UNION OF SERVICE AND TECHNOLOGY

NTUC INVESTS IN AN END-TO-END CISCO NETWORK AND IP TELEPHONY TO IMPROVE PRODUCTIVITY AND ENHANCE SERVICES TO MEMBERS.

National Trade Union Congress (NTUC) is the national federation of unions in Singapore. Set up in 1961, the NTUC has kept faith with the basic aim of trade unionism, which is to safeguard and enhance the interests of workers. As at 1 January 2004, there are 63 trade unions and three associations affiliated to the NTUC. They collectively represent more than 440,000 union members. Beyond the workplace, the NTUC family also includes nine

co-operatives, the Singapore Labour Foundation, the Ong Teng Cheong Institute of Labour Studies, and the Consumers' Association of Singapore.

In early 2004, the NTUC moved its headquarters to the new NTUC Centre at One Marina Boulevard. It took the opportunity to build a new robust network infrastructure and introduce IP telephony to its office and call center operations.

THE CHALLENGE

NTUC TAKES THE OPPORTUNITY OF ITS OFFICE RELOCATION TO CONDUCT A STUDY ON THE COST-BENEFITS OF INTRODUCING IP TELEPHONY.

NTUC has three objectives: to help Singapore stay competitive and workers stay employable for life; to enhance the social status and well-being of workers; and to build a strong, responsible and caring labour movement. Mr Martin Tsang, Chief Information Officer, Information Technology Department (ITD), explained the role of his department in helping NTUC fulfil its mission.

"The Singapore working environment has changed a lot in recent years. As a result, the composition of our members is also changing. While there are still many rank-and-file workers, we are getting more and more professionals and executives. In fact, NTUC has been aggressively recruiting more professional and executive members in recent years – a big departure from our origins. Technology solutions can help us communicate more effectively with the next generation of members."

However, Mr Tsang acknowledged the whole process will take time. NTUC's infrastructure has been evolving and in the last few years, more time and effort has been focused on how the Internet and telecommunications can make a difference. The planned relocation of its offices in early 2004 provided NTUC with the opportunity and platform to review and enhance its network infrastructure.

"In our previous premises, we were using a multi-vendor network and had encountered problems with the management of that," said Mr Ngan Chee Kuan, IT Architect, ITD. "At the same time, our members call center was using a simple PABX system. As we didn't have a full-fledged call center solution, there were limitations to what we could do."

An internal team – comprising ITD and users from various departments including the call center – was set up to conduct a cost-benefit analysis of all options, from traditional PABX systems to IP telephony solutions.

CISCO SYSTEMS
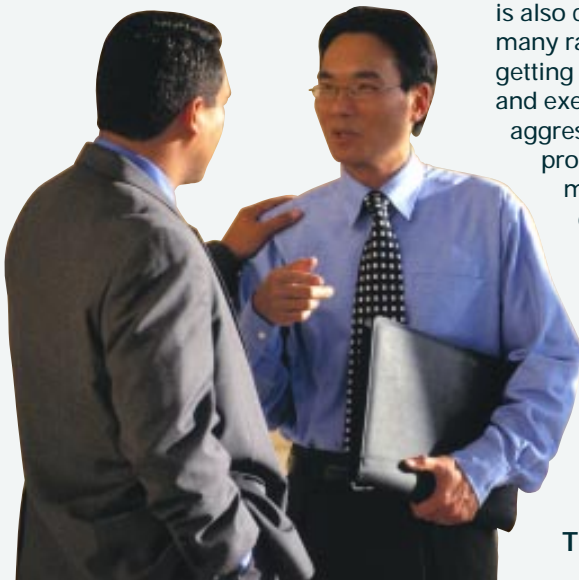
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THE SOLUTION

NTUC BUILDS 100-PERCENT CISCO WIRED AND WIRELESS NETWORK FOR MAXIMUM COVERAGE, AND IP CONTACT CENTER TO IMPROVE MEMBER SERVICES.

The study took about nine months, and the conclusion was that IP telephony was the way to go. The team then further narrowed it down to two vendors with the most complete solutions, and visited reference sites to speak to with actual users and check out how the systems worked for themselves.

The final decision was to go with an end-to-end Cisco solution, designed and implemented by NEC Solutions Asia Pacific Pte Ltd, a Cisco Certified Premier Partner. Mr Ngan explained, "We went with Cisco in the end because we needed a vendor that could deliver solid solutions in three areas – network, IP telephony and call center operations. All three areas are critical and Cisco delivered the best overall solution.

"The Cisco solution proposed by NEC was the most cost-effective IP telephony solution we had seen. We were also impressed by the architecture design proposed by NEC Solutions which would offer us greater reliability and scalability. Finally, because we had involved our users from the call center department from the start, we were also very comfortable that the Cisco solution had the features and capabilities they needed."

NTUC awarded the contract to NEC in November 2003 and the implementation was completed by February 2004. The NTUC solution comprises Cisco Catalyst Series Switches, Cisco Internet Routers, Cisco 505 Cache Engine, 230 Cisco 7960 IP Phones, 155 Cisco 7912 IP Phones, 24 Cisco 7914 IP Phone Expansion Module, 10 Cisco 7920 Wireless IP Phones, Cisco Aironet Access Points, Cisco PIX 535 Firewalls, Cisco VPN 3030 Concentrators and Cisco IP Contact Center.

The new NTUC Center network supports over 450 users – 340 of whom are also using Cisco IP Phones – its 22-agent call center, as well as seven other related bodies. All the floors occupied by NTUC – basement 1 and floors seven to15 – are now covered by a Cisco wired and wireless network. The infrastructure includes a Layer 3 Core Switch, which enables ITD to create Virtual LANs (VLANs) for different sections with better security, while a Cisco wireless network provides improved connectivity.

"The wireless coverage we have on all the floors serves two purposes. We are increasing the mobility of our officers who carry notebook computers, and providing Internet connectivity for members of the public as well who come to our various business units and auditorium," he added.

The introduction of Cisco IP Contact Center into the NTUC call center has given it an integrated, full-featured solution for managing customer voice contacts, delivering sophisticated call routing, contact management, and reporting features. "NEC Solutions also built a customized customer relationship management (CRM) solution for us," said Mr Ngan.

Post-implementation, NEC Solutions will be providing the project management, installation, testing, commissioning and maintenance for NTUC for a six-year period.

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Mr Alex Ong, Sales Director of NEC Solutions, said, "Both NEC Solutions and Cisco believe that IP telephony can go a long way to help enterprises reduce the total cost of ownership of their communications infrastructure. It is NEC's goal to become the preferred IP Communications and Contact Center Solution Partner for Cisco in the region. To do this, we will invest in expanding our base of customized IP Communications products and applications to complement the Cisco portfolio for individual vertical industries."

NEC Solutions is a regional multi-services solutions integrator that provides customers with end-to-end converged solutions for enterprise voice, data and video. With a presence in 25 countries today, it is well on its way to achieving its vision of become "a leading edge global solutions provider and foremost systems integrator in South Asia". Today, NEC Solutions is pushing the boundaries once again in the development and implementation of IP communications solutions to deliver tangible business results for its customers.

THE RESULTS

NTUC REDUCES RUNNING COSTS BY OVER 30 PERCENT AND HANDLES 20,000 MORE MEMBER QUERIES PER MONTH.

NTUC has benefited from selecting Cisco as the primary vendor for their network and call center infrastructure. While the initial capital expenditure cost was higher than going with a traditional PABX system, NTUC decided to invest in it for two reasons.

"The investment made sense as we were implementing IP telephony for both our regular operations as well as our call center. If we were to introduce a PABX system for the office and a separate telephony system for the call center, it would have cost us much more," said Mr Ngan.

"OUR AGENT PRODUCTIVITY HAS ALSO GONE UP AS CISCO IP CONTACT CENTER ENABLES THEM TO ANSWER QUERIES FASTER."

"Furthermore, we are enjoying significant savings in recurring phone bills because we are no longer providing dedicated lines for each staff, but sharing six ISDN lines, which can support multiple users. Compared to our previous phone system, the Cisco IP Telephony Solution will save NTUC over 30 percent in running costs over a six-year period."

The Cisco IP Telephony Solution is also much more flexible and feature-rich than the previous system. "NTUC practices regular job rotation to provide its staff with exposure to different functions across the organization. The flexibility of the Cisco IP Telephony Solution is a major plus point. It used to be an administrative hassle whenever anyone moved floors or jobs. With the Cisco solution in place, the staff simply has to take the Cisco IP Phone and go. They can keep their numbers and no physical re-wiring is needed."

Among the most popular features on the Cisco IP Phones are access to the NTUC corporate directory, caller-ID, unified messaging and voice messaging, and the ability to store personal phone lists on the phones.

The call center has seen improvements in service levels and internal productivity. Catherine Cho, Assistant Director, Membership Department, explained, "We used to operate during office hours five-and-half days a week. With 20 agents and two supervisors, we were handling about 25,000 calls a month. With Cisco IP Contact Center in place, customers can reach NTUC 24 hours a day through the Interactive Voice Response (IVR) facility and we are now handling an additional 25,000 enquiries per month as a result.

"Our customer service levels have also gone up as our agents now have access to all the information they need from various parts of NTUC on screen, and the customer call history so they can address specific requests and issues more effectively. Our agent productivity has also gone up as the new system enables them to answer queries faster."

Cisco IP Contact Center also provides much more flexibility in management reporting. "Some reports we needed used to take days to prepare as we had to manually extract the information and do the calculations in worksheets. With the Cisco solution, many more templates are provided for standard reports and we can customize new reports very quickly. These reports also help us deploy our manpower more efficiently," she added.

As more and more technology-savvy professionals and executives join NTUC, a greater proportion of the members will benefit from the system's self-service features. In the case of medical or other disasters, the Cisco IP Telephony Solution also provides the flexibility for agents to work remotely from wherever they are.

The Cisco IP Telephony Solution is also useful for the Industrial Relations Officers (IROs) who are posted out to Unions. With more than 30 IROs at any one time, NTUC provides a hot-desking facility for when they come back to at NTUC Center to work and need workstations, phones and Internet access.

Site management has also been made easier with the Cisco wireless network and Cisco 7920 Wireless IP Phones, which are used by site engineers and technical staff to roam the building to provide better support.

THE PARTNERSHIP

CLEAR OBJECTIVES AND REGULAR MEETINGS RESULT IN A SUCCESSFUL IMPLEMENTATION IN A COMPLEX ENVIRONMENT.

It was not an easy task implementing a network this size in a building that was being completed as the team worked. "It was a project that needed a lot of flexibility on the part of the all parties. We had to work closely with the building managers and the contractors to ensure it went smoothly, and we did it with the help of Cisco and NEC Solutions," said Mr Ngan.

"We set clear objectives and deadlines at the beginning and had constant meetings and discussions to monitor the situation. As we had involved the user departments from the start, we were able to get their cooperation to ensure proper testing and training."

"NEC is proud to be part of the team that delivered the Cisco IP Telephony Solution to NTUC," added Mr Ong.

"Our history of close partnership with Cisco and familiarity with Cisco solutions made a difference in a complex project. Cisco also helped expedite equipment deliveries to NTUC's old premises for testing and setup before the actual move which helped smoothen the migration process considerably."

"WE HAD TO WORK CLOSELY WITH THE BUILDING MANAGERS AND THE CONTRACTORS TO ENSURE IT WENT SMOOTHLY, AND WE DID IT WITH THE HELP OF CISCO AND NEC SOLUTIONS."

The end result was a seamless transition into a new building and a new lease on NTUC's mission to serve the workers of Singapore.

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