MERCK GROUP

Change Management Project

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ORGANIZATION CHANGE IN IT
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1.1   About the company

Merck KGaA, Darmstadt, Germany, is a main science and innovation organization in healthcare services, life science and execution materials. Around 50,000 representatives work to additionally create advances that enhance and upgrade life – from bio-pharmaceutical treatments to treat diseases or various sclerosis, front line frameworks for logical research and generation, to fluid gems for cell phones and LCD TVs.

Established in 1668, Merck KGaA, Darmstadt, Germany, is the world's most established pharmaceutical and synthetic organization. Merck KGaA, Darmstadt, Germany holds the worldwide rights to the "Merck" name and brand. The main exemptions are the United States and Canada, where the organization works as EMD Serono, Millipore Sigma and EMD Performance Materials.

Some of Merck's popular drugs are:

- Singulair, Asthma/Allergies, $1.26 billion
- Cozaar/Hyzaar, high blood pressure, $955 million
- Januvia/Janumet, diabetes, $760 million
- Remicade, rheumatoid arthritis
- Zetia, cholesterol, $614 million

1.2   Goals

Merck regards the interests of their representatives, clients, shareholders, and society, an approach that guarantees their business achievement. This is an essential piece of their corporate methodology, which thus supports their system, the reason for the dependable administration they experience every single day.

Merck values are the yardstick for their thinking and actions. They are the essence of what ties the company together today and tomorrow. Merck concentrates on inventive and top-quality cutting edge items in the Healthcare, Life Science and Performance Materials business segments. The organization's objective is supportable and productive development. They plan to accomplish this by developing naturally and by further building up its abilities, and in addition by making focused on acquisitions that supplement and grow existing qualities in significant ways. Expanding on driving items in every one of its organizations, they expect to produce wage that is generally autonomous of the predominant monetary cycles. Also, the point is to additionally grow the solid market position in developing markets in the medium to long haul.

2   Introduction to the problem

For a very long time, the company's focus and investment is more on the internal customers. The root of the department is more in business and sales. Due to which their approach towards doing a quality business lack technical knowledge and skill set among people. EMD Serono being a leading company in the market their competitors are rising risks on their way of success. Their success ratio in North America is declining day by day which is not a good sign. With this scenario the company's higher management has planned for a traditional change in their working style. They have decided to target 80% of their time on External Customers (end users which includes doctors, patients and pharmacies) by reaching them out directly.
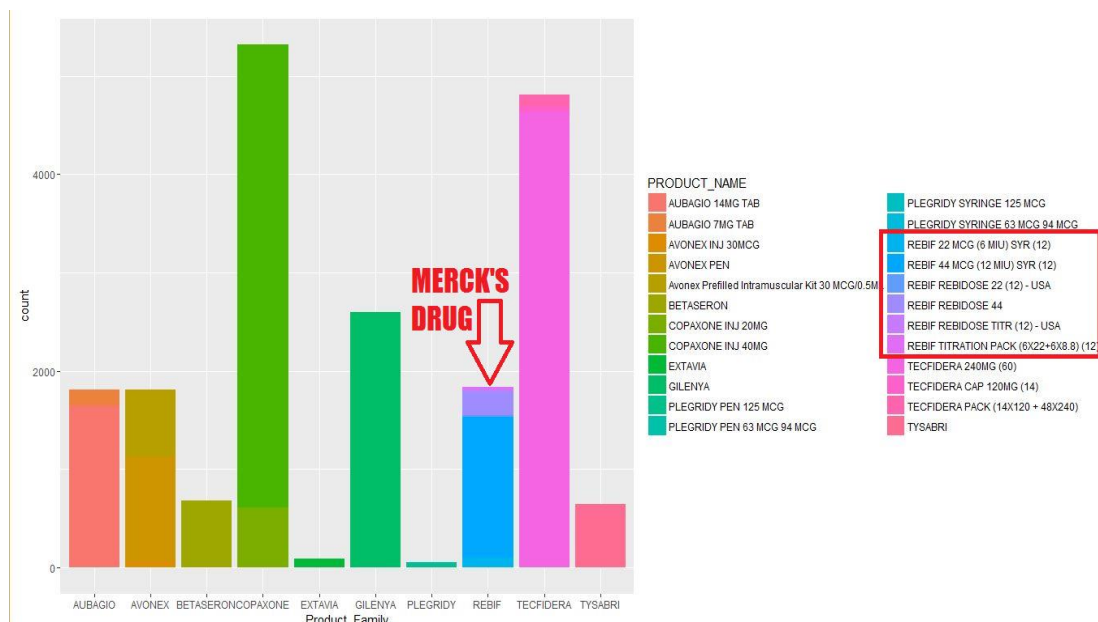
Figure 1. Graphical Representation of Merck Drug

Based on predictive analytics, in order to get the insight on future market share of drugs sale in Neurological disorder, a sample of 20,000 people were used. The plot shows the future sale of Merck's drug "REBIF" and its variants and competitor drugs.

EMD Serono has a terabytes of data available in their data warehouse. But they are not technically sound to use this data for business purpose. EMD Serono has hired a Data Analyst Intern to propose a process and design a new system to achieve their new goal. As per their plan the first task for the intern is customer segmentation. This would help EMD Serono in targeting its potential customers and would also help them in doing some cost saving. The intern being a part of EMD Serono family now, would like to provide his team right approach and an executable plan to achieve their goals successfully.

2.1 About the Team

Business Technology Team:

When we heard and learned about the problem, we saw that there was a lot of opportunity for one of our team member working with EMD Serono as an intern. The EMD Serono has only one BT Team were they worked on data analytics. The team was head by director of Information Systems with a manager and an intern. The director of the team was responsible for heading multiple projects. Everybody in the team had their own area of forte. Our team functioned in an R & D Environment. Their major focus was doing research into various areas. Currently they are involved in different project which are in development stage. Their target is to deploy these projects by December 2016 in Production environment and have their full focus on predictive analytics.

According to the learning, we found that the team was using different technologies while working on the projects. The team was responsible for designing reports for other different teams in the organization. These reports provided a high value to each team. There were many challenges involved while working with different team in an organization.

2.2 Action Plan

After learning about the company background and their problem. We thought of coming up with a plan. Hence, we started to note down some steps as a target to achieve. This was the first time we participate in a change management project. Therefore, we made a plan by identifying the skill set, knowledge, strength and weakness within our team. We distributed work according to the skill set we carried. The distribution was in terms of management, research, and technology. We followed the following steps:

2.2.1 Business Process

It covers how we study, identify, change and monitor business processes to ensure that everything runs smoothly and able to be improved over time. It is a continuous evaluation of existing processes and identification of ways to improve upon it, resulting in a cycle of overall organizational improvement. Since the team was small, they followed a few business process.

The major parts of the business process are:
- Research & Development on the projects.
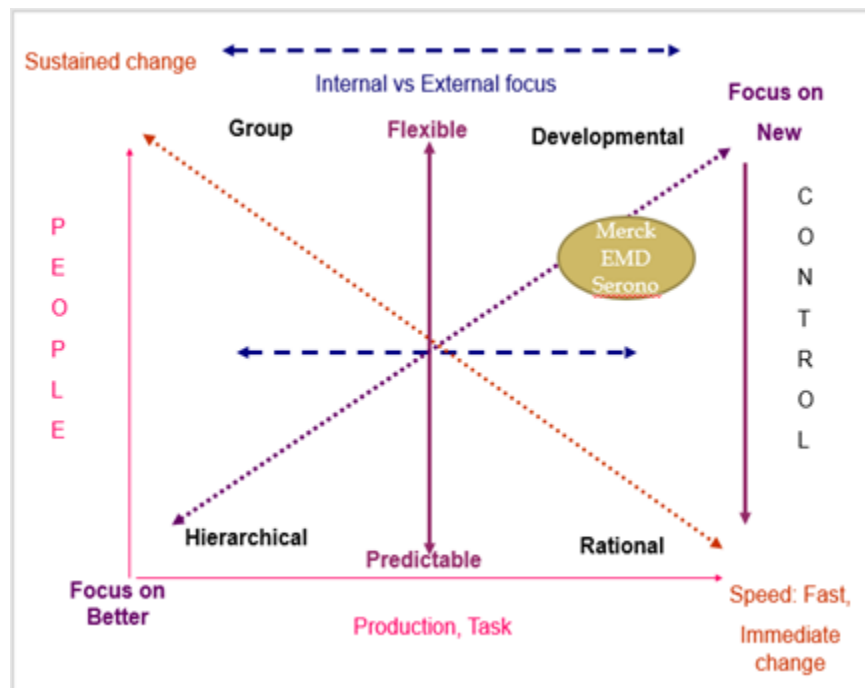- Total Quality Management
- Production
- Analysis

Figure 2. Merck EMD Serono CVF Framework

2.2.2   Technology & Services

The Business Technology Team is currently using a limited resource of technology and services. As the Data Analytics is divided into different parts of process, the tools are map according to the need in this process. The data analytics involved many tools. For doing ETL, the company is using SQL Developer to write and execute queries and procedures. The Business Intelligence reporting is done on Tableau. While on the big data side, they are introducing Microsoft Azure.

Figure 3. Merck EMD Serono Technology and Services

2.2.3   Meeting with the Manager

Our only source to understand and learn about the company was our team member, who work there as an intern. We schedule weekly meeting with our team member to understand and gather our research outcomes. However, we saw that we had a lack of company's internal functional information. In fact, our team member has just started working for the company. At this time, his source of knowledge was not sufficient. We wanted more insights about the work vision, the budget for change and the responsibilities. So, we asked our team member all the questions that we had from our different perspectives. Our team member decided to schedule a meeting with the director and the manager to come up with the answers. This approach was very helpful for us, but it was tedious for the company and our team members as they had to work on their R&D projects. When we saw that this meeting was consuming more time and effort, we decided to change our approach.

2.2.4   Question & Answer

This approach turned out to be the best one. Initially, we thought of coming up with 10 questions individually and then sorting the best one out of them to send them to the manger. But when we saw everyone's question some questions were repetitive and some could be answered by our team member intern. So we answered them and we left with only few question. This made us release that something is wrong in our approach. After taking this issue in class we came to know that we were targeting the wrong questions which is why our approach was going wrong. After taking a look of the sample from the class we understood the questions are to be divided in terms of the OAM model. By this time, we had already taken a lot of time and we were late as per our schedule. Hence, we decided to distribute the OAM model between us and focus on the designated part of the OAM model. Therefore, we thought of distributing it into parts: Part1 Organization which was further divided into Leadership, Structure and System. Part 2 Task/Work Systems. Part 3 People. We provided 6 to 7 questions each.

2.2.5   Skype Call with the Team

Our team member has collected all the answers from the executives of Merck group in order to address our concerns and convey a clear picture about the company's future plans and goals. After that, we analyzed the answers to provide our feedback and predict the growth of the change in the near future. Therefore, we decided to have a conversation with the executive of Merck group to provide our feedback and recommendations and to keep the company stand out from their competition by overcoming renewal change challenges.

We aimed to contact the executive personally to communicate our thoughts and ideas with him. Since we only have one team member working officially as an intern, he tried to schedule a meeting with the executive, but due to the time conflict /certain circumstances, we were not able to meet with him in person. Hence, we had to contact him via Skype instead.

3 Current State Analysis – OAM Model

The best way to tackle this task is to start from current state analysis. The main purpose of the analysis is to present the "AS IS" state: It helps to understand the business need, primary pain points, business processes affected, and the people involved in these processes. The true state of the business and an in-depth analysis of the root causes were responsible for the company's current situation. In order to assess the value of a business for investment purposes, it is very important to closely review its current state with respect to its assets, debts, cash flow and goodwill.

With the help of OAM model, the organization can get a clear view of its yearly or quartile performance, business process, relationship with employees, and skill set. These are the various factors which work in an integrated manner and help the organization to deliver its best in all the different factors involved in its growth.

3.1 Organization

1. **Leadership**

    Merck is a leading science and technology company in healthcare, life science and performance materials. It was founded in 1968 and headquarter located in Darmstadt (Germany). Merck Group has offices in many countries just to name few: Germany, Canada, Australia, China, France, India and United States.
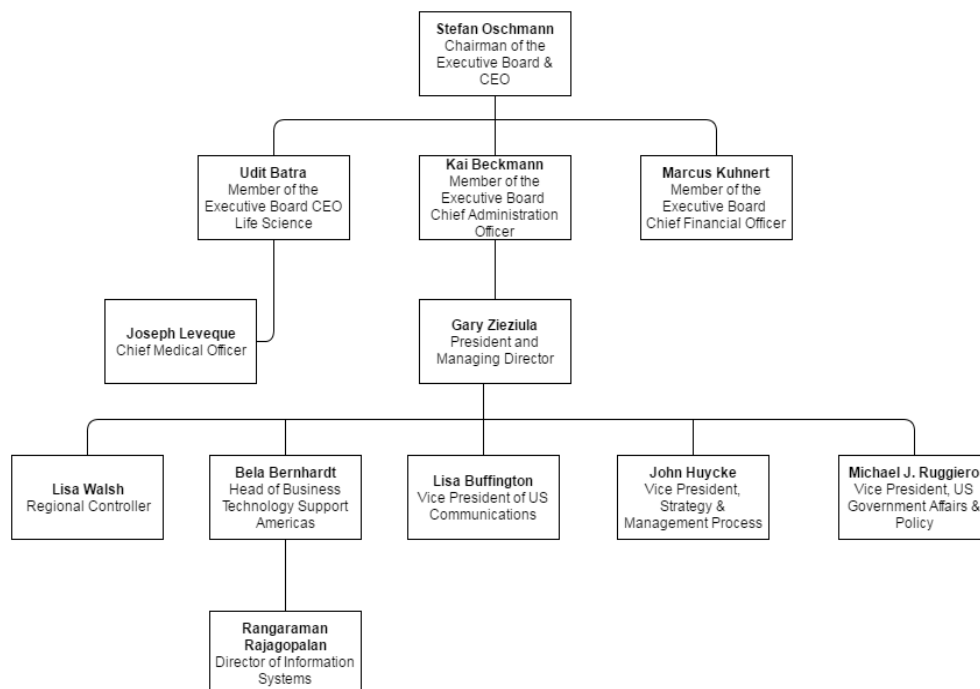
Figure 4. Hierarchical Structure of Merck Group (EMD Serono)

- **Stefan Oschmann, CEO**
  He is the Chairman of the Executive Board and CEO of Merck KGaA, Darmstadt, Germany. Since May 2016, He was responsible for including group strategy, legal & compliance, internal auditing and communications. In this project, he is the main decision maker and initiator for the change.

- **Marcus Kuhnert, CFO**
  He is the Executive Board and Chief Financial Officer of Merck KGaA, Darmstadt, Germany. Since August 2014, He was responsible for group accounting, tax, treasury, finance operations, mergers & acquisitions, and investor relations. In this project, he is responsible for the financial budgeting of the change.

- **Gary Zieziula, President and Managing Director**
  He is the President and Managing Director of EMD Serono. He is responsible for all areas of the business across the North America region by including overseeing strategic planning, maximizing the growth of the organization, and driving the performance of the company's franchises.

- **Béla Bernhardt, Head of Business Technology Support Americas**
  He oversees the local information technology (IT) functions across the Americas region including all entities and businesses in North America and Latin America. He also implements IT strategies and solutions resolving technical, operational and organizational challenges. In this project, he is the main point of contact for the change.

- **RangaRaman RajaGopalan, Director of Information Systems**
  He is the Director of Information Systems of EMD Serono. He is responsible for defining regional IS roadmaps, setting up project organizations, collaborating regularly with global information managers and country business partners to provide solutions, and identify for delivering regional IS Eco Systems by using the new trend of IS technology solutions for pharma and life sciences business units.

2. **Structure**

    Before even completely understand the change, it is very important to understand the structure of the company. As structure is the main key that will helps us to drive the change. There are many words related to structure just to name a few like responsibility, decision making power, and leadership.

    We had a clear picture after looking to the answers that their managers provided that they have a horizontal organization. However, from the lesson we learned in class we knew how the horizontal organization has a less-defined chain of command.

- Employees across lines have similar input into how the organization is run. For example, the intern being on a lower level of hierarchy also had the right to provide his input to solve any problem.

- Instead of each person having clearly defined duties, employees may work in teams, with everyone on the team having input. In this case the manager and the intern had their responsibilities defined.

- Employees may perform many different function and may report to several supervisors, rather than one supervisor. In our case, the intern reported to the Director of BT Team then to the Manager of the team. In this case most of the points were reflecting the same conditions.

However, there was also a glimpse of project based team. One of the reason that the teams are overloaded with work is that the Director of BT team headed many other projects.

3. Systems

Rewards:

EMD Serono's official website speaks a lot about their reward policies. It says that in the year of 2013, there were approximately 3,460 suggestion submitted for improvement and around 3,590 in the year of 2014. When the further investigated the found more interesting facts that around 75% of the suggestions for improvement related to production; approximately 25% comprised suggestions relating to analysis, technology and logistics.

We believed more in numbers as we knew that there is definitely a need for the change. However, the internal model has to be improved before targeting on the bigger picture of change.

Some of the improvement after knowing the facts were:

- The CEO Award
- A special prize in the categories of Change, Innovation, and Customer Orientation.
- Employee success celebration event.

Evaluation:

- Merck provides competitive salaries and additional benefits increase not only our attractiveness as an employer. They also motivate their employees and build loyalty to the company.
- At Merck KGaA, Darmstadt, Germany, compensation is based on market analyses in the relevant field and the value of the position, as well as the employee's competence and performance.
- Merck's "Global Rewards Policy" defines the framework for compensation and additional benefits across the entire company.

Budget & Control:

The budget differs based on the type of operation. The Neural department has its own budget for research and development, manufacturing, marketing, sales, etc.

3.2 Task/Work System

A work system is a collective effort and is designed when a particular task or goal is identified as requiring more than one person to accomplish. Work systems incorporate technology, information and business resources to create services or products for both external and internal customers. The system must be defined to know which workers and machines are needed, what each will be doing and how the system will flow from one task to the next for maximum efficiency. There are two type of analysis done in task/work system. They are as follows:

3.2.1 Functional Analysis:

To understand the working culture of the company, we listed some questions for the team to answer. We were unclear of the approach they use and how they implement that approach for their betterment. After looking that the answer we noted some points related to the working culture. Their answers show that they follow a waterfall methodology approach.
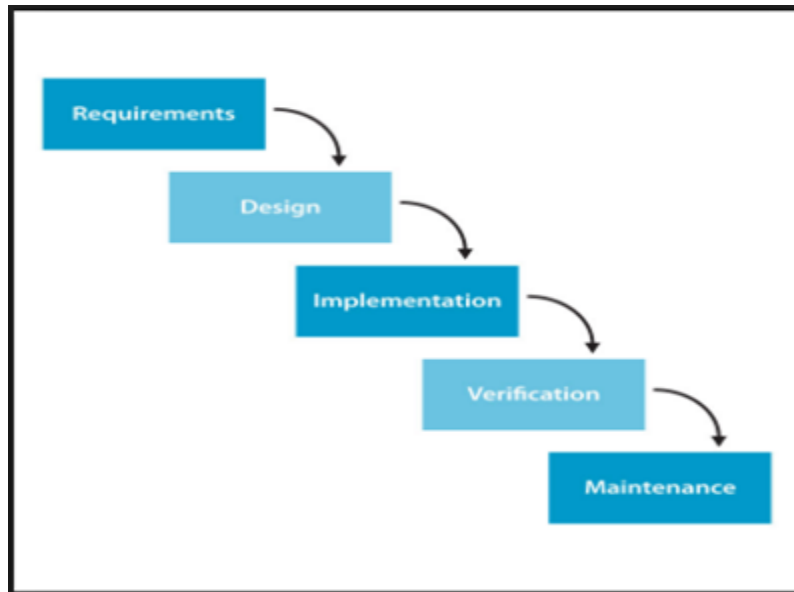
Figure 5. Waterfall Methodology Process

- Many departments in the company uses waterfall methodology by their developer team. This is because the waterfall methodology is simple to implement and the amount of resources required are minimal.

- Currently they are working on market competency project where they are facing a lot competition in the market. So they started gathering requirement from the data available to them.

- They targeted some number on a quarterly basis and started working towards it.

- In this approach there is high visibility of output as the output is checked and verified at every interval. For eg: They have divided every project in parts and have set a timeframe to finish it. So if any problem occurs they know if part to fix first.

- After talking with their intern he said that they are in a process of deploying some projects by end of December.

3.2.2   Workflow Analysis:

Workflow analysis is the first step towards improving your business processes, which in turn improves your business. This task requires the participation of management and employees involved with the intake and processing of the documents. Design input from participating employees is important to the success of the overall project.

Figure 6. Work Flow of Business Technology Team

- **Data Architect Team:**
  The Data Architect in this team are responsible for creating a blueprints of data management system. They work on installation and configuration on the tools beings used in the Data Engineering team. They are responsible to protect and maintain data sources, this is done manually.

- **Data Engineer Team:**
  There are very few data engineers working for Merck Group and the amount of work is more when compared. They are responsible for providing Database modeling system, perform ETL and provide data warehouse solutions.

- **Business Technology Team:**
  There are only two employees in this team they work along with the data engineering team, who provides them with data. They use the warehouse created by the data team to plot visualizations and provide some data insights to the business. One of the major responsibility this team has is to communicate to the business and gather their business needs.

3.3   People

3.3.1   Motivation:

Motivating your employees is vital to any business. A motivated workforce means a highly productive staff, all of which will help you achieve your business goals. And this should be a main objective in your organizational and business plan. While not every employee will be motivated by the same thing, focusing on a list of key motivating programs can help. Your plan can include everything from monetary incentives, rewards and recognitions, building programs that support work-life balance, to simply creating a fun, relaxed office environment. The opportunities are endless and the reward substantial.

- **Insurance, Health & Wellness –** Health, Dental, Vision, Life Insurance, FSA, HAS, Retiree Health & Medical and many more.
- **Financial & Retirement –** Just to name a few like Pension Plan, 401 K Plan, Retirement Plan, Performance Bonus, Stock option.
- **Family & Parenting –** Maternity & Paternity Leave, Work from Home, Fertility Assistance, Dependent Care, Child Care, Military Leave, Unpaid Extended Leave, Reduced or Flexible Hours.
- **Vacation & Time off –** Vacation & Paid time off, Sick Days, Paid Holidays, Volunteer Time off.
- **Perks & Discounts –** Employee Discount, Gym Membership, Pet Friendly Workplace, Company Car, Mobile Phone Discounts, Legal Assistance and many more.
- **Professional Support –** Diversity Program, Job Training, Professional Development, Apprenticeship Program, Tuition Assistance.

3.3.2   Values:

Merck says "Our aspiration is to make great things happen." The first sentence of our Mission Statement also applies to our values and shapes the way the company is managed. In order for the Mission Statement to be reliably implemented, there is always a need to create globally consistent tools and control systems. This enables us to actively shape our corporate culture and measure ourselves even better against our own principles.

4   Future State Analysis – OAM Model

Here we will try to describe how the company will look like as per the OAM model after implementing the change. The main area of focus that would be affected by this is the Task/Work System part. As mentioned earlier, the main change is that the data that is already collected by EMD Serono would be used to do predictive analysis which would help the organization improve and increase their customer base with a better understanding of them. There would also be some changes in the People section as would be mentioned below.

4.1   Organization

4.1.1   Leadership

There is not going to be any change in the leadership of the company. In the event that this change bears fruit, there might be an additional post created to handle the department required to deal with data analysis on a day to day basis.

4.1.2   Structure

The structure of the Business Technology department that deals with the data analysis right now is horizontal. It would make more sense to make it more of a hierarchical structure that would enable better information flow to the leadership.

4.2   Task/Work System

There would be changes in this regard in leaps and bounds. The way the various tasks are done, how the work system runs would undergo a tremendous change. How the various roles see each other and perform would be totally enhanced? Once big data analytics is properly implemented, Merck would be better able to understand their customer base. It would be possible to know why the consumer is choosing the drug instead of the competitors'. This would lead to a much better targeted marketing and information delivery system. In the end, it is the revenue that speaks the most about any organization and ensures its sustainability. The change may cost a lot but it will surely earn that cost over and beyond in the near future.

4.2.1   Functional Analysis

The current model of the running of the project is Waterfall model. This has its own advantages but falls short in areas that have a varying requirement. Keeping this in mind, the Agile model would suit the best. It would enable the team(s) to keep working and implement the newer changes without having to do as much rework as they are now. It allows for constant feedback and implementation of it in the same cycle, which could prove to be very suitable for a project of this nature. Big data analytics is a very broad field but it would prove to be most useful if the different parameters are changed and innovative ways of combining data is followed. Many hidden patterns and trends could be learnt in this way that could lead to a better result.

Predictive analysis is also another aspect that would be fulfilled by implementing this change. Predictive analytics has a huge potential. It would be able to help the organization in knowing when the demand for certain products is expected to peak and thus help it to keep stock ready. It would also be useful to know what channel the customer (patient) is going through to get to know about the products. Being a primarily pharmaceutical company with most drugs in the field of mental illness, the drugs are prescription based. It could be learnt which doctors prefer Merck products over others and why they prefer it. This would act as a feedback mechanism too whereby the shortcomings of the product could be cut short and the key selling points could be worked upon by the R & D team.

Based on the data analysis techniques, customer segmentation is also possible. This would let Merck know what way the customers are best approachable, what are their buying trends and have segmented business strategies in place that would further improve the standing of the drug in the market. There could be some sort of reward system for the customer too where they get the products for a discounted price for being loyal to the organization. This helped the organization maintain a steady and loyal customer base whereas the customers feel that their concerns are taken into account. It acts as a way to build the trust further in the customer.

4.2.2   Workflow Analysis

Strong specialized abilities are turning out to be progressively essential, and that is not going to change any time soon in the future. So in order to get the most out of the work done it is essential to hire people with recent technological skills or the skills that the company demands.

- **Data Engineer Team**: As the team is responsible to protect and maintain data sources, manually it consumes a lot of time and resources of the company. Essentially, any investigation done in the company should be well communicated to each and every employee. This incorporates having the capacity to imagine the information or results. The data analyst ought to be knowledgeable in making diagrams and charts, and utilizing visualization tools. These outcomes or bits of knowledge should then be obviously and adequately introduced, either verbally or in written. Hence, the company can hire people with good knowledge about data analytics to improve productivity and manage data in an efficient way.

- **Data Engineer Team:** This incorporates handling and logging errors, checking the framework, building error free systems, understanding what is important to scale up, managing information of database organization and keeping up a well organized system.

- **Business Technology Team:** In the future they plan to include more people to the team with an ability to lead, work well with others, communicate their thoughts clearly, negotiate business deals, mentor others, manage time well, display a professional image, interact well with clients, and solve problems.

- **Data Warehouse:** Merck plans to use a tool called Azure which is compatible with: Windows Server, SQL Server, Active Directory, Hyper-V, and many others. This implies a predictable, recognizable, and stable environment. It enables to move the virtual machines between systems and the cloud as regularly as the business needs direct—no transformation required in addition to protecting the basic business applications with cloud reinforcements and Disaster Recovery.

4.3   People

4.3.1   Motivating people and improving sales:

Regardless of how incredible the venture or administration is; the business will definitely come up short if the sales process is inefficient. So, in order to improve sales, it is vital for Merck to train the employees, reinforce the training, a healthy competitive environment and observe how the employees react to it. The most ideal approach to enhance group effectiveness is by knowing and working with the unique style of every team member. Another important factor is to establish trust within the team by listening and taking suggestions from every team member. Those that have the quality of critical thinking and advancement can come up with the best solutions for the client. Those that have the quality of representing and influencing can train and motivate people with their best capabilities. Furthermore, those that have incredible relationship capabilities and the capacity to assemble trust, can attract more clients.

When the sales force has data specific to buying trends and understands the customers' needs better, they will go in the field and have a better confidence. It gives them more confidence knowing that they have a higher probability of making a sale if a certain doctor (or consumer) is approached than another. This would help in motivating their spirits even further and give them a drive to work harder. The added incentives along with the sales volume is another huge motivation factor.

4.3.2   Values:

The value system of a company which is primarily in the pharmaceutical field is something that sets it apart and builds trust with their customer base. The patient (consumer) needs to know that they can trust the company with their health and life. Keeping this in mind, having some sort of interaction with the consumer and understanding their problems is the best way to go about it. This could be done in the form of anonymous surveys that helps the company understand the mindset and needs of the patient.

The people working for the organization must also have the feeling of being a part of the bigger goal, helping in the betterment of the society, by providing quality drugs. There should be collaboration and purpose. These are some of the key values of Merck. They go a long way in building an organization that has employees from various parts of the world working in harmony together.

5   Findings

1. **Flaws in Horizontal alignment of organization:**

   At the initial level of our research we came to know that there are some flaws in alignment of organization model. This structure brings equal authority to staff or employees in the organization. It also empowers employees to make daily operational decisions and encourage employees to consult with management on larger issues. But at Merck due to the director handling too many teams at same time is not able to schedule meeting with his team members on a daily basis. So work gets piled up as decision are not taken.

2. **Rewards are not appealing:**

   With the number of complaints submitted every year it can be concluded that employees are not happy with the reward policy. Felicitation or reward ceremony must be a great success in German culture but we feel there are many more motivational rewards that Merck can do for their employees. Which will also help them build good relationship with their peers.

3. **Less Training Programs:**

   There employee motivation policy talks about training session but after reading the articles and review on different website we were able to confirm that there are not many training program for a new employee. He / She should be comfortably resourceful and should be able to adapt to the culture and working style. When research more on this we came to know it is due to culture influence on company origin. May be the working style in Germany is different to the working style in United States.

4. **Small Team:**

   After the getting input from the team member who works for Merck we came to know that his team consist of three people: The team is head by Director of Information Systems with a data analyst and an intern. The Director of the team was responsible for heading multiple projects. The amount of work and research involved is more as compared to the team, which is not providing them a room to come out of the work zone and try something new that will make the work easier.

5. **Less involvement with other teams:**

   The main goal of this change is to target more customers by providing good data insights that will help the company take decision or their betterment. But after looking the data and their approach there was no strategy that focused on consumers. Different departments at EMD Serono are disoriented. For eg: There is a disconnect between department. Repetitive work, less knowledge about other teams.

6. **Driven by Waterfall Methodology.**

There are two stages enforces while using this methodology. In waterfall methodology there are defined start and ends to any project and the progress can be identified by both the vendor and the client. This methodology works best in a development cycle. As there are fix customer requirements. As it is easier to design and correct possible flaws. It is an efficient way to transfer knowledge when team members are dispersed in different location.

7. **Older Version Tools:**

The version of the tools that they are currently using is an older version. As their knowledge using this version is excellent. Some tools are very specific to the current requirement, but in a data analytics team the requirement keeps on changing depending on market needs. Less emphasis is given to cloud technologies.

8. **Data Redundancy and No Documentation:**

Merck EMD Serono gets data from multiple data sources which are in different format. When a company has this amount of data it is very necessary to clean such kind of data. With the help of the skype interview we got a chance to look at the company's data. They wanted us to see the dimensions and measures they are using so that we can provide them with some insight questions. But what we discovered was that there is a huge possibility that there will be repeated data, or bad data, which will later on provide wrong numbers and figure. This will lead to wrong decision making. We also saw that they had some manuals but we figured they were not enough. Even in the team there was no documentation about the business problem, or problems they solved. This also created a lack of interaction with the other teams in the organization and their work.

9. **No use of Data Marts:**

While doing ETL there is a process that one needs to follow. Creating Data Marts is one of the important part while following this process. The BT team using ETL as a business process is adding data from CSVs to their server. They are in future planning to map this to cloud. But this is the most dangerous step in the field of data analytics.

6   Recommendations

1. **Minimize Flaws in Horizontal Alignment:**

   We think that it is very important to have good relationship with our peers at work place. There should be disagreement or discussion but one should understand that this is not personal. In order to build a good environment, we recommend adopting new initiatives like team built activates, team outings, giving on call duty or invitation to tool conference. This is a good practice to follow and improve efficiency of a team.

2. **Appealing rewards:**

   Have a suggestion box is one of the good practice that the company is currently following. But taking those suggestions seriously with benefit the company more. We recommend that rewards like giving gift cards, movie tickets, game tickets or food coupons.

3. **Develop Training Programs:**

   We recommend them to arrange some training programs for the new hires. Basics introducing to the company, what they do, how many team are there and what each team does. This can give employees a basic understanding of the company and helps them interact with teams. We also suggested them to organize some team activity events so that employees can participate and have a better interaction with other teams. This will also be helpful as a team building activity.

4. **Hire Interns and Dedicate Project Manager:**

   After having a talk with the team member we noticed that there is a huge amount of work every individual has to do in a day. The target is not achievable with this amount of work. Due to the budget issues, it is not possible for the team to hire new Full-time employees. So hiring two graduate interns will help them find solution. In any data analytics team there is a necessity of a program manager who acts as the scrum master, he talks with other team gathers their requirement and also keeps a track of the backlogs.

5. **Built Reports and Conduct meeting with the Business:**

   Instead of directly focusing on the end target the customer, they should first focus on the internal help to achieve this target. The face of the company the sales and the marketing people who actually deal with the end users are the right point of contact. They have also sort of knowledge about the product. If conducted a meeting with and gathering information and design some visualization for them. They will be the right people to identify the numbers.

6. **Use concepts of Agile Movement:**

   Agile approaches help teams respond to unpredictability through incremental, iterative work cadences and empirical feedback. Agile process proposes alternatives to waterfall, or traditional sequential development. Scrum is the most popular way of introducing Agility due to its simplicity and flexibility. Scrum has only three roles: Product Owner, Team, and Scrum Master. These are described in detail by the Scrum Training Series. The responsibilities of the traditional project manager role are split up among these three Scrum roles. Scrum has five meetings: Backlog Grooming, Sprint Planning, Daily Scrum, the Sprint Review Meeting, and the Sprint Retrospective Meeting.

7. **Update and Introduce New Tools:**

   Merck is using many tools for different purpose like Integration, Reporting and Cloud Computing. We recommend them to update the newer version of these tools as they have updated service which will save their time and effort of creating feature which are just a click away. Our team member as an intern suggest them to use Microsoft Azure which is a best tool to use in a pharma company.

8. **Perform Data Quality and Documentation:**

   To minimize the effect of data loss or bad data it is necessary to clean data and check the quality of the data as it is use for decision making. We proposed them to use Talend which allows them to do ETL, DQ and MDM. By using this tool, they can minimize the budget cost and also use the same tool for different projects. Nowadays, it is very important for any organization to document each and every business process. As there are always new hires in the organization. We suggested them to use JIRA as a tool for documentation since this tools are great in scrum. Documentation of fixed problems will also save time and helps employees from repeating work.

9. **Create Data Marts:**

   Creating Data Marts often holds one subject area – for examples, Finance, or Sales. It also summarizes data. Concentrated on integrating information from a given subject area or set of source system. It helps as collective way of access for a group of users. The implementation cost is low.

7 Conclusion

It is conclusive to say that market has become competitive in an era of technology. Analysing EMD Serono's current situation from different angles of OAM Model, strategies to reach out to their external customers, EMD Serono holds the fourth position in future market sales in America if it continues to function like it has been till now. As being the change management consultants for EMD Serono, we would recommend the Director to have a conference with managers from different teams and set the vision clear. As per our findings, the teams at EMD Serono lack coordination. It is recommended to have managers informed about Serono's roadmap to future and ask how they can involve predictive analytics in their ongoing projects.

Come up with a problem statement and work on a PoC. This PoC will be presented at Merck, Germany for the final approval of budget. Afterwards hire a full-time resource to finally implement predictive analytics at EMD Serono. As from the skype call with Director, we understood he has no clear roadmap for the implementation of change and under his leadership, he is planning to bring the change. It would take long time to bring this change at EMD Serono reason being the leadership has a couple of different projects to go live and this change certainly needs an attention. A lot of time and resources could go wasted if teams are not organized to introduce predictive analytics. To improvise the current operations being carried out at EMD Serono, collective efforts from all the teams is required and not just the leadership.

8 Key Learnings

1. It is important to have hierarchical structure in order to reduce communication gap and Technical-Management perspective alignment.

2. This is the first time I saw how a company with horizontal structure is running and learn about it strengths and drawbacks, because, in China, we always have hierarchical structure in both high level and low level of an entire firm.

3. Having a small team of two people is not an effective approach to apply the change in any organization. Instead, the workload should be distributed among a large group of different skills to ensure the success of the change.

4. After looking at the data and their approach there was no strategy that focused on consumers. Data analytics plays a major role to keep a track of what a customer might be interested in. It thus helps in improving sales, marketing and trust.

5. Documentation and logging of data is very important as it gets piled on for years and is later difficult to manipulate. Documentation of fixed problems will also save time and help employees from repeating work.

6. Multicultural responsiveness, including respect for people unlike yourself and the capability to take viewpoints of and to cooperate with groups.

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Abbreviations

BT – Business Technology

CVF – Culture Value Frame work

OAM – Operational, Administrations, and Management

ETL – Extract, Transform, Load

DQ – Data Quality

MDM – Master Data Management System.