Useful Business Measurements and Targets

Product Development Engineering

Error Measurements

Percent of drafting errors per print
Percent of errors in cost estimates
Number of off-specs approved
Cost of input errors to the computer
Percent of error free designs
Percent of errors found during design review
Percent of reports with errors in them
Data recording errors per month
Number of errors in publications reported from the plant and field
Number of off specs accepted
Percent of bills of material that are released in error
Number of products that pass independent evaluation error free

Time Measurements

Number of times a print is changed
Time to correct a problem
Time required making an engineering change
Cycle time to correct a customer problem
Number of days for the release cycle

Late/On-Time Measurements

Percent of prints released on schedule
Percent of meetings starting on schedule
Number of missed shipments of prototypes
Number of days late to pre-analysis
Percent of corrective action schedules missed
Percent of requests for engineering action open for more than two weeks

Accuracy/Performance Measurements

Simulation accuracy
Accuracy of advance materials list
How well product meets customer expectations
Field performance of product
Percent of evaluations that meet engineering objectives
Percent of special quotations that are successful
Percent of total problems found by diagnostics as released
Effectiveness of regression tests
Number of unsuccessful pre-analyses

Miscellaneous Measurements

Percent of repeat problems corrected
Cost of engineering changes per month
Percent of test plans that are changed (changed test plan)
Spare parts' cost after warranty
Number of meetings held per quarter where quality and defect prevention were the main subject
Person-months per released print
Customer cost per life of output delivered
Number of problems that were also encountered in previous products
Number of restarts of evaluations and tests

Industrial/Plant Engineering

Error Measurements

Percent of error in time estimates
Percent of error in purchase requests Scrap and rework due to calibration errors
Number of mechanical/functional errors in industrial design artwork
Number of errors found after construction had been accepted by the company

Time Measurements

Percent of manufacturing time lost due to bad layouts
Hours lost due, to equipment downtime
Number of hours used on unscheduled maintenance
Number of hours used on scheduled maintenance
Repeat call hours for the same problem

Late/On-time Measurements

Percent of facilities-on schedule
Percent of equipment -maintained on schedule
Percent of equipment overdue for calibration

Cost Measurements

Percent deviation from budget
Maintenance-cost/equipment cost ratio
Percent variation to cost estimates

Miscellaneous Measurements

Changes to layout
Accuracy of assets report
Percent-of total floor space devoted to storage
Percent of engineering action requests accepted
Number of unscheduled maintenance calls

Useful Business Measurements and Targets

Manufacturing and Test Engineering

Error Measurements

Percent of tools that are reworked due to design errors

Number of process changes per operation due to errors

Percent error in manufacturing costs

Percent error in test equipment and tooling budget

Number of errors in operator training documentation

Percent of errors that escape the operator's detection

Percent error in yield -projections

Percent error in output product quality

Percent of drafting errors found by checkers

Accuracy Measurements

Percent of process operations where sigma limit is within engineering specification

Percent of tools that fail certification

Percent of testers that fail certification

Percent of designed experiments needing revision

Percent correlation between testers

Utilization Measurements

Labor utilization index

Asset utilization

Percent of manufacturing used to screen products

Equipment utilization

Scheduling Measurements

Percent of equipment ready for production on schedule

Percent of meetings starting on schedule

Percent of tools and test equipment delivered on schedule

Percent of action plan schedules missed

Miscellaneous Measurements

In-process yields

Time required solving a problem

Number of delays because process instructions are wrong or not available

Percent of changes to process specifications during process design review

Number of waivers to manufacturing procedures

Percent of tools and test equipment on change level control

Percent functional test coverage of products

Percent projected cost reductions missed

Number of problems that the test equipment cannot detect during manufacturing cycle

Manufacturing/Shipping

Error Measurements

Tune and/or claiming errors per week

Percent of parts not packed to required specifications ‘

Errors per 100,000 solder connections

Percent of shipping errors

Percent of products error-free at final test

Percent of time log book filled out correctly

Defect Measurements

Scrap and rework cost

Percent of product defect-free at measurement operations

Defects during warranty period

Replacement parts defect rates

Percent of products defective at final test

Time/Scheduling Measurements

Percent of jobs that meet schedule

Percent of unplanned overtime

Percent of daily reports in by 7:00 a.m.

Percent of late shipments

Time between errors at each operation

Employee/Labor Measurements

Suggestions per employee

Percent of jobs that meet cost

Percent of employees trained to do the job they are working on

Number of accidents per month

Performance against standards

Labor utilization index

Percent of operators certified to do their job

Miscellaneous Measurements

Percent of shipments -below plan Complaints on shipping damage

Percent of output that meets customer orders and engineering specifications

Percent of utilities left improperly running at end of shift

Number of security violations per month

Percent of control charts maintained correctly

Percent of invalid test data

Forecasting Measurements

Error Measurements

Percent error in sates forecasts

Number of forecasting assumption errors

Useful Business Measurements and Targets

Miscellaneous Measurements

Number of upward pricing revisions per year

Number of project plans that meet schedule, price and quality

Number of changes in product schedules

Production Control Measurements

Error Measurements

Percent of errors in stocking

Percent of errors in purchase requisitions

Percent of errors in work-in-process records versus audit data

Number of bill-of-lading errors not caught in shipping

Time/Scheduling Measurements

Percent of late deliveries

Percent of manufacturing jobs completed on schedule

Time required incorporating engineering changes

Time that line is down due to assemble shortage

Time of product in shipment

Percent of time parts are not in stock when ordered form common parts crib

Miscellaneous Measurements

Number of items exceeding shelf life

Percent of products that meet customer orders Inventory turnover rate

Cost of rush, shipments

Spare-parts availability in crib

Cost of inventory spoilage

Marketing Measurements

Error Measurements

Percent error in market place Errors in orders

Errors per contract

Percent of correctly dialed phone numbers

Customer- Related Measurements

Response time to customer inquiries

Number of new customers

Percent of time customer expectations are identified

Percent of time customer expectation changes are identified before they impact sales

Percent of customers called back as promised

Number of complimentary letters

Percent of customer letters answered in two weeks

Percent- of complaint reports received

Percent of complaint reports answered in three days

Time/Scheduling Measurements

Percent of proposals submitted ahead of schedule

Person-hours per $10,000 sales

Percent of meetings starting on schedule

Time required turning in travel expense accounts

Percent of bids returned on schedule

Sales Related Measurements

Cost of sales per total costs

Sales made per call

Ratio of marketing expenses to sales

Miscellaneous Measurements

Percent of quota attained

Percent of proposals accepted Inquiries per $10,000 of advertisements

Percent of repeat orders

Number of new business opportunities identified

Percent reduction in residual inventory

Percent of changed orders

Number of revisions to market requirements statements per month

Quality Assurance Quality Measurements

Error Measurements

Percent error in reliability projections

Number of errors detected during design and process reviews

Errors in reports

Percent of errors in defect records

Percent error in predicting customer performance

Number of off specs approved

Customer Related Measurements

Percent of product that meets customer expectations

Time to answer customer complaints

Number of customer complaints

Level/Percentage of customer surveys

Number of customer calls to report errors

Time/Schedule Measurements

Time to correct a problem

Time to identify and solve problems

Receiving inspection cycle time

Time required processing a request for corrective action

Percent of reports published on schedule

Number of audits performed on schedule

Useful Business Measurements and Targets

Percent of laboratory services not completed on schedule

Number of reject orders not dispositioned in five days

Supplier Measurements

Percent of suppliers at 100 percent lot acceptance for one year

Number of committed supplier plans in place

Percent of correlated test results with suppliers

Number of manufacturing interruptions caused by supplier parts

Percent of qualified suppliers

Comparison Measurements

Percent of quality assurance personnel to total personnel

Percent of quality inspectors to manufacturing directs

Percent of quality engineers to product and manufacturing engineers.

Variations between inspectors doing the same job

Miscellaneous Measurements

Percent of employees active in professional societies

Number of engineering changes after design review

Number of process changes after process qualification

Cost of scrap and rework that was not created at the rejected operation

Percent of lots going directly to stock

Percent of problems identified in the field

Number of complaints from manufacturing management

Percent of field returns correctly analyzed

Percent of improvement in early detection of major design errors

Number of requests for corrective action being processed

Percent of part numbers going directly to stock

Percent product cost related to appraisal, scrap, and rework

Percent skip lot inspection

Number of problems identified in-process

Procurement/Purchasing Measurements

Error Measurements

Errors per purchase order

Routing and rate errors per shipment

Percent of purchase orders returned due to errors or incomplete description Percent of phone calls dialed correctly

Time Measurements

Percent of supplies delivered on schedule

Purchase order cycle time

Number of times per year line is stopped due to lack of supplier parts

Average time to fill emergency orders

Average time to replace rejected lots with good parts

Time to answer customer complaints

Time required to process equipment purchase orders

Cost Measurements

Percent decrease in parts costs Stock costs

Parts cost per total costs

Actual-purchased materials cost per budgeted cost

Percent projected cost reductions missed

Cost of rushed shipments

Miscellaneous Measurements

Percent of discount orders by consolidating

Number of orders received with no purchase order

Expediters per direct employees

Number of items on the hot list

Percent of suppliers with 100 percent lot acceptance for one year tabor hours per $10.000 purchases

Supplier parts scrapped due to engineering changes

Percent of parts with two or more suppliers Percent of lots received on production line late

Number of items billed but not received

Information Systems Measurements

Error Measurements

Keypunch errors per day input correction on CRT

Reruns caused by operator error

Errors per thousand lines of code

Percent error in forecast

Percent error in lines of code required

Number of coding errors found during formal testing

Number of test case errors

Number of documentation errors

Number of error-free programs delivered to customer

Useful Business Measurements and Targets

Number, of process step errors before a correct package is ready
Percent of defect-free artwork
Number of errors found after formal test

Revision/Change Measurements

Number of changes after the program is coded
Number of test case runs before success
Number of revisions to plan
Number of revisions to program objectives
Number of revisions to checkpoint plan
Number of changes to customer requirements
Percent change in customer satisfaction survey

Miscellaneous Measurements

Percent of reports delivered on schedule
Percent of time required to debug programs
Rework costs resulting from computer program
Number of cost estimates revised
Percent of customer problems not corrected per schedule
Percent of problems uncovered before design release
System availability
Terminal response time

Accounting Measurements

Error Measurements

Percent of errors in reports
Errors in input to Information Services
Errors reported by outside auditors
Percent of input errors detected
Percent of errors in payroll
Percent data entry errors in accounts payable and general ledger

Time Measurements

Number of hours per week correcting or changing documents
Payroll processing time
Length of time to prepare and send a bill
Length of .time billed and not received
Time spent correcting erroneous inputs
Machine billing turnaround time
Average number of days from receipt to processing Credit (turnaround time)
Travel-expense accounts processed in three days

Complaint Measurements

Number of complaints by users and Number of complaints about inefficiencies or excessive paper

Miscellaneous Measurements

Percent of late reports
Number of final accounting jobs rerun
Number of equipment sales miscoded
Amount of intracompany accounting bill-back activity
Number of open items
Percent of deviations from cash plan
Percent discrepancy in Material Review Board (MRB) and line scrap reports
Percent of shipments requiring more than one attempt to invoice
Number of untimely supplier invoices processed

Finance Measurements

Error Measurements

Percent error in budget predictions
Computer rerun time - due to input errors
Number of record errors per employee
Percent of error-free vouchers
Percent of errors in checks
Entry errors per week
Number of payroll errors per month
Number of errors found by outside auditors
Number of errors in financial reports
Percent of errors in travel advancement records
Percent of errors in expense accounts detected by auditors

Miscellaneous Errors

Computer program change cost
Percent of financial reports delivered on schedule
Percent of bills paid on time for company price break incentive

Personnel Measurements

Time Measurements

Number of days to answer suggestions
Number of employment requests filled on schedule
Number of days to fill an employment request
Time to process an applicant
Average time visitor spends in lobby
Time to get security clearance
Time to process insurance claims
Wait time in medical department
Number of days to respond to applicant

Useful Business Measurements and Targets

Employee Related Measurements

Percent of employees who leave during the first year.

Number of suggestions resubmitted and approved

Personnel cost, per employee

Cost, per new employee

Turnover rate due to poor performance

Percent of employees participating in company-sponsored activities

Percent of complaints about salary

Percent of personnel problems handled by employees' managers

Percent of employees participating in voluntary health screening

Percent of offers accepted

Miscellaneous Measurements

Number of grievances per month

Management evaluation of management education courses

Opinion survey ratings

Percent of retirees contacted yearly by phone

Percent of training classes evaluated excellent

Percent deviation to resource plan

Percent of promotions and management changes publicized

Percent of error-free newsletters

Clerical Measurements

Error Measurements

Errors per typed page:

Percent of coding errors on time cards

Pages processed error-free per hour

Administration errors (not using the right procedure)

Misfiles per week

Percent of phone calls dialed correctly

Percent of pages retyped

Percent of impressions reprinted

Late Measurements

Percent of action items not done on schedule

Percent of inputs not received on schedule

Period reports not completed on schedule

Number of times manager is late to meetings

Miscellaneous Measurements

Paper mailed/paper used

Percent of phone calls answered within two rings

Clerical personnel/personnel supported

Number of times messages are not delivered

Security/Safety Measurements

Violation Measurements

Security violations per audit

Safety violations by department

Percent of security violations

Miscellaneous Measurements

Percent of documents classified incorrectly

Percent of audits conducted on schedule

Percent of safety equipment checked per schedule

Safety accidents per 100,000 hours worked

Number of safety suggestions

Percent of clearance errors

Time to get classification clearance

Percent of sensitive parts located

Management Measurements

Employee Related Measurements

Percent of personnel turnover rate

Percent increase in output per employee

Percent of employee output that is measured

Percent employee absenteeism

Percent of employees promoted to better jobs

Number of job improvement ideas per employee

Ratio of direct to indirect employees

Number of professional employees active in professional societies (*e.g. ASQ, APICS,SME*)

Percent of managers active in community activities

Percent of employees taking higher education

Number of employees dropping out of classes

Percent of employees active in improvement teams

Number of hours per year of career and skill development training per employee

Percent of executive interviews with their employees

Percent of employees with development plans

Percent-of employee time spent on first-time output

Department morale index

Useful Business Measurements and Targets

Cost Related Measurements

Percent variation from budget

Dollars saved per employee due to new ideas and/or methods Warranty costs

Scrap and rework- costs

Cost of poor quality

Number of employees participating in cost-effectiveness

Scheduling Measurements

Percent of target dates missed

Percent of output delivered on schedule

Percent of meetings that start on schedule

Percent of appraisals done on schedule

Number of tasks for which actual time exceeded estimated time

Error Measurements

Percent error in planning estimates

Percent error in .personnel records

Percent of time cards signed by managers that have errors on them

Percent of employees who can detect and repair their own errors

Data integrity

Plan/Revenue Measurements

Volumes actual versus plan

Revenue actual versus plan

Number of formal reviews before plans are approved

Percent revenue/expense-ratio below plan

Revenue generated over strategic period

Number of iterations of strategic plan
Increased percent of market

Return on investment

Percent of time program plans are met

Percent of suggestions with delinquent response or execution

Percent of documents that require two management signatures

Number of damaged equipment and property reports

Number of decisions made by higher-level management than required by procedures
Improvement in customer satisfaction survey

Security violations per year

Legal Measurements

Response time on request for legal opinion
Time to prepare patent claims

Percent of cases lost

Miscellaneous Measurements

Result of peer reviews

Percent of appraisals with quality as a line item that makes up more than 30% of the evaluation

Percent of departments with disaster recovery plans

Number of user complaints per month

Percent of procedures less than ten pages

Percent of changes to project equipment required

Normal appraisal distribution

Number of grievances per month

Number of-open doors per month

Number of security violations per month

Improvement in opinion surveys

Number of procedures with fewer than three acronyms and abbreviations