

A STUDY ON EMPLOYEE ENGAGEMENT WITH SPECIAL REFERENCE TO THE AFABLEZ SEMICONDUCTOR

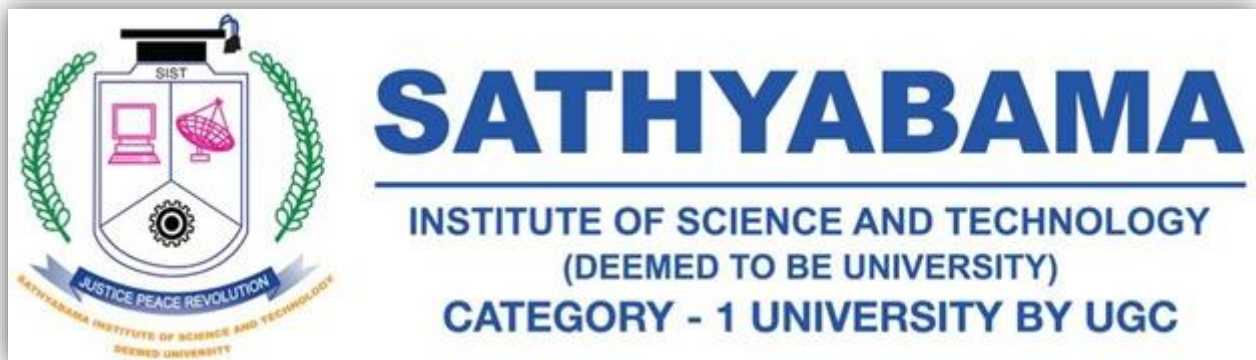
Submitted in partial fulfilment of the requirements for the award of

MASTER OF BUSINESS ADMINISTRATION

by

SURESH KUMAR N

REGISTER NO:42410269



**DEPARTMENT OF BUSINESS ADMINISTRATION
SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)**

**Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE
JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119**

DECEMBER 2023



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SCHOOL OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **SURESH KUMAR N 42410269** who carried out the Project Training “**A STUDY ON CONSUMER BEHAVIOUR WITH SPECIAL REFERENCE TO AFABLEZ SEMICONDUCTOR**” under my supervision from AUG 2023 to SEPT2023.

Dr. Yasmeen Bano

Internal guide

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Submitted for Viva voce Examination held on_____

Internal Examiner

External Examiner

DECLARATION

I SURESH KUMAR N (42410269) hereby declare that the Project Report entitled “**A STUDY ON CONSUMER BEHAVIOUR WITH SPECIAL REFERENCE TO AFABLEZ SEMICONDUCTOR**” done by me under the guidance of **DR. YASMEEN BANO, MBA, M.PHIL, PH.D ASSISTANT PROFESSOR** is submitted in partial fulfilment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

SURESH KUMAR N

Date: 30-Sept-2023

INTERSHIP CERTIFICATE

To whomsoever it may concern

Ref: LT/HR/2022-23/CoI-12

This is to certify that **Mr. SURESH KUMAR.N** has been associated with us as Intern in Business Development Team from **28-Aug-2023** to **28-Sept-2023**. During this period her involvement in the task and activities are found to be satisfactory and appreciable. We wish her all success in her future endeavors.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION:

The study has been done in Afablez Semiconductor Private Limited, Chennai. They design, develop and fabricate feature-rich IP products with enhanced performance, optimization, and customizability.

The main aim of the organisation study is to get familiar with the organization and gain complete knowledge of the function of various departments. The organisation is defined as collectively achieving common objectives.

Every organisation has different functional departments like Finance, Human resource, Marketing, operations, IT, Tender, etc. organisation is a foundation upon which the whole structure of management build it.

Every organization is on has certain basic parts that are made up of people who perform supervise, and plan besides those who render support services and technical advice. As such studying the structure or design of an organization means analyzing how these parts are put together, who reports to whom, the degree of centralization or decision-making power concerned at the top, and the extent of rules, policies, regulations, and procedures in the related to the combination of strengths. The study includes a brief study of the core departments organization.

The structure of an organization is characterized by the task and authority structure.

Afablez Semiconductor Private Limited believes that its success and prospects are directly

1.2 Objectives of the Study:

The objective of the study conducted at Afablez Semiconductor Private Limited

Primary objectives:

- 2 To familiarize with the business organization Afablez Semiconductor Private Limited, Chennai.

Secondary Objectives:

- To gain practical knowledge regarding the organizational function to learn about the mission, vision, and policies of the organisation.
- To get industrial experience and exposure and understand its structure to understand the strength, weakness, opportunities and threats of the company

2.1 Scope of the Study:

- The study is mainly based on the details collected from each department. It provides a better understanding of the functional level of each department like production, sales, finance and HR, IT, Tender
- Organizational study aims at advancing our knowledge of organizations, organizing and They organized in and between societies
- The social sciences and promotes an understanding of organizations, organizing and the organized as phenomena that shape and are shape by the societies of which they are apart
- Organizational study invites innovative high-quality research from a wide range of philosophical traditions, disciplines, and methodological approaches. It encourages the interplay between theorizing and empirical research, in the belief that they are mutually informative

2.2 Period of the study:

The study was confined to a period of 4 weeks from August 22nd to September 22nd.

2.3 Limitation of the study:

- Time constraint prevented the complete collection of data.
- There is a liability of data used for study is largely depends upon the company's report and information given by the executives.

2.4 Vision of the company:

To be the world's domineering ODM & OEM of adroit craggy modules and trust-able design ally of embedded computing technologies.

1.6 Mission of the company:

- Our mission is to be a leading manufacturer providing superior quality products and services at competitive prices.
- We want to be a globally innovative and competitive business providing 100% genuine services to our customers.
- We are committed to total customer satisfaction by providing quality products & services.
- Established as a proprietorship firm in 2008 in the name of Femto Logic Designs Systems, the company was converted into a private limited company in 2013 in the name of Femto Logic Design Private Limited.
- It was renamed to FLDEC Systems Private Limited in September 2018. The company is involved in ESDM catering to industries such as defense, aerospace, navy etc. Its manufacturing unit is in Chennai with about 250 design and development engineers.

CHAPTER 2

PROFILES

2.2 INDUSTRY PROFILE:

The semiconductor industry is the aggregate of companies engaged in the design and fabrication of semiconductors and semiconductor devices, such as transistors and integrated circuits. It formed around 1960, once the fabrication of semiconductor devices became a viable business.

The industry's annual semiconductor sales revenue has since grown to over \$481 billion, as of 2018. The semiconductor industry is in turn the driving force behind the wider electronics industry, with annual power electronics sales of £135 billion (\$216 billion) as of 2011, annual consumer electronics sales expected to reach \$2.9 trillion by 2020, tech industry sales expected to reach \$5 trillion in 2019,[5] and e-commerce with over \$29 trillion in 2017. In 2019, 32.4% of the semiconductor market segment was for networks and communications devices.

In 2021, the sales of semiconductors reached a record \$555.9 billion, up 26.2 percent with sales in China reaching \$192.5 billion, according to the Semiconductor Industry Association. A record 1.15 trillion semiconductor units were shipped in the calendar year. The semiconductors are projected to reach \$ 726.73 billion by 2027

Industry structure:

The global semiconductor industry is dominated by companies from the United States, Taiwan, South Korea, Japan, and the Netherlands.

Electronic integrated circuit export by country or region as of 2016, by HS4 trade classification. Export of discrete semiconductors as of 2016, by United Nations Harmonized Commodity Description and Coding Systems 4 Unique features of the industry include continuous growth but in a cyclical pattern with high volatility. While the current 20-year annual average growth of the semiconductor industry is on the order of 13%, this has been accompanied by equally above-

average market volatility, which can lead to significant if not dramatic cyclical swings. This has required the need for high degrees of flexibility and innovation to constantly adjust to the rapid pace of change in the market as many products embedding semiconductor devices often have a very short life cycle.

At the same time, the rate of constant price-performance improvement in the semiconductor industry is staggering. Consequently, changes in the semiconductor market not only occur extremely rapidly but also anticipate changes in industries evolving at a slower pace. The semiconductor industry is widely recognized as a key driver and technology enabler for the whole electronics value chain.

The industry is based on the foundry model, which consists of semiconductor fabrication plants (foundries) and integrated circuit design operations, each belonging to separate companies or subsidiaries. Some companies, known as integrated device manufacturers, both design and manufacture semiconductors.

The foundry model has resulted in consolidation among foundries. As of 2021, only three firms can manufacture the most advanced semiconductors: TSMC of Taiwan, Samsung of South Korea, and Intel of the United States. Part of this is due to the high capital costs of building foundries. TSMC's latest factory, capable of fabricating 3 nm process semiconductors and completed in 2020, cost \$19.5 billion.

Intel is considering outsourcing some production to TSMC. It currently can only produce 10 nm semiconductors, while TSMC and Samsung can both produce 5 nm.

Global Foundries, an American-headquartered firm, uses a 12 nm process for its most advanced chips due to the rapidly increasing development costs of smaller process nodes.

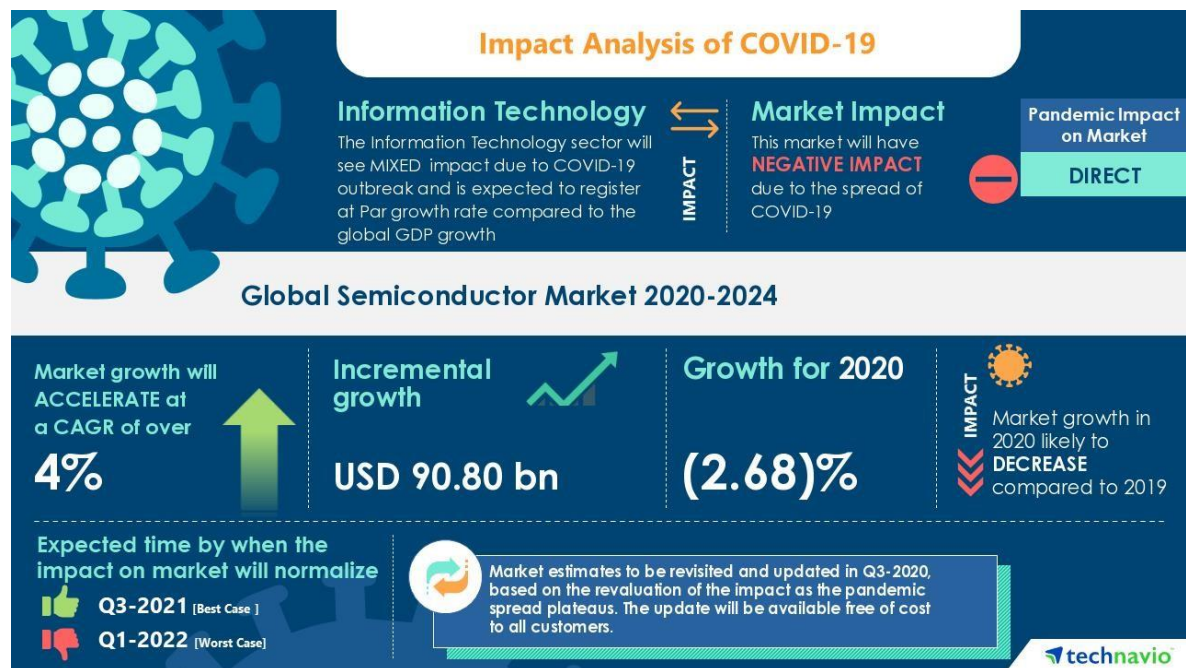


Figure 1.1
Global semiconductor market

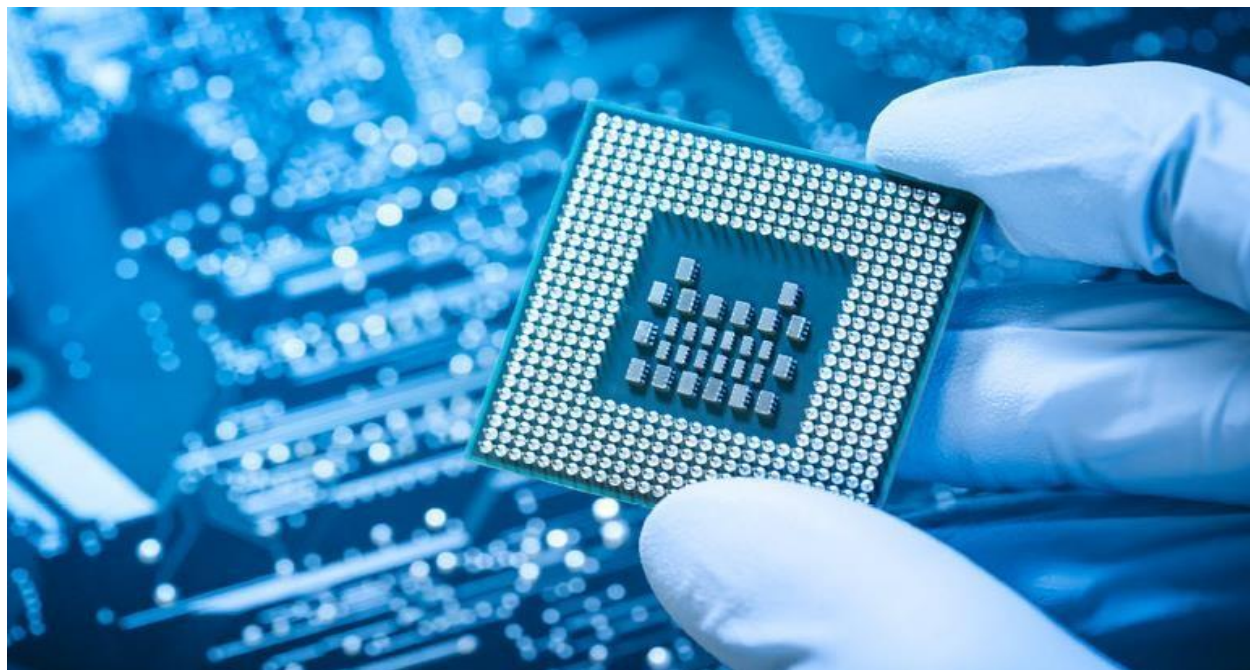


Figure 1.2
Semi-conductor

2.3 Company Profile:

Afablez is an absolute provider of full range IP solutions. We design, develop and fabricate feature-rich IP products with enhanced performance, optimization, and customizability. Our ability to re-envisage device reliability, design, and reuse IP in a short time, and with reduced cost has helped numerous semiconductor fabs and diversified domains.

Further, We endeavor to power the era of “scientific know-how” with our flexible, agile, robust and secure silicon chip design, IP integration and application testing.

3 HISTORY

- Incorporated in July 2018, Afablez Semiconductor Private Limited is involved in designing and manufacturing semiconductor hardware. It is a fabless semiconductor manufacturing company.
- Mr. Vanchinathan Thangavel is the company’s promoter, CEO and Managing Director. Its manufacturing unit is in Chennai, Tamil Nadu.
- Established as a proprietorship firm in 2008 in the name of Femto Logic Designs Systems, the company was converted into a private limited company in 2013 in the name of Femto Logic Design Private Limited.
- It was renamed to FLDEC Systems Private Limited in September 2018. The company is involved in ESDM catering to industries such as defense, aerospace, navy etc. Its manufacturing unit is in Chennai with about 250 design and development engineers.
- **Mr. Vanchinathan Thangavel** is the company’s promoter, CEO and Managing Director.

3.1.2 DIRECTOR:

- a. The company has 2 directors and no reported key management personnel.
- b. The longest serving director currently on board is Vanchinathan Thangavel who was appointed on 22 June 2018. Thangavel has been on the board for 4 years. The most recently appointed director is Sudharsan, who was appointed on 27 August, 2019.
- c. Vanchinathan Thangavel has the largest number of other directorships with a seat at a total of 8 companies. In total, the company is connected to 7 other companies through its directors.
 - Mr. Vanchinathan Thangavel
 - Mr. Sudharsan.

3.1.3 Quality Statement:

- We operate with powerful governance and superior morals. Our group of dedicated, full-fledged QM Team works with latest Sophisticated machines and instruments.
- To Assure quality of finished products Rigorous quality control measures are taken during Each Stage of Manufacture Including Raw Materials, Sample Pieces and Finished Products.

3.1.4 Rules and Regulations of the Company:

- Outfit of the employees should be formals and during Saturdays business casuals are allowed.
- 1st And 3rd Saturday is a Working day, 2nd And 4th Saturday Is Holiday.
- Reporting Time Is 9.30AM Should Check In Before 10AM .

3.1.5 Achievements:

- Completed many projects of NASA , ISRO , INDIAN ARMY, AIR FORCE, BHEL
- Awarded as the best quality semiconductor manufacturer.
- Completed the projects of Accenture, TCS, Cognizant.

2.2.8 Corporate Social Responsibility:

- Taking care of cancer patients
- Funding many non government organizations
- Giving work exposure to the college students and making them learn by providing internships.

Threats:

- Equipment failure.
- High loss expectancies.
- Global supply chain management challenges.
- Business resiliency risks.
- Chip shortage - Less supply, More demand
- A confluence of problems led to the semiconductor shortage. In addition to long-standing issues within the industry, Such as insufficient capacity at semiconductor fabs, the covid-19 pandemic introduced unprecedented challenges

3.2 PRODUCT PROFILE:

FLDEC Systems is an electronics system design manufacturing company. We are preeminent developers, ODM, OEM of Hi-Speed electronic products. We are rapid in adopting imminent future innovative technologies such as AI, ML, Embedded Vision, Big data analysis, NextGen Video. We matriculate these technologies to provide front-line solutions for our customers in diverse domains including:

- Hi-Speed FPGA Designs
- Sensor Fusion
- IoT
- 5G wireless
- Cameras Interfaces,
- Cloud interfaces

Our augmentation, aggressiveness, and time-to-market attitude wholly redefine demand generation.

HI-SPEED FPGA DESIGN:

FTDI's powerful FPGA platform simplifies USB 2.0 integration, reduces LSI development time, and supports sub-100 ms hardware reconfiguration



Figure 1.3

HI speed FPGA design

FTDI'S Morph-IC-II platform combines an Altera Cyclone®-II FPGA with high-performance USB 2.0 capabilities to facilitate Hi-Speed communications with ultra-fast, sub-100 ms FPGA programming and re-programming.

This makes the Morph-IC-II ideal for applications which require users to reconfigure hardware functionality 'on-the-fly' by downloading software over USB, "morphing" the hardware. As well as enhancing application flexibility, hardware reconfiguration via USB can also reduce BoM costs as the FPGA need only be sized for the most complex discrete function rather than all potential functions.

FTDI's platform incorporates all of the hardware, software and documentation needed for 'out-of-the-box' FPGA development. The hardware comprises a compact development module incorporating an Altera EP2C5F256C8N Cyclone-II FPGA and an FTDI FT2232H USB-to-multi-purpose UART/FIFO IC. One channel of the FT2232H is utilized for FPGA-to-PC communications and supports data transfer speeds of up to 40 Mbytes/sec.

The second channel of the FT2232H is used to configure and reconfigure the FPGA over USB. USB programming eliminates the need for Flash configuration memory normally required to configure SRAM-based FPGAs.

The Morph-IC-II features up to 80 general purpose I/O (GPIO) lines ensuring optimum flexibility for connecting the FPGA to external circuits and interfaces.

As well as supporting FPGA application development and the FPGA-based prototyping of high-volume ASIC applications, the Morph-IC-II is also an ideal education platform for developers who want to learn more about FPGA design. FTDI also allows customers to use the

SENSOR FUSION:

Sensor fusion is the ability to bring together inputs from multiple radars, lidars and cameras to form a single model or image of the environment around a vehicle. The resulting model is more accurate because it balances the strengths of the different sensors. Vehicle systems can then use the information provided through sensor fusion to support more-intelligent actions.

Each sensor type, or “modality,” has inherent strengths and weaknesses. Radars are very strong at accurately determining distance and speed — even in challenging weather conditions — but can’t read street signs or “see” the color of a stoplight. Cameras do very well read signs or classifying objects, such

as pedestrians, bicyclists or other vehicles. However, they can easily be blinded by dirt, sun, rain, snow or darkness. Lidars can accurately detect objects, but they don’t have the range or affordability of cameras or radar.

Sensor fusion brings the data from each of these sensor types together, using software algorithms to provide the most comprehensive, and therefore accurate, environmental model possible. It can also correlate data pulled from inside the cabin, through a process known as interior and exterior sensor fusion.

A vehicle could use sensor fusion to fuse information from multiple sensors of the same type as well — for instance, radar. This improves perception by taking advantage of partially overlapping fields of view.

As multiple radars observe the environment around a vehicle, more than one sensor will detect objects at the same time. Interpreted through global 360° perception software, detections from those multiple sensors can be overlapped or fused, increasing the detection probability and reliability of objects around the vehicle and yielding a more accurate and reliable representation of the environment.

The right AI can learn from it, and that helps us solve challenging corner cases our customers face.

A third benefit of low-level sensor fusion is reduced latency. The domain controller doesn’t have to wait for the sensor to process data before acting upon it. This can help speed performance in situations where even fractions of a second count.

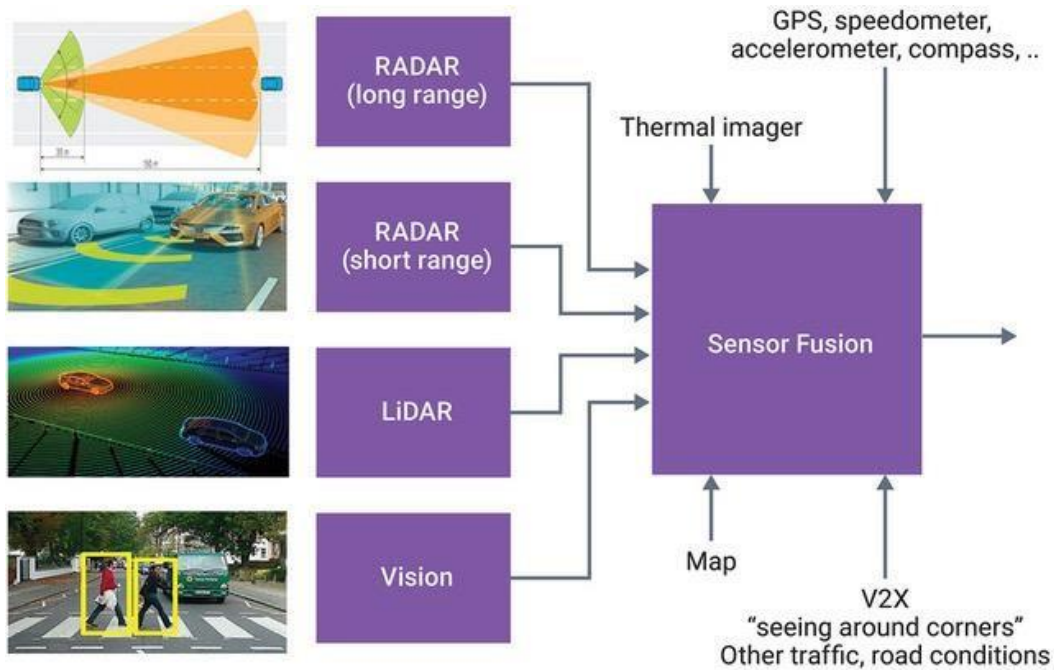


Figure 1.4
sensor fusion

IOT:

- ❖ The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.
- ❖ A thing in the internet of things can be a person with a heart monitor implant, a farm animal with a biochip transponder, an automobile that has built-in sensors to alert the driver.
- ❖ when tire pressure is low or any other natural or man-made object that can be assigned an Internet Protocol (IP) address and is able to transfer data over a network.
- ❖ Increasingly, organizations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision

How does IOT work?

- ❖ An IoT ecosystem consists of web-enabled smart devices that use embedded systems, such as processors, sensors and communication hardware, to collect, send and act on data they acquire from their environments.
- ❖ IOT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analyzed or analyzed locally.
- ❖ Sometimes, these devices communicate with other related devices and act on the information they get from one another.
- ❖ The devices do most of the work without human intervention, although people can interact with the devices - for instance, to set them up, give them instructions or access the data making and increase the value of the business.

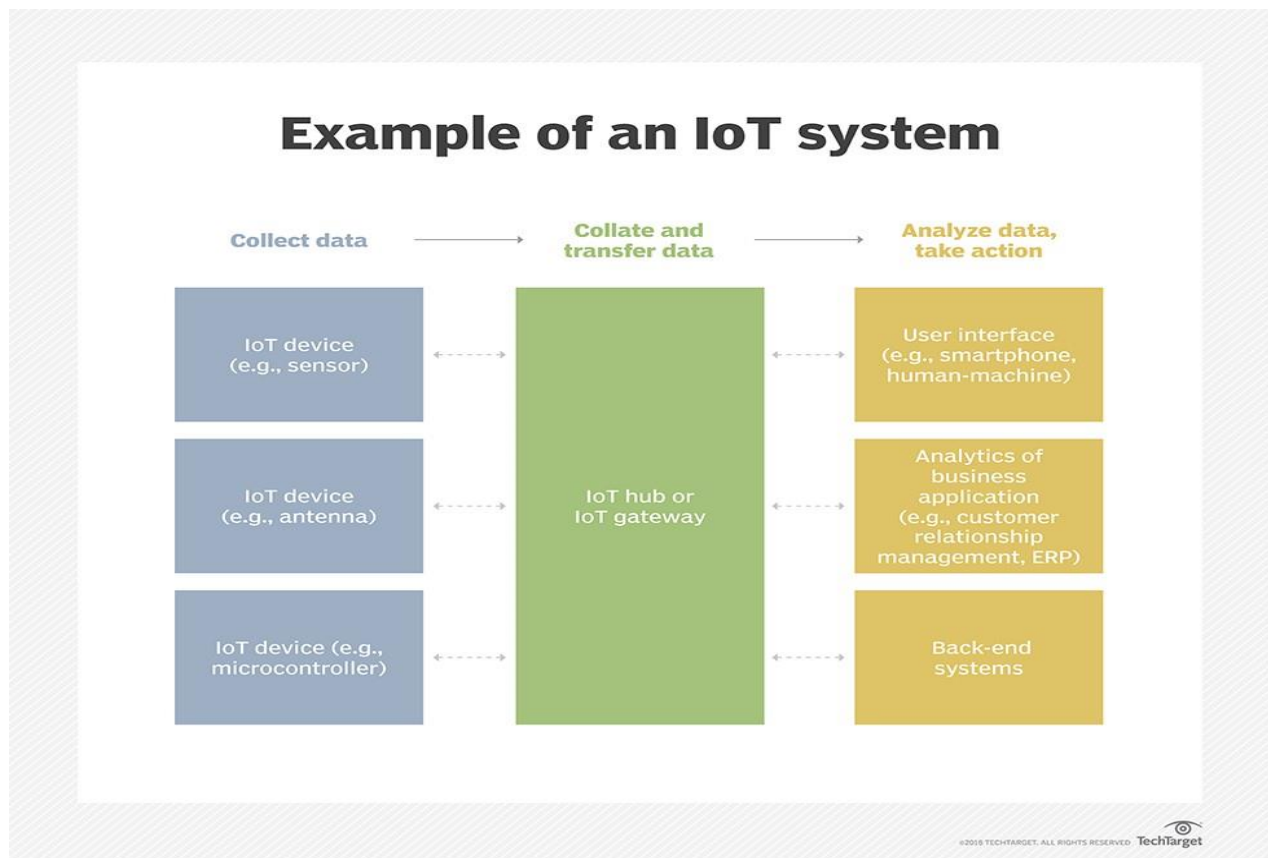


Figure 1.5

IOT system

5G WIRELESS:

- ❖ 5G networks are cellular networks, in which the service area is divided into small geographical areas called cells. All 5G wireless devices in a cell communicate by radio waves with a cellular base station via fixed antennas, over frequency channels assigned by the base station. The base stations, termed nodes, are connected to switching centers in the telephone network and routers for Internet access by high-bandwidth optical fiber or wireless backhaul connections.
- ❖ As in other cellular networks, a mobile device moving from one cell to another is automatically handed off seamlessly. 5G is expected to support up to a million devices per square kilometer.
- ❖ The industry consortium setting standards for 5G, the 3rd Generation Partnership Project (3GPP), defines "5G" as any system using 5G NR (5G New Radio) software - a definition that came into general use by late 2018.
- ❖ Several network operators use millimeter waves called FR2 in 5G terminology, for additional capacity and higher throughputs. Millimeter waves have a shorter range than the lower frequency microwaves, therefore the cells are of a smaller size.
- ❖ Millimeter waves also have more trouble passing through building walls. Millimeter-wave antennas are smaller than the large antennas used in previous cellular networks. Some are only a few centimeters long.
- ❖ The increased data rate is achieved partly by using additional higher-frequency radio waves in addition to the low- and medium-band frequencies used in previous cellular networks. For providing a wide range of services, 5G networks can operate in three frequency bands are **low, medium, and high**.
- ❖ 5G can be implemented in low-band, mid-band or high-band millimeter-wave 24 GHz up to 54 GHz. Low-band 5G uses a similar frequency range to 4G cellphones, 600–900 MHz, giving download speeds a little higher than 4G: 30–250 megabits per second (Mbit/s).[5] Low-band cell towers have a range and coverage area like 4G towers. Mid-band 5G uses microwaves of 1.7–4.7 GHz, allowing speeds of 100–900 Mbit/s, with each cell tower providing service up to several kilometers in

radius. This level of service is the most widely deployed and was deployed in many metropolitan areas in 2020.

- Some regions are not implementing the low band, making Mid-band the minimum service level. High-band 5G uses frequencies of 24–47 GHz, the bottom of the millimeter wave band, although higher frequencies may be used in the future.



Figure 1.6
5G wireless

CAMERA INTERFACE:

The Camera Serial Interface (CSI) is a specification of the Mobile Industry Processor Interface (MIPI) Alliance. It defines an interface between a camera and a host processor. The latest active interface specifications are CSI-2 v3.0, CSI-3 v1.1 and CCS v1.0 which were released in 2019, 2014 and 2017 respectively.

CSI-1

CSI-1 was the original standard MIPI interface for cameras. It emerged as an architecture to define the interface between a camera and a host processor. Its successors were MIPI CSI-2 and

MIPI CSI-3, two standards that are still evolving.

CSI-2:

The MIPI CSI-2 v1.0 specification was released in 2005. It uses either D-PHY or C-PHY (Both standards are set by the MIPI Alliance) as a physical layer option. The protocol is divided into the following layers:

1. Physical Layer (C-PHY/D-PHY)
2. Lane Merger Layer.
3. Low Level Protocol Layer.
4. Pixel to Byte Conversion Layer
5. Application Layer

In April 2017, the CSI-2 v2.0 specification was released. CSI-2 v2.0 brought support for RAW-16 and RAW-20 color depth, increase virtual channels from 4 to 32, latency reduction and transport efficiency (LRTE), differential pulse-code modulation (DPCM) compression and scrambling to reduce Power Spectral Density.

In September 2019, the CSI-2 v3.0 specification was released. CSI-2 v3.0 introduced Unified Serial Link (USL), Smart Region of Interest (SROI), End-of-Transmission Short Packet (EoTp) and support for RAW-24 color depth.

CSI-3

MIPI CSI-3 is a high-speed, bidirectional protocol primarily intended for image and video transmission between cameras and hosts within a multi-layered, peer-to-peer, UniPro-based M-PHY device network. It was originally released in 2012 and got re-released in version 1.1 in 2014.

Camera Command Set (CCS)

The Camera Command Set (CCS) v1.0 specification was released on November 30, 2017. CCS defines a standard set of functionalities for controlling image sensors using CSI-2

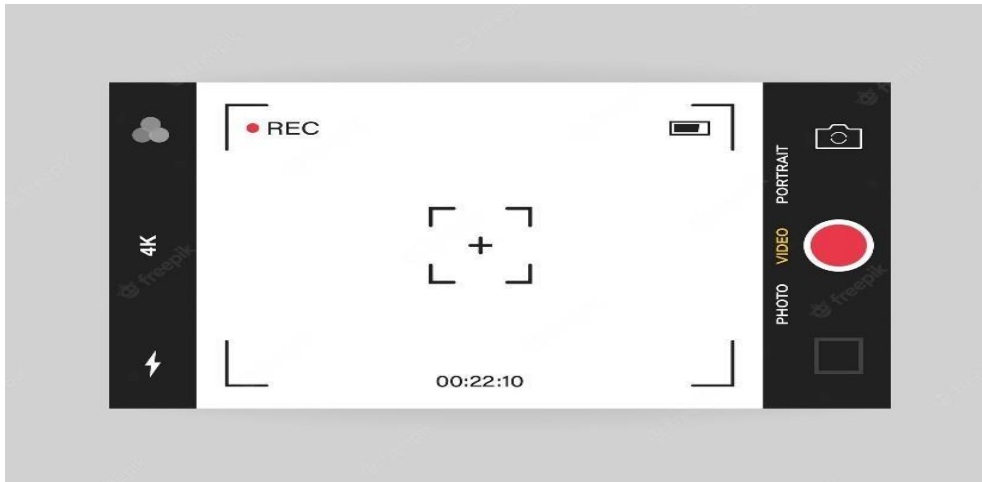


Figure 1.7
camera interface

CLOUD INTERFACE:

A Cloud API is a software interface that allows developers to link cloud computing services together. Application programming interfaces (APIs) allow one computer program to make its data and functionality available for other programs to use. Developers use APIs to connect software components across a network.

Cloud APIs are often categorized as being vendor-specific or cross-platform. Vendor-specific cloud APIs are written to support the cloud services of one specific provider, while cross-platform APIs allow developers to connect functionalities from two or more cloud providers.

Cloud APIs are often categorized by type:

- **PaaS APIs:** Platform as a Service APIs provide access to back-end services such as databases.
- **SaaS APIs:** Software as a Service APIs facilitate connections between cloud services at the application layer.
- **IaaS APIs:** Infrastructure as a Service APIs enable cloud-based compute and storage resources to be provisioned and de-provisioned as quickly as possible.

3.3 ORGANIZATION STRUCTURE OF THE COMPANY

ORGANISATIONAL CHART

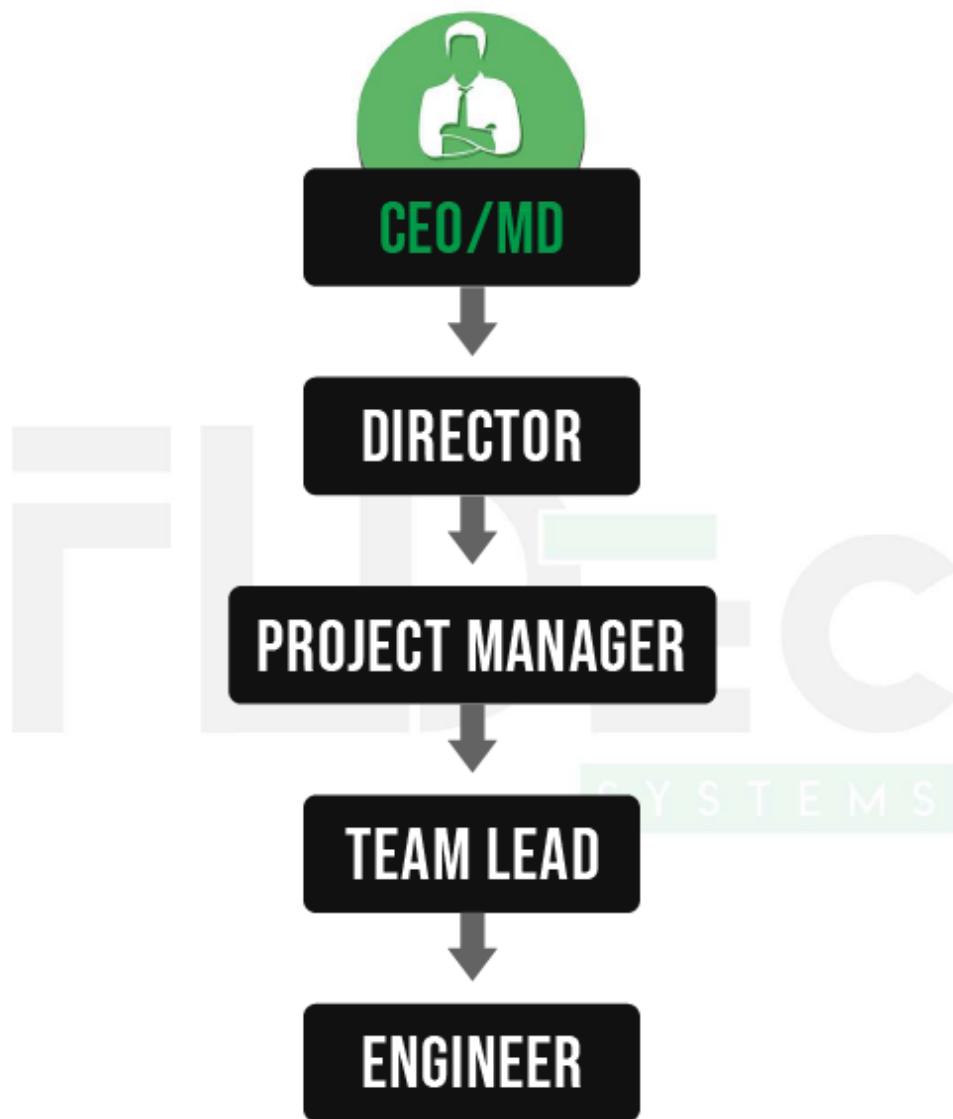


Figure 1.9
organizational chart

CHAPTER 3

FUNCTIONAL DEPARTMENTS

3.1 MARKETING DEPARTMENT:

- This company is of Business-To-Business marketing refers to the marketing of products to other businesses and organizations.
- It holds several key distinctions from B2C marketing, which is oriented toward consumers.
- In a broad Sense, **B2B** marketing content tends to be more informational and straightforward than **B2C**.
- This is because business purchase decisions, In comparison to those of Consumers, Are Based More on Bottom-Line Revenue Impact. return on investment (ROI) Is Rarely a Consideration for The Everyday Person—At Least In A Monetary Sense—But It's a primary focus is for to incorporate decision makers.
- ❖ Afablez semiconductor private limited they do marketing by these videos or products their main customers are **ISRO, NASA, ARMY, and INDIAN AIR FORCE**.

Physical Evidence:

This Refers to all existing and potential features customers see when engaging with your business.

- Is the tangible proof that establishes credibility
- It includes the look and feel of your business branding
- Spans the physical and digital environment

Achievements:

- 250 Design & Development engineers
- High End Workstations & Test Benches

Industry Leading EDA Tool are been used for manufacturing.

3.2 Human Resource Department:

Functions of HR department

- Recruitment
- Selection
- Performance appraisal
- Incentives and benefits

RECRUITMENT

- Recruitment is the process of finding and attracting capable applicants for employment.
- The source of recruitment includes campus recruitment, consultancies And lateral entries.

a)Campus Recruitment

The Recruitment panel goes to the reputed colleges to select the candidates.

On the following basis they recruit the candidates.

- GET –Graduate Engineer Training

- DET-Diploma Engineer Training

b)Consultancies

- The department heads tells where requirements are needed and passon the information to the HR department about the requirement.
- The concerned recruitment team will gets approval for filing the vacancies. Then the consultancies approach by telling the Requirement of the job vacancies.
- The best fit applications are been Mailed for attending the interview.If the HR is satisfied then, they are called for the personal interview.

c)Lateral Entries

They pick the experience candidates or people from other companies

The Following is the process of lateral entry recruitment:

- Interview
- Written Test
- Technical and personal interview

Performance Appraisal:

- ❖ Performance appraisal is an objective assessment of an individual's performance against well-defined benchmarks.
- ❖ The performance appraisal is provided based on the superior–subordinates relationship, where by the superiors rate their subordinates. They are rated on the basis of the employees' performance.

3.3 Finance Department:

Finance Functions:

- Financing decisions
- Dividend decisions
- Liquidity functions

Role of Financial Manager:

- Funds rising
- Funds allocation
- Profit planning
- Understanding capital market.

Budget :

The funds which are required by the organization are been provided by the corporate office, Chennai. These funds are been allotted to all the departments, Whenever there is requirement.

Allocation of Funds:

Funds are been allotted for various purposes for the Departments. They allocate the funds for various activities and also for various projects, and also for special projects, They also allocate for the Pay rolls. They use the customized Erp to pay the salary to the employees.

Roles and Responsibilities:

AFABLEZ employees provide a continuous production system, making use of special

purpose machines and produces standardized items in large quantities.

Characteristics:

- Standard products are manufactured.
- Small work in progress is involved.
- More maintenance is required.
- Minimum cost of production per unit.

3.4 Purchase Department:

The Purchase Department will be manufacturing and the manufacturing company will produce End Items to meet the demand and the availability of sufficient production capacity. It must be coordinated with the availability of raw material and purchase the items from which the End Items are be produced.

The Following are the system which is been followed to procure the materials:

- JIT
- LCL
- MRP
- VMS

JUST IN TIME (JIT):

- Just-In-Time (JIT) Is an Inventory strategy, companies will employ to

increase efficiency and decrease waste by receiving goods only as they are needed in the production process, thereby reducing inventory costs.

- This method requires producers to forecast demand accurately.
- JIT encompasses the successful execution of all manufacturing activity required to produce a final product from design to delivery and includes all stages of conversion from raw materials onwards.

LOW COST LOGISTICS (LCL) LCL

- It Includes materials such as bolts, nuts etc.
- These are been purchased in bulk and they are been used for production, This doesn't affect the Inventory cost.
- Low cost logistics is used to handle the cost of small parts like Bolts which is used in an efficient manner.
- It makes the material handling process easy with a less minimum cost and effort.

MATERIAL REQUIREMENT PLANNING

- A materials requirement planning (MRP) information system is a sales forecast-based system used to schedule raw material deliveries and quantities, given assumptions of machine and labor units required to fulfill a sales forecast.
- Material is a technique for determining the quantity and timing for the acquisition of dependent items needed to satisfy master schedule requirements.
- An alternative approach to managing dependent demand items is planned for the procurement or manufacture of the specific 28 components that will be required to produce the required quantities of the end production schedule indicated by the master production schedule.

VENDOR MANAGEMENT SYSTEM (VMS)

- Managing vendor/supplier is not an easy task and the manual interaction

can be a costly and time taking process.

- A vendor/supplier is a part of the supply chain management term that means anyone who provides goods or services to a company or individuals.
- A vendor often manufactures inventoried items and sells those items to a customer.
- Vendor management is a time-consuming process that may include adding new suppliers to your vendor master data base, payment inquiries, order management, invoice creation, and vendor evaluation process.

3.5 Tender Department:

- Tender department employees are responsible for examining Tender documents, the scope of work, determining qualifications, and financial criteria, making presentations, and risk matrix, and providing information to top management to obtain bidding approval.

3.6 Future Plans:

- ❖ Afablez is going to expand its manufacturing facilities and they are going for diversification.
- ❖ Afablez is getting high end top notch machines for manufacturing of semiconductors.
- ❖ They will have a tactical mission computer
- ❖ They will also have ground vehicle control system
- ❖ 8k Video engine
- ❖ 10g Network card

CHAPTER – 4

ANALYSIS

4.1 SWOT ANALYSIS OF AFABLEZ:

Strength

- Availability of Resource Is High.
- Customer satisfaction.
- Good infrastructure.
- Good relationship among employees.
- There is good communication system and co-operation among all departments.
- Efficient employees .
- Standard quality products.
- Strong product portfolio.

Weakness

- Production cost is high
- High reliance on imported raw material imports creating potential price / qualityavailable issues.
- Diversified products on the list and the concentration each product receives decreases accordingly.
- Maintenance cost of machines are high.

Opportunities

- Expansion of market
- Company provides better credit facility to dealers.
- India is now of 5g generation, so that they can provide the productsusing 5gservices
- Company introduces promotional programmer.

Chapter 5

Learning experience

Oral presentation:

i. DE risking factors:

Every organization serving the financial sector must keep up with existing deposits and compliance and follow new updates, new regulations, and trends in this area. Although following this sector's job is seen as laborious and time-consuming, failure to follow up brings in non-compliance with the new regulations. Failure to comply with regulations can also damage institutions' reputation, lose customers, and be subject to severe penalties from regulators.

Therefore, it is very important to implement appropriate AML-CTF compliance programs in institutions. De-Risking, on the other hand, is a strategy that companies apply when they cannot manage these money laundering risks that they have obligations to. You can find more detailed information about De-Risking and AML in the rest of your article.

What Is De-Risking?

As we mentioned, there is a law, regulation, etc. that financial institutions follow. In order to comply with these regulations, a certain AML Program should be established in organizations. When we look at the basis, these programs differ according to institutions because the risk level and risk understanding of each institution are not the same. De-Risking can also be considered as a strategy that can be implemented by those organizations that cannot manage their money laundering risks. In this process, financial institutions can increase their expenditures for the compliance program they implement, take new measures, and cut off relations with institutions or customers they see as risky. Such action steps take place in financial institutions as De-Risking.

ii. Risk assessment:

Steps needed to manage risk

Risk management is a step-by-step process for controlling health and safety risks caused by hazards in the workplace.

You can do it yourself or appoint a competent person to help you.

- **Identify hazards**
- **Assess the risks**
- **Control the risks**
- **Record your findings**
- **Review the controls**

Identify hazards

Look around your workplace and think about what may cause harm (these are called hazards).

Think about:

- how people work and how plant and equipment are used
- what chemicals and substances are used
- what safe or unsafe work practices exist
- the general state of your premises

Look back at your accident and ill health records as these can help you identify less obvious hazards. Take account of non-routine operations, such as maintenance, cleaning or changes in production cycles.

Think about hazards to health, such as manual handling, use of chemicals and causes of work-related stress.

For each hazard, think about how employees, contractors, visitors or members of the public might be harmed.

Vulnerable workers

Some workers have particular requirements, for example young workers, migrant workers, new or expectant mothers and people with disabilities.

Talk to workers

Involve your employees as they will usually have good ideas.

Assess the risks

Once you have identified the hazards, decide how likely it is that someone could be harmed and how serious it could be. This is assessing the level of risk.

Decide:

- Who might be harmed and how
- What you're already doing to control the risks
- What further action you need to take to control the risks
- Who needs to carry out the action
- When the action is needed by

Control the risks

Look at what you're already doing, and the controls you already have in place. Ask yourself:

- Can I get rid of the hazard altogether?
- If not, how can I control the risks so that harm is unlikely?

If you need further controls, consider:

- Redesigning the job
- Replacing the materials, machinery or process organizing your work to reduce exposure to the materials, machinery or process
- Identifying and implementing practical measures needed to work safely providing personal protective equipment and making sure workers wear it

Put the controls you have identified in place. You're not expected to eliminate all risks but you need to do everything 'reasonably practicable' to protect people from harm. This means balancing

the level of risk against the measures needed to control the real risk in terms of money, time or trouble.

You can find more detailed guidance on controls relevant to your business.

Record your findings

If you employ 5 or more people, you must record your significant findings, including:

- the hazards (things that may cause harm)
- who might be harmed and how
- what you are doing to control the risks

To help you, we have a risk assessment template and examples. Do not rely purely on paperwork as your main priority should be to control the risks in practice.

Review the controls

You must review the controls you have put in place to make sure they are working. You should also review them if:

- they may no longer be effective
- there are changes in the workplace that could lead to new risks such as changes to:
 - staff
 - a process
 - the substances or equipment used

Also consider a review if your workers have spotted any problems or there have been any accidents or near misses. Update your risk assessment record with any changes you make.

iii. In housing/ Out sourcing:

What Is the Difference Between In-House and Outsourcing?

Outsourcing is the practice of hiring an outside company or contractor to perform work, whereas in-housing (also known as insourcing) is the practice of assigning this work to existing employees.

Is It Better to Outsource or Keep In-House?

There are benefits and disadvantages to outsourcing certain roles, as there are with keeping those operations in-house. A company has greater control over the direction and management of work by its in-house employees than it would over an outside contractor. On the other hand, outside companies may have more experience and resources with certain tasks, such as legal services. In addition, a company must pay the full salary and benefits of its in-house employees. Outsourcing those roles to another company could cost more or less than keeping those roles in-house, depending on the nature of the task.

What Does In-House Recruitment Mean?

In-house recruitment is when a company directly advertises, interviews, and hires a new employee to fill an open role. The alternative is to outsource hiring to a professional recruiting agency.

Real-World Example of In-House Financing

Ford Credit is a well-known in-house auto financing group. Ford Credit is the business of giving out auto loans for Ford car buyers at their own dealerships, rather than encouraging Ford customers to seek external financing from a bank or credit union.

In January 2017, Ford Credit partnered with Autofill to make car buying and financing even easier through technology that allows the buyer to shop online for their car and auto loan. With this new point-of-sale platform, Ford customers can shop online through Ford dealer websites, buy and finance their car. This type of customer experience allows car buyers to spend less time at the dealership while also offering a faster sales process for Ford. Other auto companies such as General Motors also have important in-house financing arms.

What Is the Main Advantage of an In-House Approach?

A company retains greater control over operations by keeping them in-house than they would exercise by outsourcing these roles to a contractor. In addition, they also have

the benefit of in-house specialists who are intimately familiar with the company's business and brand, compared to an outside company that may be less familiar.

iv. Manufacturing sector:

What is the Scenario of India's Manufacturing Sector?

- Manufacturing is among the major economic activities that involves value addition that has consequential positive multiplier effects in the economy. India has the fifth largest manufacturing base in the world.
- As per the second quarter report of the Quarterly Employment Survey conducted by the Union Ministry of Labor, the manufacturing sector accounted for nearly 39% of all the employment generated in the selected nine sectors.
- More than 45% of the manufacturing output is obtained from the MSME sector in India.
- Over the years, there are certainly a handful of domains where India has carved a position of manufacturing leadership such as apparel & accessories, textiles, drugs & pharmaceuticals, petroleum products and motor vehicles.
 - However, we still have a long way to go before our manufacturing can match the success of our services exports.

What is the Bonded Manufacturing Scheme?

- To support the “Make in India” program, the CBIC launched the Bonded Manufacturing Scheme under the Customs Act, 1962.
- Under this programmer, a manufacturing unit can import goods (both inputs and capital goods) under Customs duty deferment with no interest liability.
- The scheme has no investment threshold and export obligations.
- The duties are fully remitted if the goods resulting from such manufacturing operations done in bonded warehouses are exported.

- The import duty is payable only in the event where the finished goods or the imported goods are cleared in the domestic market (ex-bonding).
- The onboarding to the bonded manufacturing programmer is fully digital and the microsite for the same is available on ‘Invest India’ portal.

What can be Done to Boost Manufacturing in India?

- Infrastructure Investments: A multi-pronged approach should be adopted to support manufacturing with the focus largely on large-scale infrastructure investments as it will itself create enormous growth opportunities.
 - Research has shown that investment in hard infrastructure also results in reduction of logistics cost of manufacturing.
- Policy Interventions: A final conceptual piece of India’s manufacturing strategy has to be the design of policies to increase worker skills, and to increase access to finance for its firms.
 - The latter is a general need across the economy, but manufacturing firms are more likely to require fixed capital investments, and are hurt more by lack of adequate finance for expansion, upgrading, or working capital.
- Judicious Import Policy: Through judicious use of import policy, production within the country can be regulated with the objective of generating greater employment in the economy.
 - Exports to international markets, facilitated by Customs, can also be boosted from the domestic surplus generated from the manufacturing capability within the country.
- Eliminating ‘Policy Casualness’: The spate of policy announcements without having the preparedness to implement them is ‘policy casualness’. The government needs to take into account the implications of implementation deficit in its decisions.

V Assembly line:

What Is an Assembly Line?

An assembly line is a production process that breaks the manufacture of a good into steps that are completed in a pre-defined sequence. Assembly lines are the most commonly used method in the mass production of products. They reduce labor costs because unskilled workers are trained to perform specific tasks. Rather than hire a skilled craftsman to put together an entire piece of furniture or vehicle engine, companies hire workers only to add a leg to a stool or a bolt to a machine.

Understanding Assembly Lines:

An assembly line is where semi-finished products move from workstation to workstation. Parts are added in sequence until the final assembly is produced. Today, automated assembly lines are run by machines with minimal human supervision.

The introduction of the assembly line drastically changed the way goods were manufactured. Credit Henry Ford, who set up an assembly line in 1908 to manufacture his Model T cars. Before, workers would assemble a product (or a large part of it) in place, often with one worker completing all tasks associated with the product's creation.

Assembly lines, on the other hand, have workers (or machines) complete a specific task on the product as it continues along the production line rather than complete a series of tasks. This increases efficiency by maximizing the amount a worker could produce relative to the cost of labor.

Determining what individual tasks must be completed, when they need to be completed, and who will complete them is a crucial step in establishing an effective assembly line. Complicated products, such as cars, have to be broken down into components that machines and workers can quickly assemble.

Companies use a design for assembly (DFA) approach to analyze a product and its design in order to determine assembly order and identify issues that can affect each task. Each task is then categorized as either manual, robotic, or automatic, and is then assigned to individual stations along the manufacturing plant floor.

vi. Inline sector:

Inline Measurement:

Inline Measurement suggests that the measurement device, or integrated sensors, are situated in a flow-through system such as a sensor integrated into a manufacturing line, that continually monitors product parameters passing through the station. While inspecting the inline measurement system should be capable to measuring shape and dimension to judge the product conformance.

Inline measurement occurs without the skill of an operator and can be repeated for a large amount of products. When human operators are thrown into the mix the question of skillset becomes an issue. However, when the process becomes automated there are less chances that mistakes will be made. Furthermore, consistent automated monitoring helps to identify when unacceptable products appear which helps when tracking a products traceability.

Inline systems should be accurate regardless of work environment. Inline measurement should be precise even if a temperature shift occurs; some system use a 'golden part' as a reference allowing measuring systems to perform comparative rather than absolute measurements. Typically, Inline measurements rely on automation and precision of machine mechanics.

Inline measurement can take many forms, from the fully integrated robotic measuring systems employed with the automotive industry for complete vehicle body inspection along its welding and assembly operations, to individual smart sensors added to a manufacturing process to control an individual critical aspect of the manufacturing process. Increasingly inline inspection is being added to manufacturing lines to improve product quality, enhance process

control, and thus improve productivity. In reality **'its all about the sensors'** sensors perform the measurement task and can be static, mounted upon a motion device to move them in and out of measuring position or integrated with a sophisticated multi-axis motion device such as an inline integrated CMM or a 6 axis industrial robot.

vii. Robotics hand involvement in manufacturing:

What Is an Industrial Robotic Arm?

Robotic arms, also known as articulated robotic arms, are fast, reliable, and accurate and can be programmed to do an infinite number of tasks in a variety of environments. They are used in factories to automate execution of repetitive tasks, such as applying paint to equipment or parts; in warehouses to pick, select, or sort goods from distribution conveyors to fulfill consumer orders; or in a farm field to pick and place ripe fruits onto storage trays. And as robotic technologies develop and industrial environments become more connected, the capabilities of robotic arms expand to enable new use cases and business operation models.

The Benefits of Industrial Robotic Arms

Businesses can realize several benefits from industrial robotic arms:

- **Improved safety.** Robotic arms help keep workers safe by operating in environments that are hazardous and executing tasks that present high risk of injury to humans.
- **Improved efficiency and productivity.** Robotic arms can operate 24 hours a day, seven days a week without fatiguing, allowing businesses to keep production, inspections, or other tasks going continuously to increase output.
- **Enhanced precision.** By their very nature, robotic arms perform more consistently and accurately than humans for tasks that require extreme precision or consistency.
- **Greater flexibility.** As business priorities change, robotic arms can easily be repurposed for new activities or mounted onto different platforms, such as autonomous mobile robots (AMRs), a stationary assembly line platform, or wall or shelf, as needed.

Industrial Robotic Arm Components:

Robotic arms, aptly named because they resemble a human arm, are typically mounted to a base.

The arm contains multiple joints that act as axes that enable a degree of movement. The higher number of rotary joints a robotic arm features, the more freedom of movement it has. Most

industrial robotic arms use four to six joints, which provide the same number of axes of rotation for movement.

In addition to rotary joints, robotic arm components include the robot controller, an end-of-arm tool, actuators, sensors, vision systems, power systems, and software components.

viii. Infographics:

By definition, an infographic is a visual representation of any kind of information or data.

Whether it's a study on market trends or a step-by-step guide on how to do your laundry, an infographic can help you present that information in the form of an attractive visual graphic.

Why Should You Use Infographics?

There's a reason why infographics are so popular—they're fun, engaging and super easy to share. Plus, they have tons of benefits for all kinds of content creators, including businesses, educators and nonprofits.

Marketers can use infographics to drive more website traffic, increase visibility and brand awareness, and boost engagement.

Educators and trainers can use infographics to explain difficult concepts or break down complex information to make it easier to understand.

Nonprofits can use infographics to spread awareness about a cause or social issue.

ACTIVITIES DONE:

Metal bar chart:

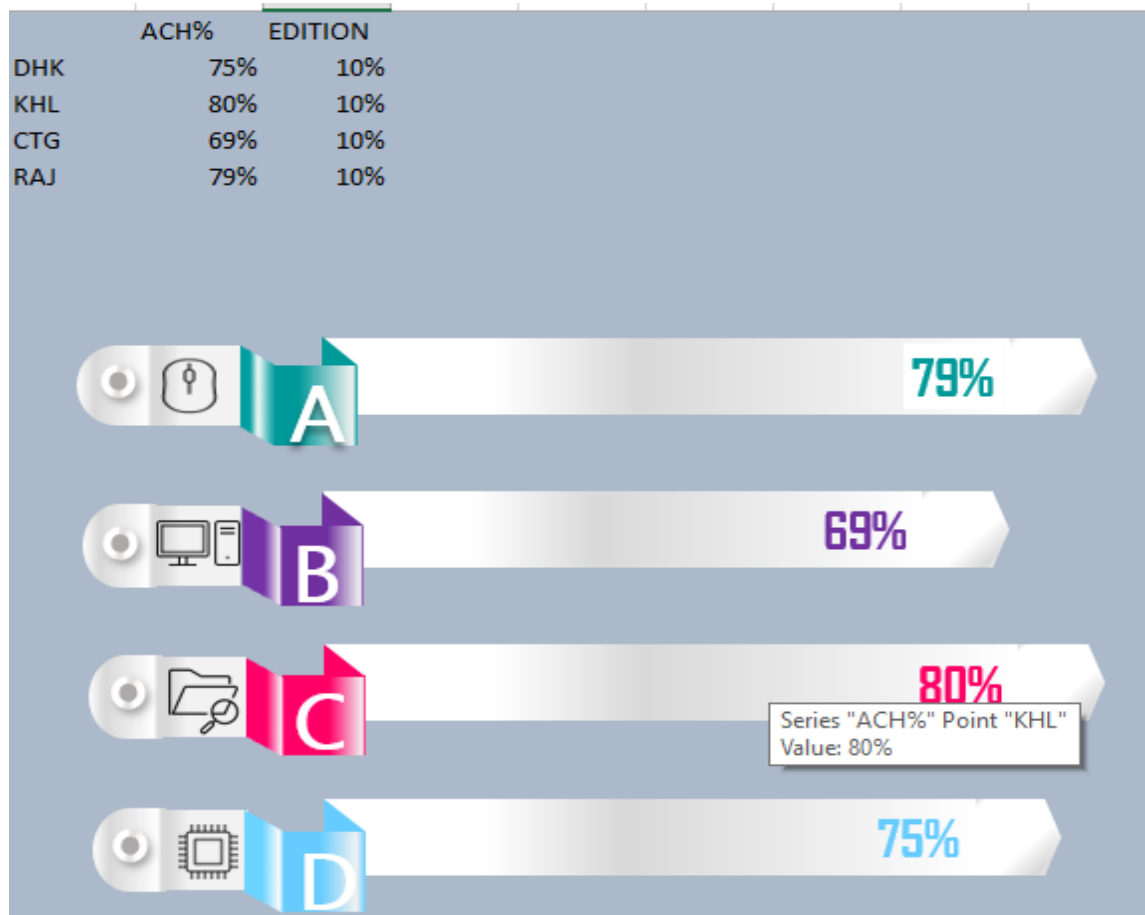


Figure 2.0

KPI INDICATOR:

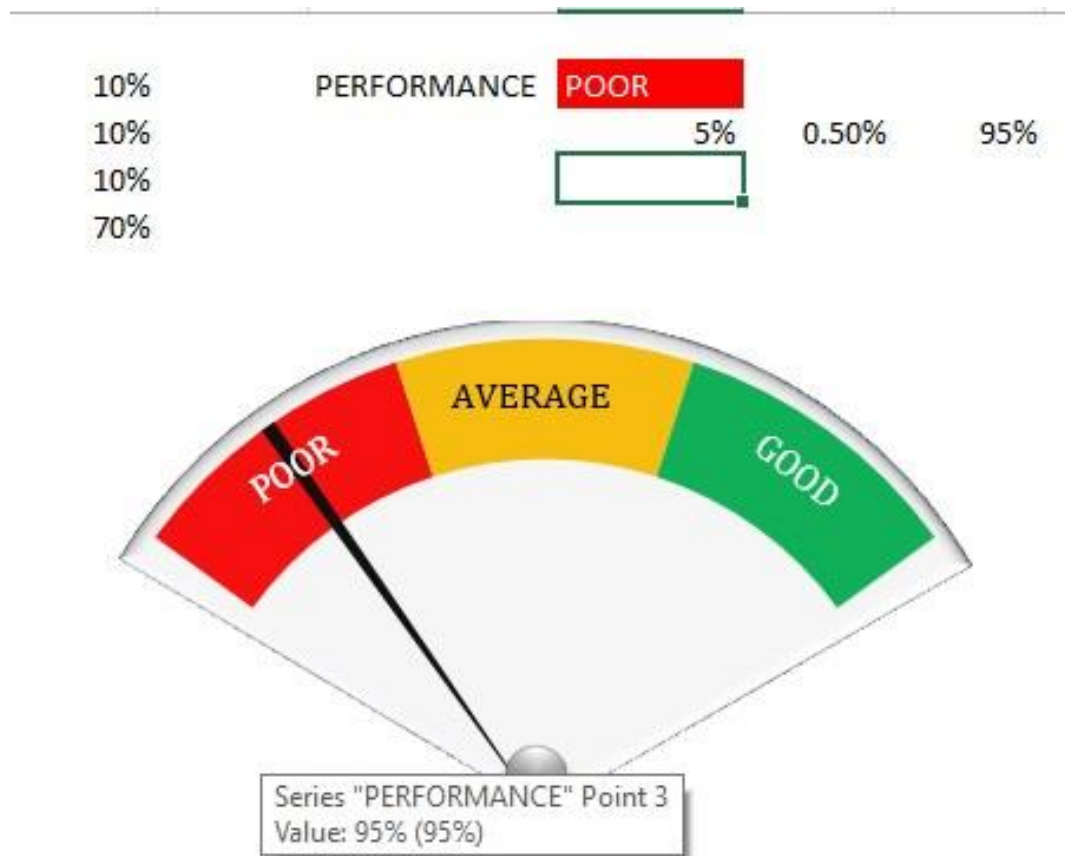


figure 2.1

MALE & FEMALE:

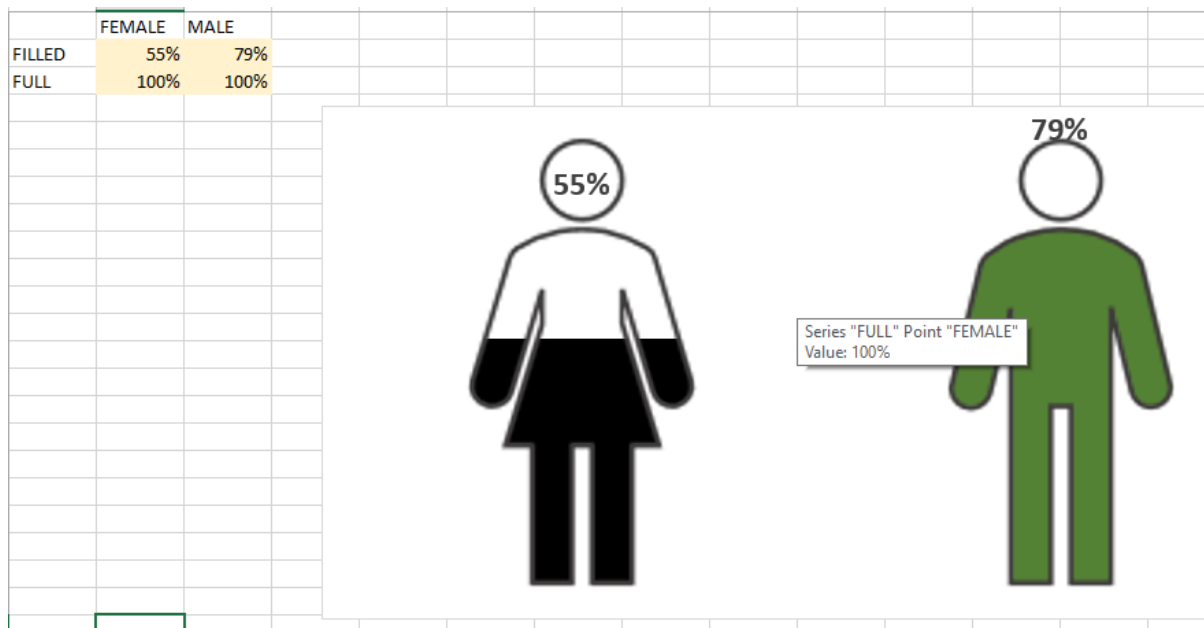


Figure 2.2

FOCUS CHART:

TEAM	SALES	IMAGE SIZE	HANGING LIGHT
HARI	4000	5	#N/A
DEEPI	6000	5	#N/A
ARSHAN	7000	5	#N/A
KEERTHU	9000	5	6.5

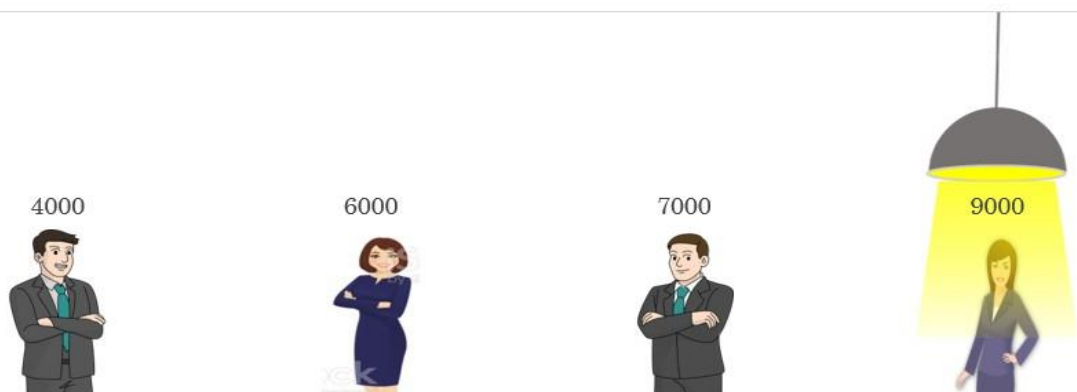


Figure 2.3

DAYWISE SALES:

A	B	C	D	E	F	G	H	I	J	K
DAY	SL	BOTTOM CAP	GREEN	RED	TRANSPARENT GREEN	TRANSPARENT RED	UPPER CA		TARGET	50%
SUN	59%	3%	59%	#N/A		41%	#N/A	3%		
MON	68%	3%	68%	#N/A		32%	#N/A	3%		
TUE	60%	3%	60%	#N/A		40%	#N/A	3%		
WED	41%	3%	#N/A	41%	#N/A			59%		
THRU	70%	3%	70%	#N/A		30%	#N/A	3%		
FRI	38%	3%	#N/A	38%	#N/A			62%		
SAT	82%	3%	82%	#N/A		18%	#N/A	3%		

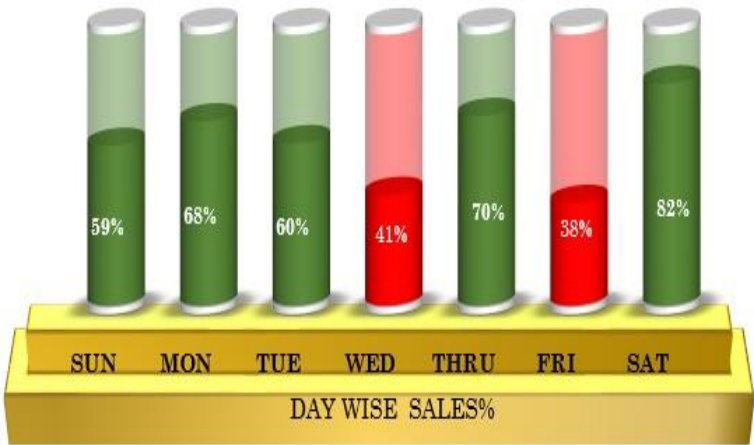


Figure 2.4

WEEKLY SALES:

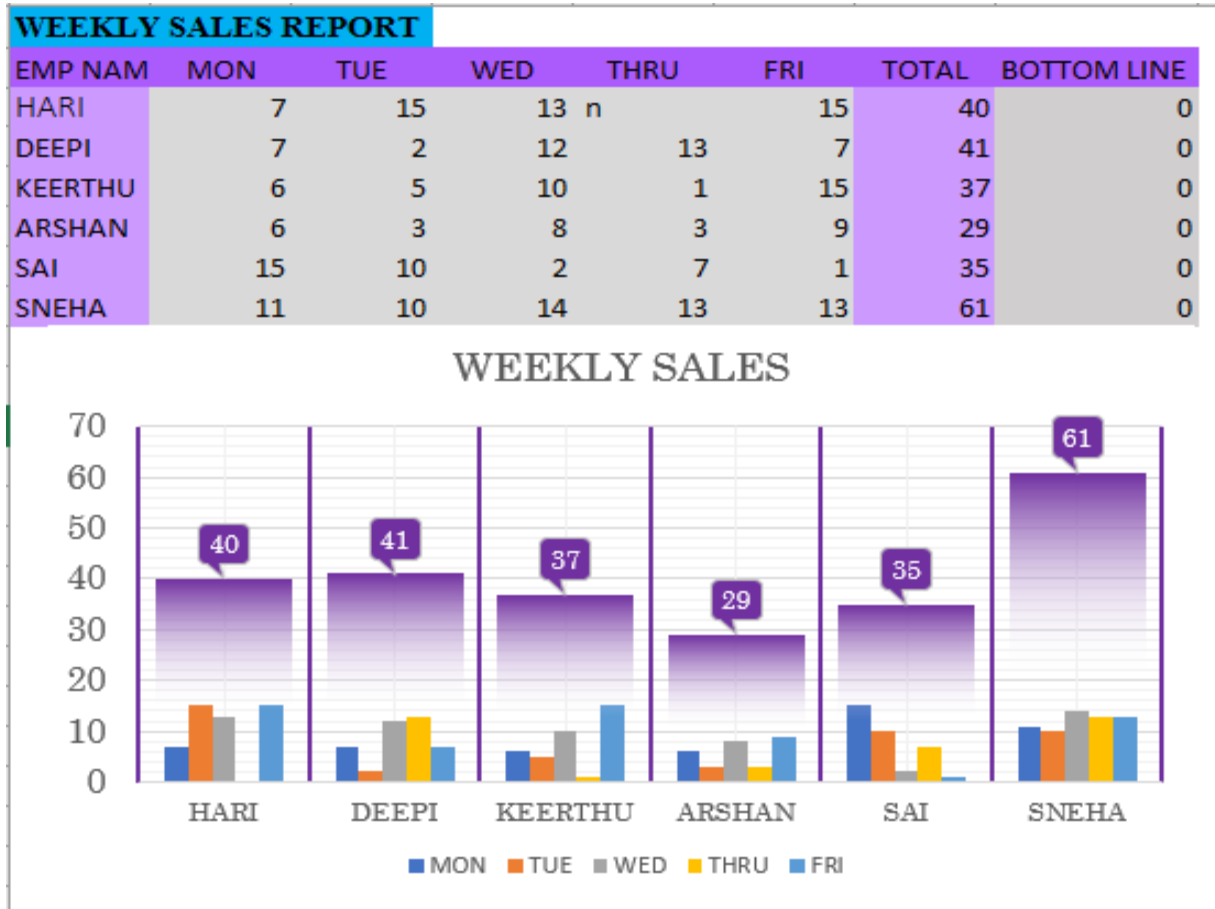


Figure 2.5

BALLOON CHART:

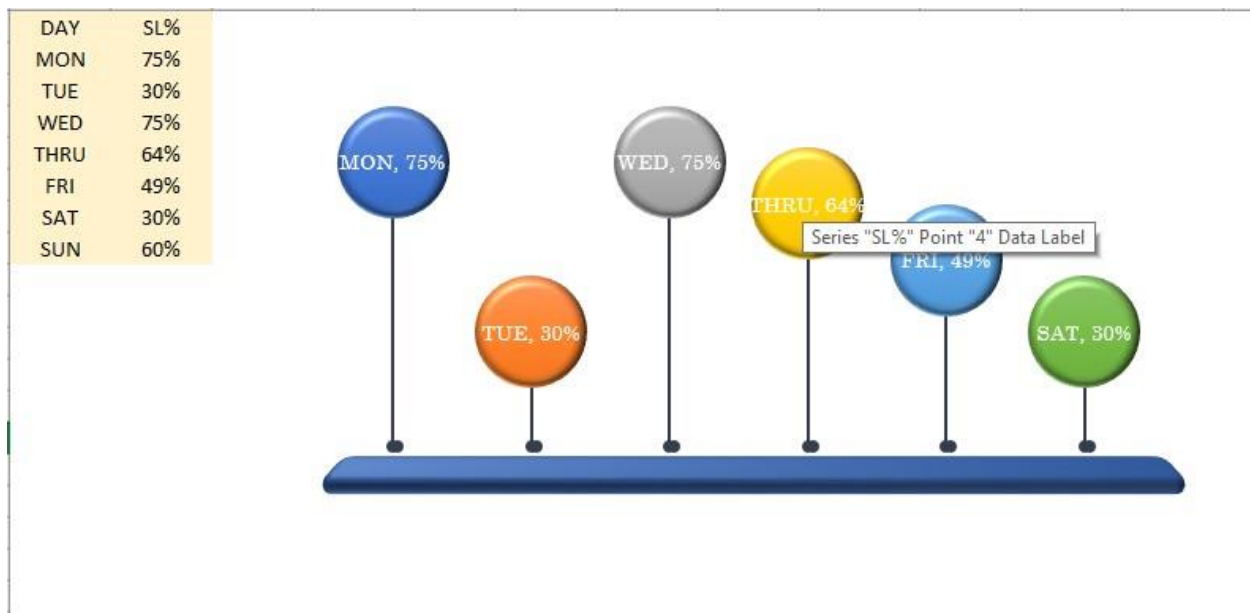


Figure 2.6

BUTTERFLY CHART:

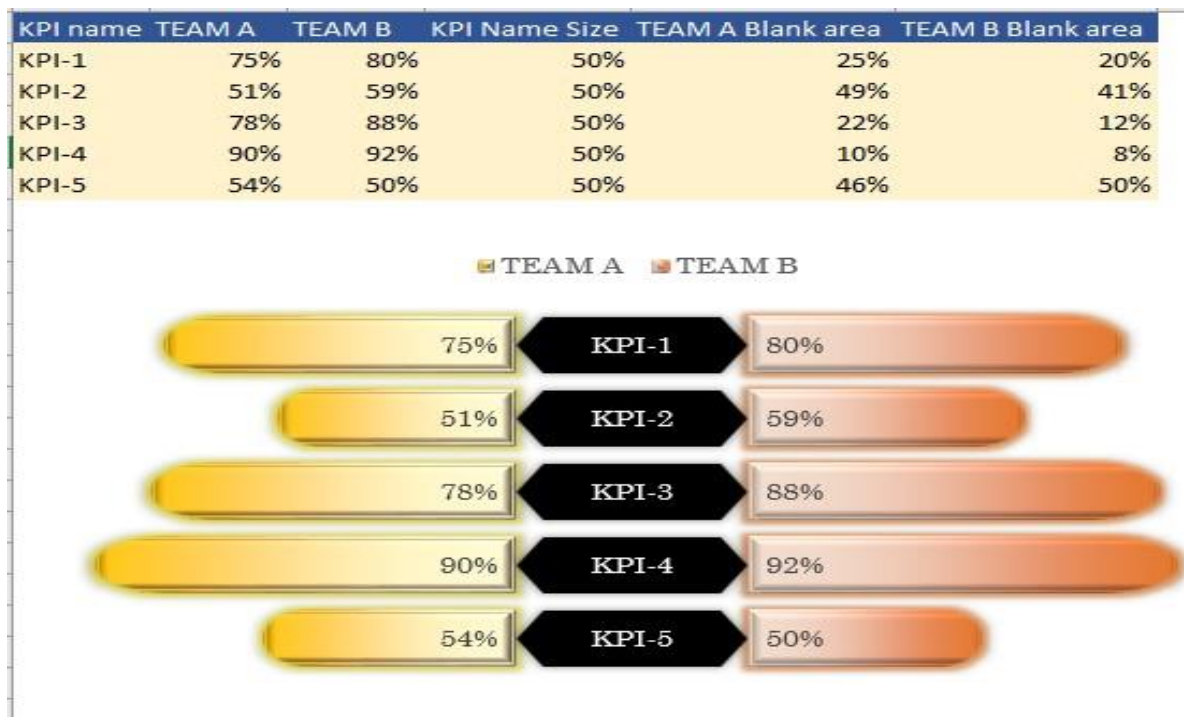


Figure 2.7

3D GAUGE CHART:

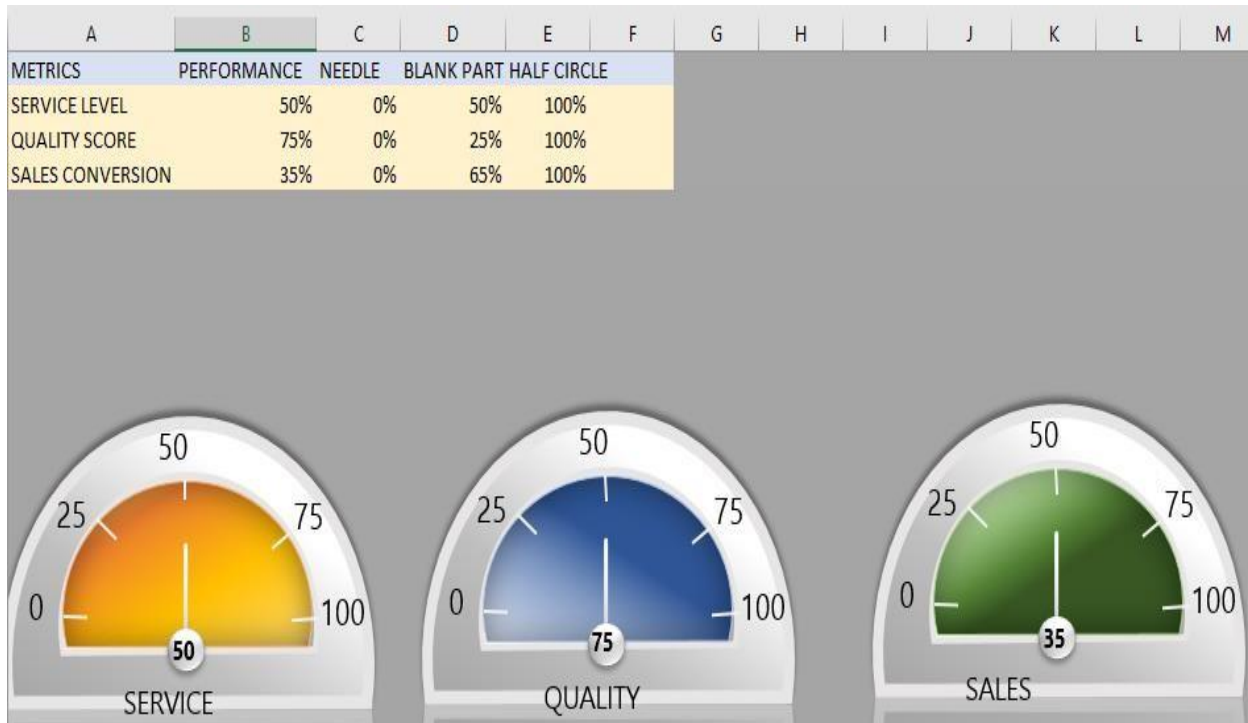
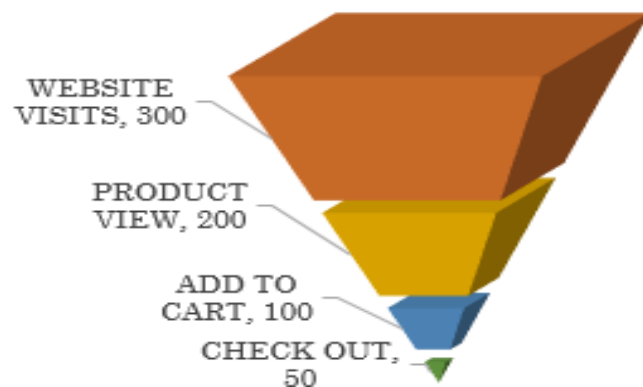
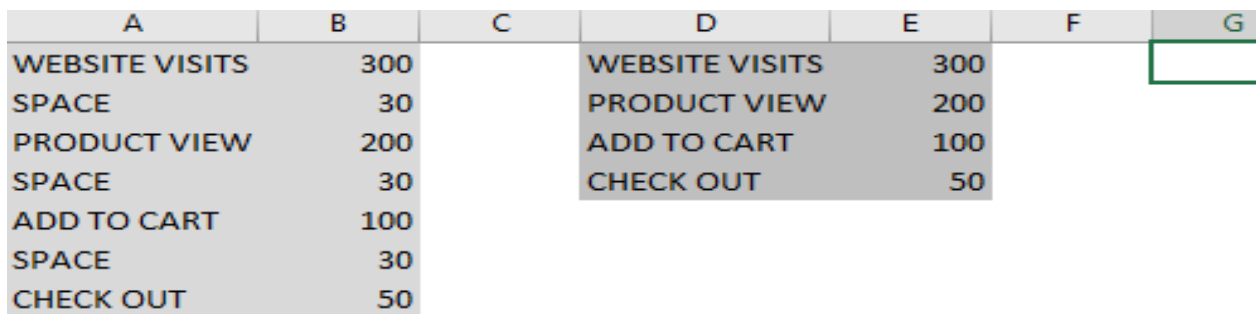


Figure 2.8

FUNNEL CHART:



Chapter 6

FINDINGS, SUGGESTION, CONCLUSION

6.1 FINDINGS

- ☐ Fast growing company
- ☐ 5s principle implemented
- ☐ Canteen facility is good
- ☐ A clean and hygiene environment is made in the plant
- ☐ Producing and maintaining good quality product
- ☐ Eco friendly and non-polluting company
- ☐ They give important to customer satisfaction
- ☐ The welfare measures were provided for the employees
- ☐ Providing loan to employee

6.2 SUGGESTION

- ☐ Can provide transport facility for employees
- ☐ Can get more suggestion from research and development department to increase efficiency.
- ☐ Can update with more recent technology.
- ☐ can give medical facility to employee.
- ☐ Implementation of modern equipment is needed to produce efficiently.

6.1 CONCLUSION

This organization study helps to understand the various departments and their function in the organization. It has also help us to know about the strength and weakness of the company. It also helps to transform the academic knowledge into practical knowledge. Finally, the Training of an organization and its objective depends on how they function to achieve their organizational objective and to satisfy the customer satisfaction

There are benefits and disadvantages to outsourcing certain roles, as there are withkeeping those operations in-house. A company has greater control over the direction and management of work by its in-house employees than it would over an outside contractor. On the other hand, outside companies may have more experience and resources with certain tasks, such as legal services. In addition, a company must pay the full salary and benefits of its in-house employees. Outsourcing those roles to another company could cost more or less than keeping those roles in-house, depending on the nature of the task

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