When Teck Guan Yeo was recruited as the IT director for Goodyear Singapore Tyres, Asia Pacific, a wholly-owned subsidiary of Goodyear Orient Company (Private) Limited, he was given the charter to close the gap between IT and the business. “Previously, IT was operationally focused and not strategically aligned to business,” he recalls.

The first thing Yeo did was reorganize the IT team to align more closely with business priorities and stakeholders. Then, working with the different business owners, Yeo and his team began to identify and prioritize various projects. He assigned IT leaders to each segment of the business. “They meet with their business counterparts each month,” Yeo explains. “We also established an IT steering committee that meets quarterly. During those meetings, the business stakeholders and IT leaders review all of the proposed projects, evaluate them based on ROI calculations, and agree upon the commencement of all IT projects.” They also assess projects six months after they’re completed.

To oversee new projects, Yeo formed a Project Management Office. It coordinates communications and activities between the IT team, external third parties, and business stakeholders. “This helps ensure that all parties have a shared ownership in the project,” he says. “It is important to gain the trust of the business and assure them that projects are engineered to fulfill their requirements.”
371 and counting
Three-and-a-half years later, Yeo and his team claim credit for initiating and completing 72 different projects. “These have generated US$300 million in operational efficiency gains and cost savings,” Yeo reports. “IT is now seen as a valued business partner and not merely a services provider.”

A complete overhaul of the ERP systems was one of the most important projects for Yeo. “We did not have a standard ERP solution across the region,” he states. This fragmented approach was costly and complex to manage. In addition, Goodyear lacked visibility across its regional operations, something that was not only inefficient but inhibited the company's ability to deliver seamless, timely service to its customers.

Yeo opted to standardize on SAP across all operations and regions. Over a period of two years, he and his team worked with the business to define operational requirements and incrementally roll it out across each of the company’s four regional country clusters. “Our costs went down, operational efficiencies went up, and the ability to deliver optimal service to our customers got dramatically easier,” he sums up.

Another project he touts as a critical success is the implementation of a Cisco VoIP solution. “The telecommunications systems were extremely costly to support and weren’t integrated,” he says. “Sustainability is also an important corporate initiative, and we sought to reduce our regional carbon footprint through video conferencing technology while cutting travel costs and improving organizational collaboration.”

R&D leads to data center transformation
In the near future, Goodyear plans to build a new R&D facility in the Asia-Pacific region. “It will be critical in helping the company to evolve its business not only in the Asia-Pacific region but globally,” Yeo explains. “But before we could initiate the effort, we needed to ensure that our data is protected.”

On that note, backup and recovery was a real pain point for Goodyear. “Our data volumes grew rapidly at the start of our standardization of ERP functions onto SAP,” Yeo says. “The rate of growth became steeper and steeper as SAP was activated across the region.”

With a limited data center footprint, Yeo’s team was faced with quickly dwindling space. “Our backup success ratio with the former solution was problematic as well,” he continues. “In the past, backup jobs frequently failed and we missed our KPI (Key Performance Indicator) to store backups daily.”

Another challenge was the need to seamlessly integrate the backup process with Goodyear’s adoption of virtualization. Yeo’s team is using VMware vSphere and open systems running Red Hat Enterprise Linux in a data center revamp that started in 2009. “Virtualization helped us get a handle on our data center sprawl and comply with objectives around green IT,” Yeo comments. His team currently runs approximately 40 IBM AIX servers to power performance-intensive databases and services for the SAP platform. But they also have in excess of 150 virtual servers running Microsoft Windows and Red Hat Enterprise Linux with a ratio of 75:25.

The ultimate objective was a foundation on which the team could build out a private infrastructure as a Service (IaaS) cloud environment and then provision customer-facing applications on top of it. “As our capacity requirements change, we are able to dial up or down and provide our customers with a pay-as-you-go model,” Yeo notes. “We’re also able to roll out new applications much faster.” Previously, it took two months to roll out a new server; with the private cloud environment, the Goodyear team can do so in four hours.

Hitting the road with appliances
In mid 2011, Yeo and his team went in search of a new data protection solution, establishing three evaluation criteria. “The first was that the new solution had to be user friendly,” Yeo relates. “The second is that it had to be easy to maintain. The final was the need for a solution provider with a presence across the region.”

Yeo was already familiar with Symantec solutions. He was an early
adopted of Symantec Enterprise Vault in 2003 when he served as the IT director at Beyonics Technology Ltd. For data protection, Yeo and his team looked at several different solution options, including Symantec NetBackup. In addition to the three evaluation criteria, Yeo wanted to move from a tape-based architecture to one based on disk. NetBackup met all of these requirements.

The availability of NetBackup in an appliance form factor was also attractive to Yeo. “The plug-and-play capabilities of the 5020 appliance gave us rapid deployment and then ongoing ease of management,” he says. For assistance sizing, architecting, and implementing two NetBackup appliances, Yeo and his team engaged Symantec Platinum Partner Softsource Solutions Pte Ltd. “With the support of the Softsource Solutions team, we were able to implement the new backup and recovery environment in several weeks,” Yeo adds. “Their team integrated seamlessly with my team and made it a fast and easy process.”

Goodyear’s storage infrastructure is configured in a four-tier architecture using EMC and NetApp storage systems. Tier one is based on an Enterprise Flash Drive, tier two consists of Fibre Channel disk, tier three runs SAS (Serial Attached SCSI) storage, and tier four uses SATA disk. Differential and incremental backups are run daily, with a full backup completed weekly. All backup is now done to disk. Only backup with long-term retention requirements are vaulted to tapes; as a result, any data with 30-day-or-less retention can be easily recovered from disk.

Goodyear has also recorded substantial savings around storage because of the Deduplication Option in NetBackup. “We’ve experienced an eight-to-one decrease in storage,” Yeo says. This frees up a huge amount of storage. “Previously, we would back up, on average, 48 terabytes each week,” Yeo explains. “This shrank to four to five terabytes as a result of deduplication.” And this is only a partial picture of the tangible results. With a storage environment that doubled in size from two years ago, the deduplication savings multiply over time.

Comparable results have been seen around weekly backup windows. For example, for SAP systems alone, the Goodyear team shrank its weekly backup window from 60 hours to 6 hours. “And our backup success ratio is now in the vicinity of 99 percent or more,” Yeo adds. Another benefit from the Deduplication Option in NetBackup is a

“IT was operationally focused and not strategically aligned to business.”
– Teck Guan Yeo, IT Director, Asia Pacific, Goodyear Singapore Tyres

Podcast
Teck Guan Yeo and his team have overseen 72 different IT projects from start to finish during the past 3½ years; get the details via the Executive Spotlight Podcast at go.symantec.com/yeo-podcast.
A Lesson in History

When Teck Guan Yeo joined Ness Technologies Co., Ltd. in 2007 as the general manager for operations, he was charged to establish new operations in China and quickly develop a sustainable revenue stream.

Not a native of China—he was born and raised in Singapore—Yeo recognized that he would need to find commonality with his customers to build strategic business relationships.

“Chinese history was the answer,” he says. “The Chinese people relate to historical events and their implications for the present and future. They often quote historical sayings or draw upon different historical anecdotes to make sense of business issues.”

Already familiar with various aspects of Chinese history, Yeo came up with a list of books to read on the subject and developed an aggressive reading regimen. “It was a very fulfilling experience,” he reports. “It was an opportunity for me to merge my professional and personal development onto the same path.” Because of Yeo’s understanding of Chinese history, he was able to relate to his customers, and they were comfortable sharing their strategic plans and operational objectives with him.

reduction in replication time from the production to DR environments; only delta changes are replicated to the DR environment instead of everything under the prior architecture. This has two results. The first is a reduction in network bandwidth costs, a saving that will accumulate over time. The second is the ability to resume services at a secondary location in a shorter period of time.

The integration with the VMware vSphere environment is also critical for the Goodyear team. “With NetBackup, we have a consolidated view across our physical, virtual, and cloud infrastructures,” he states. Another area that Yeo cites as a new advantage is the Auto Image Replication (AIR) capability. “From a DR standpoint, we are able to recover data much faster and in a more granular manner,” he says. “It also helps us reduce cost because we don’t need daily snapshots.”

Global security standard

Yeo’s team also leverages a number of Goodyear global technology standards. “Symantec forms an integral part of our global security standard,” Yeo notes. “Because I believe security is critical to the business, my team has been working to take those global standards and to evolve and mature them for the region.”

Symantec: Endpoint Protection is used across primary and secondary data center locations in Singapore, along with Symantec Critical System Protection. Symantec Endpoint Protection is also deployed across several thousand workstations and laptops in Asia Pacific. For those same clients, Goodyear uses PGP Whole Disk Encryption to encrypt data and ensure that confidential information is protected. Yeo’s team is in the midst of pushing Altiris Client Management Suite from Symantec out to each of its regional clusters for remote systems management and patch management. “We’ve taken a number of manual processes and are automating them with Client Management Suite,” Yeo says.

Rubber meets the road

The first Goodyear factory opened in Akron, Ohio in 1898, a converted strawboard factory specializing in the manufacturing of bicycle and carriage tires, rubber horse-shoe pads, and poker chips. The company ascended into the iconic stratosphere with the advent of the automobile, becoming the primary provider of tires for the Ford Model T in 1908. And by 1926, the company had achieved the status of the world’s largest rubber company.

Today, the US$20 billion company remains a global innovation leader and advertising icon; the company is truly where the “rubber meets the road.” And a critical enabler behind the company’s success is technology—including information technology. Yeo and his Asia Pacific team are playing an important role. They are not simply serving as caretakers for the global technology standard but rather seeking ways to identify and prove the capabilities of new solutions that impact both regional and global operations.

As they move into 2012, this is exactly what Yeo’s team is doing. “We see mobility as an important business enabler and have embarked on a program to make our various applications, including the SAP solution, available on iOS and Android devices,” he says. “We are always looking for new ways to impact the business.”

Patrick E. Spencer (Ph.D.) is the editor in chief and publisher for CIO Digest and the author of a book and various articles and reviews published by Continuum Books and Sage Publications, among others.

Solution Composite: Symantec

- Symantec NetBackup 5020 Appliances
- Symantec NetBackup
- Symantec Endpoint Protection
- Altiris Client Management Suite from Symantec
- PGP Whole Disk Encryption from Symantec
- Symantec Critical System Protection
- Symantec Partner Softsource Solutions Pte Ltd.