Project 1 @ Merck

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Mentor

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M.Des, 2017 - 19 Interaction Design IDC School of Design

Acknowledgement

I would like to express my heartfelt and deep sense of gratitude to my mentor, **Brijesh Thakur**, for his constant guidance, encouragement and support.

I would like to thank the director of Strategy Department, **Abhisek Agrawal**, co-guide, **Anirudh Masurkar**, manager, **Giteshwari Rangari** and all other staffs of the departments who helped me in various ways to understand the functions and operations of the company and spending their valuable time with me.

The completion of this project would not have been possible without the valuable discussion with my dear friend, Vasudeo Maurya, an active support in framing this project. His contribution is sincerely appreciated and gratefully acknowledged.

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Abstract

When you have huge data and put it a table, it will be difficult to understand what is going on, the positives and negatives. So if you visualize your gathered data, it will be more clear and helps you understand the data. Too much data and its data visualization will cause problem to understand. You have organise it according to the needs and for the end - user. Merck Limited, a pharmaceutical company at Mumbai in India, uses their dashboard system, MIDAS (Merck India Data Analytics System) to visualize their marketing, sales trend, growth and achievement rate. Their dashboard is too clustered with data and not properly organised and users of MIDAS are the company's employees itself. The dashboard is not designed to the user and their needs. So here, I am assigned as an UX intern in the Strategy Department at Merck Limited to redesign their dashboard according to the user needs and improve its user experience. The new look of desktop version of the dashboard was given to vendor / developer after I had user evaluation of my proposed dashboard with the users of MIDAS.

Merck KGaA

Company Profile

Merck KGaA was founded in 1668 at Darmstadt, Germany, by
Friedrich Jacob Merck. It's the world's oldest pharmaceutical
company, completed 350 years and one of the leading science and
technology company. They are engaged in the areas of Health,
Environment and Culture & Education.



Merck headquarters in Darmstadt

Merck India

Merck incorporated in India as E. Merck India Private limited in 1967.

In 2017, they completed their 50 years in India. They started as a pharmaceutical company and they are extending to science and technology business. Their branches are located at Mumbai, Goa and Bengaluru.

Task

- 1. Critice existing dashboard as a stranger, without anyone's help.
- 2. Using the existing survey and with my creativity, redesign the dashboard.
- 3. Conduct user study on my proposed dashboard and do necessary changes before handling to vendor.
- 4. Create the mobile variant of the proposed dashboard.



Research on MIDAS

1. Users

First, I had to identify the users of MIDAS. These users are from the company's employees itself and also I have to understand their hierarchy. There are two groups of users under Merck India:

1. Merck India business units

They are again divided into three categories :

- Consumer Health
- Fertility
- Oncology
- 2. Merck India functional modules

They are divided into two categories:

- Sales Force Effectiveness (SFE)
- HR

There are 24 tabs / sheet titles in total:

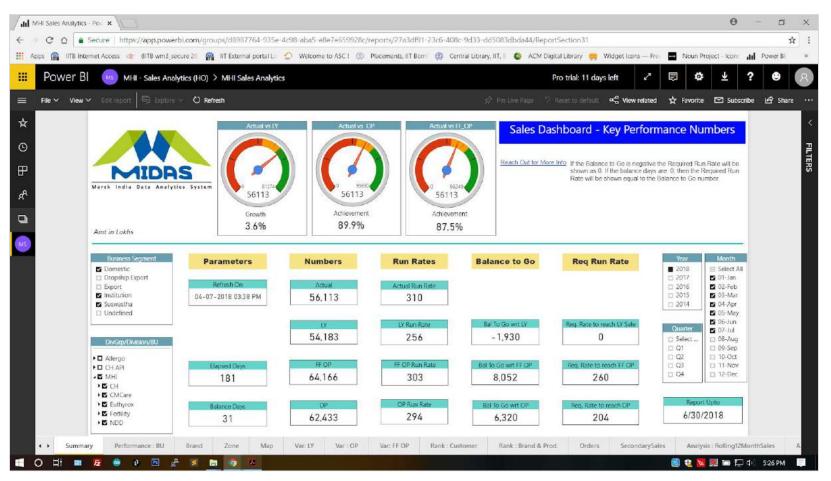
4	<u> </u>	
1	COVE	r sheet

- 2. Help
- 3. Summary
- 4. Performance: BU
- 5. Brand
- 6. Zone
- 7. Map
- 8. Var: LY
- 9. Var: OP
- 10. Var: FF OP
- 11. Rank: Customer
- 12. Rank: Brand & Product

- 13. Orders
- 14. Secondary Sales
- 15. Analysis: Rolling 12 months
- 16. Analysis ; Sales Achievement Bucket
- 17. Analysis: Trends
- 18. Analysis : CAGR
- 19. MTDQTDYTD: Div Grp. Div, Brand, SKU
- 20. MTDQTDYTD: Div, BU
- 21. MTDYTDQTD : BU, Zone, Area, Territory
- 22. MTDQTDYTD: Brand, Zone
- 23. MTDQTDYTD: Zone, Brand
- 24. Customer

All the users doesn't view all the tabs.

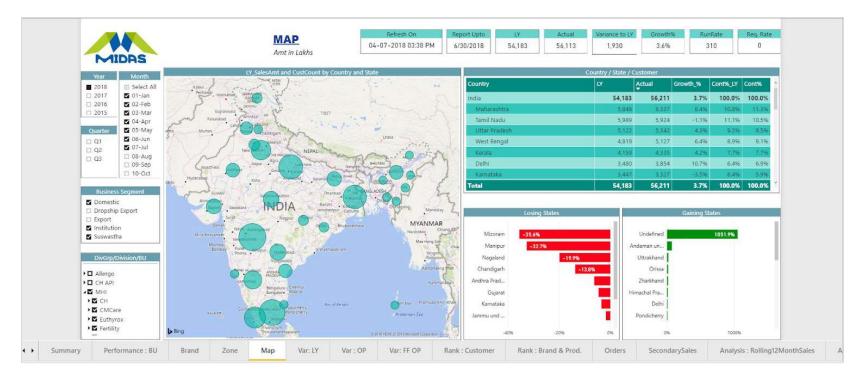
Example: the most important sheet for Head of the HR will be Zone. He may look for Performance: BU tab and not into Var (Variance) tab. Some data were irrelevant to some users because in depth data were not needed. Thus I got an idea from the users on which tabs they are more into focused and what users were looking on.



MIDAS - Summary tab



MIDAS - Zone tab



MIDAS - Map tab

2. Business definitions and their outputs

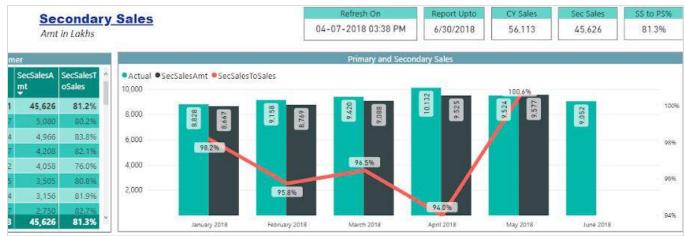
I had understand what all these short forms, the business terms, how the data was calculated, the rate as well as their visualizations because I was new to the business area, its important to me to understand what they are, so that I can come up with appropriate visualisations and can find out error in graph if it seems odd. It was not tough to understand them and also found some reasons behind why such graph was used to represent such data.

Example: Actual means current sales, LY means last year, OP means Target sale, FF OP means Field Force OP. FF OP will be higher than OP because its a target given to the field workers to match company's target. If 100% is the OP and 105% is the FF OP and they were able to achieve 105% in their field target, it means the company already achieved 100%. Rolling 12 month of a company gives progress of the company counted from a month to its next occurring month.









3. Software: Microsoft Power BI

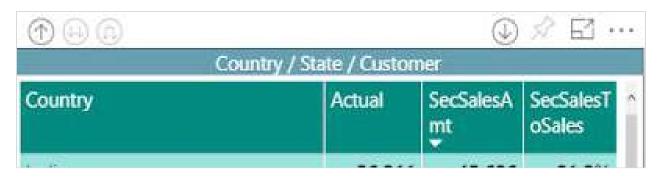
MIDAS was done on Microsoft Power BI, an online real-time data visualization for business analytics. It's a powerful software where it lets you create workspaces, where you add your datas (Example: excel sheet file) and transform it into beautiful visualization. So I had to learn what are its capabilities, number of data visualizations available and functions of each module.

Example: You can export the data visualization on clicking the options menu that appears at the top right corner of it. If you like to see data related to a specific information in a data visualization, click on it and all the related information mapped to it will be shown dynamically.

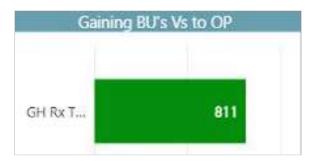
In order to know its capabilities, I went to the Power BI community. There they have a section called data stories where people can share their projects. If you are in search of some possibilities and found something interesting, they had shared the code. In this way i got brief idea about Power BI and where all it can be applied to.

4. Data visualizations

To get updated with modern and sample applications of data visualizations, I referred from Microsoft Power: BI data stories, Behance, and randomly selected from internet.



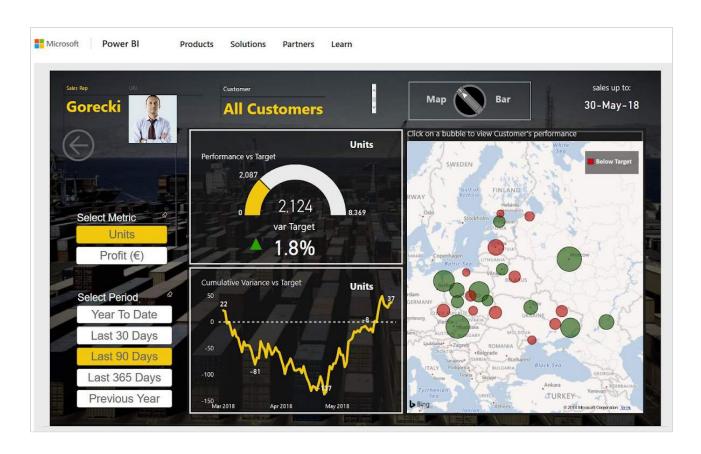








Microsoft Power BI : Data stories example 1

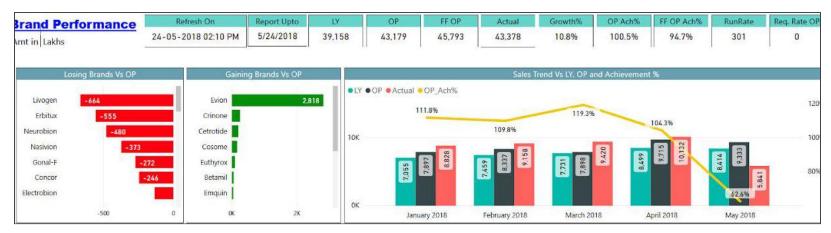


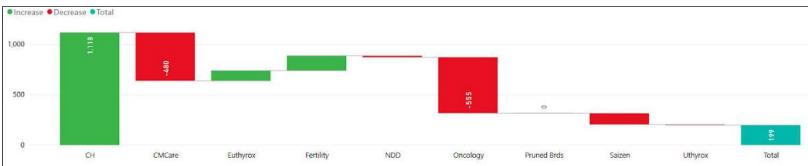
Microsoft Power BI: Data stories - example 2

Task 1: Heuristic Evaluation

Pros:

- Less writings.
- To an extend it is understandable.
- Usage of color in graph is able to understand:
 - which product is having growth
 - o profit and loss in business units
 - o sale trends
- Quick reference
 - Top right side data values helps in referring / comparing graphs





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Cons:

I was asked to do evaluation on the existing dashboard as a stranger and not to take input or ask any body about MIDAS and its features. All sheet were having problems and each problem would be appearing in some sheets of frequency about atleast two. I identified more than 30 problems and will be more if it was done as usability evaluation.

I concluded this task as:

- User study and user evaluation is required.
- Needs a clean up.
- Need an update in UI to its current trend.
- Power BI is able to present a better UI.
- Seems like IT did basic UI for the dashboard just to make it work.

1. Landing Page

- Summary is given as the default landing page.
- It is set to users who use the Merck Sales Analysis.
- First time user will find difficult to understand the summary page without a guide.



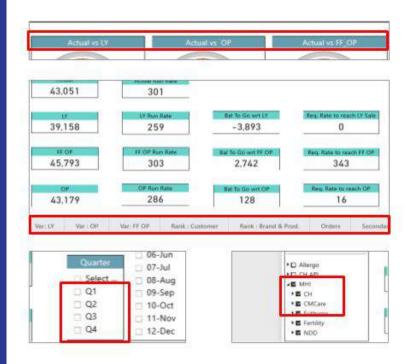
2. Cover Sheet & Help

- Cover sheet and help tab disappears after loading the landing page.
- First time user takes time in finding them if he didnt notice during the loading.



3. Short forms

- Summary sheet doesn't give hints or any added help to understand what are these short forms are.
- Actual mean what?
- Why OP is written instead of target?



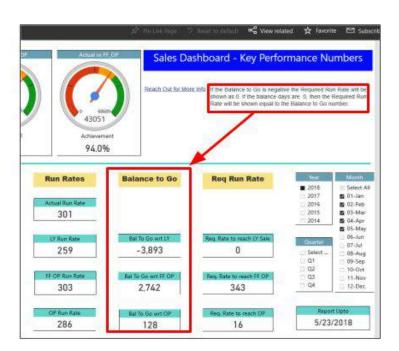
4. Header

- Many information are placed in the header.
- The horizontal blue line is the only hint that gives the top portion is header.
- The logo, heading / title and other information are positioned wrong.



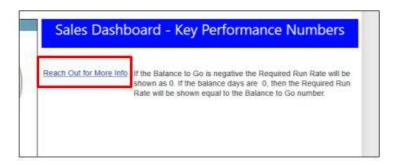
5. Notes

• Note is written far from its content.



6. Reach out hyperlink

• What this hyperlink link feature does is clearly written in Cover Sheet.



7. Currency

- 'Amt in Lakhs' is written at a position far from its usual position as seen in e-commerce websites.
- It may be difficult to find out.



8. The Dial

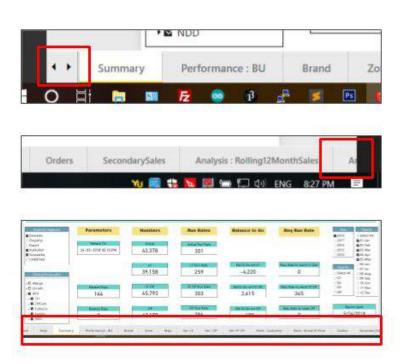
- Dial resembles temperature
- Reading is same for all the dial is that an error?
- Growth and achievement rating doesn't fit in the dial as seen from the dial heading.





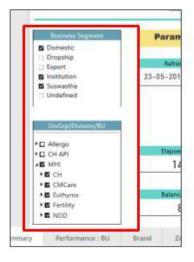
9. Sheet tabs

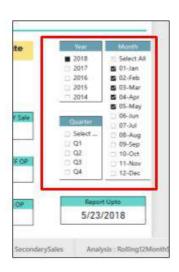
- · Position of the sheet tabs.
- Either way slider arrows positioned at one place may be good and can be bad.
- Tabs are not able show all the categories at once.
- If the sheet is at the center, then to go for specific sheet I need to click either of the arrows or should remember them(if the sheet tabs scales up in the near future).



10. Filters

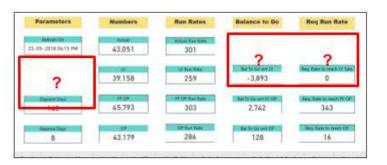
Filters are not together.





11. Blank Data

 Spaces creates confusion on whether those data are missing or not able to load or invalid or nothing.



33. Power BI - UI capability



Task 2: Redesigning the Dashboard

Survey on MIDAS users

A Survey was done by mentor, **Brijesh Thakur**, Head of Merck India Healthcare and all Heads under its division. The survey was done through internet using Survey Monkey, an online survey platform, which was generally used in the company itself. The survey was open on April 23rd, 2018 and closed on May 15th, 2018. The survey was in the form of questionnaire, opinion and feedbacks. It was sent to 90 employees and 65 of them responded as response rate of 72.22%.

• Useful section:

- Found useful on complete data availability, Dashboards, Sales analysis for brand wise, zone-wise,
 BU performance.
- Sales Data availability in Zone wise and Brand-wise format were the most useful section.

Enhancements:

- Maximum users are looking for speed.
- 'Integration feature' which varies with department requirement.
- Looking for report to be exported in PPT/ PDF.
- o Downloading graph should also be possible.

• Irrelevant Section :

- irrelevant sections are Variance tab.
- multiple fields and filter.
- o run-rate feature.
- Recommendation to the vendor / developer :
 - Training/ workshop on Power BI should be done.
 - Instruction or tips can be provided in the form of 'Help' Button on each page.
 - Removing the irrelevant sections or merged into one.

- o Enhancements asked by the users like speed, integration need to be incorporated with MIDAS.
- Flexibility to download the report and graph.
- Quick access to data and navigation should be effortless.
- Show top 5 customer, brand, current month sales for quick analysis.

New look of desktop version of MIDAS

The 24 tabs were cut short to 9 tabs:

- 1. Sales Summary
- 2. Performance: BU
- 3. Brand
- 4. Zone
- 5. Rank
- 6. Var FF OP
- 7. Sales Achievement
- 8. Trends
- 9. MTD, QTD, YTD

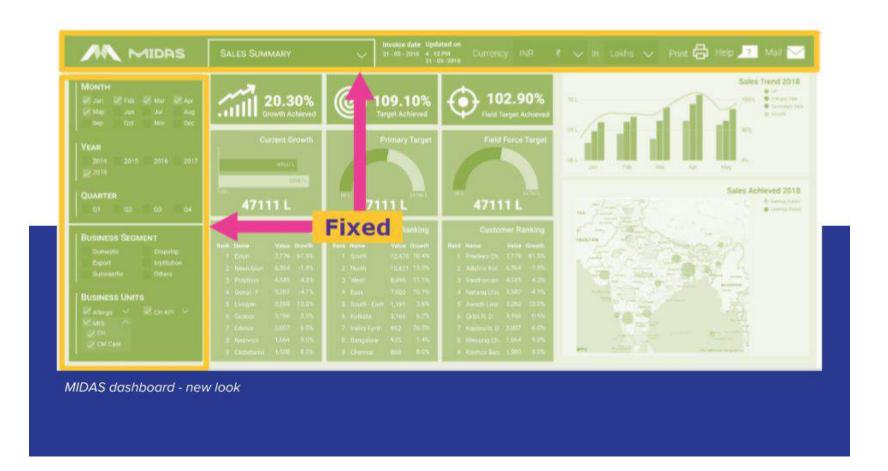


MIDAS dashboard - old look

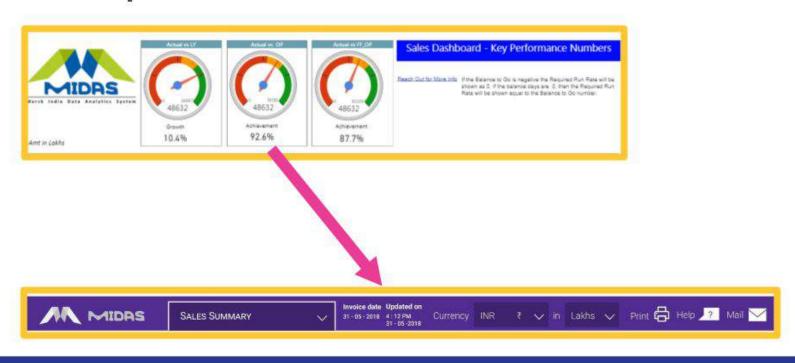


MIDAS dashboard - old look

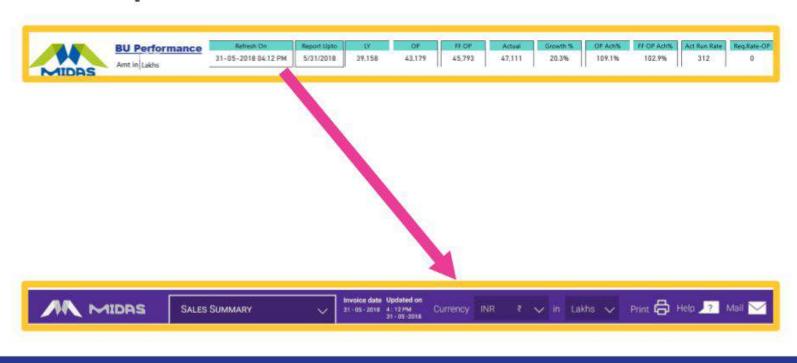




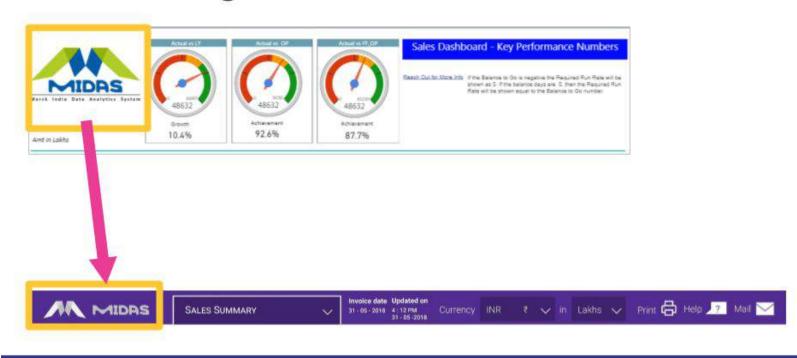
1.1. Top bar



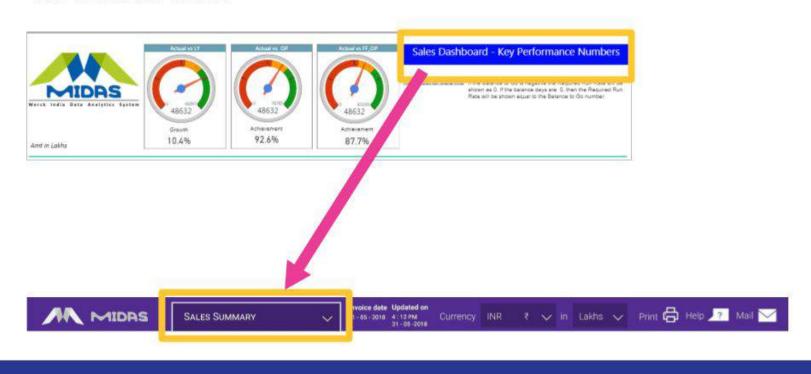
1.2. Top bar



2. MIDAS logo



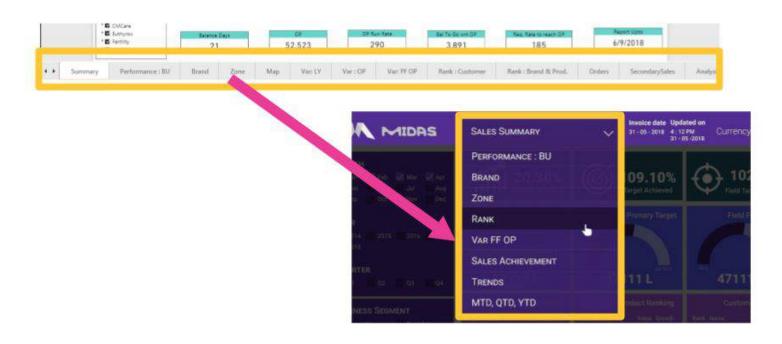
3. Sheet title



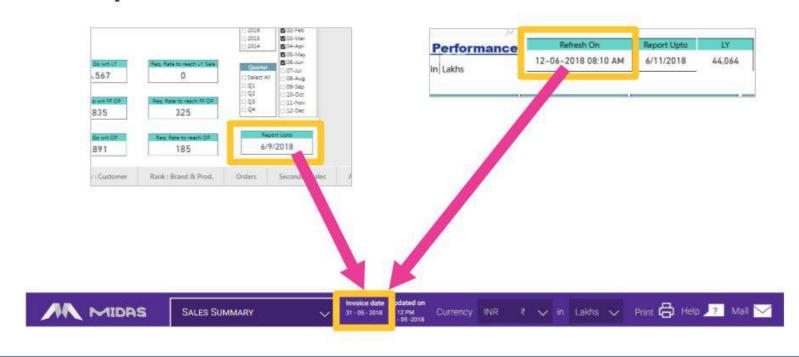
4. Title



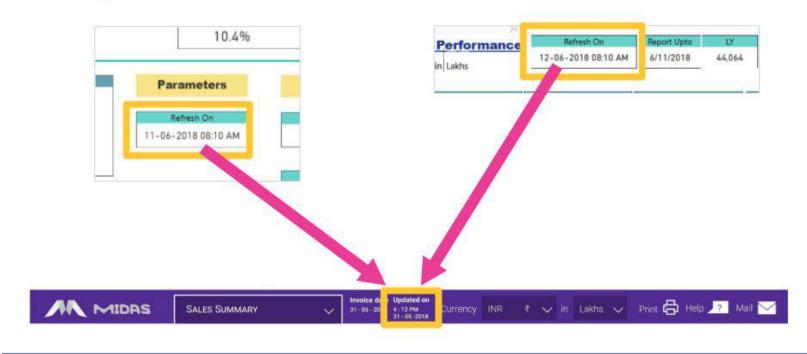
5. Title sheets



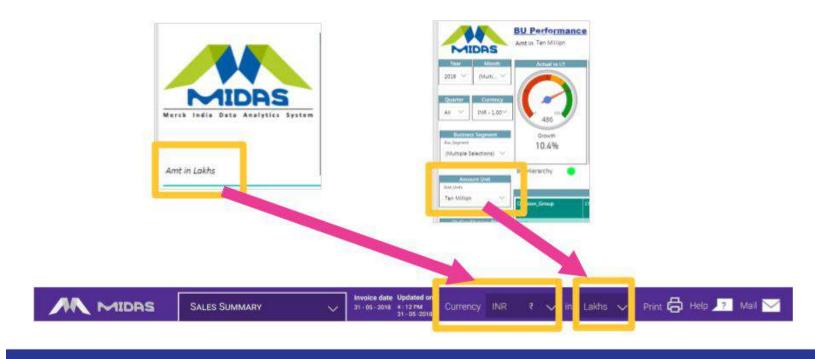
6. Report Information



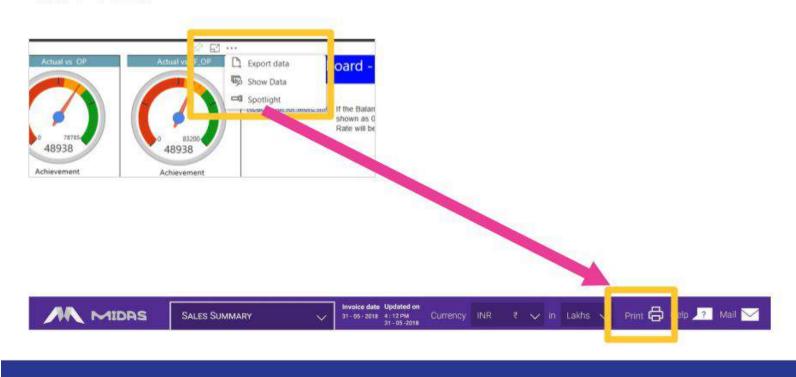
7. Update Information



8. Currency and denomination



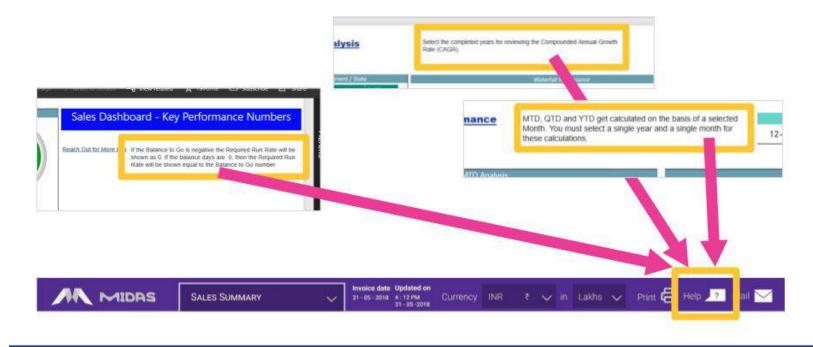
9. Print



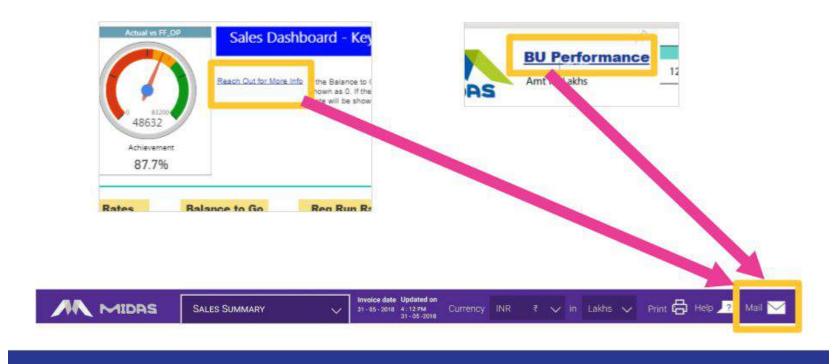
10.1. Help



10.2. Help



11. Mail



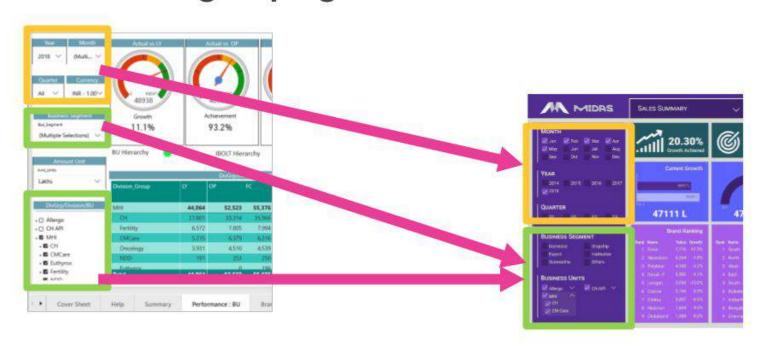
12. Filters



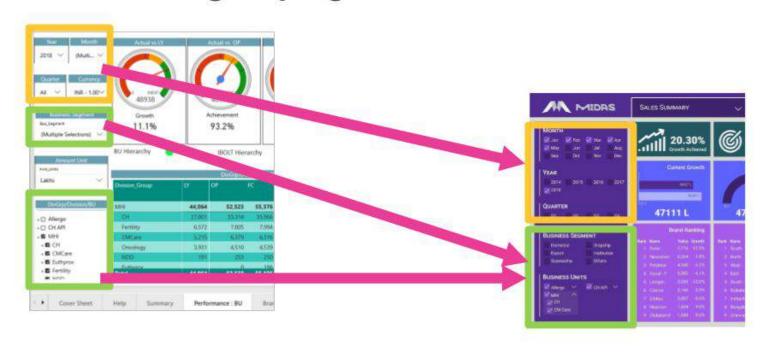
13. Filter grouping



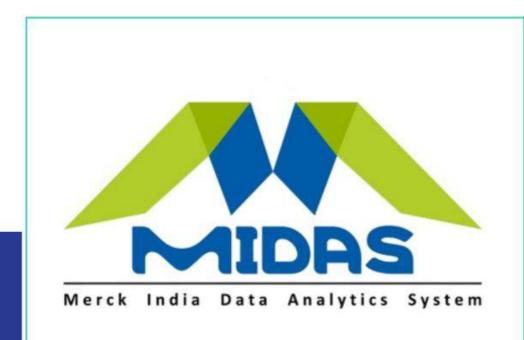
14.1. Filter grouping



14.2. Filter grouping



The irrelevant datas were removed. Some datas that were missing for specific sheet title but found as separate sheet title for itself in the dashboard, were brought to its relevant sheet. Filters were grouped. Proper top bar with dropdown of sheet title was made. Currency & its denomination, Help, Print and Mail were the new features added to the top bar so that its available everywhere. The cover sheet of MIDAS and contextual information of the current sheet title were the other added features coming under Help. Cover sheet of MIDAS and the UI of dashboard was given a new look. Now every information will be distinguishable to users and should be able to learn by themselves with ease. There will be problem facing with content of the sheet title as some users can be used with the older version of MIDAS and also because of relevant datas were shifted to its parent sheet. Cutting down the irrelevant data and sheet title will actually improve the loading time of each sheet title.



Reports:

Summary Report: This gives an overview of the Sales Performance.

Performance Reports: There are four types of Performance reports viz: Business Unit, Brand, Zone and Customer,

Variance Analysis Reports: There are three types of Variance Analysis Reports viz: Variance Waterfall Report wrt LY, Variance Waterfall Report wrt OP and Variance Waterfall Report wrt FF OP

Ranking Reports: There are two types of Ranking REports viz Customer Rank, and Brand&Product Rank

Returns, Breakage and Expiry; There are two reports analyzing these transactions viz SalesReturn and Break/Expiry Report

Orders: Orders and their Fulfillment are in the Orders Report.

Secondary Sales; Secondary Sales and their relationship with Primary Sales is in the Secondary Sales Sheet.

Analytical Reports; The following four analytical reports have been given viz

- Rolling Twelve Months Sales
- Sales Achievement Buckets
- Rends of OR Actuals, Achievement% and Growth %
- CAGR Compounded Annual Growth Rates

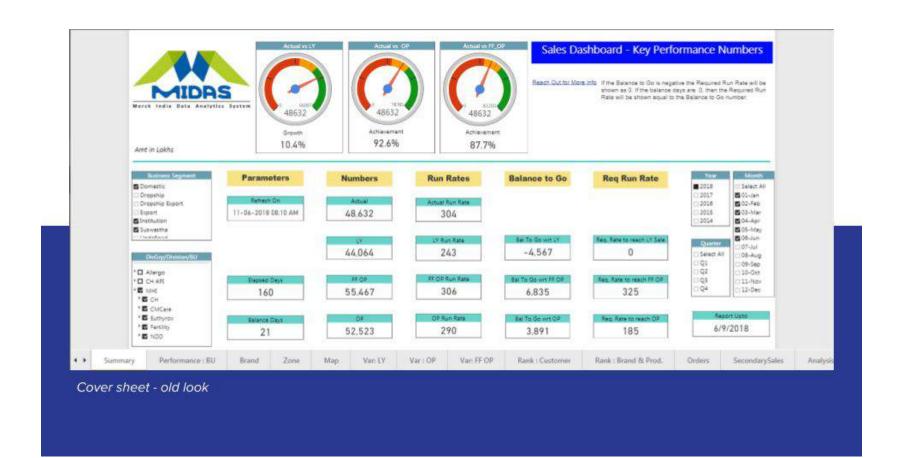
MTD/QTD/YTD Reports: There are five reports of this category viz:

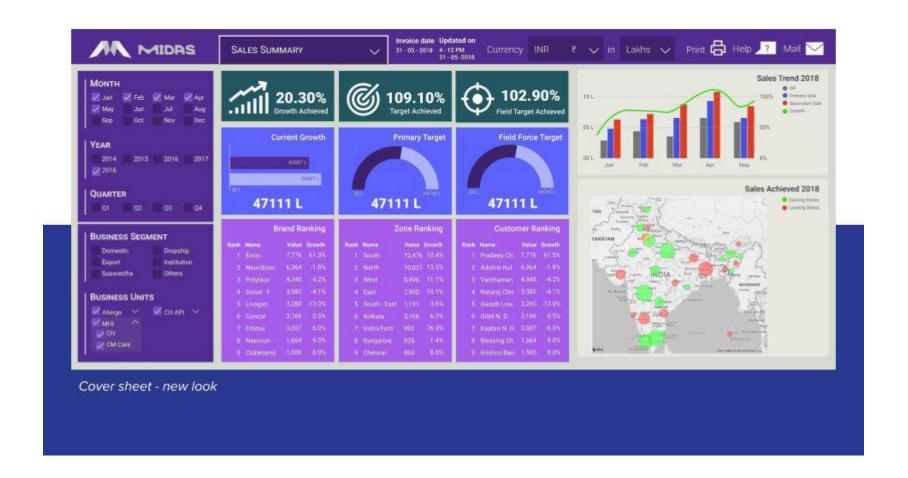
- Division and Bu wise MTD/QTD YTD
- BU, Brand and SKU wise MTD/QTD/YTD
- BU, Zone, Area, Territory wise MTD/QTQ.YTD
- Brand, Zone wise MTD/QTD/YTD
- Zone and Brand wise MTD/QTD/YTD

Reach Out for More Info < Click this hyperlink for sending email to admin.

The Sheet Title on each page is a hyperlink which will open an email to the administrator wherein you can write your request for more information.

Cover sheet - old look







Task 3: User Evaluation

I did user evaluation of my proposed dashboard on 3 users, each from :

• Head of SFE, Oncology and HR.

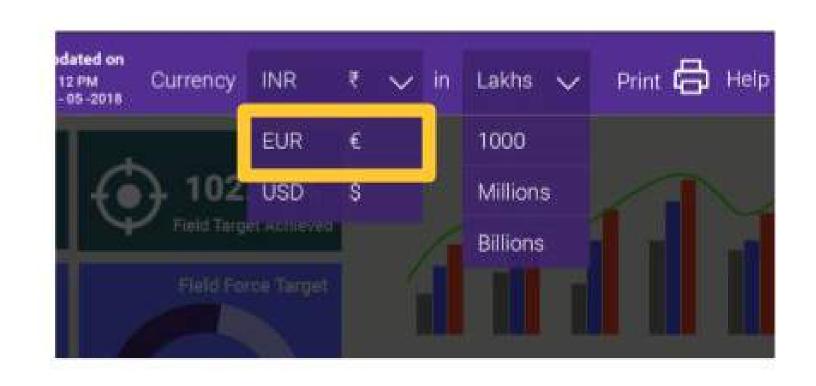
Their feedbacks were:

- Very positive on the new look of MIDAS
- For HR : Zone matters.
- For Oncology : BU level matters.
- Question : Only my field is shown or all fields are shown?
- Highlight higher level or rank.
- Question: Will there be month closing MD achievement, MD OP?
- User customized: BU level is needed and not all India level i.e. show the content that I need, so I don't want to

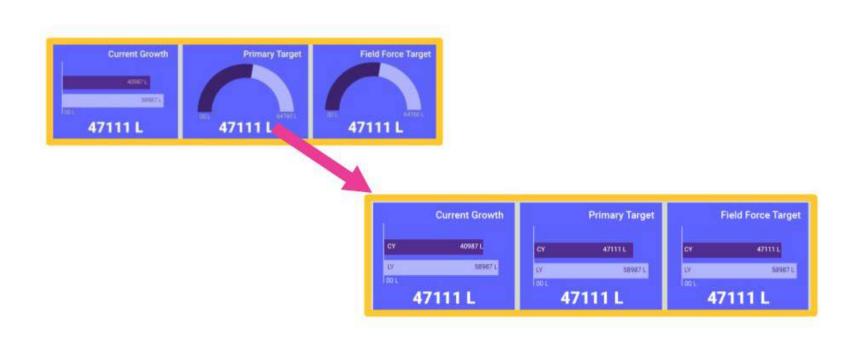
scroll, select and concerned about other irrelevant information. It cuts down unwanted information and speeds up loading time.

- Struggling mobile app selection, scroll, UI, data and loading time. The above point can improve these issues.
- Add Primary and secondary sale comparison in one table.
- Add customer wise LY and CY primary and secondary sales.
- Add MAT column along with MTD, QTD, YTD table.
- Currency : Euro matters than GDP.
- Show units in graph.
- In loss and gain graph, replace 0 as OP 2018.
- Mention Ops as internal OP MD OP and FF OP.

All the necessary changes were made from the given feedback before handling to the vendor / developer. User customised sheet was recommended during our meeting with the vendor. It should be possible because in the current MIDAS, the first tab is Cover Sheet but you will be greeted by Summary sheet when you login into to the MIDAS. MIDAS mobile application was having lots of problems as what you make in the desktop version will be reflected to the mobile variant. Showing only important data can actually helps in loading the page quickly.







Division_Group	LY	OP	LE	
MHI	39,158	43,179	46,000	
CH	25,077	27,344	29,984	
Fertility	5,587	6,421	6,611	
CMCare	4,797	5,251	5,189	
Oncology	3,220	3,743	3,780	
NDD	158	206	201	
Futhwrox		0	135	

Task 4: MIDAS mobile

After handing over my proposed dashboard to the vendor, I was given task to do the mobile variant of MIDAS. It was an easy task as I already done the desktop version but should be to the theme I made for desktop version of MIDAS. I had to be carefull not to change any information or on theme in doing the mobile variant, as the desktop version was fixed and what you see in the desktop version should be reflected on mobile version. Here the top bar had dropdown Sheet title, filter and menu button. Filters of the desktop were shifted to the filter option and Currency & Denomination, Help and Mail were shifted to the menu option in the mobile variant. Some minor changes were done on UI part as it is going to have Android look. Example: the floating window that appears when you press the option button.

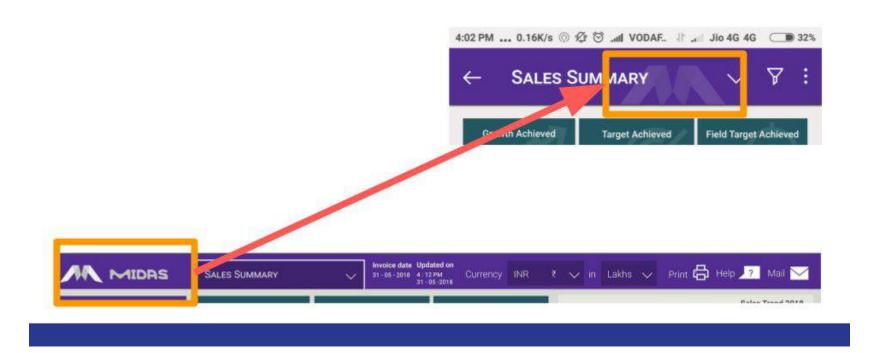
MIDAS - Desktop view



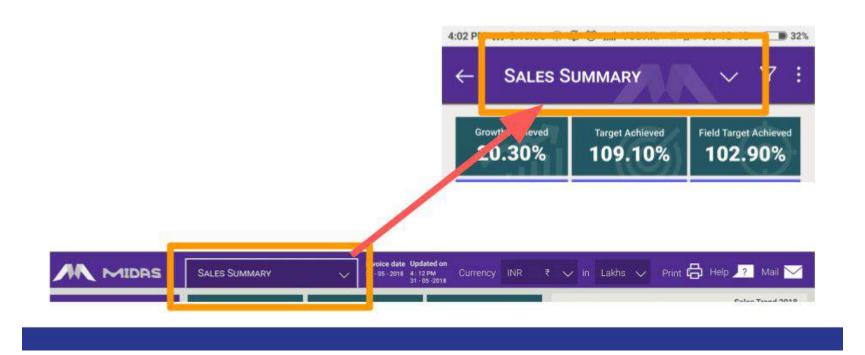
MIDAS - Mobile view

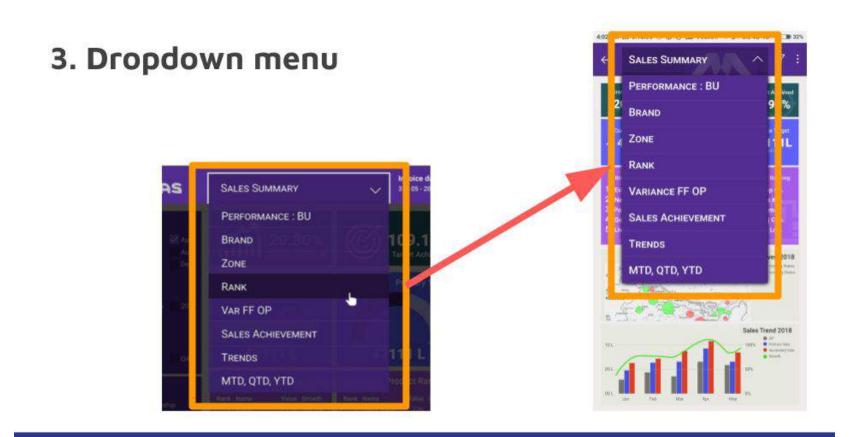


1. MIDAS Logo

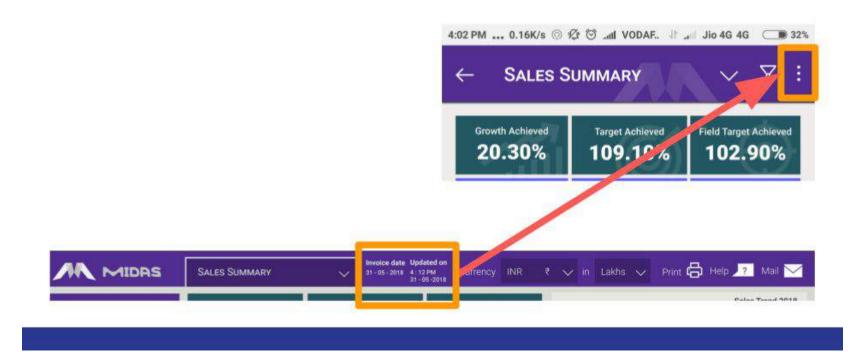


2. Title sheet

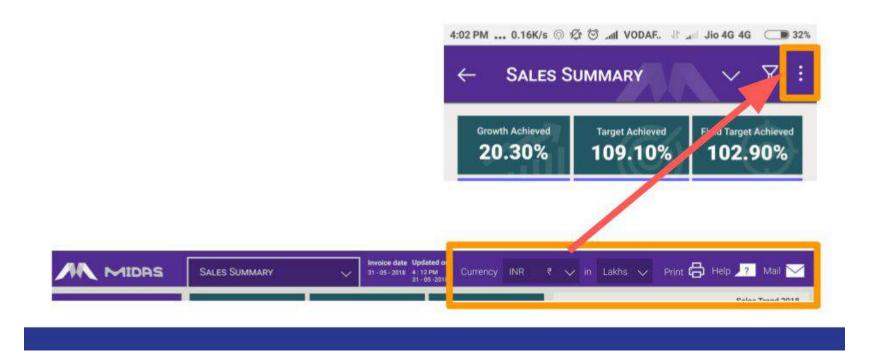


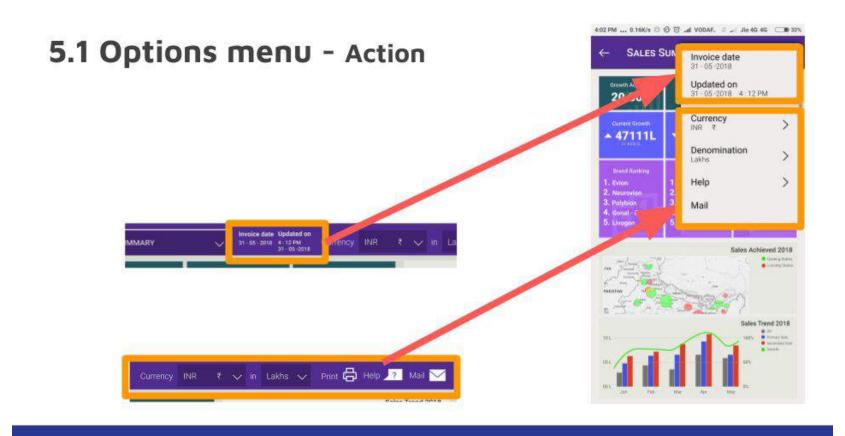


4. Invoice and Update info



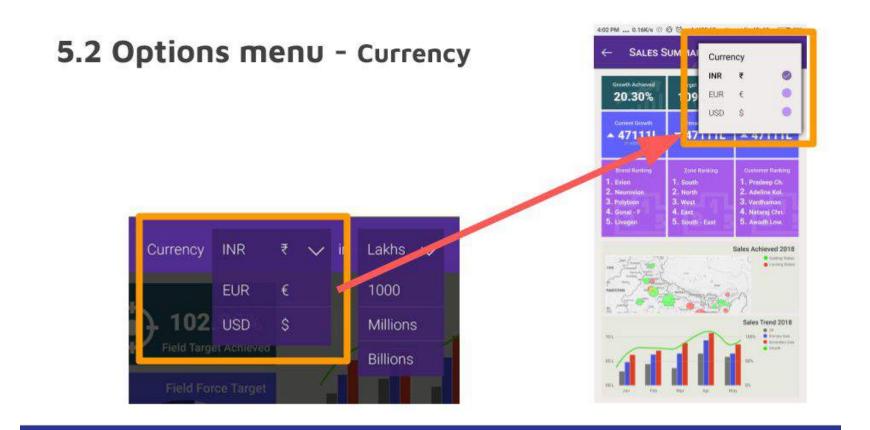
5. Utility bar

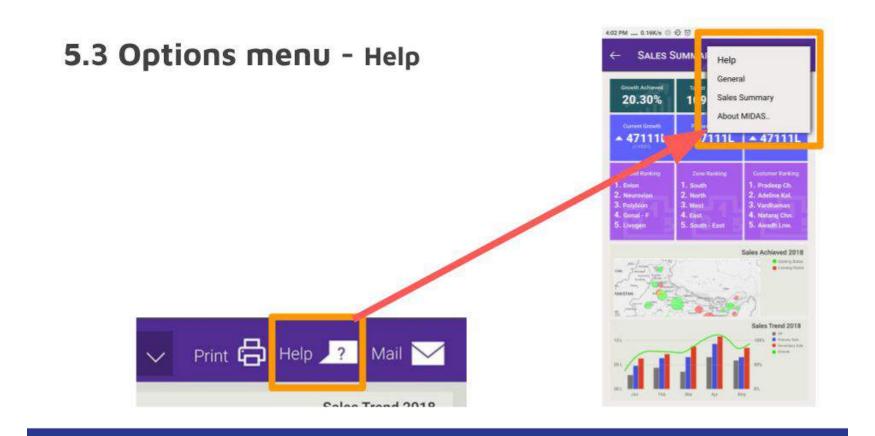


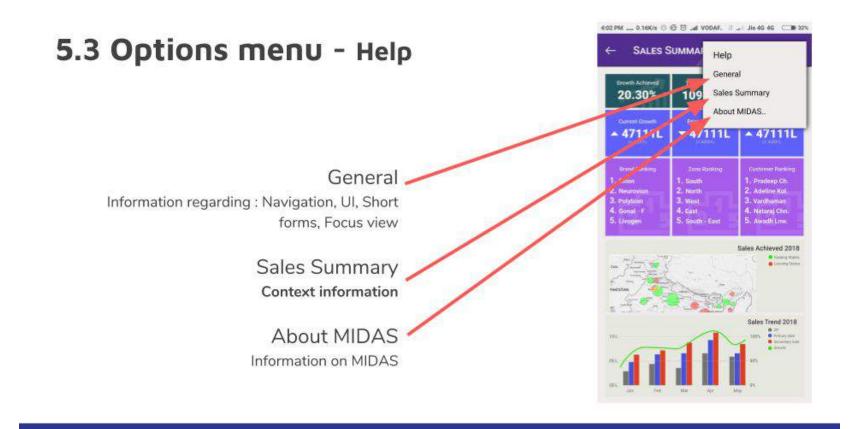


5.1 Options menu - Action





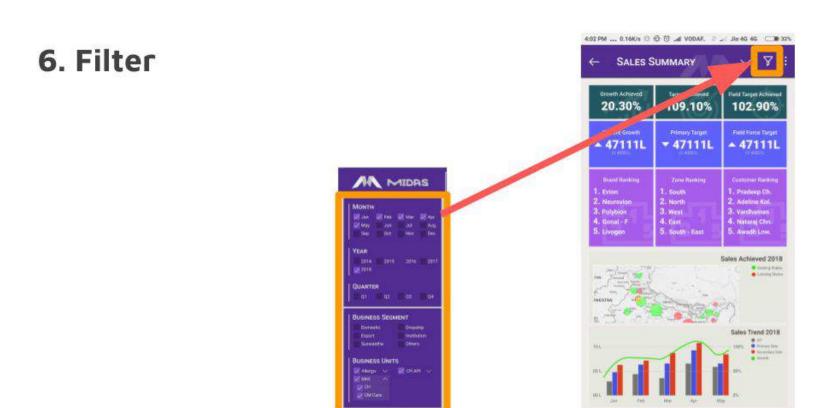




5.4 Options menu -About MIDAS







6.1 Filter - action



Learnings from Merck

- Speed up the work.
- Put ideas fast.
- Organise and manage time.
- Have fun and be chilled, but do the work with effort and quality.
- Do not get involved in work, move around and explore.

References

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- http://community.powerbi.com/t5/Data-Stories-Gallery/bd-p/DataStoriesGallery
- https://thenounproject.com/
- https://icons8.com/icon/set/widget icons for windows 10
- https://www.behance.net/gallery/53357679/UniBank
- https://www.behance.net/gallery/67033561/BUX-Cryptocurrency-Gaming-Platform