and behavior as a prerequisite to growth. Developing products that customers want in timely manner fuels growth, but customer understanding is a necessity. Behind this customer understanding rests a sophisticated analysis of their data.

Prior to the development of the data warehousing solution, the company was faced with a huge volume of data which was difficult to use for business decisions because it was not organized consistently, and because managers had different levels of skills in making sense of the data. The company estimated that each employee produced nearly a gigabyte of data annually, and around one-third of this was contained in data such as spreadsheets. This made the information required for business decisions slow to access and often of poor quality.

A rigorous selection process was carried out to find a supplier that could provide a robust system to produce the needful market analytics. A global data warehousing provider was selected, based on criteria including the scalability and reliability of the solution, the supplier's expertise, its ability to deliver within set times and budget, and excellent references from previous customers. The solution resolved data managing problems by consolidating the data using a live-data warehouse, through which information can be accessed and generated. The overall solution combined software solutions for data extraction, data warehousing, and analytical reporting from various vendors.

Major benefits for the company include serving over hundred internal users of the enterprise data warehouse across a range of functions including finance, marketing, customer care, and senior management, all looking at the data from different perspectives for different purposes. Majority of business solutions are fabricated using data from the warehouse. The company was able to demonstrate high return-on-investment for the selected solution regarding profitability of distribution channels, accuracy of marketing expenditure, and faster as well as more confidence product development and product placement.

### **3.3 Consultant as maturity change agent**

Even though the companies and the consultant's engagement differed significantly from cases to case, the objective of the participant observer in terms of his intentions and visions of interfering have been similar in four of the five cases, which provides later on the common basis of the comparative analysis. However, the fifth case was also included because it showed that a consultant mediated through an IT vendor still can have a significant impact on alignment maturity. The questions to the consultant and his answers for each case are summarized in table 2 (verified by the interviewee).

	Retailer	Car Transporter	Printer and Packager	Food Producer	Telecom Operator
How did you perceive the initial alignment maturity in this company (based on the Luftman framework)?	level-1: IT as a cost center; no IT-business career cross-over; lack of alignment strategy; metrics are all technical	level-1: IT as a cost center; no IT-business career cross-over; lack of alignment strategy; metrics are all technical	level-1: IT as a cost center; no IT-business career cross-over; lack of alignment strategy; metrics are all technical	level-1: IT as a cost center; no IT-business career cross-over; lack of alignment strategy; metrics are all technical	level-3: IT assets become more integrated enterprise-wide; senior and mid-level IT management understand the business, and the business's understanding of IT is emerging; service level agreements begin to emerge
What have been your main consultancy activities conducted in this company?	<ul style="list-style-type: none"> <li>• assisting in building IT structure</li> <li>• selection of vendors &amp; systems</li> <li>• participating in project steering committees</li> <li>• assessment of IT staff training needs</li> <li>• establishing an business-IT forum</li> <li>• preparing an IT master plan</li> <li>• initiating IT policies</li> <li>• initiating and monitoring IT governance processes</li> <li>• high-level reporting to the CEO</li> </ul>	<ul style="list-style-type: none"> <li>• selection of vendors &amp; systems</li> <li>• selected knowledge transfer regarding system implementation and business support</li> </ul>	<ul style="list-style-type: none"> <li>• assisting in building IT structure</li> <li>• selection of vendors &amp; systems</li> <li>• participating in project steering committees</li> <li>• assessment of IT staff training needs</li> <li>• establishing an business-IT forum</li> <li>• initiating IT policies</li> <li>• initiating and monitoring processes related to IT governance</li> <li>• high-level reporting to the CEO</li> </ul>	<ul style="list-style-type: none"> <li>• assisting in building IT structure</li> <li>• selection of vendors &amp; systems</li> <li>• participating in project steering committees</li> <li>• assessment of IT staff training needs</li> <li>• preparing an IT master plan</li> <li>• initiating IT policies</li> <li>• initiating and monitoring processes related to IT governance</li> <li>• high-level reporting to the CEO</li> </ul>	<ul style="list-style-type: none"> <li>• evaluation of data warehousing and data mining practices</li> <li>• assist in preparations to transfer IT into profit center as far as pertaining to BI activities</li> </ul>
What have been your motives, intentions and maturity visions driving your consultant activities in this company?	Motive/intention: bridging the gap between industry and academia; helping the industry to mature and attain higher maturity; economic prosperity in general Maturity vision is built in each case based on (a) 30-45 days of fact finding and assessment of current maturity, and (b) reflection if own engagement can contribute to maturity development				
How did you set priorities for activities to be conducted first, or later, or to be excluded from the consultancy agenda?	<ol style="list-style-type: none"> <li>1. top-management priorities</li> <li>2. business needs</li> <li>3. IT needs</li> <li>4. industry pains (state-of-the-art)</li> </ol>	<ol style="list-style-type: none"> <li>1. top-management priorities</li> <li>2. business needs</li> <li>3. IT needs</li> <li>4. industry pains (state-of-the-art)</li> </ol>	<ol style="list-style-type: none"> <li>1. top-management priorities</li> <li>2. business needs</li> <li>3. IT needs</li> <li>4. industry pains (state-of-the-art)</li> </ol>	<ol style="list-style-type: none"> <li>1. top-management priorities</li> <li>2. business needs</li> <li>3. IT needs</li> <li>4. industry pains (state-of-the-art)</li> </ol>	<ol style="list-style-type: none"> <li>1. top-management priorities</li> <li>2. business needs</li> <li>3. IT needs</li> <li>4. industry pains (state-of-the-art)</li> </ol>
Which obstacles did you face in the organizational environment while conducting the consultancy activities?	<ul style="list-style-type: none"> <li>• Too much interference by CEO in process details and low-level decision making</li> <li>• Too little IT knowledge owned by key business managers</li> </ul>	<ul style="list-style-type: none"> <li>• CEO acted and was perceived as "sheikh", i.e. no decision could be made without him; IT governance could not be part of the agenda</li> </ul>	<ul style="list-style-type: none"> <li>• Too much interference by CEO in process details and low-level decision making</li> <li>• Too little IT knowledge owned by key business managers</li> <li>• Very high turn-over on both IT and business side</li> </ul>	<ul style="list-style-type: none"> <li>• Too much interference by CEO in process details and low-level decision making</li> <li>• Too little IT knowledge owned by key business managers</li> <li>• The initially selected IT team was an impairment in the beginning</li> </ul>	<ul style="list-style-type: none"> <li>• Very sophisticated internal structures (IT headcount almost 400) require following complicated communication mechanisms and dealing with internal conflicts, and prevent agility towards understanding of and adapting towards new business practices</li> </ul>
By which indicators did you perceive an achievement in maturity progress by end of your consultancy?	IT assets become more integrated enterprise-wide; senior and mid-level IT management understand the business, and the business's understanding of IT is emerging; service level agreements begin to emerge (indicators of Luftman level-3)	Business-IT alignment is now transaction-based; limited understanding of each others' roles (indicators of Luftman level-2) - at least in relation to the successfully finished project in the center of the consultancy	Business-IT alignment has been transaction-based; limited understanding of each others' roles (indicators of Luftman level-2)	Business-IT alignment has been transaction-based; limited understanding of each others' roles (indicators of Luftman level-2)	Conversations with IT reveal maturity gains in terms of better understanding of (a) the business side of IT service provision (b) the governance of service provision, and (c) the role of the IT vendor
How do you perceive your own contribution of your consultancy activities and its importance for maturing the business-IT alignment in this company?	Processes related to IT governance and the Business-IT forum, both initiated by consultant, now sustain without involvement of consultant or CEO	Contribution to improvement of business operations but not to alignment maturity	Processes related to IT governance, initiated by consultant, have sustained without further involvement; the newly founded Business-IT forum contributed to alignment maturity, but continued needing mediation of consultant or CEO	Processes related to IT governance and the Business-IT forum, both initiated by consultant, have sustained only short time after the consultant's withdrawal because almost all senior managers in IT and business have left the company	Consultant provided knowledge about technology & application (BI), application domain (retail), and IT governance (of service provision); however he was the only change agent for maturing the Business-IT relation at both the user company and the vendor

Table 2. Summarized answers of consultant per question and case

The following explains particularly those answers in detail which were found similar in several cases or which are rich in highlighting the road to alignment maturity.

*Initial perception of alignment maturity:* The consultant chose the framework of Luftman (2004) to describe the initial alignment maturity which was perceived on level 1, except for the Telecom case (level 3).

*Main consultancy activities conducted:* The consultant seemed to have drawn upon a repertoire which he had built up from experience:

- assisting in building IT structure which included studying the current business, transforming existing IT jobs and roles, drawing up IT structure plan, creating a “buy in” from the IT department (usually not difficult because IT staff members were not so well educated and the change was in their favor), convincing the CEO; the last step easily consumed up to 80% of the time in this activity because (a) more budget is needed to cover running cost as well as training, (b) more tiers in the organizational structure also create more empowerment (potentially challenging the CEO), (c) newly appointed IT managers turn out to be much younger than their business counterparts, (d) the CEO frequently brings in other business managers to be convinced by the consultant
- selection of IT vendors and systems, i.e. recommending selection procedures and participating in selection decision making
- participating in project steering committees mainly for the purpose of conflict mediation between stakeholders inside the companies, but in many cases also with IT vendors because procurement contracts often lack precision and open the door for endless debates (e.g. who should install the required service pack), thus delaying the project work
- assessment of training needs, mainly for IT staff
- establishing an Business-IT forum, i.e. a regular meeting opportunity to overcome the often persisting “blame culture” and collaboratively continue alignment efforts, driven by agenda and dedicated forum leadership (usually CIO or IT manager; initially led by the consultant or the CEO)
- preparing an IT master plan outlining the IS and IT strategy based on the given business strategy
- initiating and IT policies regarding the handling of databases, passwords, servers, backups, and more
- initiating and monitoring processes related to IT governance
- high-level reporting to the CEO including IT management assessment, alignment status and progress, plan fulfillment, budget utilization; this activity is important as the CEOs in most cases underestimate the value of the IT function and the IT management, and this attitude seems to persist

*Motives, intentions, and maturity vision as drivers behind consulting activities:* In all cases the vision driving the consultant’s interception was based on the assessment of current maturity (only in the Telecom case the scope restricted to service provision) and a reflection of a possible contribution to maturity development.

*Priority setting for activities:* If not set by the project design itself or by the IT vendor mediating the interception, the consultant set the priorities according to the following ranking: “1. top-management priorities, 2. business needs, 3. IT needs, 4. industry pains (state-of-the-art)”

*Obstacles faced in organizational environment while conducting activities:* In all cases in which the consultant had a direct relation with the company, the continuous interference of CEO in process details and low-level decision making has been reported as the main obstacle, coupled with a lack of IT knowledge on the side of key business function managers (which are mostly recruited without requiring such knowledge) and, by implication, a lack of their engagement in IT-related decision making processes. The consultant’s narratives from various cases included that the CEO: decided to own the organization’s change management but was too busy and only rarely participated or facilitated the change / significantly delayed a needed move of an IT staff resource from one branch to another / surprisingly prevented IT staff from going to trainings although budget was approved / stopped acquisition of IT memory extension (worth less than ten thousand USD) / delayed renewal of firewall so that

IT services had to shut down / had to approve every single laptop for an IT staff member / was perceived as a “sheikh” who has absolute decision power, i.e. it remains at his discretion when to decide about what... Even though most of the CEO acknowledged that they are over-influencing daily affairs and even realized that the company lost IT investment due to high CEO interference, the delegation of authority towards IT governance mechanisms happened only very reluctantly and still might be reversed any time.

*Perceived indicators of achievement in maturity progress by end of participation:* The consultant reported: “I look at IT practices; and business-IT relationship and once enhanced practices observed, I can spot areas of enhancement e.g., regular monthly forum, IT acquisitions, vendor selection procedure, hiring, training plan, budgeting in consequent years, projects initiation and documentation.” For all cases improvements were perceived that indicate a maturity gain, also according to the Luftman framework (except for the Telecom case because of its limited scope). The perceived maturity gains were also confirmed by representatives of multinational IT vendors who were involved in most of the cases.

*Perceived contribution / importance of consultant’s activities:* In three cases the consultant considers his contribution as significant because the companies in focus have established (a) a number of processes related to IT governance which were sustaining beyond the engagement of the consultant, and (b) a Business-IT forum as a continuous communication mechanism to proceed with alignment efforts. The consultant reported for these cases that the “situation has progressed as, at least, the major IT decisions are no longer left to non-IT people and the role of the CEO has been controlled.” However, only in one of these three cases it is confirmed that these advancements sustain until now, in one case the alignment maturity fell back to the initial level (because of the massive turnover of key IT and business managers), and for one case the current situation could not be confirmed. In one other case the consultant could only contribute to changing the CEO’s perspective on IT as a pure technical support to being a business enabler, but no alignment maturity gain was possible (due to short duration and the organizational culture withstanding it). In the case of the consultancy was mediated through the IT vendor, the consultant was the only change agent for maturing the business-IT alignment in the area of BI-related service provision. Maturity gains in this case have not been institutionalized but resulted, on both sides of the user company and the IT vendor, in better understanding of the business side of IT service provision, the governance of service provision, and the role of the vendor.

### **3.4 Case findings on “fast-track” interceptions**

This paper has introduced five cases from the Arab World where one of the authors has been consulting many firms for number of years. The cases in focus are from Egypt (4) and KSA, the largest two countries in the Arab World, with assumed leadership in IT practices. Requirements for being included in the sample of this study have been that the companies are “locally grown” and medium to large size, with visible industry leadership, and that the consultancy was related to aspects of IT-business alignment.

All of the five companies were facing a crisis in utilizing IT investments for the benefit of their business; this had triggered their decision to bring in an external consultant. Initial evaluation by the consultant revealed that the lack of sufficient business-IT alignment is causing major troubles to the business and hence alignment improvement is needed. The journey towards higher degree of business-IT alignment is usually a long one. However, the companies in focus have suffered in various corners and have been racing around the clock to utilize their IT investments and prevent business breakdowns. Accordingly, the consultant needed to ask himself: what type of consultant interception would “fast-track” the needed improvement in business-IT alignment? The answer to this question is of general interest because many companies in the Arab World and overall in emerging markets are struggling for an alignment maturity to gain the benefits of their high-tech investments.

The analysis of the five cases reveals both, repeatedly successful interventions which could be replicated elsewhere, as well as obstacles that tend to persist despite available knowledge of best practice.

The interceptions by the IT consultant, that have helped the companies to reach a higher alignment maturity level faster than they would have accomplished on their own, include:

- Design and implementation support of the IT structure (including job description, career path, KPI's, and salary schemes) which meets the business requirements
- Design and implementation support of an IT training plan to equip IT personnel with the necessary IT and business knowledge (the latter to foster interaction with peer business colleagues)
- Design and implementation support of an IT sourcing process with all necessary formalities
- Design and implementation of an business-IT forum where business and IT requirements are jointly discussed and problems are raised and solved
- Initiating IT policies (including password policy, server policy, anti-virus policy, e-mail policy etc.)
- Mediating the relation between top management, business functions, and IT in order to formulate and agree upon IT objectives
- Chairing project steering committees to help solving pending problems (that would otherwise remain unsolved and thus delay project progress)
- Bringing the attention of top management, business officials, and IT to the potential and necessity of acquiring and deploying state-of-the-art technologies in the business (some of the persistent problems have been due to lack of knowledge about and/or the lack of trust in modern technology)
- Acting as a change agent with top management, i.e. convincing them with the key role of IT, which paves the way for top management buy-in at different corners, e.g. new IT structure and IT budget

Most of the above listed interceptions had been running in parallel. However, priority was given to the design and implementation support of the IT structure and the IT training plan because these are setting the stage for all other interceptions.

As expected, the improvement of business-IT alignment had positive impacts on the companies such as, among other, the IT structure was able to resolve lots of the tension in the business-IT and helped to lift-up the spirit of IT personnel (now everyone can only be blamed on his/her scope-related issues); the business-IT forum served as a collective early warning mechanism and helped solving problems quickly; implementing the IT budget reduced the approval cycles; sourcing of IT products and services has gained all stakeholders' satisfaction. Of course, all of these are phenomena which every company would gain from improving its alignment maturity: it is the result of successful best practice implementation, and such observations are in line with academic findings.

In the case of the consultant has been affiliated with the IT vendor, the consultant's activities and possible interceptions have been very much limited in scope compared to the other four cases. Nevertheless, interceptions directed towards alignment maturity gains have been possible and include also advancing the IT vendor in assuming an effective role in promoting business-IT alignment.

The case analysis also revealed obstacles to successful consultant interceptions: most obvious is the often overwhelming role played by the CEO, interfering in too many details of the IT related affairs while at the same time preventing that the actors involved would sort out these affairs by themselves. Such kind of behavior seems to persist even though knowledge of best practice is available and the CEOs even acknowledge that their degree of engagement is not appropriate. However, it seems that authority delegation is a very difficult step for the company 'rulers', and this is matched by the attitude of employees and even top managers who fear to take more responsibility (which might lead to more personal blame) while at the same time they lack sufficient knowledge and skills to assume this responsibility.

In conclusion, from the cases there is evidence that the consultant's interceptions (such as listed above) can "fast-track" the needed improvement in business-IT alignment, especially when the sense of crisis in the company creates a readiness to embrace the change and the subsequent benefits are obvious enough to those involved to sustain the newly reached maturity level. However, the personality and behavior of the CEO, the attitude of middle management, and the corporate culture as a whole

may obstruct all efforts of “fast-tracking” any time, especially when the actors involved adhere to traits deeply rooted in the region’s autocratic traditions.

## **4 Conclusion**

This research had been motivated by the question of how companies in emerging markets, investing in latest IT solutions, can be supported in developing maturity in business-IT alignment faster than their predecessors in developed countries. In particular, we focused on the role of the consultant and sought to investigate what kind of his/her interceptions can or do have an impact on “fast-tracking” the alignment maturity process in a given environment, and which environmental factors are standing against such attempts.

Documenting ex-post the participant observation in five consultancy cases in Egypt and beyond, reflected through participant objectivation, we identified several key interception points related to: developing IT structure, IT training plan, IT sourcing process, and IT policies; knowledge transfer with regards to state-of-the-art technologies in the business; Business-IT forum as a communication structure, mediating the relation between top management, business functions, and IT; taking active role in the project steering committees; acting as a change agent with top management. All of these had led to observable maturity gains in the cases in focus; they can be replicated and are in line with known best practice. However, hierarchical organizational structures and behaviors, coupled with a lack of IT-related knowledge and the reluctance to delegate and accept responsibility for the business-IT alignment are recurrent factors standing against the consultant’s interception.

Previous literature on business-IT alignment has extensively focused on identifying alignment models, maturity stages, alignment antecedents, and reasons for misalignment. But too little research exists related to the actors and actions that actually leverage a company’s maturity level, let alone in a fast-track manner. This research contributes to the literature by providing a multiple case study approach based on participant observation and objectivation, and the findings shed light on the potentials and limitations of the IT consultant as a maturity change agent towards improving business-IT alignment in practice.

This research has also practical implications for vendors operating, or intending to, in the Arab World. First, the research showed that it is possible for the companies operating in the region to attain a fast track to maturity by relying on the role of the IT consultant. Additionally, it also highlights the often overinflated role of the CEO, with regard to interfering in making IT decisions. However, it also revealed that companies operating in the region do have access, and budget, to the same technology and systems operating in the developed countries. From the perspective of IT project management it is also advisable to strengthen the role of a mediator (e.g. steering committees) in order to resolve conflicts between stakeholders involved, especially beneficiaries and IT vendors.

Limitations of this research pertain to the restricted comparability of the consulting cases (due to inconsistent durations and timeframes, different industry backgrounds, etc.) and the (possible) distortion of the researchers’ role division between focusing on participant observation and objectivation, respectively, while co-authoring this publication.

Future research includes the need to follow up the type of interceptions carried-out by internal stakeholders (e.g. CEO, CIO, business managers, other roles), and the objectivation process and subsequent analysis should be bolstered by including cases from various consultants. Additionally, longitudinal studies need to be carried out to further explore impact on the long-term, in a comparative manner inside and across various industries as well as countries.

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