



MOTOROLA

Commercial, Government and Industrial Solutions Sector

2002 Malcolm Baldrige National Quality Award



Application

May 30, 2002

One Motorola

Powered by Performance Excellence

intelligence  everywhere™



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P.1 Organizational Description

P.1.a Organizational Environment

P.1.a.1

Our main products and services include:

- Mission Critical Radio Networks, Systems, Products and Services
- Integrated Communications Technology and Information Technology Solutions
- Commercial and Industrial Radio Products

They are delivered through:

- Large professional sales, engineering and business development organizations (Direct Sales)
- Extensive dealer, integrator and service networks (Indirect Sales and Service Channel)
- Customer Center for Systems Integration (CCSI)
- Supply Chain Organization which includes:
 - Customer support organizations who take product orders, service and support requests
 - ‘Motorola on Line’ (extranet) that provides customers and partners with self-service capabilities to order, accept and ship products

P.1.a.2 The organization context and culture is embedded in the CGISS’ vision, mission and brand promise statement.

CGISS’ vision is to “become the trusted integrator of complex communication and information solutions for the public sector and business critical enterprise customers.”

CGISS’ mission statement is to “improve the performance of our customers’ operations by providing integrated information and communications solutions.”

CGISS’ brand promise is “to help organizations move faster, reach farther and act with confidence. We will expand possibilities with rapid, mobile intelligence.”

CGISS’ values are the stated Motorola Corporate values based on two key beliefs: constant respect for people and uncompromising integrity in everything we do. At Motorola, we are committed to act with honesty and fairness in all aspects of our business -- with customers, suppliers, employees, competitors, governments and society at large -- and to comply with the laws of each country and community in which we operate. The commitment to uncompromising integrity underscores the standards of individual behavior that are inherent in the Motorola Code of Business Conduct. In this Code, Motorola as a Company has created a corporate climate that values integrity, emphasizing the need for each, employee to demonstrate integrity, both in word and action.

P.1.a.3

Motorola CGISS worldwide employs approximately 15,260 associates.

Employee skill levels range from assembly and warehouse workers to senior management / president. Educational levels range from high school to PhD graduates. Motorola’s culture creates a strong environment for team learning and individual attainment of advanced and continued education. Worldwide. Motorola enjoys a direct relationship with its employees. Workforce Diversity is a business initiative that drives the hiring, development and retention of our highly skilled and diverse workforce.

P.1.a.4 Technologies, Equipment and Facilities

Our Technologies and Equipment include Digital & Analog System/Radio Equipment and Communication and Information Technologies. Our key facilities are listed in the following table.

Regions	Key Facilities
North America	Schaumburg, IL Plantation and Sawgrass, FL
Latin America	Sawgrass, FL Mexico City, Mexico
Europe, Middle East and Africa	Basingstoke, UK Taunusstein and Berlin, Germany Tel Aviv and Arad, Israel
Asia/Pacific	Singapore Penang, Malaysia Beijing and Tianjin, China

P.1.a.5 CGISS complies with Federal, State and Local requirements. We are ISO 9001 compliant and also adhere to the following standards:

Financial

Internal (Corporate):

- Standards of Internal Control (SIC)
- Worldwide Corporate Financial Practices (WWCFP)
- Standard Operating Procedures (SOP)
- Electronic Information Security Standards (EISS - for Financial Systems)

Internal (Sector):

- Sector Financial Practices (SFP)
- Chief Accountant’s Bulletins (CAB)

External:

- Securities and Exchange Commission (SEC)
- General Accepted Accounting Principles (GAAP)

Environmental, Safety & Product

- FDA (Food and Drug Admin Rules)
- IDNS (Illinois Dept. of Nuclear Safety)
- DOL (Department of Labor incl. the Family Medical Leave Act, and other Health related regulations. There are many others applicable to the HR Field, EEOC, etc)
- NEC (National Electric Code)
- BOCA (Building Codes)
- NFPA (National Fire Protection Administration)
- FCC (Federal Communications Commission, in addition to Product requirements we have for licensed sites)
- ADA (Americans with Disabilities Act)
- ISO 14001
- United States Federal Communications Commission, Code of Federal Regulations; 47CFR part 2 sub-part J
- Institute of Electrical & Electronic Engineers (IEEE) C95.1-1999 Edition
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998

CGISS complies with all technology standards worldwide. Within each region, all sites must comply with their local laws and regulations and the corporate EHS requirements. In addition, sites are required to complete an analysis of impacts and risks associated with their activities and establish appropriate controls (internal requirements) to minimize these risks and impacts.

P.1.b

P.1.b.1

CGISS' market segments include:

- North America
- Latin America
- Europe, Middle East and Africa
- Asia Pacific

CGISS' customer groups in these regions include:

- Systems (Direct) Customers
 - Public Safety (Law Enforcement, Fire, Emergency Medical Services)
 - Public Access Mobile Radio Operations
 - Governments – National, State, Provincial, and Local
 - Regulated Enterprises
- Radio (Indirect) Customers
 - Commercial and Industrial Entities
 - Public Sector

The key requirements for CGISS' Systems and Radio Solution Products are:

- Features and Functionality
- Reliability and Dependability
- On time delivery
- Coverage
- Adherence to Standards (Project 25 /TETRA)
- Migration and Upgradability

The key differences between Customer Group and Market Segment requirements include:

- Different Standards (Project 25 v. TETRA) in Different Regions
- After Sales Support
 - 7x24 Operation Support
 - Continuous Monitoring
 - Rapid Response/Turnaround
 - Low Bounce Rates (Low Defect Levels)
 - Electronic Communications
- Cost
- The Degree of Customization Required
- Degree of Program Management and System Integration Required
- Distribution Channel

P.1.b.2 Four fundamental types of suppliers support CGISS' operations:

- Production material and component suppliers (e.g. plastics, semiconductors)
- Outsourcing suppliers (e.g. circuit board manufacturing, accessory and radio equipment manufacturers)
- Drop ship suppliers (e.g. antenna towers, equipment rooms)
- Non-production material, tools and equipment suppliers (e.g. MRO, office equipment and supplies, services)

CGISS' Dealers (indirect channel) provide sales and service to our indirect radio customers.

CGISS' customer relationships are generally formal and covered by contract.

CGISS' most important supply chain requirements include:

- Quality of delivered products
- On time delivery of products
- Cost of delivered products

The key communication channels with dealers and suppliers include:

- Customer Support Organization
- Field Sales & Service Organization
- Service Depots
- The Internet

- The Extranet through “Motorola OnLine”
- Marketing Communications & Events & Public Relations
- Consultants
- Dealer User Groups & Trade Associations

P.2 Organizational Challenges

P.2.a Competitive Environment

P.2.a.1

Worldwide, CGISS maintains a number one position in the radio system market. We are at least 2 X better than largest competitor. CGISS’ market growth will match or exceed industry growth. We are able to do this because we can offer a broad portfolio of radio systems products and services that have global reach. No single competitor can come close to matching our total systems and products solution offering.

P.2.a.2

The key factors that determine our success are built on Technological Supremacy, Customer Intimacy and Operational Excellence. We are able to achieve this because of:

- Customer-focused employees
- Strong Relationships with our Channel Partners and our Quality Suppliers
- Trust (Deliver on our Promises)
- Long-Term Commitment to Customer Satisfaction
- Reputation (Brand)
- Quality of Product, System, Business Processes
- Global Distribution and Support Networks
- Delivery and Support of Custom Solutions
- Commitment to Multiple User-Driven Standards
- Motorola Labs and Research

Changes taking place that affect our competitive position include:

- New Players in our Industry
- The Convergence of Technologies
- Global Economies
- New Customer Business Models
- Customer Decision Processes
- Government & Regulatory Environment
- Government Politics
- Consolidation of Government User Groups into State-wide/Country-wide Systems (Mega System)
- Global Safety & Security

P.2.b CGISS’ strategic challenges -- Technological Supremacy, Customer Intimacy and Operational Excellence are included in columns 2 & 3 of the CGISS 2002 Performance Excellence Scorecard (Figure P.2.b-1).

- Operational: Meet our customer and program commitments
- Human Resource: Turn the Leadership Supply Process into a competitive advantage
- Business: Be the leading digital supplier, worldwide

P.2.c Performance Improvement System

Our improvement process has been standardized to ensure consistent Sector-wide deployment of systematic evaluation and improvement of CGISS’ processes (Figure P.2.c-1). The “What We Do” line in the generic model is the same for every improvement process. The “How We Do It” area of the model describes responsibility for the improvement process, frequency of evaluation, stakeholders involved, inputs considered, evaluation approaches and key measures, the process to monitor improvements, and how the improvements are implemented and institutionalized. While there is not space available in the application to include the entire model for each improvement area, the specific information from the “How We Do It” area will be described during the site visit.

There are four levels of performance, evaluation and improvement processes, linked to the scorecard initiatives cascaded down to individual levels. They are:

- Stractics™ – Sector level strategy implementation, monitoring and management framework.
- Organizational Performance Reviews - Regular formal performance review of key organizational measurements as compared to the organization’s scorecard.
- Operations Reviews – Regular formal review of key operational measurements that are linked to the organizational scorecard.
- Personal Commitment Process – Regular formal performance review of individual measurements that are linked to the sector and corporate scorecards.

There are also continuous improvement teams that meet regularly to proactively evaluate and improve processes, including teams assigned to each performance excellence category.

A full model for each improvement process is available on the Motorola intranet to allow improvement teams easy access and assurance that specific inputs are not overlooked. It also provides a consistent framework for fostering organizational learning and knowledge sharing across the sector.

Figure P.2.b-1



The 2002 Performance Excellence Scorecard

CGISS

STRATEGIC DIRECTION		PERFORMANCE MEASUREMENT	
Vision	Current-Year Initiatives	Business Processes	Business Results
Strategic Objectives			
CGISS	GMSG	GTDG	SCOG

Figure P.2.c-1

Performance Excellence Evaluation & Improvement (E&I) Process				Process Owner:	Date:	
What We Do						
Major Streams of Work and Who's Responsible	Frequency and Method of Review	Stakeholders	Input Required for Reviews and Evaluation	Evaluation Approaches and Key Measures	Process to Monitor Improvements	Plan for Institutionalization
How We Do It						
Work Stream #1						
Work Stream #2						

GLOSSARY

A2LA	American Association for Laboratory Accreditation
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
ADA	Americans with Disabilities Act
AEA	American Electronics Association
ALT	Accelerated Life Test
APCO	Association of Public-Safety Communications Officials International
ARMS	Alternate Resource Managed Service
BLIP	Big Line Leverage of intelligence Process
BRAVO™	CGISS' Individual reward and Recognition Event
BU	Business Unit
CAP	Customer Acquisition Process
CCSI	Customer Center for Systems Integration
CENELEC	European Committee for Electrotechnical Standardization
CGISS	Commercial, Government and Industrial Solutions Sector
CMM/ CMMI	Capability Maturity Model
CMS	Conversational Monitor System
COF	Customer Order Fulfillment
Compass	Motorola knowledge sharing system
CPK	Capability Index is adjusted with a factor K

GLOSSARY

CRAD	Customer Requested Acceptance Date
CRSD	Customer Requested Ship Date
CSA	Canadian Standards Association
CT/IT	Communication Technology/Information Technology
DOL	Department of Labor
DOORS	Software Engineering Tool
ECPS	Engineering Computing and Process Solutions
EHS	Environmental, Health and Safety
EISS	Electronic Information Security Standards
Extranet	Secure Internet Connection provided to trusted partners and guests on a corporate network.
FIRST	For Inspiration and Recognition of Science and Technology
FM	Factory Mutual
FRB	Failure Review Board
GCC	Global Customer Care – Non-Technical Call Center Issue Tracking System
GMO	Global Marketing Organization
GMSG	Global Marketing and Sales Group
Green Belt/Black Belt	Person trained in statistical problem solving techniques
GTDG	Global Technology and Development Group
GTS	Global Technical Support - Technical Issue Tracking System

GLOSSARY

GTSS	Global Technology Solutions Sector
HAP	Human Asset Planning
HCI	Human Computer Interface
HSD	High Speed Data
IACP	International Association of Chiefs of Police
IDNS	Illinois Dept. of Nuclear Safety
IEA	Industrial Electronics Association
IEEE	Institute of Electrical and Electronic Engineers
IERG	Industrial Electronics Research Group
IESS	Integrated Electronics Systems Sector
IFQ	Initial Field Quality
IMA	Illinois Manufacturers Association
Impact 21™	Process to track product sell-through and customer information through an automated reporting system
IMS	Intex Management Services, Ltd.
ISD	Integrated Solutions Division
JA	Junior Achievement
LRP	Long Range Plan
LRQA	Lloyd's Register Quality Assurance
M&A	Mergers and Acquisition
MDUG	Motorola Data Users group

GLOSSARY

MERT	Motorola Emergency Response Team
M-Gate™	MPP/SPD Core Process Redesign
Motorola on Line or MOL™	Internet portal that allows customers to purchase product, Check their accounts, submit questions, enter and track issues
MPP	Market Product Planning
MTUG	Motorola Trunked User Group
NAEM	National Association of Electronic Manufacturers
NAM	National Association of Manufacturers
NEC	National Electric Code
NFPA	National Fire Protection Administration
NGL	Next Generation Leader
NSBE	National Society for Black Engineers
OASIS	Global staffing system
OECD	Organization of Economic and Cultural Data
OMV	Office of Minority Ventures
OTC	Order to Cash
PC™	Personal Commitment
PCS	Personal Communications Sector
PE	Performance Excellence
PET	Product Environmental Template

GLOSSARY

POPI™	Protection Of Proprietary Information
PULSE™	Employee satisfaction survey
RMTR	Roadmap technology Review
RONA	Return on Net Assets
SABA™	Science Advisory Board Association
SAM	Served Available Market
SCOG	Supply Chain Operations Group
SEI	Software development capability rating
SHPE	Society of Hispanic Professional Engineers
SKIP	Personal Commitment with next level “skip” a level
SPD	System and Product Development
SROE	Scrap, Replacement, Obsolescence, Exchanges
STAR	Accountability and Recognition Award Program
Stractics™	Sector level strategy implementation, monitoring and management framework
SWE	Society of Women Engineers
TABS	Technical Advisory Boards
TAM	Total Available Market
TAS	Target Account Selling
VPP	Voluntary Protection Program
WLAN	Wide area Network
X Factor	Cycle Time

Item 1.1 Organizational Leadership**1.1.a.1**

Performance Excellence begins and ends with our stakeholders. It is the roadmap we use to execute against our strategies, ensure fact-based business decisions, align our resources, and drive continuous improvement, which drives customer satisfaction and profitability. Performance Excellence helps the entire CGISS organization to manage for innovation and focus on what's important to our customers – a must in today's competitive marketplace.

Performance Excellence is an on-going, consistent business system framework that helps us to set key strategic initiatives, establish clear priorities and align our efforts as one company in order to execute flawlessly and deliver on-time customer solutions. All of our business processes are linked to key strategies, focused on results and designed to create value for all of our key stakeholders. Our leaders are held accountable to monitor these results and learn from them to drive continuous improvement.

The Motorola Board of Directors, Motorola Management Board and Sector senior management set our values, short and long term directions and performance expectations. Performance expectations are set during the annual strategic planning process and through staff and Stractics (proactive analysis of our goals, strategies & opportunities) meetings. Expanded Staff Net Meetings are used to develop the Performance Excellence Scorecards, along with manager input.

The CGISS strategy process uses inputs from all stakeholders to balance value for them. These inputs are determined through a systematic analysis of stakeholders' needs.

The Customer expectations are determined through the customer listening and learning approaches as described in figure 3.1-1. The Motorola Board of Directors and the Motorola Management Board determine Shareholder expectations based on customer and industry feedback. Management, based on regular strategy meetings, the cascading of information from quarterly Expanded Staff Net-Meetings, "State of the Sector" emails from the Sector president, CGISS Leadership emails and employee feedback (i.e. open door policy, Personal Commitment dialogues / checkpoints, surveys, "Your Ideas Email") determines the expectations of Employees. Supply management, based on our business strategy, supplier feedback, supplier performance and customer feedback, determines the expectations of Suppliers and Partners. Senior

management, based on regulatory standards, Motorola policies, approaches outlined in 1.2b and community opinion-leader feedback, determine the expectations of the Community/ Public. We also balance value for customers and other stakeholders through inclusion of their requirements in the strategic planning process, and review of related performance in management review forums.

Values, short and long term directions and performance expectations are primarily deployed through Performance Excellence Scorecards, which include development of a Personal Commitment goal-setting document for each manager and employee. Each manager and employee develops personal goals that support the Sector's performance expectations. Rewards are provided based on performance results. The performance expectations are communicated in our communication cascade (a combination of one-way, two-way, upward, downward, electronic, and face-to-face communication, and incorporates a feedback mechanism for continuous improvement), through Town Halls, Newsbriefs (i.e. weekly email news summary) over the intranet, and through emails. Managers of all levels are expected to participate and communicate their performance goals to their respective employees.

1.1.a.2

Senior Management creates an environment for empowerment, through support of "learn through mistakes," keeping communication lines open with managers and employees at all levels, and through SKIP dialogues. This environment is reinforced by after action reviews, and a number of other approaches including, Personal Commitment, Leadership Supply, and BRAVO!

Senior Management creates an environment for innovation by supporting a number of approaches that encourage and enable employees to become more innovative, including the support of the Technical Ladder, Personal Commitment, SABA, Engineering Awards and Recognition, intellectual property & Patent Awards, RMTR (at the Sector, Group and Division levels), and technical committees. This environment is reinforced through support of our reward/recognition systems, open communications, Town Hall meetings RMTR feedback, Patent Awards, Gold Badges.

The Sector Staff creates an environment for organizational agility by supporting a number of approaches including the proactive analysis of our goals, strategies & opportunities (Stractics), 6 sigma

Black Belts, leveraging best practices and resources, and partnering with key suppliers and dealers. We reinforce the environment for organizational agility through people development, cross-functional teaming, strategic focus, satisfying our customers, and through cost management.

Deployment of these approaches allows the organization to manage with minimal supervision. Scorecards, standardized practices, and Personal Commitment reinforce and set clear performance expectations.

In addition to Empowerment, Innovation and Organizational Agility, Organizational Learning is supported by a high performance culture, which optimizes employee contributions. The Sector Staff encourages organizational learning through support of organizational training specialists, topical/functional sponsored symposia, skill development guides, the training tracking system, Performance Excellence, Personal Commitment, project management, after-action reviews, the Chairman's Leadership Institute, and the Business Development Institute. Employees are given tools such as a standardized change acceleration model, communities of practice, and information repositories. Organization Learning is functionally supported by Leadership Learning and Performance, the Office of Business Excellence, and World Wide Learning Services.

The Sector Staff encourages Employee learning through support of functionally-specific curriculum training, e-learning, Personal Commitment development plans, budget, internal and external certifications, employee involvement in professional societies, and an e-learning emphasis in employee communications. This environment is reinforced through, communicating our Vision & Goals, articulating each employee's role through Personal Commitment, BRAVO reward/recognition systems, patent awards, and Gold Badges.

1.1.b.1

Our leadership review forums include semi-annual Organizational Performance Review Meetings, quarterly Operations Reviews, monthly Customer & Business Performance Meetings, quarterly Performance Excellence Steering Committee Meetings, quarterly Performance Measurement Council meetings, and monthly Strategy Review Meetings. These formal meetings are supplemented with, as needed, Sector President "Stractics" meetings, and regular CEO level checkpoints. Within all of the review forums and meetings specific

elements of the Performance Excellence Scorecard are reviewed.

CGISS' Leadership Review/Stakeholder Matrix (Figure 1.1-1) depicts the leadership review forums. Stakeholder issues, and measurements related to organizational success, competitive performance, performance to goals and the ability to assess changing needs are addressed in these forums. Organizational performance is segmented into business process measures and business results that CGISS calls "Stractics," or strategic tactical initiatives, which are managed in a secure website that ensures real-time access to both status and actions. During one of our Customer & Business Performance Meetings, we formed a cross function team to scope and address both short-term and long-term global safety and security opportunities. One example of stimulating short-term sales is customer showcases to educate customers as to our safety and security solution portfolio. These are being offered in each region of the world.

1.1.b.2

Our performance review findings are translated into priorities for improvement through Performance Excellence Scorecards that have assigned weights in specific areas with action items identified and assigned to specific individuals. Within a given key performance measurement, we use the "Stractics" process to drill down into the necessary ingredients to identify, analyze, prioritize and assign ownership to those critical action plans. Opportunities for Innovation that are identified in review forums are assigned specific responsibility that often includes a team. An example of how we determine opportunities for innovation, organizationally, is through our "One Motorola Business Transformation Initiative" and "Advanced Technology Group Meetings." This is also accomplished through quarterly Personal Commitment reviews, where individuals specifically review progress towards goal completion and discuss how individual and team performance can be improved. All capital expenditures are evaluated for their contribution to key process indicators.

Figure 1.1-1 Leadership Review/Stakeholder Matrix.

(S- Organizational success C- Competitive environment P- Performance to Plan)

Forum	*Key Measures	Stakeholders Addressed
Ops Review -Meets quarterly -Attendance includes Sector, Group, Division, & Function Staffs	<ul style="list-style-type: none"> o Financial o Information/Analysis o Process Management o Finance o Quality o Standards Compliance o Strategic Initiatives o HR o Benchmarking o Competitive and Market Analysis o Acquisition Investment o Implementation Monitoring 	Customer, Shareholder, Supplier, (dealers integrators service providers) Employees Community/Public
Customer & Business Performance Meeting -Meets Monthly -Attendance includes Sector Staff and others as needed	<ul style="list-style-type: none"> o Leadership o Strategic Planning o Customer & Market Focus o “Stractics” management o Finance o Quality o Standards Compliance o Strategic Initiatives o HR 	Customer, Shareholder, Supplier, (dealers integrators service providers) Employees Community/Public
Performance Excellence Steering Committee Meetings -Meets quarterly -Attendance includes Staff & PE Category Champions	<ul style="list-style-type: none"> o Leadership o Strategic Planning o Customer & Market Focus o Information/Analysis o Human Resources o Process Management o PE Monitoring 	Customer, Shareholder, Supplier, (dealers integrators service providers) Employees Community/Public
Performance Excellence Governance Steering Committee -Meets Annually -Attendance includes Business process Directors and PE Category champions	<ul style="list-style-type: none"> o Performance Excellence Assessment report o Assessment learning report. o Team Interviews 	Customer, Shareholder, Supplier, (dealers integrators service providers) Employee Community/Public
Strategy Review Meetings -Meets quarterly -Attendance includes, Sector staff and Group strategy directors	<ul style="list-style-type: none"> o Leadership o Strategic Planning o Strategy Process Monitoring 	Customer, Shareholder, Supplier, (dealers integrators service providers) Employee Community/Public

1.1.b.3

Performance Excellence fosters accountability and alignment between the responsibilities of leaders in CGISS and actual business results. Senior leaders own specific business goals on the scorecard and are rewarded based upon the accomplishment of those goals as well as the aggregate performance of the business to those goals. This approach reinforces an underlying philosophy that reflects the values of accountability and shared

responsibility for the business. Progress to these goals is evaluated in the Performance Review forums indicated above. Frequent, visible, and candid discussions facilitate corrective actions and stewardship by the senior leadership team at an organizational level.

On an annual basis, all senior leaders are calibrated against their peers. Calibration reinforces the organization level review indicated above with a review at the individual level.

The calibration matrix is comprised of two axes: results and behaviors. Calibration reinforces the philosophy of individual accountability and helps leaders continually assess their relative performance to their colleagues. The behaviors axis reflects senior leaders results on a 270-degree leadership assessment that measures their effectiveness. The leaders' manager(s) and direct reports complete the assessment on an annual basis. The results axis contains a quantitative value reflecting the senior leaders success in achieving their Personal Commitment and/or PES scorecard goals. From calibration, each leader is given feedback about their performance along with a detailed assessment and developmental report from the 270-degree survey. In Personal Commitment dialogues, the senior leaders reflect on their successes and difficulties in 1) demonstrating Motorola's leadership standards, and 2) achieving business results. The senior leaders, with coaching from their managers, work to identify development plans on both of these dimensions. Progress is monitored quarterly in Personal Commitment dialogues (individual level) and in Talent Management Reviews and Performance Reviews (organizational level).

Through the Talent Management reviews, discussed more specifically in 5.1.a.4, the organization continually monitors leadership performance and takes action to ensure the talent most capable of delivering performance to the business occupies the Leveraged Jobs, the jobs with the most impact. This process capitalizes on the results of Calibration and the forums where organizational performance are reviewed. In CGISS, the CGISS Office of Leadership guides this process in concert with the Corporate Office of Leadership.

Additional inputs to the leadership improvement process include results from the PULSE survey questions related directly to leadership effectiveness (5.3.b.2). These results are analyzed and responsibilities are assigned and incorporated into individual Personal Commitments.

Item 1.2 Public Responsibility and Citizenship

1.2.a.1 CGISS' practices, measures and targets for addressing regulatory requirements, legal requirements, and risks associated with products, services and operations are depicted in the Impact of Products, Services and Operations matrix (Figure 1.2-1). Practices commonly used for risk mitigation include the use of legal consultation, formal processes & procedures, mandatory training, the use of consultants, a crisis management process, business recovery plans, etc. CGISS' facilities exceed government regulations in all countries in which it operates. CGISS adheres to more stringent U.S. regulations in countries that do not have rigid regulations. Measures are well defined in each area and targets include full regulatory compliance, full legal compliance and all risks mitigated. All Motorola CGISS facilities operate in conformance with our corporate

Environmental Health and Safety Management system, which complies with the ISO14001 requirements and contains elements of OSHA's Voluntary Protection Program (VPP). VPP is an OSHA Program established to recognize facilities that have established systems that go above and beyond regulatory compliance. All Motorola CGISS Facilities are registered to the ISO14001 Standard.

At Motorola and throughout CGISS organizations and operations worldwide, it's our priority to enhance customer loyalty through best-in-class leadership in environmental health and safety, product safety and standards compliance. We are committed to meeting customer expectations and market requirements for safe products, systems, services and total solutions. We achieve this by institutionalizing and implementing enhanced practices, processes and programs and by fostering a culture dedicated to making this a better, safer world for employees, customers and the many publics impacted by our operations and our product and system solutions.

Product Safety Leadership:

CGISS expanded and enhanced its product safety initiatives by establishing a dedicated sector-wide, global product safety organization that led and directed all CGISS business units and product safety/regulatory compliance teams to achieve new levels of excellence in product safety and standards compliance.

Product Environmental Leadership:

At Motorola, we make products that connect people - and we continuously strive to stay connected to the planet we share, too. That means developing innovative ways to create high-tech products with low environmental impact. Our goal is to create products that conserve resources, contain only benign materials, use low amounts of energy and are easy to recycle. We also create products that help make the world a safer place while helping people live better lives, environmental requirements are integrated into the M-Gate Process. The Product Environmental Template (PET) and goals drive further improvement to meet future customer needs and potential regional requirements. Aggressive customer-linked goals have been established to improve the environmental attributes of our CGISS Products. Our customers are often Community and Government entities that may be held responsible for establishing and enforcing Environmental Health and Safety Requirements. Therefore, EHS requirements become an integral part of our customers' requirements and one that Motorola values consistently.

Safer Workplace Environment:

Our objective is zero injuries and illnesses. Even one occupational injury or illness is one too many. Our goal is to provide a safe and healthy work environment for all our employees.

Figure 1.2-1 Impact of Products, Services and Operations

	Practices	Measures	Targets
Regulatory Requirements & Standards	<ul style="list-style-type: none"> • On staff knowledgeable professionals • Consult with Legal Department • Functional Orgs/GRO shaping regulatory standards • Industry Group participation, lobbying (NAM, AEA, IEA, ACGIH, IERG, NAEM, etc), & standard-setting • Formal processes and procedures established (e.g. M-Gates) • Mandatory topical training • ISO 14001, ISO 17025 • EHS Management System 	<ul style="list-style-type: none"> • Regulatory Compliance & Audits • OSHA, ISO, ADA, UL, FM, CSA, CENELEC, EPA. • Corporate Standards & Audits • Standards of Internal Control • EHS Management System Standards • EHS Metrics • EHS Goals 	<ul style="list-style-type: none"> • Full regulatory Compliance • ISO14001 Registration for all facilities • Customer EHS requirements identified and addressed. • Conformance to Motorola EHS Standard A2000 • ISO 17025 certification • Agency certifications and approvals
Legal Requirements	<ul style="list-style-type: none"> • On staff knowledgeable professionals • Consult with Legal Department • Formal processes established • Design for the Environment Training • Contract Book • Ship Acceptance 2000 • Corporate EHS Document A2000 	<ul style="list-style-type: none"> • Obtain legal counsel opinion or approval • Regulatory Approvals & Audits • Corporate Standards & Audits • Product Environmental Template 	<ul style="list-style-type: none"> • Full legal compliance • Regulatory or agency approvals and certifications
Risks Related to Products (Hardware, Software & Systems)	<ul style="list-style-type: none"> • Internal testing • Formal processes established • M-Gates/Ship Accept.2000 • Customer Safety Inquiring Procedure, GCC/GTS • Failure Review Board (FRB) • Stop Ship procedure 	<ul style="list-style-type: none"> • Performance metrics • Risk Mitigation Plans established • Standards Compliance • Product Safety Design Reviews 	<ul style="list-style-type: none"> • Full compliance with applicable laws, regulations, industry and internal standards • All risks mitigated
Risks Related to Services	<ul style="list-style-type: none"> • Formal processes established • Internal testing • R56 Site Installation Manual • Service EHS Management System 	<ul style="list-style-type: none"> • Performance metrics • Risk Mitigation Plans established 	<ul style="list-style-type: none"> • Full compliance with applicable laws, regulations, industry and internal standards • All risks mitigated
Risks Related to Operations	<ul style="list-style-type: none"> • Maintain compliance with OSHA & EPA requirements • Formal processes in place for plant operations • Crisis Management • Business Recovery Plans 	<ul style="list-style-type: none"> • OSHA/EPA regulations • Quarterly report • Corporate Audit • SIC Audit • Annual Self assessments • Equipment Preventative Maintenance Plans and Metrics 	<ul style="list-style-type: none"> • Full compliance applicable laws and regulations (No Citations or fines) • Satisfactory Corporate and self-assessments • Best in class Injury and Illness rates • Continuous improvement in EHS Impact measurements • No downtime due to equipment failure

For the past five years, our global injury and illness rate has been steadily declining. Currently in 2002, our recordable injuries and illnesses per 100 employees – is well below the U.S. electronics industry and U.S. manufacturing average. By the end of 2001, nine of our Motorola sites received the highest award from U.S. Occupational Safety and Health Administration (OSHA) - the Voluntary Protection Program (VPP) Safety Through Accountability and Recognition (STAR) award. This prestigious award is issued to sites demonstrating superior safety and health programs. Only one-hundredth of one percent of eligible sites in the U.S. earned this award.

Environmental, Health and Safety (EHS) Management System (MS): Motorola sites around the world operate under a common EHS Management Systems framework. Through Lloyd's Register Quality Assurance (LRQA), all of our manufacturing sites are registered to the globally recognized environmental management standard, ISO 14001. Our operations require the use of natural resources, which we recognize has potential impacts to air, water and land. In accordance with ISO14001, we are taking an active role in preserving and protecting the environment. CGISS Sites have established metrics to track our environmental performance and set annually objectives. Performance is compared to both internal Motorola operations as well as external benchmarks. The views of the Community and other interested parties are taken into consideration when setting our annual objectives as specified in the Motorola EHS Managements system standard.

1.2.a.2

At CGISS, we anticipate public concerns with our products, services and operations through analysis of regulatory trends, government relations, participation in industry/trade groups, working closely with our Sector and corporate legal, regulatory and public relations organizations, with regulatory authorities, and use of feedback from our Global Customer Care/Customer Safety Inquiry Procedure. We anticipate future concerns by using many of these same methods in addition to our issues management process, monitoring advocacy group activities, examination of competitors' products and Customer/Market research.

1.2.a.3

We ensure ethical business practices through the Board of Directors Ethics Committee, a Corporate Compliance Officer, adherence to the Motorola Code of Conduct, an Ethics Hotline, and the Leadership Standards Model Ethics training consists of code of conduct adherence for all employees, Ethics in Action and New Employee Orientation. Ethical business practices are reinforced through our leadership standards.

1.2.b

CGISS' support of its local and professional communities is summarized in Figure 1.2-2. Support is evident at the organizational, senior leader and employee level, and includes alignment with Motorola Foundation contribution strategies, a Community Relations Strategy and Plan, Community Relations Councils/Coalitions, a CEO Award for Volunteerism, etc. Professional community involvement is supported through paying dues and expenses, allowing time off to attend meetings, participation of senior leaders in leadership and technical forums and participation in technical organizations at the employee level. Community Relations professionals determine which organizations to support by measuring the potential for addressing critical community needs, achieving priority business goals, and/or appealing to employees' interests. Program-specific assessment results and spending are tracked.

We also support a Community Relations program that includes numerous Motorola-sponsored employee volunteer activities. Collectively, we support and strengthen CGISS' key communities by encouraging, all employees, and levels of management, to participate in volunteer activities through Motorola's volunteer grants program and through formal and informal recognition.

CGISS Community Relations also works to support its global business and customers and their unique needs. CGISS Community Relations led an effort to include Community Relations/Education programs in two brochures/companion pieces to Motorola's Annual Report to tell the "Motorola story" of the company's global community involvement to enhance education.

CGISS' level of participation in our global communities and our adherence to higher environmental standards has been recognized by many countries.

Motorola has a long history of responding to major disasters both in the U.S. and throughout the world. Support has taken the form of providing local technical/communications support, donating or loaning communication equipment and/or expediting new shipments to meet the numerous customer requests for emergency help to support police, fire, ambulance and other emergency services in the affected areas.

As part of the CGISS Community Relations efforts, we have targeted backyard communities (communities where we have the greatest employee presence) to conduct opinion leader and household research. Ongoing discussions with community leaders also serve as a resource to help prioritize community issues. In addition, the program is in the process of evolving to develop a strategy for community outreach opportunities in areas where we conduct business, but do not have a major employee presence.

It is an established practice for employees to belong to professional organizations and especially for senior management to participate on boards and committees. In addition, the Community Relations staff identifies and places management-level staff on boards and committees of organizations that meet priority community needs and/or represent opportunities to meet key business objectives.

Examples of the professional associations CGISS employees participate include the Institute of Electrical and Electronic Engineers (IEEE), National and Illinois Association of Manufacturers (NAM / IMA), American Electronics Association (AEA), Society of Women Engineers (SWE), National Society for Black Engineers (NSBE), Society of Hispanic Professional Engineers (SHPE), Association of Public-safety Communications Officials, International (APCO) and International Association of Chiefs of Police (IACP).

Figure 1.2-2 Community Support

	Local Communities	Professional Community
Organizational Support and Leadership in Key Communities	<ul style="list-style-type: none"> • United Way • Alignment with Motorola Foundation Contribution Strategies • Matching gifts for higher education employee contributions • Community Relations Strategy and Plan • Community Relations Councils/Coalitions • Response to Major Disasters • Education Outreach • World Wildlife Fund • Call to Protect ‘Donate a Phone’ Program 	<ul style="list-style-type: none"> • Support of participation of employees in professional organizations including the payment of dues, time off and expenses paid to attend meetings • Institute of Electrical and Electronic Engineers (IEEE) • National and Illinois Association of Manufacturers (NAM/IMA) • American Electronics Association (AEA) • Society of Women Engineers (SWE) • National Society for Black Engineers (NSBE) • Society of Hispanic Professional Engineers (SHPE) • Association of Public-Safety Communications Officials, International (APCO) • International Association of Chiefs of Police (IACP)
Senior Leadership Support and Leadership in Key Communities	<ul style="list-style-type: none"> • United Way Silver leadership Giving • CEO Award for Volunteerism • Senior Management Champions for key Outreach Programs (e.g. FIRST, JA, United Way, Science Bowl) 	Senior Leaders actively participate in leadership and technical forums.
Employee Support and Leadership in Key Communities	<ul style="list-style-type: none"> • United Way • Junior Achievement • Community Liaison Council • CEO Award for Volunteerism 	Participation in technical organizations

Item 2.1 Strategy Development

2.1.a.1 CGISS' strategic planning process is the ongoing responsibility of the management team. The short and long term planning horizon is one and three years respectively. It includes a well-defined, multiphase process that includes quarterly reviews and off cycle reviews to assess performance. The key steps are as follows:

1. Evaluate the strategy of record;
2. Refine and implement Strategy
3. Tighten linkage to the Long Range Plan
4. Reassess strategy of record.

This ongoing opportunity assessment and strategy investment is revisited when assessing the external environment, developing the internal strategic fact base, developing strategies and setting performance targets, selecting priority strategic initiatives and milestones, implementing, monitoring, re-calibrating and communicating.

The key participants are GMSG, Global Marketing and Sales Group, GTDG Global Technology and Development Group, SCOG, Supply Chain Organization, and the functional groups (Legal, Finance, Human Resources and Information Technology). The strategy process is summarized in Fig 2.1-1

2.1.a.2 (b1) CGISS' management team considers customer and market needs and expectations and opportunities in the planning process. A Strategic Marketing Process is used to assess the market, decipher the expectations and identify the opportunities. The analysis includes existing customers, customers of competitors, defined as SAM (Served Available Market) and other potential customers defined as TAM (Total Available Market). Customer input focuses on market-specific solutions and also provides competitor /customer/market information for use in the planning process. The specific approaches described in Figure 3-1 are also used as sources of customer-related data and information in the planning process. Sources of data include input from field sales and service teams via weekly briefing room reports, surveys and focus groups. Quarterly market share metrics are collected as a part of the Organizational Performance Assessment Process. Directed inquiry is a part of the M-gate process, which helps to drive new product and service development (Figure 6.1-1) through quarterly operations reviews, environmental scans at quarterly strategy review meetings, the Global Customer Care resolution process (Figure 3.2-1) and data is obtained from executive customer visits as part of the Target Account Selling Program.

2.1.a.2 (b2) CGISS' strategy teams evaluate the competitive environment and capabilities relative to the competitors in the planning process. Inputs from several outside consulting firms provide objective, business intelligence. Industry studies by third parties on products

and markets are purchased and the findings are shared by strategy. This process starts with the assessment of the external environment. This includes analysis of market, competitor, environment, customer and portfolio. Merger & Acquisition transactions, macro trends, strategic capital allocations are also considered. From this strategic fact base, strategies and performance targets are developed. Strategic initiatives and milestones are prioritized, implemented and monitored.

Hypotheses are also tested, stacking possible outcomes against existing business conditions and internal views. Literally the "Outside In" v. the "Inside Out views of the competitive landscape are reviewed side by side and discrepancies are revealed and misconceptions addressed. Additional competitive intelligence is derived from attending professional conferences and trade shows, review of trade publications and benchmarking other companies. Customer visits and focus groups are another source of competitive information, regarding changes in product offerings and technology. Motorola Labs, Motorola Ventures, U.S. and Foreign Patents are sources of business intelligence, which are included in the planning process through well-defined channels. A "radar screen" is continually updated to provide a snap shot of CGISS relative to the competition.

2.1.a.2 (b3) Technological and other changes enter the planning process equation through the marketing organization. Detailed information is gathered from trade shows; industry symposia; scientific and academic journals and Internet web sites of dedicated technology. Customer meetings, user groups, and the number and nature of US and foreign patent filings and applications provide input on existing and possibly disruptive technology. The planning process also includes analyses from our internal R&D organization, which identifies emerging technologies. We also use the Market Product Planning (MPP) (M-Gate) (Figure 6.1-1) process to identify technology changes that are considered in the planning process. Other key changes are evaluated based on industry standards, government regulations, local and federal legislation and emerging programs.

2.1.a.2 (b4).

CGISS' management assesses strengths and weaknesses in the Sector's operational capabilities for the planning process through a core competency assessment, an analysis of the Value Chain (R&D, Product Development, Manufacturing, Marketing, Sales, Distribution, Customer Service) and the competency requirements. The Directors of Distribution Management, Finance, Legal, IT, HR and the other business and support functions and the Learning & Organizational Effectiveness team complete ongoing organizational assessments for readiness in relation to the overall business strategy. The requirements of each of these organizations are reflected in their respective scorecards. (Figure P.2.b-1, Item 2.2.a.2.)

At CGISS, the HR Function is responsible for the Human Asset Planning and aligns the capabilities of the work force with the strategic plan. Gaps are assessed to provide information to senior management for use in the planning process. In strategy development, leadership supply and the core competency assessments of employees are considered. Subsequent development of action plans is completed to include requirements and training and readiness assessment based on skill need and scope of management responsibility. Human resource planning is fully integrated into the overall planning process.

2.1.a.2 (b5) The supply chain organization assesses supplier capabilities for the CGISS planning process. The planning process also includes the involvement of key suppliers directly in the planning process at the appropriate level (some are invited to attend strategic planning meetings). External companies are used to assess suppliers and provide input to the planning process. Specific factors considered are supplier performance (quality, delivery, cost), capacity to meet CGISS' growth plans and the status of suppliers in various certification processes includes compliance to ISO 9000.

2.1.a.2 (b6) Financial risk analyses and societal risk analyses, by region and major country, are provided by Corporate Strategy. Analyses include OECD, the Organization for Economic Cooperation & Development, news feed (Reuters, Bloomberg, etc.), credit rating agencies, government statistics, country risk, exchange rate fluctuation, capital flows, tax, interest rates, and general business conditions. Societal risks considered in planning include political climate and stability, changes in regulatory and environmental requirements, RF frequency availability, and work force availability. Technological risks considered include protection of intellectual property, information security, and a constant scan for competitive disruptive technologies.

2.1.b.1 CGISS' strategic objectives and the timetable are depicted in the Strategic Objective and Action Plan Summary (Figure 2.2-1) and in column one of the Performance Excellence Scorecard, and, have a 12 to 36 months time horizon. The scorecards include specific action plans and measures aligned with the strategic objectives. (Figure P.2.b-1).

2.1.b.2 The long-term strategic objectives of the business in Column 1 of the Scorecard address the challenges identified in P.2., Operational Excellence, Technology Supremacy, and Customer Intimacy.

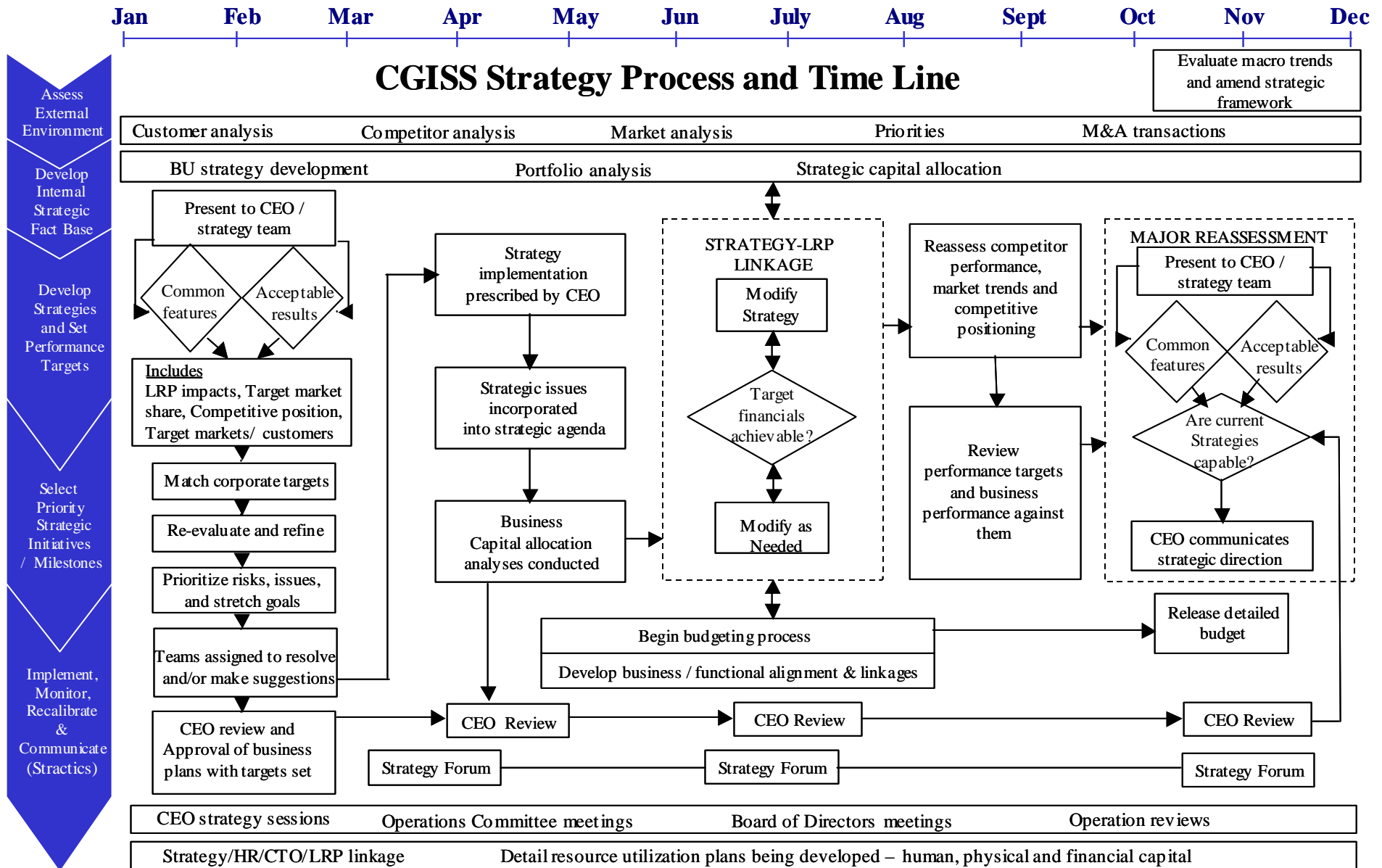
In order to realize these objectives, current year initiatives are developed and recorded in column 2 of the Scorecard. Specific business processes and measurement associated with each of the current year initiatives are defined and recorded in the business processes and in the business results section of the scorecard (columns 3 & 4). These

objectives are further cascaded to the individual through the organizational scorecards and the Personal Commitment Process.

The Strategic Planning Process encompasses the needs of all the stakeholders. Key stakeholders include shareholders, customers, suppliers/partners, competitors, employees and the community. These stakeholders are represented in the Organizational and Functional Scorecards to ensure that the strategic objective balances the need of all key stakeholders. Stakeholder needs are determined using the approaches described in item 1.1.a.1

The strategic planning process is evaluated and improved at the Corporate level with input from Sector organizations within Motorola to ensure consistency of the planning process. CGISS is represented on the Corporate Strategy Council, which meets quarterly and considers input from each business unit within the Corporation for the purpose of improving the planning process. There is a focused effort to create the appropriate linkages, preventing duplication of effort. Other inputs routinely considered in this process include an evaluation of the process cycle time, benchmarking other companies' planning processes and the linkages across the Sectors.

Figure 2.1-1



Item 2.2 Strategy Deployment

2.2.a.1 CGISS’ managers and employees develop action plans at the Sector, Group and Department levels that support the business strategies. The action plans are developed from the business cases that are prepared through the M-Gate process (for each core business) and through the growth strategy meetings (for new business). The plans incorporate objectives, competitive data, financial analysis, business modeling, shareholder value analysis, and resource requirements. The strategic deployment approaches are specifically called out by opportunity. The action plans are included in the Performance Excellence Scorecards at each level. The Scorecards are structured to illustrate the alignment between action plans and strategies and includes performance measurement. The Scorecards are fully deployed worldwide and are aligned with employees’ Personal Commitment plans. Personal Commitment ensures that each employee is responsible for accomplishment of specific plans, and bonuses are determined based on performance. In this way, strategies can be driven down from deployment to the individual level and ensure dialogue between managers and their employees. (Figure P.2.b-1, Figure 2.2.1.) The Strategic Objective Action Plan Summary indicates the key short and long-term action plans, the key changes in product/service offerings for our customers/markets and the way we will operate to meet those changes.

The CGISS Sector Staff (senior management), is responsible for allocating resources to ensure achievement of the overall action plans. A formal cost/benefit analysis (Capital Expenditure Process) is used. There is also a formal Board of Director’s meeting held quarterly to review the allocation of key business personnel (e.g. Engineers). The decision process is based on business cases developed through the M-Gate process. Communications program rollout is worldwide and includes all employees.

2.2.a.2 CGISS’ short and long-term action plans are depicted in Scorecards starting with the Sector Scorecard (Figure P.2-1) and cascading through the organization. The Stractics Management and Monitoring Framework provides detailed information related to any key changes in our products/services and customers/markets and manages and monitors the action plans and deliverables related to those strategic objectives.

2.2.a.3 CGISS’ Human Resource Planning Process is the responsibility of Human Resource Management and is conducted annually. It is fully integrated into the overall strategic planning process.

Figure 2.2-2 depicts a sampling of specific human resource plans. Specific plans relate to work and jobs, compensation and reward/recognition, recruiting and hiring and include measures to track progress-to-plan.

2.2.a.4 CGISS’ key performance measures/indicators for tracking progress relative to action plans are managed and monitored through the scorecard utilizing the Stractics Management and Monitoring Framework. The overall action plan measurement system achieves organizational alignment and covers all key deployment areas and stakeholders through the cascading scorecard linked operationally and functionally within the Sector and total Motorola. Deployment is achieved through the alignment of the individual’s Personal Commitment goals to the Scorecard.

2.2.b A three-year projection analysis is conducted, using statistical techniques, routinely for CGISS and competitors, from third party research and internal sources, on customer satisfaction, market share and financial data. These projections are developed from internal and external sources to ensure reliability and accuracy. (Figure 2.2-3). The projections are used as an input by senior managers for developing CGISS’ goals.

Figure 2.2-3 Future Projections of Key CGISS Measures

	Past Levels	Target Levels	3-Year Proj.	Comp. Proj.
Financial				
-ROA	XXX	XXX	XXX	XXX
-PBT %	XXX	XXX	XXX	XXX
-Gross Margin	XXX	XXX	XXX	XXX
Customer				
-Market Share	XXX	XXX	XXX	XXX
-Sales Growth	XXX	XXX	XXX	XXX
-Satisfaction	XXX	XXX	XXX	XXX
Operational				
-DPM (sigma)	XXX	XXX	XXX	XXX
-SPE	XXX	XXX	XXX	XXX
-Sales/Emp.	XXX	XXX	XXX	XXX

Figure 2.2-2

Summary of Human Resource Plans	Tactical Link	Performance Measures	Targets
Breakthrough Changes in Work Design			
Improve organizational readiness of a diverse workforce to lead in a rapidly changing external environment (5.1)	Diversity Team	NGL engagement	Per Plan
	Bus. Effectiveness	TBD June	Per Plan
Achieve world class execution on new internal and external business opportunities and alliances (5.1, 5.2)	Merger Integration	% to integration effectiveness	Per Plan
Develop HR functional strategy (5.1)	HR Strategic Landscape	LRP Integration	Per Plan
	HR Tactical Framework		
Foster a performance management culture through the institutionalization of Personal Commitment and alignment with Performance Excellence	Personal Commitment	Dialogue Checkpoints	Per Plan
	Performance Excellence	% completion to project Plan	Per Plan
Team Member Development, Education, & Training			
Implement the new Motorola University training delivery model and change the University focus to competency management and deployment (Order to Cash; Consulting & Training Planning); 5.2		Create in Business Learning Teams	Per Plan
	Performance Consulting Process	Training Deployment	Per Plan
		System Deployment	Per Plan
	OTC - Transaction Fee	Cost, Quality, Cycle Time	Per Plan
	OTC - Component Build	Cost, Quality, Cycle Time	Per Plan
	OTC - Order Cancellation Process	Cost, Quality, Cycle Time	Per Plan
Compensation, Recognition, and Benefits			
	PC/PE linkage	PC Goal Achievement	Per Plan
Human Resource Needs Identification & Recruitment			
Complete deployment of the following Leadership Supply processes: Performance Management, Recruit & Select, Career Planning and Dev., and Talent Management (replacing TOML and OMDR) 5.1	Leadership Supply		Per Plan
	Leadership Planning	NGL Development	Per Plan
Upgrade Motorola talent through Leadership Supply deployment and the development and deployment of acquisition, retention, transition, and competency development strategies (5.1)	Leadership Supply	Retention of top 15%	Per Plan
	Leadership Planning	NGL Development	Per Plan

3.1.a.1 CGISS has several strategic and tactical business processes for targeting market segments, customer segments and specific account opportunities requiring different technology solutions. These include the strategy core process, which determines the high-level segmentation approach. Two main levels are defined. Level 1 segmentation is by four regional business units: North America, Latin America, Asia Pacific, Europe / Middle East / Africa. Level 2 is by Sales Distribution Channel: Direct and Indirect. The Market and Product Line Planning Process (MPP), links with the strategy process to further refine specific customer grouping (Public Safety and Enterprise) and identifies high value target sub-groups for the purpose of identification, qualification and development of new solution requirements. Market and competitive intelligence data gathering and analysis are at the front end of the MPP process and enable segmentation and targeting to occur. In addition, the Customer Acquisition Process (CAP) is considered an input to MPP. The Sector/Group Strategy Organization, the Global Marketing Organization, and regional business units each play an interactive role in selecting target markets and customer segments that have an impact within each of the four main regions and two distribution sales channels.

The sales distribution teams within CGISS four regions have responsibility for establishing target accounts. Tools, such as sales funnels, are key to evaluating account status through the life of an opportunity and assist with prioritization of resources around key accounts.

System awards are tracked and analyzed in all regions and provide tactical input to targeting accounts and account strategy.

The Global Marketing Organization facilitates monthly, quarterly, and bi-annual meetings with the regional business units and Engineering to develop/review market segment priorities and plans, aligning the necessary resources.

3.1.a.2 CGISS' customer listening and learning approaches are designed to address our customers' current and future purchase decisions. The majority of the approaches listed in Figure 3.1-1 are in use within each of the four regions in a consistent methodology for regional comparison. However, each region has the ability to implement region specific content based on their customer's preferences or cultural styles. Information from these approaches are used in the strategic planning process referenced in Section 2.1.a.2 (b1) and in the product development process referenced in 6.1.a.2. We focus on their needs in different ways at key stages of the customer lifecycle. In product/service planning, we employ the "Market and Product Planning Process" (MPP) which has defined stages for customer input such as market intelligence metrics, research, user group data, etc (Figure 6.1.1). The MPP process involves target market needs analysis to generate new solution ideas. The

MPP requires the collection and analysis of customer data for business case development. A customer feedback loop is required to validate customer value propositions and solution concepts/feature trade-offs at Gates 14 and 13 respectively, and to quantify demand for Gate 13 opportunity sizing. Research protocols and a research repository have been established to ensure that optimal research approaches are used and research is focused and cost-effective. Our "BLIP" process for gathering and utilizing market intelligence insures effective customer listening and learning is incorporated into key operating decisions during MPP, marketing and other business development activities.

After the customer purchase decision has been made, the "Global Customer Care" (GCC) organization employs processes and metrics to ensure listening occurs as issues (including complaints) surface, and trends are analyzed to proactively learn and address in advance where possible. With our Network Monitoring solution for large system customers, we attempt to proactively detect and fix system problems remotely. Often customers learn there was an issue for the first time through the monthly activity report, having never experienced the problem. In addition, customer's views are constantly listened to and tracked during each phase of the System Integration process. Additional approaches include the Knowledge Management Strategy, information derived from the Customer Acquisition Process, direct contact between CGISS sales and operational employees and customers on a day-to-day basis, surveys, focus groups, user groups, beta sites, on-site labs, analysis of trade literature, etc. The relative importance of customer requirements is determined through one or more of the various listening and learning approaches depicted in Figure 3.1-1. Specifically during different stages of Market Research (purchase preferences, needs analysis, and solution/product feature trade-off analysis), during the Customer Satisfaction Survey process and during the Customer Care process with the complaint management system and Motorola Online. The importance of specific factors are weighted or analyzed via, Pareto and then prioritized. Those with the highest ranking determine areas that will effect change for continuous improvement (reference P.2.c). Customer focus group sessions are conducted extensively as a precursor to survey development, feature lock-down, and content requirements for user group sessions, conferences, and customer visits.

them. The requirements tracked include call waiting times and call abandonment rates.

In addition to the inputs above, the Sector uses a broad array of feedback approaches and sources to ensure that customer input and customer complaints resolved and used to improve customer relationships. The Global Customer Care process (GCC) receives inputs from multiple sources including call centers, field sales, field service, web pages, emails and faxes, etc. These inputs are entered into the database to form the basis of analysis, tracking, and clocking of customer issue resolution (reference Figure 3.2-1). By applying analytical techniques such as Pareto, key, high impact changes in order of priority, customer issues are identified and solutions implemented ensuring effective and rapid continuous improvement. The GCC process also allows for comparison of data between the four regions to determine if issues are global or region-specific.

CGISS has provided worldwide mechanisms to ensure that customers have easy access to conduct business, seek assistance and information, and voice their concerns. Managers in our Systems Support Center and Global Response Center, based on customer feedback, determine the mechanisms. The mechanisms have evolved over time, and take full advantage of today's technology, such as with the recent deployment of Motorola OnLine. CGISS has six call centers located around the globe for effective customer access. The System Support Center provides access on a 24/7 basis. All of the call centers use the same customer relationship management software package. Every call received is assigned to an owner, including an escalation support process step. The Technical Issue Resolution Process, which includes cross-functional representation within CGISS, is used worldwide. Many customers have home phone numbers of CGISS managers, or can be directed to home phones by the customer contact personnel in the call centers. CGISS managers are all equipped with cell phones, pagers, and notebook computers with email accessibility, making personal customer access a possibility at any time. Many of the approaches used to improve customer relations are a direct result of customer requests and the Continuous Improvement process (P.2.c). Specifically, the Customer Satisfaction Perception Survey was modified to a web based system in 2001, based on direct customer input. In addition, the Customer Visit program is customized to each customer based on its specific issues/needs and attending audience.

3.2.a.3 CGISS' complaint handling process is the Global Customer Care (GCC) process. The process is very comprehensive and implemented worldwide. There is a sub-process within the larger GCC process, which is a robust escalation and management procedure for any type of product safety inquiries and care complaints. (See Figure 3.2-1) depicts the worldwide process for resolving technical issues. This process identifies systemic system issues

through the aggregation process. Each is then analyzed and addressed appropriately.

Customer complaint and satisfaction data information from our broad array of formal (e.g. perception surveys, Call Centers) and informal (e.g. executive visits, trade shows) customer listening approaches, from our win/loss and CAP, and from our customer delivered quality initiatives is collected within the regions for action planning and implementation clocking. Through the bid and quote and CAP processes, we analyze our strengths and weaknesses v. the competition. Detailed corrective action/resolution plans are developed for those customer sales we lost to ensure we resolve the issue for other customers going forward and to win the "lost" customer's business during the next bid session. Our customer delivered quality initiative ensures that, at the regional level, there is a focused emphasis placed on the top 5 customer issues and managed for resolution. Progress reports are conducted weekly with the Sector and Regional management teams. Similarly, monthly calls are conducted with the regions to track the resolution progress on warranty program improvements.

In order to ensure that the Sector is choosing the right strategic priorities and applying its overall resources most effectively, this same information is aggregated at the Regional and Sector levels for analysis, and strategic planning. The strategic planning process determines which customer segments to focus on. The Performance Measurement Council, after reviewing the results of earlier performance to customer satisfaction and resolution goals, then selects the goals and metrics that will be applied to our target customers for the year. By doing this, customer feedback and complaint data is used tactically to quickly resolve specific customer issues. This same data is analyzed through the strategic planning process, goal setting process, and metric selection process to determine strategic direction and to ensure the proper allocation of Sector resources. Systemic issues are identified through the aggregation process and analyzed and addressed.

3.2.a.4 The Global Marketing and Sales Group is responsible for evaluating and improving CGISS' approaches for building relationships, access approaches and complaint handling, through the use of CGISS' continuous improvement approach as depicted generically in P.2.c. The group meets monthly and includes members of the Sector Staff. Inputs evaluated include changes in CGISS' strategic objectives, results of customer satisfaction survey questions related to access and referral, information from the approaches described in Figure 3.1-1 related to customer listening and learning, aggregate data from our complaint management processes described in 3.2.a.3, trends in customer call waiting and abandonment rates and benchmarks of other companies' approaches for customer access, relationship building and complaint handling. Additionally, this group monitors significant changes in

CGISS' and Motorola's strategic objectives/direction and incorporates changes into the relationship-building approaches, as appropriate, to keep them current with overall business objectives and goals. The group is also focused on sharing information with other Sectors within Motorola, as a way to present one face to common customers. Our Account Management Model, which presents "One Face" from Motorola, is used globally. The model in P.2.c-1 is a generic depiction of our improvement process.

3.2.b.1 CGISS tackles customer satisfaction in a variety of ways. The primary approach for determining customer satisfaction is through the customer perception survey that is deployed worldwide in eight languages. From 1997-2001, the perception survey was conducted by a region-specific third party agency, via the telephone. However, based on direct customer feedback, the methodology was changed in 2001 to utilize an electronic web-based survey instrument allowing for greater customer convenience and participation. The satisfaction survey is designed to benefit both Sector and Regional needs to better determine areas for improvement. Specific questions about customer repurchase intentions and positive referral recommendations are included as a way to track loyalty to Motorola. Customer retention is also tracked. To increase retention, the Life Cycle Management Process was introduced in 2000 with a Scorecard goal for customer retention and life cycle approach. In addition, each region has the ability to add region-specific questions to the core set of global questions. This ensures cultural or regional differences are surfaced and addressed. The survey methodology, however, is consistent between the regions. The Global Customer Care (complaint handling) Process is also deployed worldwide, and is the best source of data and information related to customer dissatisfaction.

Survey feedback is collected annually for customers from all distribution channels (Direct End customers and Dealer channels) and analyzed and evaluated both regionally and globally by distribution channel segment.

Sector staff conducts a formal global review of the Customer satisfaction feedback upon completion of each survey. On a regional basis, reviews are conducted. Operations Reviews capture actionable information to predict future business needs and to identify opportunities to better serve our customers.

Customer satisfaction is addressed two ways. In addition to the "reactive" processes such as GCC, and the Failure Review Board (FRB), predictive data is collected and analyzed in order to develop changes in action plans necessary to avoid dissatisfaction before it occurs at the customer complaint level. Data such as warranty claims, warranty failure rates, warranty costs, repair rates, recalls, and initial field quality (IFQ) are combined with the customer-specific inputs such as GCC, or FRB to create a

complete picture of the factors which impact perceived or realized product and services quality. This information is then put into tactical action through review at the business unit level during the weekly progress report calls that focus on the Top 5 Customer Delivered Quality Initiatives and during the quarterly operations reviews. The information is used to impact strategic action through regional, Sector, and Quality Council reviews which then drive Sector initiatives and/or strategic priorities included in the Scorecards.

3.2.b.2 A rigorous process is used to set the appropriate follow-up response mechanism to various customer segments through different modes of communication and interaction. These "call out" mechanisms are defined at the business unit, regional, and global levels. At the business unit/ tactical level, actions might include tracked, and clocked follow-up to close customer complaint issues. Follow up occurs through call center contact, electronic messaging, field sales, and field service or through remote system support processes. Each mode of communication has a scheduled period for interaction with its target customer base. These "call out" plans are reviewed locally to ensure tactical resolution occurs. They are then aggregated and sent upwards in the organization to identify if more strategic action planning needs to occur in order to ensure that each targeted customer segment has both the right mode of contact as well as the right period of contact for the given mode. Additionally, managers from all levels, including CGISS' most senior manager's, follow-up with customers on a proactive basis. Feedback from all of these customer contact techniques is used in goal setting, analysis of the customer/market environment in strategic planning, and in the product development (M-Gate) process depicted in Figure 6.1-1. If appropriate, the feedback is also forwarded to our continuous improvement teams, including those in process management.

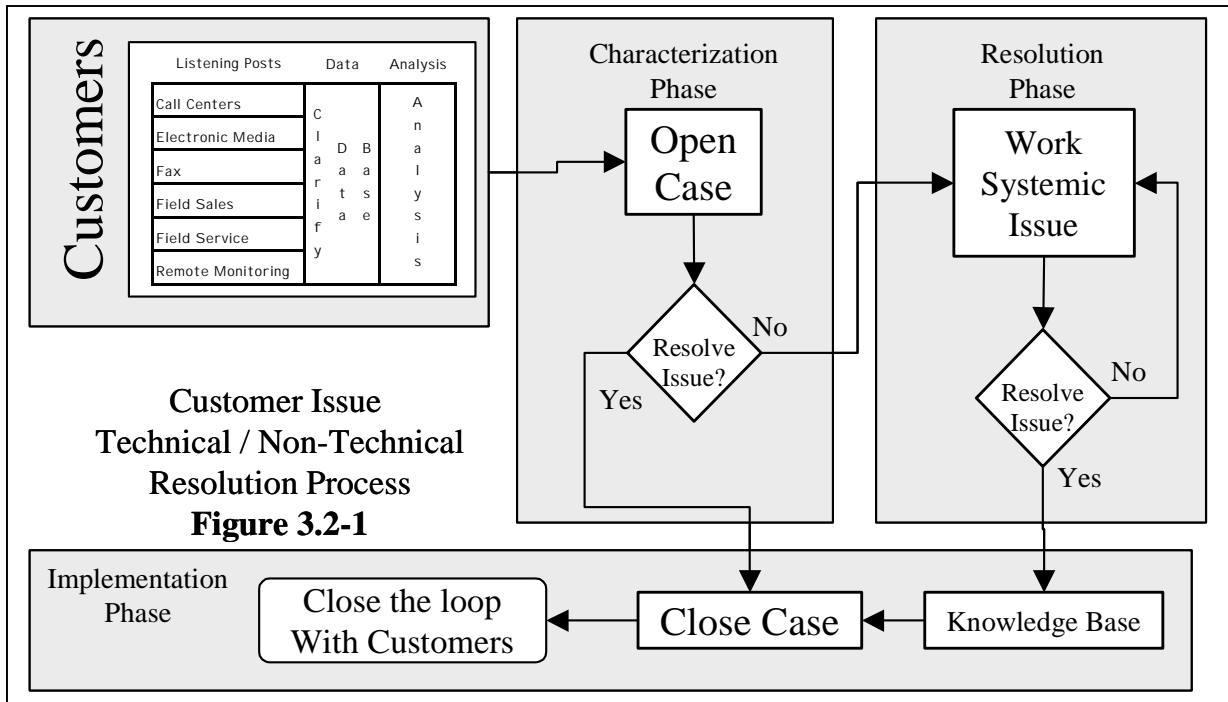
3.2.b.3 CGISS' customer satisfaction surveys are the primary approach for determining customer satisfaction v. competitors. CGISS' customer satisfaction v. the competition is significantly higher. Customer retention is another measure of satisfaction that is tracked.

3.2.b.4 CGISS' approaches for determining customer satisfaction, including satisfaction v. competitors, are evaluated and improved by CGISS' Quality Directors. Survey results are evaluated in this forum, as well as benchmarks of other companies' approaches for customer satisfaction determination. (Refer to the continuous improvement model depicted in item P.2.c-1)

The Global Marketing & Sales Group Quality Directors have key responsibility for ensuring customer satisfaction measurements are kept current with group/Sector business directions. "Lessons Learned" meetings are conducted after each Perception Survey is implemented and the results are used to make process improvements. Regionally deployed

quality directors are integral to the process of updating measurement approaches to ensure relevance to business unit needs. Every year, the global quality organization develops strategies and champion improvements to the worldwide Customer Care process. Regional quality directors team with representatives from business unit operations and marketing to implement improvement initiatives defined in the annual strategy. Two reviews per region are conducted annually to track the improvement initiatives and ensure the survey process is current and

relevant to our critical customer issues. This ensures continuous process improvement, as depicted in the generic model in item P.2.c-1. Evaluation of survey results, benchmarks of other companies' approaches and analysis of changing business needs are all incorporated into improving customer satisfaction determination. Recent outcomes include the ability to analyze global trends via standardized survey instruments, data collection and analysis by market segment, and testing of alternative modes of data collection, including Internet deployment.



Item 4.1 Measurement of Organizational Performance

4.1.a.1 At CGISS, our data and information is gathered using information systems such as Oracle, Clarify, COF and several other independent methods. We then integrate and categorize this information into two types of measures: Performance and Operational. These metrics are shared throughout the organization using the Motorola Compass Knowledge Sharing System. Performance measures are high level, and include seven to ten measures that are included in our Performance Excellence Scorecards. These are generated through our annual goal setting process. These measures/goals are set by the appropriate level of management (Sector staff, group

staff, etc.) and reviewed at the Sector staff level. Operational measures are identified by each group and/or division organization as needed. They are tracked locally at the respective design centers, factories, or regional business unit. CGISS' measurements track key project performance, product warranty repair trends, control metrics for factory processes, customer satisfaction, etc. This data is used in various periodic management reviews including Sector and group Operations reviews, Quality reviews, Meet Commitments meetings, Strategy reviews, etc. The broad scopes of these measures are depicted in figure 4.1-1 and 4.1-2.

Measurement Name	Benefactor(s)	Scorecard Goal Linkage	Data Collector	Review Forum	Frequency of Update
Accounts Receivable Weeks	③	Meet accounts receivable plan	Finance	All Ops Reviews	Monthly
Annual Revenue Growth	①③⑦	Achieve annual revenue growth plan	Finance	Group Ops Reviews	Monthly
Annual Sales Growth	③	Achieve target sales of new products/solutions	Finance	All Ops Reviews	Monthly
Budgeted Costs	③	Manage controllable budgets to plan	Finance	All Ops Reviews	Monthly
Cost of Sales	③	Achieve Sector cost of sales plan	Finance	Ops Review	Monthly
Project Cycle Time	②③⑦	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Project M-gate status	④	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Project Risk Assessment	④	Meet all Program commitments	Program Mgmt.	Meet Commitments	Monthly
Manufacturing Costs	②③⑥⑧	Achieve manufacturing cost plan	Finance	All Ops Reviews	Monthly
On-time Delivery	②③	Meet performance goals on major projects/products	Quality	Group Ops Reviews	Monthly
Free Cash Flow	③	Meet accounts receivable plan	Finance	All Ops Reviews	Monthly
Profit Before Taxes	③⑦	Achieve PBT plan	Finance	All Ops Reviews	Monthly
Program Cost Performance	③	Meet performance goals on major projects/products	Finance	Group Ops Reviews	Monthly
Releases	③	Achieve releases plan	Finance	All Ops Reviews	Monthly
Return on Net Assets	③	Achieve RONA goal annually	Finance	Group Ops Reviews	Monthly
SEI/CMM/ CMMI Levels	④	Software Engineering SEI Level	Quality	Group Ops Reviews	Quarterly
Top Box Customer Satisfaction	②	Improve Top Box customer satisfaction	Quality	All Ops Reviews	Bi-Annual
Share of Market	③	Maintain share in N.A.- Increase share in rest of world	GMSG Brand	All Ops Reviews	Monthly

Fig 4.1-1 Performance Measurements (Overall Organization Performance)

Legend:
 ① = Employee ④ = Operational ⑦ = Share Holders
 ② = Customer ⑤ = Human Resources ⑧ = Manufacturing
 ③ = Financial Performance ⑥ = Suppliers

Fig 4.1-2 Operational Indicators

Measurement Name	Measurement Linkage	Scorecard Goal	Data Collector	Review Forum	Frequency of Update
Cost of Quality	①②③⑦	Achieve a ___% reduction in cost of quality from 2000 base line	Quality	All Ops Reviews	Monthly
CRAD	①⑦	Achieve and maintain ___% on time delivery (CRSD, CRAD)	Quality	All Ops Reviews	Monthly
CRSD	①⑦	Achieve and maintain ___% on time delivery (CRSD, CRAD)	Quality	All Ops Reviews	Monthly
Customer Problem Resolution	①③⑦	Improve customer problem resolution cycle time	Quality	All Ops Reviews	Monthly
Customer View of Quality	⑦	Achieve design goal in warranty repair performance	Manufacturing	Ops Review	Monthly
Failure Review Board Metric	③⑦	Maintain backlog and cycle time from 2000 base line	Quality	All Ops Reviews	Monthly

Measurement Name	Measurement Linkage	Scorecard Goal	Data Collector	Review Forum	Frequency of Update
Hiring & Attrition	④ ⑤	Manage hiring & attrition to maintain full staffing per plan	Finance / HR	Ops Review	Monthly
Inventory Turns	②	Inventory turns of ____ or better	Via accounting system	GM Staff	Monthly
Non-Factory Cost Reduction Initiatives	③ ④ ⑥	Achieve non-factory cost reduction goals	Finance	All Ops Reviews	Monthly
Personal Commitment	⑤ ⑥	Institutionalize Personal Commitment and link to Performance Excellence	HR	All Ops Reviews	Quarterly
Sales of New Products	① ④	Create and implement solutions strategy to optimize opportunities in top regions	Finance	All Ops Reviews	Quarterly

Legend:

- ① = Business Function
- ② = Manufacturing Function

- ③ = Engineering Function
- ④ = Finance
- ⑤ = Human Resources

- ⑥ = IT Function
- ⑦ = Support Function

Directly aligned to our Scorecards and management reviews, both decision-making and daily operations are supported by the use of the two types of measures. This is evident in the extent and effectiveness of performance at all CGISS levels.

4.1.a.2 CGISS' performance measures are selected and aligned through the development and subsequent reviews of the PE Scorecards by management at all levels within the Sector. These depict the alignment of the measures with CGISS' strategies and objectives. The broad scope of operational measures and their use in day-to-day management of operations (including statistical process control) ensures the scope of data is broad and complete. The identification of measures and development of Scorecards ensures standardization and consistency throughout all of CGISS worldwide. It is not relegated to manufacturing, but includes all business and support processes, customer interface and administrative functions.

The Personal Commitment process allows the goals of the individual employees to align with their respective division, group, and Sector Scorecards. This process is the mechanism that ensures alignment of goals to the key performance measures from top down, bottom up, and across to all levels within the organization.

4.1.a.3 CGISS selects and ensures the effective use of key comparative data and information to drive its selection of measurements and goals so that key business decisions are data-driven. For customer and market analysis, a business intelligence process is used and the information is integrated into a Business Intelligence Database as described in items 2.1.a.2 and 3.1. Information is obtained from blind studies in which companies agree to participate, but the resultant information is not associated with any company specifically; from face-to-face benchmarking processes where selected topics address gaps that have been identified; from customer intelligence; from attendance at trade shows and conferences; from examination of

competitor systems and products; and from information that is generally available in company literature. The aggregate of this information is used to generate both system/product and associated technology roadmaps that span five years into the future. A standard competitive analysis process is associated with both the strategy and technology reviews that are conducted to review, discuss, and revise these key business drivers.

The standard Motorola Competitive Matrix comparison process is used the following ways: (1) selecting the major competencies/technology drivers (2) selecting the key competitors (3) grading each category for each competitor on a scale from 0 to 5 where 5 is the leader over three time frames: last year, today and 3 years into the future (4) determining if the competency/technology is a pacing, key or base and color shading the leader in each category. The competitive analysis is utilized to generate, re-evaluate and realign roadmaps driving business investment priorities. Senior business managers and technologists jointly review and revise business and technology development projects based on this aggregate of information.

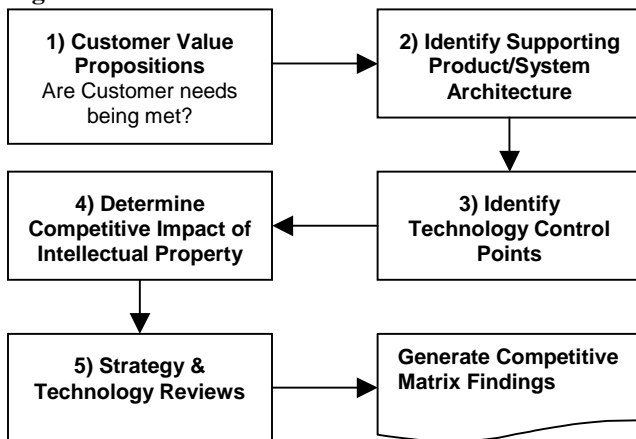
Internal self-evaluation techniques or outside assessment/audits are used to generate the relative competitive standing and the associated gap analysis so that all benchmarking activities can be highly focused. Examples of these evaluations processes include ISO9000 audits, SEI (System and Software) assessments, Motorola's Quality System Review, Motorola's Product Development Assessment, Motorola's Malcolm Baldrige initial award receipt and continued use to drive corporate-wide improvements. The Product Development Assessment, for example, was generated from best practices found in an extensive corporate-wide product development benchmarking activity. Motorola has pioneered many efforts, using the six-sigma tools and methodologies, many of which are the foundation for our current processes.

Selection of comparative data/information comes from senior business leaders, senior technologists, portfolio management teams, the CGISS Advance Technology and

Strategy Organization, functional managers and external consultant recommendations. The drivers for comparative benchmarks are based on the requirements of strategic planning and our continuous improvement processes.

The CGISS process for benchmarking other companies is documented in Fig. 4.1-3:

Figure 4.1-3



Again, benchmarks/comparative data and information are selected for capability gaps identified in assessment or via key Technology Control Points. The CGISS Benchmarking Repository, as well as the System/Product and associated Technology Roadmaps can be found in the Motorola Compass Knowledge Sharing System. In addition, specific functional areas perform benchmarking analysis on an as needed basis.

Competitive data is used to anticipate what technology, features, and capabilities competitors might introduce. This enables our senior management to set our stretch targets through strategic planning and break through approaches developed by our continuous improvement teams. This requires access to Emerging Technology from the research lab. Motorola Research Labs and CGISS's Advanced Technology and Strategy Organization activities or actual business acquisitions are driven by this information. Again, Motorola uses patents to protect its key distinctive inventions.

4.1.a.4 CGISS has two distinct and formal processes to evaluate and improve performance measures and operational indicators, which occur at an annual meeting chaired by the Sector's Strategy Directors, who form the CGISS Performance Measurements Council. The Directors evaluate the performance measures v. the needs of the strategic planning process and the requirements of the new strategies. Operational indicators are evaluated semi-annually at the operational group level in a meeting headed by the Group Quality Director and also at semi-annual facility meetings and weekly/monthly operational

review meetings. In these meetings, trends in performance are reviewed, as well as changes in strategies/performance measures and customer requirements. The multi-tiered improvement process enables enhancements to be made to performance measures at the Sector, group and facility levels. This ensures that all performance measures are kept current with the needs of strategic planning and customers at all levels of CGISS. The process is documented and institutionalized worldwide in the CGISS Improvement process format (Item P.2c).

4.1.b Performance Analysis

4.1.b.1 CGISS manages its business using clearly defined and broadly communicated goals and performance measurements. These goals and measurements are reviewed on a quarterly basis within the Sector and with corporate management through a series of operation reviews in which functional groups report on their performance against goals and action plans for continuous improvement or recovery activities. From this information, we conduct organization level analyses that identify cause-effect relationships across functional areas and works teams that impact or contribute to the sector's business results. Based on these analyses the Sector management team agrees on action plans in the functional groups to support problem recovery, continuous improvement, or capitalizing on breakthrough opportunities

In addition to the Sector level analysis, each functional group repeats this process for their organizational goals resulting in a series of linked analyses and action plans that roll up and drill down to performance at any level in the Sector.

4.1.b.2 The results of the organization level analyses and action plans are communicated to the work group and functional levels through three primary channels. First, we have direct communications to all CGISS associates through quarterly town hall meetings in which high level corporate, sector, and group results and action plans are reviewed with all employees worldwide. This ensures that all associates have a consistent understanding of the performance, directions, and imperatives of the Sector. Second, we have a more detailed quarterly briefing by the expanded staff of CGISS (first and some second level reports to CGISS Staff members) to ensure that the extended leadership team is working from the same data. Finally, the results of the Sector level analyses, the conclusions, and the agreed on actions from the management operations reviews are communicated through focused meetings in the chain of command to the appropriate work teams in the Sector responsible for acting on those plans.

4.1.b.3 The CGISS Scorecard is the basis for the senior executive review processes and management review processes across the Sector. Our Scorecards are also the mechanism for linking operational results and performance

indicators to the strategic initiatives of the organization. The Scorecards and associated measures address the important requirements for each of the constituencies that we serve including customers, shareholders, employees, community, and business partners.

For each key performance indicator, current, historic and future trends are prepared, reported, and reviewed in operations reviews at the group level and quarterly operations reviews at the Sector level. Preparation for these reviews involves performing the analyses and correlations necessary to understand the contributing factors to current performance and the development of action plans and forecasts for future performance.

In addition to the management operations review forums, our strategy process also relies on this data and analyses to support longer-term decisions. Environment changes, new opportunities, or performance that is inconsistent with the strategic needs of CGISS are identified.

Item 4.2 Information Management

4.2.a.1 Data and information are made available to employees, suppliers/partners, and customers using best-in-class standard commercial off-the-shelf hardware and software. The standard software applications provide data that is kept current real time. Historical data is made available using data warehouses designed to capture information on a periodic basis. The data stored in data warehouses is typically a subset of the transactional data but is designed to capture specific information necessary to develop metrics and report business trends. In many cases, business units will supplement standard software applications with specific reports using standard query and reporting tools.

Employees looking for policies, processes or procedures can be directed to specific web sites or navigate through the knowledge management repository known as *Compass*.

Secure portals have been created for customers and suppliers to enable the exchange of information, specifications, and/or standard business transactions.

Motorola also forecasts material requirements and inventory status information available to suppliers through the Schedule Sharing system. Schedule Sharing is a partnership program between Motorola and its Suppliers where both parties improve their operational performance by sharing procurement information electronically. E-Commerce applications allow customers and distributors to purchase products and review order status online.

The network and server architecture is designed to supply a high degree of uptime and availability for key applications. Metrics are used to measure system availability and take corrective action, when necessary.

4.2.a.2 During the software development life cycle, business requirements, design specifications, application code and system/user acceptance test results will go through a standard Engineering review procedure, or Formal Technical Review, as required by the software development process.

Standards of Internal Control (SIC) and the Electronic Information Security Standards (EISS) are provided to guide employees who develop software applications that have effective financial controls, data integrity, security, and system reliability.

All computer operations must comply with Electronic Information Security Standards for authorized access, backup, virus and firewall protection. Computer operations are audited on a periodic basis for compliance with these standards.

A Business Impact Analysis is conducted on each system and reliability requirements are defined based on this analysis. Included in this is the requirement is an effective Disaster Recovery Plan.

Many web sites provide their own mechanisms for timeliness:

- The Project Management web site (Top 20 Programs) is updated every 30 days.
- Briefing reports on progress to Plans, Customers, Quality, etc. are generated and distributed by e-mail each week.
- Business Scorecards are published annually, and reviewed quarterly.

By their nature, transactional systems are always current. Data warehouses, which are based on extracts of the transactional systems, are typically updated on a daily basis. Where the business requires less frequent updates, they are scheduled as required. For example, although backlog for the factory may be updated on a daily basis, the summary for the financial community may only be updated on a monthly basis. Likewise, web-based reports are updated as required by the business. As the update requirements differ, data warehouse table entries are time stamped with the last update date. It's also important for IT to report the update schedule to the business community. An example is the data warehouse web site where a dashboard shows processes that are scheduled to run, those that are currently running and those that have been completed, including the time of completion.

Any documents posted on *Compass* require both a Protection Of Proprietary Information (POPI) classification, and Export Control classification, to ensure that access controls are enforced and to prohibit any unauthorized individuals from accessing confidential information. More sensitive classifications require user login with password protection.

4.2.a.3 CGISS' data information availability methods are evaluated and improved on several levels. Sector Engineering Computing and CGISS IT leadership meet periodically with their Board of Directors (BOD) to update information relative to their processes and tools. Representatives of these groups also receive feedback from our annual Performance Excellence assessment opportunities for improvement. The BOD is made up of leaders of the business and engineering community. The leadership teams review major programs and resource allocation with their respective Board of Directors on a quarterly basis and sometimes more often, as required. The cross-Sector Engineering Computing and Process Solutions (ECPS) team meets quarterly and are responsible for setting direction for enterprise-wide Engineering Computing and Tools.

To provide more tactical direction, the CGISS IT Board Of Directors has authorized a Change Advisory Committee that is also made up of business representatives that use the current systems.

To help keep the hardware and software applications current with business needs and directions, the ECPS Team evaluates the following inputs, quarterly:

- Business and Information Technology
- Performance Excellence Scorecards
- Board Of Director project priorities
- Strategic Plan
- Technology Roadmap
- IT/Market Trends
- Benchmarking Data
- System Audits
- Legal/Environmental/Government/DOD Requirements
- Budget Plans
- Customer Satisfaction Survey responses

Formal mechanisms are used so that users can submit requests for work to be performed to implement new systems or modify/enhance existing systems. Engineering Computing is responsible for four levels of technical support (Fig. 4.2-1)

Performance metrics (e.g. boot-up time, response time, user friendliness, uptime/availability, etc.) are analyzed semiannually by Engineering Computing to find adverse trends or anomalies in the operations that need to be

corrected. Once these issues are identified, a cause and effect analysis is performed to identify corrective actions that will prevent the problems from recurring.

Fig 4.2-1 Engineering Computing Support Levels

	Org. Level	Type of Support
Level 3	Corporate	Common Tool acquisition/support, Central Databases, Enterprise level processes
Level 2.5	CGISS	New Common Tool Implementation
Level 2	Site-Wide	Application & Infrastructure Support, Security
Level 1	Site-Local	Help Desk, Desktop Maintenance, Backups

4.2.b.1 CGISS has adopted the Motorola desktop hardware and software standards to reduce costs, ensure reliability and improve ease of use by simplifying the environment that 15,000+ employees use to communicate with each other. Standards are established for hardware, software and software revision levels that can help remove barriers to communication and collaboration between internal organizations. By doing so, CGISS frees significant resources to work on external customer needs by simplifying the computing and communications environment.

Special Interest Groups (SIGs) or Technical Advisory Boards (TABs) and working groups have been formed across the corporation to involve users in establishing and updating the Desktop standards for Motorola. Working groups and SIGs exist for:

- Desktop Configuration Standards
- Desktop Hardware Standards
- Desktop Software Standards
- Ensuring business continuity
- Ensuring reliability
- Remote Access Standards
- Help Desk Standards
- Collaborative Tool Standards
- Network Infrastructure Standards
- Engineering Interoperability Standards
- Web Communities of Practice Standards

Additionally, any interested associate may submit proposals and requests directly to the working groups for consideration. All activities and proposed standards are posted for comment and review by any employee.

CGISS has also adopted an SEI Policy to establish basic practices that will ensure the quality and reliability of software, systems, services and processes. The policy of OneIT states that all IT projects will utilize an approved documented process to guide the development, acquisition,

maintenance and implementation of IT products. Some products, which are a result of this effort, include the One IT Applications Directory Password, and the Tigers purchasing system.

Individual organizations perform periodic software Capability Maturity Model (CMM) assessments designed to identify areas of strengths and weaknesses. This data is tracked over time in order to identify trends in process maturity. Action plans are developed and reviewed based on these assessments to modify existing processes or create new processes in order to improve the software and hardware reliability. Extensive software and hardware testing is performed per documented plan. Formal technical reviews are held to ensure high product integrity is in place before roll out.

4.2.b.2 The annual OneIT Strategic Planning Process includes all corporate and Sector Information Technology organizations. Steering committees, system engineering /architecture teams and software engineering process groups meet at least once a month to plan and execute process improvement activities.

The following inputs are evaluated to help keep the hardware and software current with business needs and directions:

- Business and Information Technology
- Performance Excellence Scorecards
- Board Of Director project priorities
- Strategic Plan
- Technology Roadmap
- IT/Market Trends
- Benchmarking Data
- Audit results
- Legal/Environmental/Government/DOD Requirements
- Budget Plans
- Customer Satisfaction Survey responses

In addition to CMM assessments, software and hardware councils meet on a monthly basis to monitor improvement activity, discuss issues and propose solutions in order to ensure high reliability is achieved and maintained.

Individual divisions also perform Lessons-Learned activities at the conclusion of project rollouts to identify areas that represent significant reliability issues. The lessons learned material is collected, analyzed and applied to process improvement activities.

Item 5.1 Work Systems**5.1a.1**

CGISS' work and jobs at all levels are designed, organized and managed through collaboration with employees and management. Supervisory /management jobs are developed with tools including the Leadership Competency Model and Leadership Supply. This is an ongoing process throughout the year, where managers and employees take ownership of the process and job designs. All jobs are organized and managed to promote teamwork, knowledge sharing, collaboration, and professional development. Approaches to work and job management are organized using substantial team approaches that support cooperation, collaboration, individual initiative, innovation and flexibility among employees. Examples of these approaches include job rotation, cross training, patent awards, and reward and recognition approaches. During the past several years, we have re-designed several major job families in CGISS in order to create better career progression, increase job flexibility and clarify duties and responsibilities for employees. Individual's goals are a direct reflection and connection to the Sector Performance Excellence Scorecard and are managed through the PC process.

5.1.a.2

CGISS' managers and supervisors encourage and motivate employees to develop and utilize their full potential through quarterly Personal Commitment dialogue sessions. To help achieve both personal and professional goals, Motorola offers tuition reimbursement, continuing education, promotion-from-within, and the Motorola Incentive Plan. Cross-functional 'Communities of Practice' focus on critical business issues fostering individual learning and development. Competency assessments and career development dialogues enable managers and their employees to create ongoing developmental plans. Managers and Supervisors utilize formal and informal Coaching sessions to instill individual responsibility and ownership for personal development. BRAVO! (Our spot recognition program) concentrates on rewarding behaviors and subsequent business results. Patent Awards recognize technical innovation, and annual merit increases, promotions, and stock options are also awarded.

CGISS' approaches to work, jobs and employee involvement are evaluated and improved during weekly staff meetings, quarterly operations reviews, and Category 5 Performance Excellence reviews. A systematic review and analysis of each Reward program's effectiveness is completed during and after each major initiative. Every year, the Category 5 Performance Excellence Team is joined by Senior Management to review and analyze the results of our annual Performance Excellence Assessment (which

includes feedback from both formal applications and from our annual assessment conducted by an external party). Rewards programs are benchmarked for all jobs and overall competitiveness. Improvements are standardized through changes in processes and practices, including measures tracked. They are institutionalized across CGISS through sharing and communications, including several found in Figure 1.1-1. The specific inputs related to work, jobs and employee involvement include alignment of these approaches with CGISS' strategies, benchmarking, PULSE results related to work, jobs and involvement, and other employee feedback derived from the Open Door Policy, Personal Commitment Dialogues.

5.1.a.3

CGISS' performance management supports high performance through the PE Scorecard process, which is tied to each employee's Personal Commitment. Personal Commitment is a business improvement, performance management and employee development process created by Motorola. This process, consisting of quarterly dialogues and tools, helps employees to maximize the contributions they make to the business and their own job fulfillment. Through the Personal Commitment process, managers, teams, and individuals focus on the actions needed to satisfy our customers, meet business goals and achieve professional satisfaction.

The Personal Commitment process rewards individuals for meeting personal performance goals. Employees receive feedback and develop plans for the next year and beyond. The Global Rewards Team manages CGISS' compensation, recognition and incentive systems. Specific approaches include: the Motorola Incentive Plan, Personal Commitment, a pay for performance merit program, Stock Option Program and individual performance awards.

The Rewards organization has developed clear metrics to target and evaluate the differentiation of rewards for both executives and non-executives. Benchmark data supports the position that organizations that differentiate their reward programs, demonstrate better business performance than those who do not. Relative Performance Assessment (RPA) system, which ranks employees relative to others in similar grade bands and functions, has been integrated with Personal Commitment. In the executive grade bands, CGISS achieved differential investment between the Most Effective (ME) and Solidly Effective (SE) and between the Most Effective and Least Effective (LE). CGISS also demonstrated increased differential investment in the areas of Stock Option awards and salary planning for 2002 executive participation. The Incentive Pay Plan (IPP) has been re-designed to focus on business results and individual performance.

Figure 5.1-1 Opportunities for Individual Initiative and Responsibility

J (Job), W (Work Unit), L (Location), S (Sector), C(Corporate)

Cooperation/Collaboration	Innovation/Individual Initiative	Organizational Culture
<ul style="list-style-type: none"> • Business Councils (C) • Cross-functional teams (JWLS) • Sharing of Best Practices through Communities of Practice (JWLS) • Information-sharing Events (JWLS) • Community Involvement (S) • Establish “work partners / collaboration with colleagues via Personal Commitment (JWS) 	<ul style="list-style-type: none"> • Open-door policy (C) • Patent Awards (C) • Service Club dinners (C) • Personal Commitment process (C) • FAST Teams (JWL) • Patent Awards (J) • Business Councils (C) • SKIP Dialogues (W) • Promotion from within (JW) • Career Plans in PC (C) 	<ul style="list-style-type: none"> • New Hire Orientation (JWLS) • Uncompromising Integrity (JWLSC) • Constant Respect for People (JWLSC) • Performance Excellence Business Systems Framework (JWLS) • Six Sigma Black Belt, Green Belt (JW) • Diversity (C) • ‘One Motorola’ face to the Customer(C) • Performance Management (J)
Flexibility	Communications	Knowledge / Skill Sharing
<ul style="list-style-type: none"> • Cross training (JW) • Flex-time as appropriate (JW) • Job rotation (JW) • Employees “float” to address changes in workload (JWS) • Job descriptions (JW) • Open one- and two-way communication environment with employees so they are comfortable raising suggestions via Town Halls, team meetings, open-door policy, intranet, email, Net Meetings, Personal Commitment quarterly checkpoints. (WS) 	<ul style="list-style-type: none"> • Town Halls (JWLS) • Executive Conferences (JWLS) • CGISS Newsbriefs electronics publications (JWLS) • Closed-circuit TV (JWL) • Quarterly Personal Commitment Dialogues (JWL) • Employee Recognition (JWL:) • Bulletin Boards for facilities w/o web access (JWL) 	<ul style="list-style-type: none"> • Teams (JWL) • Communities of Practice (JWLS) • Cross-Functional Teams (JWLS) • Managers and direct reports (JWLS) • Operations reviews (JWLS) • NetMeetings (JWLS) • Cyber Casts (JWLS) • Learning Skill Guides (JW)

CGISS’ approaches to compensation, reward and recognition are evaluated and improved during quarterly operations reviews, and Category 5 Performance Excellence reviews. The specific inputs related to compensation, reward and recognition include alignment of these approaches with CGISS’ strategies, PULSE results related input, benchmarks both internal and external to Motorola (including compensation rates in specific geographic locations and regions), specific input from Motorola’s Global Rewards Organization, and the deployment status of Personal Commitment. On an annual basis, the Category 5 Performance Excellence Team is joined by Senior Management to review and analyze the results of our annual Performance Excellence Assessment. Succession planning is also evaluated and improved in this annual forum, with specific inputs analyzed related to retention of top candidates, the status of the Leadership Supply process, the diversity of high potential candidates, etc.

5.1.a.4

To meet the need for world-class general managers, Motorola instituted Leadership Supply, our leadership succession planning process. Leaders are expected to achieve results (PE goals, PC Goals) and demonstrate the Leadership Behaviors The leadership assessment is

conducted annually and is used to calibrate the leadership talent along with measures of their success in achieving business results. Leveraged Positions identify the most impacting jobs in the Sector. In Talent Management meetings, calibration results are aligned with the leveraged positions to assess the relative health of our leadership ranks and identify successors for the leveraged jobs. The Leadership Planning process grows future GM’s through a similar set of interventions (calibration, assessment, talent management) in addition to individual coaching and a career roadmap process. Specific objectives are to make Motorola a magnet for leadership talent, to proactively identify, track and develop sufficient-sized global and diverse pools of leadership talent, to continuously improve the quantity and quality of leaders and potential leaders in the pipeline by differentially investing in and accelerating the development of solid to strong performers and by moving under-performers out of the organization. The Leadership Supply and Leadership Planning processes are consistent with our performance management approaches.

5.1.a.5 CGISS’ HR management identifies the characteristics and skills needed by new employees through the Human Asset Planning process. CGISS’ recruiting and hiring approaches include the use of the OASIS global staffing system, diversity

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and college hiring programs, the contract labor program (ARMS), internal recruitment system (CMS), employee referral program (Quest for the Best), Internet resume boards, print and electronic advertising, job fairs and external placement agencies. The hiring process also includes drug screening and background investigations.

The main objectives of Motorola's diversity strategy are to attract and retain a talented workforce that reflects and represents the diverse cultures and preferences of our customers and consumers, and to generate a broad acceptance of integrated, diverse perspectives that create a competitive advantage in the marketplace. Our focus has been leadership diversity, employer branding, and continued visibility through key diversity events such as NSBE, WITI, and SHPE, among others.

Retention and development are addressed in several ways. Leadership Supply addresses the development of our most senior talent. Leadership Planning focuses on identification, assessment, and development of our succession bench strength. Retention is also being addressed through Personal Commitment, pay for performance programs and training. Our Business Councils strengthen retention efforts through personal and professional development.

Community partnerships increase visibility for the organization externally and internally reinforce our commitment to organizations, which service our employees, customers and suppliers. The effectiveness of our community partnerships is managed through our Community Relations team, and the Motorola Foundation.

CGISS' approaches to recruiting, hiring and diversity are evaluated and improved during monthly HR operations reviews. The specific inputs related to recruiting, hiring and diversity include PULSE survey results, direct employee and manager feedback, benchmarks both internal and external, the hiring retention rate and affirmative action plan metrics. Every year, the Category 5 Performance Excellence Team reviews, with Senior Management, the results of our annual Performance Excellence Assessment. Analytical approaches include trend analysis and gap analysis vs. benchmarks and performance expectations. Improvements are standardized through changes in processes and practices.

They are institutionalized across CGISS through sharing and communication.

Item 5.2 Employee Education, Training and Development

5.2.a.1: Education and training support our short and long term organizational objectives by aligning training solutions and individual training plans to the overall organization's business goals. Working together, CGISS senior management, the CGISS Learning Community, a cross-functional team made up of Motorola University - Leadership Learning and Performance (MU-LLP), Worldwide Learning Services (WLS), and training managers, take a broad look at the goals of the organization and the current business environment within CGISS. Several inputs are reviewed on an annual basis, including Performance Excellence Scorecards and interviews with senior management. Other data is gathered on an as-needed basis, including competency assessments of functional groups and focus groups conducted with managers of functional groups. The gaps identified from these inputs are compared with current critical business issues and strategies to determine and prioritize individual, team, and the organizations' developmental/learning needs.

Training priorities and opportunities that align to critical business needs are communicated directly from CGISS senior leadership through manager briefings, e-mail messages, and quarterly Town hall meetings. Learning Skill guides, list the priorities according to functions, Groups, and Regions. Employees can refer to these guides and identify training opportunities available for their own individual development needs.

Individual needs are most often identified through the Personal Commitment process. During the Personal Commitment process, individuals discuss training and career development with their managers. During these dialogues, career aspirations, feedback from managers, linkage with overall business and group objectives, and recommended training from the Learning Skill guides are covered. These plans are jointly reviewed and agreed upon by both the employee and the supervisor. Training opportunities for employees include instructor-led classroom-based training, e-Learning via the web or CD-ROM, and self-study opportunities such as reading industry publications and participating in communities of practice. (See item 5.2.a.3).

Figure 5.2-1 Sample Training Courses that Address Key Developmental/Learning Needs

Technological Change	Management/ Leadership Development	Employee Orientation	Safety	Performance Measurement/ Improvement	Diversity
Object Oriented Analysis and Design	Essentials of Motorola Management	Peer Success Program	Hazard Communication	Introduction to Continuous Improvement and Statistical Methods	Manager Responsibilities under the Americans with Disabilities Act
DOORS Practical Application Training	Achieving Results through People	PC/IDE Orientation	Operations/ Machine Safety	Six Steps to Six Sigma Concepts	Preventing Sexual Harassment
Introduction to SDT	Building a Customer-Focused Organization	Systems Subscriber Orientation	Chemical Safety	Applying Continuous Improvement Tools	Valuing Diversity
Clearcase NT	Business Development Institute	New Employee Orientation	Hazard Risk Assessment	Comparative Methods	Diversity and Workplace Issues
Understanding IP Networking	Chairman’s Leadership Institute	Performance Excellence Awareness Training	Gas and chemicals	Developing Quality Software	Asian Business Council Leadership Summit
TCP/IP Troubleshooting	Mentoring and Coaching for Managers	Employee Integration Process	Electrical, Explosives, Ladder, Plant Services Safety	Sources of Variation	Managing Across Cultures
Gathering Requirements			Intro Software System Safety (Phoenix)	Cycle Time Reduction and Mapping Workshop	

5.2.a.2:

The CGISS Learning Community seek input from employees and supervisors worldwide to determine training needs through a number of channels. Employees may make recommendations directly through tools such as the PULSE survey (see Item 5.3.c.2) and through surveys conducted following training events (see Item 5.2.a.4.). They may also make recommendations through their direct supervisors and managers, via the Personal Commitment process. An example where historical assessment indicators, such as PULSE Survey results, have led to delivery of learning solutions for CGISS include, Employee Integration Process (GTDG), and Leadership Planning Process for CGISS. These approaches apply to employees worldwide.

5.2.a.3:

The CGISS Learning Community maintains several curriculums that address the topics of technological change, management/leadership development, new employee orientation, safety, performance measurement/improvement, and diversity.(Figure 5.2-1).

Portfolio managers and solution fulfillment specialists in the CGISS Learning Community identify and maintain training programs that address these key development

areas for CGISS. Their responsibility is to source or develop the necessary content, maintain the necessary resources for delivery (e.g. instructors, printed materials, CD-ROMs) and maintain the quality of the content and delivery.

Employee feedback processes described in item 5.2.a.2, and the business assessment processes described in section 5.2.a.1 are used to determine if the content is up to date, and if new training programs should be developed or sourced.

5.2.a.4:

In order to meet the needs of our business’ diverse and geographically dispersed employee population, training is delivered in a variety of ways, including classroom-based, web-based, and CD-ROM. Employees may take training in small groups assisted by an instructor or facilitator, or they may take self-paced training through e-learning. Formal training is provided through two formats: classroom-based instructor-led training and e Learning. Classroom-based instructor-led training is used widely within CGISS to give participants an opportunity to work collaboratively on group activities, gain hands-on experience in computer labs, and practice newly acquired ‘soft-skills’. Instructors for these

courses are internal and external subject matter experts. E-learning, via CD-ROM and web-based courses is growing in popularity in all regions, and is becoming increasingly important when the subject matter relates to introduction of new products, policies and procedures, and desktop applications that are widely used by many employees.

Informal self-study opportunities are encouraged in areas where employees want to stay current with the very latest trends in technology and business. In many cases, the pace of change in these areas is so great that employee education needs are better met by some alternative means of learning, instead of formal classroom training or e-learning. One very successful example is the Learning Link Live program developed for our sales associates. This program uses simple conference call technology to bring subject matter experts and salespeople together to discuss key topics related to CGISS. These Q & A calls are recorded and made available via the corporate intranet for additional participants who were not able to participate in the “live” call.

Participant Assessment (PA) surveys are used by the Learning Community to evaluate the effectiveness of training. Participant Assessments are used at the conclusion of each class. In addition, we use Perception of Training Impact to Job (PTIJ) surveys to look at particular “macro” views of the training organization. For example, we conducted a PTIJ survey to evaluate the effectiveness of our e Learning solutions. In cases where employees complete their training in an e-Learning format, both assessments are emailed to the participants. In certain cases, we also measure the effectiveness of training by establishing focus groups of participants to comment on their training experience. Pulse results are also included in our continuous improvement activities.

5.2.a.5:

Reinforcement of knowledge and skills acquired through education and training in CGISS is the responsibility of managers and supervisors through the Personal Commitment process. Both skills and behaviors are identified during the planning stage of the process, and they are reviewed and reinforced by supervisors and managers on a regular basis throughout the year. Training materials and delivery are designed to be as relevant to the requirements of the job as possible.

5.3.a

CGISS’ practices related to health, safety and ergonomics include safety councils, an Ergonomics Task Force, EHS systems audits, use of the Voluntary Protection Program (proactively inviting OSHA to inspect), health fairs, on-line ergonomics classes, safety

awards and recognition, emergency/non-emergency numbers at each facility. (See 5.3-1).

The Environmental, Health and Safety (EHS) Teams at each CGISS site worldwide continually assess the impact of each facility’s processes, products and services on the environment, health and safety of our employees and work to reduce the Environmental, Health and Safety risks associated with site activities. Several CGISS facilities have either qualified or re-certified for the prestigious Occupational Safety and Health Administration’s Voluntary Protection Program STAR Award. CGISS is exploring possibilities for expanding OSHA VPP globally, starting with the Penang, Malaysia site. CGISS is also proud to participate in the Motorola Assist Program, which includes Immunization services, Up-to-date travel advisories, 24-hour medical advice/referrals, Emergency care and Emergency medical evacuation/ repatriations.

In an effort to trend employee activities, EHS established metrics, which allow site managers to prioritize and redesign process. The EHS team is responsible for implementation of corrective action reporting system for accidents, ergonomic hand tool safety, and back safety awareness fairs, accident report escalation process, personal ergonomic assessments, current enhancements to facility office equipment, investigating and identifying common vendor for office furniture, and ESIH Champion development. EHS is constantly striving to lower injury/illness rates and lost time associated with these OSHA recordable incidents. Employees are able to identify health and safety concerns in the workplace using several channels: hot line numbers, ESIH Champions, attending Health Fairs, resources in OHR, web site access and awareness programs.

CGISS’ approaches to employee well being and satisfaction are evaluated and improved during quarterly operations reviews, and Category 5 Performance Excellence reviews. On an annual basis, the Category 5 Performance Excellence Team is joined by Senior Management to review and analyze the results of our annual Performance Excellence Assessment. Improvements are standardized through changes in processes and practices. They are institutionalized across CGISS through sharing and communication. The Team utilizes the model presented in Item P.2.c in the Organizational Profile. These inputs include injury analysis, benchmarks, health safety ergonomics reports, corporate results, EHS Management System audit results, and specific measures outlined in Figure 5.3-1. Occupational Health is presently being benchmarked for our Automatic External Defibrillator program.

Figure 5.3-1 EHS Practices - (W) denotes approaches that are deployed worldwide

	Practices	Measures	Targets
Health	1) Wellness Programs (W)	Utilization	___% of HAP Participants
	2) Fitness Center Activities	Utilization	Exceed National Average
	3) Health Fair (W)	Participation	___% of population
	4) Health and Safety Depot	Utilization	___ usages per day
	5) Customer Sat. Survey	Results	___% in customer satisfaction
	6) AED	Globally Implement	End of first half 2002
Safety	1) 6-2222 Medical Emergency Phone Line (W)	Response time	___ minutes for EMS
	2) 6-safe Safety & Environmental Concerns	Utilization & turn around time	___% follow through and closure
	3) Compliance	Audit Scores	Pass
	*ADA Accessible	Out Side Consultant/Facility Changes	Compliant
	*Corporate Global EHS Audits 1993-1997 & 1999 (W)	Pass / Fail	Pass
	*Medical OSHA Surveillance Programs (W)	No Citations	___% Compliant
	4) OSHA VPP Star Award	Qualified in 1995 Recert. in 1998	All US. CGISS Manufacturing sites
	5) MERT-Motorola Emergency Response Team (W)	Emergency Response	___% training compliant
	6) Air and Noise level checks (W)	OSHA Recordable Incidents	No Incidents
	7) Automatic External Defibrillator (W)	Global implementation	All Qualified Sites (MERT)
Ergonomics	Safety and Ergonomics Fairs	Participation	___% of population
	Hazard Communication Training (W)	Participation	___% Manufacturing Pop
	2) Injury and Illness Investigation (W)	OSHA Rate	Rate less than ___
	3) Job Analysis (W)	Identify Workplace Hazards	Eliminate All Workplace Hazards
	4) ESIH Champions	Employee Participation	___% of building zones covered
	5) ISO14001 Certification (W)	Audit	Entire Corporation Certified

5.3.b.1 Motorola’s PULSE employee survey was designed in 2000 as an organizational diagnostic and employee satisfaction/well-being/motivation assessment tool, and is administered every other year. Global focus groups are used to develop survey content, and determine the key factors that affect well being, satisfaction, and motivation. In 2002, an extensive redesign of PULSE was done to identify those factors that are most critical for employee satisfaction and organizational performance (i.e. factor analysis, key drivers, norms, trends, variance). The survey is conducted every other year as a census and is offered in 11 languages

5.3.b.2 CGISS provides employees with a wide array of benefits and services to enhance the work climate. The philosophy of the Global Rewards and Compensation team is: "To provide world-class reward strategies and programs that attract, retain and

motivate the best people, producing outstanding business performance and shareholder value.”

We provide a total compensation package that is competitive with the prevailing practices for each industry and country in which we operate, allowing for above average total compensation when market and business justifies. The Global Rewards Team routinely surveys our competitors, conducts employee feedback sessions, and polls Human Resources Managers to ensure that our total rewards program provides a competitive package of benefits and services.

The Motorola policies that govern our human resource activities are developed at a corporate level and are the overriding structure for managing our employees with site-specific policies identified as needed to effectively manage the local workforce.

Motorola provides its employees with a number of benefits including, comprehensive medical benefits, recreational and social clubs, day care options, diversity business councils, employee award and recognition resource and referral program, call care, retirement benefits, wellness initiatives, expanded healthy quality of life programs. Employees are made aware of these programs through various methods - newsletters, flyers, table tent cards, intranet websites, mailings to the employee's home, employee information centers, call centers, Town Hall meetings and bulletin board displays. Recent enhancements to the Motorola Employee Benefits package, specifically profit sharing and pension accounts as well as fitness center reimbursements, were made based on employee feedback.

The importance of consistent, well-reasoned policies cannot be overstated. They ensure the fair treatment of employees and help lay the foundation for a positive/productive work environment. As the competition to attract and retain the best and the brightest intensifies, a positive work environment becomes an important differentiator.

All Motorola businesses in the U.S. have accepted and implemented a consistent set of policies to ensure Motorola maintains its long-standing position as a premiere employer in the high tech field.

Specific policies include the following: Job Sharing and Flexible Work Schedules, Family Illness Leave of Absence, Bereavement Time Off and Pay, Community Service, Education Assistance, Open Door Process, Parental Leave of Absence, Personal Leave of Absence, Senior Service, Drug Free Workforce, Safe and Respectful Workplace, Motorola's Employee Assistance Program, Ambassador Program, Wellness Initiatives, Global Employee Consultation System (GECS), ONCALL, Food Service Initiatives.

5.3.b.3

CGISS' PULSE survey is used to determine employee well being, satisfaction and motivation of employees worldwide. The data from our survey was compared to over three-dozen companies similar to Motorola. The normative data indicated our results were above the industry norms in many benchmarked categories. The next PULSE survey will be administered in July 2002.

The formal and informal assessment methods and measures used to determine well being, satisfaction and motivation are described in Figure 5.3-3. The key factors that affect employee well-being, satisfaction, and motivation are determined through methods such as employee focus groups, reviewing employee productivity, retention metrics, through information exchange with our employee business councils, the Office of Leadership, and through information via chat sessions with employees. These results are included in the strategic planning process, and are also included in the evaluation and improvement of leadership effectiveness.

5.3.b.4

In 2000, CGISS performed extensive linkage analysis between PULSE results and real business results (financials, customer satisfaction data, human resource outcomes, and productivity data). CGISS found a direct relationship between employee's overall satisfaction and actual turnover in our business. This relationship drove the evolution of our retention team and its efforts and our extensive retention analysis on a monthly basis. PULSE also demonstrated a relationship between customer awareness, as measured by PULSE, and actual customer satisfaction.

Figure 5.3-3 Assessment Methods

Well-Being	Satisfaction	Motivation
<ul style="list-style-type: none"> o Customers Sat. Survey o Team Membership o MERT o ESIH Champions o Utilization Rates o Health & Safety Depot o Health Risk Analysis o Pulse Survey 	<ul style="list-style-type: none"> o Pulse Survey o Town Halls o Let's Chat o Open Door Policy o Turnover 	<ul style="list-style-type: none"> o Market data o Pulse Survey o STAR o Productivity Charts o Leadership Assessment

Item 6.1 Product and Service Processes

6.1.a.1 CGISS' high level product and service design process framework is called the M-Gate process, which includes 15 "gates" or phases. M-Gates represent a comprehensive set of Marketing, Engineering, Project Management, Manufacturing and other functional activities to ensure proper business planning and implementation. The Market and Product Line Planning (MPP) gates M-15 through M-11 address the Market Intelligence and Analysis, Business Case Development and the

Portfolio Planning phase associated with a project and results in the development of a Business Solution. This solution is transitioned to the System and Product Development (SPD), gates M-10 through M-0. These SPD gates address activities of project definition, implementation, launch and close out of production delivery systems. Both MPP and SPD are cross-functional processes that require joint participation of Marketing, Engineering, Manufacturing, Order Entry, Order to Cash, Product Distribution, Customer Service Organizations and other functions. Key elements of the M-Gate process are described in Figure 6.1-1.

Figure 6.1-1 The M-Gate Process

Gate	Requirements	Owner(s)
M-15 Idea Accept: Formally launch a new business case for a specific opportunity	<ul style="list-style-type: none"> ○ Market Opportunity ○ Opportunity Objectives ○ Strategy Alignment 	<ul style="list-style-type: none"> ○ Gap Analysis Team ○ Customer Representative ○ Gap Analysis Team
M-14 Concept Accept: Decision to invest effort and resources to develop a business case	<ul style="list-style-type: none"> ○ Business Case Team ○ Proposed Business Case 	<ul style="list-style-type: none"> ○ Project Sponsor ○ Business Case Team
M-13 Solution Select: Select business cases that meet a minimal set of financial criteria	<ul style="list-style-type: none"> ○ Customer Feedback ○ Detailed Business Case ○ Project Cost Estimates 	<ul style="list-style-type: none"> ○ Business Case Team ○ Business Case Team ○ Estimation Experts
M-12 Portfolio Accept: Approve portfolio and resource allocation for business case	<ul style="list-style-type: none"> ○ Business Cases ○ Solution Roadmaps ○ Solution Portfolio ○ Technology, Architecture & Platform Strategy 	<ul style="list-style-type: none"> ○ Business Case Team ○ Business Case Team ○ Portfolio Mgt. Group ○ System Engineering
M-11 Solution Lock: Approve the feature portfolio, project strategy and resource allocation and launch products required for solutions	<ul style="list-style-type: none"> ○ Project strategy, ○ Feature descriptions / list ○ Budgetary estimates ○ Staffing plans ○ Solutions Roadmaps ○ Project Manager ○ Process feedback and Lessons Learned 	<ul style="list-style-type: none"> ○ Portfolio Management ○ Solution owner ○ Estimation Experts ○ Portfolio Management ○ Portfolio Management ○ Project Sponsor ○ Portfolio Management
M-10 Project Initiation: Engage project team and transfer ownership to specific project manager	<ul style="list-style-type: none"> ○ Project start ○ Project Business review 	<ul style="list-style-type: none"> ○ Project Sponsor ○ Project manager
M-9 System Requirements Baseline: Establish baseline project scope	<ul style="list-style-type: none"> ○ Core Team ○ Staffing Plans ○ Resource Checkbook ○ Project Mgt. Plan ○ Technical Requirements ○ Business and Mfg. Requirements ○ Selection of Components suppliers ○ Intellectual property review 	<ul style="list-style-type: none"> ○ Project Sponsor ○ Team leader ○ Resource Manager ○ Project Manager ○ System Engineering ○ Core Team ○ Sourcing And Product Mgt. ○ Core team
M-8 System Requirements Allocated: Establish baseline allocation of project scope to develop Contract Book plans	<ul style="list-style-type: none"> ○ Technical Requirements Allocations ○ Business/ Mfg. Requirements Allocation ○ System Modeling ○ Product / System Test Strategy ○ Business Test Strategy ○ Customer Introduction Strategy 	<ul style="list-style-type: none"> ○ System Engineering ○ Mfg., Sourcing, Services, Marketing ○ System Engineering ○ Dev, Field, Test Eng. & Marketing ○ Marketing ○ Sourcing ○ Manufacturing

Gate	Requirements	Owner(s)
	<ul style="list-style-type: none"> ○ Mfg. Ramp strategy 	
M-7 Contract Book: Secure commitments of all impacted organizations to the implementation launch and closeout phase of project	<ul style="list-style-type: none"> ○ Contract Book ○ Staffing plans ○ Resource checkbook ○ Project management plans ○ Sourcing 	<ul style="list-style-type: none"> ○ Project manager ○ Team leader ○ Resource manager ○ Project manager ○ Sourcing
M-6 Design Readiness: Ensure the completeness and correctness of subsystem requirements. Re-confirm the organization's ability to meet original plan	<ul style="list-style-type: none"> ○ Subsystem requirement allocation ○ Next level Business / Mfg. Requirement ○ Test specifications ○ Sourcing ○ Operability Design Guidelines 	<ul style="list-style-type: none"> ○ Development Engineering ○ Manufacturing, Service and Marketing ○ Test Engineering ○ Prod. Mgt., Development ○ Engineering Sourcing ○ Development Engineering
M-5 System Test Readiness Ensure that the product meets the defined project scope and the quality is at acceptable levels.	<ul style="list-style-type: none"> ○ Product / Systems ○ Documentation and Training ○ Test beds / test cases / scripts ○ Mfg. Systems and processes ○ Sourcing 	<ul style="list-style-type: none"> ○ Development Engineering ○ Technical Publications ○ Test Engineering ○ Mfg. and Service ○ Manufacturing planning
M-4 Ready for Field Test: Engineering development complete.	<ul style="list-style-type: none"> ○ Product / System ○ System Analysis & Modeling ○ Manufacturing systems and processes ○ Sourcing ○ Field test cases, tools and scripts ○ Field test plan ○ Marketing communications 	<ul style="list-style-type: none"> ○ Development and Test Engineering ○ Dev. & System Engineering ○ Mfg., Dev. and Service ○ Mfg. planning & Sourcing ○ Test engineering ○ Field Engr. ○ Marketing
M-3 Ready for Controlled Intro: Products and support ready for commercial launch of controlled rollout	<ul style="list-style-type: none"> ○ Product and Systems ○ Launch staffing plan ○ Resource checkbook ○ Launch Preparations 	<ul style="list-style-type: none"> ○ Dev., Sys, Test, Field Engr. Mfg., Quality ○ Team leader ○ Resource Manager ○ Team leader
M-2 Volume Deployment: Permit unrestricted deployment to marketplace	<ul style="list-style-type: none"> ○ Product / System ○ Manufacturing systems and processes ○ Sourcing ○ Global launch ○ Training and Documentation ○ Cost management ○ Project Lessons Learned 	<ul style="list-style-type: none"> ○ Dev. and Test Negro, Manufacturing ○ Mfg. planning & Sourcing ○ Team Leaders ○ Technical Publications ○ Core Team ○ Core Team
M-1 Retirement Plan Approved: Determines when a product meets criteria to begin process of ending production and customer shipments	<ul style="list-style-type: none"> ○ Product / Platform Roadmap ○ Retirement Plan ○ Project Business Review ○ Project Lessons Learned 	<ul style="list-style-type: none"> ○ Product Management ○ Retirement Core Team ○ Retirement Core Team ○ Retirement Core Team
M-0 End of Life; Terminate support for product or system	<ul style="list-style-type: none"> ○ Product Retirement Lessons Learned 	<ul style="list-style-type: none"> ○ Retirement Core Team

The M-Gate process was created under the auspices of the System and Product Development Board of Directors, which is comprised of senior engineering managers from each sector. The System and Product Development (SPD) Board of Directors owns the overall M-Gate process framework and provides periodic updates per request from corporate-wide users. A Maintenance Team reports to the SPD Board of Directors and the SPD Operating Council for the overall framework improvements based upon user evaluation, best

practices within the Sectors and internal benchmarking. A compass site provides a collection point from all users in the M-gate process that identifies improvement opportunities. The SPD Board of Directors meets at least quarterly to review, authorize, prioritize, and resource improvements to the overall framework. Program Management owns the responsibility of deploying and using M-Gates on each authorized program /project.

Each gate has an objective that defines the business purpose of the gate. Specific commitments are established and/or confirmed at M-Gates 12, 11, 7, 3, 2 and 1. Each gate requires an owner who is accountable for tracking the gate requirements, maintaining status and taking corrective action to ensure that the gate requirements are met in a timely manner. Each gate requires a review board whose function is to approve the ultimate completion and passage of the gate. Lessons learned are incorporated as requirements in M-Gates 11, 7, 2, 1, 0 to drive continuous improvements by the process owners or by the Maintenance teams for framework issues. The program manager is responsible to ensure that the lessons are completed by the appropriate participants in the process and forwards the conclusions to the M-Gate Maintenance team for consideration. Lower level detailed processes exist for each specific discipline and function.

6.1.a.2 Customer and market requirements are key elements in the criteria of gates M-15 - M-11. The processes use customer/market inputs to develop a business case for the product. Information gathered from the customer listening and learning techniques described in Item 3.1 are evaluated and considered. Specific sources of data and information include inputs directly from customers, customer advisory groups, indirect distribution partners, trade associations and the output from the Business Intelligence process. Changing customer and market requirements are considered throughout the entire M-Gate process. Critical customer requirements can be added to the project that is under way through the Configuration Control Board (CCB) Process. Appropriate project personnel must sign-off on plans to incorporate changes. CGISS has both mainstream releases and maintenance releases. New requirements can be added to either type of release through the CCB process. If the change requirement impacts the earlier gate's output criteria, the process reverts to the earliest impacted gate.

6.1.a.3 Potential new technology, such as e-technology, is considered in CGISS' design process in M-Gates 15-13, with input from a dedicated advanced technology organization. CGISS uses the Vital Few process to focus on new technologies and new market opportunities. The Advanced Technology and Strategy Team, along with Portfolio Management, Motorola Labs and the Product Groups participate in the process by providing domain expertise, as required. The Technology Architecture Platform Strategy is developed prior to M-12. Specific technology input is pulled from integrated technology roadmaps, technology literature, symposia, competitive offerings, and academia and research outputs.

Similarly, production delivery systems' new technology is derived from manufacturing roadmaps, industry capabilities knowledge and benchmarking. Changes are reviewed and prioritized within the Information Technology (IT) Governance process, which further examines the production and delivery technology opportunities and its business impact. All recommendations are submitted to the IT Board

of Directors for decision on inclusion into the IT resource plan.

6.1.a.4 The M-gate requirements and the more detailed specific processes as well as the proactive quality, process and engineering teams ensure that design quality, cycle time, lessons learned, technology and productivity are addressed. Specific M-Gate metrics (Dashboard and Risk Charts), tracked by the Project Manager continuously monitor each project for schedule, program slippage, cost, X-factor (cycle time), staffing and M-gate status scope change, risk assessment and risk mitigation plans. In the "Meet Commitments" meetings, these metrics are reviewed at the group level monthly and at the division /region level biweekly to provide the individual focus necessary to achieve project expectations. Program schedules appear on scorecard goals at the group and divisional/regional level.

The CGISS Sector level Scorecard identifies customer-delivered quality as a key goal, with a significant weighting in the Motorola Incentive Program (MIP). These goals translate through the organizations as a way to reduce defects, improve test capabilities, enhance Accelerated Life Testing, reduce customer-experienced problems, reduce warranty, and improve internal manufacturing / 3rd party quality resulting in improved productivity and increased efficiency.

An additional element within the M-gate process that ensures customer-delivered system / product quality is the (SA2000) ship acceptance criteria for new products at the manufacturing site and in the region in which they will be sold. Included is a SA2000 checklist that defines the minimum requirement for ship acceptance. The Quality Assurance Manager reviews the SA2000 checklist with project management for completeness prior to granting ship acceptance in M-Gate 3. The checklist requires attainment of all contract book design requirements (i.e. performance to specification), quality requirements (i.e. DPU and ALT), manufacturing requirements (i.e. process capabilities, supplier certifications), distribution readiness and support capability. After product acceptance is attained, quality audits are conducted.

Figure 6.1-2 Key Production and Delivery Processes *(1) in-process measure (2) customer feedback (3) supplier feedback

6.1.b.1	6.1.b.1	6.1.b.2	6.1.b.3
Key production/delivery processes	Key performance requirements	Meeting key performance requirements	Key performance measures/ indicators*
New Product Intro	Defined in Product Contract Book at M-7	<ul style="list-style-type: none"> Meeting commitment meetings Design reviews Program reviews 	<ul style="list-style-type: none"> Cpk, (1) Product sigma goal, (1) Product yield goal, (1) Product Slippage (1)
Schedule Sharing	<ul style="list-style-type: none"> Weekly deliveries Minimize inventories 	<ul style="list-style-type: none"> Daily planning meeting Schedule sharing meeting 	<ul style="list-style-type: none"> Stock out (1,3) Conformance to SS window (1,3)
Hubbing	<ul style="list-style-type: none"> Stock levels Inventory carried by supplier 	<ul style="list-style-type: none"> Production control meetings 	<ul style="list-style-type: none"> Stock out (1,3) Cost (1)
Build to Order & Build to Stock	<ul style="list-style-type: none"> Production capacity Manufacturing capability Cost Management Delivery commitments Product compliance 	<ul style="list-style-type: none"> Factory capacity analysis Capital equipment reviews Process capabilities studies Operations reviews Testing results Customer Quality audits 	<ul style="list-style-type: none"> Forecast (1) Yields & Throughput (1) Cpk (1) Statistical process control chart (1) Product cost (1) SROE (1) CRSD & Schedule Share Window Test yields (1) CQA results (1)
Distribution Center	<ul style="list-style-type: none"> Finish goods inventory Delivery commitments 	<ul style="list-style-type: none"> Operations reviews Customer Quality audits 	<ul style="list-style-type: none"> CRSD performance (2) Stocking levels (1,3) Supplier delivery performance (1,3) Material Cost (1,3)
System Integration	<ul style="list-style-type: none"> System delivery System compliance Cost Management 	<ul style="list-style-type: none"> Operations reviews Testing results Quality audits 	<ul style="list-style-type: none"> CRAD performance (2) Factor Accept Test Plan (1) Inventory Cost (1) Cost per Unit (1,3)

Key cost goals are established for each project in according to the appropriate M-Gate requirement established by the business plan. Program costs are tracked through the program management office and at the “Meet Commitments” reviews.

Transfer of learning from past projects and other parts of the company are output requirements of specific M-gates as noted in Figure 6.1-1. The gate owners drive improvement in the process accordingly. New design technology is an input to the M-Gate process through M-Gate 13. Design quality is also enhanced by the selection of the best technologies for product development. The Advanced Technology and Strategy team evaluates technology that is available in the telecommunications industry, matures the technology and utilizes a technology transfer process to ensure a seamless transition.

Use of early supplier involvement in the design phase enhances domain knowledge and ensures supplier capability in the product design processes. Parts qualification and supplier’s statistical process control data eliminate the need to receive inspections, which can often result in cost and productivity inefficiencies.

6.1.a.5 CGISS’ M-gate cross-functional product and service approach involves input from all relevant operational areas

including strategy, marketing, engineering, manufacturing, sourcing, distribution, sales and service. Each gate contains one or more requirements (deliverables). These requirements provide information that is necessary to determine if the objective of the gate has been met and to support the decision making process that must occur at each gate. Failure to satisfy the criteria associated with a requirement may constrain the start of activities that are triggered by passage of the gate. The gate requirements and exit criteria ensure that the production/ delivery system and performance are satisfied. The ship acceptance elements are mapped to the M-Gate process to produce the SA2000 checklist. Product ship acceptance is defined when gate M3 is completed and the SA2000 checklist is used to determine compliance of all key operational requirements prior the exit of M3 (ship accept).

6.1.a.6 The M-Gate process includes a number of approaches that ensure trouble-free and timely production and launch. They include: early supplier involvement, SA2000 check sheet processes, post mortems, contract books, prototype builds, pilot builds / tests, customer testing and product ship acceptance.

An automated Accelerated Life Test (ALT) has been designed to simulate life usage of the products and is a predictor of warranty service. Rigorous ALT goals are

established in the contract book (M-Gate 7) to achieve warranty expectations. The product approval (M-Gate 3) requires that specific ALT goals for each product are achieved.

In order to prevent rework and facilitate trouble-free introduction of product and system software, the Software Engineering Institute (SEI) capability model is institutionalized in CGISS. Specific goals exist to drive all product and systems software organizations to higher levels of the capability index.

6.1.b.1 CGISS' core production and delivery processes include material flow from vendors through one of two separate build processes defined by our customers' needs: build to order (low volume unique products) and build to stock (high volume standard products). Figure 6.1-2 identifies key elements of the production delivery process along with their requirements and key measures.

6.1.b.2 CGISS ensures that daily operations meet operational performance requirements by having well-deployed systems and processes that have been refined through continuous improvement. The systems and processes meet internal and external certification requirements, including ISO-9000 and ISO14001. Along with well-defined procedures, a "Black Belt/Green Belt" program is aimed to provide specific employees with strong technical problem-solving skills in statistical process control, six sigma, control experiments, etc. These individuals provide leadership to drive the continuous improvement processes based on a data-centric problem solving in the production and delivery process.

6.1.b.3 Key measures (both in-process and end-of-process measures and customer feedback) have been defined for all of CGISS' core processes. These operational measures (see Item 4.1.a.1 and Figure 6.1-2 above) have performance expectations based on business, product and customer requirements. Measures that miss expectations are immediately corrected and monitored, via quality and manufacturing review forums. Along with specific measures, the processes are managed and controlled using Statistical Process Control Charts that establish upper and lower control limits for stable processes. When either the upper or lower limits are exceeded, corrective action is taken. Key measures are included in Figure 6.1-2, depicting their alignment with the core processes. Note that only a sample of measures is presented in Figure 6.1-2.

If a serious deviation impacting customer, product or business requirements is identified, a "Stop Ship" process can be initiated. Once a stop ship is declared, the quality manager, conducting the meeting, transfers facilitation of the stop ship meeting to the functional Quality Manager of the organization that owns the issue. This new owner chairs regular meetings/conference calls with the appropriate representatives from engineering, manufacturing, and business teams to accomplish the following: root cause

analysis, short term containment actions, and long term containment actions. A post mortem and lessons learned are completed as part of the process.

6.1.b.4 Regularly scheduled Accelerated Life Testing (ALT) that exposes products to a stress environment simulating years of product use are conducted on currently manufactured products to verify that product integrity has not degraded over time.

Automated product test is performed to the Contract Book product specifications during the manufacturing process (some tests are eliminated as the parameter performance is achieved by product design). Through preventative problem solving, process design and statistical techniques, product test yields are targeted for continuous improvement. Facility-driven statistical sampling and test time reduction activities lower the total test and inspection costs.

Customer Quality Audits are used at the end of the manufacturing process to ensure conformance to customer requirement and absence of out-of-box failures. Variable statistical sampling is used to identify potential problems and to minimize inspection cost. Immediate feedback to the manufacturing operation accelerates corrective action and containment. Key suppliers also provide in-process and end-of-line audit information that eliminates the need for incoming inspections through regular quality reviews.

6.1.b.5 During scheduled Scorecard performance reviews and monthly operational reviews, process results are measured and challenged against the Scorecard requirements and continuous improvement goals. Using the Evaluation and Improvement model depicted in P.2.c, the process owners for each business / facility are responsible to make improvements within the business, taking inputs including operational performance, process analysis, process mapping, consideration of new and alternative technology (from industry publications and industry trends) and feedback from benchmarks and customers. Process changes are communicated and implemented throughout the entire Sector through weekly hotlines / status reports, staff meetings, inter-sector meeting / Motorola functional meetings and project reviews.

Item 6.2 Business Process

6.2.a.1 CGISS' business proposition focuses on new technology solutions in the Mission Critical and Enterprise markets. Transitioning technology into delivered products and services in a timely manner at market acceptable value points drives the growth model. The key processes that contribute to business growth and success for CGISS are described in Figure 6.2-1.

6.2.a.2 The annual strategy process and the MPP process (Gates M-15 through M11) synthesize inputs from customers, technologies, process capabilities, competitors and external

trends. The sources of information vary, as appropriate, depending on the specific business process. This provides business process requirements to individual business process owners. The continuous review of the strategy of record identifies changes in the business environment that impact

growth and success and provide direction to the appropriate process owners. Besides business inputs, specific process owners receive additional inputs for improvements from technology roadmaps, process experts, and suppliers as appropriate.

Figure 6.2-1 Key business Processes

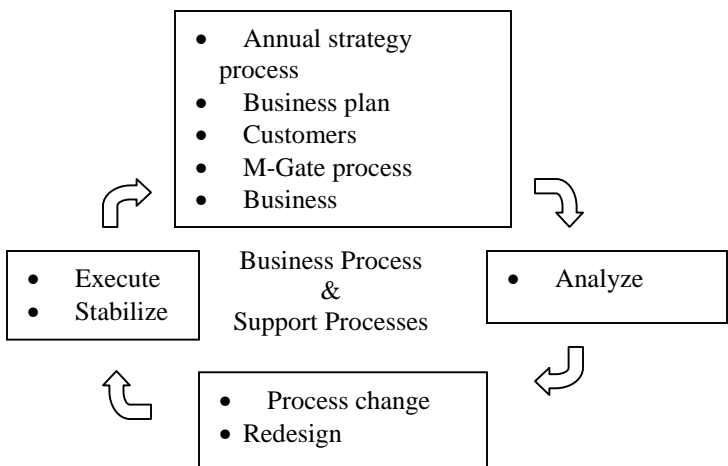
Key Business Processes	Process Requirements	Measures*	Expected Performance
Innovation / Research (Motorola Labs)	<ul style="list-style-type: none"> Innovation to generate profitable growth. 	<ul style="list-style-type: none"> Conformance to Commitment (1) 	<ul style="list-style-type: none"> ___% ___%
Research & Development / Technology Acquisitions	<ul style="list-style-type: none"> Research and Development that deliver world-class products and systems. M-Gates 15 - 10 	<ul style="list-style-type: none"> Technology Maturity index (1) Number of patents 	<ul style="list-style-type: none"> ___% ___ per year
E-Business	<ul style="list-style-type: none"> Usage 	<ul style="list-style-type: none"> Orders per week (1) Site visits per mo. (1) % Indirect invoice paid per mo (1) Warranty claims submitted. (1) 	<ul style="list-style-type: none"> _____ _____ ___% ___%
Supply Chain Management & Outsourcing	<ul style="list-style-type: none"> Cost improvement Provide supply chain capability to serve market demand Support Sector Growth requirements Meet Customer Sat. 	<ul style="list-style-type: none"> Customer Requested Ship Date (2) Order to Cash Cycle Time Metrics (Total and Short Cycle), (2) Cost (manufacturing cost as a % of Revenue (covered in Section 4). (1) Cost Reduction \$ (1) 	<ul style="list-style-type: none"> CRSD: ___% on-time Cycle OTC Time: ___ days Total Business OTC Cycle Time: ___ days Year on year improvement in all cost metrics Proprietary
Supplier Partnering	<ul style="list-style-type: none"> Mfg. effectiveness Customer delivery Mfg. efficiencies 	<ul style="list-style-type: none"> Quality (1,3) Delivery (1,3) Cost Savings (1) 	<ul style="list-style-type: none"> > ___ ppm defective Zero stock-outs ___% Matl Cost reduction
Mergers and Acquisitions	<ul style="list-style-type: none"> Maximize shareholder value Mitigate knowledge seepage Retain top talent Ensure career development 	<ul style="list-style-type: none"> Business Performance (1) <ul style="list-style-type: none"> SVA Sales & releases Pre-tax profit Pay back Capital expenditures Budgeted costs Market share Integration Process Dashboard (1) Post Mortem Learning's (1) Retention of Top Talent (1) 	<ul style="list-style-type: none"> Percent to plan Percent to completion of functional spectrum roadmap M&A website freshness ___% retention of top ___% talent ___% transition of bottom ___% performers Per succession plan
Key Business Processes (6.2-1)	Process Requirements	Measures*	Expected Performance
Engineering Project Management	<ul style="list-style-type: none"> M-Gate framework of Window opportunities 	<ul style="list-style-type: none"> Top 20 Meet Commitments (1) Schedule variance (1) Risk (1) Slippage (1) 	<ul style="list-style-type: none"> 100% compliance Zero RPN < _____ Zero
Sales & Marketing	<ul style="list-style-type: none"> Sales Effectiveness High Performance 	<ul style="list-style-type: none"> Performance to Quota (1) Budget & Receivable Perf. (1) Market Share (1) 	<ul style="list-style-type: none"> 100% Proprietary Proprietary

*(1) in-process measure; (2) customer feedback; (3) supplier feedback

6.2.a.2 The annual strategy process and the MPP process (Gates M-15 through M11) synthesize inputs from customers, technologies, process capabilities, competitors and external trends. The sources of information vary, as appropriate, depending on the specific business process. This provides business process requirements to individual business process owners. The continuous review of the strategy of record identifies changes in the business environment that impact growth and success and provide direction to the appropriate process owners. Besides business inputs, specific process owners receive additional inputs for improvements from technology roadmaps, process experts, and suppliers as appropriate.

6.2.a.3 The individual process owners are responsible for the process design that is done, along with inputs from the annual strategy process, business plan, customers, suppliers, internal process results and process experts. Inputs, new or changed business requirements and process measures are analyzed for improvement opportunities by the internal process owner and process experts for desired requirement impact. Opportunities that meet prioritization thresholds are resourced with redesign teams or process improvement teams established to redefine, implement and stabilize the process as defined in Figure 6.2-2. Although the M-gate process is the way we design new product and services, a less complex process is used for Business Support Processes. A management review mechanism facilitates resource allocations and program execution.

Figure 6.2-2 Business / Support Process Design Process



6.2.a.4 Each business process is tied to Performance Excellence Scorecards that identify key measures in alignment with the annual strategic planning process. CGISS’ key measures to control and improve the business processes are depicted in Figure 6.2-1. Each measure has an expected performance, identified by the process owners. For example, managing program schedule, resources and cost is a critical requirement in the program management process. Each element of the program is analyzed for risk – the likelihood of an occurrence to happen and its impact. These two attributes are combined and rated on a 100-point criterion scale and risk mitigation plans are developed if CGISS 2002 Malcolm Baldrige Application Summary

necessary. If the resultant Risk Performance Number (RPN) is greater than 50, an escalation process is initiated. Some Business Process measures are defined by the business requirements through the Scorecard performance metrics to plan. Two basic elements ensuring that key requirements are met include training of employees to effectively perform their job and written procedures that define the key elements of the job. Training and procedures are institutionalized worldwide. The Motorola Incentive Program identifies plan performance as expected performance and stretch performance as superior achievement. The expected performance levels were derived based upon high-level historical performance, strategy and / or business requirements. When actual performance levels do not meet expected performance, the process is deemed out of control and a corrective action process with specific achievement goals, actions, and defined accountability helps to improve performance immediately. Specific measures include customer feedback, supplier feedback and in-process measures as depicted in the footnote categorization in Figure 6.2-1.

6.2.a.5 CGISS minimizes the cost associated with inspections, tests and process performance audits through a number of business-specific methods. The approaches include early supplier involvement in design, a parts qualification process that precludes the need for receiving inspection and use of supplier statistical process control data. Business processes’ cost-minimizing tactics are online and reduce manual information gathering. Formal technical reviews minimize assessment time through pre-classification of software projects by degree of difficulty. Non-audit related savings tactics include consignment relationships with suppliers to minimize inventory carrying charges and long-term supplier agreements that provide suppliers with security and CGISS with competitive prices. A well-defined merger and acquisition process with specific functional audit points minimizes the risk and cost associated with selecting the appropriate integration strategies and actions. Project management processes follow the Software Engineering Institute (SEI) CMMI model. Software engineering, system engineering and the product and process components are integrated within the overall development process to improve project performance, productivity and reduce cost. CGISS completed its first CMMI appraisal in early 2002, becoming the fifth CMMI appraisal by industry in the world.

6.2.a.6 CGISS’ business processes are evaluated and improved by the business owners in scheduled staff and operations meetings conducted regularly (the frequency of evaluation varies with the needs of each business process).

Inputs include performance measures and goals, changes in sector strategies, consideration of alternate technology and input from benchmarks and customers of the process. The process owners are responsible for implementing improvement within their functional areas. Improvements are institutionalized through procedural changes and shared

Sector-wide to all relevant functions through functional meetings and initiatives.

6.3.a.1 CGISS' key support processes include Finance, IT, HR / Staffing, Quality, Real Estate and Environmental, Health/Safety. (Figure 6.3-1).

Item 6.3 Support Processes

Figure 6.3-1 Support Processes, Requirements and Measures *(1) in-process measure (2) customer measure

Key Support Processes	Performance Requirements	Measures *	Expected Performance
Finance	<ul style="list-style-type: none"> High integrity High efficiency levels Timeliness Legal Compliance 	<ul style="list-style-type: none"> Ethics Training (1) Cycle Time (1) Accuracy (1) Cost/Function (1) Cash Collection (1) Weekly Receivables (1) Audit Results (1) Account Admin. (1) 	<ul style="list-style-type: none"> Completed training % of target Targeted hour of closing Improvement towards goal on exception invoices Cost as a % of Sales Collection % of Beginning Balance Weeks vs. Target No repeat points; all Satisfactory
IT	<ul style="list-style-type: none"> Response Access 	<ul style="list-style-type: none"> 1st call resolution Mean time to repair System availability 	<ul style="list-style-type: none"> >__% __ days >__% uptime
HR/ Staffing Employee Relations	<ul style="list-style-type: none"> Hiring Cycle Time Financial B/E WFP Accuracy Reduce SAT cases & EEOC Charges Employee well-being 	<ul style="list-style-type: none"> Requisition Approval to Hire Cycle Time (1) Act. Vs Budget (1) Act. Hires vs WFP (1) Cases YTD (1) Dissatisfaction cases (1) 	<ul style="list-style-type: none"> __ days __% below budget __% accuracy __% decrease Year over year decrease
Quality	<ul style="list-style-type: none"> High Customer Sat. High Quality Levels High Performance Compliance to ISO 	<ul style="list-style-type: none"> Customer Sat. Survey (2) Business Operation Quality Metrics (1) ISO Status (1) SEI (1) 	<ul style="list-style-type: none"> Top Box: __% CRSD: __%, CRAD: -__%, Customer resolution per improvement plan Warranty cost per improvement plan Outsource assembly yield > __% Rolled yield . __% ISO certified Level __ CMM / CMMI
Real Estate	<ul style="list-style-type: none"> Physical space Cost 	<ul style="list-style-type: none"> Space Consolidation (1) Cost Reduction (1) 	<ul style="list-style-type: none"> Per plan Per plan
Environmental, Health & Safety	<ul style="list-style-type: none"> Maintain High Integrity Legal/Regulatory Compliance 	<ul style="list-style-type: none"> Audit results (1) Self-Assessment #s (1) VPP Review Results (1) 	<ul style="list-style-type: none"> Meet EHS Compliance Maintain VPP STAR Status Maintain ISO 14001 compliance

6.3.a.2 The process owners determine CGISS's support process requirements with input from the annual strategy and business plans. Scorecard alignment ensures that the goals match the strategic direction of the business. Additional inputs from subject matter experts on staff, regulations (internal and external), external customer surveys, internal customer inputs discussed in the various reviews and industry are continuously reviewed and enhanced accordingly. For example, customer satisfaction information is a Sector level Scorecard goal. Specific satisfaction inputs can enter the organization through the multitude of listening posts described in Section 3.1, the external customer satisfaction

perception and transactional surveys. These inputs provide the basis for activities to improve customer satisfaction. These inputs can also lead to specific internal operational metrics such as delivery conformance and issue resolution cycle time. Inclusion of support functions in the monthly and quarterly regional and group business reviews maintains consistency of the support goals with the operation and focus on performance results. The key operational requirements are specific to the process and are listed in Figure 6.3-1.

6.3.a.3 Key requirements are included in the design process according to Figure 6.2-2. The support process owner analyzes inputs from customers, the annual strategy process, internal

MOTOROLA

customers, business requirements and measures for improvement opportunities and priority. In the case of Customer Satisfaction, specific attribute information is used to prioritize and identify areas for improvement. Regional business organizations own their results and are responsible for actions on the top three attribute issues. Business priority thresholds and performance expectations provide the framework for the process owner to resource the improvement activities and institutionalize changes in the processes. The frequency of the design process evaluation can vary, but typically occurs annually in conjunction with the development of business plans, which are reviewed on a regular basis by the Management and Operations team.

6.3.a.4 Well-deployed processes with metrics, process controls, process reviews and corrective actions ensure that the daily operations of key support processes meet performance requirements. For example, the Top 5 Issue Process is a deployed quality process that weekly reviews the top five customer issues by region for status and progress. Owners assigned to each issue are the senior group level management representing the supply chain, engineering and sales. Weekly reports with updated issues and actions are distributed. As issues are resolved new issues are added to ensure there are always five top issues per region. Two basic elements ensuring that key requirements are met include training of employees to effectively perform their job and written procedures that define the key elements of the job. Training and procedures are institutionalized worldwide.

6.3.a.5. Each support process is tied to Performance Excellence Scorecards that identifies key measures in alignment with the annual strategic planning process. CGISS's key measures to control and improve the support processes are depicted in Figure 6.3-1. Each measure has been assigned an expected performance by the process owners. The expected performance levels were derived based upon high-level historical performance, strategy or business requirements. When actual performance levels do not meet expected performance, the process is deemed out of control and a corrective action process with specific achievement

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goals, actions, and defined accountability is employed to improve performance immediately. Specific measures include customer feedback and in-process measures as depicted in the footnote categorization (See Figure 6.3-1).

6.3.a.6 Support functions minimize cost with the use of targeted inspections, auditing procedures and preventive controls. Incorporating internal audits into the certification process with a single external audit partner provides continuity and cost-effective assessments. Additional cost minimizing techniques use process controls such as design checklist in the M-gate process that specifically addresses product and safety compliance and drives preventive measures.

6.3.a.7 Each functional support process owner is responsible for continuous improvement and uses staff meetings to monitor goals performance and drive improvement. Specific functional owners also have periodic meetings or conference calls to engage the regional functions in the process improvement learning. For example, all of the regional quality directors review the entire customer satisfaction survey process, annually. This customer satisfaction process surfaces both global and regional-specific concerns. Based on information gather from the previous regional customer satisfaction data, specific regional issues could be raised to global issues if appropriate for all regions. Likewise, global issues for the following years may be deemed a regional issue, based on regional performance and importance. Best practices are shared regionally through meetings and conference calls. Benchmark and customer inputs, supplier recommendations, process analysis, performance trends and audit surveillance provide the basis for improvement strategies. In addition, support operations are typically aligned across the corporation through steering committees or direct functional reporting structures that facilitate cross Sector learning and implementation of "Best Practices." The process owners and their teams for each business / facility are responsible to make improvements within their respective business.

Item 7.1 Customer-Focused Results

7.1 CGISS' trend in "Top Box" customer satisfaction survey results is excellent from 1999 through 2001, as noted in Figure 7.1-1. The reduction noted in 2001 is due to a change in the survey methodology to accommodate our customers desire for a more time efficient web survey process as a replacement for a telephone survey. CGISS substantially leads all other Motorola business units and industry benchmark (Figure 7.1-2). Additionally CGISS' trends in customer issue (Complaint) resolution cycle time and product warranty are favorable, as depicted in Figure 7.1-5, 6.

Figure 7.1-1

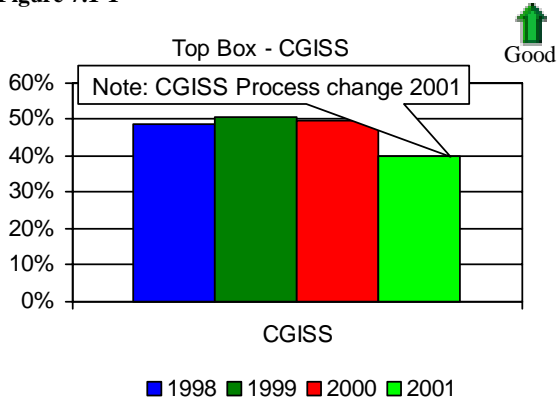


Figure 7.1-2

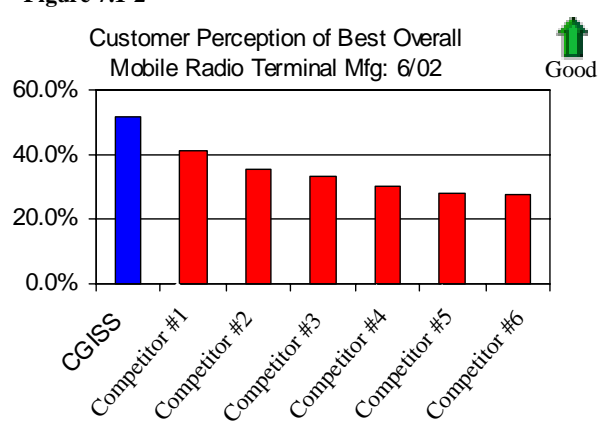


Figure 7.1-3

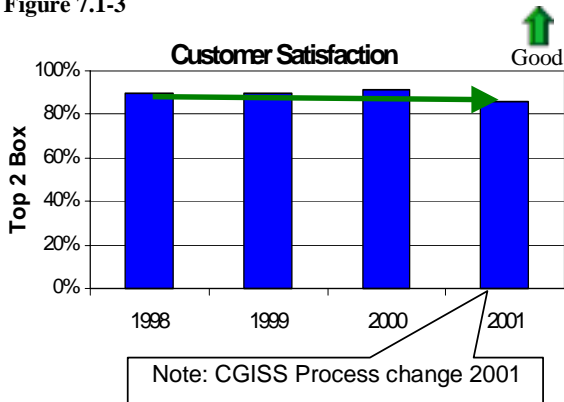


Figure 7.1-4

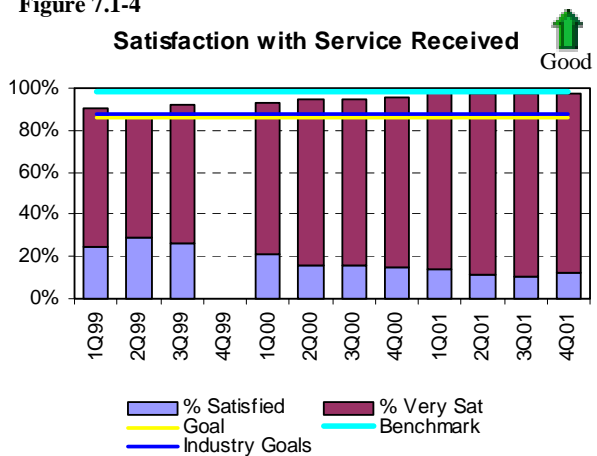


Figure 7.1-5

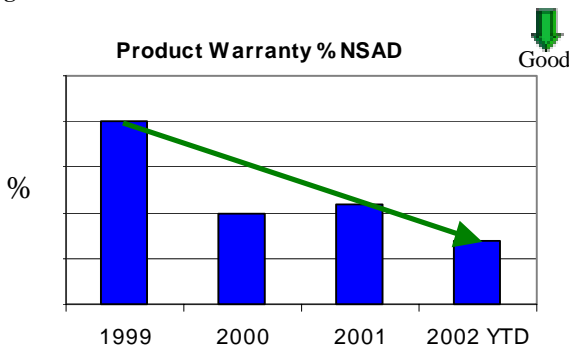
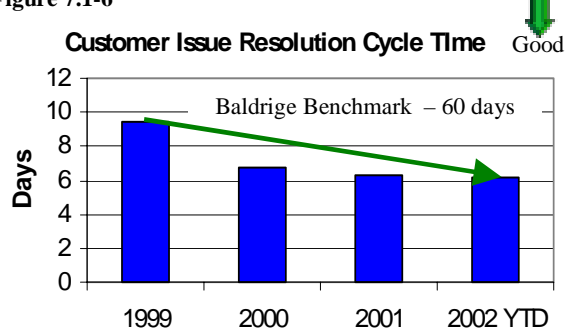
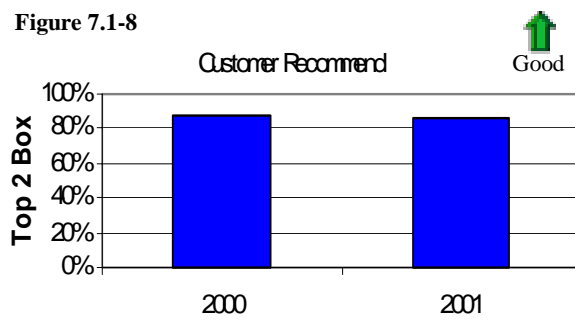
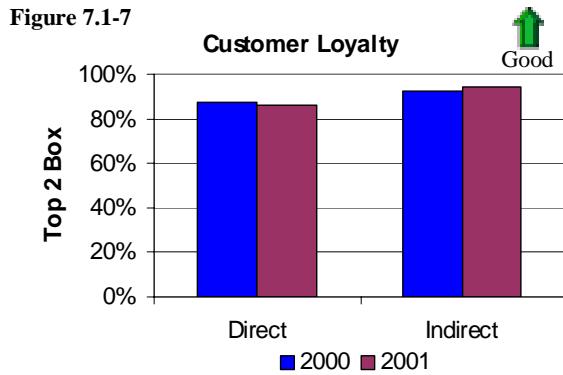


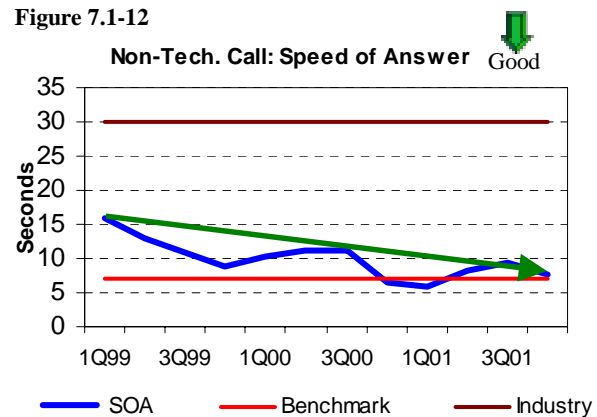
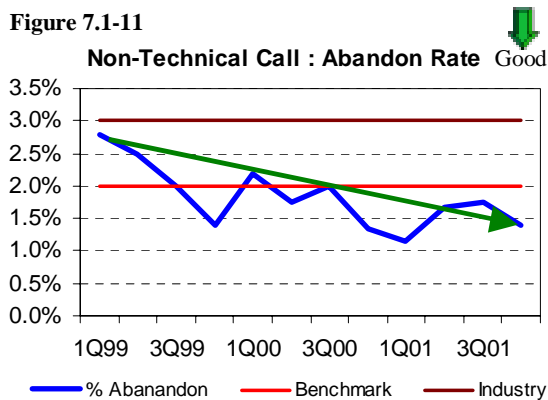
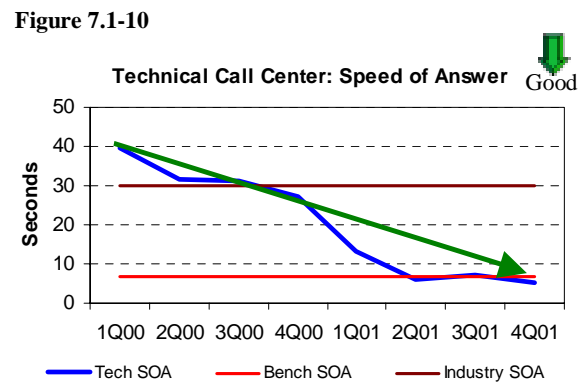
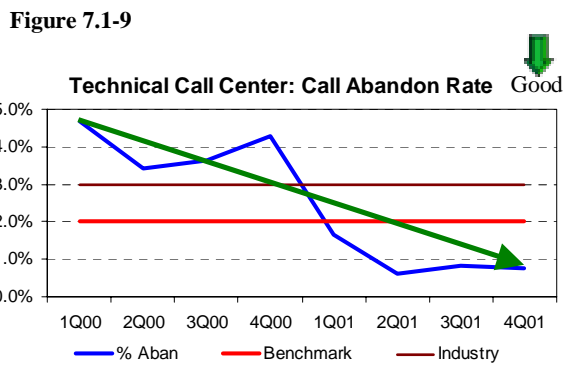
Figure 7.1-6



7.1.a.2 CGISS' customers have consistently rated CGISS very high in customer loyalty as noted in Figure 7.1-7. The Top 2 Box results mirror the customer loyalty, as depicted in Figure 7.1-8.



7.1. b CGISS' technical and non-technical call centers surpass industry standards and benchmarks in both abandon rates and speed of answer as evidenced in Figures 7.1-9, 10, 11, 12. Customer requested delivery times are excellent and improving as depicted in Figure 7.1-13,14.



Item 7.2 Financial and Market Results

Figure 7.1-13

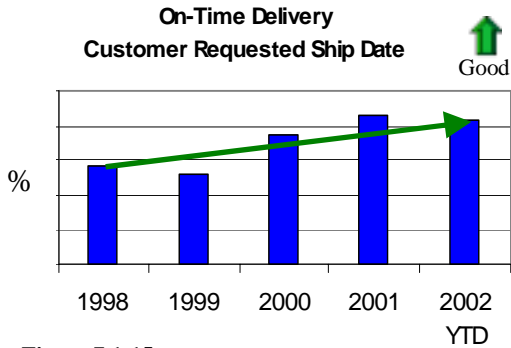


Figure 7.1-14

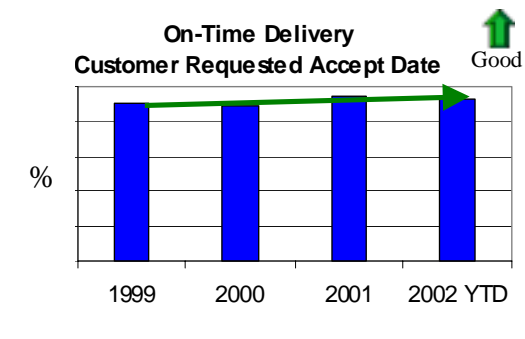


Figure 7.1-15

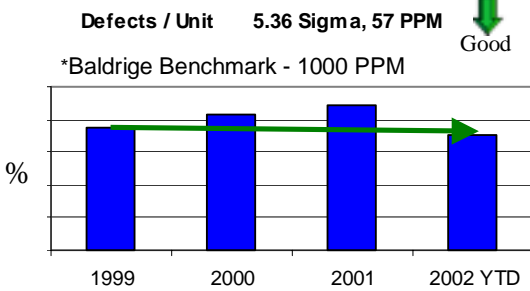
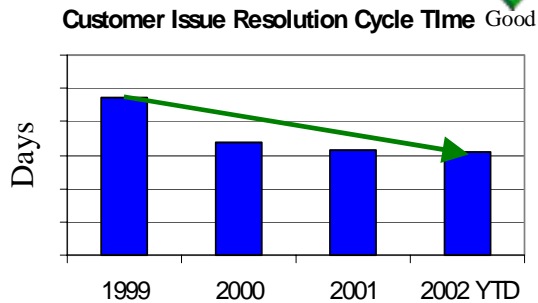


Figure 7.1-16



7.2 With the U.S. in a recession, the Communications Industry in a severe downturn, and Global economic growth flat, CGISS Sales were relatively flat. Competitive Basket 3 had slightly better sales growth due to the European base of one major competitor and aggressive acquisitions by another. Margins remained strong relative to competition. PBT% continued to be strong relative to competition. CGISS balance sheet management, combined with our profit performance, yielded very strong cash performance. CGISS achieved superior relative Return on Assets, and improvement in our internal measure, RONA%. The CGISS contributions of profits and cash along with significant company restructuring and revitalization, contributed to a strong stock performance relative to competitors and the NASDAQ 100.

Figure 7.2-1

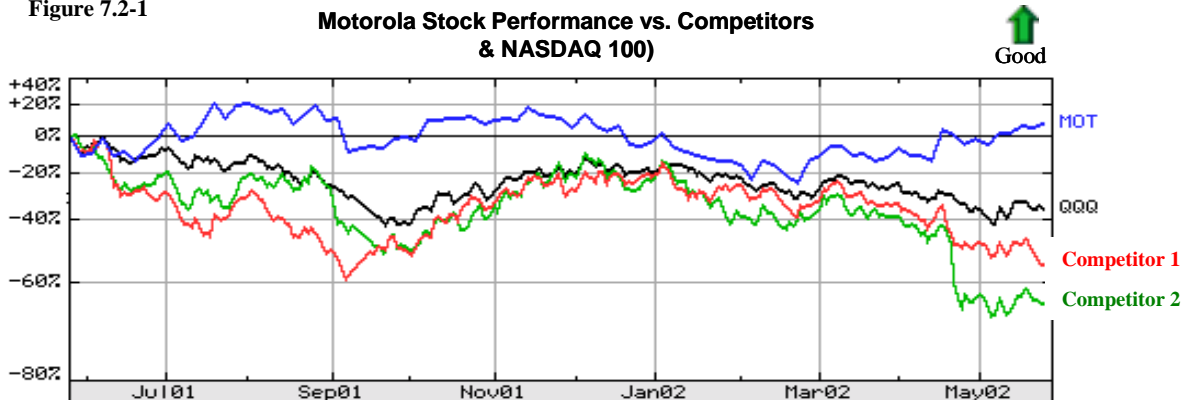


Figure 7.2-2

Profit Contribution - 2001



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Figure 7.2-3

Sales Growth

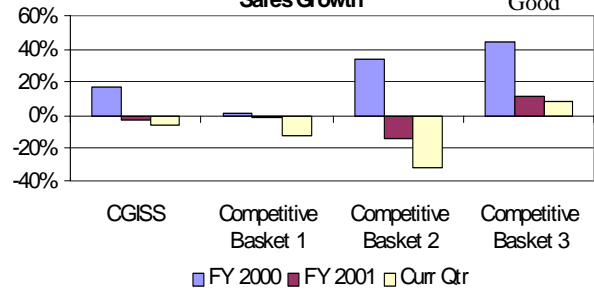


Figure 7.2-4

PBT %

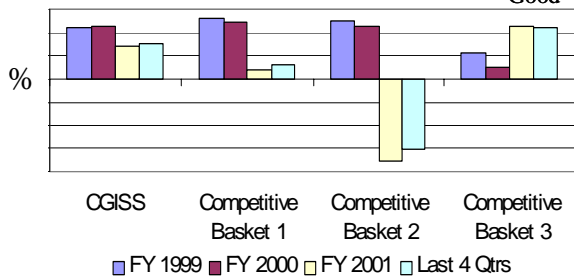


Figure 7.2-5

Gross Margin %

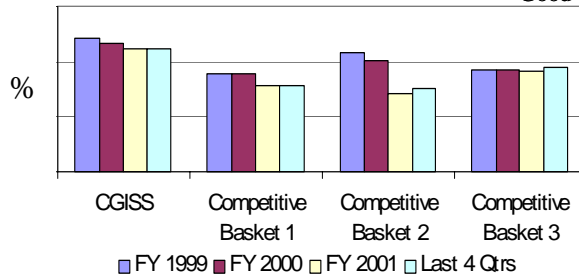


Figure 7.2-6

Cash Flow %NSAD

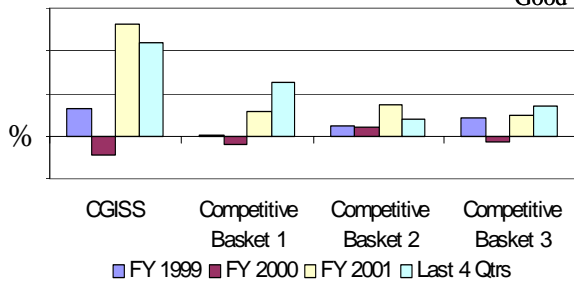


Figure 7.2-7

ROA % with CGISS RONA Comparative

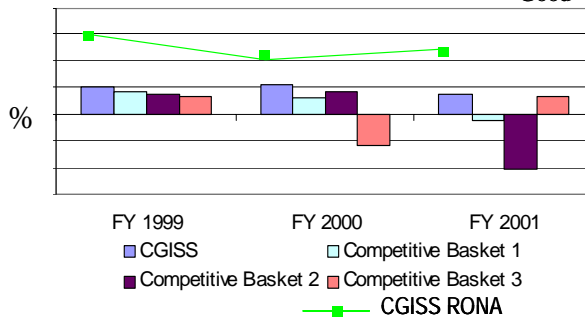


Figure 7.2-8

Subscriber Unit Global Market Share - Q4 2001



Company Confidential
CGISS is at least 2x
Closest Competitor

Figure 7.2-9

Q4 2001 Region Market Size & Motorola Share



Company Confidential
CGISS is at least 2x
Closest Competitor

Figure 7.2-10

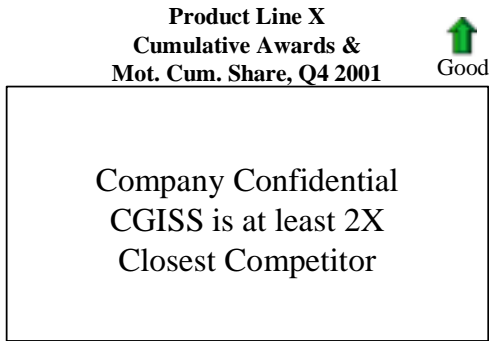
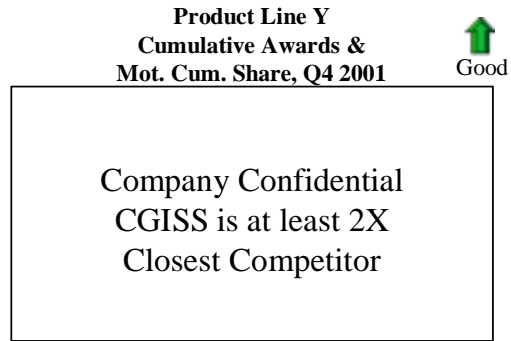


Figure 7.2-11



7.3 CGISS Human Resources key measures/indicators of employee well being, satisfaction and development results are positive and comparative data suggests that CGISS is best-in-class in many key areas including overall satisfaction

Job classification simplification – reduce the number of job codes from over 8500 to approximately 5000 corporate wide. Developed competency based jobs in the IT organization. IT job titles have decreased from 500 to 75. Worldwide Learning Services job titles reduced from 66 to 34.

Figure 7.3-1

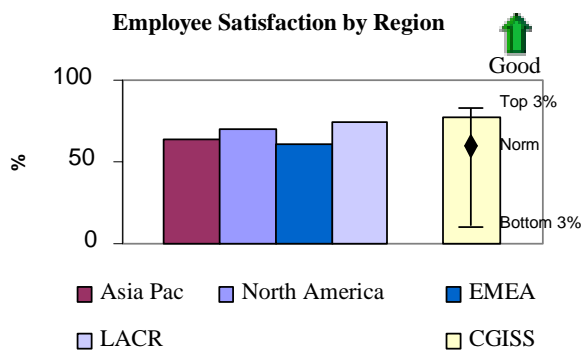


Figure 7.3-2

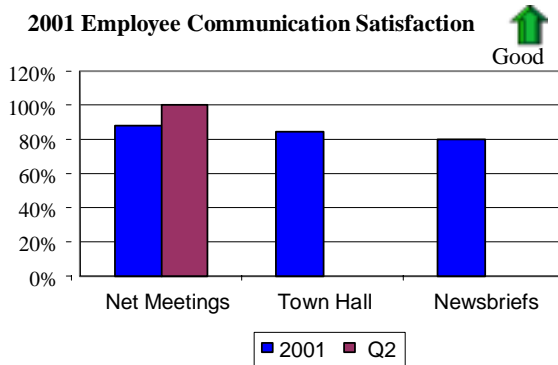


Figure 7.3-3

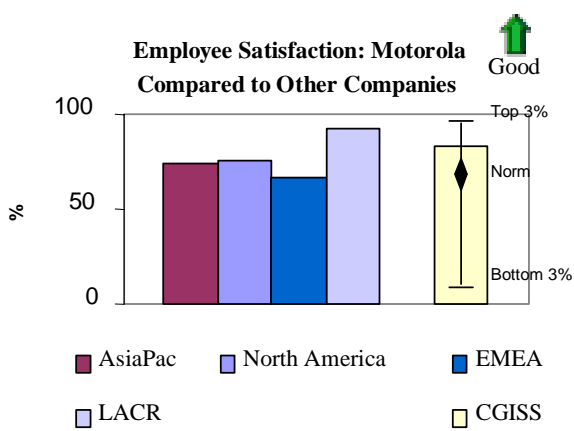
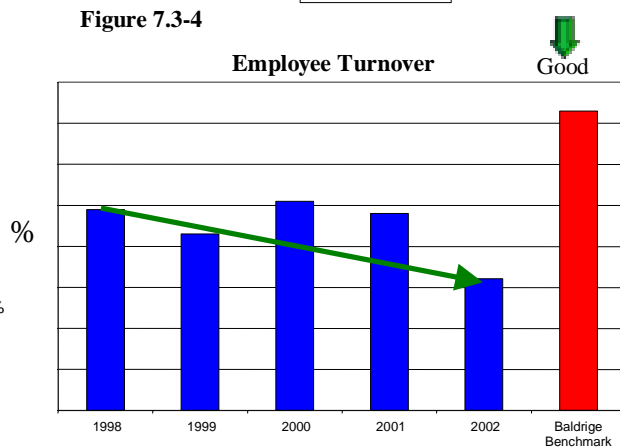


Figure 7.3-4



Item 7.3 Human Resource Results

Figure 7.3-5

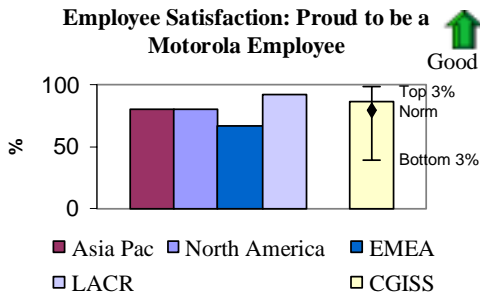


Figure 7.3-6

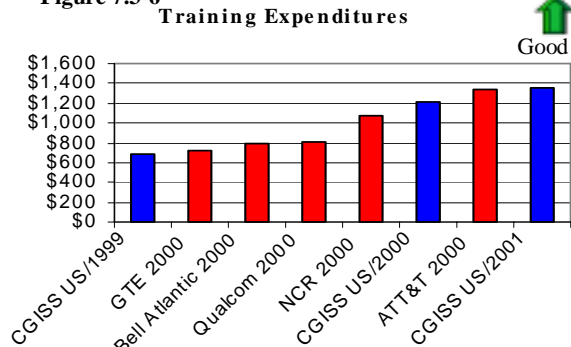



Figure 7.3-7 CGISS Bravo Reward Metrics  Good

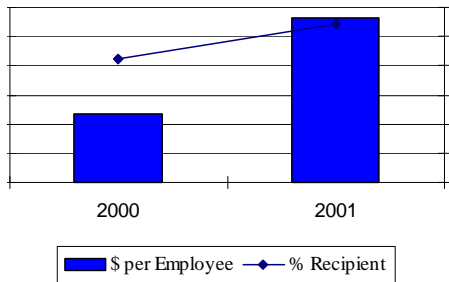


Figure 7.3-8 CGISS Stock Option History  Good

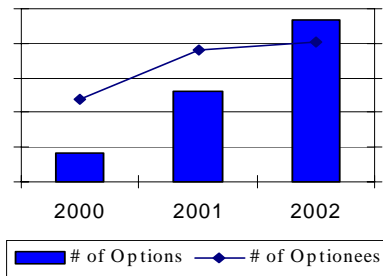



Figure 7.3-9 CGISS I/I Rate Per 100 Employees **14% Improvement**  Good

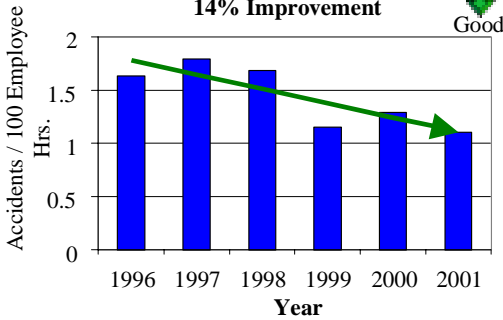


Figure 7.3-10 Injury And Illness Rate  Good

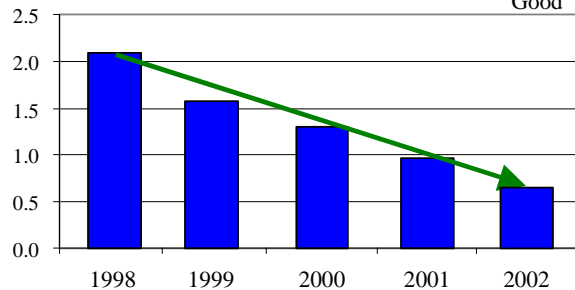



Figure 7.3-11 Workers Compensation Dollars/Employee  Good

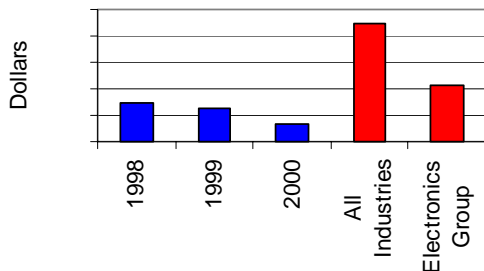

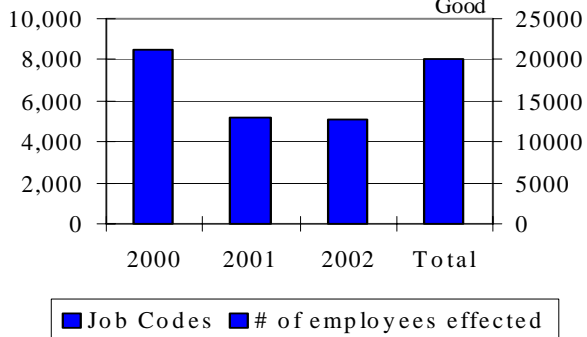


Figure 7.3-12 Job Simplification  Good



Item 7.4 Organizational Effectiveness Results

Figure 7.3-13

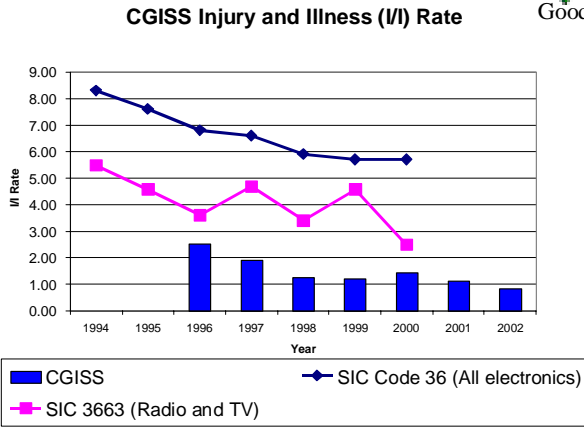


Figure 7.3-14



7.4 CGISS is enjoying favorable comparative results and positive trends in key indicators of the operational performance of design, production, delivery, business and support processes, including regulatory/legal compliance and citizenship.

Our organizations' key performance results that contribute to the achievement of organizational effectiveness is significant as illustrated in 7.4.

Figure 7.4-1

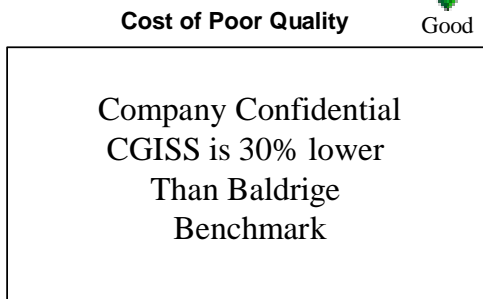


Figure 7.4-2

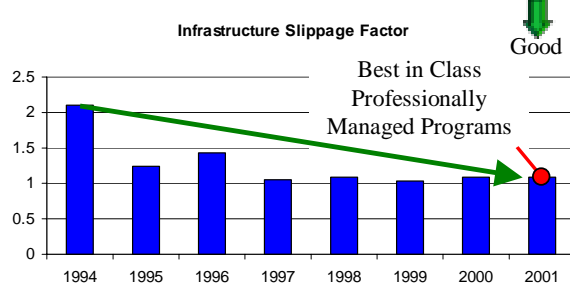


Figure 7.4-3 Manufacturing Cycle time
Book to Ship

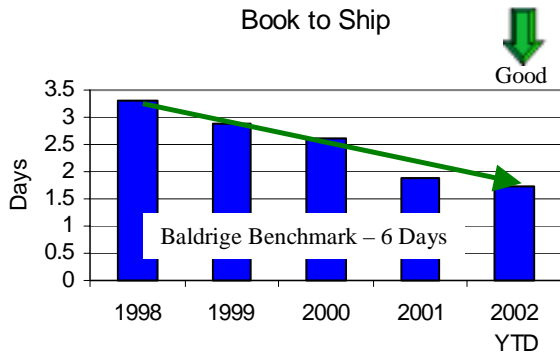


Figure 7.4-4

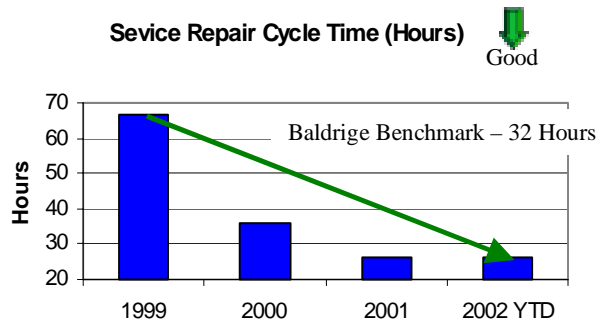


Figure 7.4-5

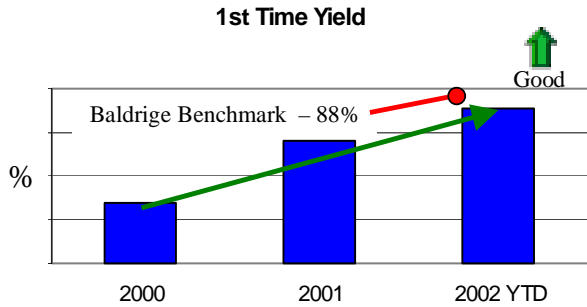


Figure 7.4-6

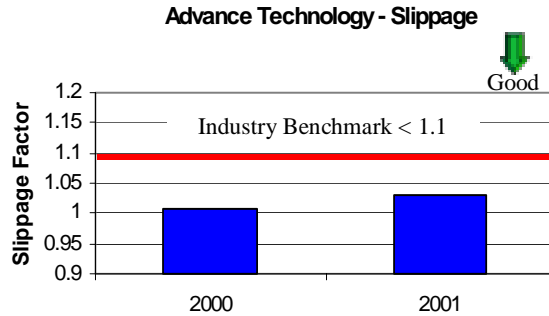


Figure 7.4-7

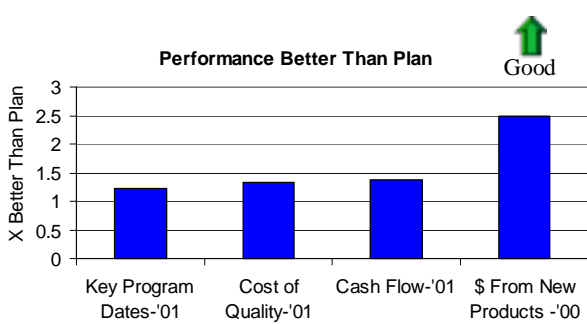


Figure 7.4-8

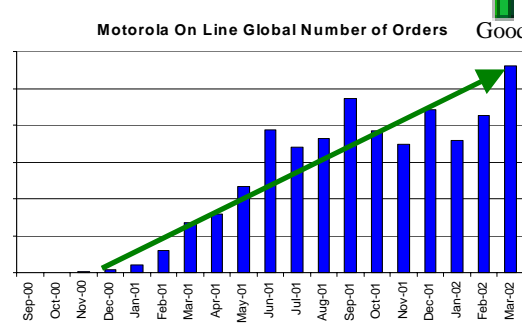


Figure 7.4-9

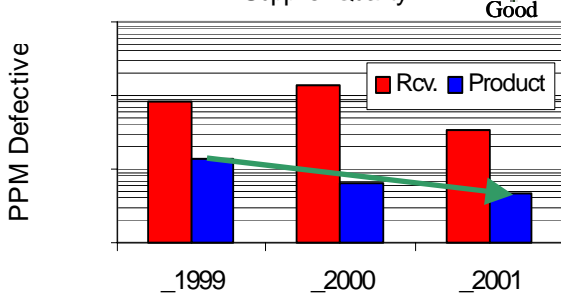


Figure 7.4-10

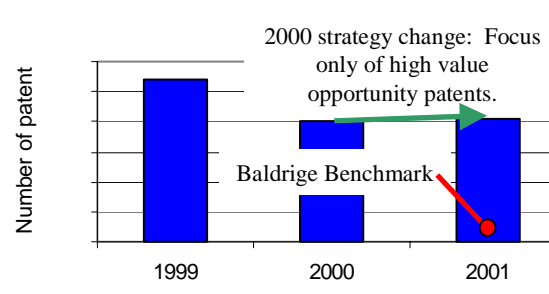


Figure 7.4-11

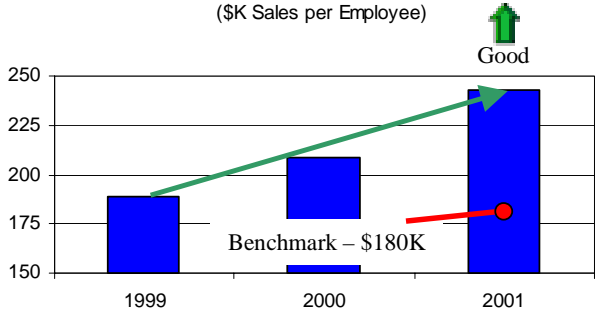


Figure 7.4-12

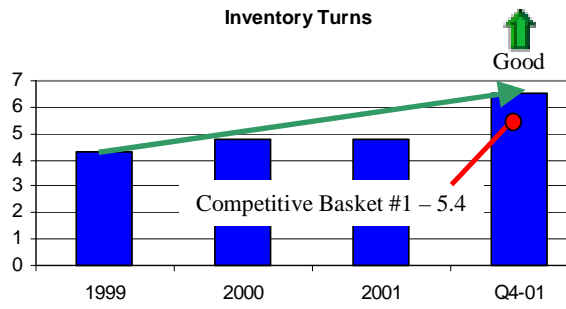


Figure 7.4-13

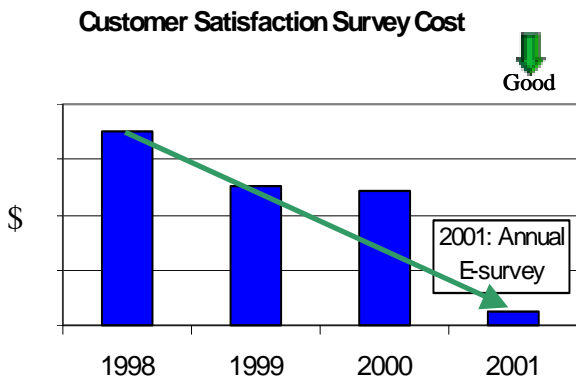


Figure 7.4-14

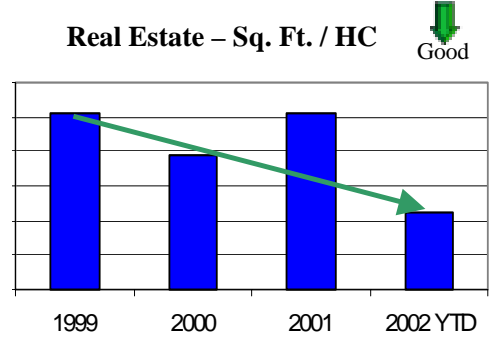


Figure 7.4-15

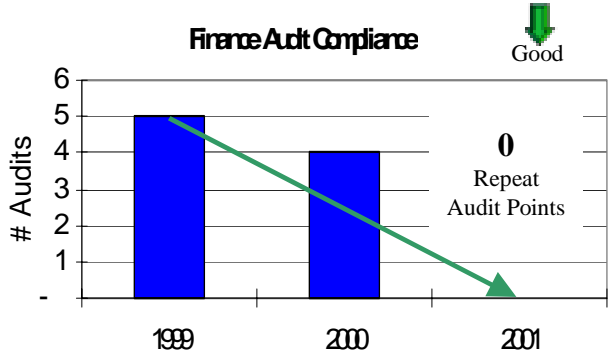


Figure 7.4-16

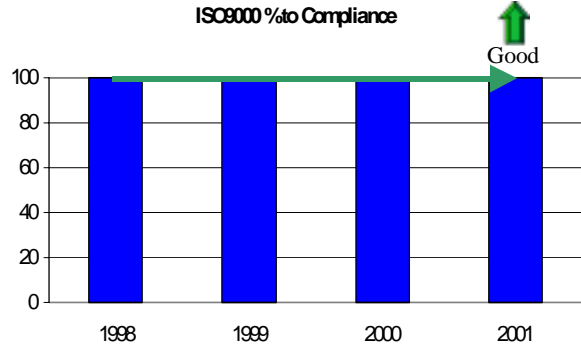


Figure 7.4-17

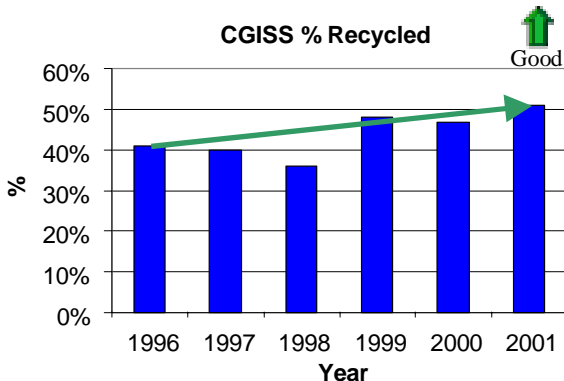


Figure 7.4-18

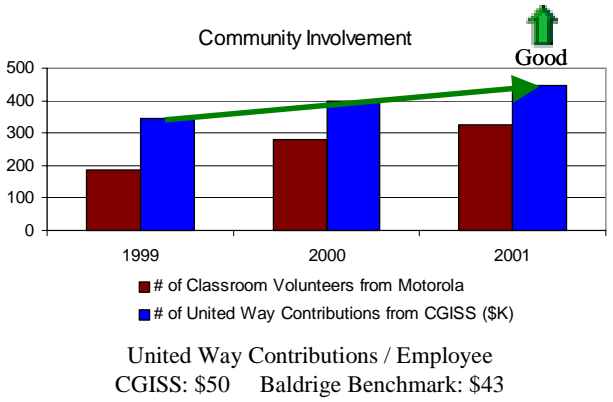


Figure 7.4-19

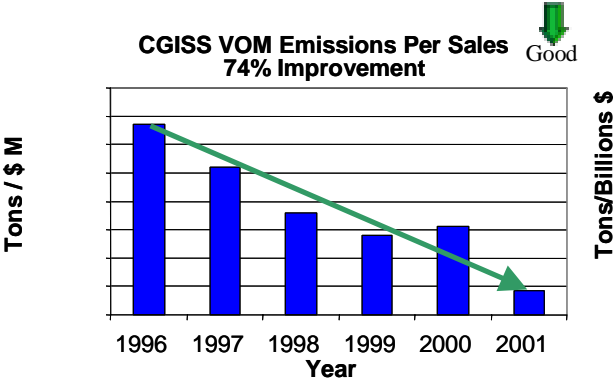


Figure 7.4-20

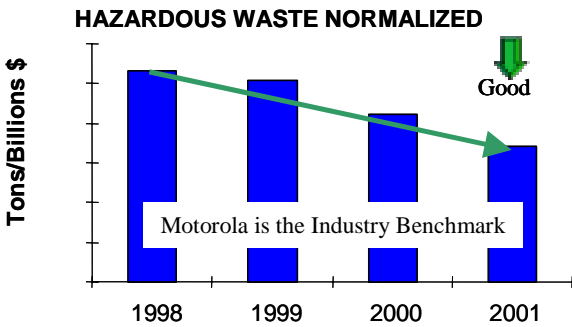


Figure 7.4-21

