



Changing the Way We
Work, Live, Play, and LearnSM

Work



Live



Play



Learn





Using Customer Feedback to Focus Software Quality Improvements



Lisa Arnold, Operations Manager
Peter Schulz, Manager, Corporate Quality
Cisco Systems, Inc.
March 13, 2008

History of Global Satisfaction Surveys at Cisco



- **Politics of Change**
- **Presenting the Results**
- **Establishing the Initiatives**
- **Measuring our Success**
- **Lessons Learned**

Glossary

- Client

Internal Cisco organizations

- Customer

Survey respondent, i.e. Cisco product end-user

Cisco Systems, Inc. Overview

- \$4 billion R&D investment, annually
- Over 16,000 engineers working in more than 1110 labs worldwide
- Worldwide leader in networking for the Internet.
- Industry-leading routing and switching products
- 110+ acquisitions to quickly enter new markets and add talent

IP Communications

Network Security

Wireless LAN

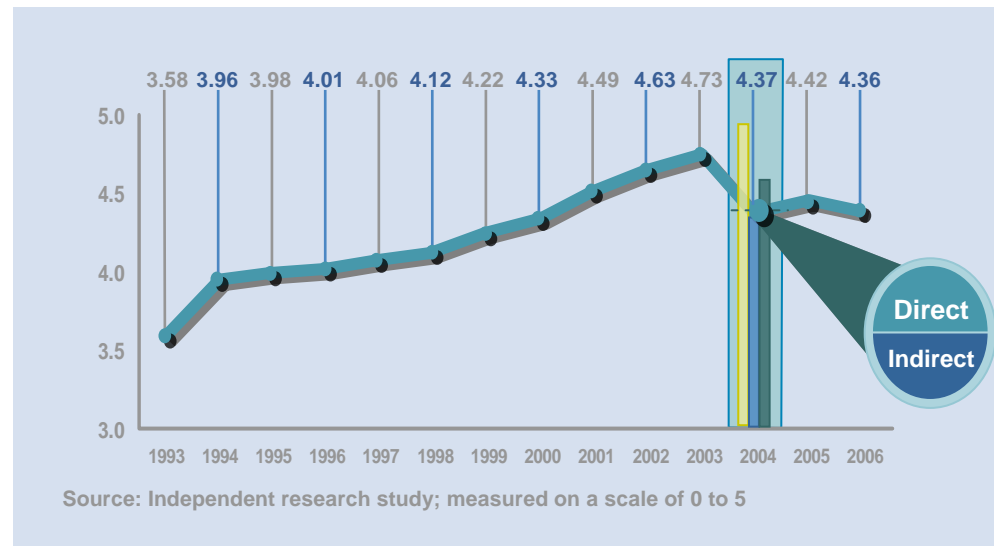
Storage Area Networking

Home Networking

Video Systems

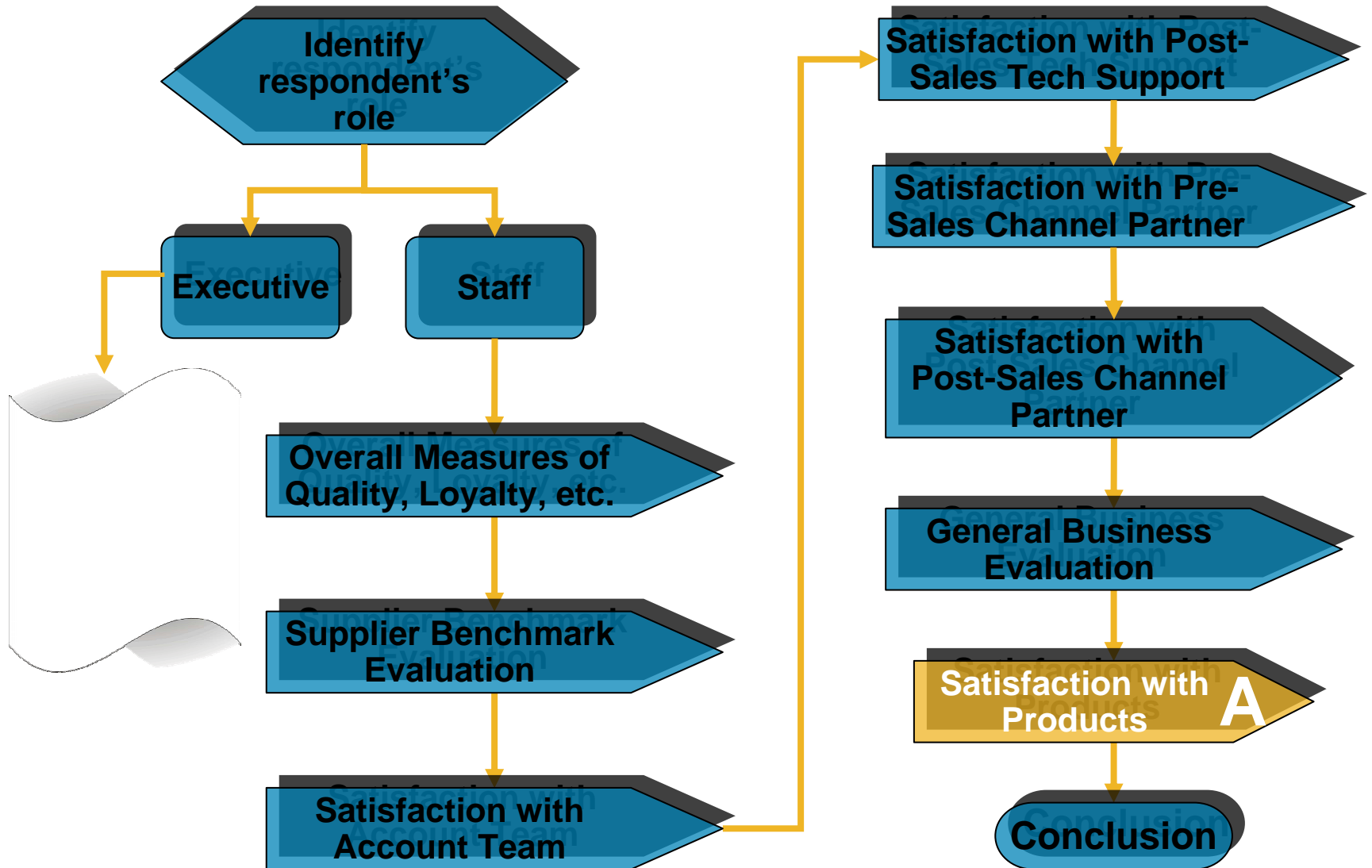
Application Networking Services

- 10+ years of history formally tracking customer satisfaction
- Central part of Cisco's culture
- Customer satisfaction tied to the bonus plan – for **everyone**
- Organizational ownership

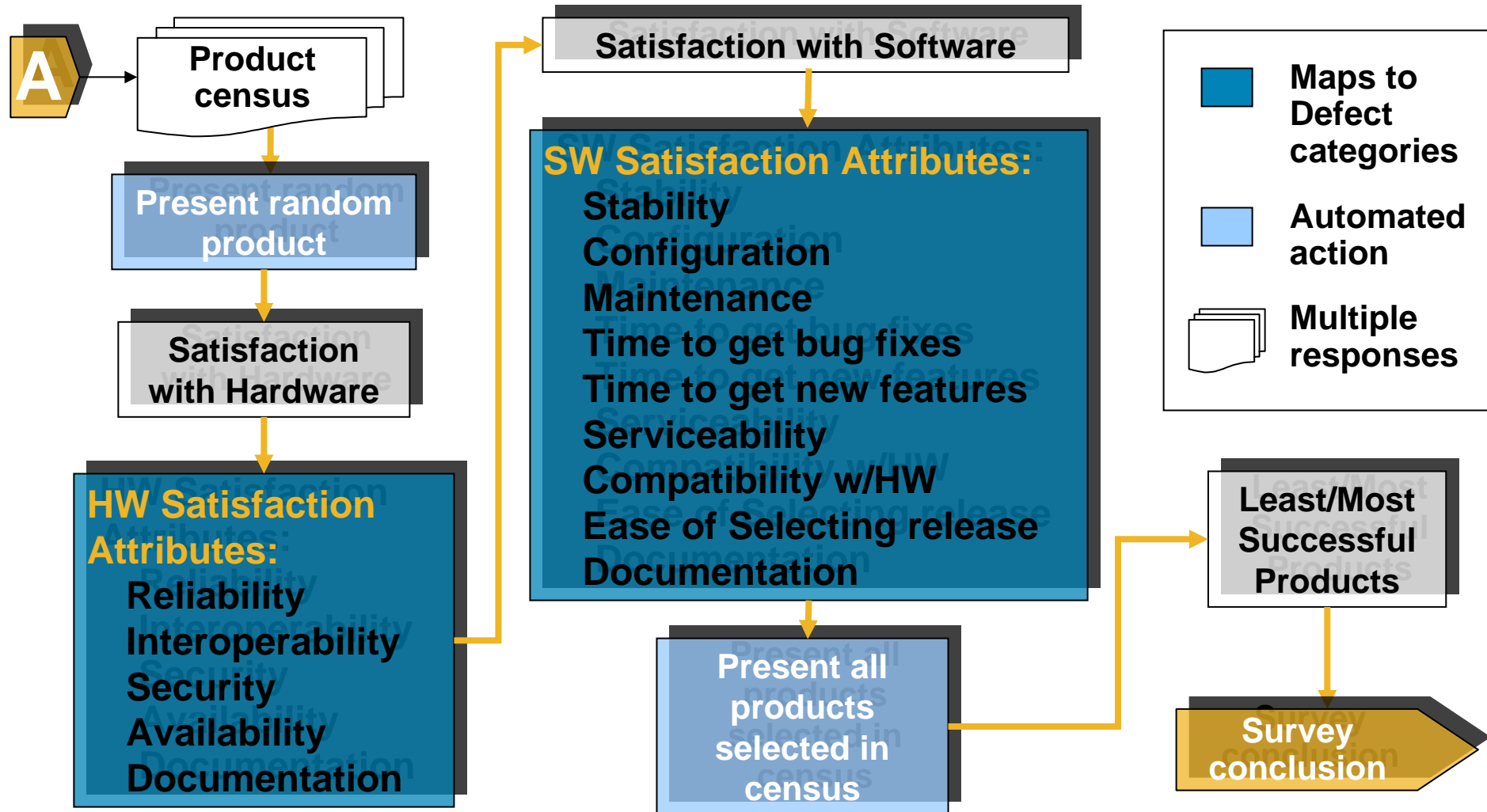


Global Customer Satisfaction Survey

General Flow: Sections by Actionable Area



Product Evaluation Flow First Year



- History of Global Satisfaction Surveys at Cisco

Politics of Change



- Presenting the Results
- Establishing the Initiatives
- Measuring our Success
- Lessons Learned

Politics of Change

Fighting “The Data is Wrong”

- **Make the Data Real**
 - “Your data isn’t right”
 - “Your data doesn’t match our data”
- **Make the Data Believable**
 - “What does that really mean?”
 - “You didn’t ask the right question”
 - “This data isn’t actionable”



Politics of Change

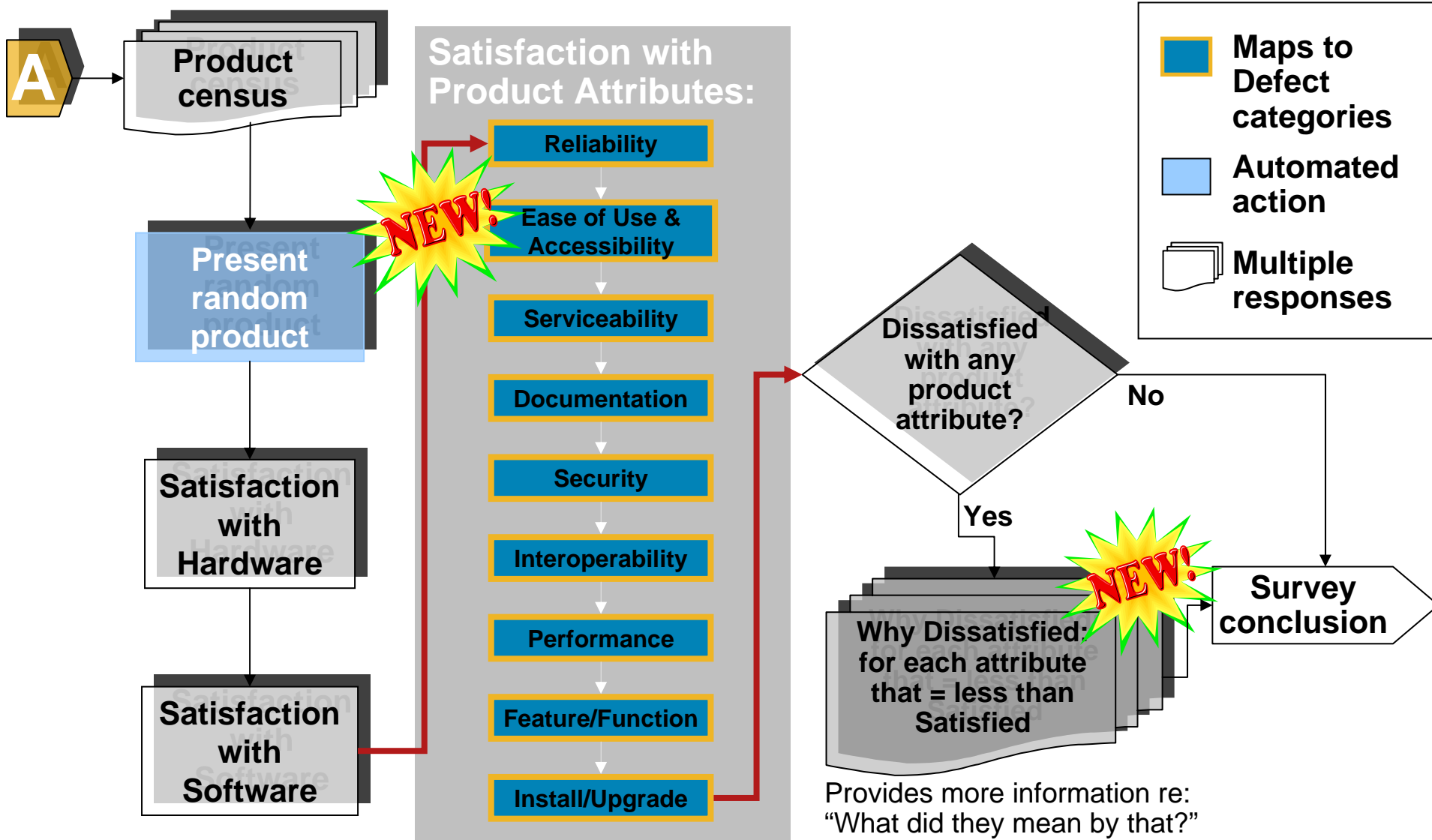
Providing the Data That is Right

- Data Must Be
 - Compelling
 - Backed up by “trusted” data
- Making a logical connection between customer data and operational reality
 - Slice the data a variety of ways to get buy in
 - No matter how you slice it – the direction is clear
- Dispelling the belief that “it’s not our fault”
- Trusted insider to back up the data and message



Making Adjustments

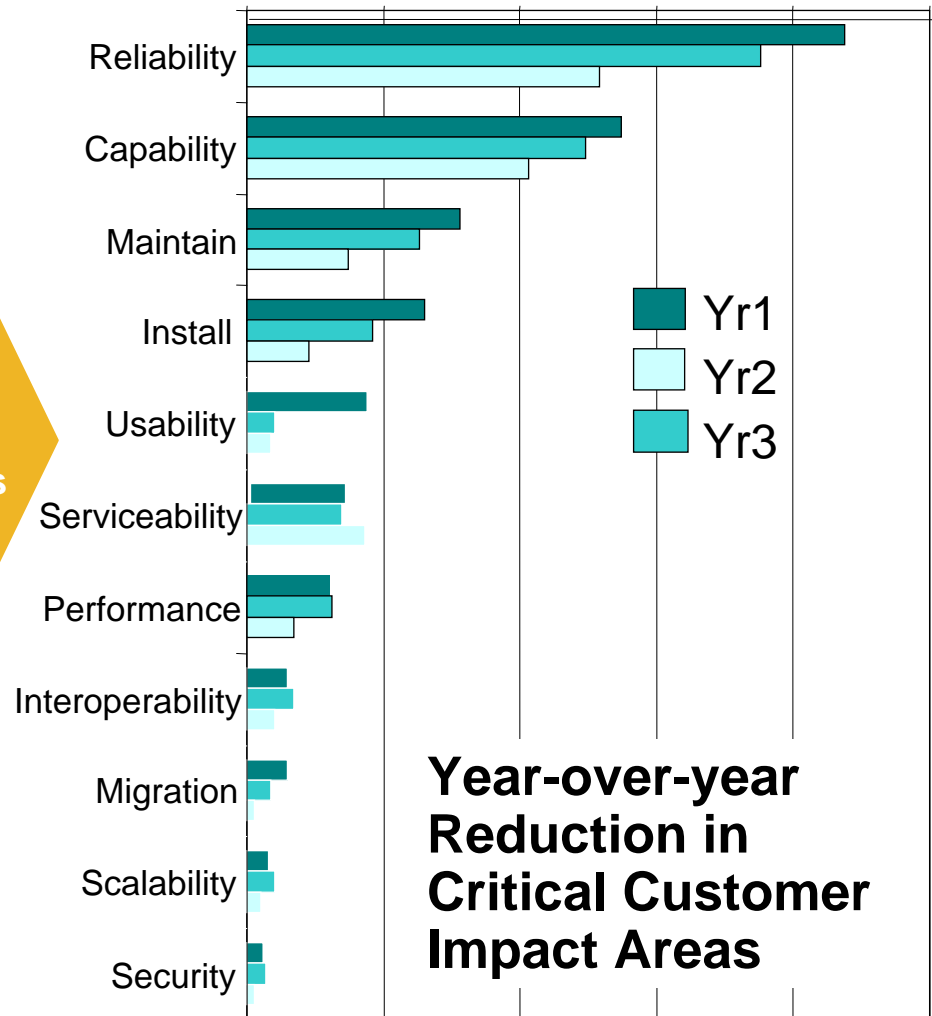
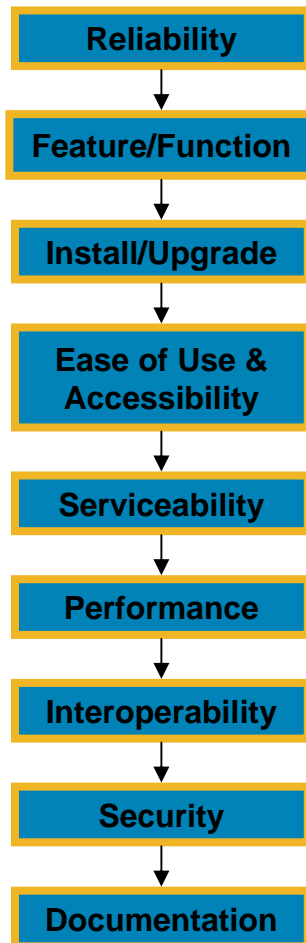
Getting ahead of the critics



Lesson Learned

Clear link: Survey language parallels engineering

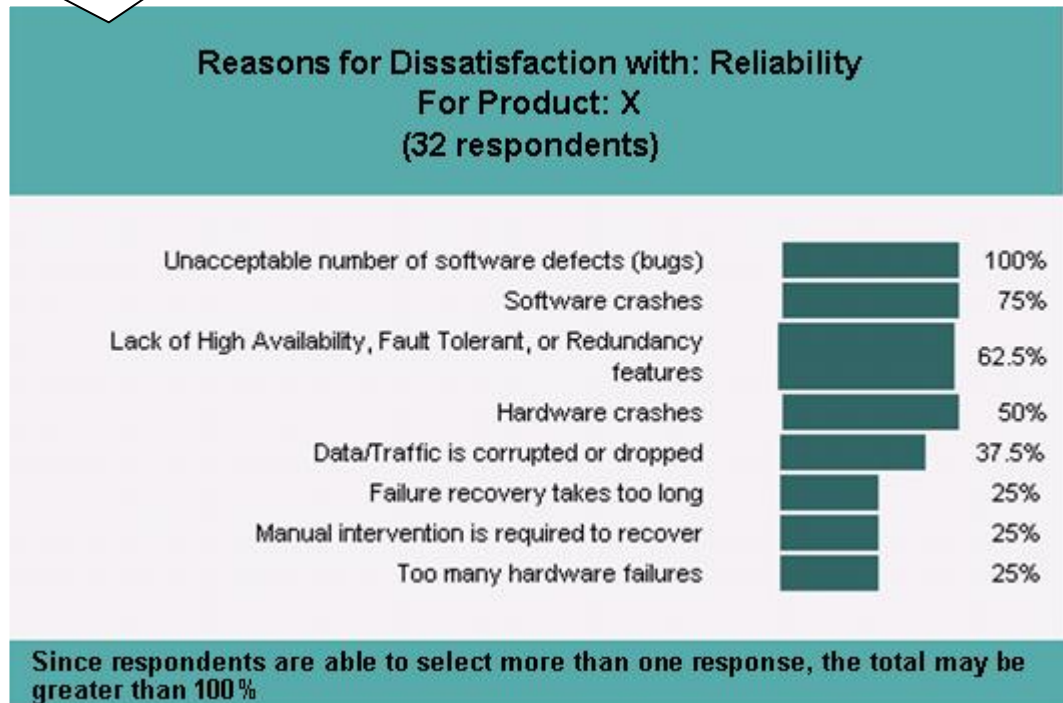
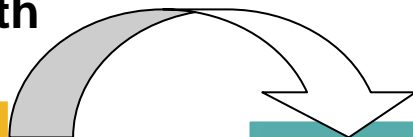
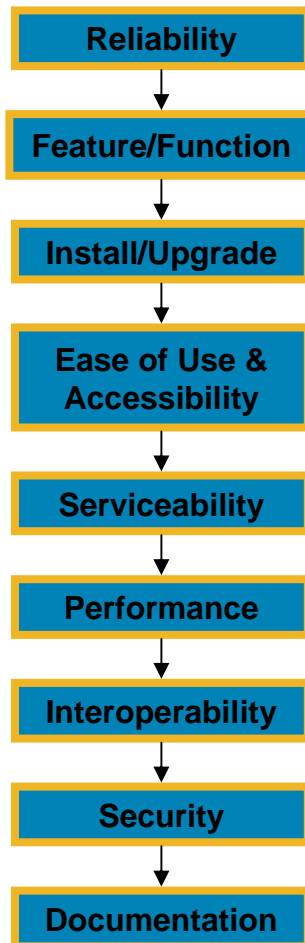
Satisfaction with Attributes:



Lesson Learned

Provide more detail upfront

Satisfaction with Attributes:



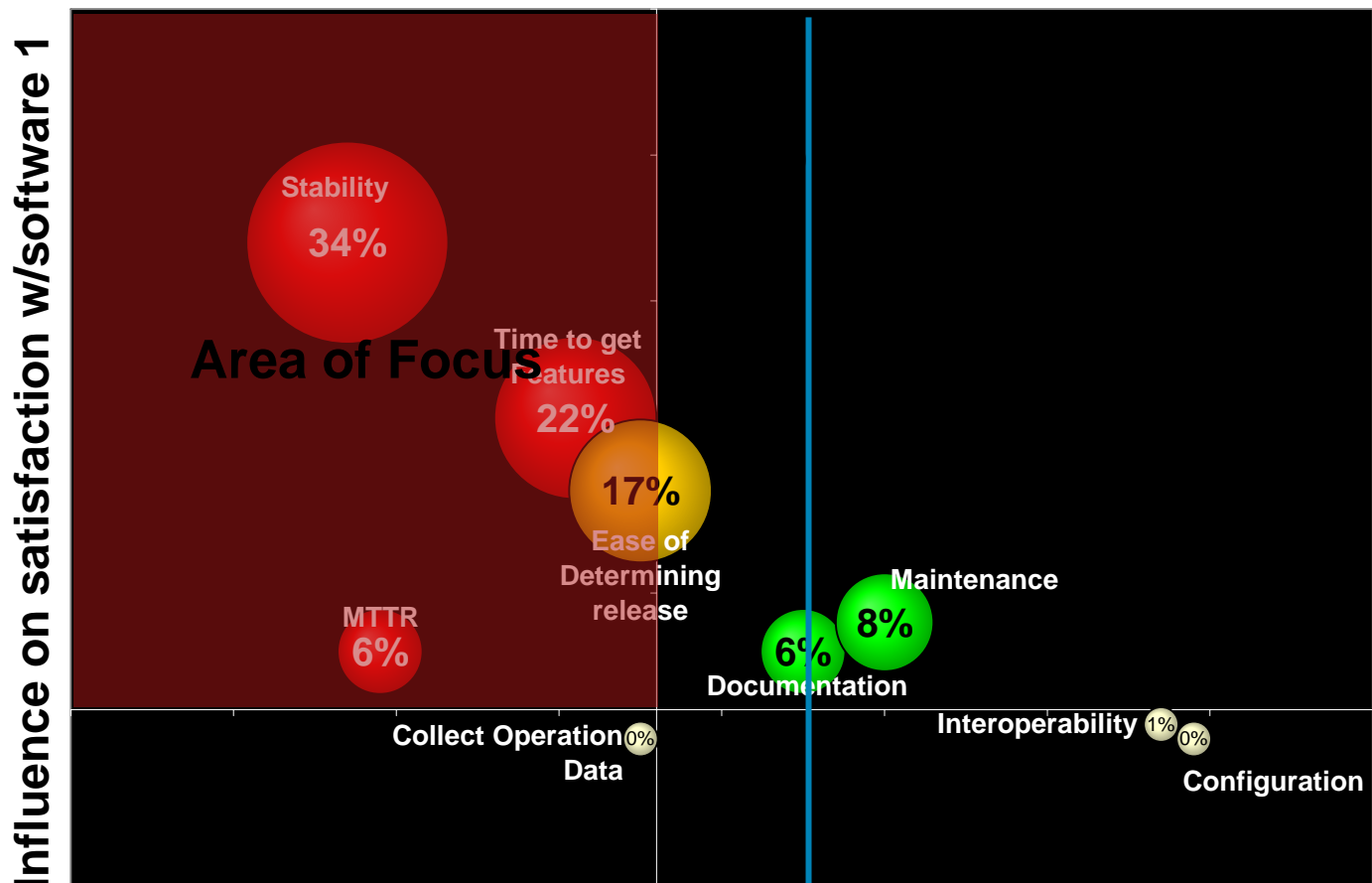
- **History of Global Satisfaction Surveys at Cisco**
- **Politics of Change**



- **Establishing the Initiatives**
- **Measuring Our Success**
- **Lessons Learned**

Problem: Product X Trails Other Cisco Products In Satisfaction with Quality of Software

Year 1 Global Satisfaction Survey Results

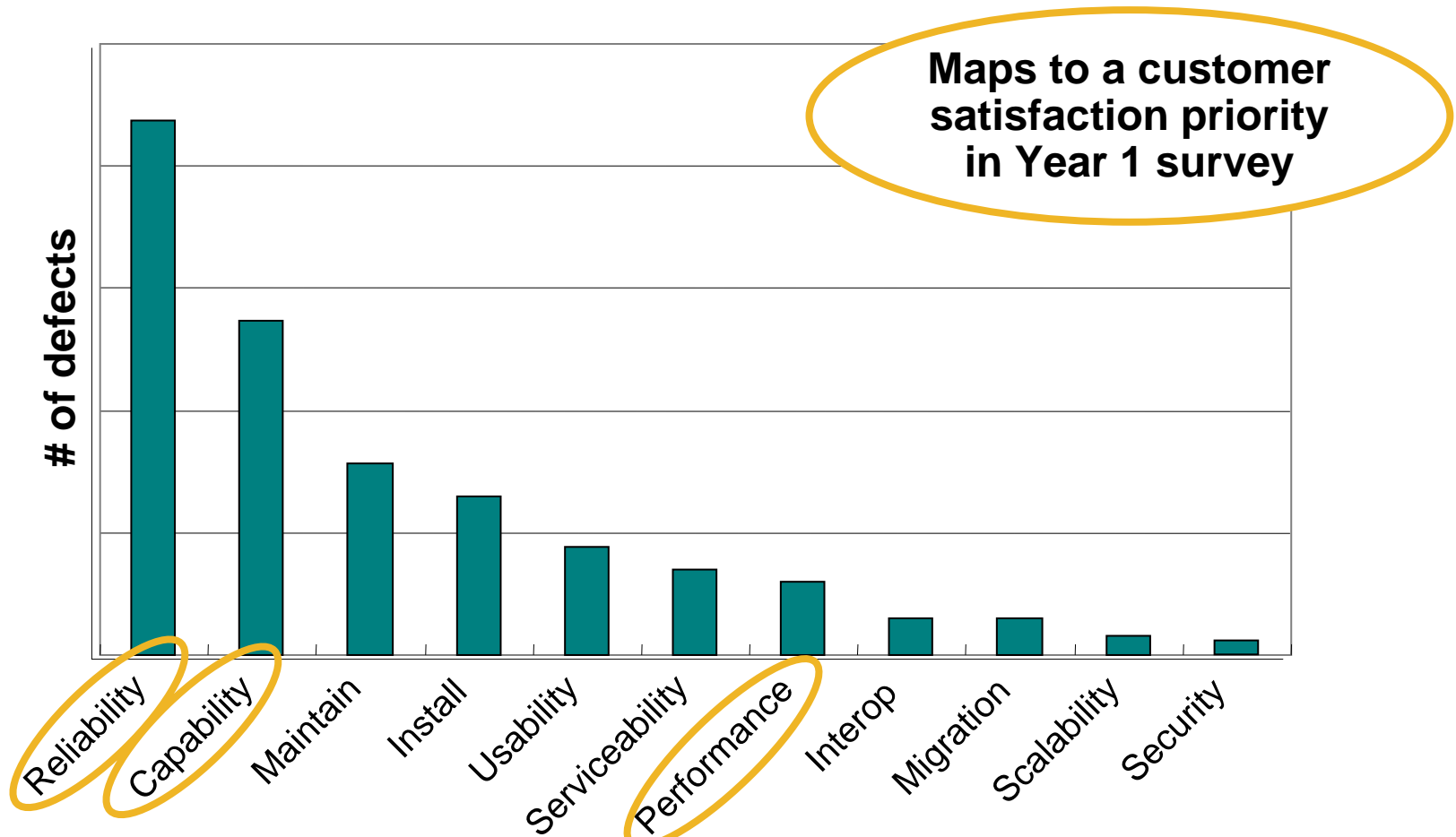


Increasing Satisfaction with Attribute 1

NOTE: All data has been modified for illustration purposes

A Second Look Using the Engineers' own data

Categorized Defect Data: What is the impact of defects on customers' systems?



NOTE: All data has been modified for illustration purposes

- **History of Global Satisfaction Surveys at Cisco**
- **Politics of Change**
- **Presenting the Results**

Establishing the Initiatives

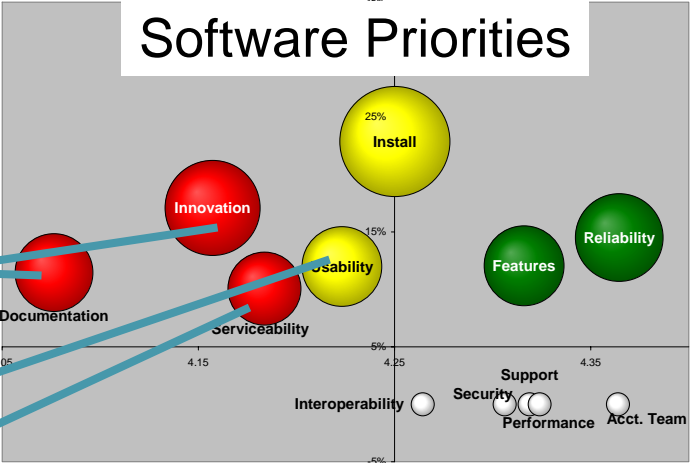


- **Measuring our Success**
- **Lessons Learned**

Validating the Initiatives

Improvement Plan Maps to Customer Satisfaction

Objective
Reduce Doc Improvement Plan Backlog by 25%
Deliver TAC Training on Advanced Debugging Techniques
Market RF Leadership, Deliver MIMO, Cognio (FY08)
Improve out of the box usability of WNBU products (focus groups, roadmap)
Deliver Phase 1 of serviceability Enhancements in Concannon
Forecast Accuracy of +/-3% Overall with +/-7% by Product OTS goal is 97%, and our shipped LT goal is 90% of ship sets at or below LT target



- History of Global Satisfaction Surveys at Cisco
- Politics of Change
- Presenting the Results
- Establishing the Initiatives

Measuring Our Success



- Lessons Learned

Weekly Review of Operational Data Quality Dashboard

WNBU Customer Satisfaction Improvement Plan

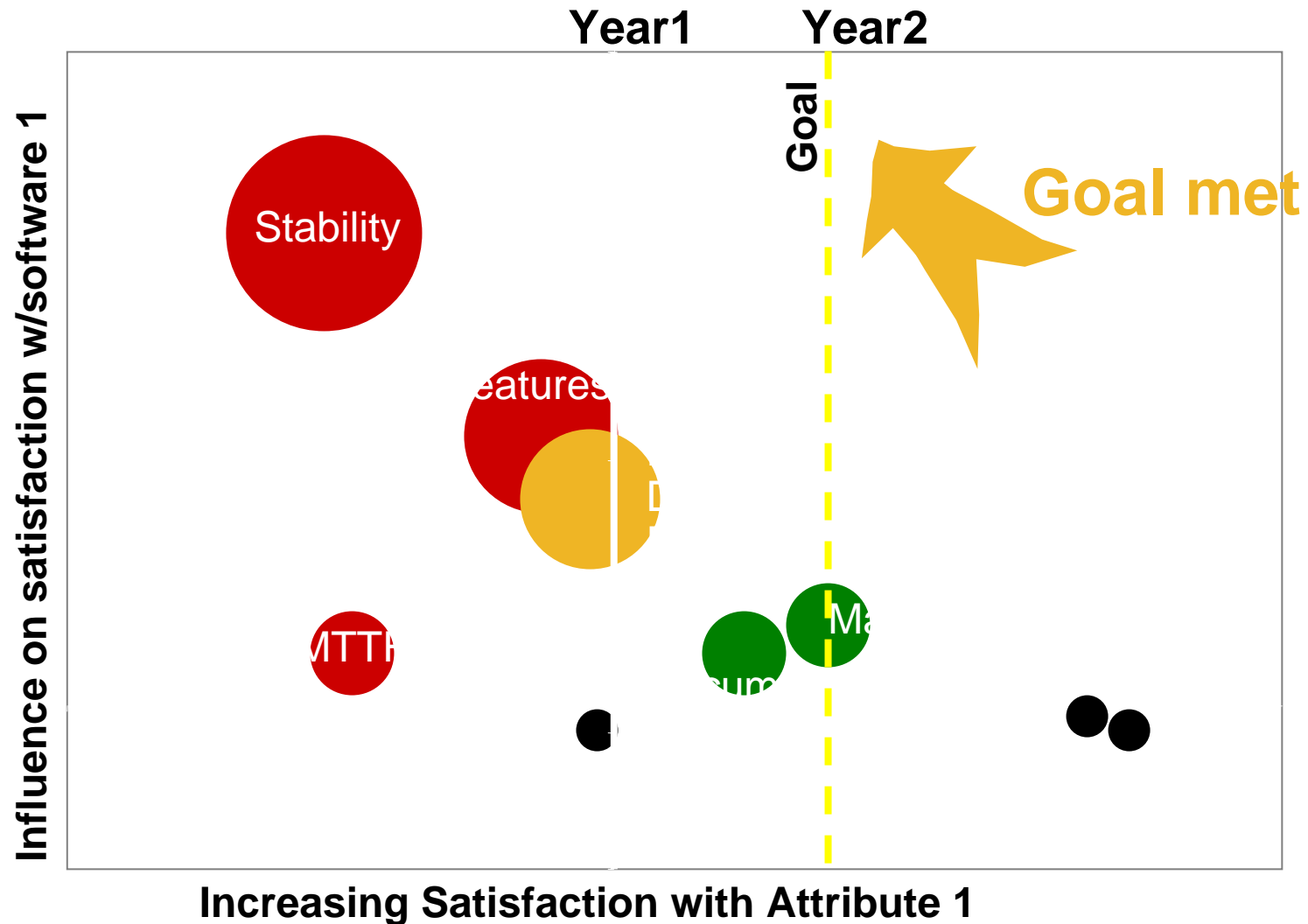
Objective	State	Owner	Target Completion	Success / Next Steps
Reduce Doc Improvement Plan Backlog by 25%		Miller / Files	July 2007	Backlog Reduced by 20% In Past Several Weeks
Deliver TAC Training on Advanced Debugging Techniques		Chebrolu	December 2006	Identified top 3 topics : 1. Mesh AP's 2. WCS and 3. Location Server plus BE-MR2 and 2106. Training occurred the week of January 22 nd . Plan to poll TAC on a monthly basis to determine next steps.
Market RF Leadership, Deliver MIMO, Cognio (FY08)		Sloan / Pelham	On-Going	D3 EC Complete - Included Basic Cognio Integration Tesla Project EC Planned for February
Improve out of the box usability of WNBU products (focus groups, roadmap)		Badjate	April 2007 (Phase 1)	Concannon: Added ACL Improvements, misc WCS UI improvements D3 EC: WCS Usability features included Worked with TAC to EC a project to data mine WCS support cases

Executive Summary for WNBU

Metric	Customer Experience			Customer Intimacy	Supplemental Metrics							
	Responsible Manager	CFD MTTR	Doc. Backlog	CI Plan	Defect Density	Rel CFD	Automation Test Coverage	Ease Of Use	Serviceability	TAC Training	CSAT SW	CSAT HW
WNBU	Galloway, Brett	41	72.6	80	N/A	31	87	74	N/A	2	4.4	4.4

Our shipped LT goal is 90% of ship sets at or below LT target

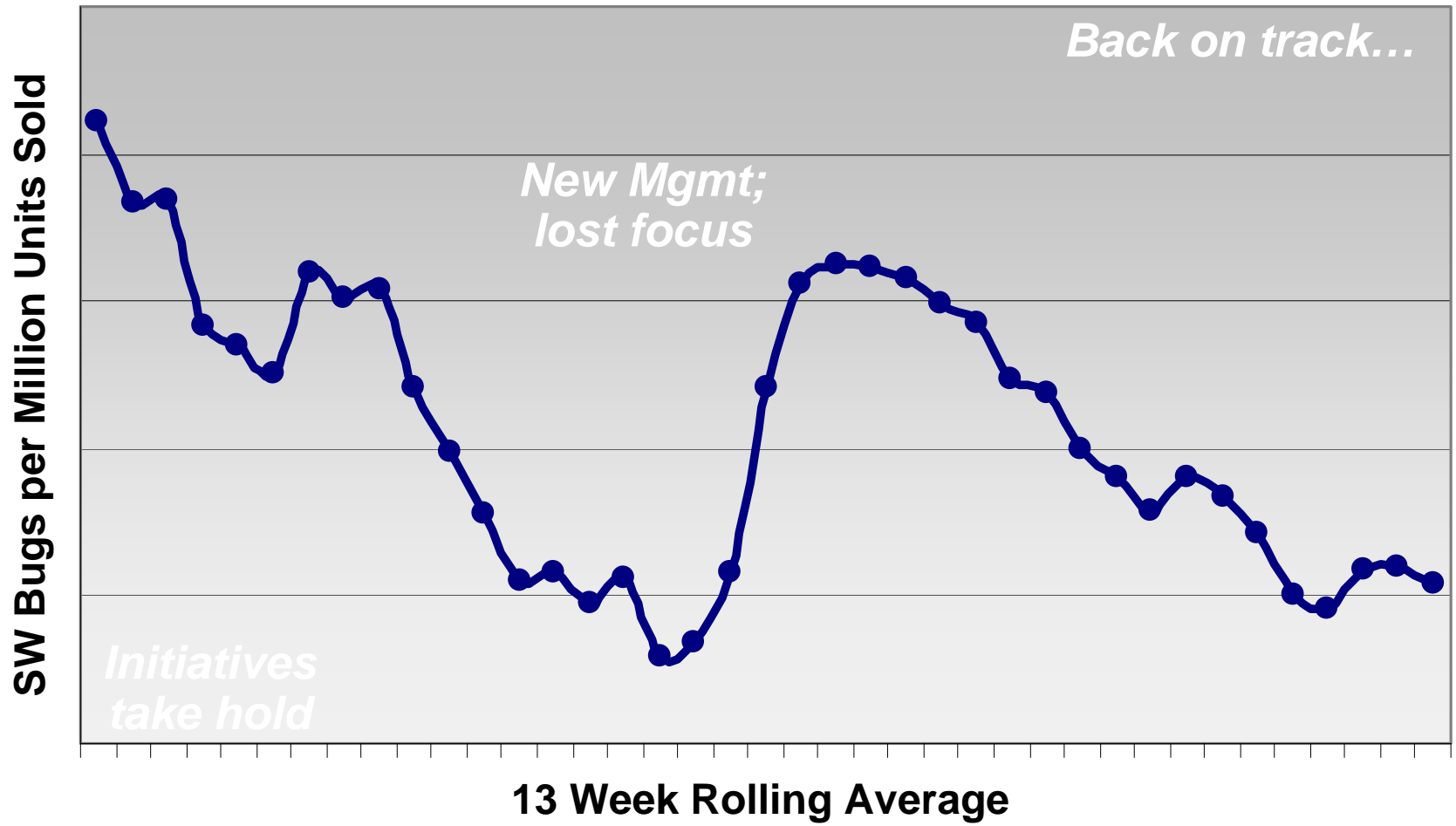
Cisco Product X Year 2 Customer Sat Data Goal Set



NOTE: All data has been modified for illustration purposes

Goal: Reduce Customer Found Defects

Success Requires Continual Focus



- History of Global Satisfaction Surveys at Cisco
- Politics of Change
- Presenting the Results
- Establishing the Initiatives
- Measuring Our Success

Lessons Learned



Lesson Learned about Data Access

Easy Access to Customer Feedback



Product Satisfaction Analyzer Return to Overview

TG, BU and Overall scores reflect weighted averages determined by product census.

Group:

Business Unit:

Product Family:

Version/Series:

Bu Spotlight WNBU

The Cached Report below was generated: 02/26/2008 05:52 AM

	WNBU Totals	FY05	FY06	FY07	FY08 Goal	FY08 Actual	
	# of Responses	2864	3132	3876	--	2729	
Why Dissatisfied?	Quality of Hardware	4.35	4.33	4.38	4.39	4.43	↑
NA	Quality of Software	4.10	4.12	4.23	4.26	4.27	↑
Why Dissatisfied?	Reliability	4.32	4.36	4.35	4.38	4.38	↑
Why Dissatisfied?	Usability	4.16	4.22	4.25	4.27	4.32	↑
Why Dissatisfied?	Serviceability & Maintenance	4.09	4.19	4.19	4.22	4.24	↑
Why Dissatisfied?	Documentation	4.01	4.09	4.10	4.14	4.12	
Why Dissatisfied?	Security	4.17	4.31	4.32	4.34	4.33	
Why Dissatisfied?	Interoperability	4.15	4.27	4.27	4.30	4.29	
Why Dissatisfied?	Performance & Scalability	4.25	4.32	4.31	4.34	4.34	↑
Why Dissatisfied?	Features & Capability	4.19	4.32	4.29	4.33	4.33	↑
Why Dissatisfied?	Installation/Upgrade/Migration	4.31	4.25	4.22	4.27	4.25	
Why Dissatisfied?	Time to Adoption	4.11	--	4.21	4.24	4.27	↑
Distribution	Likely to Recommend	--	4.01	4.08	4.12	4.17	↑
Distribution	Degree of Technical Innovation	4.11	4.14	4.10	4.18	4.26	↑
Comments	Meets Carrier-Class Requirements (SP-Only)	--	--	3.92	3.98	3.96	
Comments	Account Team - Specific to Product	--	4.31	4.33	4.34	4.39	↑
Why Dissatisfied?	Technical Support - Specific to Product	--	4.24	4.25	4.27	4.29	↑
Why Dissatisfied?	Lead Time	--	4.11	4.13	4.17	4.23	↑

NOTE: Responses from those with 6 or more months of hands-on experience are shown below:

-
-
-

↑ = At or Above Goal
 ↓ = 0.03 Points OR LESS Below FY07
 ↓ = MORE Than 0.03 Points Below FY07

Summary

Lessons Learned

- Keys to success
 - Meaningful metrics
 - High-level sponsorship
 - Local leadership
- Communicate consistently and often
- Clear link:
 - Survey parallels engineering language
- Easy access to customer feedback



Contacts

- Lisa Arnold

Cisco Systems, Inc.

lisad@cisco.com

408-525-6148

- Peter Schulz

Cisco Systems, Inc.

peschulz@cisco.com

978-936-1855

