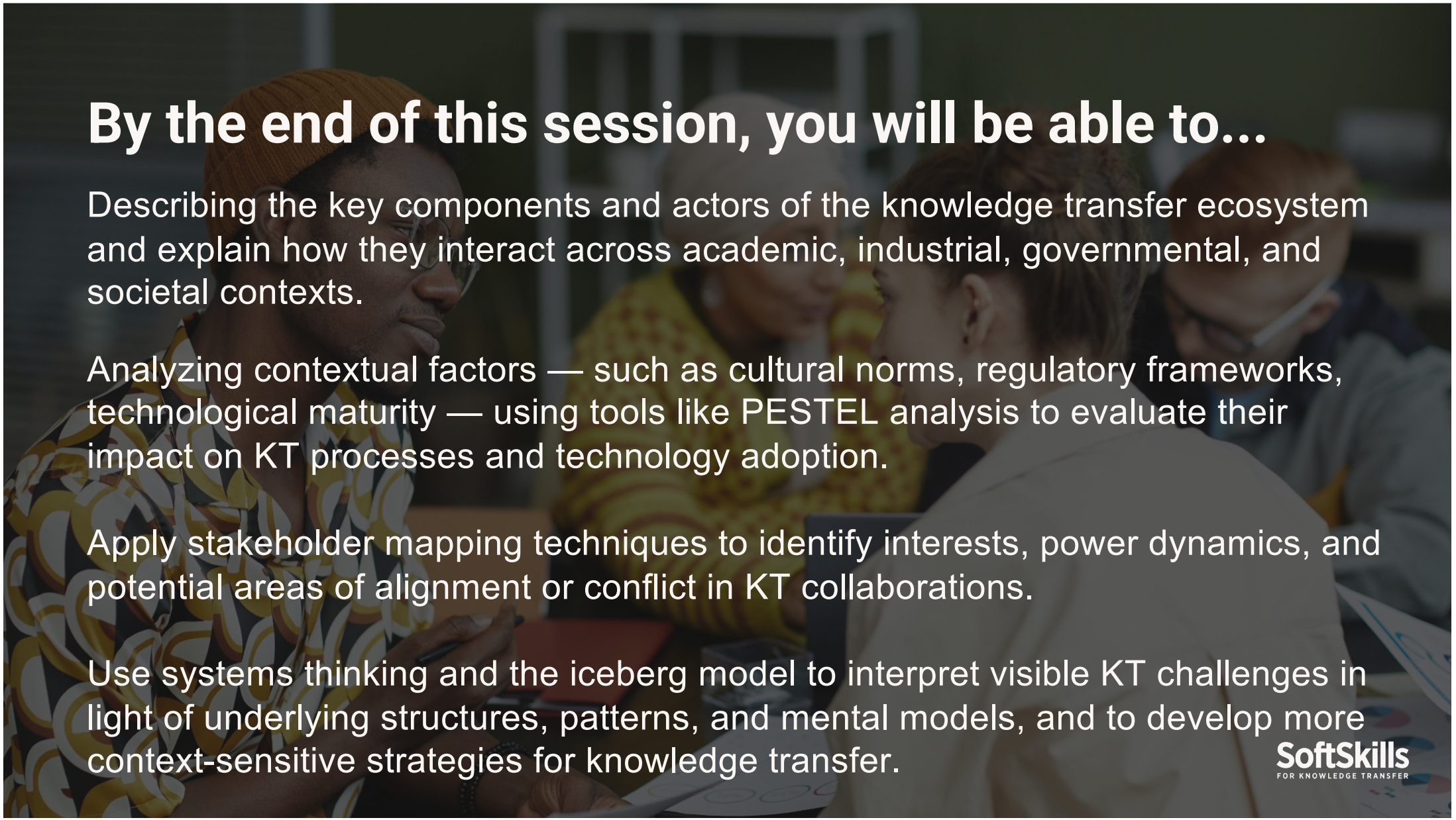
Welcome: Context Awareness for Knowledge Transfer

KTSoftSkills - Soft Skills for Knowledge Transfer
Project n. 2022-1-IT02-KA220-HED-000089663



By the end of this session, you will be able to...

Describing the key components and actors of the knowledge transfer ecosystem and explain how they interact across academic, industrial, governmental, and societal contexts.

Analyzing contextual factors — such as cultural norms, regulatory frameworks, technological maturity — using tools like PESTEL analysis to evaluate their impact on KT processes and technology adoption.

Apply stakeholder mapping techniques to identify interests, power dynamics, and potential areas of alignment or conflict in KT collaborations.

Use systems thinking and the iceberg model to interpret visible KT challenges in light of underlying structures, patterns, and mental models, and to develop more context-sensitive strategies for knowledge transfer.

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Agenda

Time	Topic	
15 min	Introduction & Icebreaker Game	Group Exercise
30 min	Drawing Exercise	Group Work & Mini Lecture
30 min	Knowledge Transfer Ecosystem & Context	Mini Lecture
15 min	Break	
30 min	System Thinking	Mini Lecture
45 min	Iceberg Model in Practice	Group Work
15 min	Wrap up	Group Discussion

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Let's get to know each other better!

Check out the list of questions in the next slide.

Pick up-to 3 questions to ask each other.

Be authentic!

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- What books on your shelf are begging to be read?
- Which do you do more often: hum or whistle? Hum or whistle your answer.
- What's something you intended to do today, but didn't? Why not?
- What's the first thing that comes to mind when you hear the word "fun"?
- What's the best New Year's resolution you've ever made?
- What magic tricks do you know? Perform one now.
- What's your favorite item to cook? Why?
- Are you a hugger or a non-hugger? Why?
- Are you ever a high-maintenance person? Explain.
- Are you superstitious? Give an example.

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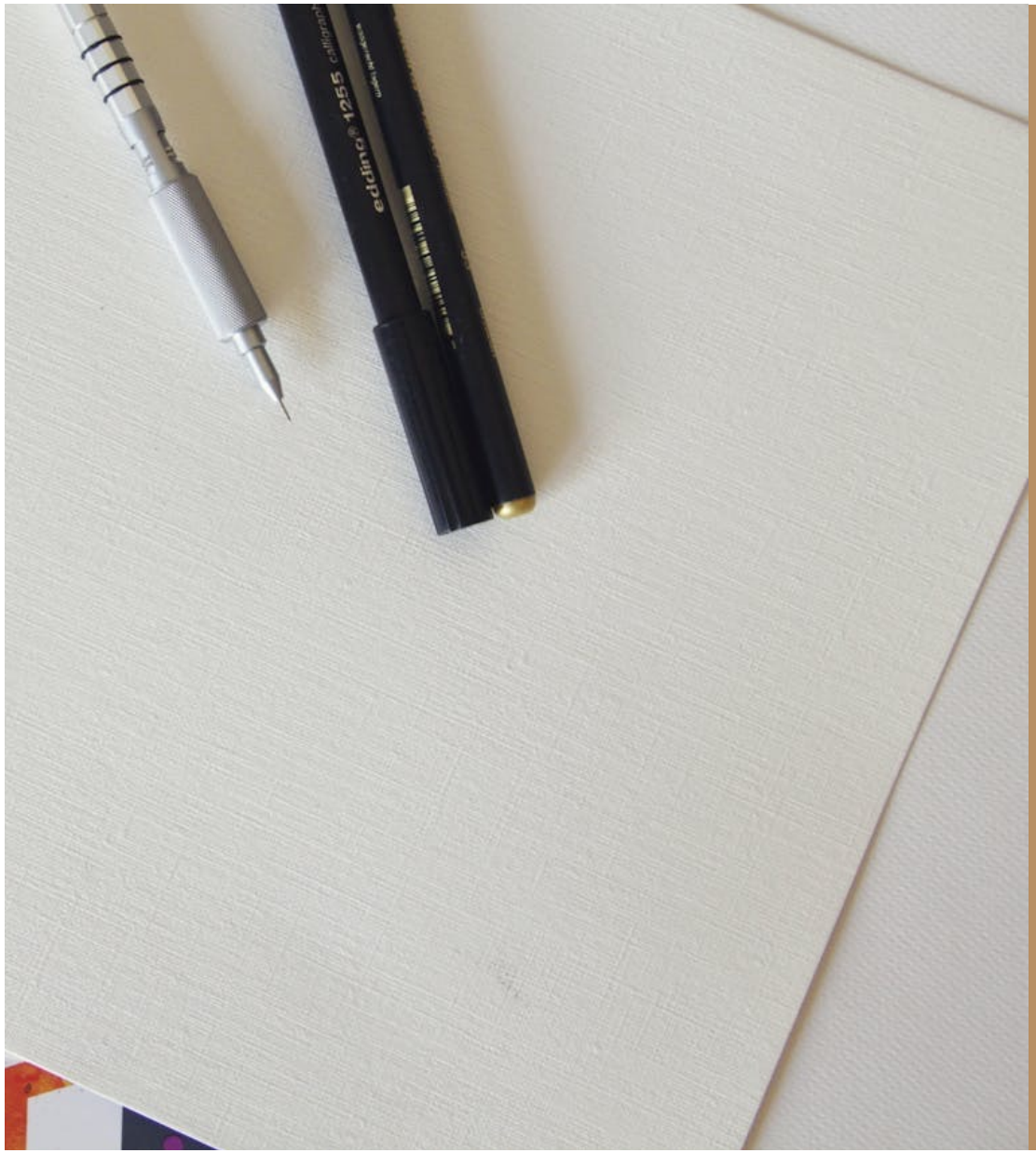

A Visualization Exercise

1. Make a drawing that describes a knowledge transfer process
    - Include all relevant actors and how they relate with each other
    - Be creative, there is no right answer

2. When everybody is ready, you will show your drawing to the rest of the group

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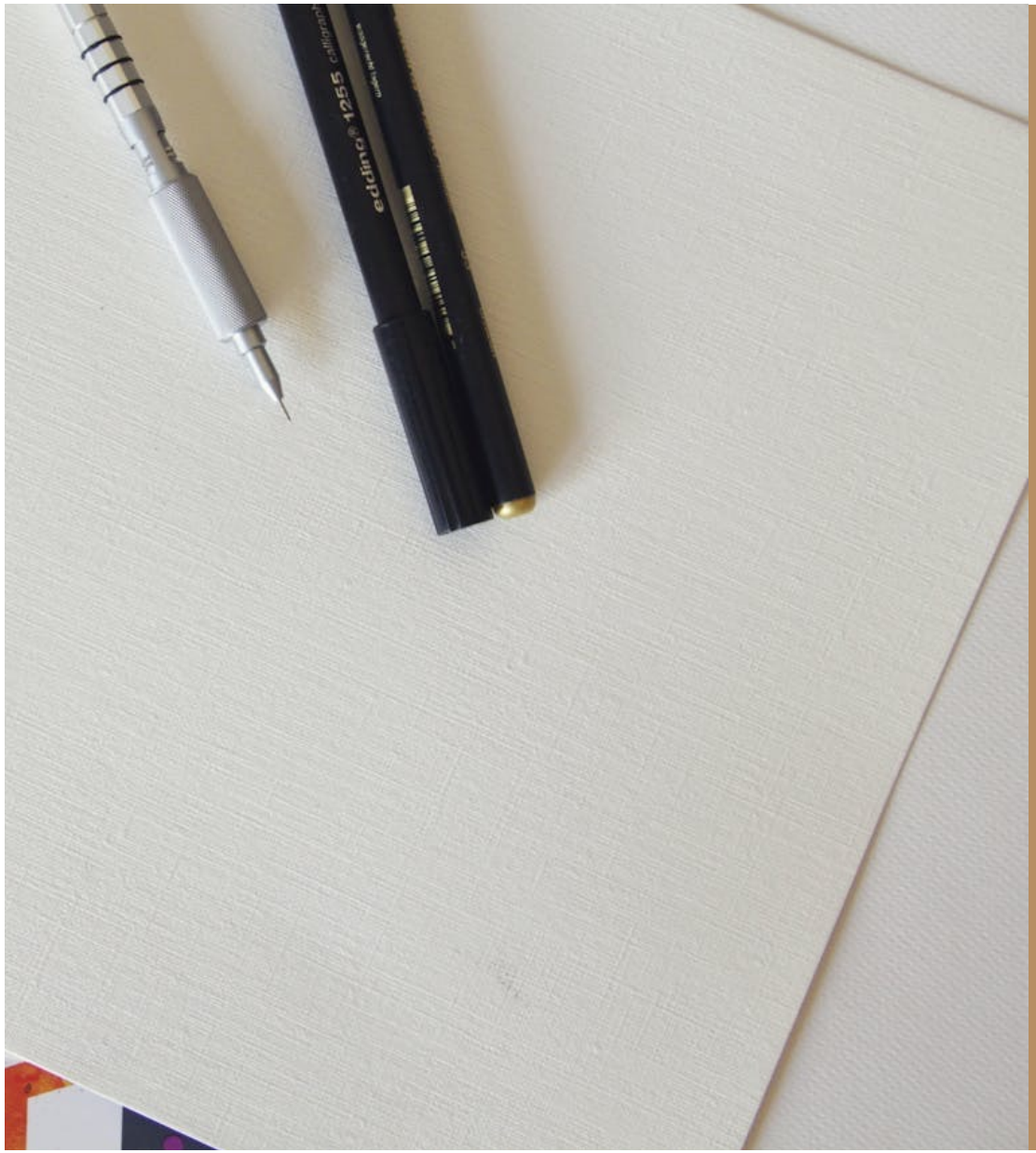

Time to discuss

We can all have different perspectives and ideas about KT process. Let's share our perspective.

- Does the process follow a line, cycle or something else? Why?
- Which actors and relationships are mentioned? Why?

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Quadruple Helix Innovation Systems

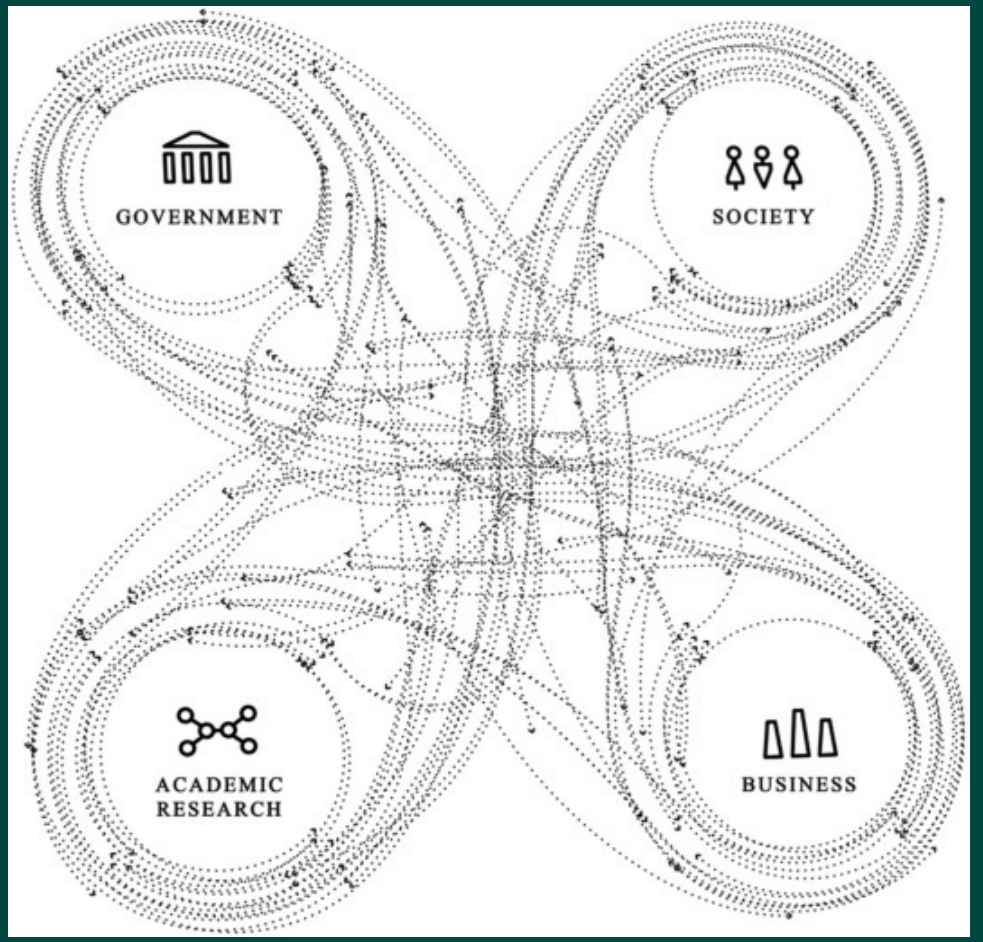

Image source: Schütz, Florian; et al. (2019). Co-shaping the Future in Quadruple Helix Innovation Systems: Uncovering Public Preferences toward Participatory Research and Innovation

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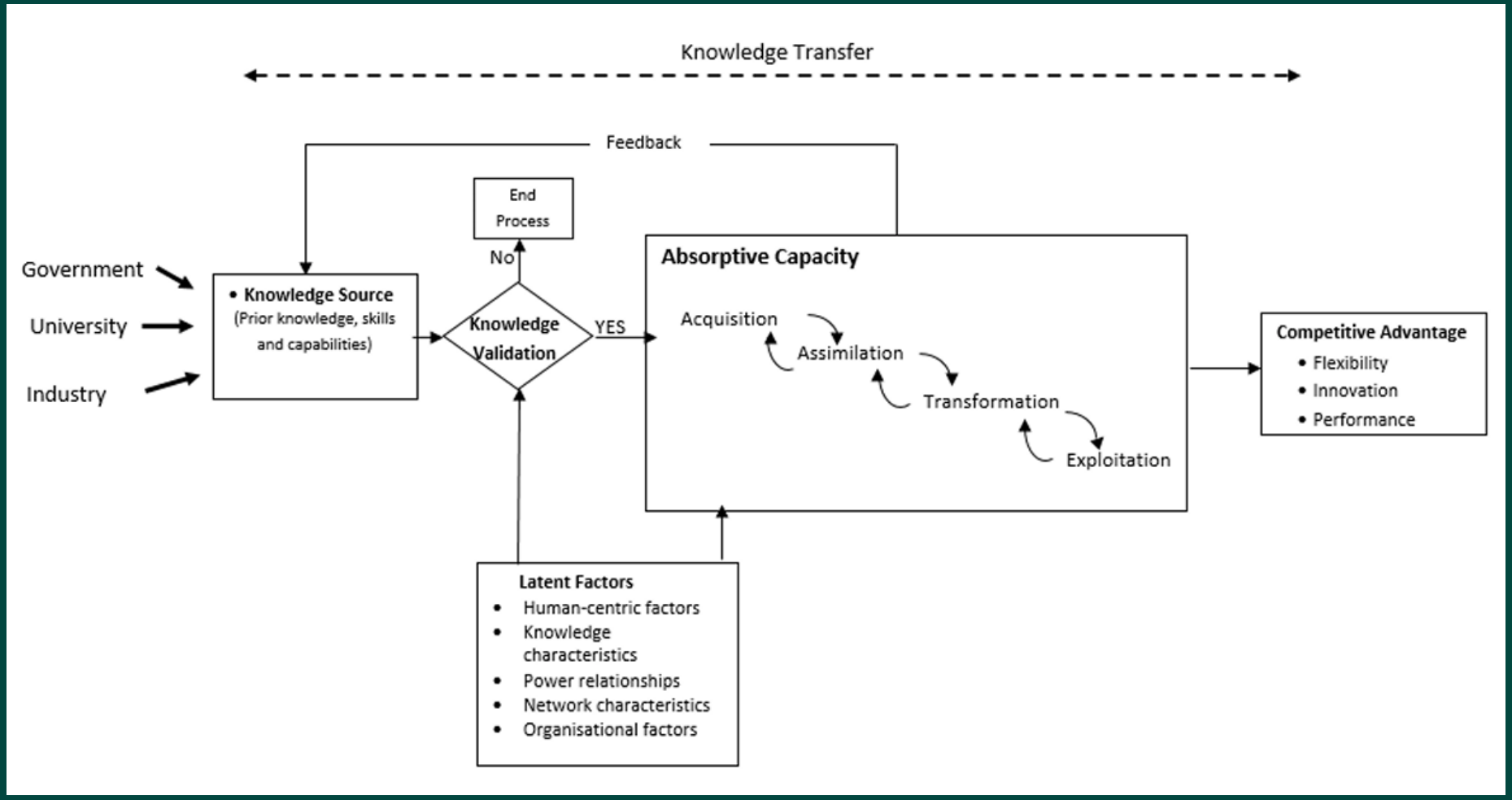

Image source: Miller, Kristel; McAdam, Rodney; Moffett, Sandra; et al. (2016). Knowledge transfer in university quadruple helix ecosystems: an absorptive capacity perspective

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What is the Knowledge Transfer (KT) Ecosystem?

The KT ecosystem refers to the **network of actors, processes, and resources** involved in moving knowledge from creators to users.

It includes both formal and informal structures that enable **collaboration, innovation, and value creation**.

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Core Components of the KT Ecosystem

Component	Main Role	Examples	Key Concerns
Producers	Generate knowledge through research	Universities, public research institutions	Relevance, funding, academic incentives
Intermediaries	Bridge research and practice	TTOs, knowledge brokers, innovation hubs	IP issues, translation gaps, trust
Users	Apply/adopt research in real settings	Industry, public sector, NGOs, startups	Usability, ROI, tech readiness
Funders & Regulators	Set policies, provide funding & oversight	Governments, EU agencies, grant providers	Impact accountability, policy coherence
Societal Actors	Influence direction and legitimacy	Citizens, media, advocacy groups	Transparency and inclusiveness

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How Do These Components Interact?

1. **Producers** generate knowledge
2. **Intermediaries** translate and adapt it
3. **Users** implement and commercialize it
4. **Regulators** and funders shape the rules and incentives across the system

Societal feedback loops influence research agendas and adoption. Collaboration, trust, and mutual understanding are key to effective flow.

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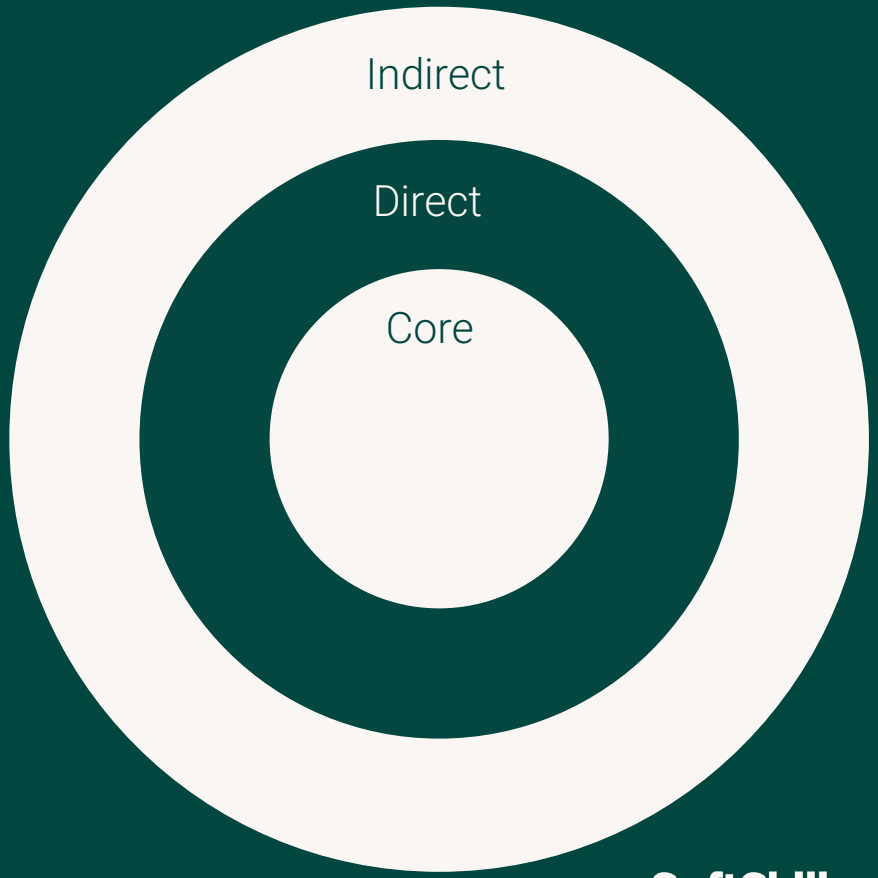
Stakeholder map

A visual presentation of the people and organisations impacted by your problem and their relations with each other.

Helps in identifying the potential stakeholders, both internal and external as well as their motivation, desires and challenges.

Helps to prioritise the stakeholders and clarifies the relations between them.



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KNOWLEDGE TRANSFER STAKEHOLDERS TABLE

Stakeholder (Backgrounds)	**What they care about?** (Goals)	**How they may misunderstand?**	**Bridging Tactics**

Source for Table: KTSS Project Consortium

Use tools such as **Stakeholder Table** to map out, understand and analyze stakeholders in your knowledge transfer context.

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Why Context Matters in Knowledge Transfer

- Knowledge Transfer (KT) doesn’t happen in a vacuum.
- Success depends heavily on **external contextual factors**.
- Understanding these factors enables more effective collaboration, strategy, and technology uptake.

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What Are Contextual Factors?

Key types of contextual influences on KT:

- Cultural norms (e.g. attitudes toward hierarchy, innovation, trust)
- Regulatory frameworks (laws, policies, funding rules)
- Technological maturity (infrastructure, readiness for adoption)
- Gender and inclusion dynamics
- Sector-specific characteristics (e.g. public health vs. manufacturing)

The PESTEL Framework

PESTEL is a tool to systematically assess external influences.

Political
Economic
Social
Technological
Environmental
Legal

Helps identify barriers and enablers in the KT environment.

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Applying PESTEL to Knowledge Transfer

Use PESTEL to:

- Map out factors influencing the transferability and adoption of knowledge/technology.
- Adapt KT strategies to different regions, sectors, or stakeholder groups.
- Anticipate risks or resistance early in the process.

Example: KT in Renewable Energy Sector

Political: Government incentives for green tech?

Economic: Cost of local production vs. import?

Social: Public trust in innovation, community buy-in?

Technological: Grid compatibility, digital infrastructure?

Environmental: Climate targets, environmental urgency?

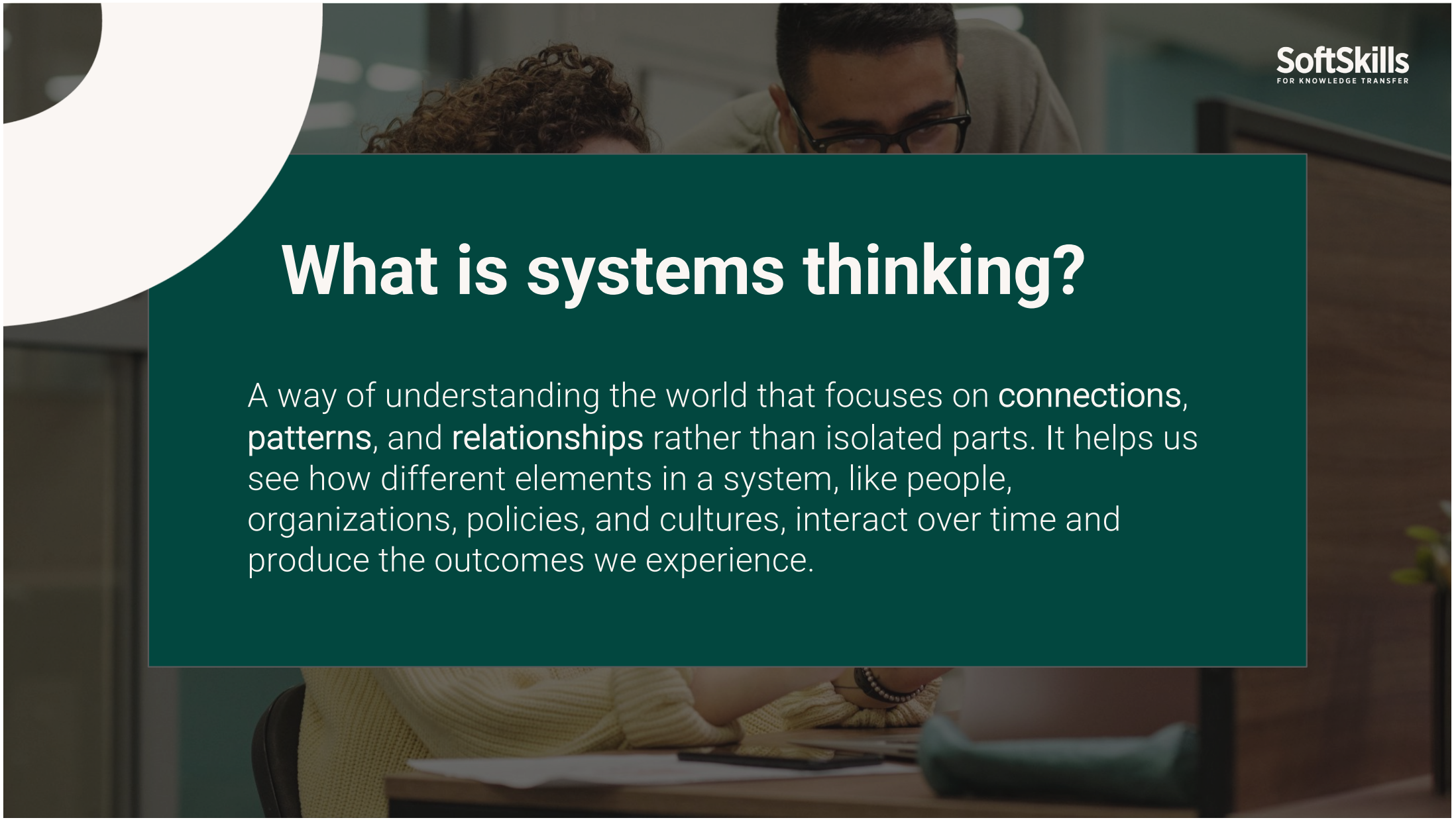
Legal: IP regulations, licensing models?

A System, Not a Chain

The KT ecosystem is not linear—it's a system with feedback loops.

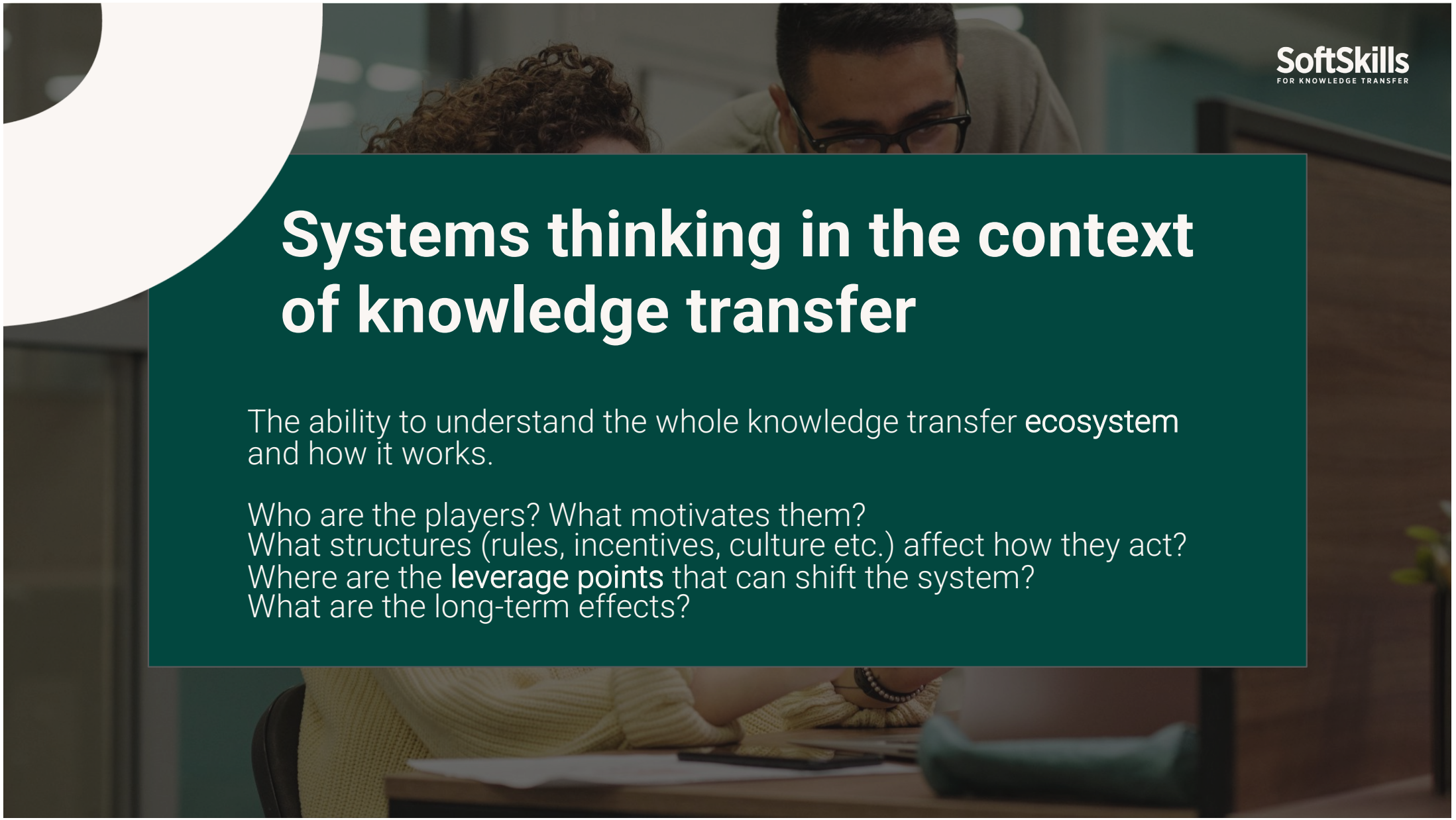
Example: Industry needs → inform research → influence funding priorities → reshape university strategies.

Systems thinking helps us navigate tensions and align interests across the ecosystem.



What is systems thinking?

A way of understanding the world that focuses on **connections**, **patterns**, and **relationships** rather than isolated parts. It helps us see how different elements in a system, like people, organizations, policies, and cultures, interact over time and produce the outcomes we experience.



Systems thinking in the context of knowledge transfer

The ability to understand the whole knowledge transfer **ecosystem** and how it works.

Who are the players? What motivates them?
What structures (rules, incentives, culture etc.) affect how they act?
Where are the **leverage points** that can shift the system?
What are the long-term effects?

Linear thinking vs. Systems thinking

Assumes cause and effect are more or less simple:

“If we do A, then B will happen.”

In complex fields like knowledge transfer:

A might cause B, but also C, D, and even **an unexpected** E, F or G some years later.

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An example
Linear thinking vs. Systems thinking

We’ve developed a great breakthrough research-based solution
→ Industry will adopt it.

In reality adoption is not possible or it´s difficult because:

- Businesses might lack trust in academic partners.
- The product doesn’t align with current market needs.
- There’s a skills gap in applying the innovation.
- Regulatory, budgetary, or timing barriers slow adoption.
- Organizational culture resists outside solutions.

Ask: What conditions must be in place for adoption?
Use mapping to identify key actors, incentives, motivations, pain points across the ecosystem.

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Key Principles of Systems Thinking for KT Professionals

Everything is connected
A change in one area affects the others.

Cause and effect are not always close in time or space
The result of a decision might appear months or years later or show up in an unexpected place.

Small changes can have big impacts
Identifying **leverage points** places in the system where a small shift can produce major change is a key.

People see the system differently
Cultural and mental models matter. Building shared understanding is crucial.

Unintended consequences are normal
Trying to “solve” a problem without seeing the bigger system often creates new problems. Systems thinking helps us avoid this trap.

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The Iceberg Model

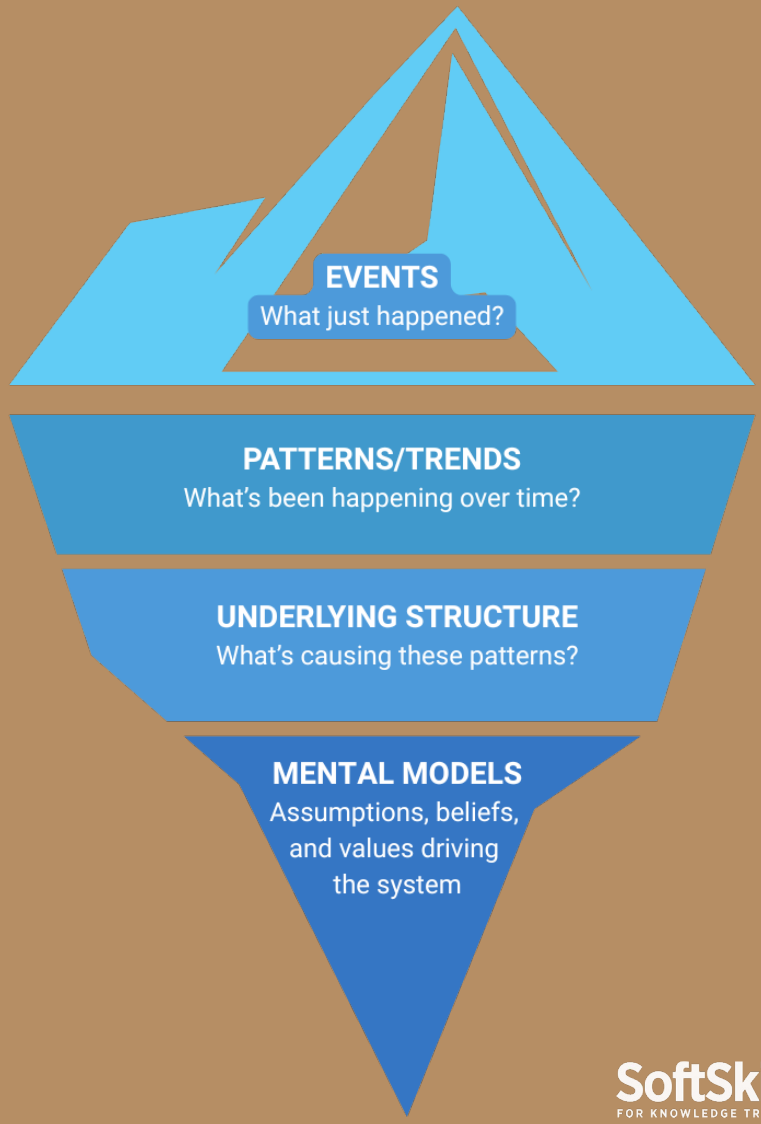
A tool to guide systems thinking

1 Events. What happened?
This is the surface level and things we observe or experience.

2 Patterns or Trends. What's been happening over time?
This layer looks at repeated behaviors, recurring challenges, or trends.

3 Systemic structures. What's causing these patterns?
These are the rules, processes, organizational structures, policies, and relationships that shape behaviors.

4 Mental Models
Beliefs, assumptions, or values are driving the system? What beliefs keep the system in place?
These are deeply held worldviews or cultural assumptions.



Source for Diagram: KTSS Project Consortium

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The Iceberg Model

An example in the context KT process

1 Events. What happened?
A company drops out of a university collaboration project.

2 Patterns or Trends. What's been happening over time?
This isn't the first time a business partner has pulled out midway.

3 Systemic structures. What's causing these patterns?
Funding structures reward short-term outcomes.
Businesses and researchers have conflicting timelines.
There's no shared project ownership or integration strategy.

4 Mental Model
Academics believe industry only cares about profit.
Businesses believe universities are too slow and theoretical.
Both underestimate the value of ongoing communication.

Which layer do we usually focus on? What would change if we went deeper?

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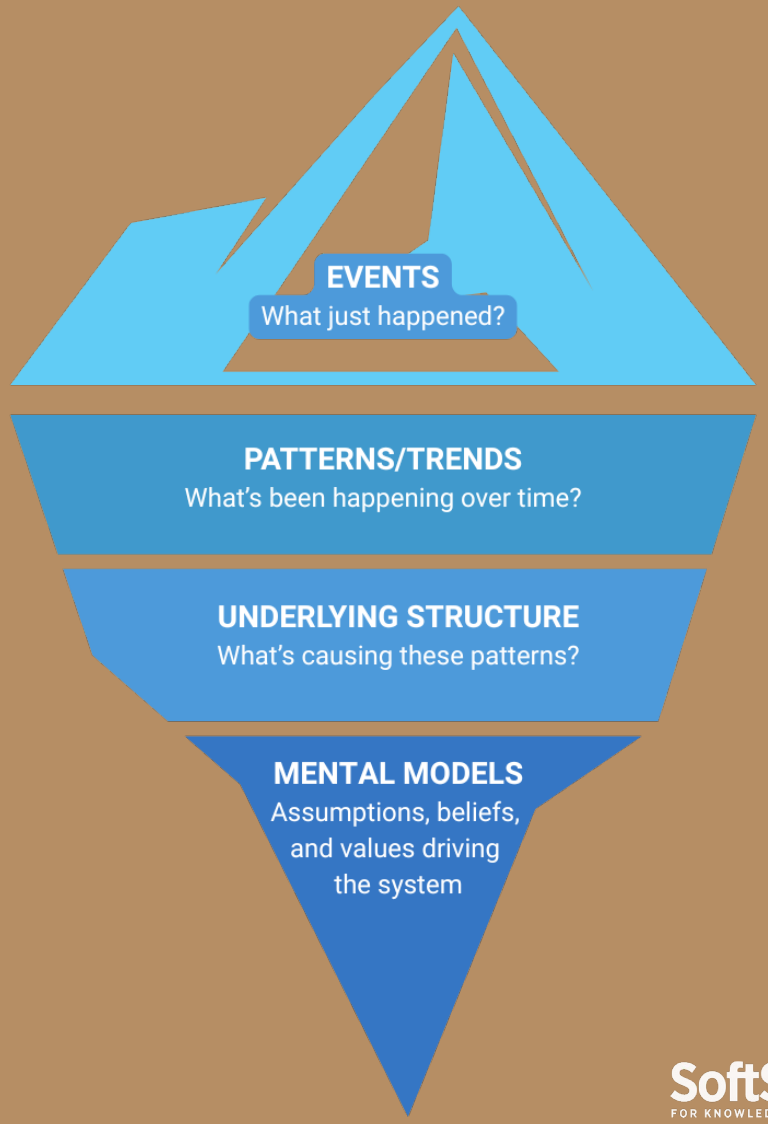
Group Work

10 min. Find a specific KT problem/situation from your daily work to focus on

20 min. Use Iceberg Model to analyze the problem in all levels

15 min. Presenting the icebergs & discussions

Source for Diagram: KTSS Project Consortium



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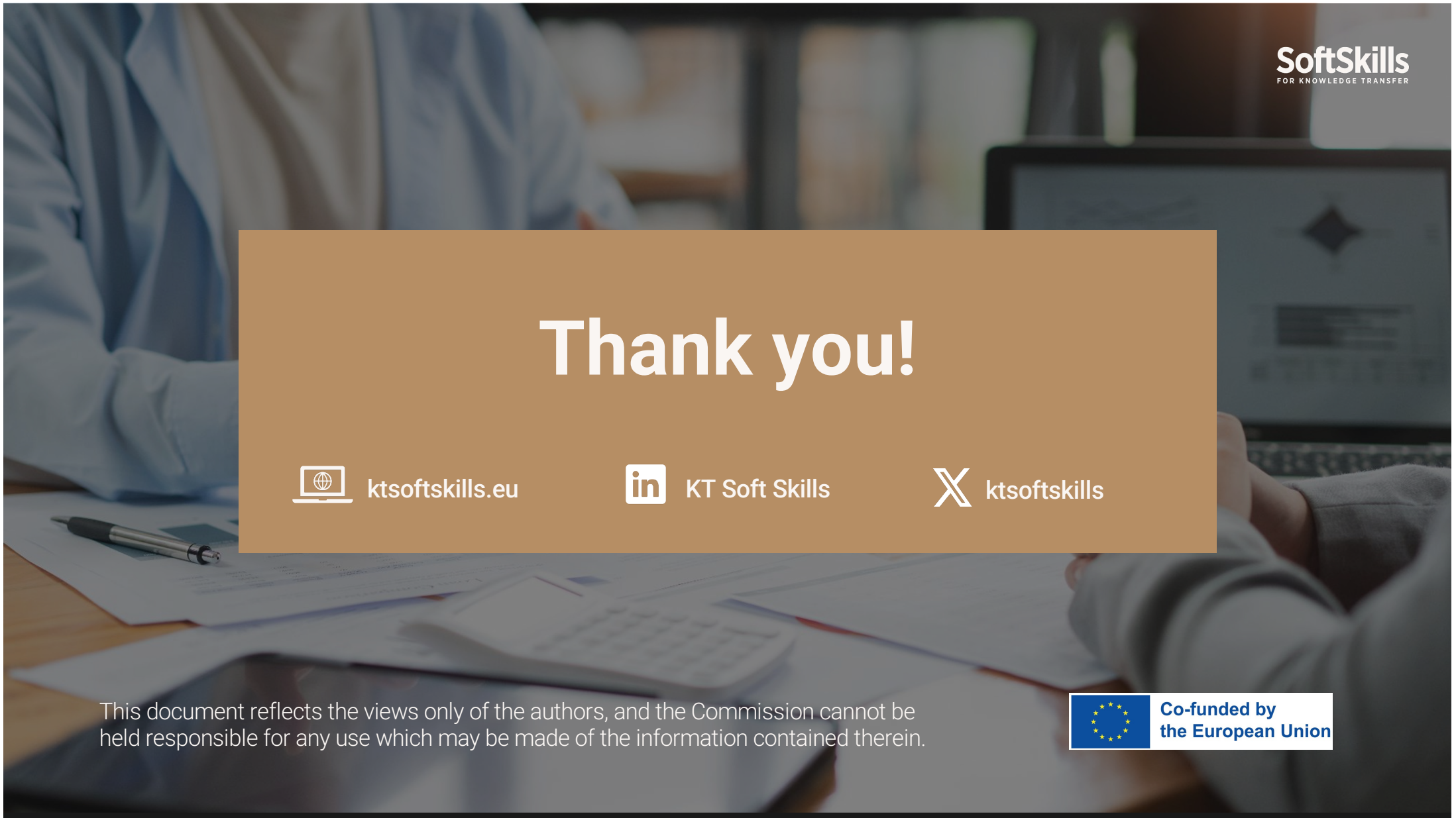

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