Project title: Executive workforce performance and HR analytics dashboard

Business Understanding

Business context

Senior management and HR stakeholders need a concise view of workforce performance, attendance, compensation, headcount, and employee retention. The underlying employee dataset contains these measures, but a raw worksheet does not provide an efficient way to identify important patterns or compare departments.

This project develops an executive dashboard and reporting solution in Excel. It combines dynamic KPI formulas, interactive PivotCharts, Status slicers, and an Attendance-versus-Performance scatter plot to support faster and more consistent management decisions.

The report covers three main dashboard components

- An executive KPI scorecard.
- An interactive departmental performance and salary chart.
- A scatter plot assessing the relationship between Attendance % and Performance Score.

Data Understanding

Data source

The source is the Employee Performance & HR Analytics Master Data.xlsx used in this documentation. It contains employee-level records covering organisational, attendance, performance, recruitment, employment, progression, and salary information.

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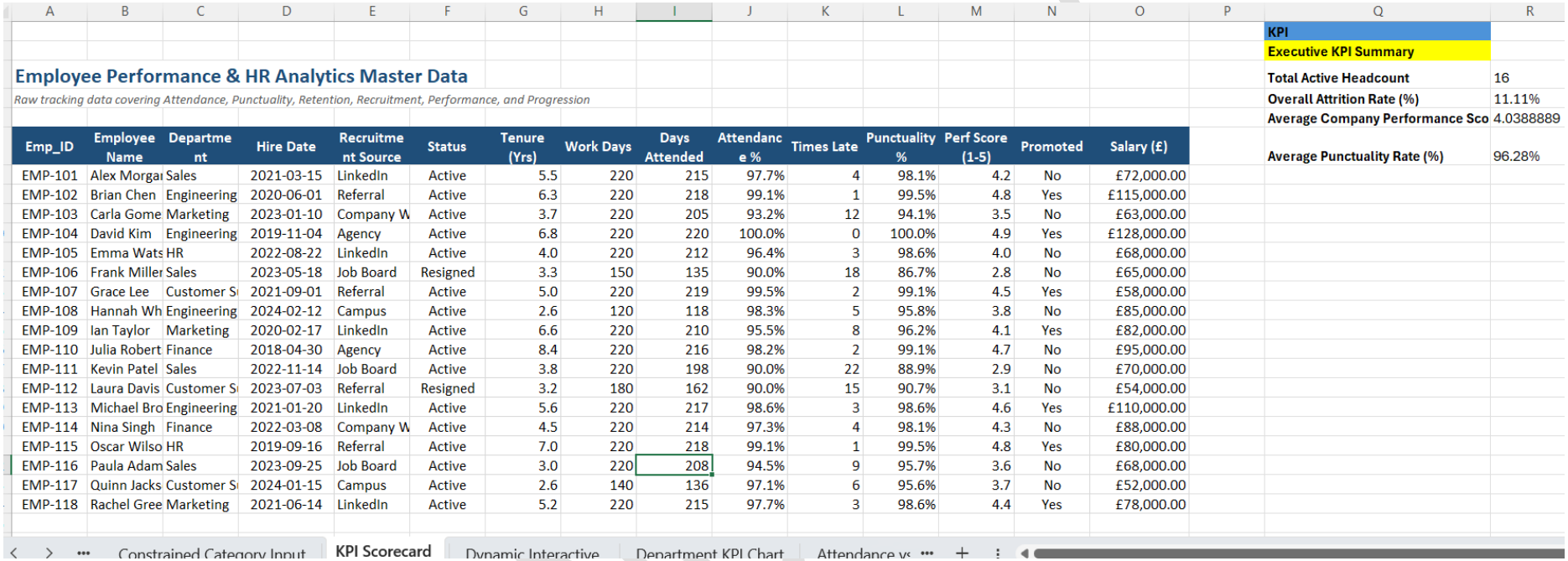
KPI Scorecard



Employee Performance & HR Analytics Master Data

Raw tracking data covering Attendance, Punctuality, Retention, Recruitment, Performance, and Progression

Emp_ID	Employee Name	Department	Hire Date	Recruitment Source	Status	Tenure (Yrs)	Work Days	Days Attended	Attendance %	Times Late	Punctuality %	Perf Score (1-5)	Promoted	Salary (£)
EMP-101	Alex Morgai	Sales	2021-03-15	LinkedIn	Active	5.5	220	215	97.7%	4	98.1%	4.2	No	£72,000.00
EMP-102	Brian Chen	Engineering	2020-06-01	Referral	Active	6.3	220	218	99.1%	1	99.5%	4.8	Yes	£115,000.00
EMP-103	Carla Gome	Marketing	2023-01-10	Company W	Active	3.7	220	205	93.2%	12	94.1%	3.5	No	£63,000.00
EMP-104	David Kim	Engineering	2019-11-04	Agency	Active	6.8	220	220	100.0%	0	100.0%	4.9	Yes	£128,000.00
EMP-105	Emma Wats	HR	2022-08-22	LinkedIn	Active	4.0	220	212	96.4%	3	98.6%	4.0	No	£68,000.00
EMP-106	Frank Miller	Sales	2023-05-18	Job Board	Resigned	3.3	150	135	90.0%	18	86.7%	2.8	No	£65,000.00
EMP-107	Grace Lee	Customer S	2021-09-01	Referral	Active	5.0	220	219	99.5%	2	99.1%	4.5	Yes	£58,000.00
EMP-108	Hannah Wh	Engineering	2024-02-12	Campus	Active	2.6	120	118	98.3%	5	95.8%	3.8	No	£85,000.00
EMP-109	Ian Taylor	Marketing	2020-02-17	LinkedIn	Active	6.6	220	210	95.5%	8	96.2%	4.1	Yes	£82,000.00
EMP-110	Julia Robert	Finance	2018-04-30	Agency	Active	8.4	220	216	98.2%	2	99.1%	4.7	No	£95,000.00
EMP-111	Kevin Patel	Sales	2022-11-14	Job Board	Active	3.8	220	198	90.0%	22	88.9%	2.9	No	£70,000.00
EMP-112	Laura Davis	Customer S	2023-07-03	Referral	Resigned	3.2	180	162	90.0%	15	90.7%	3.1	No	£54,000.00
EMP-113	Michael Bro	Engineering	2021-01-20	LinkedIn	Active	5.6	220	217	98.6%	3	98.6%	4.6	Yes	£110,000.00
EMP-114	Nina Singh	Finance	2022-03-08	Company W	Active	4.5	220	214	97.3%	4	98.1%	4.3	No	£88,000.00
EMP-115	Oscar Wilso	HR	2019-09-16	Referral	Active	7.0	220	218	99.1%	1	99.5%	4.8	Yes	£80,000.00
EMP-116	Paula Adam	Sales	2023-09-25	Job Board	Active	3.0	220	208	94.5%	9	95.7%	3.6	No	£68,000.00
EMP-117	Quinn Jacks	Customer S	2024-01-15	Campus	Active	2.6	140	136	97.1%	6	95.6%	3.7	No	£52,000.00
EMP-118	Rachel Gree	Marketing	2021-06-14	LinkedIn	Active	5.2	220	215	97.7%	3	98.6%	4.4	Yes	£78,000.00

KPI	
Executive KPI Summary	
Total Active Headcount	16
Overall Attrition Rate (%)	11.11%
Average Company Performance Sco	4.0388889
Average Punctuality Rate (%)	96.28%

Constrained Category Input | KPI Scorecard | Dynamic Interactive | Department KPI Chart | Attendance vs

The headcount is 16 because two employees are marked **Resigned**.

The attrition rate is therefore $2 \div 18 = 11.1\%$.

The performance and punctuality KPIs are rounded to two decimal places

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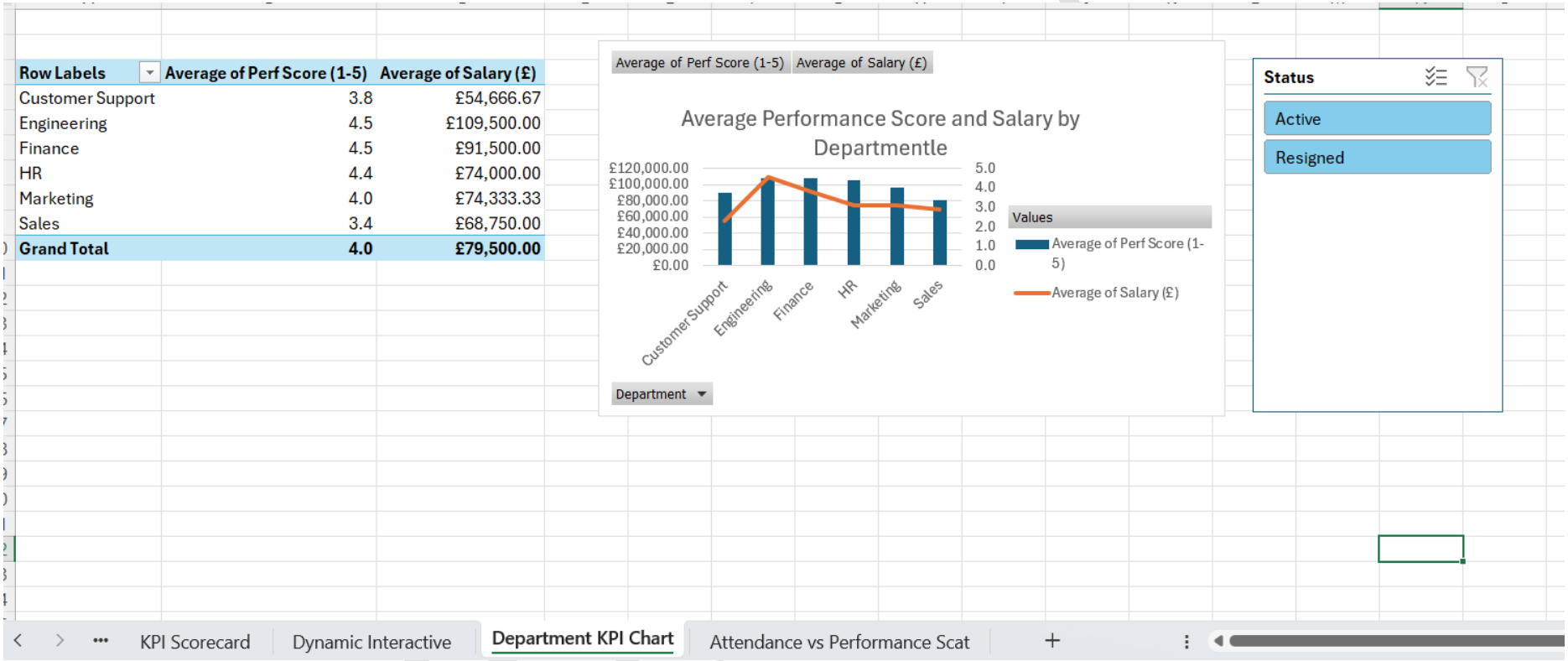
Dynamic Interactive Chart



Performance score is on a 1–5 scale, while average salary is in pounds, potentially from approximately £50,000 to £120,000.

On a standard clustered column chart, the performance score columns may appear almost invisible next to salary.

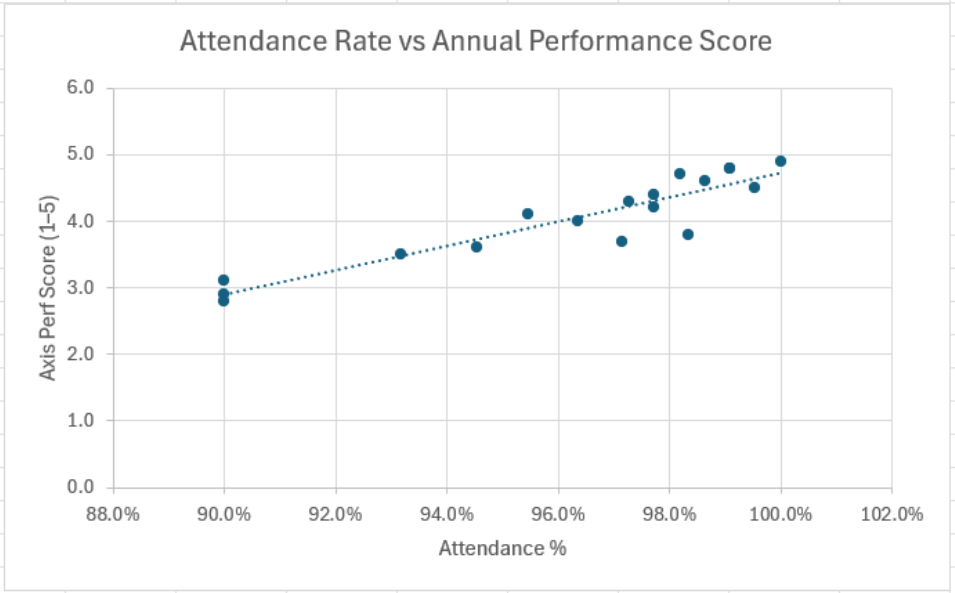
Although the chart type becomes a Combo Chart internally, it still uses two clustered-column series and makes both business measures readable.

Set the primary axis to approximately 0–5 and the secondary axis to an appropriate salary range, such as £0–£120,000

Slicers provide visible filter buttons for tables or pivot tables and show the current filter state. When connected to a PivotTable, filtering it also filters its linked PivotChart.

Attendance vs Performance Scatter Plot

Employee Name	Attendance %	Perf Score (1-5)
Alex Morgan	97.7%	4.2
Brian Chen	99.1%	4.8
Carla Gomez	93.2%	3.5
David Kim	100.0%	4.9
Emma Watson	96.4%	4.0
Frank Miller	90.0%	2.8
Grace Lee	99.5%	4.5
Hannah White	98.3%	3.8
Ian Taylor	95.5%	4.1
Julia Roberts	98.2%	4.7
Kevin Patel	90.0%	2.9
Laura Davis	90.0%	3.1
Michael Brown	98.6%	4.6
Nina Singh	97.3%	4.3
Oscar Wilson	99.1%	4.8
Paula Adams	94.5%	3.6
Quinn Jackson	97.1%	3.7
Rachel Green	97.7%	4.4



KPI Scorecard | Dynamic Interactive | Department KPI Chart | Attendance vs Performance Scat

A trendline provides a concise visual indication of whether the relationship is generally positive, negative, or weak.

The R-squared value shows how much of the variation in performance score is explained by the linear relationship with attendance in this dataset.

A value close to 0 indicates a weak linear relationship; a value closer to 1 indicates a stronger fit.

The chart assesses whether employees with lower attendance levels also tend to have lower annual performance ratings. A downward or weakly positive trend may justify further review; however, attendance alone should not be treated as the cause of performance differences.

Important risks and limitations

- The dataset is relatively small, so results may change substantially when new records are added.
- Attrition is calculated from the available employee records and may not represent an organisation wide annual turnover rate unless the dataset covers the complete reporting period.
- Average salary comparisons can be affected by department size and role mix.
- Averages can conceal variation between employees.
- A correlation between attendance and performance does not establish a causal relationship.
- Workforce metrics may involve sensitive employee information and should be shared only with authorised stakeholders.
- Protected absences or approved workplace adjustments must be considered before interpreting attendance related patterns.

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Recommendations

1. Convert the master data into an Excel Table so formulas, PivotTables, and charts can expand more reliably.
2. Refresh the PivotTable and PivotChart whenever the source data changes.
3. Add a reporting date or reporting period to distinguish current attrition from historical records.
4. Include department headcount alongside average salary and performance.
5. Add a clear dashboard legend explaining each KPI and chart.
6. Use appropriate data access controls for salary and employee information.
7. Investigate outliers individually rather than making decisions from chart position alone.
8. Consider adding trend reporting over time once historical snapshots become available.

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Conclusion

The proposed Executive Workforce Performance and HR Analytics Dashboard provide the management with a structured view of workforce health.

The KPI scorecard summarises headcount, attrition, performance, and punctuality, while the interactive departmental chart supports comparisons by Status.

The scatter plot provides an additional analytical view of whether Attendance % appears to relate to annual Performance Score.

The solution improves accessibility and consistency by turning employee level data into a focused management report. Its outputs should be interpreted alongside HR context, business policies, and further investigation rather than used as the sole basis for decisions about individual employees or departments.

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