Power BI

Report Design Process

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About Me

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IRONMAN
55 - 70
PRO

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Agenda

What is Power BI & UX/UI Design

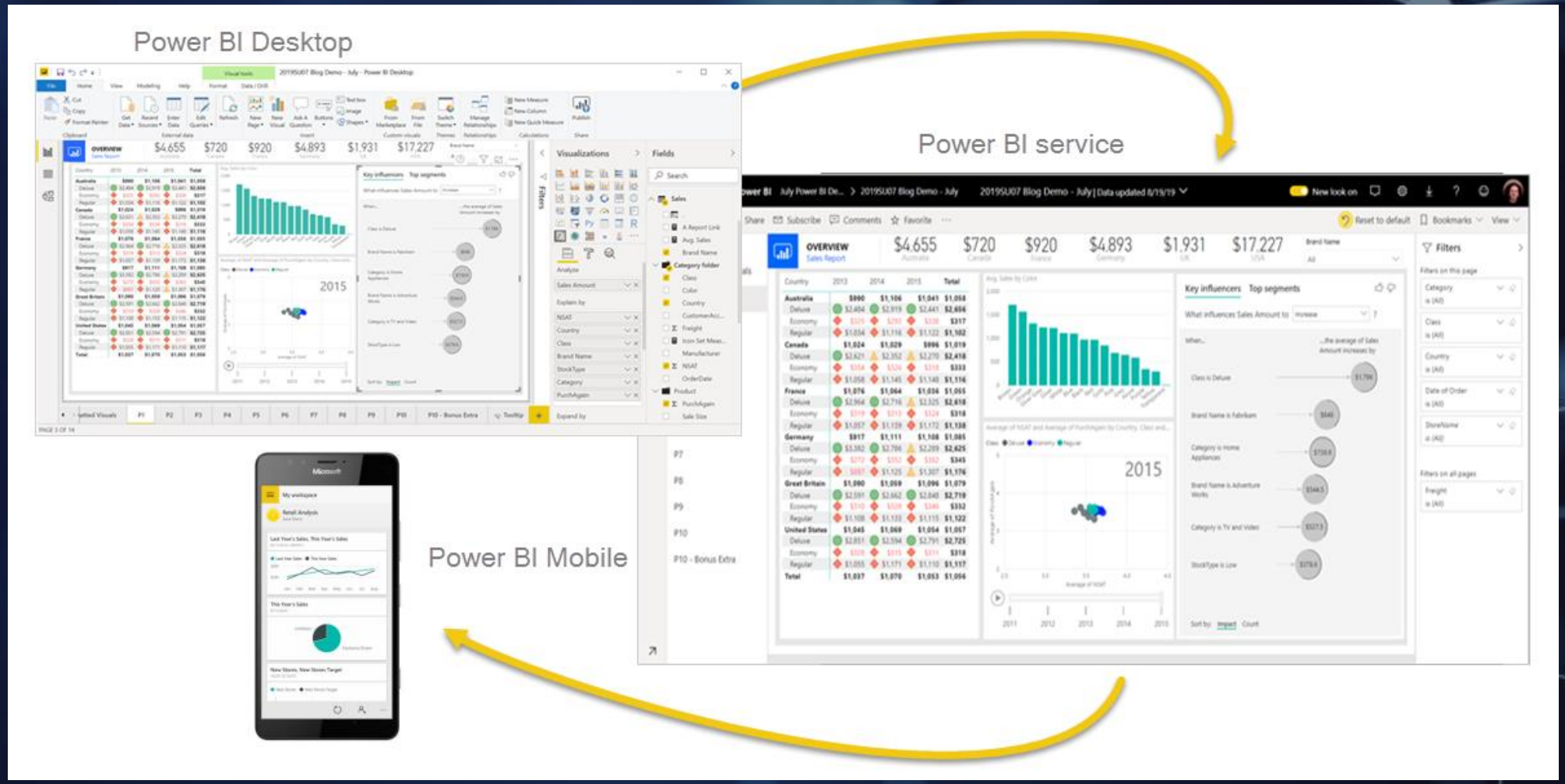
Report Design Process

UX laws & Principles

What is Power BI?

Power BI is a technology-driven business intelligence tool provided by Microsoft for analyzing and visualizing raw data to present actionable information.

What is Power BI?

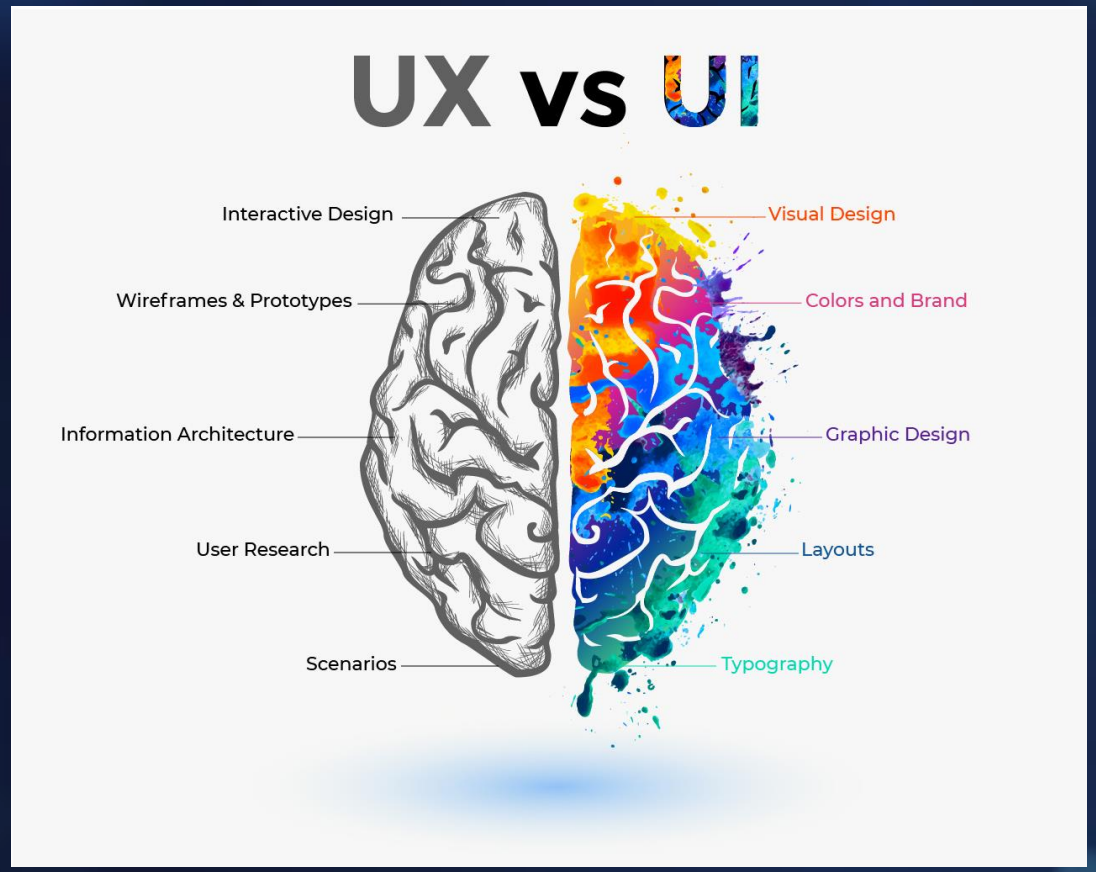


What is UX/UI Design?

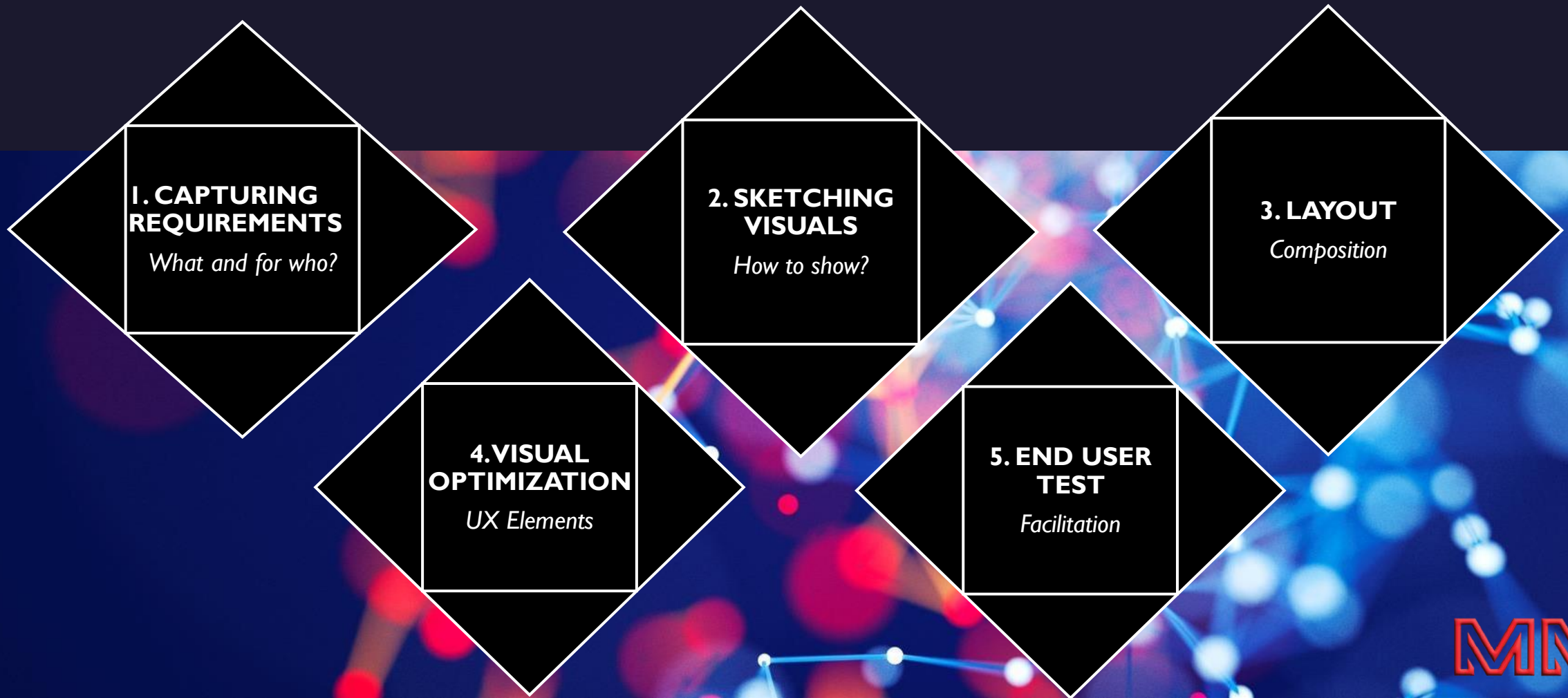
UX Design is a process of creating products or services that is easy to use and enjoyable for a user.

UI Design, on the other hand, refers to the actual interfaces with which users engage.

What is UX/UI Design?



Report design process



Capturing Requirements

Define:

Decision Makers

Knowledge Experts

Sponsor

Guiding Question:

What decisions will be taken based on the report?

Define (Non) Negotiables:

- Corporate Design
- Consumption (Service, Desktop, Mobile)

How to understand your user?

Emphasize

1. Personas
2. User stories

Personas

Mireille

"You will always find what are you looking for"

- Age: 65
- Gender: female
- Occupation: Spiritual healer
- Marital status: Married
- Children: 3
- Income:
- Interests: Acupuncture, moxibustion, working with chacra, holistic medicine, cooking, reading

Bio

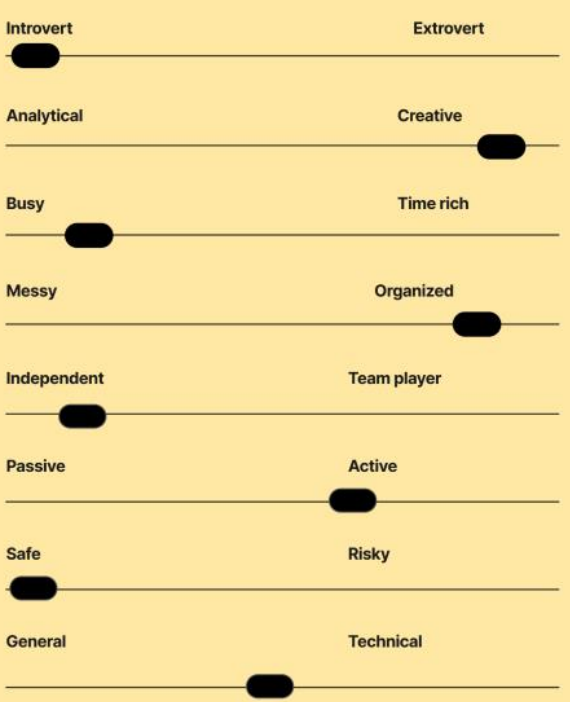
Mireille is a healer who lives in Florida in a small retired community. She travels occasionally to give seminars and lectures all over the world. She has written a couple of books.

Mireille had found her calling in life and enjoys tranquility and happiness that she had found through learning and improving herself, becoming a better version of herself.

She is deeply concerned that vast majority of people still want a "magic" pill to fix their health issues whether it's a physical or mental pain. By giving seminars and lectures she is bringing knowledge to people about alternative methods. **What bothers her the most** is still not being discovered well enough especially when she is traveling in different places, and the amount of so called healers who are trying to scam people.

She feels excited when there is an opportunity to create a healers community to collaborate and work together for the benefits of others, create events and seminars for those who are seeking alternative approach.

Personality



User stories

are problem or goal oriented and do not include specific solution or features.

*As a [**description of user**], I want [**functionality**] so that [**benefit**].*

As a database administrator, I want to automatically merge datasets from different sources so that I can more easily create reports for my internal customers.

Requirements Matrix

Report page Name: Name

Report page User: Users

Define	What	Answer
Define the goal of the report	GOAL	eg., Optimize production so that the cost is lowest and production times shortest eg., To give a high level overview of KPIs to multiple levels in the Unilever hierarchy
Define decisions that the report should drive	DECISION	eg. Should the production process be adjusted? eg. Do I need to see a more granular level of the indicators?
Define precise questions that help provide the answer to the decision	SUPPORTING QUESTIONS TO ANSWER	eg. Is the production time at each state close to the target?
Assign min 1 KPI to each question	KPI	eg. Actual prod. duration vs. target over time
Define action that should be triggered	ACTIONS	eg. Understand if there is room for speeding it up
Define who should see what and if they need any special adjustments	STAKEHOLDERS:	eg. Head of Production - All eg. Analysts - only for own products eg. Support - X

What visual is used	VISUAL 1	text
Is there another visual needed (total / KPI Card)	VISUAL 2	text
Define any filters or comparisons that are important for the decision	FILTER / COMPARISON	eg. Would be good to see a comparison of this year, last year, previous year sales.
Is there any dynamic element for the visual (toggle, slider)	DYNAMIC ELEMENT	text
Indicate what needs to be highlighted	HIGHLIGHTS	text
Default breakdowns?	BREAKDOWN	text
Reference lines/ targets etc	CONTEXT	text
Additional information needed?	TOOLTIP	text
Is there a need for bookmark (Chart-Table view)	BOOKMARKS	text

Sketching Visuals

Year

2021

Product Category

Accessories | Clothing | Shoes

Sales - Total

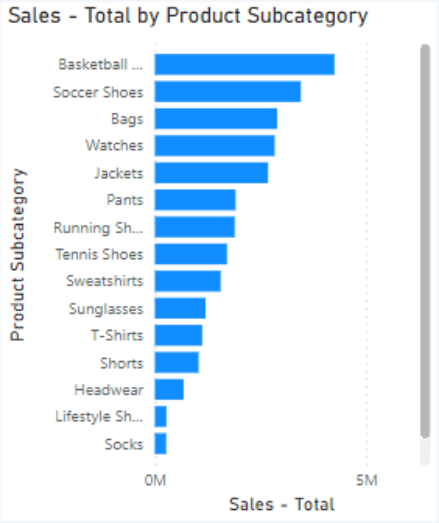
28.0M

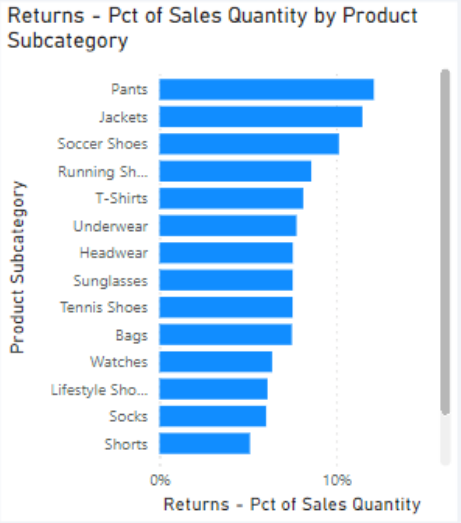
Returns - Pct of Sales Quantity

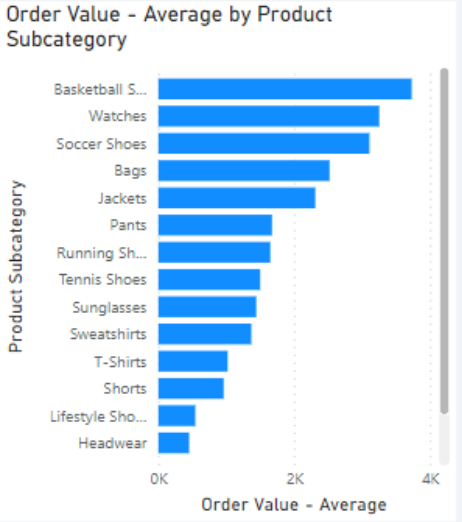
7.7%

Order Value - Average

11K







Layout

Sales - Total

28.0M

Returns - Pct of Sales Quantity

7.7%

Order Value - Average

11K

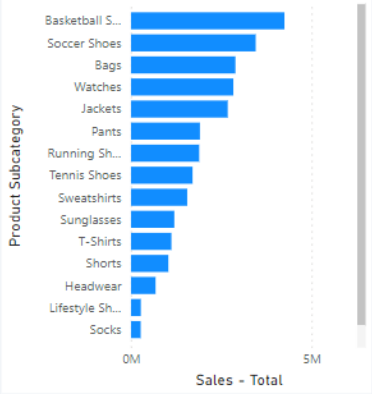
Year

2021

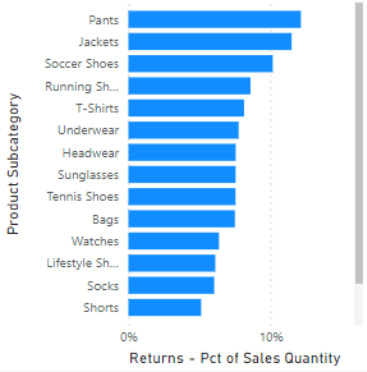
Product Category

Accessories | Clothing | Shoes

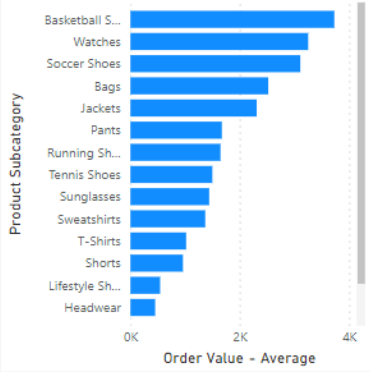
Sales - Total by Product Subcategory



Returns - Pct of Sales Quantity by Product Subcategory

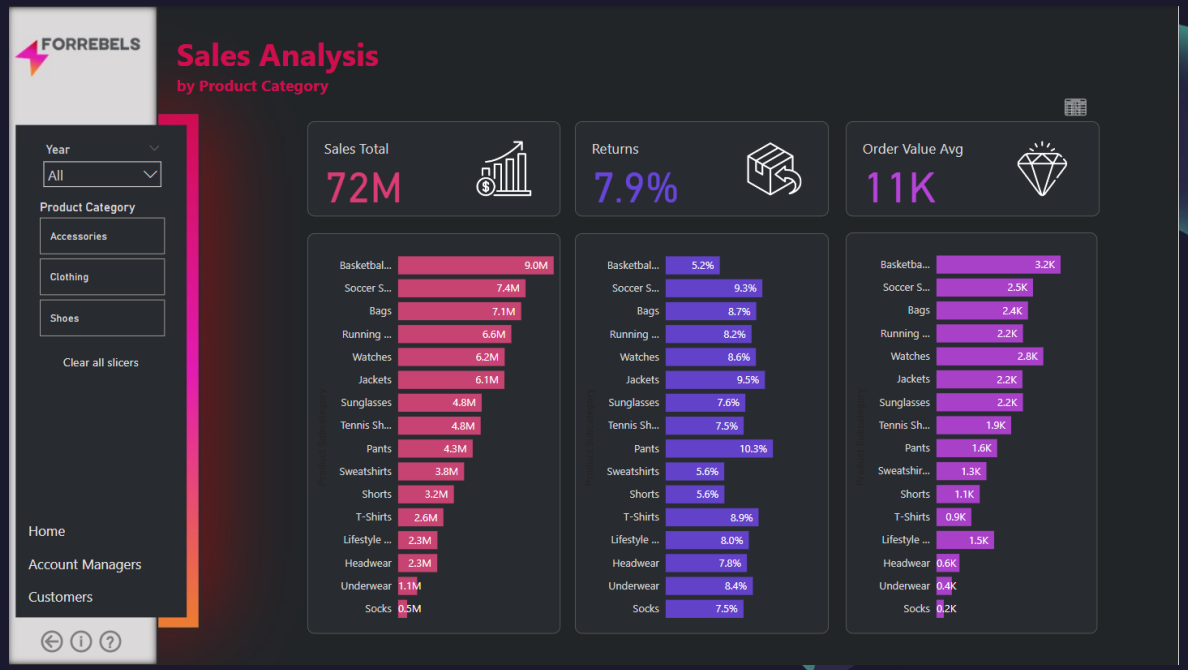


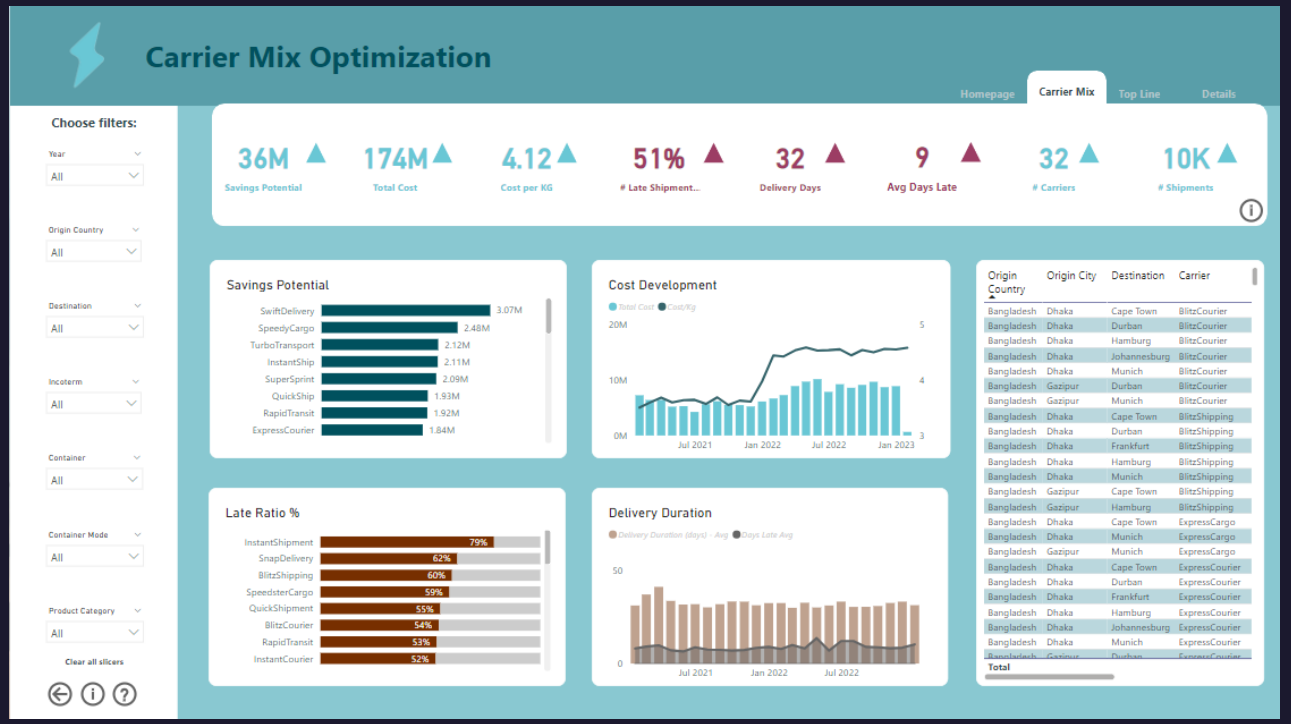
Order Value - Average by Product Subcategory

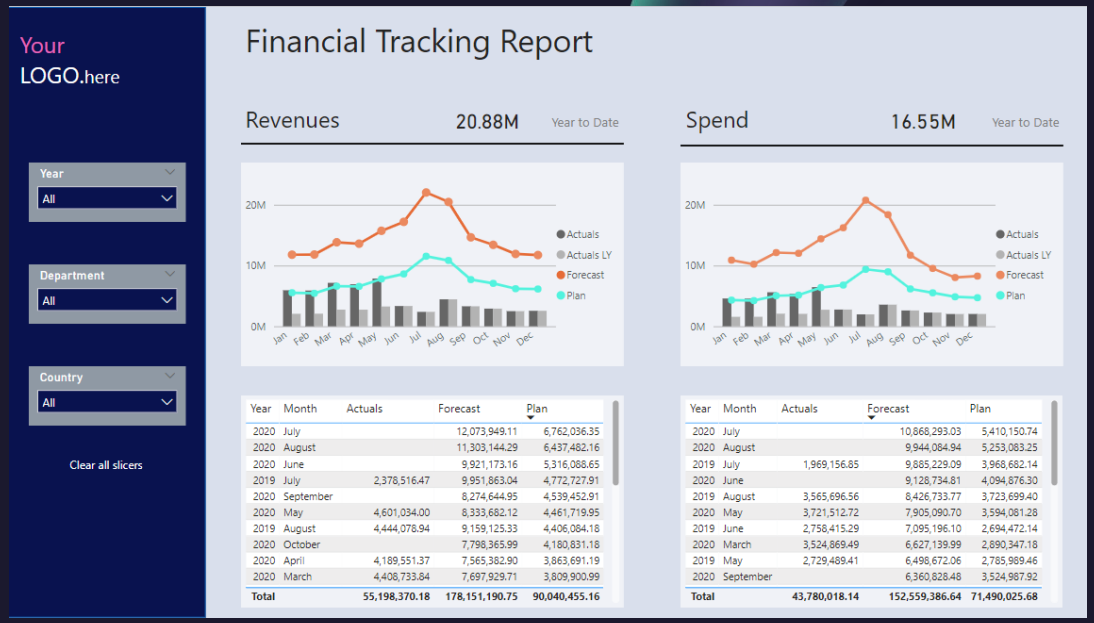


Visual Optimization

YOUR LOGO
SALES ANALYSIS DASHBOARD
2020
2021
2022
2023
Accessories
Clothing
Shoes
TOTAL SALES
Clothing, 2022
6.83M
RETURNS
Clothing, 2022
9.0%
ORDER VALUE
Clothing, 2022
3.7K
Home
Sales Analysis
Account Managers
Customers
CY vs PY
⇩ 22.5% vs PY
Pants 1.80M
Shorts 1.49M
Sweatshirts 1.06M
T-Shirts 0.90M
Jackets 0.77M
Underwear 0.66M
Socks 0.16M
1.5
CY vs PY
⇧ 1.0% vs PY
Pants 10.6%
Shorts 6.0%
Sweatshirts 7.0%
T-Shirts 9.8%
Jackets 10.1%
Underwear 9.8%
Socks 10.3%
9.00 %
CY vs PY
⇩ 2.8% vs PY
Pants 2.0K
Shorts 1.6K
Sweatshirts 1.2K
T-Shirts 1.0K
Jackets 1.1K
Underwear 0.7K
Socks 0.2K
1.9


FORREBELS
Sales Analysis
by Product Category
Year
All
Product Category
Accessories
Clothing
Shoes
Clear all slicers
Home
Account Managers
Customers
Sales Total
72M
Returns
7.9%
Order Value Avg
11K
Basketbal... 9.0M
Soccer S... 7.4M
Bags 7.1M
Running ... 6.6M
Watches 6.2M
Jackets 6.1M
Sunglasses 4.8M
Tennis Sh... 4.8M
Pants 4.3M
Sweatshirts 3.8M
Shorts 3.2M
T-Shirts 2.6M
Lifestyle ... 2.3M
Headwear 2.3M
Underwear 1.1M
Socks 0.5M
Basketbal... 5.2%
Soccer S... 9.3%
Bags 8.7%
Running ... 8.2%
Watches 8.6%
Jackets 9.5%
Sunglasses 7.6%
Tennis Sh... 7.5%
Pants 10.3%
Sweatshirts 5.6%
Shorts 5.6%
T-Shirts 8.9%
Lifestyle ... 8.0%
Headwear 7.8%
Underwear 8.4%
Socks 7.5%
Basketba... 3.2K
Soccer S... 2.5K
Bags 2.4K
Running ... 2.2K
Watches 2.8K
Jackets 2.2K
Sunglasses 2.2K
Tennis Sh... 1.9K
Pants 1.6K
Sweatshir... 1.3K
Shorts 1.1K
T-Shirts 0.9K
Lifestyle ... 1.5K
Headwear 0.6K
Underwear 0.4K
Socks 0.2K


Carrier Mix Optimization
Homepage
Carrier Mix
Top Line
Details
Choose filters:
Year
All
Origin Country
All
Destination
All
Incoterm
All
Container
All
Container Mode
All
Product Category
All
Clear all slicers
36M
Savings Potential
174M
Total Cost
4.12
Cost per KG
51%
Late Shipment...
32
Delivery Days
9
Avg Days Late
32
Carriers
10K
Shipments
Savings Potential
SwiftDelivery 3.07M
SpeedyCargo 2.48M
TurboTransport 2.12M
InstantShip 2.11M
SuperSprint 2.09M
QuickShip 1.93M
RapidTransit 1.92M
ExpressCourier 1.84M
Cost Development
20M
10M
0M
Jul 2021
Jan 2022
Jul 2022
Jan 2023
Origin Country
Origin City
Destination
Carrier
Late Ratio %
InstantShipment 79%
SnapDelivery 62%
BlitzShipping 60%
SpeedsterCargo 59%
QuickShipment 55%
BlitzCourier 54%
RapidTransit 53%
InstantCourier 52%
Delivery Duration
Jul 2021
Jan 2022
Jul 2022
Total


Your LOGO.here
Year
All
Department
All
Country
All
Clear all slicers
Financial Tracking Report
Revenues
20.88M
Year to Date
Spend
16.55M
Year to Date
20M
10M
0M
Actuals
Actuals LY
Forecast
Plan
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Year Month Actuals Forecast Plan
2020 July 12,073,949.11 6,762,036.35
2020 August 11,303,144.29 6,437,482.16
2020 June 9,921,173.16 5,316,068.65
2019 July 2,378,516.47 9,951,863.04 4,772,727.91
2020 September 8,274,644.95 4,539,452.91
2020 May 4,601,034.00 8,333,682.12 4,461,719.95
2019 August 4,444,078.94 9,159,125.33 4,406,084.18
2020 October 7,798,365.99 4,180,831.18
2020 April 4,189,551.37 7,565,382.90 3,863,691.19
2020 March 4,408,733.84 7,697,929.71 3,809,900.99
Total 55,198,370.18 178,151,190.75 90,040,455.16
Year Month Actuals Forecast Plan
2020 July 10,868,293.03 5,410,150.74
2020 August 9,944,084.94 5,253,083.25
2019 July 1,969,156.85 9,885,229.09 3,968,682.14
2020 June 9,128,734.81 4,094,876.30
2019 August 3,565,696.56 8,426,733.77 3,723,699.40
2020 May 3,721,512.72 7,905,090.70 3,594,081.28
2019 June 2,758,415.29 7,095,196.10 2,694,472.14
2020 March 3,524,869.49 6,627,139.99 2,890,347.18
2019 May 2,729,489.41 6,498,672.06 2,785,989.46
2020 September 6,360,828.48 3,524,987.92
Total 43,780,018.14 152,559,386.64 71,490,025.68

Report Final check

Report page Name: Name

Report page User: Users

1. Concept		Notes per page
Is it clear what decisions the report should help with?	Clarity	text
Are the most important KPIs clearly visible and readable?	Readability	text
Are the insights actionable?	Functionality	text
2. Visuals		
Are the numbers correct?	Correctness	text
Are the charts answering supporting questions as intended?	Choice	text
Is axis needed? Is axis title needed?	Axis	text
Are labels necessary? Are they conditionally formatted to improve readability?	Labels	text
Is enough context provided to draw conclusions (reference lines, yoy, target, highest/lowest value)?	Context	text
Are colors used consistently across the report (same color, same category)?	Colors	text

3. Layout

Is the order of visuals logical? What reading pattern is it?	Structure	text
Are the correct items highlighted?	Highlights	text
Are the elements aligned? Is there enough whitespace?	Background	text
Are the fonts matching and in hierarchy?	Fonts	text

4. UX elements

Is navigation intuitive? How can it be improved?	Navigation	text
Are filters working correctly? Is the data meaningful after applying filters (blank?)?	Filters	text
Are buttons working (actions)? Are they formatted (on hover)?	Buttons	text

5. User Testing

Test the report as a user. Create tasks/ questions for yourself and perform them.	Intuitiveness	text
Test the report as a user. Create tasks/ questions for yourself and perform them.	Ease of use	text
Test the report as a user. Create tasks/ questions for yourself and perform them.	Usefulness	text

6. What is missing

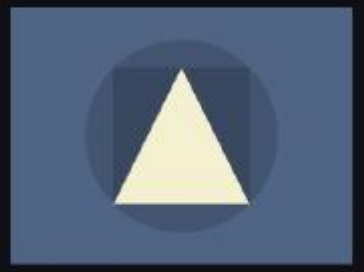
.	Intuitiveness	text

End User Test

		Strong Points	Improvement Points
1 Concept			
Clarity	Do I understand what the report is about? Is there a story/question it answers?		
Readability	Is it easy to read the data story?		
Functionality	Is it easy to get to the answers? Is the report helping make decisions?		
2 Visuals			
Correctness	Are the numbers correct? Did you click on every button/filter?		
Choice	Is the visual appropriate for the data/question/topic?		
Axis	Is the scale and axis clear and easy to comprehend?		
Labels	Are labels helping the readability?		
Context	Is there informative context provided? Is it helpful?		
Colors	readability?		
3 Layout			
Structure	Is the structure intuitive and quick to comprehend?		
Highlights	Are the right things highlighted?		
Background	How is the background from the visual perspective? Is it clean and polished?		
Fonts	Do the fonts of the report match? Are they correct size?		
4 UX elements			
Navigation	Is the navigation intuitive?		
Filters	Are filtering option exhaustive? Are they clear and helpful?		
Buttons	Do all buttons work/communicate message as intended?		
Other elements	What UX elements unique for this report are great or should be improved?		
5 User Testing			
Intuitiveness	Is the report/report flow intuitive?		
Ease of use	Is the report easy to use (no complex clicking patterns)?		
Usefulness	Is the report useful to the extend that you could imagine revisiting it in the future?		
6 What is missing?			

UX laws & Principles

lawsofux.com

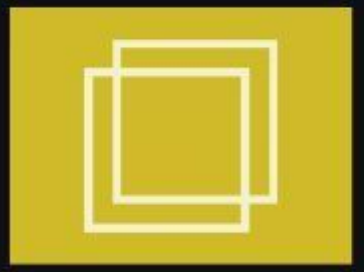


Aesthetic Usability Effect

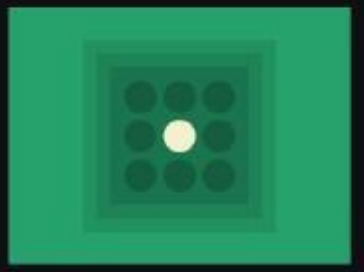
Doherty Threshold

Fitts's Law

Hick's Law



Jakob's Law



Law of Common Region

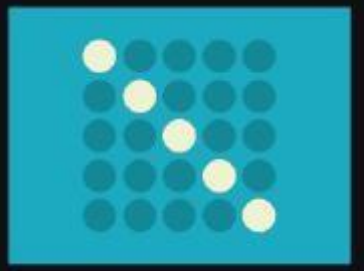
Law of Prägnanz

Law of Proximity

Law of Similarity

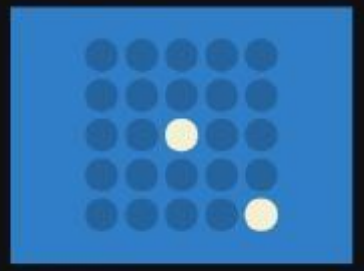
Miller's Law

Occam's Razor



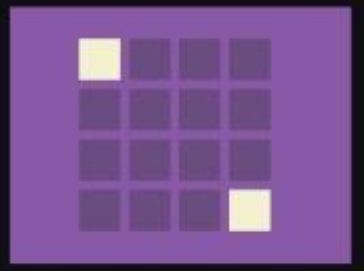
Pareto Principle

Parkinson's Law



Peak-End Rule

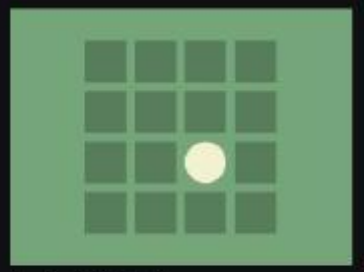
Postel's Law



Serial Position Effect

Tesler's Law

Uniform Connectedness



Von Restorff Effect

Zeigarnik Effect

Fitts's law

The time to acquire a target is a function of the distance to and size of the target.

1.Touch targets should be large enough for users to accurately select them.

2.Touch targets should have ample spacing between them.

3.Touch targets should be placed in areas of an interface that allow them to be easily acquired.

To make interactive buttons large (especially on finger-operated mobile devices)

Aesthetic-Usability Effect

Users often perceive aesthetically pleasing design as design that's more usable.

1. An aesthetically pleasing design creates a positive response in people's brains and leads them to believe the design actually works better.

2. People are more tolerant of minor usability issues when the design of a product or service is aesthetically pleasing.

Make report design appealing

MMI

Thank you

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