

CASE STUDY



October 25, 2010

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1 Introduction: Balanced Scorecard and Lean Six Sigma

Performance Management using the Balanced Scorecard methodology translates strategy into execution. It provides organizations with a dynamic management system that reinforces, implements and executes corporate strategy.

Process Excellence using the Lean Six Sigma methodology continually improves the performance of company results and processes against customer requirements. It provides a rigorous system that listens to customer and business requirements, measures performance gaps, analyses root causes and implements sustainable fixes with careful change management.

Combining elements from Balanced Scorecard, Lean and Six Sigma offers a management system that provides compelling answers to four key questions that are constantly on the mind of every organization's leadership:

1. Are we matching or exceeding customer requirements?
2. Are we driving strategic execution?
3. Are we focusing scarce business improvement resources to best effect?
4. Are we fixing issues?

Although the Balanced Scorecard strategic management system provides an excellent and widely accepted means for describing, communicating, executing and monitoring the execution of strategy, it fails to provide a systematic solution for closing specific strategic performance gaps. This is where methods like Lean and Six Sigma provide the Balanced Scorecard with an ideal and complementary improvement ingredient.

In 2007, Teknosa – a leading electronics retail chain from Turkey - embarked on a project to improve the efficiency and effectiveness of its management system, for which it had just been awarded the ISO 9001: 2000 compliance certificate. It understood that business excellence is not achieved with a certificate on the wall, or that "excellence" is a continuous state. For Teknosa, achieving and maintaining business excellence would become an ongoing effort, based on a superior level of process and strategy awareness among all of its employees and in everything it does.

2 Teknosa in brief

Teknosa is Turkey's leading electronics retailer. It operates under two brands: Teknosa, which offers consumer home and IT electronics through 255 stores in 68 cities, and Iklimsa, which offers air conditioners, cash registers, refrigerators and combination boilers through 220 dealers in 47 cities.

Considering that the company offers over 96,000 square meters of retail space that attract over 6 million shoppers every month, and that it employs over 3,000 employees who achieve a 15% market share, it may be a surprise for many to hear that the company only started in 2000 with 5 stores!

Part of its success is no doubt due to the recognition that being successful requires a dedicated and skilled staff. To this purpose, the company founded the "Teknosa Akademi", an internal educational and training facility, in 2005. Teknosa Akademi facilitates training and career planning for every Teknosa employee starting from the first day of their employment.

This effort has paid off for the company as Teknosa enjoys an excellent brand image in Turkey, which helps it fend-off the competitive pressure from market newcomers such as MediaMarkt and BestBuy with success. This is illustrated by being rated the number 5 among all retailers in the Fortune 500 Turkey listings and the number one retailer in Interpromedya's "Top 500 IT firms". The Federation of Asia-Pacific Retailers Associations (FAPRA) furthermore picked Teknosa as the Chain Retailer of the Year and also Microsoft awarded Teknosa as Turkey's Store of the Year. The long list of awards does not stop there and is likely to continue to grow for years to come.

On the social playing field, Teknosa carries out a rich variety of projects and initiatives. Take for example its "Technology for Women" project where it offers computer classes free of charge to women in various cities across the country in an effort to boost computer literacy. "Technology for History" is yet another example which involved providing Teknosa's technological expertise in digitizing nearly 100,000 works of art and protecting them from the destructive effects of time. Also in sports the company is highly active by being the technology supplier of the national football team of Turkey and by being the main sponsor to the Turkey Basketball Cup.

Over the coming years, Teknosa aims to maintain its target of stable growth by adding new stores to its' existing network across the country.

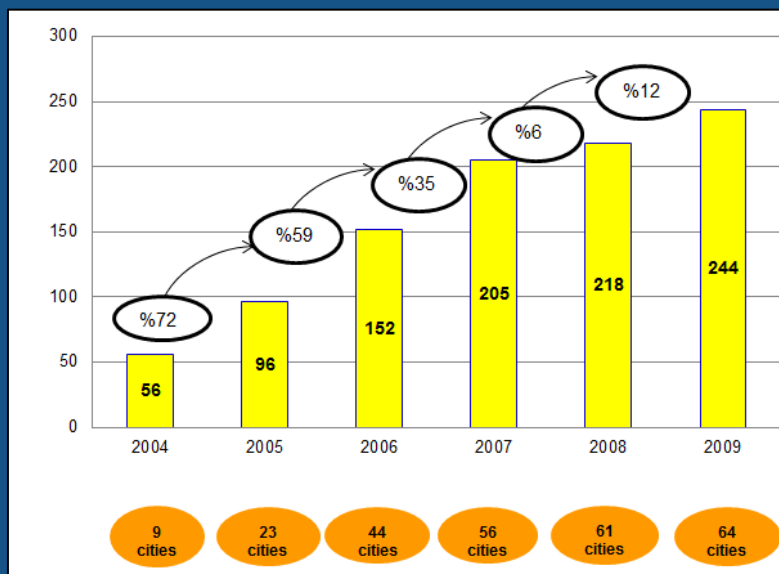


"Teknosa Plaza", Teknosa's Main Office in Istanbul

3 The challenge: rapid growth and fierce competition

Six years since its inception, Teknosa found itself struggling with the speed of growth of its retail network. The electronics market in Turkey at the time was growing at an annual rate of 5% and Teknosa's market presence had grown from 5 stores in 2000 to 152 stores in 2006, with almost 3 new stores opening in some part of Turkey every week. Managing operations across all stores – from ordering to delivery and returns - in such a dynamic environment was quickly becoming a problem.

The healthy state of the Turkish consumer electronics market furthermore had not gone unnoticed by Teknosa's competitors. International players like MediaMarkt, BestBuy and Darty were eager to get their piece of the pie and were aggressively establishing themselves on the Turkish market.



Teknosa retail store network growth 2004 – 2009. Source: Teknosa

Teknosa understood that in order to manage its rapid growth it was essential to standardize processes and drive continuous improvement throughout its retail network and back-office operations. Process standardization and continuous improvement required proper process management and effective strategy execution with short reporting cycles that would support effective decision making.

In order to not just survive, but be successful in fending-off the new competition and grow its market share, Teknosa made its move to become operationally excellent, improve customer satisfaction to beyond that of its competitors and reduce cost. Although it had just received ISO 9001 certification from the British Standards Institution (BSI) - the world's leading authority in the field of quality audits - Teknosa knew that quality management provided the potential to add significantly more value than their new certificate ever could.

Combining Balanced Scorecard, Process Management and Lean Six Sigma provided Teknosa with the ideal quality management system toolset for continuously improving operational efficiency in line with strategy.

4 Implementing an effective quality management system at Teknosa

No management system can be effective if it does not enjoy active employee participation. In fact, without employee participation one can simply conclude that there is no management system. Obtaining employee support for a new management system starts with helping employees understand their role in the big picture, and providing them with easy access to all the information they need to perform that role. This means that people need to understand how their work ties into that of others and what is expected of them in terms of objectives and tasks.

A well-defined company goal and a clear plan on how the organization plans to achieve that go a long way in motivating people, especially when it is clear how employees by achieving their own objectives, play a part in the overall picture. Process management and strategy management with Balanced Scorecard are ideal tools to provide a basis for achieving such.

With this in mind, Teknosa leadership set out to define its requirements for an effective management system.

4.1 Requirements for the improved quality management system

To ensure employee participation

Continued quality and customer focus are essential in any retail organization. To make sure all stores and back-office departments would take an active part in the quality management system, Teknosa set-up a training and certification program called "Teknolite". Teknolite is a combination of the Turkish words "Teknosa", and "Kalite", meaning quality. The Teknolite program provides ISO 9001 and internal auditor training to all store managers and key employees from each department in Teknosa. Currently, Teknosa has more than 400 certified Teknolite members, meaning one in every eight employees, which shows how well quality-thinking has penetrated the organization.



To avoid sub-optimization

Most organizations are organized into functional departments. Teknosa is no different with departments for supply chain, marketing, finance, human resources, information technology, quality development and internal auditing. Yet like any other business, Teknosa's business processes are cross departmental. Running an effective management system requires that key personnel in departments and stores need to be process-oriented when deciding how to perform or restructure their activities. Silo-thinking typically leads to sub-optimization and you cannot improve the performance of a system if you are not aware how it operates. Process-focus was going to have to be a key underpinning of the new management system.

To keep things manageable

Teknosa's daily operations are supported with a large amount of documentation: supplier delivery and return policies, logistics paperwork, complaint forms, internal order forms, reporting templates, warrantee policies and forms, the list goes on forever. Of course not every employee can have access to every document, yet the documents they *can* access should be easy to get to, with clarity on document versions. Because document versions change continuously there also had to be proper control of documents in the form of reviews and approval cycle support. It was clear that a document management system would have to become part of the new management system, but document management system do not necessarily make documents easily available to employees – especially when dealing with a large number of document types and versions as Teknosa is dealing with. Something more innovative had to be found that would keep things manageable while at the same time make information readily and easily available to employees.

To align with strategy

A proven strategy management methodology had to be chosen that would help the executives turn their strategy into action and provide them with the needed tools steer and refine where such would be needed. The Balanced Scorecard strategy management methodology by Professors Kaplan and Norton had proven its worth already for thousands of organizations worldwide and Teknosa's Head of Six Sigma and Quality Department, Dr. Ümit Özen had many years of experience with Balanced Scorecard, so the choice was easy.

To enable continuous improvement

One of the key principles of quality management, continuous improvement is essential for an organization to achieve and sustain success. Performance measurement and monitoring drives improvement as it sets targets and helps highlight performance gaps. Teknosa chose Lean Six Sigma as its' preferred method for fixing performance issues as it offers a statistical approach for improving the quality of process outputs by removing the causes of defects and minimizing variability.

4.2 Selecting a solution provider

Late 2005 Teknosa started looking for partners that could help it implement an effective management system that would match its requirements. With process management and Balanced Scorecard being two key requirements, it was clear that this partner would need to have an excellent consulting track record in both areas. After talking with several candidates and performing their due diligence, in early 2006 the choice fell on Ironman Consulting and QPR Software.



Ironman Consulting demonstrated Teknosa a high level of expertise backed by an excellent reputation, gained from numerous business management projects where time and time again it had outperformed the large consulting houses.

QPR Software was chosen as technology provider because its software allows the integration of Balanced Scorecard KPI's with process maps, provides a collaboration layer that helps provide additional context to process and performance information, and proved to be very easy to use. So easy that Teknosa was confident it could maintain and further develop the system without having to rely on external tool consulting effort. Process maps furthermore could be organized in a helpful hierarchical manner, something no other process management software could provide and the rich collection of documentation could be made available to employees via the process maps, which it considered a major benefit and driver for obtaining employee buy-in to process management. Unlike any other software at the time QPR offered the only solution localized to Turkish, further to that it was able to offer Teknosa with local support.

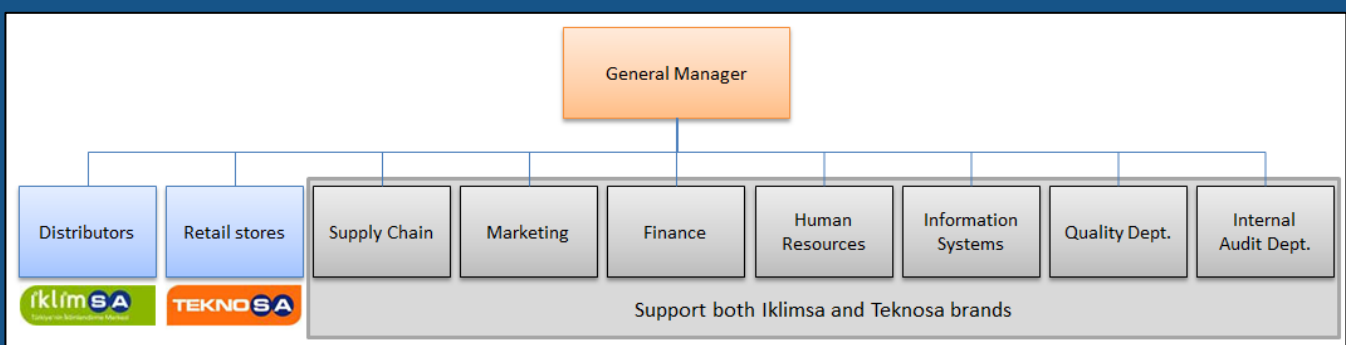
5 Implementing the solution at Teknosa

Under the experienced guidance by Ironman consultants Teknosa started the implementation of its new management system in the spring of 2006. The implementation project took a total of 5 months and can roughly be divided into the following project phases:

5.1 Defining Teknosa's main process architecture

Any organization is a "system of processes" and this system needs to be transparent in order for the organization to be able to operate and improve it. In May 2006 Teknosa started a project called "My Way" with the aim of defining and mapping the organizations' top-level process architecture.

Teknosa defined its process architecture by looking at its "demand creation" and "order fulfillment" processes, and its organization structure. The business processes for both the Iklimsa and Teknosa brands were quite similar. However, the fact that Iklimsa operates through a dealer network (the Iklimsa stores are not owned by Teknosa) and Teknosa retail operates through Teknosa-owned retail stores demanded a split in the process descriptions.



Teknosa organization chart in 2006. Source: Teknosa

This lead Teknosa management to come to the following top-level process architecture, which is based on six main processes that form the end-to-end demand creation and order fulfillment chain, as well as an additional seven support processes:



Teknosa top-level process architecture. Source: Teknosa

Teknosa thus took a top-down process modeling approach where it first looked at how the organization works from a top level before it got down to looking at how each main and sub process is described in detail. QPR ProcessGuide offers organizations with excellent support for combining both top-down and bottom-up approaches as it automatically organizes process maps in hierarchical fashion. A main or support process as depicted above can immediately be described into more detail on a lower level process map, without having to set-up the hierarchical relationship between the two process maps. Elements on those process maps can then again be described into more detail on yet lower level process maps and so on, until you reach the level of activities. Vice-versa it is possible to group activities or process parts into a sub-process element, while QPR ProcessGuide keeps all interfaces to other process elements intact and maintains the hierarchy and drill down/drill up connections. This makes building and maintaining the process model immensely convenient, flexible and intuitive.

Ironman consultants moderated the workshops in which process owners and process contributors participated. Before the workshops started, Ironman consultants and Teknosa's Six Sigma and Quality Department agreed upon the modeling standards that would be used. These standards covered the modeling notation, the application of flows, storage etc. Doing this would ensure that the result of each workshop would be compatible with other workshops in terms of consistency, abstraction level and captured information.

5.2 Getting into detail: Describing the sub processes

With the main process architecture in place the next step was to describe all main and support processes into sub-processes and those sub-processes to an activity-level detail. Teknosa organized a total of 115 workshops at its Headquarters in Istanbul in which a total of 130 process owners and process contributors participated to define and describe 190 sub processes. This part of the project took 4 months and led to a significant improvement in process awareness in the organization. Before the implementation each department suffered from having only a limited understanding of Teknosa operations, as they understood only a part of the processes: the part they were responsible for. After having described the entire "system of processes" that makes up Teknosa it had become clear to each department that a process is composed of interrelated activities, some of which may be performed by other departments. Making an improvement to a process thus would not make sense without looking at the activities that are performed by other departments that take part in the bigger chain. After each session was completed, the participants of a workshop would review the created process maps from QPR portal and were able to attach comments and improvement ideas to the process map simply by using their own internet browser. Comments could thus be centrally gathered and shared with other participants – a key feature of the QPR Portal.

A challenge that any organization will have to deal with when embarking on a large process discovery project is: how do you keep participants interested and motivated? To overcome this it is essential to be able to rely on experienced moderation skills and deep industry knowledge of the external consultant. Internal folks may lack or simply may not be accepted as moderators and when choosing a manager as moderator you run the risk of all their proposals being accepted, even when people disagree. A moderator that does not know the industry furthermore may quickly be perceived by participants as someone who does not add value to the exercise.

After this large process discovery and description project Teknosa's top management reviewed all processes and approved of these, after which the process definitions were made available through QPR Portal to the stores and head quarter personnel.

5.3 Setting up and integrating the documentation management system

ISO 9001 certification requires an organization to implement an effective documentation management. This covers not just the corporate policy, quality manual, quality system procedures and records, but also proper control of all documents that facilitate the effective operation and control of processes.

Teknosa chose "e-isoft9000", a Turkish document management software vendor, for its document management system. After training its Teknolite certified staff in using the software it started the process of moving all its documents like procedures, work lists, instructions and forms to the system and linking the forms to the process maps in QPR ProcessGuide so that personnel is able to access the documents that are related to their tasks directly from the portal-based process information.

5.4 Assigning process management responsibilities

Effective process management necessitates clear roles and decision-making bodies in the organization in which it is applied. In Teknosa each Vice President is responsible for the top-level process that relate to their role. Teknolite members (in this case: department managers) bear responsibility for the sub-processes that relate to their role. Process improvement suggestions are made by submitting them to the Six Sigma and Quality Department who implement the change to the process maps after obtaining the approvals from the higher-level process owners.

This helps avoid uncontrolled process map editing by multiple process owners, something that often results in process maps becoming difficult to read and thus, understand, which inevitably reduces the value of the process model to the organization.

Only when approval is obtained are updated process descriptions communicated through the QPR portal to personnel. QPR supports this approach by allowing designers to make updates to process maps in development branches of the process model, where development branches can be promoted to “published” status once approval has been achieved.

With responsibility naturally comes training. During the implementation project process modelers received training from Ironman in using QPR ProcessGuide, which meant a one day introduction followed by five days of hands-on training during the workshops – after that the process modelers were ready to take on the modeling work on their own. Key personnel at the headquarters got one-day training in QPR Portal and store managers were trained by Teknosa’s own Quality Department. Today QPR training has become a part of every new employee’s training program.

5.5 Translating Teknosa strategy into a Balanced Scorecard

Once the process model had been defined to its initial state, Ironman moved the project to focus on the strategy-side of the story. During a two-day workshop, Ironman lead Teknosa’s top management team in the creation of Teknosa’s strategy map. This strategy map – a diagram that depicts the organization’s key strategic objectives and their interrelationships – formed the basis for defining the key performance indicators.

To keep the strategy story clear and easy to understand, while ensuring the organization is focused on strategy, Teknosa top management evaluated and was encouraged to pick only the most critical key performance indicators. This resulted in a balanced scorecard with no more than 4 KPI’s per strategic objective and no more than 4 strategic objectives per perspective. This does not mean that Teknosa runs its entire performance management system with only 101 KPI’s. Like many other companies it uses a large number of KPI’s to manage its operations effectively. However, using many KPI’s on your Balanced Scorecard only dilutes your strategy message, which reduces the focus of VP’s, department managers and employees on what is critical and therefore poses a negative influence on strategy execution.

Strategic Objectives and Indicators in Teknosa BSC Model			
	TEKNO SA	TEKNO SA	iklim SA
# of Strategic Objectives	12	13	9
# of Indicators	31	44	26
# of KPI per Objective	2,6	3,4	2,9

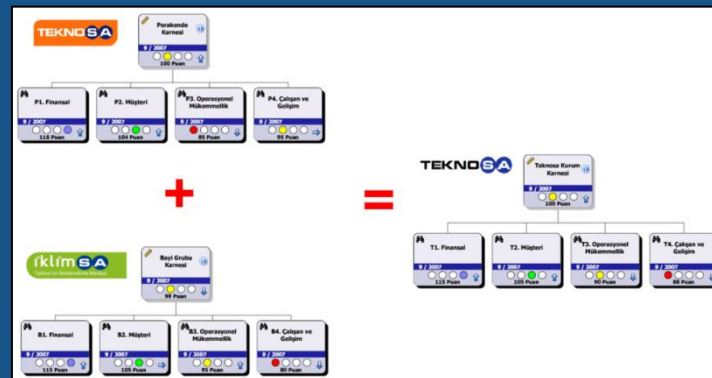
As of Oct. 2010

Teknosa balanced scorecard in numbers. Source: Teknosa

"The experience of Ironman Consulting in process management and Balanced Scorecard implementations has been extremely valuable for us"

Dr. Ümit Özen, Head of Six Sigma and Quality at Teknosa

The next step was to define Teknosa's scorecard architecture. Here the architecture followed the organizational set-up where the Teknosa headquarters forms the umbrella-organization for both Teknosa Retail and Iklimsa brands.



Teknosa Retail and Iklimsa scorecards are consolidated into the Teknosa Group Balanced Scorecard. Source: Teknosa

5.6 Cascading the scorecards and setting targets

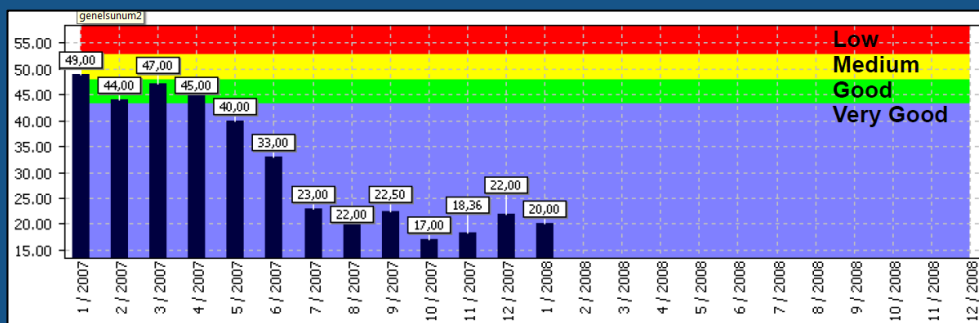
Having just a top-level scorecard is not effective in driving results. Strategic objectives and Key Performance Indicators are concepts that stand too far from the daily activities of individual departments, team or employees. In order to drive effective strategy execution, the top-level balanced scorecard needs to be cascaded down to business unit, function, department, team and often even individual employee level. The organization alignment should be clearly visible through strategy, using the strategy map, performance measures and targets, and

initiatives. Scorecards are used to improve accountability through objective and performance measure ownership, and desired employee behaviors are incentivized with recognition and rewards.

Teknosa's first step in cascading its' scorecard was to assign each KPI to a department Vice President. It then defined the sub-measures and targets of which the achievement would be required to realize the achievement of each separate KPI. One of the benefits of using QPR ScoreCard was the flexibility it offers in choosing KPI's and measures. Unlike many other performance management tools QPR ScoreCard supports both data collection in a manual manner as well as automated through integration with back-office systems. Teknosa could thus freely decide what it needed to measure without worrying whether the data was available, and implement the solution fast. Teknosa now obtains 69% of its performance data through manual input while the rest is automated and focuses on the financial data.

After the initial scorecard was decided upon, top management reviewed and approved. QPR ScoreCard allowed Teknosa to then automatically cascade it down to Teknosa Retail and Iklinsa business unit levels.

Targets were set for data in a standardized manner. Teknosa decided to start out with the following levels and fine tune its target setting practice as it would learn more over time: Less than 90% of target would define the measure as on red level. Between 90% and 100% would turn things to yellow. Between 100% and 110% would turn things to green and better than 110% would be awarded with the color blue. Average performance over the past year would define the 100% target level.



The use of targets and ranges in Teknosa. Source: Teknosa

5.7 Linking processes and performance

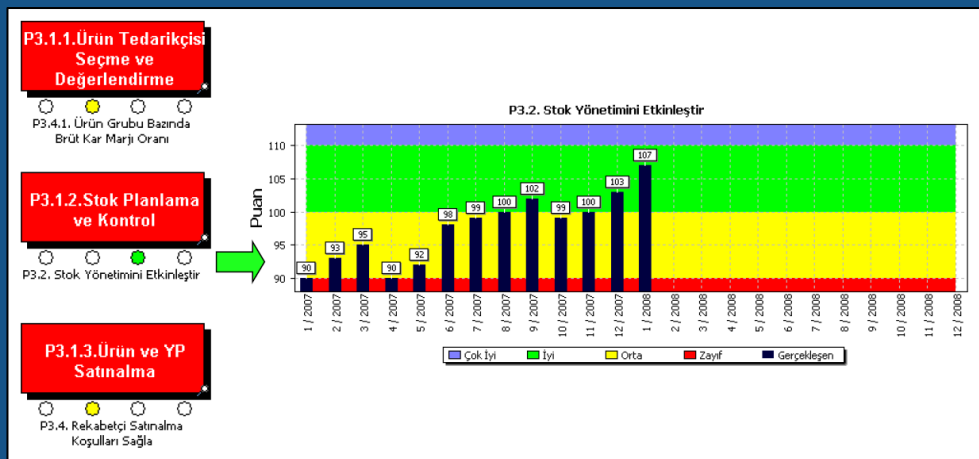
So far, Teknosa had come to a point where it had effectively described how things were done in the organization in its process model - its "system of processes" - on one side and its business goal and how it intended to get there – its strategy story or balanced scorecard – on the other. Now it was time to link the two together as "the way things were done" had to be aligned with, and in support of company strategy. This means that process performance had to be measured from a strategy perspective. Doing this would result in at least two immediate benefits:

1. There would be a clear driver for continual process improvement as measuring process performance also allowed Teknosa to set annual targets for process performance and

below-par performance would become visible immediately and prompt corrective action

2. Process improvement activities would become focused at meeting the target set by the process performance measure - which effectively was derived from its strategy management framework – and therefore would reinforce strategy execution

Linking processes and performance also supported the ISO 9001 requirements for process performance management. Teknosa accomplished this by linking its corporate Teknosa-level scorecard KPI's to its first level processes. Also here QPR provided an important facilitator as it is the only software that allows linking of KPI's with process map elements.



Linking performance indicators related to "inventory planning control" to "stock level management" processes. Source: Teknosa

"With QPR ProcessGuide our process descriptions are interlinked, allowing us to navigate easily from one process to another. Processes can also be linked to performance measures in QPR ScoreCard, which shows us not only the flow of the process but also how well it performs, all in one view"

Dr. Ümit Özen, Head of Six Sigma and Quality at Teknosa

5.8 Managing change

Changing an organizations management system by introducing process and performance management processes and tools also requires the organization to address the implications of change. It is not unlikely to face resistance of department and store managers who are suddenly exposed to strict measurement and reporting of their performance, let alone the introduction of new targets they are supposed to achieve. Also making sure that every store manager understands the requirements of ISO 9001 compliance and how that reflects to their daily work

is one of the typical challenges that organizations can face when attempting to introduce an effective quality management system.

Teknosa understood that in order to get everyone “on board”, everyone had to understand the reasons for implementing the new system and what it meant to their daily activities. The Teknolite certification program provided a major driver for improving process awareness and ensuring quality focused personnel. Where it involved performance, Teknosa ensured that targets would always have to be meaningful, achievable yet challenging and agreed upon with each KPI owner.

Ironman furthermore provided effective software training classes, tailored to each user-groups’ usage requirements. Usability had been one of the requirements during the software selection process and here is where QPR excels compared to any other package by being primarily focused at the business user. Acceptance of the software therefore was easily achieved.

6 Using QPR in Teknosa

Today the QPR system has become an integrated part of how Teknosa manages its operations. The main focus is understandably on the Balanced Scorecard KPI framework, but since each KPI is linked with a process description there is a clear line of sight where to look when performance is not what should be.

6.1 Monthly and annual performance reviews

Teknosa evaluates its operational and strategic performance both annually as well as every month. Data is entered and consolidated upward every 15th of the month, which initiates the reporting cycles. Monthly reviews are performed by department managers and top management by using two different configurations of navigator tree views. The first compares the actual performance to the target for that month and another that provides a yearly rolling performance view of KPI’s.

Perakende Karnesi		Dönem: Tümü için en son Seriler: Varsayılan seriler				
Hiyerarşi	Dönem kırılımı	Değer ve dönem	Değer ve dönem	Aralık rengi	Eğilim ikonu	Sorumlu
Perakende Karnesi	Ay	11 / 2007 97 Puan	11 / 2007 100 Puan	🟡	⬆️	Mehmet.Nane
P1. Finansal	Ay	11 / 2007 110 Puan	11 / 2007 100 Puan	🟡	⬆️	Mehmet.Nane
P2. Müşteri	Ay	11 / 2007 98 Puan	11 / 2007 100 Puan	🟡	⬆️	Mehmet.Nane
P2.1. Müşteri Hizmetlerini Etkinleştir	Ay	11 / 2007 104 Puan	11 / 2007 100 Puan	🟢	⬆️	Kadircan.Erkiralp
P2.1.1. Şikayet Oranı	Ay	11 / 2007 0,75 %	11 / 2007 1,50 %	🟡	⬇️	Kadircan.Erkiralp
P2.1.2. İade Oranı	Ay	11 / 2007 8,12 %	11 / 2007 8,00 %	🟡	⬆️	Mehmet.Nane
P2.1.3. Şikayet Çözüm Süresi	Ay	11 / 2007 18,36 saat	11 / 2007 48,00 saat	🟡	⬆️	Kadircan.Erkiralp
P2.1.4. Çağrıların Karşılama Oranı	Gün	11 / 2007 96,09 %	11 / 2007 90,00 %	🟢	⬆️	Kadircan.Erkiralp
P2.1.5. Zamanında Karşılama Çağrı Oranı	Gün	11 / 2007 88,71 %	11 / 2007 80,00 %	🟡	⬆️	Kadircan.Erkiralp

Retail organization - KPI hierarchy

Measurement frequency

Target

Actual

Range

Trend

Responsible

QPR navigator view comparing actual performance to target for the period

On top of that, QPR allows each user to design own navigator and analysis views. Navigator views provide users with a tree view of each scorecard, whereas analysis views provide table-like views of defined measurement elements (perspectives, objectives, KPI’s, measures, projects, risks etc.) that can come from any scorecard

in the system. Customization then comes down to filtering of these measurement elements based on any of their attributes or values, as well as deciding what columns are shown. One can for example only show KPI's that have improved compared to the previous period, KPI's that focus on profitability, Measures that are owned by a particular user etc. Once a view has been created it can be bookmarked, allowing users to create multiple bookmarks of their favorite view configurations, and even share these view configurations with a selection other users.

Perakende Karnesi		Dönem: Tüm için en son Seriler: Varsayılan serile												
Hiyerarşi	Dönem	Oca	Şub	Mar	Nis	May	Haz	Tem	Ağu	Eyl	Eki	Kas	Ara	Sorumlu
Perakende Karnesi	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Mehmet.Nane
P1. Finansal	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Mehmet.Nane
P2. Müşteri	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Mehmet.Nane
P2.1. Müşteri Hizmetlerini Etkinleştir	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Kadircan.Erkiralp
P2.1.1. Şikayet Oranı	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Kadircan.Erkiralp
P2.1.2. İade Oranı	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Mehmet.Nane
P2.1.3. Şikayet Çözüm Süresi	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Kadircan.Erkiralp
P2.1.4. Çağrıların Karşılama Oranı	Ay	●	●	●	●	●	●	●	●	●	●	●	●	Kadircan.Erkiralp
P2.1.5. Zamanında Karşılama Çağrı Oranı	Gün	●	●	●	●	●	●	●	●	●	●	●	●	Kadircan.Erkiralp

QPR navigator view presenting KPI performance over the past 12 months

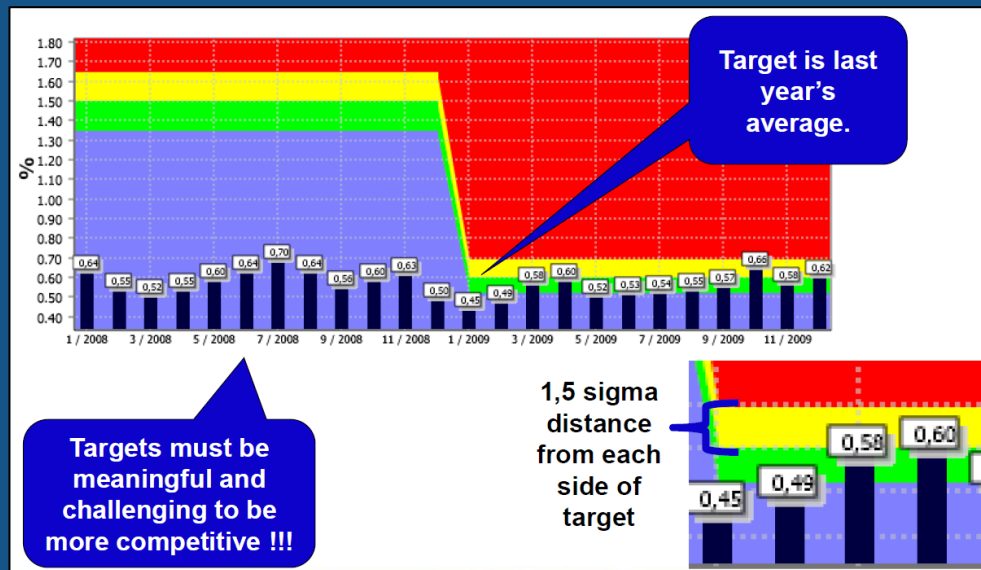
Top management has monthly strategy performance review meetings in which it evaluates performance and decides on actions to take, such as deciding on new targets for strategic objectives. In addition, every year it has a strategy planning workshop where Teknosa strategy for the coming three years is discussed and laid-out. The general industry situation, Teknosa performance, SWOT analysis, scenario playing and new business opportunities all provide a basis for the strategy discussions during these workshops.

6.2 Towards a meaningful target-setting practice

Teknosa had set-off with performance management by setting targets based on the average values of measures over earlier periods, where it used a simple 10% rule-of-thumb approach for defining "low", "medium", "good" and "very good" range values (with low meaning red, medium meaning yellow, good meaning green, very good meaning blue etc.). Although this provided a satisfactory way to start things up, one that also helped Teknosa in gaining employee acceptance for the system, it soon became clear that a better approach for setting targets was needed.

"For some measures the earlier targets no longer made sense as performance had improved to levels where performance simply always was in the deep blue and the target no longer posed any kind of challenge to the people involved" Aylin Cankurtaran, Six Sigma and Quality Chief at Teknosa highlighted.

To fix the problem of meaningless targets, the Teknosa Six Sigma and Quality Department in 2009 started a new approach for determining targets, based on the Six Sigma methodology. As a first improvement step it decided that the limits for "low" and "very good" had to change from the 10% bandwidth to 1,5 sigma (1,5 sigma meaning 1.5 times the standard deviation value).

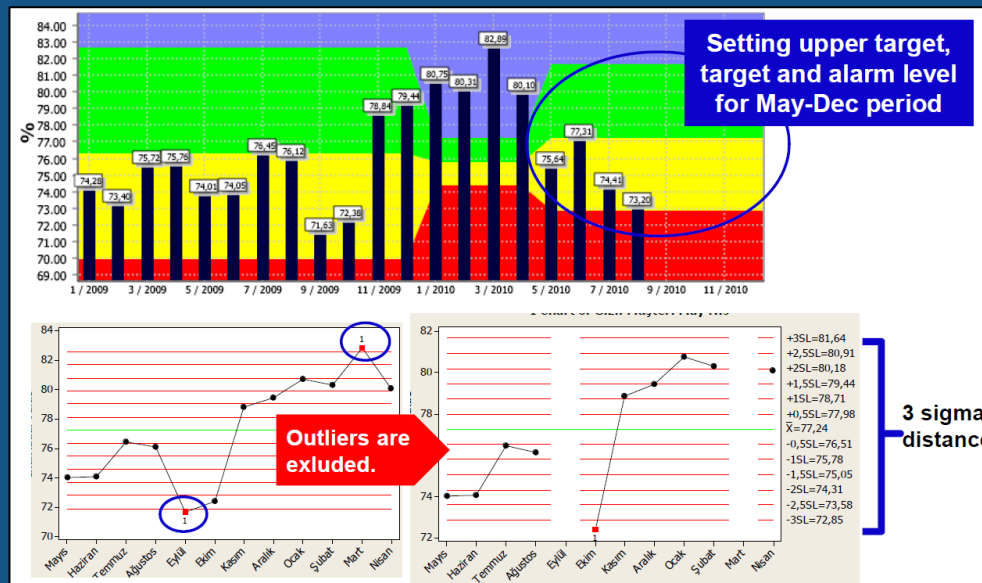


Towards more meaningful targets in Teknosa

As one would expect, this move led to a wave of resistance from some department managers and store managers who now were faced with much more challenging targets. Luckily with strong support from Teknosa top management and a fair amount of good discussion and explanation, Teknosa's Six Sigma and Quality Department did manage to get support for the new target setting methodology.

"When we explained that setting these new targets did not aim to hold people responsible for poor performance but rather to be able to more quickly identify areas of poor performance in order to fix the problem before it would grow on a manager beyond the point of control, their attitude towards the whole initiative changed and went from concern to enthusiasm" Dr. Ümit Özen, the Head of Six Sigma and Quality department at Teknosa explained. "People need to know why you are doing the things you do, not to control them, but to control the situation, after all we're all on the same side." he continued.

"With some measures however, we soon figured out that also our new target setting approach didn't work very well" Aylin Cankurtaran pointed out. "The problem was that the specs had become too narrow, as the behavior of performance was very irregular, either far too high one month and far too low in the other. And so we had to base our target setting method on how the data was behaving." She explained. "What we came up with was an evolution of our initial model. We would look at past data, calculate the mean value, then look at data variations and exclude those performance values that were outside of 3 sigma limits. For the resulting data, we choose the appropriate sigma limits, in which all historic data falls in. For instance, if all historical data falls in 2 sigma limits, we take 2 sigma limits to determine "low" and "very good" limit, instead of 1,5 sigma. By using this method, we understand the behavior of the historic data and determine the limits accordingly. So far this new way has been working well for us, but of course we maintain an eye on the situation."



Evaluating the behavior of performance data when deciding target levels

Keeping a close eye on the meaningfulness of targets and monthly performance typically results in gradual evolution of the performance management system. Targets are adjusted to become meaningful and challenging and changes are proposed and implemented to KPI's. Since 2007 up to the date of writing this report, Teknosa has made a total of 328 revisions on their KPI's, which demonstrates how active the system is in use in the organization.

6.3 Dealing with low performing indicators and process improvements

Performance management tools provide an excellent means to organizations in highlighting poor performance. With Balanced Scorecard, where cause-and-effect plays an important role in describing the relationships between measures, KPI's and strategic objectives, a low performing measure can be the forebode of poor performance in other areas. Hence it is important to address poor performance in a timely manner. The ability to configure alerts for poor performance as well as analysis capabilities can help organizations timely recognize poor performance and take action. Although email can be an effective tool for managers who wish to initiate action, it lacks the ability to share information with others over longer periods of time, it does not permanently link the action to a performance measure, and neither does it allow managers to monitor progress of the initiated action in a project-like manner. QPR provides a web-form-based approach for initiating, monitoring, analyzing and reporting on all performance or process related actions taken by the users of the system. As the actions form part of the system it becomes easier to share information as it is never locked away in people's email inboxes.

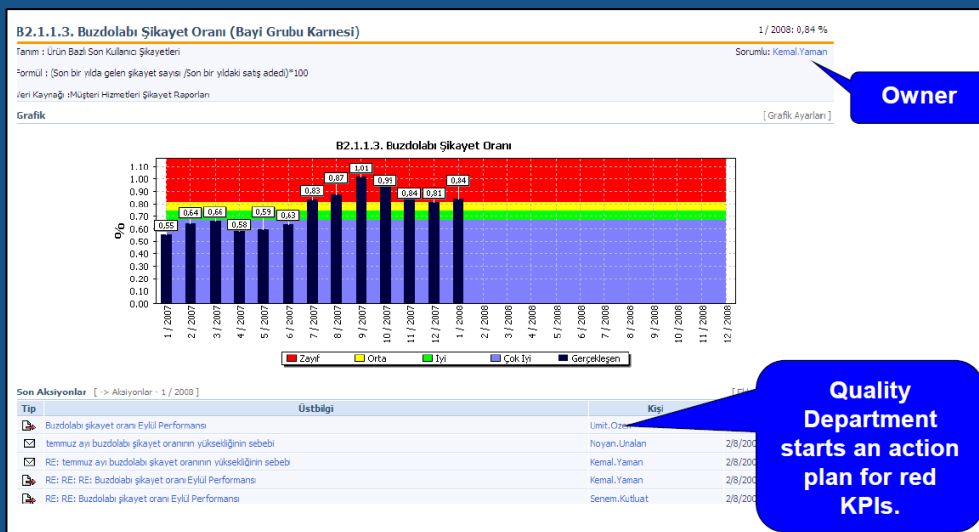
When analyzing monthly performance, the Teknosa Six Sigma and Quality Department uses QPR analysis views that display those KPI's that are in the red and ordered by the frequency of "red" performance over the past months, with the poorest performing indicators over time on top and least poor at the bottom. It exports these views to Microsoft Excel in order to provide top management with an

easy to use overview of those problem areas that most require attention during their monthly performance review meetings.

TEKNOSA KURUM KARNESİ DÜŞÜK PERFORMANSLI PARAMETRELER TABLOSU - EKİM'07															
TEKNOSA		Dönem Kırlımı	2007										Kırmızı Ay Sayısı	Gösterge Sorumlusu	
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	B2.1.1.1.1. Klima Şikayet Oranı	Ay	●	●	●	●	●	●	●	●	●	●	●	2	Kemal Yaman
	B2.1.1.2. Kombi Şikayet Oranı	Ay	●	●	●	●	●	●	●	●	●	●	●	1	Kemal Yaman

Monthly reporting of poor performing KPI's in Teknosa

"We initiate an action plan for every low performing indicator" Dr. Ümit Özen explained. "It's a great benefit to be able to do that in the same system because these action plans and comments all provide explanation about the cause of problems as well as what we're doing to get the problem fixed. A measure on red for example does not tell you why it is on red, neither does a measure that has improved over the past 6 periods tell you why it has done so. This is where insight in comments and action plans is vital. QPR allows us to attach or improvement action to such a measure, which delivers us real value. Today we initiate a new action plan for one of every 5 KPI's every month, so we use the system very intensively throughout our organization."

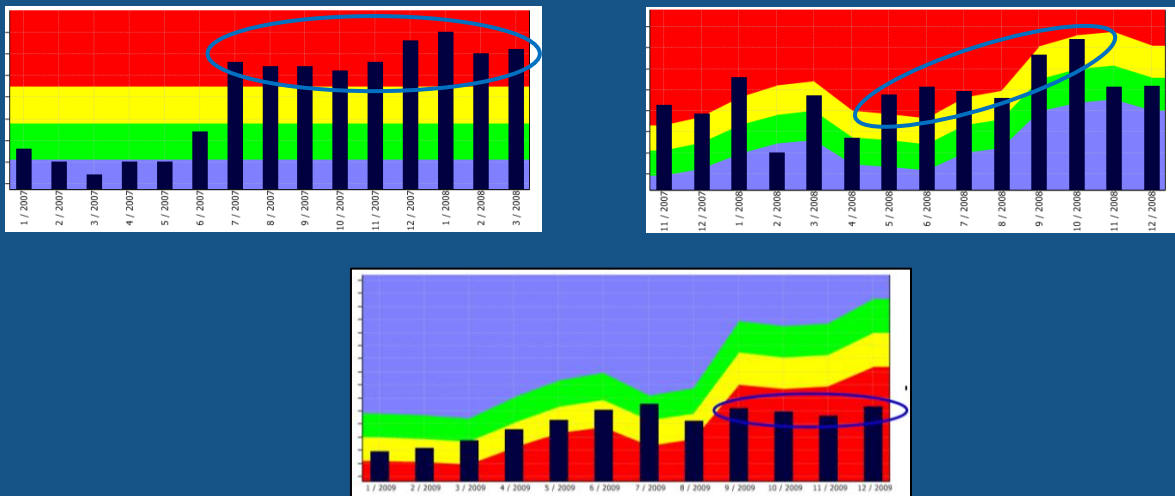


QPR supports adding context to KPI's with online action management in Teknosa

What sets QPR apart from many other performance and process management solutions is not just the ability to collaborate online by attaching portal actions to measures and process maps. With QPR Teknosa is also able to perform analysis on these portal actions in a similar way as it performs analysis on performance measures. For example every Monday the General Manager as well as each department manager receives an "incomplete actions" report through the QPR system. This report displays all agreed-upon action plans that are still open and past their deadline, the initiator of the action plan, the responsible person for it and the performance measure and/or process map it relates to. "It provides us with a convenient way of following up on actions and to address problem areas effectively", according to Dr. Özen. "If an action plan is not able to solve the problem with the low performing KPI then my team steps in and we propose a Lean or Six Sigma project to the KPI owner. Of course we look at more than just the KPI's when deciding on a Lean Six Sigma project. Also strategy compatibility and voice of the customer play an important part in our improvement project initiation decision making. Take for example store managers who were complaining about the amount of operational tasks they had to do in the store back-office. This prevented them from spending more time on the field, concentrating on sales, and being close to customers. In that case a Lean Six Sigma project was started to reduce these operational tasks of store managers."

When looking at KPI performance as a driver of Lean Six Sigma, Teknosa applies two rules:

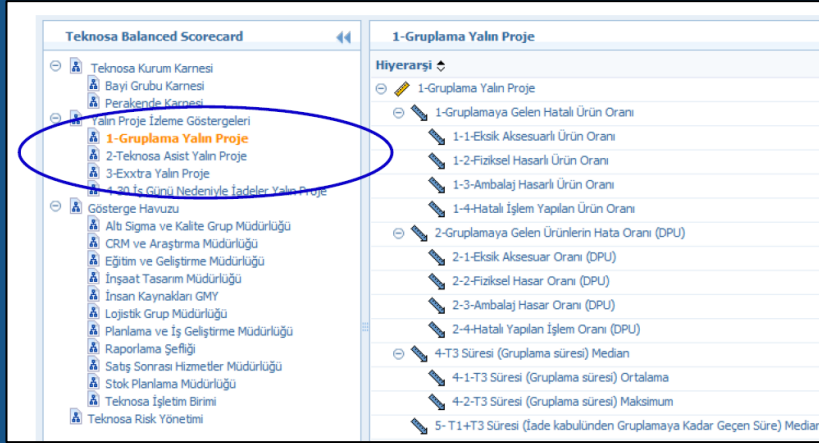
1. The KPI deviates from the target and is red for long term
2. The KPI is showing a trend towards poor performance, although it may still be in the green



Examples of measures that would qualify for a six sigma project at Teknosa.
Source: Teknosa

"At first we encountered a fair amount of resistance from KPI owners when our team stepped-in and announced the launch of a six sigma project in the area of responsibility of the KPI owner" Aylin Cankurtaran smiled, "however once we had done a few of these and people saw the effect it had on performance, they virtually lined-up in asking us whether it would make sense to start a project in their departments."

The flexibility of the QPR products is clearly demonstrated by the fact that Teknosa also monitors six sigma project performance in the same system. Unlike most performance management tools, QPR also supports milestone-based performance management, where alternatives only offer time-based measurement frequencies. "Six Sigma helps us not only fix performance gaps; it also helps us improve our strategy management." Ümit Özen commented. "At least 10 KPI's have been added to our corporate scorecard as a result of our Six Sigma projects."



Monitoring Teknosa Six Sigma projects in the QPR performance management system

6.4 Internal auditing

The importance of continual improvement in Teknosa becomes evident also when looking at its internal auditing practices. Take for example the practice of internal audits by Teknolite members, once a year every store in the Teknosa retail network is audited by another store manager. This not only serves the audit function but also provides a very concrete learning and knowledge sharing experience between store managers. Also Teknosa Six Sigma and Quality Department performs internal auditing, where it focuses on processes and documentation. Teknosa also takes certification as very important as each store is audited at least twice before each ISO 9001 audit.

6.5 Getting most out of the software with a dedicated team

Process and performance management software provide excellent information technology support for wide quality management initiatives, as that implemented at Teknosa. One of the reasons of the success that Teknosa has achieved with its new management system is no doubt the allocation of enough and skilled resources for the administering of the software technology that supports the execution of its new management system.

At Teknosa the system is run and configured fully by the Six Sigma and Quality Department, which is a business-side, not an IT department. This ability to limit IT involvement in configuring the system is crucial for several reasons: Firstly, IT employees rarely have the business mindset needed to run a process or performance management system. Secondly, typically you will see business users

having to wait for their change requests to become implemented as IT departments are required to manage a multitude of systems and applications. Requests often need to be submitted in written form into a ticketing system, posing yet another communication barrier as business users need to translate their requests into language the IT departments understands. Often this means having to be very specific or risk having to resubmit their request for further changes.

The most important reason though is that software that is too complex for business users to administer (and therefore end-up in the hands of the IT department) is not being experimented with by the business-side. Instead the software is soon regarded as being static in its functionality and it is easily assumed that new ways of working are not supported. This quickly leads to a situation where organizations are enjoying only a small part of the full potential that the software has to offer.

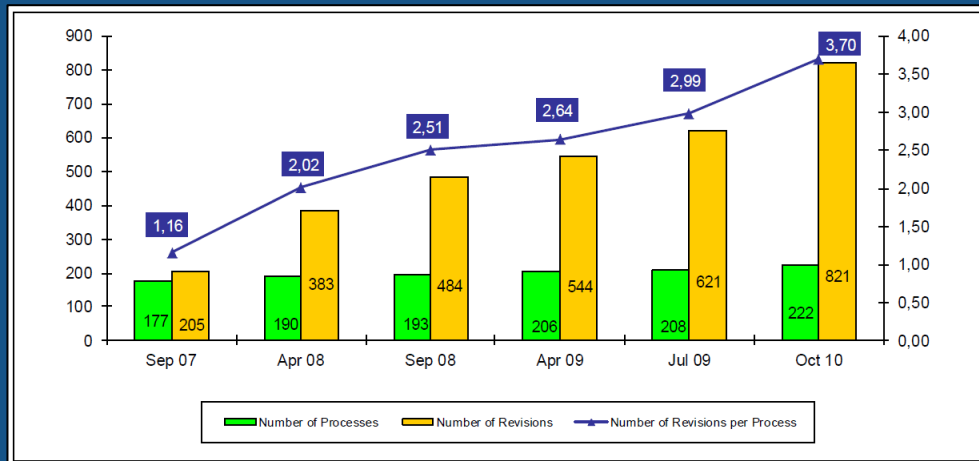
“We experiment with QPR regularly and even have our own test laboratory-like implementation running on a separate server” Cigdem Duru, Six Sigma and Quality Specialist, tells. “This helps us in getting to know what exactly the system can do for us without having to rely on outside consultants for everything. It has also allowed us to add new areas of management as now we have started to look at how QPR can add the dimension of managing risk” she continued.

7 Results achieved

Teknosa has achieved tremendous results with its quality management system implementation. Since 2007 until the time of this writing the organization has executed 33 Six Sigma projects in total that it claims has delivered it 9 million euros in gains. Some example projects include:

- Decrease in store expenses (driven by Operating expenses KPI)
- Decrease in customer complaints (driven by rate of complaints KPI)
- Decrease in the amount of unsold goods (inventory turnover rate KPI)
- Improvement of product return processes
- Increase in the sales per store square meter
- Decreasing complaints related to internet sales
- Decrease of the logistics between stores cost (driven by logistics cost KPI)
- Increasing EBITDA margin of low performing stores

Many of the executed six sigma projects lead to changes in processes. In Teknosa every process has now been revised 3.7 times on average. “If you put the number of processes and how many times processes have been revised next to each other you get an interesting picture that shows how important process-focus and process management has become to Teknosa.” Ümit Özen pointed out. “Companies that have processes that stay in their ‘as-is’ state over prolonged periods of time should really re-assess how healthy their process management initiative really is.”



Mapped processes vs. the number of process revisions over time in Teknosa.
Source: Teknosa

Perhaps the most important achievement is the one that prompted Teknosa to improve on its management system. In 2009 the company reported that it had been able to further extend its market share to 15%, despite an overall contraction in the sector.

8 Future plans

For the near future Teknosa plans to actively keep on improving on its management system. Risk management is one of the key new areas that was added recently to the system and heavily under development. "So far we have identified 17 categories of risk and started populating these categories with risks. Insight in our processes is very helpful in doing that. Risk identification is still in progress and so is the development of the processes that will help us measure and mitigate risk." Cigdem Duru commented "we firmly believe that risk management is an intricate part of both Balanced Scorecard and quality management: it will help us identify the 'what can go wrong' and make sure that our organization is ready to deal with it."



Teknosa's Six Sigma and Quality Department members. From left to right: Ertan Uygur, Cigdem Duru, Hakan Topcu, Dr. Ümit Özen, Aylin Cankurtaran and Ekrem Metehan Tan.



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