DataLab: Generation, Analysis, Iteration

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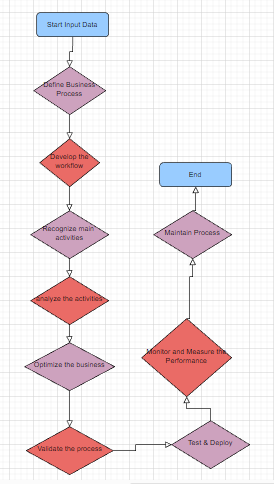
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# Task 1: The Company and Business Processes

Ramco Cements Limited, it is an Indian cement company. This company headquartered is situated in Chennai at Tamil Nadu. This company was founded in 1957. It was founded in the year of 1957 and this company is part of Ramco group. This company is a well-known business group of India. This company is the fifth largest cement producing company in India. This cement producer company is the market leader in South India. This company has produced the different types of variety of the cement industry that includes “Portland Cement”, “composite cement”, as well as “white cement” (Karthika, 2019). Thus industry has a total capacity of 16.45 million tonnes per annum. This company has produced the business process and it is simple and it is forwarded in the process. This company has started the following: the raw materials that are needed for the production of cement include various products such as limestone, clay, bauxite and other minerals. These kinds of raw materials are then transported on the production site and it is also blended and heated to properly produce the cement. This company has also extended the gypsum and it will add other additives for the time of producing the cement. This company has also invested in strong research and the process of modification that continues works to modify the quality of its products.

## 1.1 Business Process Map / Flow Chart

The Ramco cements Limited has a vast area network for the business operations across India. This company has four structural plants that are located in “Tamil Nadu”, “Andhra Pradesh”, “Telangana” and “Odisha”. The total quality of production capacity of this cement is 15.5 million tonnes per annum. It has four cement industry grinding units for several huge terminals of this business industry that also include one bulk port that is located across India and Sri Lanka. This company has a strong presence for the export market scenario. This business also exports from 11 countries. This cement company is strong for retailing the present scenario of business and it also exports from 11 countries (Podile et al. 2019). This company has a strong analysis on the research and it also helps to modify it and it has a strong business network of R&D centres for India and this business network also followed the US.



**Figure 1: Business flowchart**

(source: self-Created in Draw.io)

The Ramco Cements Limited is a flagship company of the Ramco Group, it is a business group that is dependent on South India. This company is structural and it sells cement and it is relevant to the products of India and abroad. It is the largest cement producer in the country and it has a significant presence for the competitiveness of the India cement industry. The main activity of the Ramco Cements Limited that involves the production and it also sells the cement and it has relevant products. The process of production of the company started with the crushing of the limestones and it also mixed with the other materials. These materials are included such as clay, sand and iron ore in the proportion of the right business structure. This business structure is grinded and heated in the rotary process for the process (Thakur, 2019). The structure of this business of this company is tested the quality that is checked properly for packaged and dispatched for the customers. From the outside of this production of the Ramco Cements Limited that included the marketing strategy and it also distributed its products. This company has a network of markets for the dealers and it is distributed across the country that is promoted and it sells the products. This company has a sales and marketing team that is more responsible for expanding the base of customers and it is also increased for the market share.

## 1.2 Main/Key Business Decisions

The main decisions that have been created with the process of business in Ramco Cement ltd. that are relevant with the production, pricing, marketing and the distribution of the cement. Decision of products: Production of cement that has been referred to the decisions that are relevant with the process of production of the cement. The time of production and process of cement production includes various factors such as: quantity and quality. These two factors are relevant with the time of producing the cement. The quality of raw materials are used for making the cement. The inputs are needed for production of the cement that is using the market demand, price of production, and the availability of raw materials. The output of this decisions is the quantity of the cement that is produced and it is availability of the quality of the products. Pricing Decisions: The pricing decisions refer to the decisions that are relevant with the decisions that are related to the price of cement. The inputs that are relevant to the price of the product. These inputs are needed for these decisions that include the cost of production as well as it is relevant with the decisions of the market (Singh, 2022). These decisions also include the cost of any promotional activity that have been important for analysing the decisions. The output of this decision is followed by the price of the cement.

Marketing Decision: The decision of marketing refers to the decisions that are relevant with the promotion of the product. This input is needed for this decision that includes the market that has been fixed the target. This type of marketing activity should be realised and it also follows the cost of these activities. The output of this decision has been successful and it also follows the promotional activities.

## 1.3 Business Digital Transformation

### 1.3.1 Automation of process of production

The digital transformation also helps with the Ramco Cement Ltd. that have been automatic for their process of production. This automation can help to reduce the human intervention for modified the accuracy and the production of the speed for making the cement. The automation process can also help to reduce the errors and it gives delays in the process of production. It can also help to reduce the energy consumption and the wastage of materials.

### 1.3.2 Modify the efficiency and quality of control

For making the use of the digital technology of Ramco Cement Ltd. can modify to improve the efficiency and manage the control that has managed the process of production. The process of automation can help to reduce the time for taking the complete process of production and it also modifies the accuracy and the process (Baranidharan et al. 2019). This is used for the data analytics the Ramco Cement Limited can visualize the performance of their product in the real time basis. This process can help to recognize the area which is actually needed to modify and it can improve the modification for changing the production process.

### 1.3.3 Enlarge the customer experience

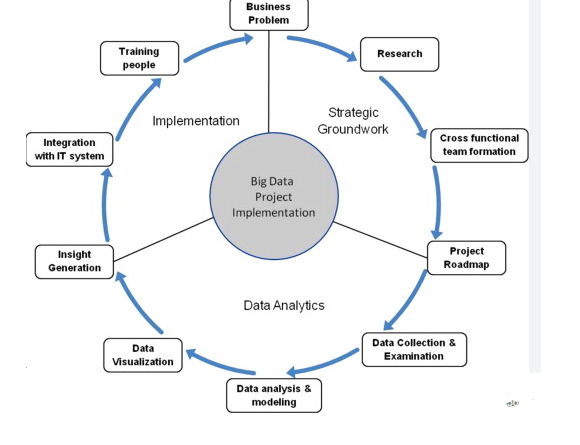
The digital transformation can help Ramco cement limits that have been provided to enlarge the customer base according to their experience. For making the use of technologies it also includes the cloud based solutions Ramco Solutions can give the customer with the real-time data for the time of production process.

# Task 2: Data Management Systems

Ramco Cement Ltd. is a main wholesaler of cement and related products in India. It has an exhaustive item portfolio that incorporates cement, prepared readymade cement,aggregates and other related items. The organization has carried out a thorough information about the data management system that deals with the whole business process. The executives’ framework assists the clients with dealing with all the significant data that is connected with cement creation, dissemination and deals. It additionally assists the clients with following stock, client orders, installments, and the payment of products that limit from there. The framework additionally produces an effective knowledge of data about business management plans that assists organizations with settling on informed choices. This framework additionally adds to the productive utilization of products. It also helps to facilitate coordination between the different divisions and units of the organization. It additionally advances functional expenses by giving ongoing process understanding into business movement (Nirmala et al. 2021). Data that assist with the concept of the frameworks likewise assist with observing creation, dispersion and deals processes. This permits the data models to distinguish processes of the organization structure and make better services. It likewise assists the clients with understanding the clients' requirements and serving them better. In rundown, Ramco Cement Ltd. data about the executive’s framework adds to efficient and effective the administration of the entire business process.

## 2.1 Information/Data Management Systems

The database management system (DMS) is fundamental for modern day organizations since it permits the structure to store and access the information rapidly and without any problem. Ramco Cement Ltd is no exemption, executing an extensive DMS to work with their tasks. The first move toward quite a while execution process at Ramco Cement Ltd is choosing what information to process of the product cost. This incorporates plan exchange information, client data, fabricating information and different information connected with the business. When the idea of the information is not set in company data, the important equipment and programming should be bought and introduced (Selvan, 2021). This incorporates servers, capacity, the database management system data sets and other related equipment and programming. The following stage is to arrange effective DMS. This incorporates setting up data sets, making client accounts, and designing required security conventions. After the framework boots, import the fundamental information. This incorporates client information, item information, creation information and some other information expected by this association. Once imported, arrange the information as indicated by the business needs. This incorporates setting classes and subcategories, and setting access levels for various clients. This gives representatives admitted to the information they need to take care of their responsibilities and settle on informed choices.



**Figure 2: Implementation of Big data in Ramco Cement Ltd.**

(Source: researchgate.net)

The Ramco Cement Ltd. information database management system the information assortment, capacity, handling and examination. Data is gathered from different sources like various online studies, client input, and in any event, fabricating processes. This information is put away in a solitary storehouse or data set. From that point, they can be handled and examined to uncover valuable experiences. The database maangement systems likewise incorporate an information purging interaction. This interaction incorporates confirmation, check and cleaning to guarantee the information is precise and exceptional. This interaction is basic to guaranteeing information quality and compelling use. When the information is prepared, it can utilize it to make reports and dashboards. Reports are utilized to gather data that can be utilized for independent direction. Dashboards give an outline of the information and can be utilized to screen execution and recognize patterns. Information the executives frameworks additionally incorporate information insurance processes. This incorporates keeping the information protected and available just to the individuals who need it. This interaction is critical to forestall information abuse or access by unapproved people.

## 2.2 Database Management Systems

The process of Database Management Systems in Ramco Cement Ltd. starts with the process of making an effective database. This includes the design of the database, the selection of the appropriate “database management system (DBMS)” and the implementation of the DBMS. Once the database is created, data can be gathered, queried, and manipulated. The selected data can be imported from external sources such as “text files”, “spreadsheets”, and other databases. In addition, data can be updated, deleted and modified. Security measures can also be implemented for the database (Moha et al. 2021). Once the database is established and data is entered, the DBMS can be used to generate reports, analyze data and make decisions. Finally, the DBMS can be used to automate many processes such as scheduling, data cleansing, and data replication. This helps to increase efficiency and accuracy of the data management system.

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## 2.3 Big Data for Business

The process of Big Data for Business in “Ramco Cement Ltd.” begins with the collection of data from multiple sources such as “customer feedback”, “financial transactions”, “operational data” and other various sources. This data is then analyzed using advanced analytics techniques to identify patterns, correlations, and trends. The insights gathered from the analysis help the business to identify areas of improvement, develop strategies, and make better decisions (Chakraborty et al. 2021). The data is then used to generate reports which help the business to track performance, optimize operations, and make more informed business decisions. Additionally, Big Data helps the business to develop better customer engagement strategies and identify potential opportunities for growth.

# Task 3: Business Intelligent (BI) Tools

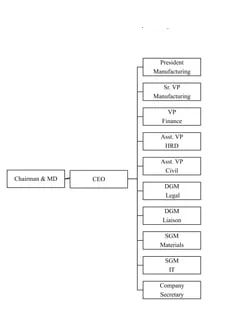
The tool of business intelligence that is the most important part of modern organisation improvement. Ramco Cement Ltd, is a leading Indian Cement manufacturer that has implemented the “Business Intelligence” tools to make their business process that is most efficient and it should have to be more transparent and it is also cost effective. There are some ways which have involved the “Business Intelligence” tools that are helping in the Ramco Cement Limited. The tools of “Business Intelligence” can help to analyse the large amount of data and it also allows the managers to make the fixed decisions that have to be made quickly. This helps to modify the efficiency of this cement producing company. The tools of “Business Intelligence” can help to recognize the data patterns to follow the data and it also provides the highlights of the business that can be used to make the operations more efficient. The Ramco Cement Limited that has used the Business Intelligence tools for giving the managers a more comprehensive view of their business operations (Mathiraj et al. 2021). This helps the employees to recognize the risks and it also analyses the opportunities and takes the proactive decisions that have to be made to ensure that their business remains the same as the competition in the market. The “Business Intelligence” tools can have to be used for the customer data and it also provides the highlighted structure of the customer needs and it also should preferences. This helps to personalise the customer experiences for the customers and it also improves the customer satisfaction.

## 3.1 Opportunities for Intelligent Tools and Systems

Ramco Cement Limited is one of India's leading cement manufacturers that have used it in a wide manner. The products of this company have been available across the overall country. To increase the demand of this company’s cement, this company has been looking for innovative ways to reduce the costs and also modify the efficiency. The business intelligent tools and systems that can be used for optimising the process and it finds out the streamline the operations and it leads to \modify the productivity of the cement and savings of cost. The main key chance for these intelligent tools and the systems in the Ramco Cement Limited that have been measured in predictive maintenance. This predictive maintenance uses the artificial intelligence algorithms that are used for sensing to recognize the problems and it also modifies the business that have been occurring to allow the proactive repair and follow the maintenance. This helps to cut off the downtime and reduce the operating costs. The predictive maintenance that has been used for analysing the production procedures for leading to higher efficiency and it also provides the better quality of products. Another opportunity is to use intelligent business tools and follow the business strategy of Ramco cement that is mainly used for identifying and recognizing the process of production and it also allows for quick and accurate repairs and replacement. This system also helps to reduce the wastage and it also increases the quantity of the cement quality that has been effective (Banerjee, 2021). For this business strategy, analyse the opportunities, business tools and the systems that can be also used for modifying the safety purpose of the production process. For example the use of sensing devices and its safety protocols that have been used to detect the main problems and it also cut off human errors. The use of artificial intelligence used to cut off the downtime and it also optimised the production.

## 3.2 Business Intelligent (BI) Support

Business knowledge (BI) is the method involved with collecting,storing, analyzing, and introducing information to assist associations with settling on better choices. In the present serious business climate, essentials that give organizations the data they need to settle on very much effective choices that are fundamental. Ramco Cement Ltd is one of the main cement organizations in India. To compete the force of Ramco Cement Ltd. business insight to remain serious and convey the most elevated level of administration. Business Intelligence should be possible at Ramco Cement Ltd. given the information and investigation. This industry really wants to distinguish amazing things that identify the opportunities and pursue the business decisions to make better choices (Pan et al. 2022). It assists the concept with understanding client conduct and productivity process of cement that are relevant with information. This permits the marketing purpose to settle on better conclusions about the item contributions, evaluating and promoting efforts. The BI additionally works on functional productivity. Ramco Cement Ltd BI can be utilized to follow functional execution and recognize regions for development. BI can be utilized to monitor production, inventory, and deal information to distinguish patterns, examples, and opportunities for development. Business Intelligence can likewise be utilized to screen an organization's monetary presentation. Ramco Cement Partnership BI assists the user with following the organization's monetary execution and distinguishing regions for investment funds.



**Figure 3: Organization structure of Ramco Cement ltd.**

(Source: researchgate.net)

## 3.3 Reflect on the BI tools

Ramco Cement Ltd. is a main cement producing company in India. It offers an extensive variety of BI devices to its clients. These tools assist clients with examining deals information, client information, and other applicable measurements to be relevant and informed of the clients’ choices. The BI instrument utilized by Ramco Cement Ltd. incorporates predictive analysis, data mining, and data representation. Predictive analysis assists organizations with recognizing client business patterns and ways of behaving to improve activities. Data mining reveals concealed examples and experiences from enormous information. The data should be a representation that permits the clients to introduce complex information in a straightforward visual configuration. Ramco Cement Ltd's BI instrument likewise gives a thorough perspective on client information (Selvan, 2021). This provides the clients with a total image of this company's clients and analyses their requirements. It likewise recognizes client inclinations and patterns of buying the products. This permits organizations to help their marketing efforts and targets to be fixed at the right customers. The Ramco Cement Ltd BI tools additionally distinguishes client data segmentation and follows the data segmentation patterns. This permits that to in like manner recognize the most productive clients and target fixed product quality. BI tools can likewise assist with distinguishing strategically improved cross-selling and up-selling to identify opportunities.

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