

Managing People and Organizations

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MGM603

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Lecture 10



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AI & Digital Transformation in Human Resource Management

**How generative AI, people analytics, and HR technology are reshaping the way
organizations attract, develop, and retain talent.**

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Learning Objectives

Understand generative AI in HR

Explain how generative AI is used across the employee lifecycle, from chatbots to strategic decision support.

Apply people analytics thinking

Describe how data-driven methods turn HR information into decisions that create business value.

Evaluate predictive models

Assess how predictive analytics can anticipate employee turnover and inform retention strategy.

Identify future HR competencies

Recognize the skills HR professionals need to remain effective in a digitally transformed workplace.

Connect technology to experience

Link HR technology platforms to the quality of the end-to-end employee experience.

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Why This Matters to Every Business Student

Digital transformation is no longer an IT project — it is a core driver of how organizations compete for and manage talent.

Strategic

HR is shifting from an administrative function to a strategic, data-informed partner in business decisions.

Every Role

AI and analytics tools now touch recruiting, performance, learning, and workforce planning across every HR role.

Competitive Edge

Organizations that adopt HR technology thoughtfully gain a measurable edge in agility, cost, and talent retention.

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The Digital HR Transformation Journey



STAGE 1

Digitization

Paper records move into digital HR information systems (HRIS).



STAGE 2

Digitalization

Processes are automated — payroll, leave, performance workflows.



STAGE 3

Integration

HR systems connect across the employee lifecycle into one data ecosystem.



STAGE 4

Intelligence

Analytics and generative AI turn HR data into predictions and decisions.

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Generative AI in Human Resource Management

MODULE 1

Generative AI in Human Resource Management

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What Is Generative AI?

- Generative AI (GenAI) uses large language models (LLMs) to create new text, images, or content rather than simply classifying or predicting from existing data.
- It works by predicting the most likely next word or output based on patterns learned from massive datasets.
- In HR, GenAI acts less like a calculator and more like a knowledgeable assistant that can draft, summarize, and converse.

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Traditional AI vs. Generative AI

- Traditional AI: classifies, scores, or predicts (e.g., resume filtering, attrition risk scores).
- Generative AI: creates new content (e.g., job descriptions, interview questions, policy drafts).
- Modern HR platforms increasingly combine both — prediction plus generation — in a single workflow.

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The Evolution: From Chatbots to Strategic Decision-Making



2016–2018

Rule-Based Chatbots

Scripted bots answer simple, predefined HR questions (leave balance, policy lookup).



2019–2021

NLP Virtual Assistants

Natural language understanding enables more flexible employee self-service.



2022–2023

Generative Content Tools

LLMs draft job ads, emails, and learning content on demand.



2024–Today

Strategic AI Co-Pilots

GenAI supports workforce planning, scenario analysis, and executive decision support.

Risks, Limits & Ethical Guardrails



Risks & Limitations

- Hallucination: AI can generate plausible but incorrect information.
- Bias amplification if training data reflects historical inequities.
- Over-reliance can erode critical human judgment in sensitive decisions.
- Confidential employee data requires careful handling in AI tools.



Ethical Guardrails

- Keep a human in the loop for hiring, discipline, and pay decisions.
- Disclose to employees when they are interacting with AI.
- Audit AI outputs regularly for bias and accuracy.
- Apply data privacy and consent standards to any AI tool in use.

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What Is People Analytics?

- People analytics is the systematic use of workforce data and statistical methods to inform HR and business decisions.
- It moves HR from relying on intuition and anecdote toward evidence drawn from measurable patterns.
- It spans everything from simple headcount reporting to advanced predictive and prescriptive models.

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Why It Is Different From Traditional HR Reporting

- Traditional reporting describes what happened (e.g., last quarter's turnover rate).
- People analytics asks why it happened and what is likely to happen next.
- It links HR outcomes directly to business metrics such as productivity and revenue.

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The People Analytics Maturity Model



LEVEL 1

Descriptive

What happened?
Basic dashboards
and headcount
reports.



LEVEL 2

Diagnostic

Why did it happen?
Root-cause analysis
of HR trends.



LEVEL 3

Predictive

What will happen?
Statistical models
forecast outcomes.



LEVEL 4

Prescriptive

What should we do?
Models recommend
specific actions.

Core HR Metrics That Matter



Turnover Rate

Share of employees who leave in a given period, voluntary vs. involuntary.



Time-to-Fill

Days needed to fill an open position from posting to acceptance.



Cost-per-Hire

Total recruiting cost divided by number of hires made.



Engagement Score

Aggregated survey results measuring commitment and motivation.



Internal Mobility Rate

Share of roles filled by internal transfers or promotions.



Absenteeism Rate

Unplanned absence as a share of total scheduled work time.

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Building a Data-Driven HR Culture

**Leadership sponsorship**

Senior leaders must model and request evidence-based decisions, not just gut instinct.

**Data literacy across HR**

HR professionals need basic statistical fluency to interpret analytics correctly.

**Cross-functional collaboration**

Analytics teams, IT, and HR business partners must work from shared definitions.

**Governance and trust**

Clear policies on data access, privacy, and ethical use build employee trust.

Challenges

1. Inconsistent or incomplete data across disconnected HR systems.
 2. Privacy concerns when combining sensitive personal information.
 3. Skills gap: many HR teams lack data analysis training.
- Resistance from managers uncomfortable with data-driven decisions.

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Key Takeaways

- People analytics turns HR from reactive to evidence-based.
- Maturity grows in stages — start descriptive, build toward prescriptive.
- Good analytics depends on data quality and cross-team trust.
- The goal is better decisions, not data collection for its own sake.

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The Cost of Turnover: Why It Matters

Losing an employee costs far more than the visible expense of recruiting a replacement.

Direct Costs

Recruiting, advertising, interviewing, and onboarding a new hire all carry measurable direct costs.

Hidden Costs

Lost productivity, knowledge drain, and reduced team morale are harder to see but often larger.

Widely Variable

Replacement cost commonly cited in HR literature ranges from roughly half to double an employee's annual salary.

What Is Predictive Analytics in HR?

From Hindsight to Foresight

- Predictive analytics uses historical data and statistical or machine learning models to estimate future outcomes.
- In HR, the most common application is estimating the probability that a given employee will leave within a defined period.
- The output is typically a risk score or flag, not a certainty — it highlights where to focus attention.

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What Is Predictive Analytics in HR?

What It Is Not

- It is not a guarantee that a flagged employee will actually leave.
- It should not replace direct conversations between managers and employees.
- It is not a substitute for addressing root causes of dissatisfaction.

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Key Predictors of Employee Attrition



Compensation Gap

Pay significantly below market or internal peers raises flight risk.



Tenure Patterns

Certain tenure windows (e.g., 12–18 months) often show higher risk.



Manager Relationship

Poor manager ratings are among the strongest predictors of exit.



Engagement Trend

A declining engagement score over time signals rising risk.



Promotion Velocity

Stalled career progression relative to peers increases risk.



Workload Signals

Overtime, absenteeism, and burnout indicators add predictive value.

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From Prediction to Action: Retention Strategies

- Stay interviews: Proactive conversations with at-risk employees to understand concerns before they resign.
- Targeted career moves: Accelerated development or internal mobility for high-value, high-risk employees.
- Compensation review: Off-cycle pay adjustments where data shows a clear market gap.
- Manager coaching: Support for managers whose teams show elevated attrition risk.

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Ethical Considerations

- False positives can unfairly label loyal employees as flight risks.
- Models risk becoming self-fulfilling if employees learn they are flagged.
- Transparency about data use is essential to preserve employee trust.
- Models must be checked for bias against protected groups.

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Key Takeaways

- Predictive analytics highlights risk — it does not replace judgment.
- The real value lies in the retention action that follows a prediction.
- Combine quantitative scores with qualitative manager insight.
- Ethical use protects both employees and the credibility of the model.

The Changing Role of the HR Professional

Traditional HR Role

- Administers policies, payroll, and compliance processes.
- Reacts to issues as they are reported by employees or managers.
- Relies on experience and precedent to guide decisions.
- Measures success mainly through process efficiency.

The Changing Role of the HR Professional

Digitally Transformed HR Role

- Acts as a strategic advisor using data and AI-generated insight.
- Anticipates issues through predictive and continuous monitoring.
- Balances data evidence with human judgment and empathy.
- Measures success through business impact and workforce outcomes.

Competency Framework: Traditional vs. Digital HR

Core Competencies (Traditional)

- Employment law and regulatory compliance knowledge.
- Recruitment, interviewing, and selection techniques.
- Compensation and benefits administration.
- Conflict resolution and employee relations.

Competency Framework: Traditional vs. Digital HR

Added Competencies (Digital)

- Interpreting analytics dashboards and predictive model outputs.
- Evaluating and selecting AI-enabled HR technology vendors.
- Applying data privacy and AI governance principles.
- Prompting and validating generative AI tools responsibly.

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Upskilling & Reskilling HR Teams

- **Structured training pathways:** Formal courses in HR analytics, data interpretation, and AI fundamentals.
- **Professional certifications:** Recognized HR analytics and digital HR credentials build capability and credibility.
- **Partnerships with IT and data teams:** Embedding analytics specialists within HR accelerates practical skill transfer.
- **Learning by doing:** Hands-on pilot projects build confidence faster than classroom training alone.

Discussion: Will AI Replace HR Jobs?

The Automation View

- Routine, transactional tasks are increasingly handled by AI tools.
- Some administrative HR positions may shrink over time.
- Efficiency pressure pushes organizations toward leaner HR teams.

Discussion: Will AI Replace HR Jobs?

The Augmentation View

- AI removes repetitive work, freeing HR for judgment-based tasks.
- Empathy, negotiation, and ethical judgment remain human strengths.
- New digital-HR roles emerge even as some old tasks disappear.

What Is Employee Experience (EX)?

Employee experience is the sum of everything an employee perceives, feels, and does across their journey with an organization.

Every Touchpoint

From the job ad they first see to their exit interview, every interaction shapes EX.

Linked to Outcomes

Strong EX is consistently associated with higher engagement, retention, and performance.

Tech-Enabled

Modern HR technology is now central to how organizations design and deliver that experience.

Challenges in HR Tech Adoption

Common Challenges

- Integration complexity across legacy and modern systems.
- Change fatigue when employees face frequent new tools.
- High implementation and licensing costs.
- Vendor lock-in limiting future flexibility.

Challenges in HR Tech Adoption

Practical Responses

- Phase rollouts and prioritize high-impact use cases first.
- Invest in change management and clear employee communication.
- Build a business case around measurable ROI, not novelty.
- Favor open, API-friendly platforms where possible.

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The Future of AI & Digital HR

- **Agentic AI:** AI systems that can carry out multi-step HR tasks autonomously, with human oversight at key checkpoints.
- **Hyper-personalization:** Every employee touchpoint — learning, pay, career path — increasingly tailored to the individual.
- **Continuous listening:** Real-time sentiment tracking replaces periodic surveys as the primary engagement signal.
- **Predictive workforce planning:** Organizations plan headcount and skills needs proactively, rather than reacting after the fact.

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Discussion Questions & Activity

- Where in the employee lifecycle would generative AI add the most value for a company you know?
- What data would you need to build a simple turnover-risk model for a specific role?
- Which HR tasks should always keep a human decision-maker, and why?
- How should an organization communicate to employees that AI is used in HR decisions?

Suggested Topics to Explore Further

- Foundational people analytics and workforce planning literature
- Case studies on generative AI adoption in talent acquisition
- Academic and industry research on predictive attrition modeling
- Reports on HR technology market trends from major HR technology analysts
- Data privacy and AI governance frameworks applicable to employment data



Thank You