A STUDY OF TOTAL QUALITY MANAGEMENT IN ERICSSON INDIA PVT. LTD.

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INTRODUCTION

Quality assurance (QA) provides the basic components required of a quality system. Quality assurance incorporates standards against which internal or external assessment is undertaken, together with the processes in place to control the components of the quality system. Quality assurance systems are designed to provide assurance that a particular standard of quality has been met and maintained.

Components of quality assurance

- Focused on outputs
- Uses a standard as the benchmark of quality
- Control of systems and processes
- Focused on efficiency
- Driven from the top
- 'Assures' quality

With a quality management approach, continuous improvement systems are added to QA by incorporating a quality cycle of continuous improvement. Unlike QA, where the goal is to meet the specified standard, quality management is seen as an ongoing journey of continuous improvement.

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A quality management system is designed to provide evidence that a specified standard of quality has been met and continuously improved.

It is accepted as good management practice that organisations need to establish structural supports (e.g. documented plans, policies, standard operating procedures) to provide parameters for practice and enable them to demonstrate that those practices are sustainable.

However, in determining 'quality' it is also acknowledged that a mechanism is needed to measure service user outcomes and the impact of service delivery in meeting service users' needs and improving quality of life. Service users have an integral role to play in monitoring the quality of services they receive, so providers have a responsibility to investigate and implement a range of mechanisms for service user feedback on levels of satisfaction and opportunities for service users to participate in the decision-making processes of the service.The focus on outcomes is a particular strength **Quality Management System**

A QMS is not static, and by definition it must be improved continually in order to enhance organizational effectiveness and efficiency. It may be formally defined as follows. A quality (management) system consists of the organizational structure, procedures, processes, and resources needed to implement quality management.

Quality management is the process for ensuring that all project activities necessary to design, plan and implement a project are effective and efficient with respect to the purpose of the objective and its performance.

Quality management is a continuous process that starts and ends with the project. It is more about preventing and avoiding than measuring and fixing poor quality outputs. It is part of every project management processes from the moment the project initiates to the final steps in the project closure phase.

QM focuses on improving stakeholder's satisfaction through continuous and incremental improvements to processes, including removing unnecessary activities; it achieves that by the continuous improvement of the quality of material and services provided to the beneficiaries. It is not about finding and fixing errors after the fact, quality management is the continuous monitoring and application of quality processes in all aspects of the project.

Quality Definition:

The first step on the quality management is to define quality, the project manager and the team must identify what quality standards will be used in the project, it will look at what the donor, beneficiaries,

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the organization and other key stakeholders to come up with a good definition of quality. In some instances the organization or the area of specialization of the project (health, water or education) may have some standard definitions of quality that can be used by the project. Identifying quality standards is a key component of quality definition that will help identify the key characteristics that will govern project activities and ensure the beneficiaries and donor will accept the project outcomes. Quality management implies the ability to anticipate situations and prepare actions that will help bring the desired outcomes. The goal is the prevention of defects through the creation of actions that will ensure that the project team understands what is defined as quality.

Quality Characteristics:

All material or services have characteristics that facilitate the identification of its quality. The characteristics are part of the conditions of how the material, equipment and services are able to meet the requirements of the project and are fit for use by the beneficiaries. Quality characteristics relate to the attributes, measures and methods attached to that particular product or service.

Functionality is the degree, by which equipment performs its intended function, this is important especially for clinical equipment, that the operation should be behave as expected.

Performance, its how well a product or service performs the beneficiaries intended use. A water system should be designed to support extreme conditions and require little maintenance to reduce the cost to the community and increase its sustainability.

Reliability, it's the ability of the service or product to perform as intended under normal conditions without unacceptable failures. Material used for blood testing should be able to provide the information in a consistent and dependable manner that will help identify critical diseases. The trust of the beneficiaries depend on the quality of the tests.

Relevance, it's the characteristic of how a product or service meets the actual needs of the beneficiaries, it should be pertinent, applicable, and appropriate to its intended use or application.

Timeliness, how the product or service is delivered in time to solve the problems when its needed and not after, this is a crucial characteristic for health and emergency relief work.

Suitability, defines the fitness of its use, it appropriateness and correctness, the agriculture equipment must be designed to operate on the soul conditions the beneficiaries will use it on.

Completeness, the quality that the service is complete and includes all the entire scope of services. Training sessions should be complete and include all the material needed to build a desired skill or knowledge

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Consistency, services are delivered in the same way for every beneficiary. Clinical tests need to be done using the same procedure for every patient.

Quality characteristics must be included in all material, equipment and services the project will purchase, the procurement officers must have a complete description of what is required by the project, otherwise a procurement office may purchase the goods or services based on her or his information of the product.

Quality plan:

Part of defining quality involves developing a quality plan and a quality checklist that will be used during the project implementation phase. This check list will ensure the project team and other actors are delivering the project outputs according to the quality requirements.

Quality Assurance:

Quality Assurance is a process to provide confirmation based on evidence to ensure to the donor, beneficiaries, organization management and other stakeholders that product meet needs, expectations, and other requirements. It assures the existence and effectiveness of process and procedures tools, and safeguards are in place to make sure that the expected levels of quality will be reached to produce quality outputs.

Quality Audits:

Quality audits are structured reviews of the quality management activities that help identify lessons learned that can improve the performance on current or future project activities. Audits are performed by project staff or consultants with expertise in specific areas.

The PDCA Cycle:

The most popular tool used to determine quality assurance is the Shewhart Cycle. This cycle for quality assurance consists of four steps: Plan, Do, Check, and Act. These steps are commonly abbreviated as PDCA.

The four quality assurance steps within the PDCA model stand for

Plan: Establish objectives and processes required to deliver the desired results.
Do: Implement the process developed.
Check: Monitor and evaluate the implemented process by testing the results against the predetermined objectives.
Act: Apply actions necessary for improvement if the results require changes.
The PDCA is an effective method for monitoring quality assurance because it analyzes existing conditions and methods used to provide the product or service to beneficiaries. The goal is to ensure

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that excellence is inherent in every component of the process. Quality assurance also helps determine whether the steps used to provide the product or service is appropriate for the time and conditions. In addition, if the PDCA cycle is repeated throughout the lifetime of the project helping improve internal efficiency.

The PDCA cycle is shown below as a never-ending cycle of improvement; this cycle is sometimes referred to as the Shewart/Deming3 cycle since it originated with Shewart and was subsequently applied to management practices by Deming.
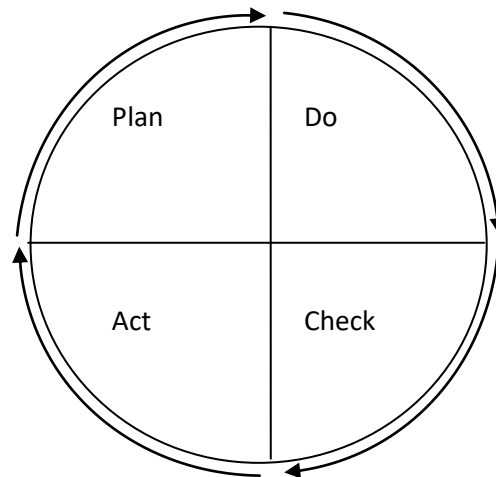

Figure: The Shewart/Deming Cycle

Quality Control Tools:

There are a couple of good tools that can be used to control quality on a project, these are cause and effect diagrams, Pareto charts and control charts:

Cause and Effect Diagram, also known as fishbone diagrams or Ishikawa diagrams (named after Kaoru Ishikawa, a Japanese quality control statistician, who developed the concept in the 1960s, and is considered one of the seven basic tools of quality management) It is named fishbone diagram because of their fish-like appearance, it is an analysis tool that provides a systematic way of looking at effects and the causes that create or contribute to those effects. The
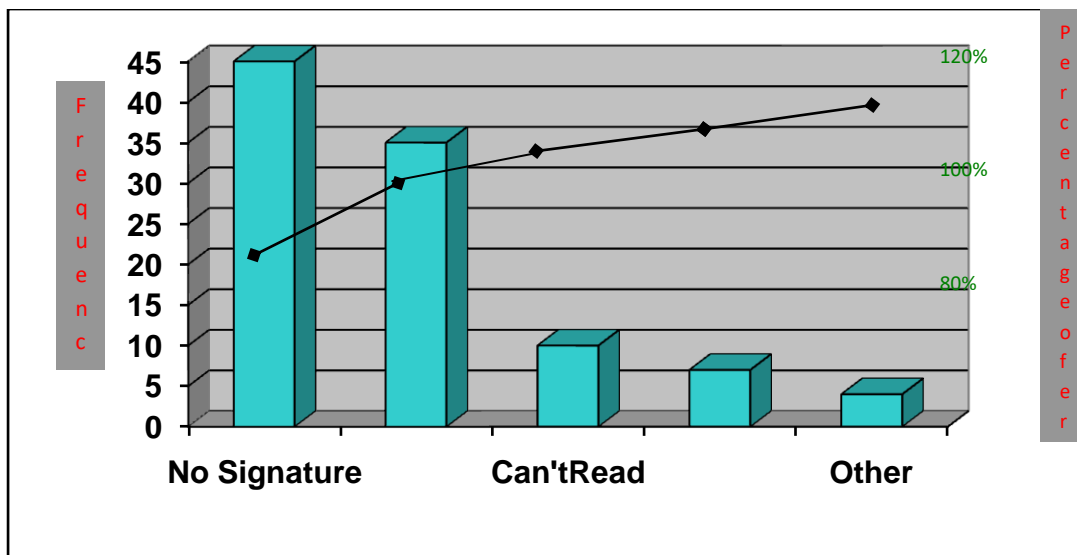
Ishikawa Diagram is employed by a problem-solving team as a tool for assembling all inputs (as to what are the causes of the problem they're addressing) systematically and graphically, with the inputs usually coming from a brainstorming session. It enables the team to focus on why the problem occurs, and not on the history or symptoms of the problem, or other topics that digress from the intent of the session. It also displays a real-time 'snap-shot' of the
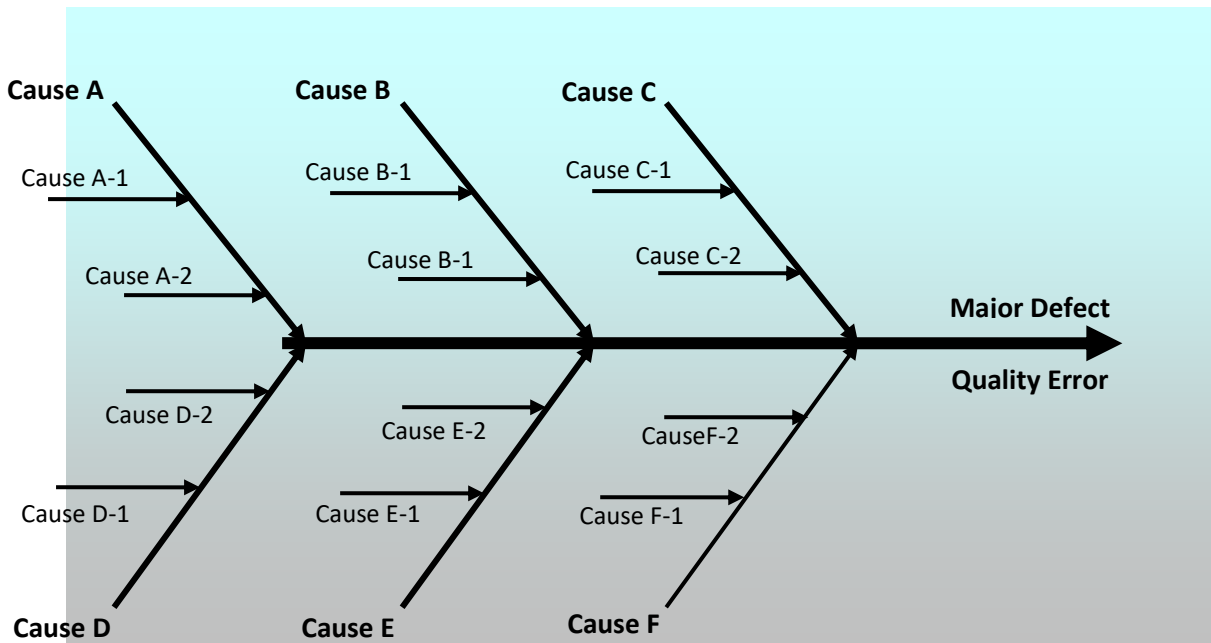
Figure: Fishbone diagram

collective inputs of the team as it is updated. The possible causes are presented at various levels of detail in connected branches, with the level of detail increasing as the branch goes outward, i.e., an outer branch is a cause of the inner branch it is attached to. Thus, the outermost branches usually indicate the root causes of the problem.

Pareto Charts; based on Pareto's rule, which states that 80 percent of the problems are often due to 20 percent of the causes. The assumption is that most of the results in any situation are determined by a small number of causes and helps identify the vital few contributors that account for most quality problems. The chart is a form of histogram that orders the data by frequency of occurrence; it shows how many defects were generated by a type of category of identified cause. For example to determine the errors in the collection of beneficiary data the project team identified five causes and for each cause the frequency they contained errors, the data is plotted as shown in the chart below, the bars represent each category and the line the cumulative percentage of the errors, the chart allows to identify that 80% of the errors could be reduced just by improving the collection of data in two categories instead of focusing efforts to correct all categories.

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A Pareto-style chart with a bar graph (left axis: Frequency 0–45) and a line graph (right axis: Percentage of, 80%–120%). Categories shown: No Signature, Can'tRead, Other.

COMPANY PROFILE OF ERICSSON PVT LTD.

Ericsson (*Telefonaktiebolaget L. M. Ericsson*) is a Swedish multinational provider of communications technology and services. The company's offerings comprise services, software and infrastructure in information and communications technology for telecom operators and other industries, including traditional telecommunications as well as Internet Protocol (IP) networking equipment, mobile and fixed broadband, operations and business support solutions, cable TV, IPTV, video systems, and an extensive services operation. Ericsson has a market share of 35% (in 2012) in the 2G/3G/4G mobile network infrastructure market.

Founded in 1876 by Lars Magnus Ericsson, the company is today headquartered in Stockholm, Sweden. The company employs more than 110,000 people and works with customers in more than 180 countries, including the United States, China, India, Brazil, Japan, South Africa, Australia, Germany, Italy, the UK, and Sweden. Ericsson holds approximately 35,000 granted patents as of 2012, including many in the wireless communications field.

Ericsson became a major supplier of telephone equipment to Scandinavia. Because its factory could not keep up with demand, work such as joinery and metal-plating was contracted out. Much of its raw materials were imported, so in the following decades Ericsson bought into a number of firms to ensure supplies of essentials like brass, wire, ebonite, and magnet steel. Much of the walnut used for cabinets was imported from the United States.

Products and services

Ericsson's business extends from technology research network and software development, all the way through to running and evolving operations.Ericsson offers end-to-end olutions for all major mobile communication standards and has four main business units:

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- Business Unit Networks (BNET) develops network infrastructure for any communication need over mobile and fixed connections. As of July 1, 2014, BNET has been divided into two new units: Business Unit Radio and Business Unit Cloud & IP.
- Business Unit Global Services (BUGS) provides telecoms-related managed services, including, for example, taking responsibility for running an operator's network and the related business support systems.
- Business Unit Support Solutions (BUSS) develops and delivers software-based solutions for operations support systems/business support systems (OSS/BSS), real-time, multi-screen and on demand TV and media as well as solutions and services for the emerging mobile commerce (m-commerce) eco-system.
- Business Unit Modems focuses on the design, development, supply and sales of LTE multimode thin modem solutions, as well as 2G, 3G and 4G Long Term Evolution (LTE) interoperability.

Operations at a local level are coordinated through a structure of ten regions, with some global and multi-country accounts for large customers .

OBJECTIVES OF STUDY

The main objective of the study was to find out the following: -

➢ To find the degree of TQM implemented in the organization.
➢ To find the level of commitment of employees toward their work.
➢ To find out factor influencing the commitment.
➢ To find the effectiveness of Quality Management System in Ericsson Pvt. Ltd.
➢ Employee attitude towards present Quality Management System.
➢ Investigate about the leading policy of Ericsson Pvt. Ltd.
➢ To find out factor influencing the commitment.

SCOPE OF THE STUDY:

➢ This project is done within the Ericsson Pvt. Ltd..
➢ To know about the Quality Product strategies of Ericsson Pvt. Ltd..
➢ To know Pros and cons of in Quality Management System.
➢ To know practical application of Quality Management System in Ericsson Pvt. Ltd..
➢ To identify Quality Management System behind public sector industry.
➢ Sample taken from around 50 people.

RESEARCH DESIGN

This research is of Exploratory Research design .I have used the questionnaire method for collecting the data.

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SAMPLE SIZE: 70

SAMPLING AREA: Ericsson Pvt. Ltd. Dehradun

DATA COLLECTION:

PRIMARY DATA:

Primary data was collected through survey method by distributing questionnaires to employees. The questionnaires were carefully designed by taking into account the parameters of my study.

SECONDARY DATA:

Data was collected from web sites, going through the records of the organisation, etc. It is the data which has been collected by individual or someone else for the purpose of other than those of our particular research study. Or in other words we can say that secondary data is the data used previously for the analysis and the results are undertaken for the next process.

EXPLORATORY RESEARCH

This kind of research has the primary objective of development of insights into the problem. It studies the main area where the problem lies and also tries to evaluate some appropriate courses of action.
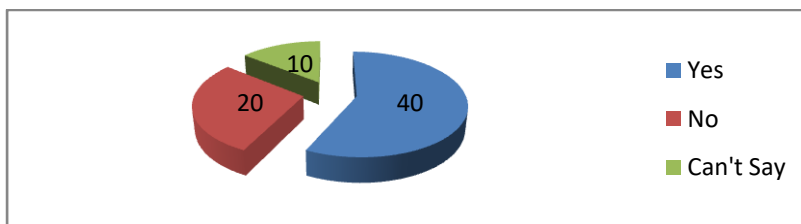
SAMPLE DESIGN:

The universe is the employee working at Sony Ericsson Office. I have selected 70 employee 40 FROM THE STAFF and 30 FROM THE WORKER for the survey.. The research was taken by necessary steps to avoid any biased while collecting the data
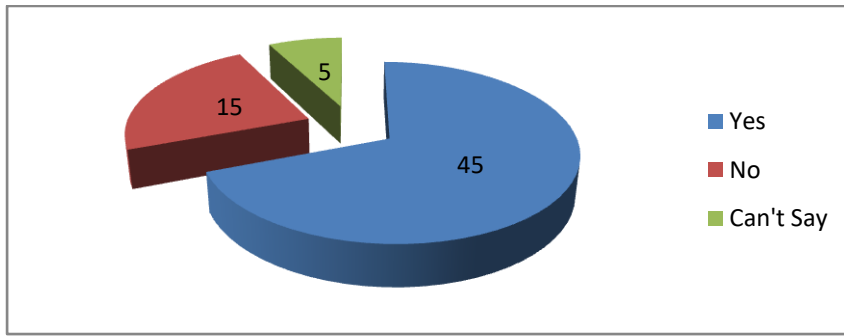
TOOLS OF ANALYSIS:

The data collected from both the sources is analyzed and interpreted in the systematic manner with the help of statistical tool like percentages.

DATA ANALYSIS

**Is the organization providing quality assurance system & operation?**

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Does the organization have quality circle?

5	
15	
45	■ Yes
	■ No
	■ Can't Say

Does your organization have quality information system?

15	
15	
40	■ Yes
	■ No
	■ Can't Say
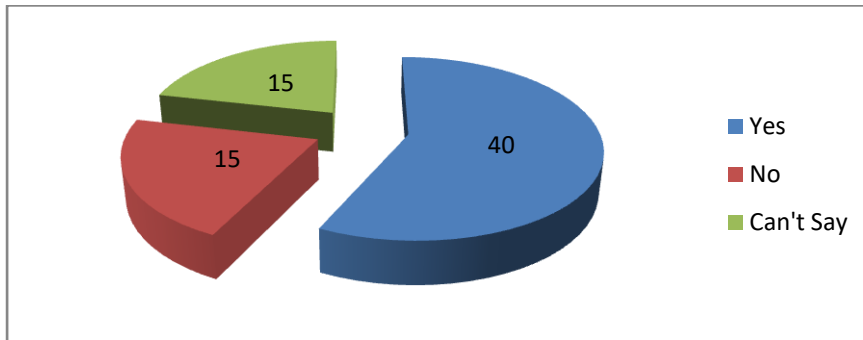
Are you practicing the six sigma for the error control?
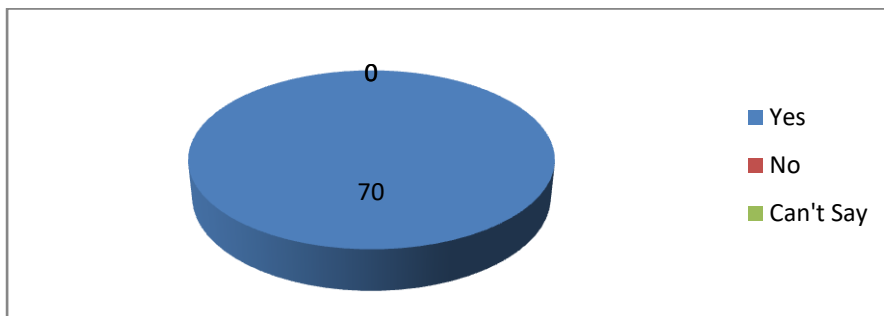
0	
70	■ Yes
	■ No
	■ Can't Say

Does the organization provide right environment to apply your knowledge from new programs to the job?

10	
30	
30	■ Yes
	■ No
	■ Can't Say

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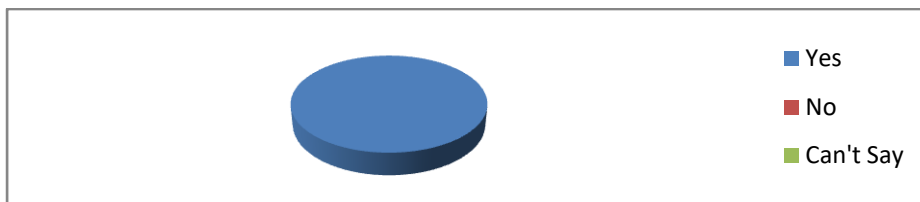
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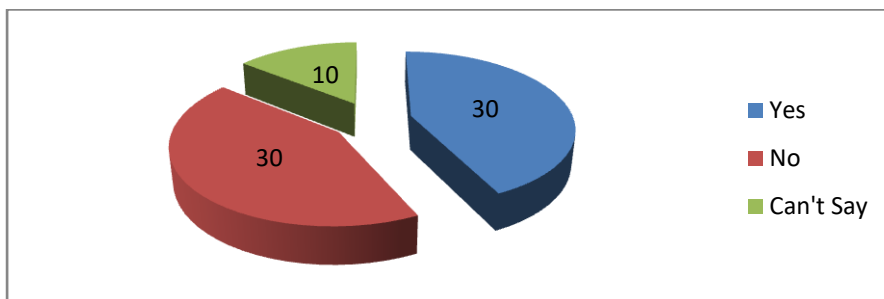
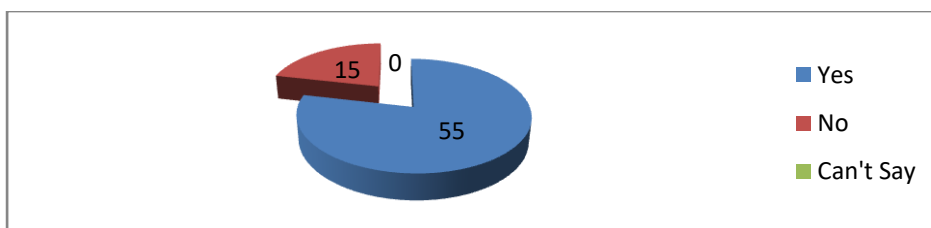**Does TQM assists in alignment of company's goal as well as individuals goals?**
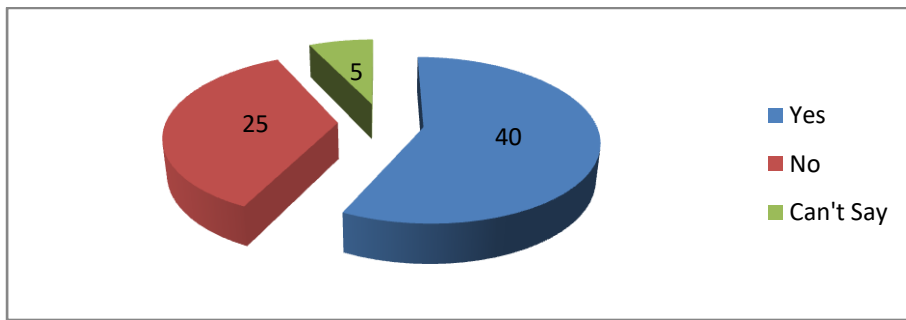
Does TQM help for improving the work efficiency of employees?
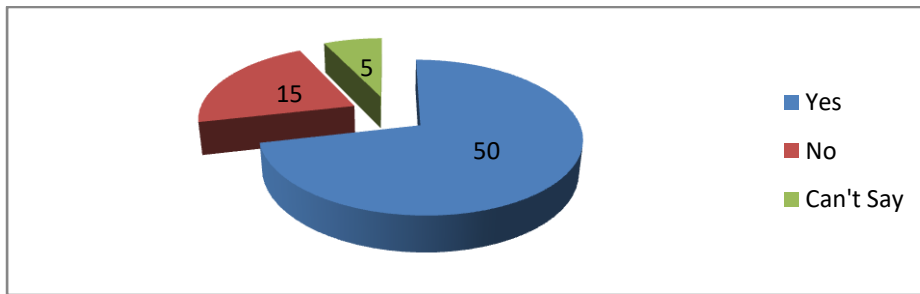
Does the organization have the certification of ISO 9000?

Employees are kept updated with changes in job skills & job designs?

Do you think the organization is quality conscious toward employees?

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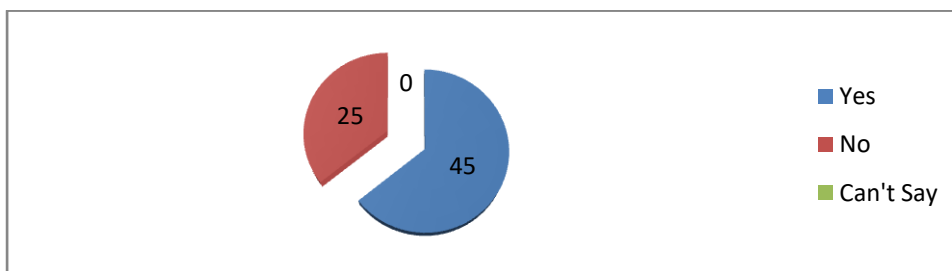
FINDINGS

- Most of the respondents i.e. 45% are agree that organization is quality conscious towards employees where as 25% are not agree.

- Most of the respondents i.e. 40% are agree that organization is providing quality assurance system & operation where as 20% are not agree and only 10% respondents does not no anything.

- Most of the respondents i.e. 45% are agree that organization have quality circle where as 15% are not agree and only 10% respondents does not no anything.

- Most of the respondents i.e. 40% are agree that organization is going for quality audit regularly where as 20% are not agree and only 10% respondents does not no anything.

- Most of the respondents i.e. 40% are agree that have quality information system where as 15% are not agree and only 15% respondents cant'say anything.

- 70% respondents can't say anything about organization used bench marking.

- Most of the respondents i.e. 55% are agree that organization Employees are kept updated with changes in job skills & job designs where as 15% are not agree.

- All the respondents says that they practicing the six sigma for the error control.

- Most of the respondents i.e. 40% are agree that there performance is properly measured in the organization where as 30% are not agree.

- Most of the respondents i.e. 30% are agree that organization provide right environment to apply your knowledge from new programs to the job where as 30% are not agree and 10% can't say anything

- Most of the respondents i.e. 50% are agree that superior type of relation in organization where as 20% are not agree.

- Most of the respondents i.e. 60% are agree they feel that they can get ahead in the org where as 20% are not agree.

- Most of the respondents i.e. 40% are agree that TQM assists in alignment of company's goal as well as individuals goals where as 25% are not agree only 5% can't say.

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- All the respondents says that their organization is ISO certified.

- Most of the respondents i.e. 50% are agree that TQM help for improving the work efficiency of employees where as 15% are not agree only 5% can't say.

RECCOMENDATIONS & SUGGESTIONS

- It is very important to provide the opportunity to the employees of the organization to express their ideas or whatever they want to express.
- Management should clear their vision mission and goals towards the employees in the organization.
- Management should involve the workers representatives in managerial activities so that the transparency could be maintained and through this they can win the confidence of the employees.
- Self-potential system should be encouraged.
- Proper cooperation should be necessary in the company.

LIMITATION OF THE PROJECT

As the study is completely based on data collected, there are some limitations those are as follow.

- Inaccurate Feedbacks. In case the research involves taking feedbacks from the targeted audience, there are high chances that feedback given is not correct. Feedbacks by their basic nature are usually biased or given just for the sake of it.
- Secondary data is not presented in a form that exactly meets the researcher's needs. Therefore, the researcher needs to rely on secondary data that is presented and classified in a way that is similar to their needs.
- When using secondary research, one must exercise caution when using dated information from the past. With companies competing in fast changing industries, an out-of-date research reports many have little or no relevance to the current market situation.
- Secondary data are only as good as the research that produced them.

CONCLUSION:

ERICSSON PVT. LTD. has large number of employer's skilled and unskilled, line and staff, flexible and inflexible – work in a network of domestic foreign facilities. Formal and informal system, good and bad practices and old and new cultures co-exist production consists of a mix of low volume of high engineered, customized products. Sometimes medium columns of high performance products with short life cycles and sometimes high volume of high quality low cost commodities.

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ERICSSON PVT. LTD. has product process is as varied as the products they produce. ERICSSON PVT. LTD. has taken a new Manufacturing Strategy or Plan to bring structure or order into the complex environment. The optical properties are one of the vital criteria beside the competitive price for product (paper / board) selection by the customer.

Though management personnel are fully aware of the above mentioned systems, there seems to be ignorance among the support staffs and casual workers to some extent.

The feedback generated during the study helps to identify the areas where needs management's attention to increase the effectiveness of ERP and TPM systems in ERICSSON PVT. LTD., and provides an opportunity for improvement

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