Cahit Erdogan was quite familiar with the challenges and opportunities facing Yapi Kredi Bank when he was named chief information officer (CIO) in early 2010. Since 2003, he had worked with the bank as an external consultant. And he was heavily involved in developing the larger IT strategy when Yapi Kredi Bank doubled in size with the merger of Koçbank Nederland N.V. and Yapi Kredi Bank Nederland N.V. in 2007, as well as post-merger post-merger integration efforts that extended through 2009.

Once the Yapi Kredi Bank team stabilized and standardized systems, they turned their attention to growth and expansion. This meant a complete change in IT priorities and focus. To lead this effort, Yapi Kredi Bank didn’t look very far—recruiting Erdogan as CIO. “The country is undergoing rapid growth, and there is huge potential for the bank to gain further penetration into the market,” Erdogan states. “IT is a critical part of this effort, and we’re in the process of transforming IT to address these new opportunities.”

This required an expansion of IT capacity with a focus on IT infrastructure. It also included development of new services and products and establishment of various key performance
indicators. “We’re about halfway through the transformation,” Erdogan says. “We have about another two years to go.”

The rationale and model for the IT transformation is based on what Erdogan describes as industrialization—from applications to infrastructure—the ability to scale and support the bank’s rapid growth plans. “IT delivery capacity doubles every couple years,” he says. “This is a particular challenge for a market like Turkey where certain types of resources are scarce. Industrialization of our IT environment gives us the ability to meet our growth requirements.”

**Business alignment: demand management**
Connecting IT back to the business is taken very seriously at Yapi Kredi Bank. Erdogan’s background in business consulting provides him with a unique perspective not possessed by many CIOs. “We created a demand-management process that demonstrates how well we are utilizing our IT investments and the return we are getting as a result of them,” Erdogan states. “This process is a combined effort between business units and IT.” The result is an ongoing evaluation and reevaluation of all major IT projects based on their return on investment. “This transparency has proven quite valuable in our guidance of the business,” Erdogan adds.

The business processes that Erdogan introduced to IT when he was brought in as CIO are significant change according to Sinan Erdem Özer, an 18-year veteran who worked his way up through the Yapi Kredi Bank ranks and was appointed group manager of Infrastructure and IT Operations in 2009. “[Erdogan] introduced a much more structured approach to IT,” he observes. “We previously spent a lot of time fighting fires and not enough time on strategic, proactive planning. The closer alignment with the business affords us this opportunity. The value IT delivers back to the business is understood much better.”

**Virtualization: an important stepping stone**
One of the central pieces of industrialization out of the gate was virtualization. Indeed, Yapi Kredi Bank was one of the first banks in Turkey to embrace virtualization. “We’ve virtualized more than 50 percent of our data center using VMware vSphere,” says Özer. “We have gone big around virtualization with more than 1,000 virtualized servers running today. We have about 800 standalone physical servers left and plan to virtualize the majority of those over the next 18 months.”

The Yapi Kredi Bank data center is comprised predominantly of Microsoft Windows servers with about 10 percent consisting of UNIX boxes. “We reached the point where virtualization slowed while we rationalize a common set of standards,” Özer says. “We couldn’t go any further without additional standardization and consolidation.”

**Cloud: flexibility, lower costs**
The cloud is something that Erdogan and Özer have embraced as part of the IT industrialization initiative. “The cloud is certainly something that requires serious consideration in the banking sector because of security compliance standards and privacy requirements,” Erdogan notes. “But this doesn’t negate the idea for us altogether.”

In 2010, the Yapi Kredi Bank team initiated a project to build out an Infrastructure as a Service (IaaS) solution. “We have a number of subsidiaries that handle functions such as leasing, factoring, pensions, and investments as well as banks in other countries,” Erdogan notes. “Rather than building out dedicated infrastructures for each of these, we offer IaaS as a private cloud service.” This approach costs less while providing Yapi Kredi Bank with much greater flexibility. “We can stand up new servers and storage systems much faster,” he adds. Rather than taking a month or two, Yapi Kredi Bank can provision infrastructure for applications in a few minutes.
Storage management industrialized

Shortly before the 2007 merger, Özer and his team looked at Veritas Storage Foundation. “We need greater flexibility in managing our IT infrastructure,” he recalls. High availability and reliability were also considerations. “We initially deployed Storage Foundation onto certain applications on our UNIX servers,” he says. “But based on the results, we subsequently extended it to a much larger set of applications.”

Özer’s team also added Veritas Storage Foundation for Oracle RAC and Veritas Dynamic Multi-Pathing. The combined solutions are currently used for storage management on all of the bank’s approximately 200 UNIX servers and have been deployed on select business-critical Microsoft Windows systems. For configuration and deployment assistance, Yapi Kredi Bank worked with Symantec Partner Symturk.

“The ability to migrate and move storage around to different servers—physical and soon virtual—is a big advantage for Yapi Kredi Bank,” Özer says. When we moved our credit card application from one server environment to another, we were able to re-provision the storage systems without any interruption in service,” Özer relates. “It was a big project but was invisible to the users because of Storage Foundation.” And when Yapi Kredi Bank added tier-two storage and designated data for migration to a cheaper storage tier, the process was seamless using Storage Foundation. “It was completely transparent to end users,” Özer reports.

Storage Foundation will also play an important role in managing storage in the private IaaS cloud. “The same principles will also apply for our private IaaS cloud service,” Özer comments. “We plan to add the deduplication capabilities in Storage Foundation later this year and anticipate a measureable reduction in our backup volumes.”

Other benefits abound. Availability improved as well as system performance. For example, batch cycles were becoming a pain point; they were taking longer than five hours to complete and thus pushing into business operating hours. “With Storage Foundation, we cut the time down to less than four hours and no longer impact business operations,” Özer says. “It also increased the uptime of our systems.”

Business continuity industrialized

At about the same time the Yapi Kredi Bank team added Storage Foundation, they rolled out Veritas solutions are currently used for storage management on all of the bank’s approximately 200 UNIX servers and have been deployed on select business-critical Microsoft Windows systems. For configuration and deployment assistance, Yapi Kredi Bank worked with Symantec Partner Symturk.

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– Cahit Erdogan, CIO, Yapi Kredi Bank
Cluster Server to select business-critical systems such as credit card processing. In 2011, they added Veritas Cluster File System. “It was very much in line with our objectives around industrialization,” Özer notes. “We sought out a highly redundant and reliable data center infrastructure with the philosophy that if we lost any component we could resume operations without any impact to the business or customers.”

Özer’s team recently began leveraging multi-node clustering with Cluster Server. The cost avoidance on the server side is substantial (versus one-to-one clustering). “We would have at least 50 percent higher server costs without the multi-node clustering capability,” Özer says. “And this doesn’t include our ability to use cheaper server hardware.” In one instance, Özer’s team was able to eliminate a high-end UNIX box that was ready for replacement, a cost upwards of US$1.5 million.

With Veritas Cluster File System, the Yapi Kredi Bank team is able to avoid attached specific storage to cluster configurations, thus allowing them to fail servers over without reconfiguring the storage. It simply leverages the larger storage pool managed by Cluster File System. “The before-and-after time difference with Cluster File System is where we see the biggest impact,” Özer observes. “We previously experienced system outages two or three times a year. Even with a 30-minute failover in each instance, we saw an impact to the business. Further, we are able to save on hardware and software costs, as we don’t need to dedicate as many resources and can use cheaper storage based on business requirements.”

Seismic activity is a regular occurrence in Turkey, and thus
business continuity is a key piece of the industrialization effort overseen by Erdogan and Özer. The data center infrastructure consists of a primary and secondary location separated by approximately 450 kilometers. “Mapping out the dependencies between the two locations is very important,” Özer says. “We added Veritas Disaster Recovery Advisor in mid-2011 to help us track and manage this process.”

Archiving and eDiscovery industrialization

In early 2010, Yapi Kredi Bank was faced with a new financial services regulation in Turkey requiring the retention of Microsoft Exchange email. “We didn’t need to look very far,” Özer remembers. “Symantec Enterprise Vault was the best for our environment.” Prior to the solution rollout, Yapi Kredi Bank maintained an email quota for each mailbox that required users to delete email or move it off to PST files in order to send or retrieve email once their mailboxes exceeded the quota limit. With the deployment of Enterprise Vault, users immediately gained back up to 30 minutes per week that they previously spent managing their mailboxes.

In addition to reduced risk, as Exchange data no longer sits in PST files on individual desktops and laptops, Yapi Kredi Bank saw a tangible reduction in Exchange data; its archive destination is no longer expensive tier-one storage but cheaper tier-three storage.

The solution is returning results to the IT help desk team as well. Before Enterprise Vault was added, recovery of email was in the top five help desk issues, consuming valuable staff time. Now, with Enterprise Vault, users can perform their own searches.

With the advent of new regulations, eDiscovery suddenly became a top priority for Yapi Kredi Bank. Without Enterprise Vault, Özer’s team spent between 20 and 50 hours performing manual discovery. As they received one or two requests each month, the cumulative time spent fulfilling them was a huge drain on IT resources. “We added Enterprise Vault Discovery Accelerator and reduced search fulfillment time to 30 minutes from 20 to 50
Endpoint security industrialized

In 2006, when the renewal for Yapi Kredi Bank’s endpoint security solution came up, Özer determined to examine alternatives. “We had too many viruses and malware getting through and the total cost of ownership was quite high,” he relates. “We had recently made some investments in other Symantec solutions and decided to move to Symantec Endpoint Protection.”

The value was immediate; software and maintenance costs were cut 80 percent while the number of malicious code and virus intrusions largely obviated. In addition, Özer moved management of endpoint security from the Infrastructure Group to Operations Group. “It is much easier to manage,” he says. “Previously, we had two dedicated headcount managing endpoint security. With the move to Endpoint Protection, we were able to reallocate those two IT staff to other functions.”


Data loss prevention industrialized

At the same time Yapi Kredi Bank selected Endpoint Protection, the team also implemented Symantec Security Information Manager.

“New banking regulations brought log management to the forefront,” Özer observes. “We needed to have an automated way for retrieval, reporting, and managing the data.”

Like with many financial services institutions, data loss prevention is a critical concern for Yapi Kredi Bank. “We had allocated budget to implement Symantec Data Loss Prevention three years ago,” Özer remembers. “But we realized that we first wanted to define the policies and worked with the business units and legal and audit teams to do this. We thus pushed the project until later.”

In late 2011, the project was revived, and the IT team initiated the process to identify, document, and review corporate data loss prevention policies. With the policies in place, they engaged Symturk to help them design and implement Symantec Data Loss Prevention.

Some of the policies leveraged out-of-the-box features, while others had to be customized. “For a financial services organization such as our own, protecting against data loss is critical,” Erdogan explains. “Data Loss Prevention gives us an important security firewall.”

Mobile demographics

Turkey has a very large youth population, and this extends to Yapi Kredi Bank’s employee base. “Most of our employees want to use mobile devices—whether corporate-owned or their own,” Özer observes.

Protecting the information accessed on those devices is a critical concern. His team will be extending Symantec Data Loss Prevention for tablets to help protect that information. “It is used to monitor, manage, and enforce policies based on the type of information being accessed and the identity of the user,” he explains. Later this year, the Yapi Kredi Bank team plans to roll out several mobile apps for its sales force. Having Data Loss Prevention in place to protect the information on those devices will be important.

IT becomes strategic enabler

As Yapi Kredi Bank has transformed its business over the past several years, IT has become a much more strategic enabler. Success isn’t simply measured in terms of services delivery but impact to the business—reduced cost, faster agility, and improved operational efficiency. “IT is no longer a service provided to the business but the business,” Erdogan says. “We’ve gone a long distance from finding post-merger integration points. It is about how much we can save, how much faster and agile the business can become, and how much more efficient we can make operations.”

Erdogan and Özer liken IT to competitive football, a sport both follow closely. “To win in football, strategic planning and focused execution are essential,” Erdogan sums up. “The same is true in IT.” As Yapi Kredi Bank completes its IT industrialization efforts over the next 18 months, the ability to read the playing field for its business possibilities and map technology solutions to solve those will be critical. This is something Erdogan knows well because of his prior experience as a business consultant and serves Yapi Kredi Bank well, helping the financial services leader to continue advancing its business and technology games.

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