How to improve manufacturing quality that reduces your service costs 53%

Corporate Profile
Grundig is a major European OEM/ODM consumer goods manufacturer with product lines in television sets, set-top boxes, digital video recorders, and more. Desktop and notebook PC manufacturing accounts for $100 million US in revenue.

Business Challenges
To provide 5,000 shops with electronic goods and excellent customer support, Grundig maintains over 600 service stations.

Grundig backs its manufactured desktop and notebook products with two years of on-site after-sales service. When a customer complains, each service call costs the firm a minimum of $25.

The costs of a high failure rate in the field alarmed upper management. So the company searched for better ways to test goods in production.

"I asked a lot of manufacturing companies," said Grundig ICT Production Team Leader Eyup (Abe) Ozturk.

"At the time they all said they were writing down their test routines, but nobody was really testing. It was difficult to find solutions at all... even on the web there was little information about diagnostics."

When he asked Intel, Microsoft, and other suppliers, they mentioned Eurosoft.

Solution
Traditional diagnostic tests check for functionality by sending data bits to a component and examining the resulting bits to match component behaviour.

Eurosoft tests are very finely tuned... for example, ensuring that RAM chips within a RAM module or a VGA card are compatible with each other. It's very important that Grundig computer systems are tested under a balanced combination of component-by-component diagnostics and system level stress tests.

Network tests go beyond simple pings... testing for network groups, policies, and more.

Most diagnostic solutions lack stress testing capability. Furthermore, traditional stress testing is done by simultaneously testing CPU, RAM, hard drives, and sometimes optical drives. The norm was set back in the 1980s, and concentrates on stressing and heating the CPU and linked components.

By working with Eurosoft, Grundig was able to custom design a unique stress test that examines all of those, plus VGA and more. The resulting test was much more appropriate for stressing the modern computer systems of 2007 and beyond.

Benefits
In the factory, Grundig executives first noticed that PC Builder helped eliminate unnecessary work.

"Currently on our all-Gigabit test system network, 200 desktops and 150 notebooks can be tested at the same time," said Ercan enolur, Assistant General Manager – Manufacturing and Engineering.

"PC Builder is easy to use and very flexible. It is simple to add new controllers, new servers, and therefore increase and/or shift testing capacity. Since a test operator's time to attend each machine has been reduced tremendously, it was possible to reach a new line balance that allows more production per shift."

It is easy to add new component definitions to the databases and fine tune tests for individual components. Updates are distributed to the whole system without cumbersome manual file transfers.

A support policy that provides help via remote desktop connection is extremely important for Grundig.

"I'm in Turkey and Eurosoft has two support sites -- UK and USA -- they can support me up to 16 hours per day", Eyup said.

"If there is a problem that I can not fix or there is an issue with our network or databases, Eurosoft connects and fixes it for me. When a new component arrives and there is a problem, I simply send them test logs for evaluation. When they need more information, they connect and trace component behaviour online to pinpoint the root cause and fix it."

PC Builder also eliminated arguments with suppliers over component quality.

Eurosoft -- delivering PC reliability solutions and immediate ROI savings since 1980

"The flexible, powerful test system gives us better technical relations with our suppliers. Some suppliers tended to claim we were not testing correctly. Since visiting our facilities they no longer make those claims."

Prior to discovering PC builder, manufacturers would find some shareware performance analysis tools and hitch them together in hope of getting useful testing capability. Not any more.

"PC Builder is extremely effective at finding out what is wrong. It has so many features and advantages... it is updated constantly and gets more adept at finding problems with current hardware and software technologies. I would never consider going back to the way we tested our systems before."

Eyup is confident that Eurosoft diagnostic solutions provide instant credibility to service technicians on customer's sites or in service stations.

"If you do not have a professional tool to use, how can you persuade an angry customer?" he asked.

"A real diagnostic solution presents a very crisp and clean result. And it is something the customer has never seen before. You simply cannot install different shareware applications to test each component on a customer's computer and expect him to trust your problem identification and solving capability. It is not possible."

Business Value
Information provided by PC Builder enabled Grundig to reduce its field failure rate – including software failures -- much more than it would have with simple diagnostics. Desktop service calls were reduced 53% and notebook service calls reduced 44%.

Next Steps
Gartner Group studies have outlined failure rates for some multinational PC and notebook suppliers.

"We couldn't imagine those failure rates before, but now PC Builder has shown us how such low rates are attainable," Eyup said. "With some more work on our service stations we'll be able to make those low rates a reality."

Stats at a Glance
- Field service reduced 53% for desktops and 44% for notebooks.
- Operator test time reduced from 25 minutes to less than 2 minutes.
- Units tested per 8-hour shift increased from 120 to 600.

Quotes

"Eurosoft promised us up to 50% decrease in our failure rate. They delivered."

"Based on the information provided by PC Builder, we were able to reduce our internal and field failure rates. That was not possible with simple tools."

Eyup Ozturk, ICT Production Team Leader at Grundig

Call a Eurosoft consultant today to discuss your testing goals…

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