Applying Six Sigma to Business Strategy Implementation

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ABSTRACT
Strategy implementation comprises all measures, activities and processes which are dedicated to integrate a newly developed strategy into an existing business organization. Strategy implementation is a crucial process that aims to bring the strategy to life by introducing and establishing it within the organization and to deliver the desired effects to the market in order to accomplish the intended business goals. Through a literature review, this article aims to provide an overview of success rates, success factors and existing concepts and tools for business strategy implementation. It also describes the process optimization methodology Six Sigma and examines its possible applications to business strategy implementation through an analysis of existing literature sources and expert interviews. Finally implications for Thai companies are also examined.

Keywords: Six Sigma, Strategy

บทคัดย่อ
การปฏิบัติการทางกลยุทธ์เป็นกระบวนการสำคัญในการสร้างกลยุทธ์สำหรับการดำเนินการภายในองค์กรและเป็นขั้นตอนสำคัญที่จะพร้อมสู่แนวโน้มของธุรกิจ บทความนี้ได้นำเสนอเกี่ยวกับความสำคัญ ปัจจัยที่มีอิทธิพลต่อความสำเร็จและแนวความคิดเกี่ยวกับการปฏิบัติการตามกลยุทธ์ นอกจากนี้ยังนำเสนอเรื่องการนำหลักการเชิงปฏิบัติการเชิงกลยุทธ์ขององค์กร (Six Sigma) ที่นำมาใช้ในการปฏิบัติการทางกลยุทธ์ขององค์กรที่ดำเนินงานอยู่ในประเทศไทย

ค่าสำคัญ: ข้อคิด, ข้อก้าว, กลยุทธ์

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* Paper presented as part of the submission of an MBA Master’s Thesis, Graduate School, Bangkok University - 2009, entitled “Applying Six Sigma Principles to Business Strategy Implementation”.
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INTRODUCTION

Reputable authors have developed methods to develop such business strategies. Aloys Gaelweiler, Peter F. Drucker, Gary Hamel, Coimbatore Prahalad, Robert S. Kaplan, David P. Norton, Fredmund Malik, Michael Porter, Henry Mintzberg or Cuno Puempin are only some of the economists, who delivered relevant concepts and tools (Eschenbach, Eschenbach & Kunesch, 2003). More and more businesses have the need to apply these methodologies of an institutionalized process to generate their strategies on a periodical basis (Dannenmaier & Dannenmaier, 2008).

A problem does not so much seem to exist in the development or formulation of strategies (Dannenmaier & Dannenmaier, 2008). Companies have the awareness of the importance of proper strategy development and they can refer to lots of appropriate methodologies, such as Gaelweiler’s concept on strategic and operative corporate management, Hamel’s and Prahalad’s model on future-oriented strategy development, Porter’s Five Forces and generic strategy types or Puempin’s Strategic Success Positions or SEPs (Eschenbach, Eschenbach & Kunesch, 2003). Moreover the challenge seems to lie in the effective implementation of the once developed strategies after their successful formulation.

Many companies, even though they had dedicated considerable resources to the development of their business strategies, are not satisfied with the transformation of the developed strategic framework and guidelines into business reality (Dannenmaier & Dannenmaier, 2008). Companies are concerned about the fact that a great percentage of the strategies are never implemented, although they were considered crucial for business success during the development stage (Dannenmaier & Dannenmaier, 2008). This leads to a lack of strategic focus and triggers different kinds of negative effects on a company’s operation and after all on its performance (Dannenmaier & Dannenmaier, 2008).

Without proper implementation of strategies, management tends to lose track toward defined business goals, which causes uncertainty about necessary operative measures and can lead to day-to-day management decisions caused by the lack of general directions (Dannenmaier & Dannenmaier, 2008). Different departments, units and teams are not heading in the same direction. They pursue their own, short term goals with no regard of overall longterm company objectives (Dannenmaier & Dannenmaier, 2008). Company goals and strategies are not broken down to individual performance targets. This leads to a lack of employee identification with desired strategies. Individual measures that would be necessary in order to pursue company strategies, cannot be identified (Dannenmaier & Dannenmaier, 2008). The overall outcome is dissipation of company resources and a dissatisfying business performance (Dannenmaier & Dannenmaier, 2008).

But what can strategy implementers refer to, in order to make the strategy work? What theoretical fundamentals on strategy implementation exist? This article subsequently evaluates actual success rates, success factors and existing concepts or models on business strategy implementation as well as, if the process improvement methodology Six Sigma can contribute to more successful business strategy implementations.

History, definition and business impact of Six Sigma

The Six Sigma methodology was first developed and successfully applied in the mid-1980s by Motorola (Bertels, 2003, 2). Through a former CEO of AlliedSignals, a company later known as Honeywell, Six Sigma was brought to General Electric (GE) where it had a strong positive impact on GE’s operating figures and especially its profits from the very beginning of its application (Pande et al., 2000, 8). Through GE’s continuing success other companies, like ABB, Black & Decker, Bombardier, Dupont, Dow Chemical, FedEx, Kodak, Sony or Toshiba, were becoming more and more interested and decided to incorporate the methodology into their businesses (Pande et al., 2000, 9).

Pande et al. (2000: xi) define Six Sigma as a “comprehensive and flexible system for achieving, sustaining and maximizing business success, which is uniquely driven by close understanding of customer needs, disciplined use of facts, data, and statistical analysis, and diligent attention to managing, improving, and reinventing business processes”. Robert Dannenmaier (2008) describes Six Sigma as a process management and improvement methodology, which is consequently based on customer needs, data and facts, statistical analysis as well as constant monitoring of the implemented process improvements. The final vision of Six Sigma is to completely satisfy customer needs profitably (Dannenmaier & Dannenmaier, 2008).

The term Six Sigma itself refers to a statistically derived process performance target of operating with only 3.4 defects per one million opportunities or process runs (Pande et al., 2000: x). From the methodology point of view this is supposed to be the general performance goal for every process, but only few processes can claim to have achieved it (Pande et al., 2000: x). At the same time there are processes for which the above performance goal would by far not be good enough, like processes in the airline industry (Dannenmaier & Dannenmaier, 2008). That is why some processes are even aiming for a level of seven or eight sigma (Dannenmaier & Dannenmaier, 2008).

Not only GE but many other companies, who have fully dedicated themselves to Six Sigma as its process optimization and continuous improvement methodology, are able to benefit significantly (Dannenmaier & Dannenmaier, 2008). The strict focus on customer needs, data, statistical analysis and continuous process monitoring not only has a strong...
impact on the improved processes but moreover on financial results (Dannenmaier & Dannenmaier, 2008). On the one hand, because of Six Sigma’s vigorous customer focus, companies are able to cater products with stronger customer orientation and therefore create higher revenues (Dannenmaier & Dannenmaier, 2008). Through data driven improvement and monitoring of the process quality and efficiency organizations on the other hand are able to significantly increase quality and reduce operating costs (Dannenmaier & Dannenmaier, 2008). It therefore can be said that Six Sigma has a clear positive impact on hard business figures.

Six Sigma methodology and implementation

Six Sigma applies the DMAIC improvement cycle. DMAIC consists of five phases of process improvement (Pande et al., 2002, pp 14-15). These phases are called “Define”, “Measure”, “Analyze”, “Improve” and “Control” and have to be applied to the improvement project in this specific order (Pande et al., 2002, 15; Birkmayer et al., 2008, 6). Every phase can be divided into three steps (Birkmayer et al., 2008, 6). The phases are separated by so called toll gates, where project progress has to be reported to a steering committee after each phase (Birkmayer et al., 2008, 6). The following figure gives an overview of the five phases and fifteen steps:

In the Define-Phase the problem and customer requirements are being defined (Pande et al., 2002, 14). It can be divided into three steps which are “Select the customer requirements that are critical to the process quality (CTQs)”, “Create the project charter or contract”, and “Develop the high-level process-map” (Birkmayer et al., 2008, 6).

The Measure-Phase aims to measure the defects (not fulfilled customer requirements) the process is producing and the process capability (Pande et al., 2002, 14). The three steps of this phase are “Identify the project output metrics, which are the key performance indicators of the process within the project”, “Develop the data collection plan”, and “Establish the process baseline, which indicates the current process performance level” (Birkmayer et al., 2008, 6).

In the Analyze-Phase the collected data is being analyzed and root causes for the process problems are being identified (Pande et al., 2002, 14). The first step of this phase is “Identify root causes”, the second is “Validate root causes and determine the
vital few, which are the few with a real impact on the process problems”, and the third step is “Quantify the opportunity of a possible positive project impact” (Birkmayer et al., 2008, 6).

In the Improve-Phase the process is being improved and causes of defects are being removed (Pande et al., 2002, 14). The three steps of this phase are “Identify the solution”, “Refine and test the solution”, and “Calculate the costs and benefits of the project” (Birkmayer et al., 2008, 6).

The last phase is called Control and aims to monitor and control the new process so that defects do not recur (Pande et al., 2002, 14). Step one of this phase is “Implement process control”, step two “Prepare and roll out the solution”, and step three “Close the project” (Birkmayer et al., 2008, 6).

Once an organization has decided to apply Six Sigma as its process optimization and continuous improvement methodology, the implementation of this philosophy normally follows three steps: first training of management, of Six Sigma full-time (Black Belts) and part-time (Green Belts) project leaders and employees; second establishment of a Six Sigma project selection process; third continuous Six Sigma project execution (Dannenmaier & Dannenmaier, 2008). The trainings for the management and employees are aiming to create awareness for the methodology and to generate the necessary acceptance of Six Sigma as means for a sustainable, long-term improvement culture (Dannenmaier & Dannenmaier, 2008). Green and Black Belts ensure the proper Six Sigma project application (Dannenmaier & Dannenmaier, 2008).

**Strategy implementation concepts and tools**

Different authors have developed systemic approaches to strategy implementation and tools to monitor it respectively. Among these authors are Kolks, Pearce & Robinson, Raps, Hronec, McNair & Lynch & Cross, Adams & Roberts or Kaplan & Norton, whose theories are described subsequently.

The “Action Model” developed by Kolks (1990) divides the strategy implementation into three parts, which are implementation planning, realization of the implementation and implementation control. Implementation planning encompasses an analysis of the formulated strategy and the internal implementation environment, as well as formulation of the implementation goals. Implementation goals are differentiated into system goals and action goals. System goals have to answer the question, what has to be achieved by the implementation. Action goals comprise the framework for the execution itself, like cost, deadlines or administrative guidelines. Planning has to consider that in the first stage of the implementation, emphasis has to lie on the achievement of acceptance towards the new strategy. The second part is the realization of the implementation. It is divided into a communication phase, followed by a transformation phase, where project teams are selected and the strategy is being operationalized throughout all parts of the organization. The third phase of the transformation is the real life application of the new strategy accompanied by training and instruction. The third part of Kolks’ “Action Model” is implementation control, where the as-is status of the implementation is compared to should-be goals and necessary corrective actions are taken.

Pearce & Robinson (1988) promote an implementation concept based on three interdependent steps. The first step is the operationalization of the strategy, which includes the identification of measurable implementation targets, the deduction of strategies for each business unit as well as the development of precise guidelines for the middle management. The second implementation step is the transformation of the strategy into daily business, which makes it necessary to adapt structure, culture and leadership principles of the organization to the new strategy. The third step is constant monitoring of the implementation and is divided into two components. Strategic controlling shall make sure that implementation efforts stay on track towards the strategic goals. Operative controlling aims to secure compliance of action plans and resources with the implementation plan.

Raps (2004) starts his strategy implementation concept with a description of a hierarchy of the strategy implementation goals. Above all stands the global goal of the successful execution of the strategy implementation, which has to be in line with company vision and goals. Thereafter he puts systemic goals, which clarify what specific deliverables have to be achieved by the implementation. The last goals in the hierarchy are goals for the effective and efficient implementation itself. Based on this goal definition Raps has developed an implementation concept based on the elements planning, directives, implementation control, organization, culture, human resource management and controlling. “Planning” comprises the concretion of the new strategy into medium-term measures, the deduction of operative goals and resource requirements for every department, the definition of annual budgets for each department as well as quarterly, monthly and weekly plans. “Directives” are understood as the definition, execution and enforcement of concrete actions. “Control” on the one hand comprises operative control, thus securing the execution of the defined actions according to plan, on the other hand strategic control as the permanent check, if the developed strategy is still the right one and valid according to the external and internal environment. “Organization” has to yield the adequate structural environment for the particular strategy to implement. The element “culture” has to make sure that employees’ values and convictions have to be in line with the culture that comes along with the new strategy. “Human resource management” has to guarantee availability of the adequate human resources.
that are necessary for the implementation. “Controlling” fulfills the central task of coordinating implementation activities in terms of time and content.

Apart from comprehensive concepts there are several performance measurement tools that help to monitor implementation progress. Three of which are described below.

The Quantum-Performance-Concept comprises a matrix with three performance measures, namely cost, quality and time, as well as three performance levels (or generators) of an organization which are the structural organization, processes and employees (Hronec, 1996). The Quantum-Performance-Measurement-Matrix combines these six elements into nine fields, each of which related to a combination of one performance measure and one performance generator. Each combination of a performance measure and a performance generator has to be rated, to be put in context with the strategy that is intended to be implemented and to be adapted to the needs of the new strategy.

The EP2M-Approach (Adams & Roberts, 1993) – Effective Progress and Performance Measurement – focuses on the development of a performance measurement system split into four areas in order to monitor the activities of a business. Effectivity and efficiency are two internal areas for which key performance measures have to be developed. Additional performance measures have to be installed for two external areas namely markets and customers. The designed measures are on the one hand intended to function as top-down measures to disseminate the new strategy into every part of the business, and on the other hand to promote bottom-up motivation for every employee by linking their specific function to overall business performance.

The most frequently applied performance measurement system is the Balanced Scorecard by Kaplan & Norton (1997). It is assumed that more than 60% of the Fortune 1000 companies use the Balanced Scorecard to monitor strategy implementation progress and company performance (Atkinson, 2006). The Balanced Scorecard (BSC) focuses its view on four dimensions of a business, which are the financial perspective, the customer perspective, the internal process perspective and the innovation and learning perspective. The consideration of these four dimensions shall help to close the gap between strategic and operative management. The process to build the BSC is always based on vision and a (new) business strategy that sometimes happens to be specified or modified during the application of the BSC. 20 to 25 performance measures or indicators have to be developed in order to link the new strategy to the four dimensions mentioned above.

Pros and Cons

From reviewing the literature it can be drawn that there are pros and cons to the question, if Six Sigma can support strategy implementation. On the one hand it seems that Six Sigma can support strategy implementation in two ways. First Bertels (2003) stated that processes are the instruments by which organizations execute their strategies. Six Sigma is focused around defining processes, measuring, analyzing, improving, implementing and controlling them (Bertels, 2003). Therefore it can be derived that Six Sigma can help to implement new strategies more efficiently and swiftly. Secondly Six Sigma and TOP offer tools which can enhance specific strategy implementation success factors, like planning & execution, organizational design & processes, monitoring, understanding, or acceptance (Dannenmaier & Dannenmaier, 2008).

On the other hand also drawbacks can be identified. In order to fully develop its power, Six Sigma needs to reach big parts of an organization, not only as an applied but also as an accepted methodology (Dannenmaier & Dannenmaier, 2008). Depending on the size of the company and the effort of implementation the penetration with Six Sigma can take from 1 up to 3 years, which means that the applicability of Six Sigma for new business strategy implementation would take at least the same amount of time (Dannenmaier & Dannenmaier, 2008). This kind of Six Sigma application therefore seems to be a huge endeavor, especially for companies who have not implemented Six Sigma as its process improvement method yet. Furthermore so far no empirical evidence could be found that underlines the seeming positive impact of Six Sigma on business strategy implementation as it is stated in the literature and by interviewed experts.

DISCUSSION

Success rates

A successful strategy implementation is determined by two factors (Raps, 2004; and Kolks, 1990). The first is an implementation plan, where all defined necessary operative measures have actually been realized. The second is the achievement of the intended goals, as defined in the proposed strategy. Only when both requirements are fulfilled, it can be taken as a successful strategy implementation (Raps, 2004). Emphasis has to be put on the term “intended” outcome of a strategy implementation, which marks the basis of comparison for determining, whether an implementation was successful or not (Kiechel, 1984). Implementation is successful only when the full intended outcome – realization of planned operative measures and attainment of intended goals – has been achieved (Raps, 2004; and Kiechel, 1984).

Different figures on success rates can be found in the literature. Raps (2004), Kiechel (1984) and Gurowitz (2008) state that less than 10% of intended strategies are implemented. Kaplan and Norton (2001) speak of success rates between 10% and 30%. Allio found out that 57% of firms are unable to
execute their strategic initiatives. O’Coorbui (2008) and Sterling (2003) state that up to 70% of strategies fail to get fully implemented. Mintzberg (1994, as cited in Atkinson, 2006) asserts that more than half of the strategies are never actually implemented.

**Success factors**

In numerous publications different success factors have been identified. In order to give a better overview, these success factors are allocated to twelve broader categories in figure 2. Subsequently the main aspects of each category are described.

![Figure 2: Categories of Success Factors](image)

**Strategy**: Probably the most crucial point of a successful strategy implementation is the strategy itself that is intended to be implemented (Dannenmaier & Dannenmaier, 2008) It is stated that without a properly developed strategy even the best implementation will not deliver the desired results (Dannenmaier & Dannenmaier, 2008). A properly defined strategy is based on a thorough analysis of the competitive environment which is combined with the analysis of internal capabilities and mainly encompasses the development of core competencies as differentiators that lead to competitive advantages in the market (Porter, 2000, as cited in Eschenbach, R., Eschenbach, S. & Kunesch, 2003).

**Planning & Execution**: One crucial part of strategy implementation plan, with clearly defined actions, responsibilities and timeframes, which makes it possible to track implementation progress (Alexander, 1985). It is important to break down the basic logic of how a broader logic is to be implemented into shorter-term actions (Allio, 2005). The plan should also identify likely implementation problems including possible contingency responses (Alexander, 1985). One aspect is setting clear priorities in the implementation plan (Mankins & Steele, 2005). This means that a few key steps and decisions have to be set and executed at the right time in the right way to meet planned implementation performance. These implementation priorities have to be translated into action items, responsibilities and timelines for each business unit and have to be provided with key performance indicators (Mankins & Steele, 2005). Such priorities make it clear for every business unit on what to focus and help management to more precisely track performance (Mankins & Steele, 2005).

Planning alone is nothing without proper execution (Beaudan, 2001). Apart from the necessary premises for execution like enough resources, clear responsibilities, comprehensive communication as well as understanding and acceptance among employees, it is crucial to follow through with the strategy execution (Allio, 2005). It is therefore necessary to meet regularly, in well-structured, punctuated team sessions, where progress of implementation action items is discussed and necessary adaptations are made (Allio, 2005). This applies to both the team responsible for the whole program as well as to the teams in the specific units (Allio, 2005).

**Organizational Design & Processes**: Sterling (2003) and Freedman (2003) recommend adapting the organizational design to the needs of the strategy, meaning that structure has to follow the new strategy (Freedman, 2003) The organization has to make sure that all necessary organizational functions are being created in order to be able to fulfill the operational
needs of the new strategy (Sterling, 2003). Sterling (2003) opts for a basic assessment of organizational capabilities and for an immediate alignment of detected capability gaps according to the new strategic requirements. Possible criteria to assess structural design with the new strategy can be: compatibility of structure with the desired competitive advantages; consistency with the company’s future core processes; alignment with the future product and market segments the company wants to serve; support of central functions; grade of devolution of decision making authority to those positions that are closest to the expertise needed for the decision (Freedman, 2003).

Thompson et al. (2007) promote the idea of cross-unit coordination through establishing effective and efficient cross-functional processes. Such processes assure fewer barriers between different vertical ranks, functions, disciplines and geographic locations. Such processes are also considered crucial to develop the core competencies that lead to the creation of competitive advantages, which make new strategies successful and sustainable. The adaptation of the organizational design therefore always has to include two main aspects, namely structure and cross-functional processes (Thompson et al., 2007).

**Resources:** Mankins & Steele (2005) suggest that resources deployment has to be discussed as early as possible in the whole implementation planning process, and these resources – financial, personal and time – have to be included in the company’s budget from the beginning (Allio, 2005). Resource allocation contains two aspects. The first one is the level of necessary resources, the second one is the timing of the allocation (Mankins & Steele, 2005). In order to assure the necessary amount and the right timing Mankins & Steele (2005) argue that every business unit has to answer three questions precisely: What actions have to be taken in order to implement the new strategy within the unit? How long will it take? What kind of resources will be needed and when during the implementation stage? After obtaining the answers for these questions from every unit, organizations can build up their resource allocation for the whole strategy initiative (Mankins & Steele, 2005).

**Responsibilities:** Alexander (1985) points out that it has to be clear from the very beginning of the implementation process who is responsible for which task. This includes the implementation process itself as well as the new organizational design, with its new structures and processes (Alexander, 1985; Raps, 2004). Only one strategy manager should be responsible for the implementation as a whole with the task to guide the overall process (Allio, 2005). He relies on designated “stewards”, who have the responsibility to coordinate the implementation tasks in their respective organizational units (Allio, 2005). They themselves use employees of these specific units in order to fulfill the necessary actions (Allio, 2005). Such a clear plan of responsibilities helps to avoid power struggles between units and within hierarchies and is crucial for a smooth implementation (Raps, 2004).

**Capabilities:** Mankins & Steele (2005) state that no strategy implementation can be better than the people who have to make it work. Apart from the creation of the necessary structures and processes it is thus crucial to have capable employees (Sterling, 2003; and Beaudan, 2001). An organization must either develop its employees by giving them the necessary capabilities to successfully implement the new strategy or to hire the right personnel (Mankins & Steele, 2005). Thompson et al. (2007) even state that putting together a staff with the right mix of experiences, skills and abilities to get things done should be one of the first strategy implementing steps, because knowledgeable and engaged employees are an essential part of successful strategy execution. The challenge is twofold. First it is crucial to hire the best and brightest people and second it is necessary to retain them by developing them (Thompson et al., 2007).

**Monitoring:** Another key for a successful strategy implementation is to continuously monitor implementation performance (Mankins & Steele, 2005; Freedman, 2003). Sterling (2003) states that effective implementation requires continual monitoring of progress in implementing the plan and of the financial returns generated by the strategy. That is why it is necessary to develop a control system that is able to provide the necessary information (Raps, 2004). Successful companies use real-time performance tracking to non-stop monitor their resource deployment as well as results against plan, in order to constantly be aware of implementation progress and necessary adaptations or corrections (Mankins & Steele, 2005). Sterling (2003) also demands that such monitoring has to be accompanied by accountability and prompt change when change is needed, if the necessary quality and benefits are not being delivered. Apart from this “internal” monitoring of implementation progress, observation of the “external” environment seems to be crucial. Sterling (2003) emphasizes two such external factors, which are the necessity to be ready for unanticipated market changes during the implementation as well as for effective competitor response to a company’s new strategy.

**Communication:** The first step to understanding and acceptance of a newly designed strategy is effective communication to all people involved in the implementation, which basically comprises all managers and employees of an organization (Sterling, 2003; Al-Ghamdi, 1998). Freedman (2003) highlights the necessity to properly communicate to the stakeholders of the strategy implementation first, meaning those people who have a genuine interest in
the new strategy or who are mostly affected by the new strategy. Sterling (2003) further emphasizes that comprehensive communication of the strategic plans is especially important when reaching out beyond the group directly involved in the development.

Understanding: According to Mankins & Steele (2005) strategy is in most companies a highly abstract concept, which is something that cannot be easily communicated and translated into action. The more abstract the strategy is formulated the more difficult it gets for lower levels within the organization to put in place executable plans (Mankins & Steele, 2005). Mankins & Steele (2005) as well as Allio (2005) therefore point out the importance of a strategy that is being kept simple and as concrete as possible. This means to clearly highlight in simple words what the strategy is and what it is not (Mankins & Steele, 2005). Allio (2005) promotes the idea to stick to not more than one page and use understandable language that contains action verbs in order to highlight the importance that implementing a new strategy is all about doing. The explanation of the intended meaning has to be followed by the check, what employees think the strategy means in order to make sure that employee interpretation is in line with the intended meaning of the new strategy (Beaudan, 2001).

Acceptance: Every strategic initiative needs the acceptance of a critical mass of employees in order to be successful (Dannenmaier & Dannenmaier, 2008). Acceptance means that people believe that the strategy is the best possible one for the business and that they are willing to make the strategy work, regardless of the effort needed for implementation (Beaudan, 2001). After a thorough communication of the new strategy and after safeguarding the understanding of everyone involved, acceptance is key to consistent participation and execution (Dannenmaier & Dannenmaier, 2008). Sterling (2003) and Alexander (1985) argue that the surest way to ensure someone understands and especially accepts a strategy is to involve him or her in the creation. Such an involvement creates the ownership needed for the implementation (Sterling, 2003) and motivates especially the important middle-managers to properly transport the strategy into their respective units (Raps, 2004). One way to secure the buy-in of those who are not part of the creation, but responsible for the implementation is to reward them according to their success (Mankins & Steele, 2005).

Leadership & Support: For successful strategy implementation a company needs to fill key managerial slots with “smart people who are clear thinkers, good at figuring out what needs to be done and skilled in making it happen and delivering good results” (Thompson et al., 2007). Leading the strategy execution process is considered a top-down responsibility which encompasses staying on top of what is happening, monitoring progress, clearing out issues, putting constructive pressure on the organization, displaying ethical integrity, leading social responsibility initiatives as well as pushing corrective actions to improve strategy execution (Thompson et al., 2007).

Culture: Thompson et al. (2007) define corporate culture as the character of a company’s work climate and personality – as shaped by its core values, beliefs, business principles and policies, traditions, ingrained behaviors, work practices, and styles of operating. It is considered one of the success factors for strategy implementations because it influences the organization’s actions, approaches to conducting business and the way of executing strategies (Thompson et al., 2007). A company’s culture can promote strategy execution, when its values are strategy-supportive and its practices and behavioral norms add to the company’s strategy execution efforts (Thompson et al., 2007). A company’s culture should encourage strategic thinking and dialogue, which helps to develop a strategically more aware workforce which is also more open to necessary strategic changes (Beaudan, 2007). It is the task of top management to foster a corporate culture that paves the way for the effective implementation of new strategies (Thompson et al., 2007; Raps, 2004).

Implications for Thai companies

Six Sigma was first introduced to Thailand through multi-national organizations running subsidiaries in Thailand, like Allianz, DHL, Fujitsu, GE, Nestlé, Toshiba or Sony (Dannenmaier & Dannenmaier, 2008). But also Thai companies have started to apply Six Sigma to improve their business related performance, like for example Thai Airways (Thai Airways Press Release, 2002). No indications could be detected that the general advantages of the process improvement methodology Six Sigma, like strong customer focus, data and fact driven analysis or sustainable process monitoring (Pande et al., 2000) cannot be drawn by Thai organizations and therefore enhance their process and business related performance respectively. There are no hints that the positive impact of Six Sigma on strategy implementation does not apply to Thai companies either. After Bertels (2003) this would mean that Thai companies who utilize Six Sigma as a process management vehicle are focused on managing their processes well and can therefore more efficiently operationalize their strategies.

CONCLUSION

Companies seem to struggle with implementing new strategies. According to different authors only between 10% and 30% of strategy implementations are successful.

The many different success factors identified by numerous authors can be subsumed under 12 categories which are strategy, planning & execution,
organizational design & processes, resources, responsibilities, capabilities, monitoring, communication, understanding, acceptance, leadership & support and culture.

The lack of strategy implementation and monitoring methodology does not appear to be the reason for unsuccessful strategy implementations. Several authors have developed applicable theory, like Kolks, Pearce & Robinson, Raps, Hronec, McNair & Lynch & Cross, Adams & Roberts or Kaplan & Norton.

Indications for the application of Six Sigma to business strategy implementation seem to be rare. Gupta has developed the Six Sigma Business Scorecard to support business strategy execution by delivering measurements that connect strategy to existing processes and that reflect the actual performance of a company at any time. Some authors have pointed out that Six Sigma as a process management concept can strongly support business strategy implementation because the better an organization manages its processes through Six Sigma the better it is capable of managing necessary process changes due to new strategies. Furthermore tools from the Six Sigma toolbox seem to be able to support the fulfillment of strategy implementation success factors. However empirical evidence could not be detected and gathering of such would be necessary to prove the applicability of Six Sigma as a means for better strategy implementation.

Finally Six Sigma also appears to be able to enhance business related performance of Thai companies and to help them to more effectively implement new business strategies.

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