Understanding Workforce Dynamics Through Data

A comprehensive analysis of employee trends, attrition patterns, and predictive insights to drive strategic HR decisions across your organisation.

Workforce at a Glance

Our People

The organisation comprises **1,470 employees**, with a healthy retention rate of 84%. However, 237 departures reveal critical patterns requiring attention.

416 employees regularly work overtime, indicating potential capacity or resource challenges that may impact retention.

1,233
Active Employees

237
Departed Staff

36
Median Age

Departed Employees: Critical Patterns Emerge

Education Profile

- Life Sciences: 63 departures
- Medical: 35 departures
- Marketing: 11 departures

Specialised technical fields show highest attrition.

Compensation Reality

68% earned up to £5k monthly before leaving.

Lower salary bands correlate strongly with departure decisions, suggesting compensation competitiveness issues.

Age Demographics

- 26–35 years: 116 (highest)
- 36–45 years: 44
- 46–55 years: 26

Younger professionals drive attrition rates.

Role-Specific Turnover

Sales functions experience disproportionate attrition:

- **Sales Executives:** 57 departures
- **Research Scientists:** 47 departures
- **Sales Representatives:** 33 departures

Active Workforce Composition

Education Distribution

Life Sciences backgrounds remain dominant with 197 employees, followed by Marketing (124) and Technical Degrees (71).

Despite attrition challenges, Life Sciences professionals form the core of our active workforce.

Compensation Landscape

47% earn up to £5k monthly, with remaining staff distributed between £5k–10k and above £10k brackets.

The concentration in lower salary bands presents both risk and opportunity for strategic intervention.

Age Profile

The workforce skews younger, with 490 employees aged 26–35 and 425 aged 36–45.

This demographic represents significant investment in development and high potential for long-term value.

Leading Roles in Active Workforce

197

Laboratory Technicians

135

Manufacturing Directors

122

Healthcare Representatives

78

Research Directors

Predictive Analytics: Identifying At-Risk Employees

The Risk Landscape

Advanced analytics reveal **151 high-risk employees** (10.3% of workforce) with an average attrition probability of 0.76.

Early identification enables proactive retention strategies before valuable talent departs.
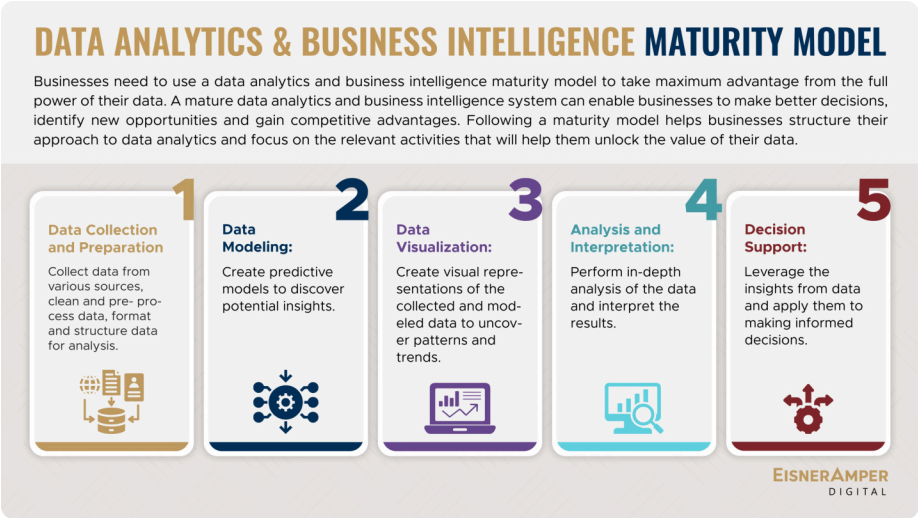
R&D Department

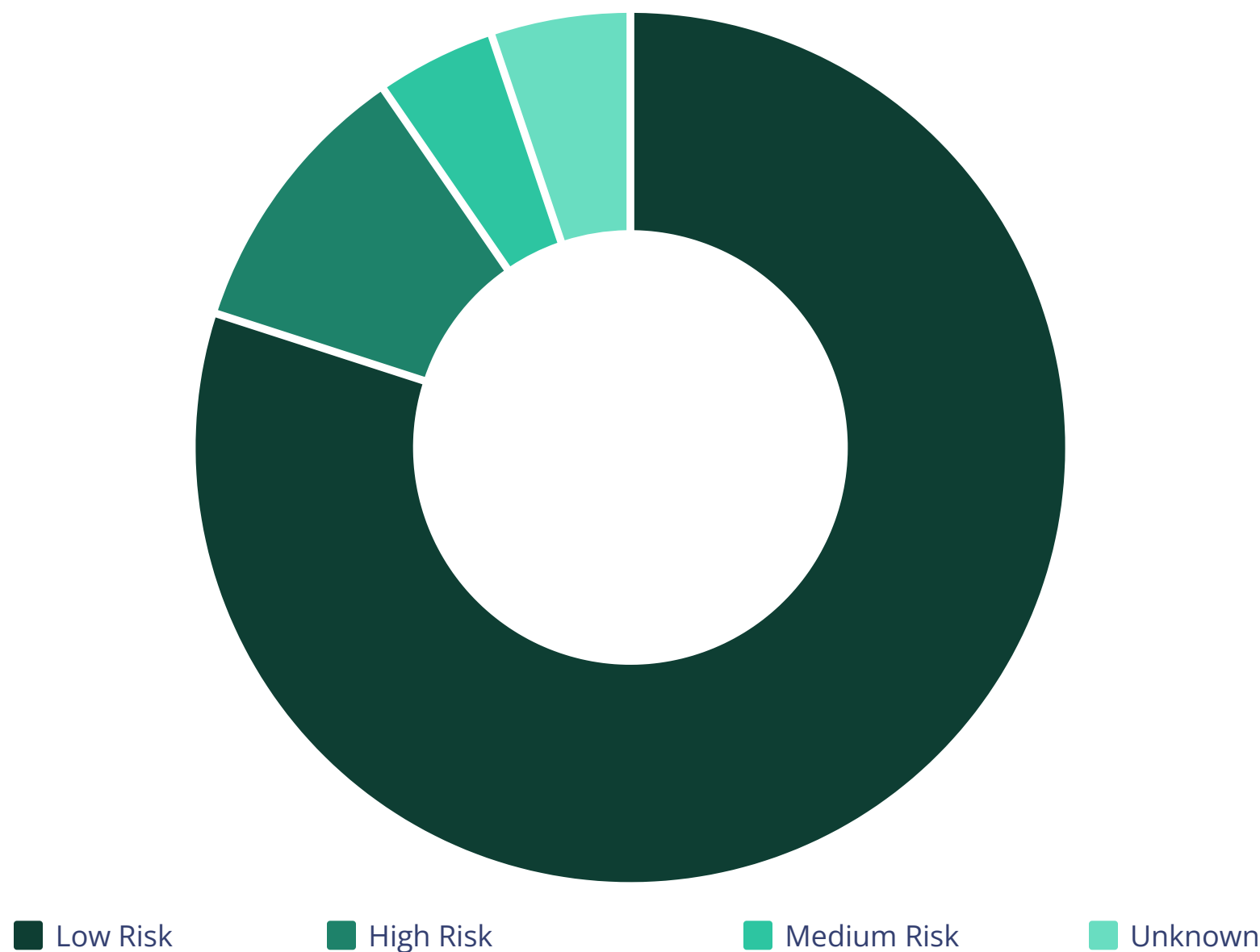**81 high-risk employees**

Sales Department

59 high-risk employees

HR Department

11 high-risk employees

DATA ANALYTICS & BUSINESS INTELLIGENCE MATURITY MODEL

Businesses need to use a data analytics and business intelligence maturity model to take maximum advantage from the full power of their data. A mature data analytics and business intelligence system can enable businesses to make better decisions, identify new opportunities and gain competitive advantages. Following a maturity model helps businesses structure their approach to data analytics and focus on the relevant activities that will help them unlock the value of their data.

1 Data Collection and Preparation: Collect data from various sources, clean and pre-process data, format and structure data for analysis.

2 Data Modeling: Create predictive models to discover potential insights.

3 Data Visualization: Create visual representations of the collected and modeled data to uncover patterns and trends.

4 Analysis and Interpretation: Perform in-depth analysis of the data and interpret the results.

5 Decision Support: Leverage the insights from data and apply them to making informed decisions.

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Risk Distribution Across the Organisation

Legend:
- Low Risk
- High Risk
- Medium Risk
- Unknown

Whilst **80.54% of employees** demonstrate low attrition risk, the 10.27% classified as high risk warrant immediate attention. These individuals possess critical knowledge and skills that, if lost, could significantly impact organisational capability and incur substantial replacement costs.
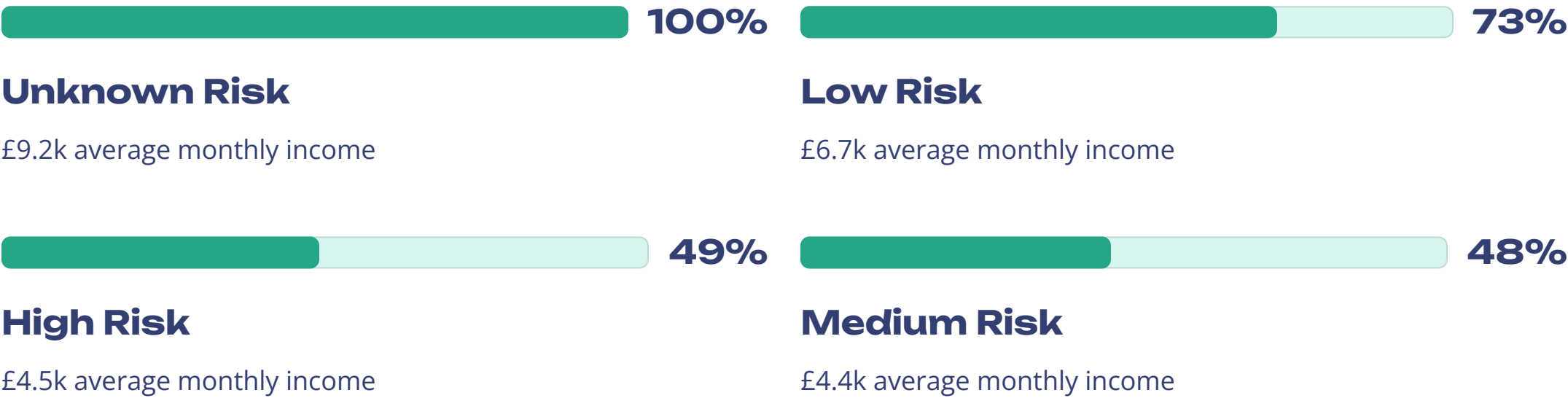
Medium-risk employees (62 individuals) represent an opportunity for preventative intervention before they escalate to high-risk status.

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The Compensation-Risk Connection
Income Reveals Risk

Analysis demonstrates a clear inverse relationship between compensation and attrition probability.

Employees earning below £5k monthly face significantly elevated departure risk, whilst higher earners show greater stability.

100%

Unknown Risk

£9.2k average monthly income

73%

Low Risk

£6.7k average monthly income

49%

High Risk

£4.5k average monthly income

48%

Medium Risk

£4.4k average monthly income

This pattern suggests that strategic compensation adjustments could serve as a powerful retention lever for at-risk populations.

High-Risk Employee Profiles
Critical Warning Signs

Examining individual high-risk cases reveals consistent patterns that enable predictive intervention:

| Employee	Attrition Probability	Risk Level	Monthly Income	Years at Company
622	0.96	High	£2,340	1
614	0.92	High	£1,878	0
959	0.92	High	£2,121	1
243	0.89	High	£1,102	1
1273	0.89	High	£1,118	1
1624	0.89	High	£1,569	0

🗒️ **Key Insight:** New hires (0–1 year tenure) earning below £2.5k face extreme attrition risk, with probabilities exceeding 89%.

Early tenure represents a critical intervention window. Enhanced onboarding, competitive compensation reviews, and engagement initiatives during the first year could dramatically improve retention.

Gender and Department Dimensions

11.6%

Male High-Risk Rate

8.3%
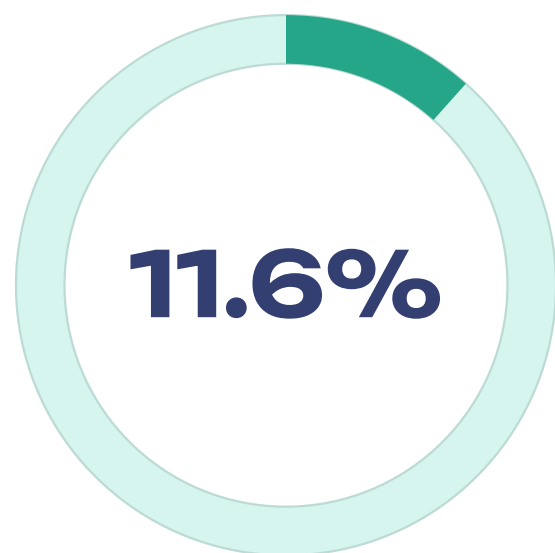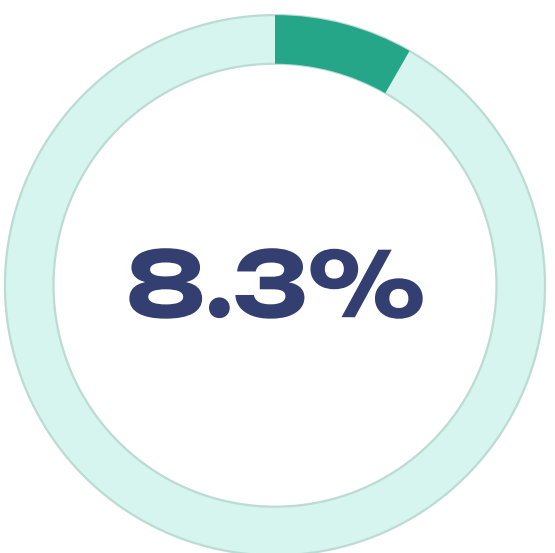
Female High-Risk Rate

Male employees demonstrate modestly higher attrition risk, suggesting potential differences in engagement factors, career development opportunities, or work-life balance concerns that merit investigation.

Department Scale and Strategic Importance

Research & Development

961 employees

The organisation's largest department and innovation engine.

Sales

446 employees

Revenue-generating function with notable turnover challenges.

Human Resources

63 employees

Supporting infrastructure for organisational effectiveness.

R&D's dominance makes retention within this function mission-critical. The concentration of high-risk employees (81) in R&D demands prioritised intervention to protect intellectual capital and project continuity.

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Strategic Insights and Recommendations

1

Target Younger, Lower-Paid Cohorts

Employees aged 26–35 earning under £5k drive attrition. Implement competitive compensation reviews and accelerated development pathways for this demographic.

2

Strengthen Sales and R&D Retention

These functions experience disproportionate turnover. Department-specific engagement initiatives, career progression clarity, and workload management are essential.

3

Address the Income-Risk Correlation

Lower compensation strongly predicts attrition. Conduct market benchmarking and implement targeted salary adjustments for at-risk, high-value employees.

4

Focus on Early Tenure Experience

Employees with less than one year of service face greatest risk. Enhance onboarding, assign mentors, and conduct frequent check-ins during the critical first year.

5

Act on the 10% High-Risk Population

151 high-risk employees represent manageable intervention scope. Proactive engagement can prevent knowledge loss and reduce replacement costs significantly.