CONFIDENTIAL

HUMAN RESOURCE MANAGEMENT BUSINESS AND TECHNICAL UNDERSTANDING

Business Description and Functional Requirements:

Customer	Inchcape plc, London
Business Unit	Distribution and Retail
Operational Area	Human Resource Management
Dash Board	Human Resources Management Dash Board
Score Card	Human Resources KPI Card
Team Size	6 [Onshore and offshore] Leading by Mr. Andrew Dixon from London.
Description	Inchcape plc is the global distribution and retail leader in the premium and luxury automotive sectors. Operating from different geographic locations and headquarter is London. Besides its business units it has a strong and enrich employee management system in Excel. The strategic, tactic and predictive analytical system expecting appropriate and dynamic dashboards and score cards in Power BI. **Organization URL:** *https://www.inchcape.com* **Organization Service:** *https://www.inchcape.co.uk/* **Employee Management Process in Brief:** It has employees of Full Time, Part Time and Permanent. They are paid for hourly, daily and weekly. Employees joining in the organization in various age groups through different recruitment processes and from numerous agencies. There are restrictions while separating from the organization (voluntary and involuntary) [Refer to doc in SharePoint site http://inchcape//employeeshire//seperations.pdf or download from GitHub] We require a single view to analyze all the details for better employee's management and control of resources separations in order to compete and grow in the market leadership. **Desired solution in all the areas of HRMS:** 1.A report with VPs employee recruitment statistics and analysis on new hires 2.Going to the Employees Analysis page to display respective VPs information. 3.Employees Analysis page with a central hierarchical network diagram to analyze the below a) New Hires Detailed Analysis b) Bad Hires Detailed Analysis c) Actives and Separations Analysis **VP_Analysis Page** a) Inchcape logo and page title b) Decomposition of employees with VP names, regions and gender c) Customized tooltip with New Hires, Actives, Separations, Bad hires info. **d) Goals analysis in Score Card for VP:** a) Dropdown to select a VP b) New hires by Month c) New hires FB Desc and Age Group d) New hires by Gender

e) New hires by PayType
e) Decomposition of employee's analysis is isolated from **Goals analysis**

Employees_Analysis Page

Main page (name: Employees) with Hierarchical Flow of operations

a) Employees image click require VP_Analysis page creation
b) New Hires image click required New Hires page opening in Employees_Analysis
c) Actives and Separations image click required Actives and Separations page opening in Employees_Analysis
d) Bad Hires image click required Bad Hires page opening in Employees_Analysis
e) Display in the right bottom
    a. "Report viewed for VP: VP name / Not Selected and Date and Time: Date and Time of the page opening

New Hires Insights Presentation:

a) Interactive analysis for Years, Quarters, Months, and Dates with date pickers
b) Clear filters to clear all filters
c) New hires comparison for the current and last years, also year over year growth change in percent format
d) Full-time and Part-time trend analysis for the new hires
e) Gender joining percentage and comparison in the new hires
f) AgeGroup wise new hires comparison by considering below 30 years as 100%
g) Region wise ethnicity wise New Hires distribution and comparison and actives trend analysis. Also drill down from Region to VP level.
h) Region wise AgeGroup wise New Hires Geographical Analysis
i) Ethnic group wise New Hires influencing factors for increase and decrease
j) Display KPI fields in the page (irrespective of filtering)
a) New Hires
b) New Hires SPLY
c) New Hires YoY Var
d) New Hires YoY % Change

Bad Hires Insights Presentation:

a) Interactive analysis for Years, Quarters, Months, and Dates with date pickers
b) Clear filters to clear all filters
c) AgeGroup wise BadHires%ofActives Trend Analysis
d) Bad hires by gender
e) Month wise AgeGroups Bad Hires YoY % Change trend analysis
f) Region wise ethnicity wise New Hires distribution and comparison and actives trend analysis. Also drill down from Region to VP level.
g) Year wise Region wise sum of bad hires with region ranking across years
h) Year wise Quarter wise and Month wise, BU wise Region wise bad hires analysis.
i) Display KPI fields in the page (irrespective of filtering)
a) Bad Hires
b) Bad Hires SPLY
c) Bad Hires YoY Var
d) Bad Hires YoY % Change

	Active Employees and Separations Analytical Insights Presentation: a) Interactive analysis for Years, Quarters, Months, and Dates with date pickers b) Clear filters to clear all filters c) VPs total Separations vs. Actives KPI status display d) Month wise Actives and Actives SPLY comparison, trend analysis on Seps YoY% change. Need other levels of analysis Region and VP. e) Month wise Seps and Seps SPLY comparison, trend analysis on Actives YoY% change. Need other levels of analysis Region and VP. f) Month wise Seps and Seps SPLY trend analysis g) Year wise Seps and Seps SPLY trend analysis h) Separations reasons comparison for separations i) Region wise Activities YOY Var, also need VP level analysis also. j) Gender wise Activates composition and comparison k) AgeGroup wise Activates composition and comparison l) Display KPI fields in the page (irrespective of filtering) a) Actives Hires b) Actives SPLY c) Actives YoY Var d) Actives YoY % Change e) Separations Hires f) Separations SPLY g) Separations YoY Var h) Separations YoY % Change

Technical Design Elements:

a) Sources, Credentials, and other security tokens

Open PBI Desktop, Extract the given Excel file tables [Ethnicity, FP, Date, BU, AgeGroup, Gender, VP, PayType, SeparationRegion, Employee]

Go to Table View-> Ensure all tables having proper shape, consider first row as header for few tables.

b) Transformations required

Go to Power Query area,

Go to the table where column headings are not proper, use first row as header.

c) Model relationships required

Look at one by one dimension table columns with employee table columns, if values match, then relate.

At the time of age group table, there is no direct match, hence we need to create a new column in employee table and then relate with age group table.

AgeGroup table does not have proper match in Employee table because employee table age value is there and age group table category available.

Employee Table->right click->new column-> write the below expression

AgeGroupID=switch(True, Employee[Age]<=31,1,Employee[Age]<=40,2,Employee[Age]>=50,3)

Connect this column with AgeGroupId in AgeGroup table [model view]

Table Relationships:

Employee[FP]->FP[FP]

Employee[Gender]->Gender[ID]

Employee[Term Reason]->Separation[Separation Type ID]

Employee[BU]->BU[BU]

Employee[Date]->Date[Date]

Employee[EnthnicGroup]->Ethnicity[Ethnic Group]

Employee[PayTypeID]->PayType[PayTypeID]

Employee[AgeGroupID]->AgeGroup[AgreGroupID]

Formula explanation:

Conditional evaluation in DAX: If (single condition) and Switch (multiple conditions)

True: Bypasses the condition always

Switch returns result after first match.

d) Model Calculations required [measures, columns, tables]

Calculated Columns Creation [the below columns are not available, need to create]

a) Create a calculated column for the new hires analysis

Emp table-> New column->write the below formula

isNewHire = IF(YEAR([date]) = YEAR([HireDate]) && MONTH([date])=MONTH([HireDate]), 1)

b) Create a calculated column for the bad hires analysis

Emp table-> New column->write the below formula

BadHires = IF(OR((([HireDate]-[TermDate])- 1)>=61,ISBLANK([TermDate])),0,1)

c) Create a calculated column for the Tenure Days

Emp table-> New column->write the below formula

TenureDays = IF(Datediff([Date], [HireDate], DAY)<0,DATEDIFF([HireDate],[Date], DAY),datediff([Date],[HireDate], DAY))

d) Create a calculated column for the Tenure Months

Emp table-> New column->write the below formula

TenureMonths = CEILING([TenureDays]/30, 1) -1

e) **Create a calculated column for the BU table**

BU table->-> New column->write the below formula

Region = mid([RegionSeq],3,len([RegionSeq])-2)

f) Measure Formulas:

Reference:

Sum	Full total of all values in a column
Sumx	Total based on expression
AllExcept	Skip all filters except the specified expression
Calculate	Perform aggregate and non-aggregate calculations
Sameperiodlastyear	In the given period exact last year information
Divide	Perform division, return actual result or alternate result
Lastnonblank	Business last date where it has value
Filter	Filter table data based on expression, return table of rows
&	Concatenate operation

Create a table with name **HRMS Analysis Measures** and then create the below measures.

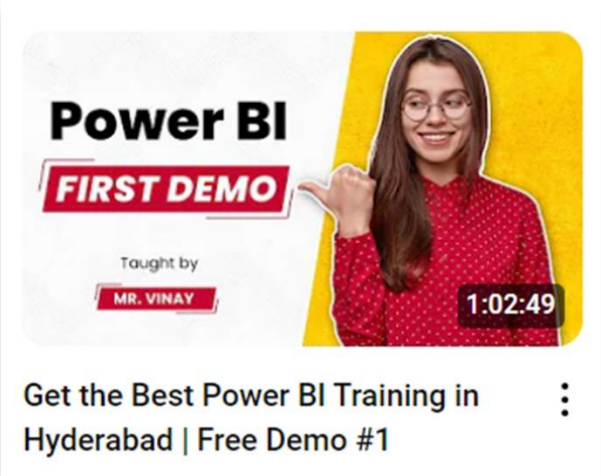
Home menu-> Click grid to enter data-> specify column name:"EID", table name: **HRMS Analysis Measures,** click Load.

Data Pane-> HRMS Analysis Measures ->right click->new measure **New Hires = SUM(Employee[isNewHire])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **New Hires SPLY = CALCULATE([New Hires],SAMEPERIODLASTYEAR('Date'[Date]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **New Hires YoY Var = [New Hires]-[New Hires SPLY]**
Data Pane-> HRMS Analysis Measures ->right click->new measure **New Hires YoY % Change = DIVIDE([New Hires YoY Var], [New Hires SPLY])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Bad Hires = count(Employee[BadHires])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Bad Hires SPLY = CALCULATE([Bad Hires],SAMEPERIODLASTYEAR('Date'[Date]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Bad Hires YoY Var = [Bad Hires]-[Bad Hires SPLY]**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Bad Hires YoY % Change = DIVIDE([Bad Hires YoY Var], [Bad Hires SPLY])**

Data Pane->Supplier Trend Analysis->right click->new measure **BadHire%ofActives = DIVIDE([Bad Hires],[Actives])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **BadHire%ofActiveSPLY = DIVIDE([Bad Hires SPLY],[Actives SPLY])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **EmpCount = CALCULATE(COUNT(Employee[EmplID]), FILTER(ALL('Date'[Date]), 'Date'[Date] = MAX('Date'[Date])))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **EmpCount SPLY = CALCULATE(COUNT(Employee[EmplID]),** **FILTER(ALL('Date'[PeriodNumber]), 'Date'[PeriodNumber] =** **MAX('Date'[PeriodNumber])),SAMEPERIODLASTYEAR('Date'[Date]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Actives = CALCULATE([EmpCount], FILTER(Employee, ISBLANK(Employee[TermDate])))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Actives SPLY = CALCULATE([Actives], SAMEPERIODLASTYEAR('Date'[Date]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Actives YoY Var = [Actives]-[Actives SPLY]**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Actives YoY % Change = DIVIDE([Actives YoY Var], [Actives SPLY])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Seps = CALCULATE(COUNT(Employee[EmplID]), FILTER(Employee, NOT(ISBLANK(Employee[TermDate]))))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Seps SPLY = CALCULATE([Seps],SAMEPERIODLASTYEAR('Date'[Date]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Seps YoY Var = [Seps]-[Seps SPLY]**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Seps YoY % Change = DIVIDE([Seps YoY Var], [Seps SPLY])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Sep%ofActive = DIVIDE([Seps],[Actives])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Sep%ofSMLYActives = DIVIDE([Seps SPLY],[Actives SPLY])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Employees = count(Employee[EmplID])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Count of BU = COUNTA('BU'[BU])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **Count of Date = COUNTA('Date'[Date])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **AVG Age = ROUND(AVERAGE(Employee[Age]), 0)**

Data Pane-> HRMS Analysis Measures ->right click->new measure **AVG Tenure Days = AVERAGE(Employee[TenureDays])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **AVG Tenure Months = ROUND([AVG Tenure Days]/30, 1)-1**
Data Pane-> HRMS Analysis Measures ->right click->new measure **TO % = DIVIDE([Seps], [Actives])**
Data Pane-> HRMS Analysis Measures ->right click->new measure **TO % Norm = CALCULATE([TO %], all(Gender[Gender]), ALL(Ethnicity[Ethnicity]))**
Data Pane-> HRMS Analysis Measures ->right click->new measure **TO % Var = [TO %]-[TO % Norm]**
Note: Remove the EID column, so that measure group table identified separately

A Big Thank you



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