

Managerial Perspectives on AI Adoption in Logistics

Case study



IN THE **UAE**



The evolving role of AI in Logistics



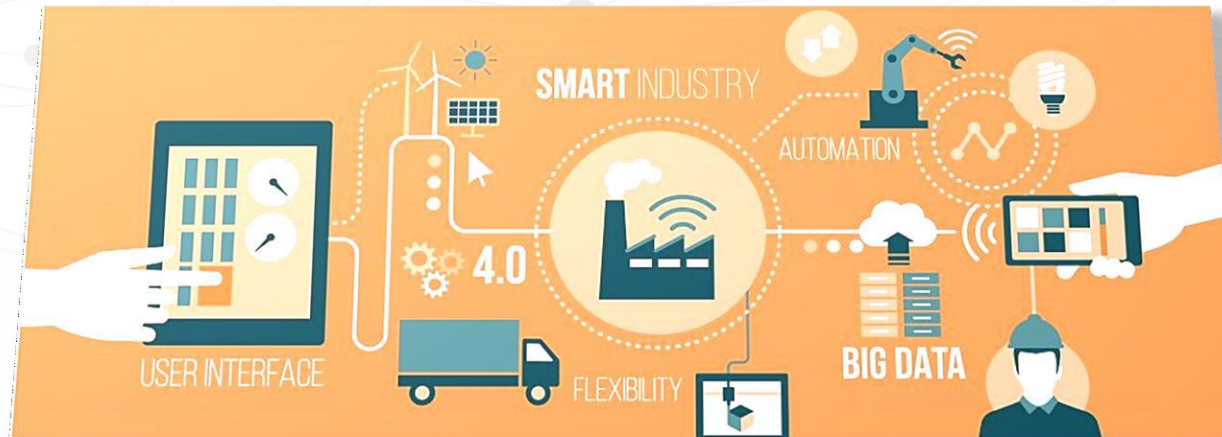
→ **Growing use of AI** in logistics and SCM functions

→ **Common applications**

- Forecasting
- Inventory management
- Decision support

→ **AI adoption** extends beyond technical implementation

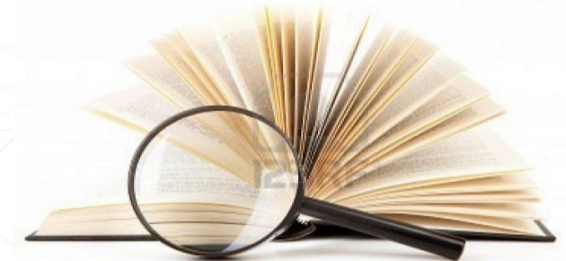
- Data quality
- Organizational capacity
- Governance structures
- Workforce acceptance



Problem Statement and Research Gap



- AI potential vs **uneven practical adoption**
- Literature emphasis on **technical performance**
- Limited empirical insight into:
 - Organizational **readiness**
 - Managerial and operational **perceptions**
- **Limited research** in non-logistics organizations with embedded logistic functions



Research Question



How do managerial and operational stakeholders perceive the **potential, readiness and challenges** of adopting **AI-based tools** in logistics and supply chain functions within a value-added technology distributor?



Research Philosophy and Design



- **Interpretivist** philosophy
- Exploratory **qualitative approach**
- **Single case study** design
- Suitable for this under-researched organizational context

Data Collection Methods



- Semi-structured written **interviews** (n = 4) of managerial stakeholders
 - **Questionnaire** responses (n = 33) of operational staff
- ↓
- Methodological **triangulation**



Data Analysis and Research Consistency



→ **Thematic analysis**

→ **Cross-validation** of interview and questionnaire findings

→ Findings interpretation guided by **established frameworks**:

- Technology–Organisation–Environment (**TOE**)
- Technology Acceptance Model (**TAM**)
- Diffusion of Innovation (**DOI**)



Overview of Key Findings



Four main themes identified:

1. **AI potential**
2. **Organizational readiness**
3. **Challenges and risks**
4. **Support for AI adoption**

Theme 1: AI potential



- ➔ Strong perceived **AI values**:
 - Forecasting accuracy
 - Operational visibility
 - Decision-making
(support tool > human replacement)
- ➔ Strong emphasis on **governance, ethics, and human-in-the-loop** decision making
- ➔ Broad perceived **value** of AI across stakeholders



Theme 2: Organizational Readiness



- Readiness **perception gap** between groups
- Managers perceive the organization as **not fully ready**, both **technologically** and **organizationally** / socially
- Operational staff perceive **technological readiness**, but raise **concerns beyond technology**



Theme 3: Challenges and Risks



→ Challenges extend **beyond technical** issues

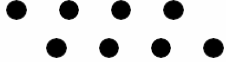
→ Predominantly **human, organisational, and governance-related**:

- Resistance to change and process complexity
- Transparency and human validation of decisions
- Job security and accountability
- Data security and privacy

→ Common concerns across groups



Theme 4: Support



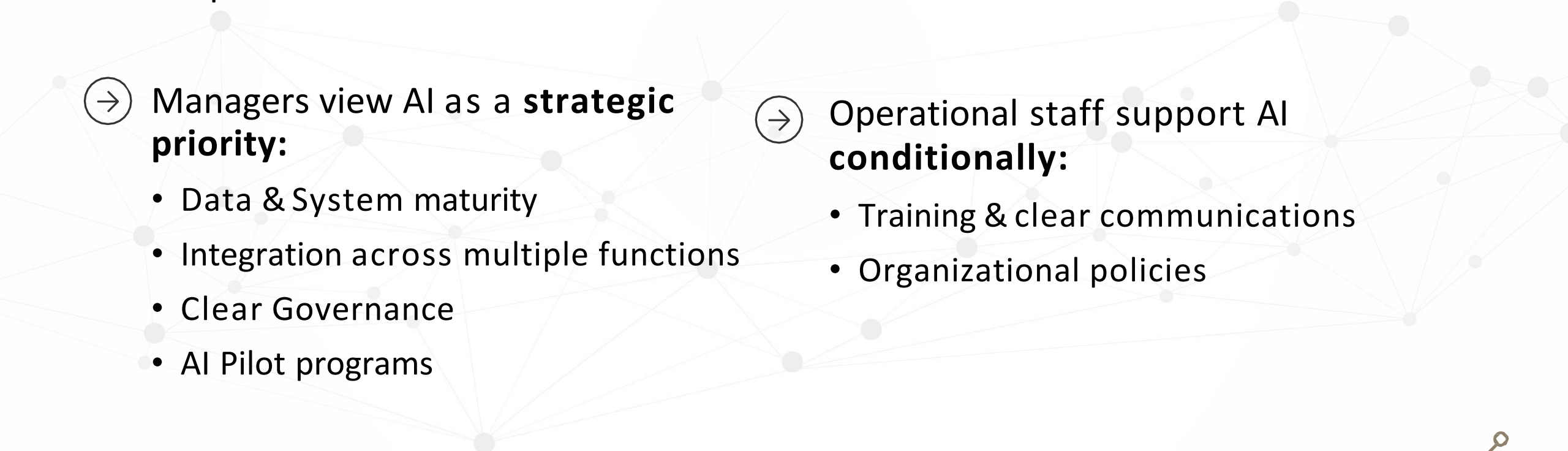
→ Overall **high support** for AI adoption despite risks

→ Managers view AI as a **strategic priority**:

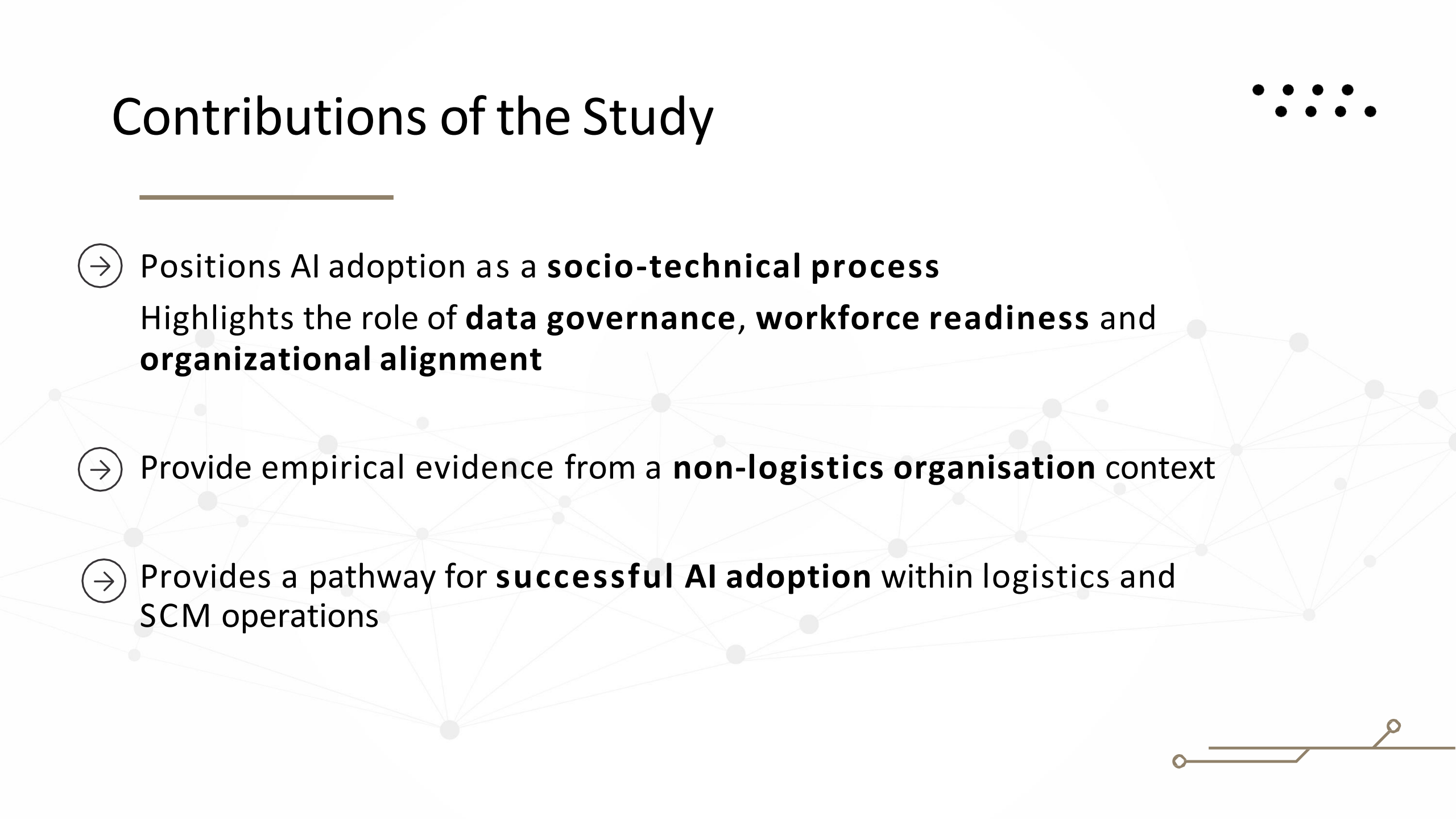
- Data & System maturity
- Integration across multiple functions
- Clear Governance
- AI Pilot programs

→ Operational staff support AI **conditionally**:

- Training & clear communications
- Organizational policies



Contributions of the Study



- ➔ Positions AI adoption as a **socio-technical process**
Highlights the role of **data governance, workforce readiness** and **organizational alignment**
- ➔ Provide empirical evidence from a **non-logistics organisation** context
- ➔ Provides a pathway for **successful AI adoption** within logistics and SCM operations

Study limitations and Future Research



- Single case study design limits **generalizability**
- Qualitative approach prioritizes **depth over breadth**
- Findings are **context-specific** but analytically transferable
- Future research: Comparative or Longitudinal multi-organization studies



Professional Development & Skills Gained



- ➔ Ability to assess AI initiatives beyond technical performance
- ➔ Improved capability to evaluate organisational readiness and adoption risk
- ➔ Strengthened stakeholder-level analysis between strategic and operational roles
- ➔ Enhanced application of academic frameworks to real decision-making contexts



Conclusions and recommendations

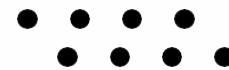


- **High perceived value** of AI across stakeholders
- Organizational **readiness as main barrier** to effective AI adoption
- **Perception gap** between managerial and operational staff on

Recommendation:

- Strengthening **data integration** and **governance structures**
- Positioning AI as a **decision-support tool** with clear accountability





Thank you for your attention

