

Master Of Real Estate Management

Prepared by
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Artificial Intelligence in Business

Lecture 6



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Chapter
04

AI Implications for the Future of Work



Chapter

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Learning Objectives

- ☐ Explain the main ways AI and digital transformation are reshaping the future of work.
- ☐ Analyze digital transformation in the workplace and its effects on work organization, leadership, and HR practices.
- ☐ Evaluate the labor-market impact of robotization, automation, teleworking, platform work, and Industry 4.0.
- ☐ Identify new digital competencies and future workforce skills required in AI-led workplaces.
- ☐ Apply future-of-work concepts to real estate management, smart buildings, PropTech, and property service organizations.

Chapter 04

1. Key Concepts in Understanding AI and the Future of Work

To understand AI's impact on work, we must first understand digital transformation, algorithms, and AI-based decision-making.

Chapter 04

Why Key Concepts Matter

- Before studying how AI affects labor markets and education, the chapter emphasizes the importance of defining key concepts.
- AI affects work through several related forces: digitalization, digital transformation, algorithmic systems, robotics, and machine learning.
- These concepts are often used interchangeably, but they influence organizations in different ways.
- Managers need conceptual clarity before designing policies, jobs, HR systems, and digital transformation strategies.
- Without clear concepts, organizations may adopt technologies without understanding their work-related implications.

Teaching note

Ask students to distinguish between digitizing documents, transforming work processes, and using AI to make decisions.

Chapter 04

Digitalization vs Digital Transformation

- Digitalization refers to converting information and processes into digital formats and digital tools.
- Digital transformation goes further: it changes how organizations work, create value, organize employees, serve customers, and manage decisions.
- Digital transformation is not just the introduction of software; it is a redesign of business models, workflows, leadership, and culture.
- In the workplace, digital transformation enables teleworking, flexible schedules, outsourcing, online platforms, and global supply chains.
- AI accelerates digital transformation because it can automate decisions, analyze data, and learn from patterns.

Real estate example

Digitization: converting lease documents to PDFs.

Digital transformation: using AI, CRM, IoT, and analytics to automate leasing, maintenance, tenant services, and portfolio decisions.

Chapter 04

Digital Transformation in the Workplace

- The digital transformation of work has developed rapidly in recent decades.
- Cloud computing, big data, mobile applications, geolocation, IoT, and mobile robots form the technological base of this transformation.
- Workplaces now rely on digital tools for collaboration, monitoring, coordination, and communication.
- New models of work include telework, function relocation, cross-border outsourcing, subcontracting, global supply chains, and crowdworking.
- These changes reshape the relationship between employees, managers, customers, and machines.

Study focus

Digital transformation changes not only where work happens, but also how work is designed, measured, controlled, and evaluated.

Chapter 04

Organizational Challenges of Workplace Digital Transformation

- Digital transformation creates major challenges for work and human resources management.
- Organizations must balance remote work control with the right to privacy.
- Different generations may have different levels of ICT skills and digital confidence.
- Data protection, digital disconnection, and social media use at work create new governance issues.
- Digital transformation also changes job evaluation, productivity indicators, motivation systems, and organizational culture.

Real estate example

A property management company may monitor remote leasing agents through CRM activity, call logs, and response times, but must avoid excessive surveillance.

Chapter 04

New Digital Leadership

- Digital leadership is required to manage both face-to-face and remote teams.
- Leaders must promote a culture of innovation, learning, and continuous improvement.
- Digital leaders should understand data, collaboration tools, AI opportunities, and ethical risks.
- Leadership in digital workplaces also requires communication, trust-building, and employee engagement.
- Managers must move from command-and-control supervision toward outcome-based leadership.

Real estate application

Real estate managers leading hybrid teams must coordinate brokers, property managers, maintenance contractors, and digital customer-service teams.

Chapter 04

AI for Work-Related Decision-Making

- AI is not science fiction; it is already part of daily life and organizational decision-making.
- AI systems learn from data, generate patterns, and produce guidelines for action.
- AI supports complex tasks with limited human intervention and can adapt to new circumstances.
- In work contexts, AI can support decisions related to HR, safety, operations, customer service, and productivity.
- AI's ability to learn from experience makes it powerful but also difficult to govern if decisions are opaque.

Real estate application

AI can decide which maintenance issue should be prioritized based on urgency, tenant risk, building system data, and safety implications.

Chapter 04

Human-Like Capabilities of AI at Work

- AI imitates selected processes associated with human thought, such as learning, reasoning, planning, and self-correction.
- Machine learning enables systems to teach themselves by analyzing large quantities of data.
- AI can recognize patterns, classify information, predict outcomes, and recommend actions.
- This makes AI useful in complex environments where manual analysis is slow or inconsistent.
- However, AI does not fully replace human judgment, especially in ethical, emotional, and socially sensitive situations.

Study focus

AI can support judgment, but managers remain responsible for decisions affecting workers and customers.

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2. AI in the World of Work

AI is changing how work is organized, who performs tasks, and what skills employees need.

Chapter 04

AI as a Driver of Economic and Productive Growth

- The chapter describes AI as a major driver of economic and productive growth.
- AI can contribute to the sustainability and viability of industrial and service sectors.
- AI changes how people work by increasing collaboration, flexibility, and automation.
- The Fourth Industrial Revolution expands automation across almost all activities.
- Organizations adopt AI and robotics because they can improve speed, efficiency, and productivity.

Real estate application

In property management, AI can improve response time, maintenance planning, energy efficiency, and tenant service quality.

Chapter 04

Automation: Opportunity and Risk

- Automation can replace people in many routine or repetitive tasks.
- Robots and AI systems do not require rest, wages, holidays, or the same working conditions as humans.
- This creates strong incentives for business owners to invest in automation.
- However, AI adoption also creates risks: opacity, discrimination, privacy intrusion, job insecurity, and possible misuse.
- Managers must balance efficiency with human dignity, fairness, and social responsibility.

Discussion point

Should organizations automate every task that can be automated, or should some work remain human-centered?

Chapter 04

AI Risks in the Workplace

- AI may cause tangible harm, such as health and safety risks, if systems fail or interact poorly with humans.
- AI may also cause intangible harm, including loss of privacy, discrimination, reduced freedom, and damage to human dignity.
- Technical limitations, consumer resistance, legal gaps, and moral debates can slow AI implementation.
- AI can increase precariousness if it reduces jobs to narrow tasks or weakens worker protections.
- A flexible but responsible regulatory framework is necessary to minimize harm.

Real estate example

A smart security system may improve safety but also raise privacy concerns if tenant movement is excessively tracked.

Chapter 04

2.1 Robotization and the Labor Market

- One of the most complex questions is how robotization will affect weakened labor markets, unemployment, and job insecurity.
- Although there is no full consensus, most studies agree that the impact will be considerable.
- AI and robotics will change job content, making jobs less routine and more technology-oriented.
- Highly qualified workers may increase in relative importance, while demand for routine manual and mental tasks may decline.
- The future labor market will reward workers who can adapt, learn, and combine technical and human skills.

Study focus

Robotization does not affect all workers equally; it affects tasks, occupations, and sectors differently.

Chapter 04

2.2 New Ways of Working

- New technologies create new ways of organizing work and production.
- Some jobs become obsolete while new roles appear requiring new skills and aptitudes.
- Organizations need to adapt current worker skills and recruit new digital profiles.
- Continuous training becomes essential because technologies and work processes change quickly.
- Adaptability becomes one of the most important qualities in recruitment and employee development.

Study focus

Work is changing in terms of tasks, place, time, contracts, supervision, and required competencies.

Chapter 04

2.2.1 Teleworking

- Teleworking is a form of work organization enabled by information and communication technologies.
- It allows work to be done from locations other than the traditional workplace.
- Teleworking is not suitable for every job; it works best for tasks that can be performed through digital tools.
- It requires redesigning work time, workspace, remuneration, safety, tools, methods, training, and control.
- Teleworking changes the social relationship between organization and employee because physical presence is reduced.

Real estate application

Property consultants can perform virtual consultations, online contract discussions, and digital customer follow-ups remotely.

Chapter 04

2.2.2 Work on Digital Platforms

- Digital platforms connect business owners, workers, and customers in transactions of goods and services.
- They create meeting places where users share, exchange, or provide services.
- Platform work allows tasks to be divided into micro-tasks with specific duration and remuneration.
- Workers may choose timetable, availability, location, and tasks, creating a sense of autonomy.
- However, platform work also raises issues of surveillance, low wages, income instability, and job insecurity.

Examples

Ride-hailing, delivery platforms, freelance marketplaces, online property services, and short-term rental platforms.

Chapter 04

Risks of Digital Platform Work

- Platform work may generate harsh working conditions, low salaries, and job insecurity.
- Traceability of every operation may reduce privacy.
- Customer ratings can affect income and reputation, sometimes unfairly.
- Platform surveillance can become invasive through geolocation, biometric control, browsing monitoring, or social media tracking.
- Organizations and regulators must address these risks to protect workers.

Real estate application

Property service platforms should ensure fair rating systems for cleaners, maintenance workers, brokers, and service providers.

Chapter 04

2.3 New Professions in Industry 4.0

- Technology is changing employment forms and creating new professions.
- Although many fear massive unemployment, many jobs still require integrated human capabilities that machines cannot fully perform.
- Machines often replace individual activities within jobs rather than entire jobs.
- New technologies create demand for data analysts, scientists, software developers, e-commerce specialists, and social media experts.
- Future professionals will need both technical skills and human-centered skills.

Real estate example

Future real estate firms may employ data analysts, PropTech managers, smart building specialists, digital customer experience designers, and AI compliance officers.

Chapter 04

Why Complete Job Replacement Is Difficult

- Many jobs require combinations of non-routine tasks and capabilities.
- Emotional skills, problem-solving, flexibility, and contextual judgment remain difficult for machines.
- Machines may perform certain tasks but struggle to integrate different activities in socially intelligent ways.
- Human workers are especially important where trust, negotiation, ethical judgment, and social communication are central.
- This means the future of work is more about task transformation than simple job disappearance.

Chapter 04

Technical Professions in Growing Demand

- Demand is expected to grow for data analysts, data scientists, software developers, and application developers.
- E-commerce and social media specialists will become more important across sectors.
- Cybersecurity specialists are needed because digitalization increases vulnerability.
- AI and automation specialists will design, implement, and maintain intelligent systems.
- Organizations also need leaders who can translate technological potential into business value.

Chapter 04

Human-Centered Professions and Skills

- Technology increases the value of human skills that are difficult to automate.
- Creativity, innovation, leadership, empathy, communication, and craftsmanship remain important.
- Jobs involving unique products or individualized human service can remain resilient.
- Organizations will seek people who can combine digital knowledge with human judgment.
- Future employability requires both technical literacy and interpersonal intelligence.

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2.4 Digitalization and Worker Well-Being

- Automation and robots can improve worker well-being by reducing exposure to dangerous substances and accidents.
- Robots can perform repetitive, harmful, or physically demanding tasks.
- Exoskeletons may allow older workers or workers with reduced mobility to perform physically demanding work.
- Drones can reduce the need for work at heights or in dangerous places.
- Technology can therefore reduce physical fatigue and improve health and safety.

Real estate example

Drones can inspect roofs, facades, and large sites without exposing workers to height-related risks.

Chapter 04

Positive Effects of Robots on Work

- Robots can relieve workers from physically exhausting or dangerous tasks.
- They can improve safety in factories, warehouses, construction, and property inspection.
- Automation can reduce repetitive strain injuries and exposure to hazardous environments.
- Smart technologies can support workers with disabilities or physical limitations.
- Used responsibly, AI and robotics can improve well-being rather than simply replace labor.

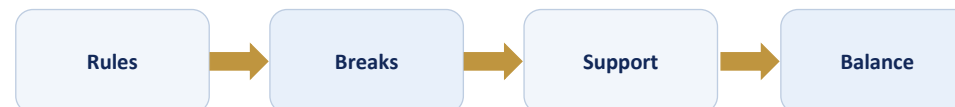
Real estate application

Robotic inspection, automated cleaning, smart safety systems, and predictive maintenance can reduce risk in buildings.

Chapter 04

Technostress and Digital Fatigue

- Technostress is linked to physical, psychological, or social complaints caused by technology-related pressure.
- Constant notifications, online meetings, monitoring, and digital multitasking can cause fatigue.
- Employees may feel that they must be continuously available.
- Digital overload reduces concentration, satisfaction, and performance.
- Organizations should design healthy digital work practices and encourage digital disconnection.



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3. The Impact of AI on Education

AI transforms education because work is changing; future employees need new skills, continuous learning, and adaptive training.

Chapter 04

AI and the Transformation of Education

- The chapter states that AI will profoundly transform education systems.
- Education must update methods, content, assessment, and access to knowledge.
- Teacher training becomes fundamental because educators must use technology effectively.
- AI can support personalized teaching and adaptive learning environments.
- Education must prepare students for digital labor markets and AI-driven organizations.

Real estate education

Real estate students can use AI simulations for investment decisions, property valuation, urban planning, and smart building management.

Chapter 04

AI in Classrooms and Learning Systems

- AI, virtual reality, educational robotics, and smart tutoring systems are expected to become common in classrooms.
- AI tools can gather and analyze student learning data.
- Personalized learning can identify each student's needs, strengths, and weaknesses.
- AI can provide automatic feedback and support individualized education.
- These tools can increase learning efficiency but require ethical data governance.

Study focus

AI can support teachers, but it does not eliminate the need for human teaching, mentoring, and academic judgment.

Chapter 04

Adaptive and Personalized Learning

- Adaptive learning systems adjust content according to student performance.
- Chatbots can simulate conversations and provide learning support through voice or text.
- Automatic assessment tools can correct responses and generate different evaluation models.
- Personalized learning helps students progress at different speeds.
- However, education must avoid overdependence on automated evaluation without human interpretation.

Real estate example

An AI platform can give different case studies to students based on their understanding of investment analysis or property valuation.

Chapter 04

Digital Skills for the Future

- The education system must include skills that cannot be easily automated.
- Digital knowledge means functioning personally and professionally in the digital economy.
- Information management includes searching, obtaining, evaluating, organizing, and sharing information digitally.
- Digital communication includes interacting and collaborating effectively in digital environments.
- Online working includes cooperating through virtual platforms and digital tools.

Skills framework

Digital knowledge
Information management
Digital communication
Online working

Chapter 04

Strategic and Leadership Skills

- Continuous learning means managing one's own learning and participating in digital learning communities.
- Strategic vision means understanding the digital phenomenon and incorporating it into organizational projects.
- Online leadership means coordinating distributed teams through digital environments.
- Customer focus means understanding and meeting customer needs in digital contexts.
- These skills are essential because future work will require both technical competence and organizational adaptability.

Real estate application

A future real estate manager must understand digital customers, AI tools, online teams, data dashboards, and smart building systems.

Chapter 04

Traditional Skills That Remain Important

- Future work still requires creativity, complex problem-solving, critical thinking, and people management.
- Coordination, decision-making, customer service, and emotional intelligence remain valuable.
- AI can automate many technical tasks, but human judgment remains necessary in complex social situations.
- Education should therefore develop both digital and traditional professional skills.
- Students must prepare for jobs where human and machine capabilities are combined.

Study focus

Technical skills help students work with AI; human skills help them lead, interpret, and responsibly use AI.

Chapter 04

AI Applications in Human Resources

- AI can improve performance by analyzing objective data and supporting work organization.
- AI can analyze absenteeism patterns and help predict when absences may become more frequent.
- AI can support selection and recruitment by identifying candidates that match requirements and predicted performance.
- AI can help retain talent by identifying leadership potential, high-performance teams, and employees at risk of leaving.
- AI can design training plans based on workforce needs and training outcomes.

Real estate HR example

A property management firm can use AI to identify which leasing agents need training in customer service, digital tools, or negotiation.

Chapter 04

AI in Recruitment: Beyond the CV

- AI-based recruitment may evaluate more than the candidate's CV.
- Recruiters may use professional networks, social media, tests, and behavioral data.
- AI can help detect personal skills and predict future performance.
- However, organizations must use only data that are truly relevant, lawful, and fair.
- Human intelligence remains necessary to interpret results and prevent inappropriate use of data.

Ethical warning

Using irrelevant personal data in hiring can violate privacy and create discrimination risks.

Chapter 04

Big Data in HR Departments

- Big data is used in HR for work-time records, flexible schedules, shifts, and performance supervision.
- AI can help manage large workforces more efficiently.
- Analytics can support scheduling, training, productivity measurement, and employee development.
- However, the use of HR data must be transparent and proportionate.
- Workers should understand how data are collected, analyzed, and used in decisions.

Real estate example

Large real estate groups may use workforce analytics for call centers, maintenance teams, sales teams, and facility management.

Chapter 04

Maintaining Skills Through Continuous Training

- It is not enough to assess workers only at the beginning of the labor relationship.
- Skills must be maintained and updated throughout employment.
- Flexible and agile training helps workers adapt to changing technologies.
- Training is especially important for jobs vulnerable to automation.
- Organizations, governments, and educational institutions share responsibility for workforce transition.

Study focus

Reskilling is one of the central responses to AI-driven labor-market change.

Case Study: AI Recruitment System

- A company implements AI to screen thousands of job applications.
- The system reduces recruitment time and standardizes initial candidate screening.
- However, historical data may cause the model to favor profiles similar to past hires.
- The organization must audit the model, remove biased variables, and maintain human oversight.
- This case shows that efficiency gains must be balanced with fairness and accountability.

Chapter 04

Case Study: Telework in a Real Estate Company

- A real estate company shifts many administrative and advisory roles to telework.
- Digital tools allow employees to communicate with clients, schedule viewings, manage documents, and update CRM records remotely.
- Benefits include reduced commuting, wider access to talent, and flexible customer service.
- Challenges include cybersecurity, employee isolation, performance evaluation, and maintaining organizational culture.
- The company must design clear policies on time, space, tools, training, privacy, and digital disconnection.

Chapter 04

Case Study: Smart Building Workforce

- A smart commercial building uses AI, IoT sensors, and predictive maintenance systems.
- Building managers no longer rely only on reactive maintenance requests.
- Workers must interpret dashboards, manage alerts, coordinate contractors, and communicate digital service updates to tenants.
- Some routine tasks are automated, but new technical and analytical tasks appear.
- This shows how AI changes job content rather than simply removing workers.

Chapter 04

Case Study: Platform Work in Property Services

- A digital platform connects property owners with cleaners, maintenance workers, photographers, and virtual-tour providers.
- Workers gain access to flexible work opportunities and broader markets.
- However, platform ratings, algorithmic ranking, and customer reviews affect income and reputation.
- The platform must ensure fairness, transparency, and protection against abusive ratings.
- This case illustrates the double-edged nature of platform work.

Chapter 04

Real Estate Workforce Transformation

- AI changes real estate professions by automating valuation, marketing, leasing support, customer interaction, and maintenance routing.
- Real estate professionals increasingly use AI dashboards, CRM analytics, virtual tours, and smart building systems.
- Human professionals remain important for negotiation, trust, ethics, local knowledge, and complex decision-making.
- The future real estate workforce needs both digital and interpersonal competencies.
- Real estate education should prepare students for PropTech, smart cities, and AI-supported decision-making.

Chapter 04

Managerial Recommendations for AI-Driven Workplaces

- Define which tasks AI should support and which decisions require human oversight.
- Assess algorithmic systems for bias, transparency, privacy, and accountability.
- Develop reskilling programs for workers whose tasks are vulnerable to automation.
- Use digital tools to improve well-being, not only productivity.
- Design teleworking and platform work policies that protect rights and maintain organizational performance.

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Chapter 4 Summary

- AI, digital transformation, robotics, and platforms are reshaping the future of work.
- Robotization changes labor markets by reducing routine tasks and increasing demand for digital and human-centered skills.
- Teleworking and platform work create flexibility but also raise concerns about privacy, insecurity, and monitoring.
- Education and HR must adapt through continuous learning, digital skills, and responsible AI use.
- For real estate, AI changes property management, smart buildings, customer service, and workforce competencies.

Final takeaway

The future of work is not only about replacing humans; it is about redesigning work around responsible human-AI collaboration.

Chapter 04

Discussion Questions

- How does digital transformation change the meaning of work, supervision, and workplace boundaries?
- Which jobs in real estate are most vulnerable to automation, and which are likely to remain human-centered?
- How can organizations balance teleworking flexibility with productivity, privacy, and well-being?
- What digital and human skills should real estate management students develop for the AI era?
- How can smart buildings improve worker safety while creating new digital-skill requirements?





Thank You