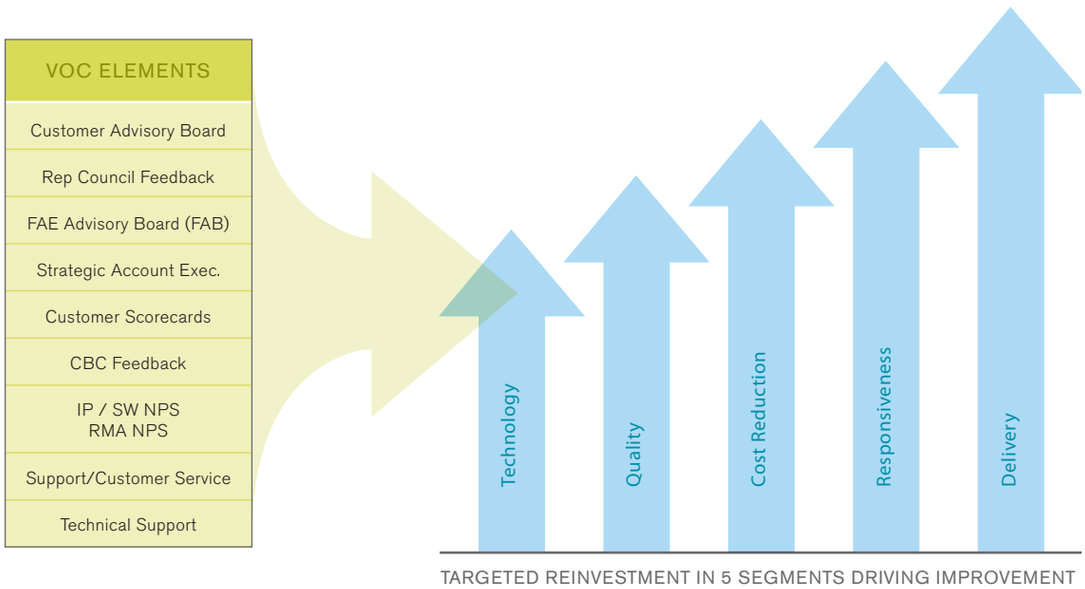
XILINX QUALITY

LISTENING TO THE VOICE OF THE CUSTOMER

From the company's first days in business, Xilinx's hallmark has been its exceptional level of customer commitment. Today, the management team recognizes that continued success as an industry-leading semiconductor company depends on the ability to closely listen to, and execute to, customer requirements.

In 2006, Xilinx launched the Voice of the Customer program to formally solicit customer feedback at all levels in the organization, across different vertical markets, and from all corners of the globe. Xilinx engages customers in a variety of ways across different channels, starting at the top with executive sponsorships, customer advisory councils, and strategic account managers. More broadly, a customer survey process relies on real-time feedback mechanisms.

Xilinx uses all of this input to track performance in terms of technology, quality, responsiveness, delivery, and cost metrics (TQRDC), including feedback on IP and software, to augment the data received through other channels and enable more targeted plans for addressing customers' needs. Tracking efforts also align the Xilinx organizations around a common purpose. Based on the favorable customer response to date, Xilinx continues to invest in further automation and to otherwise leverage the benefits that come from this program.



TARGETED REINVESTMENT IN 5 SEGMENTS DRIVING IMPROVEMENT

Customer-Driven Quality

Quality unites Xilinx employees, suppliers, and stakeholders in a shared mission that puts customers first. The Xilinx executive management team focuses on the quality issues that most affect customers. This global quality team is engaged in all aspects of the business to drive change where needed for total customer satisfaction.

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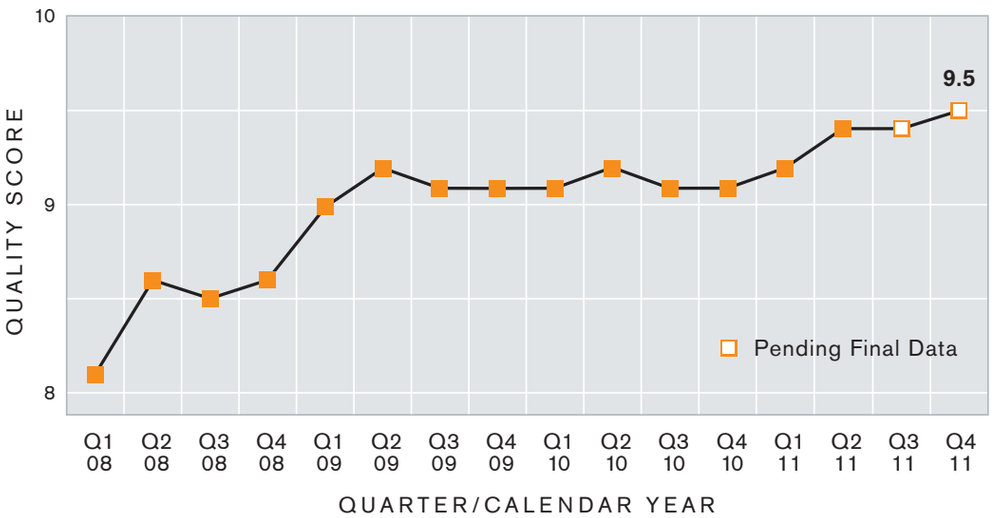
To place priority on the most important aspects of quality and to better understand the root causes of quality issues, Xilinx has instituted a repeatable, closed-loop process that integrates customer interactions from multiple operations within the company to:

- *Understand top issues facing executives and engineers*
- *Analyze data points from a variety of sources*
- *Implement initiatives with metrics for measuring and reporting progress*
- *Validate results with customers directly, using a quality-centric scorecard system*

Customer data from scorecards and surveys guides the development of Xilinx quality initiatives. Over time, these programs help Xilinx maintain technology leadership and help users accelerate quality in the systems they produce for the global customer community.

In 2011, Xilinx continued to achieve all-time-high scores for quality.

Customer Quality Scorecard Data



Expanding the Customer Voice

The primary mechanisms for collecting satisfaction data have been customer scorecards from major accounts, product support surveys, and direct customer interaction. During 2011, Xilinx continued to use the survey process to ensure that more companies provided formal feedback on all aspects of their Xilinx experience—silicon, tools, IP, hardware, and support.

Based on this feedback, Xilinx customer-driven quality programs for 2011 focused on a course of continual improvement that has proven effective for elevating the level of quality of Xilinx products.

To request more information or learn how you can participate in Xilinx's Voice of the Customer program, please email the quality team at: *survey@xilinx.com*.

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RELIABILITY FAILURE RATE SUMMARY

Failure rates are typically defined in terms of FIT (failure in time) units, where 1 FIT equals 1 failure per 1 billion device hours of operation. For example, 5 failures expected out of 1 million components operating for 1,000 hours means a failure rate of 5 FIT. The failure rate calculation method is summarized below.

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$$\text{Failure Rate} = \frac{X^2 10^9}{2(\text{No. of Devices})\,(\text{No. of Hours})\,(\text{Acc. Factor})}$$

Where: X^2 = Chi-squared value at a desired confidence level and (2f +2) degrees of freedom, where f is the number of failures

The acceleration factor is calculated using the Arrhenius Relationship:

$$A = \exp\left\{\frac{E_a}{k} \cdot \left(\frac{1}{T_{J1}} - \frac{1}{T_{J2}}\right)\right\}$$

Where: E_a = Thermal activation energy (0.7eV is assumed and used in failure rate calculation except for EPROM, in which 0.58eV is used)

A = Acceleration factor

k = Boltzmann's constant, 8.617164 x 10^{-5} eV/°K

T_{J1} = Use junction temperature in kelvin (K = °C +273.16)

T_{J2} = Stress junction temperature in kelvin (K = °C +273.16)

PROCESS TECHNOLOGY	DEVICE HOURS AT T_J = 125° C	FIT(1)
0.040 µm	1,565,214	17
0.045 µm	1,074,022	11
0.065 µm	2,853,318	9
0.09 µm	10,685,692	5
0.13 µm	2,220,131	5
0.15 µm (FPGA)	3,287,432	4
0.15 µm (EPROM)	2,110,352	12
0.18/0.15 µm	2,511,926	10
0.18 µm	3,777,837	14
0.22/0.18 µm	2,115,203	6
0.22 µm	1,974,124	6
0.25 µm	3,054,550	4
0.35 µm / 0.25 µm	2,200,928	5
0.35 µm	4,321,681	16
0.35 µm (EPROM)	1,051,816	24
0.5 µm	2,068,881	13
0.6 µm	813,893	14
0.6 µm (EPROM)	1,069,748	23

1. FIT is calculated based on 0.7eV (0.58eV for EPROM), 60% C.L. and Tj of 55C.

2. Table contains Q3 CY2011 data. For the most current quarterly report, go to http://www.xilinx.com/support/documentation/user_guides/ug116.pdf

Device PPM Summary

Mature / CPLD / PROM		
Product	Technology Node	PPM
CoolRunner™	.35µm	0.00
CoolRunner-2	.18µm	0.14
XC95XXX	.50µm / .35µm / .25µm	0.11
PROM	.60µm / .35µm / .15µm	0.47
3K / 4K / 5K	.60µm /.50µm /.35µm /.25µm	0.00
EasyPath™	Various	0.00

Spartan® FPGA		
Product	Technology Node	PPM
Spartan-2/2E	.22µm / .18µm	0.42
Spartan-3	90nm	0.59
Spartan-3E	90nm	0.09
Spartan-3A/AN	90nm	0.96
Spartan-6	45nm	0.73

Virtex FPGA		
Product	Technology Node	PPM
Virtex-E	.25µm / .18µm	0.00
Virtex-2/2Pro	.15µm / .13µm	0.51
Virtex-4	90nm	2.08
Virtex-5	65nm	7.62
Virtex-6	40nm	2.31

Aerospace & Defense		
Product	Technology Node	PPM
3K / 4K / 5K	.60µm /.50µm /.35µm /.25µm	0.00
PROM	.60µm / .35µm / .15µm	0.00
Virtex®-E	.25µm / .18µm	0.11
Virtex-2/2Pro	.15µm / .13µm	0.47
Virtex-4	90nm	0.00
Virtex-5	65nm	0.00

Automotive		
Product	Technology Node	PPM
CoolRunner	.35µm	0.00
CoolRunner-2	.18µm	3.67
XC95XXX	.50µm / .35µm / .25µm	0.00
Spartan-2/2E	.22µm / .18µm / .15µm	0.00
Spartan-3	90nm	4.13
Spartan-3E	90nm	0.30
Spartan-3A	90nm	0.00

QUALITY RESOURCE GUIDE

Xilinx publishes a comprehensive range of information about its global quality programs, metrics, and documentation. The following tables point to detailed reports and reference sites, as well as to sites for Xilinx support, training, services, and third-party programs.

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DOCUMENT TITLE	AVAILABILITY
Xilinx Quality	http://www.xilinx.com/products/quality/index.htm
Quality Policy	http://www.xilinx.com/products/quality/Xilinx_Quality_Policy.pdf
Quality Manual	http://www.xilinx.com/products/quality/QualityManual.pdf
Quality Certifications	See links to documentation for each of the following certifications at http://www.xilinx.com/products/quality/index.htm – ISO 9001:2008 / TL 9000 (XSJ, XIR, XAP, XHD), – ISO 9001:2008 (XCO), QML per MIL-PRF-38535, – ISO 14001:2004 (XSJ, XIR, XAP), OHSAS 18001:2007 (XIR, XSJ, XAP)
Annual Quality Reports	http://www.xilinx.com/products/quality/index.htm
Supplier Management	http://www.xilinx.com/products/quality/submgmt.htm
Device Reliability Report (quarterly)	http://www.xilinx.com/support/documentation/user_guides/ug116.pdf
Product Characterization Reports	http://www.xilinx.com/support/documentation/characterization_reports.htm
Silicon Stepping	http://www.xilinx.com/products/quality/silicon-stepping.htm
Pb-Free and RoHS-Compliant Products	http://www.xilinx.com/system_resources/lead_free/
FPGA Design Best Practices	http://www.xilinx.com/products/quality/fpga_best_practices.htm
Product Change Notifications	http://www.xilinx.com/support/documentation/customer_notices.htm
RMA and Returns Instructions	http://www.xilinx.com/products/quality/rma.htm
Qualification Information	A variety of other quality documents, including those listed below, are regularly posted and available on www.xilinx.com. Xilinx Reliability Report, SEU Report, MDDS / IPC-1752 Package Data, ROHS / REACH Declarations

XILINX SITE	DIRECT LINK
Xilinx Home Page	http://www.xilinx.com/
Xilinx Support	http://www.xilinx.com/support/mysupport.htm
Training	http://www.xilinx.com/training/
Documentation	http://www.xilinx.com/support/documentation/index.htm
Downloads	http://www.xilinx.com/support/download/index.htm
Troubleshooting	http://www.xilinx.com/support/troubleshoot.htm
Answer Browser	http://www.xilinx.com/support/answers/index.htm
Forums	http://forums.xilinx.com/xlnx/
Publications	http://www.xilinx.com/publications/
Events	http://www.xilinx.com/events/
Webcasts	http://www.xilinx.com/events/webcasts.htm
Third-Party Alliances	http://www.xilinx.com/alliance/
University Program	http://www.xilinx.com/university/index.htm
Contact Us	http://www.xilinx.com/company/contact.htm