

Creating effective Learning Environments: The Power of Stakeholder Involvement

Exploring how stakeholder involvement can be optimized in creating effective learning environments in universities

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I



Introduction

II



**Research
Methods**

III



Findings

IV



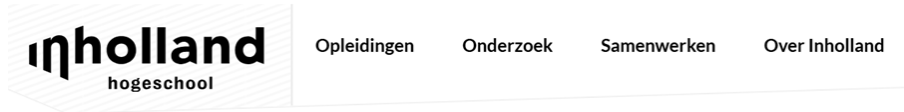
**Discussion
&
Conclusion**

V



**Limitations &
Recommendations**

Education is changing rapidly



09 juli 2024

Share Post

Flexibel onderwijs is nodig, want dé student bestaat al lang niet meer

Ons gesprek over flexibel leren

(Inholland, 2024)

Digitalisering en goed onderwijs gaan hand in hand

"Als bestuurder moet je het onderwerp digitalisering serieus nemen en weten waar je staat. Digitalisering is zoveel meer dan alleen een randvoorwaarde voor goed onderwijs." Een duidelijke oproep van Frank Tigges, bestuurder van Nestas scholengroep om de Monitor Digitalisering Onderwijs 2025 in te vullen. Samen met beleidsmedewerker Remco van der Sluis vertelt hij over het thema digitalisering binnen de scholengroep en de wijze waarop zij de monitor toepassen.

PO-Raad 16 december 2024

Nieuws-persbericht

advertenties

europa

micro-targeting

social-media

(PONT, 2024)

Flexibel onderwijs: hoe benader je het?

LINDA LITJENS • 2 JULI 2024 • DENKEN OVER ONDERWIJS • 6 MINUTEN LEZEN

(Verniewonderwijs, 2024)

New forms of education require the support of **suitable, innovative learning environments**



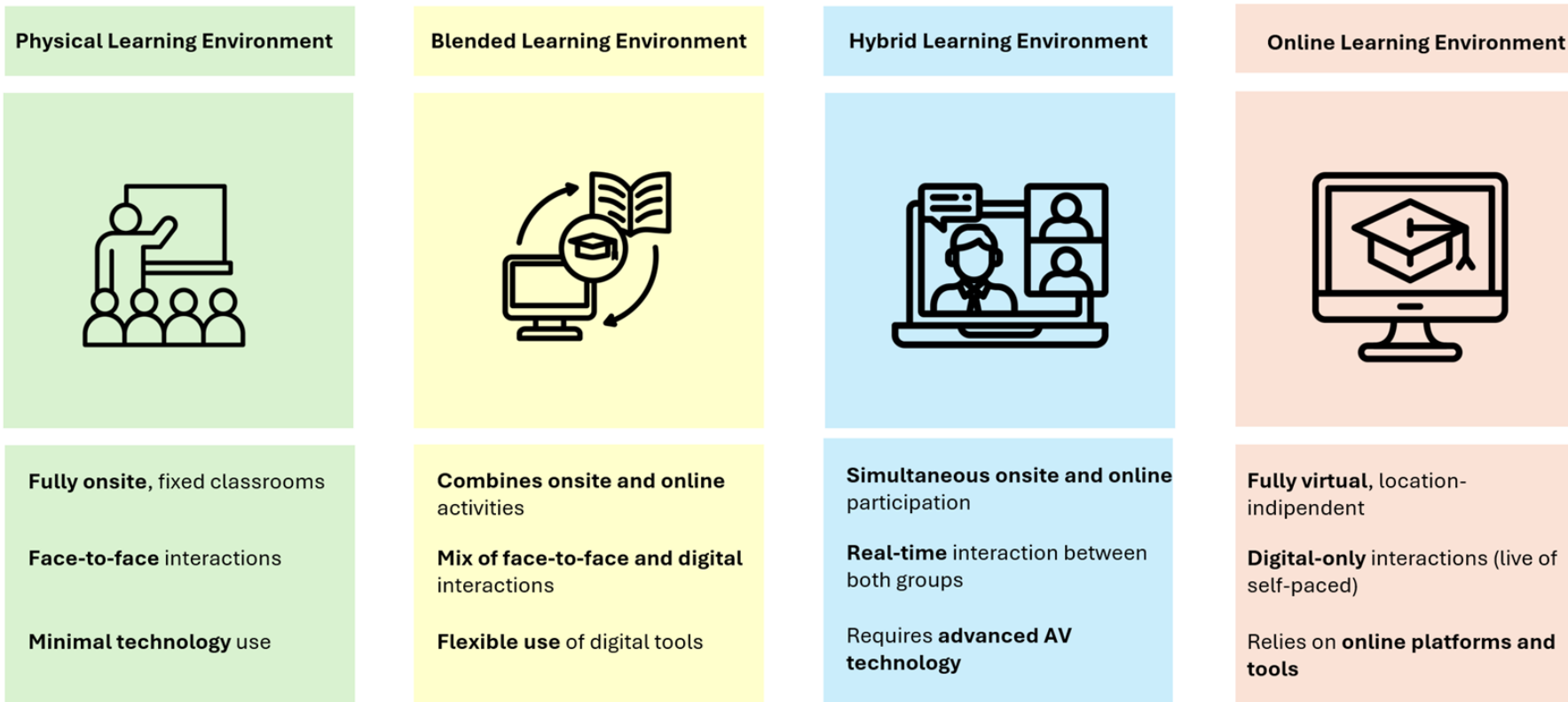
Learning Environment

“A learning environment can be defined as the physical, social and psychological setting in which learning occurs, and in which experiences and expectations are co-created among its participants (Rusticus et al., 2023).”

4 types of Learning Environments

Offline

Online



(Visualisation based on SURF, 2020)

How do you create these effective learning environments that align with the digitalisation and flexibilization trends in education?

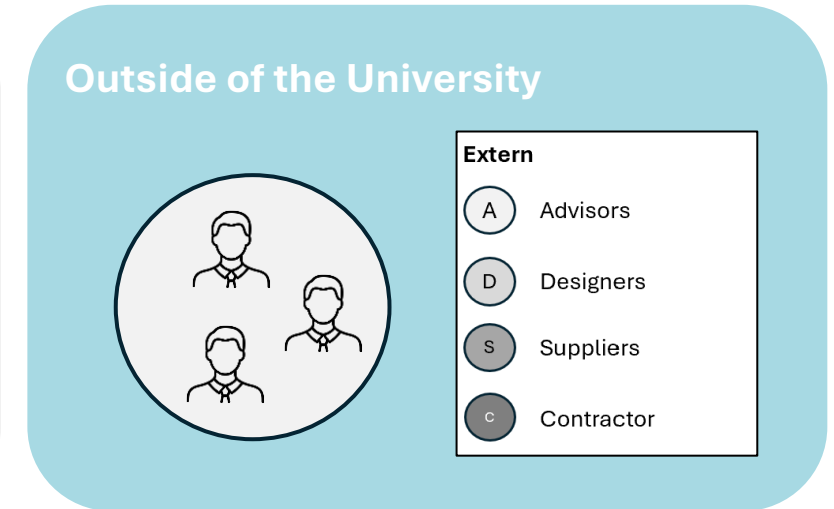
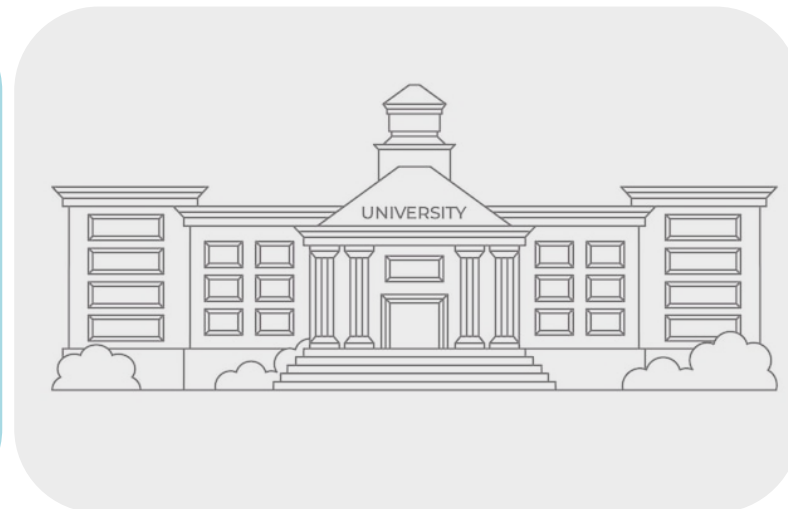
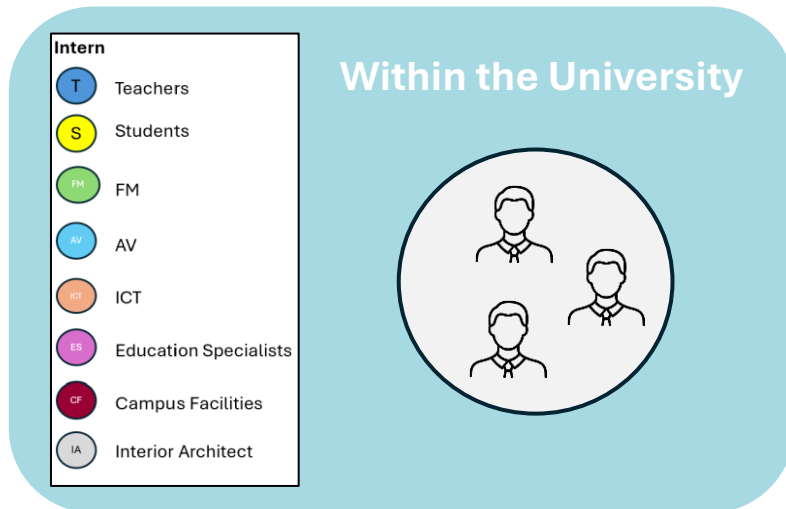
How do you create these effective learning environments that align with the digitalisation and flexibilization trends in education?

➡ By involving Stakeholders in the creation

(Borri, 2021; Frelin & Grannäs, 2021; Gatlin, 2021; Könings et al., 2014; Pnevmatikos et al., 2020; Rudman et al., 2018; Victorino et al., 2022)

Stakeholders

“Any group or individual who can affect or is affected by the achievement of the organisation's objective” (Freeman, 1984)”



Problem Statement

Little research has been conducted on the **stakeholder process within learning environments as a distinct field or on the optimisation of this process.**

It also remains unclear **how stakeholder contributions are managed** and whether these inputs effectively translate into spaces that **fulfil the expectations and requirements of end-users.**

Research Aim

The aim of this research is **to create better and more effective learning environments by optimizing stakeholder involvement** to align with evolving educational trends and end-user needs.

II



Research
Methods

Research Question

*How can **stakeholder involvement process** be optimised in the creation of **effective learning environments** in university real estate?*

Methods



LITERATURE STUDY

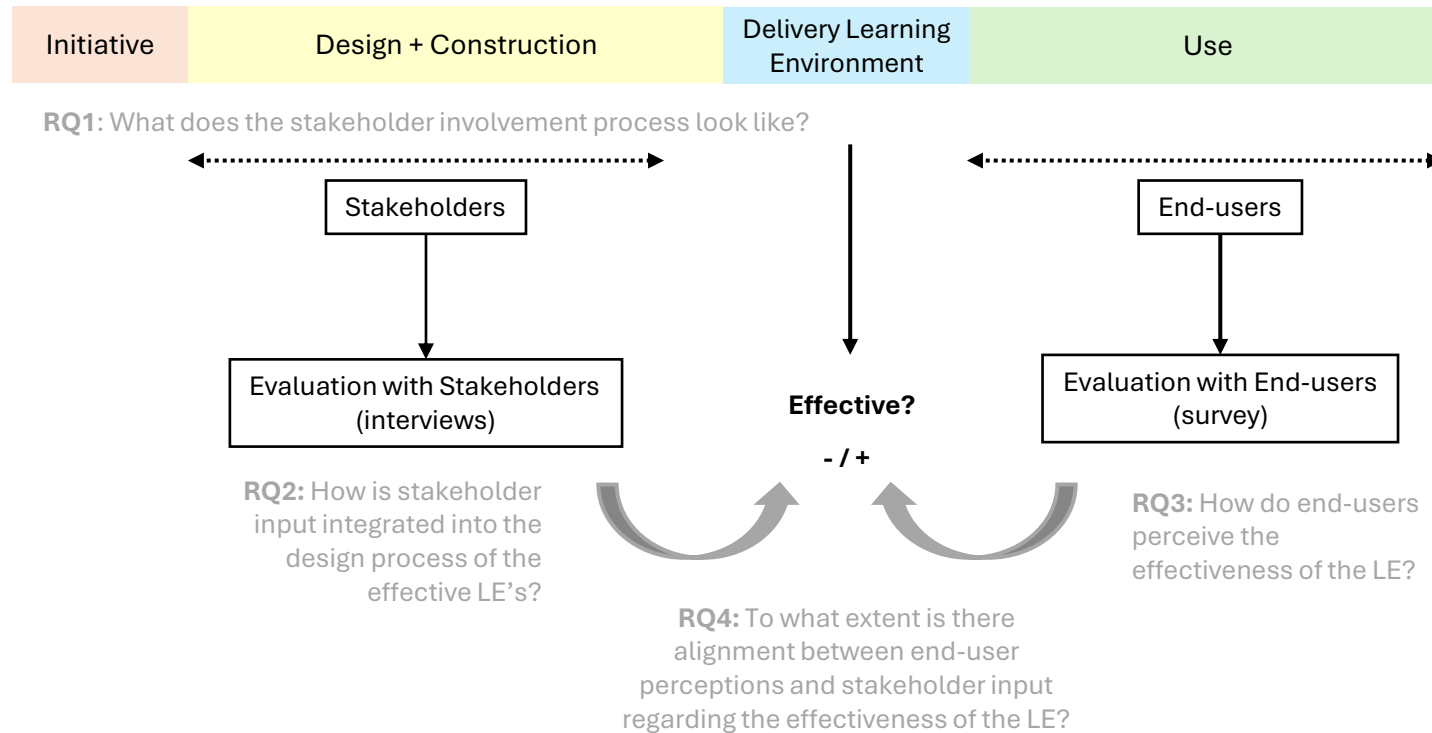


INTERVIEWS



SURVEYS

How can **stakeholder involvement process** be optimised in the creation of **effective learning environments** in university real estate?



Case Selection

Offline

Online

Physical Learning Environment



Fully onsite, fixed classrooms

Face-to-face interactions

Minimal technology use

Blended Learning Environment



Combines onsite and online activities

Mix of face-to-face and digital interactions

Flexible use of digital tools

Hybrid Learning Environment



Simultaneous onsite and online participation

Real-time interaction between both groups

Requires **advanced AV technology**

Online Learning Environment



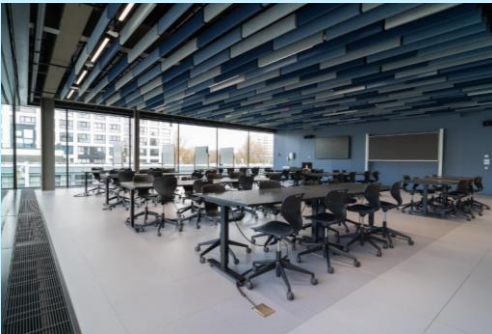
Fully virtual, location-independent

Digital-only interactions (live or self-paced)

Relies on **online platforms and tools**

Case Study

Case A
Project Rooms CDEF



2022

New Building
Part of Broader Construction Project

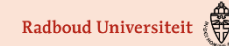
Case B
Collaboration Room



2018

New Building
Part of Broader Construction Project

Case C
OneRoom



2022

Existing Building
Single Room Construction

Case D
HALC



2022

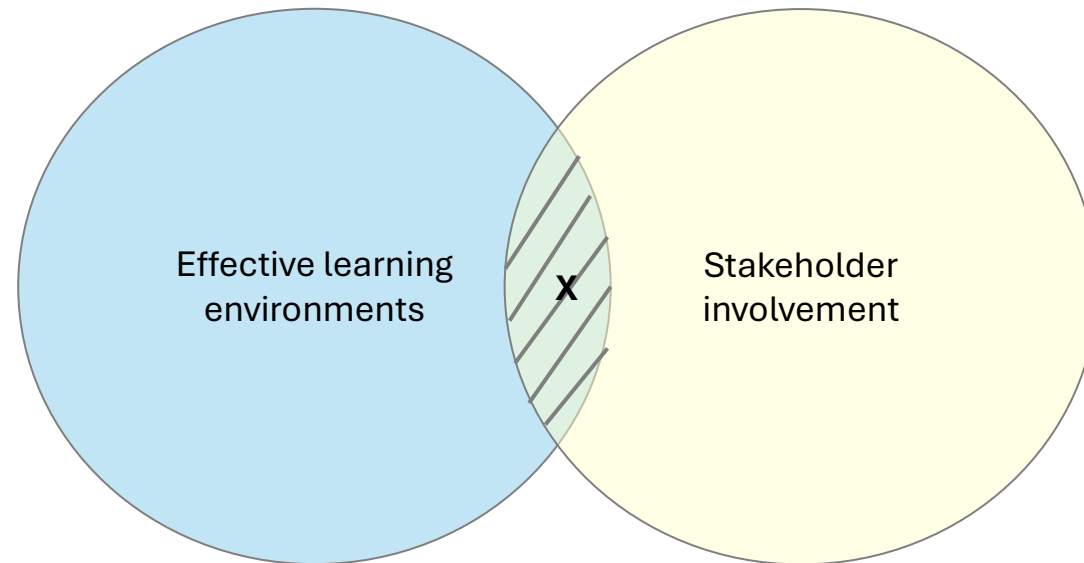
Existing Building
Single Room Construction

III



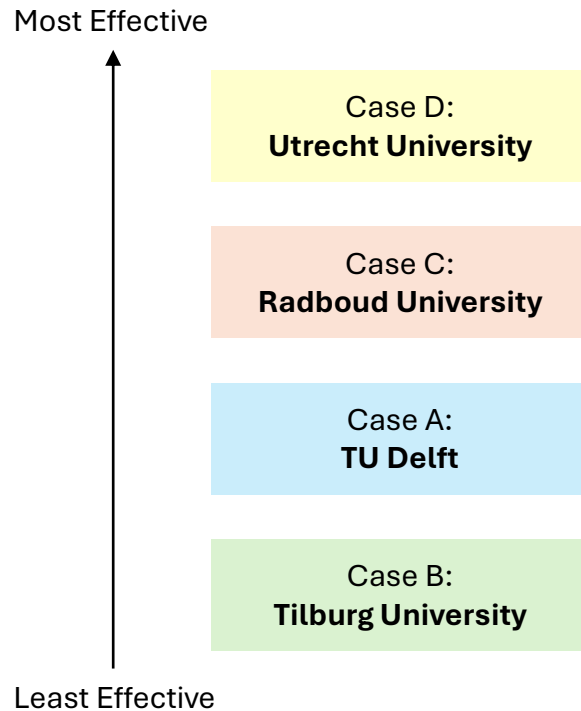
Findings

How can **stakeholder involvement process** be optimised in the creation of **effective learning environments** in university real estate?



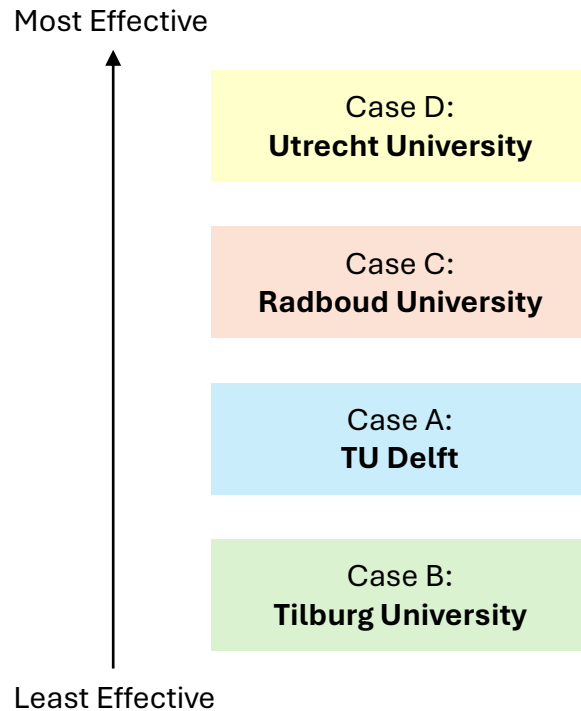
Effectiveness of the Learning Environment

Effective
Learning
Environments



Effectiveness of the Learning Environment

Effective Learning Environments



Literature



End-user Perspectives



Stakeholder Perspectives



Characteristics of an effective Blended Learning Environment

Based on literature

Characteristics of an Active Blended Learning Environment



'Formal' Classroom



Teacher Central Place in the Room



Flexible Furniture



Students are seated in groups



Presence of Analogue Tools



Presence of Digital Tools

Legend



Present



Partly Present

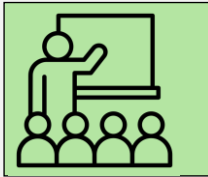


Not Present

Effectiveness of the Collaboration Room

Based on literature

Characteristic 1:
'Formal'
Classroom



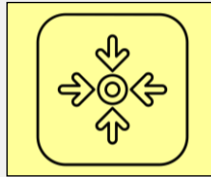
Case B
Collaboration Room



Effectiveness of the Collaboration Room

Based on literature

Characteristic 2:
**Teacher
central
place in the
room**



Case B
Collaboration Room

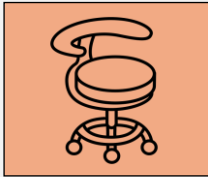


Effectiveness of the Collaboration Room

Based on literature

Characteristic 3:

**Flexible
furniture**



Case B

Collaboration Room



Effectiveness of the Collaboration Room

Based on literature

Characteristic 4:
***Students are
seated in
groups***



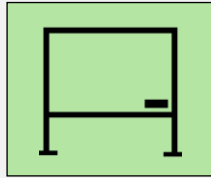
Case B
Collaboration Room



Effectiveness of the Collaboration Room

Based on literature

Characteristic 5:
**Presence of
analogue
tools**



Case B
Collaboration Room



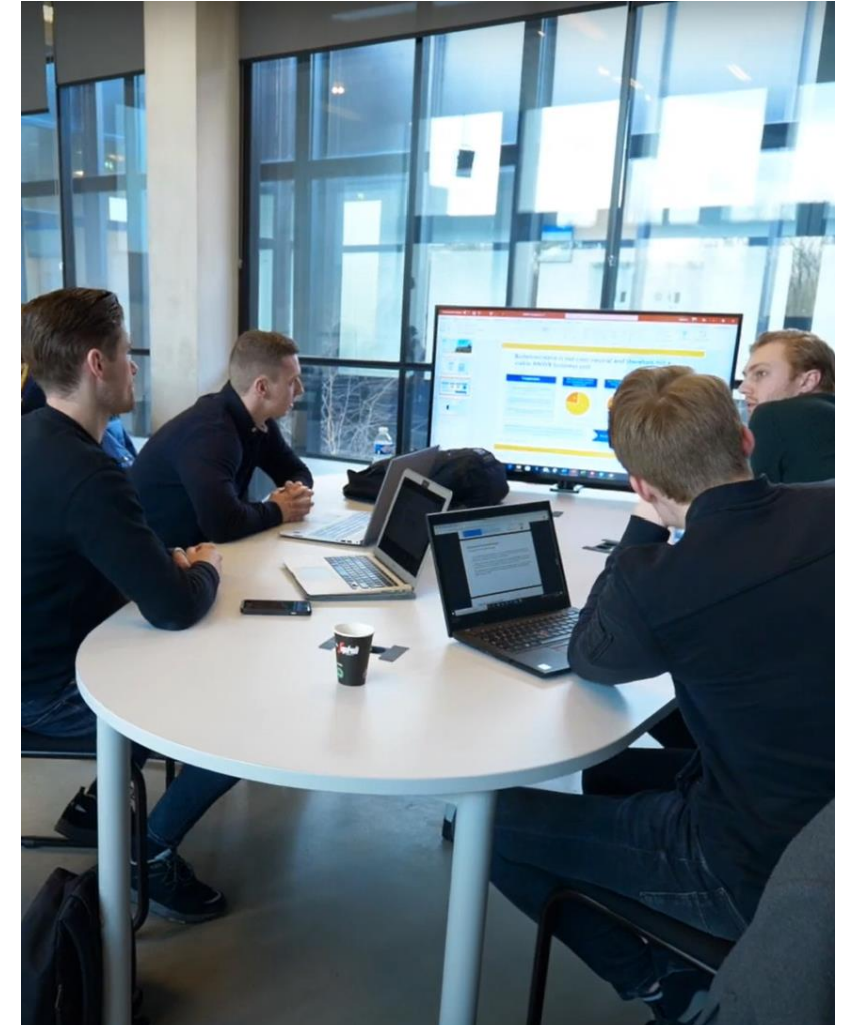
Effectiveness of the Collaboration Room

Based on literature

Characteristic 5:
**Presence of
digital tools**

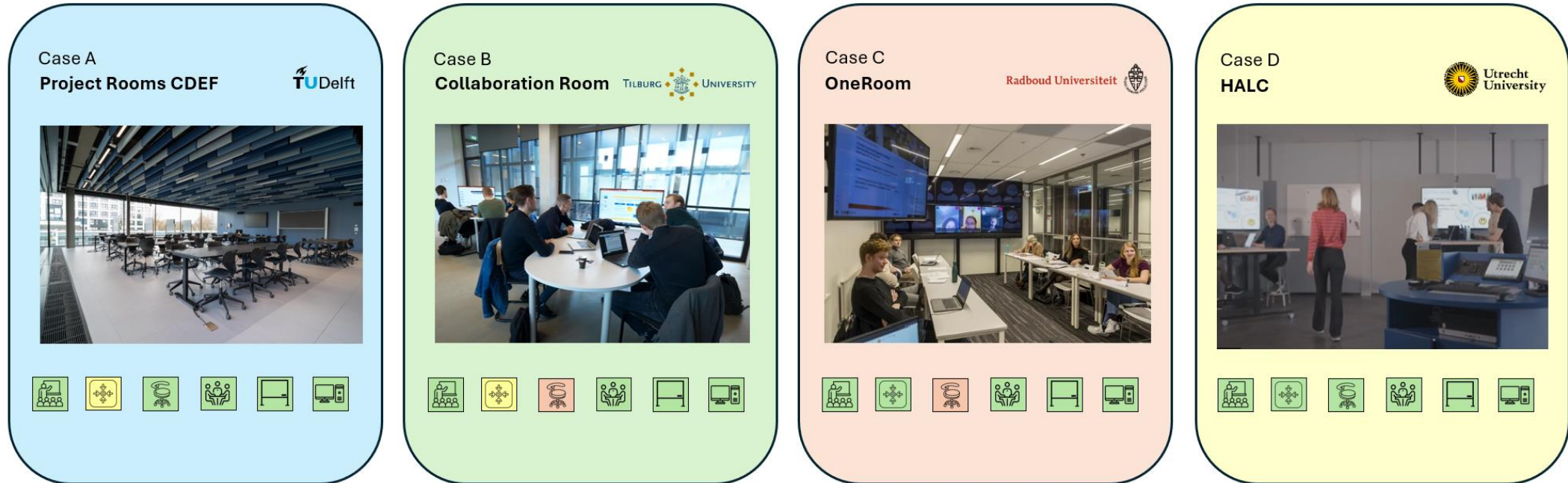


Case B
Collaboration Room



Effectiveness of the cases

Based on literature



Legend



1. 'Formal' Classroom



3. Flexible Furniture



5. Analogue Tools



2. Teacher Central Place in the Room



4. Seated in groups



6. Digital Tools

Not present

Partially present

Present

Effectiveness of the Learning Environment

Based on End-user perceptions

End-User rating
(out of 10)



7.64



6.33



8.16



N/A

Effectiveness of the Learning Environment

Based on End-user perceptions



“Seating in groups allows for **a lot of interaction** with my **groupmates** and enables good collaboration.”

Effectiveness of the Learning Environment

Based on End-user perceptions



"Seating in groups allows for **a lot of interaction** with my **groupmates** and enables good collaboration."

"Screens and whiteboards make it easy to share stuff with classmates, also the ones online"

Effectiveness of the Learning Environment

Based on End-user perceptions



Effectiveness of the Learning Environment

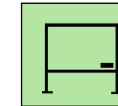
Based on End-user perceptions



"Seating in groups allows for **a lot of interaction with my groupmates** and enables good collaboration."



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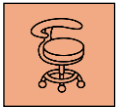


"Teacher moves through the groups, which works good for interaction with them"



Effectiveness of the Learning Environment

Based on End-user perceptions



***“Lack of turnable furniture** is the reason that half of the class cannot see the front screen”*



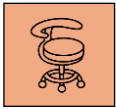
Effectiveness of the Learning Environment

Based on En



Effectiveness of the Learning Environment

Based on End-user perceptions



“Lack of turnable furniture is the reason that half of the class cannot see the front screen”

“This seating position is not ideal for certain activities such as lectures”



Effectiveness of the Learning Environment

Based on End-user perceptions



*"This **seating position** is not ideal for certain **activities** such as lectures"*

*"Change table position, **directionally** to the teacher."*



Effectiveness of the Learning Environment

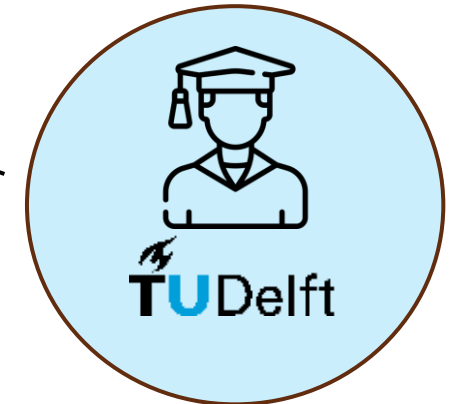
Based on End-user perceptions



*"This **seating position** is not ideal for certain **activities** such as lectures"*

*"**Change table position**, directionally to the teacher."*

*"You sit with the table beside you instead of in front of you. A setup where you **face your table directly** might work better for this lecture"*







Effectiveness of the Learning Environment

Based on End-user perceptions

	Case A: TU Delft	Case B: Tilburg University	Case C: Radboud University	Case D: Utrecht University
Room used as intended?	Partially	No	Partially	Yes

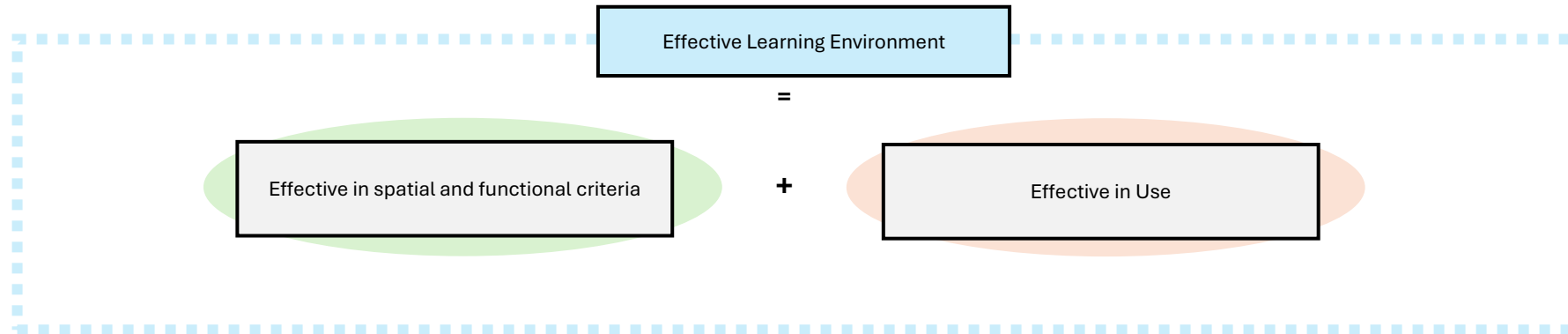
Effectiveness of the Learning Environment

Based on Stakeholder perceptions

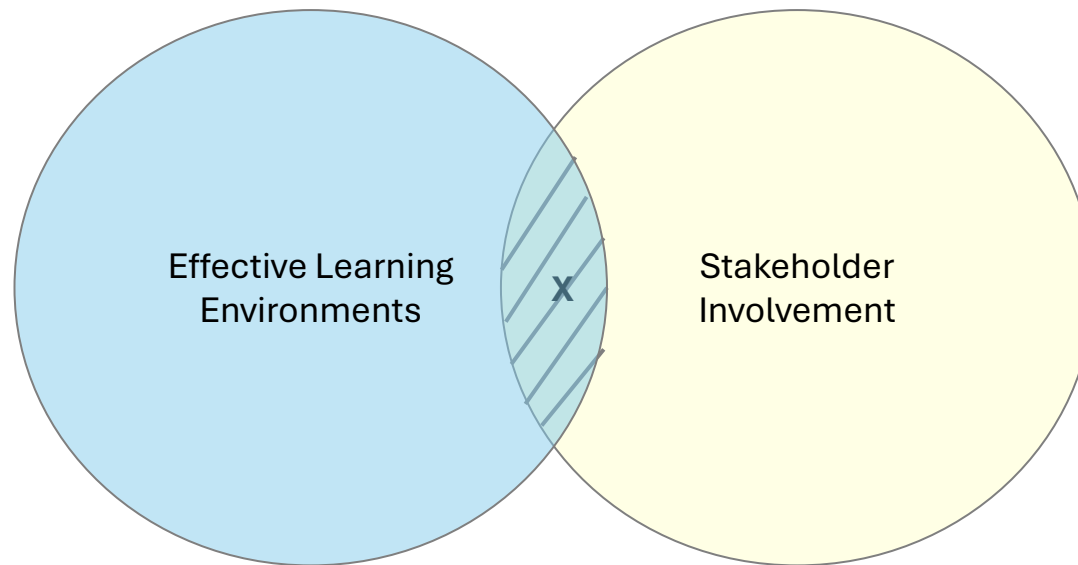
	 TU Delft	 TILBURG UNIVERSITY	 Radboud Universiteit	 Utrecht University
Satisfaction with design outcome	Yes	Yes	Yes	Yes
Satisfaction with actual use & adoption of the LE	Yes	Yes	No	Partly

Effectiveness of the Learning Environment

Effective
Learning
Environments



How can **stakeholder involvement process** be optimised in the creation of **effective learning environments** in university real estate?



Link with Stakeholder Involvement Process

Stakeholder
Involvement

Three barriers



User perspective is often not incorporated into the design, resulting in a mismatch with actual use.



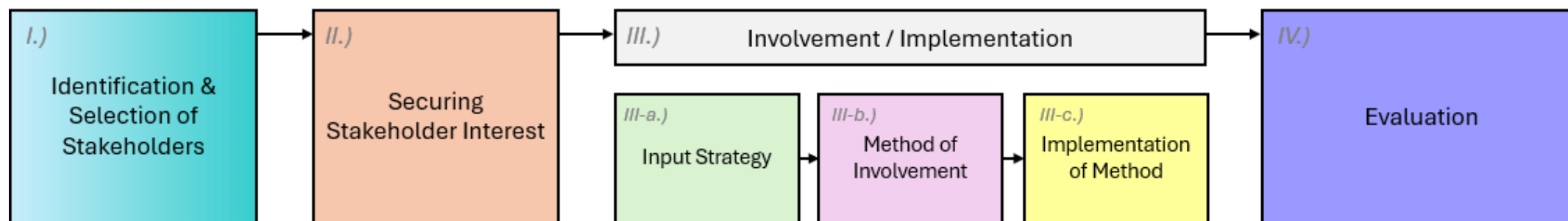
Continuous stakeholder input is constrained by the type of contract chosen



The shift to Active Blended Learning fails due to lack of institutional embedding

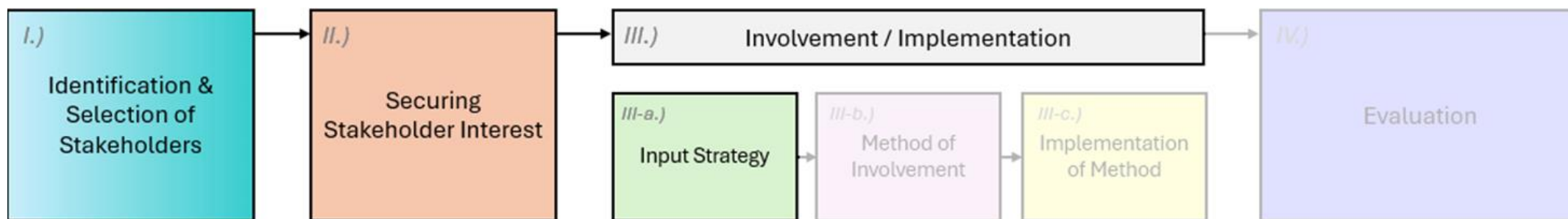


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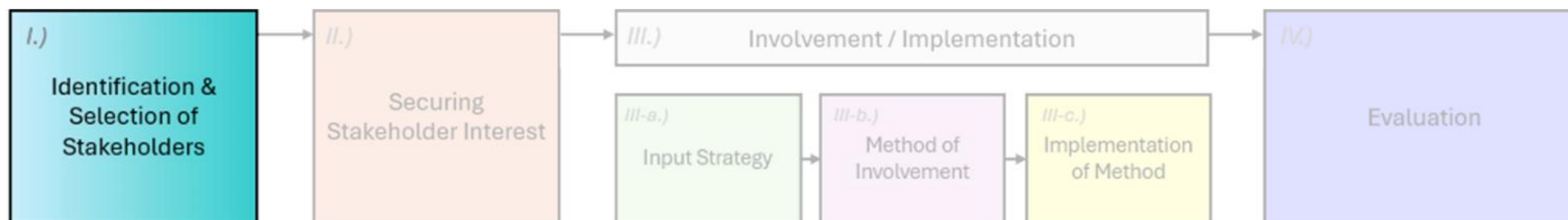
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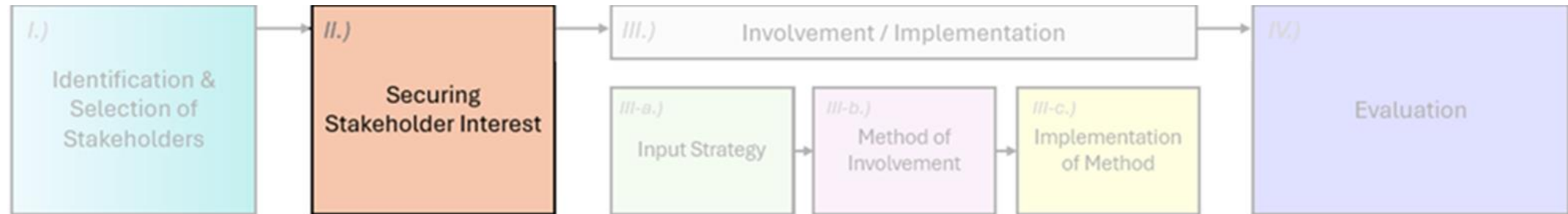
End- users are not selected as stakeholders in the process





User perspective is often not incorporated into the design, resulting in a mismatch with actual use.

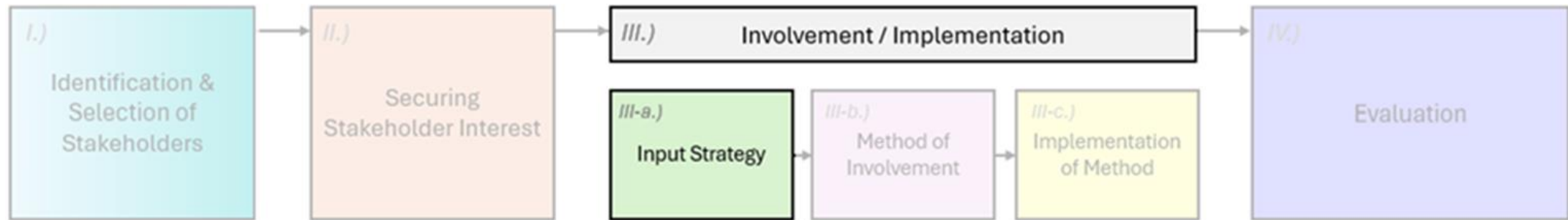
End- users are not willing to participate





User perspective is often not incorporated into the design, resulting in a mismatch with actual use.

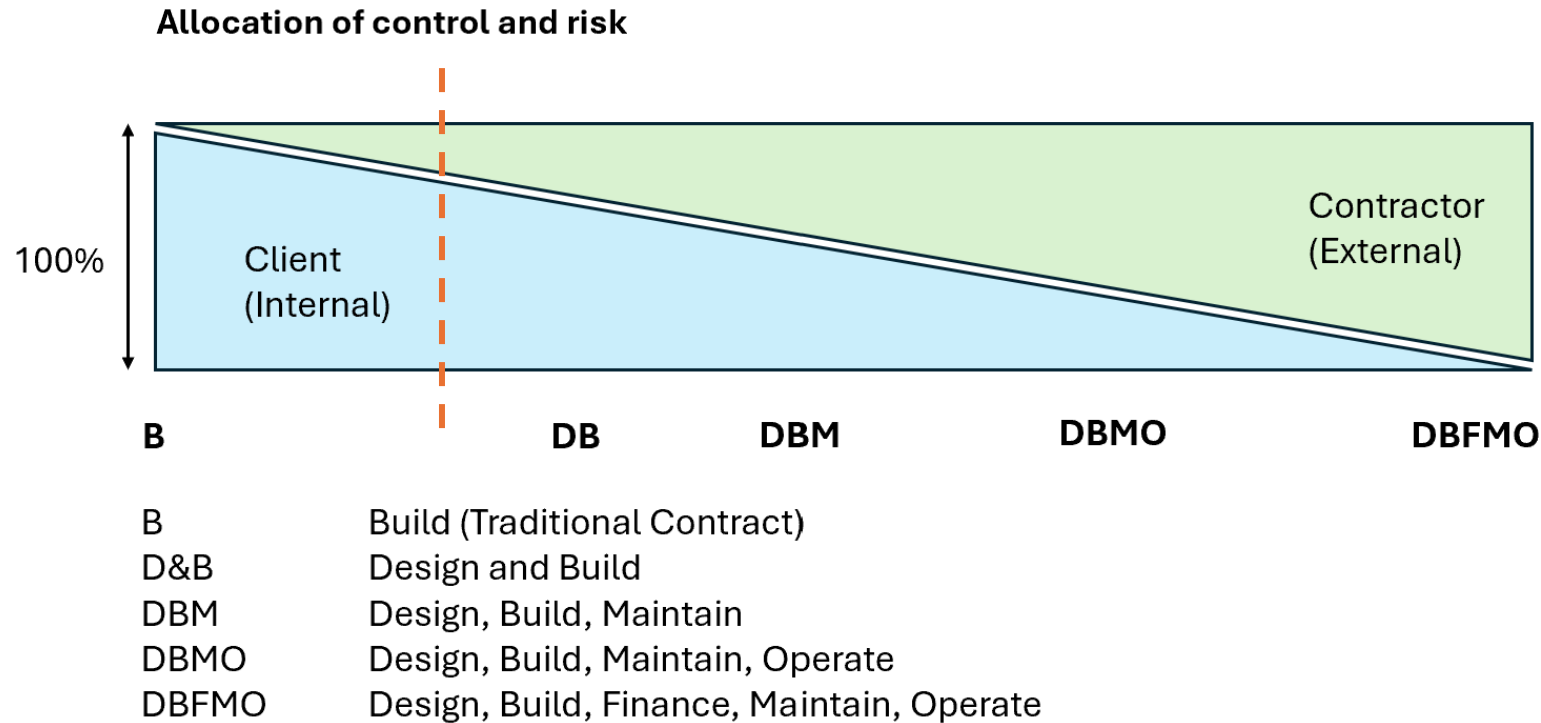
End- users are given a passive role rather than an active role



Optimisation #1: Strive for User-centric Design

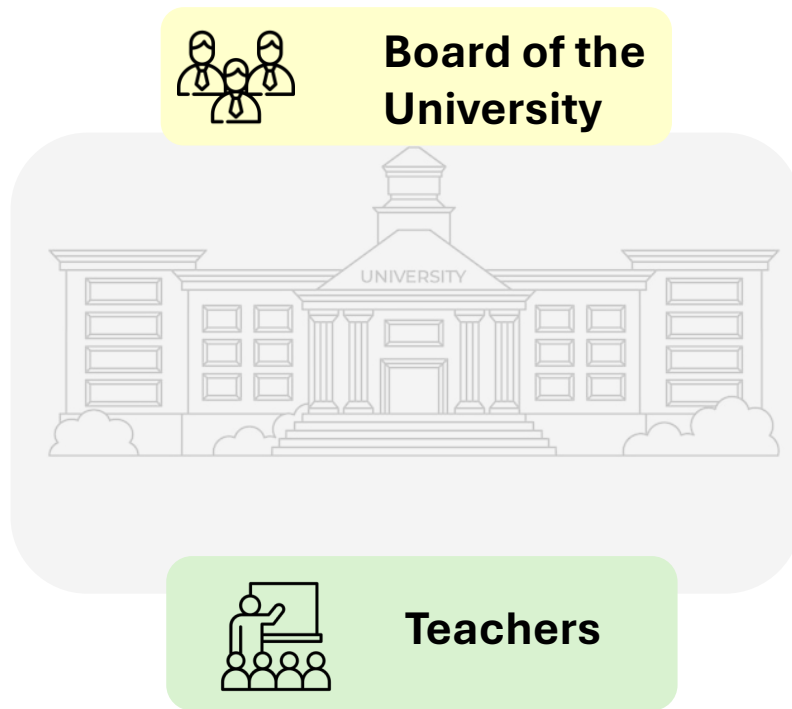


Continuous stakeholder input is constrained by the type of contract chosen.



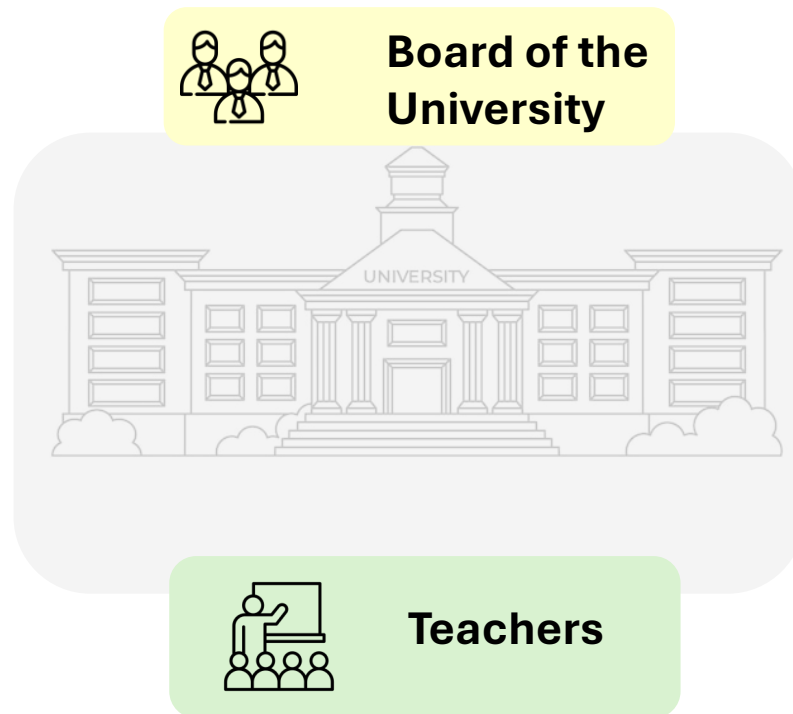
Optimisation #2: Chose for Traditional Building Contracts

*The shift to Active Blended Learning fails due to **lack of institutional embedding***





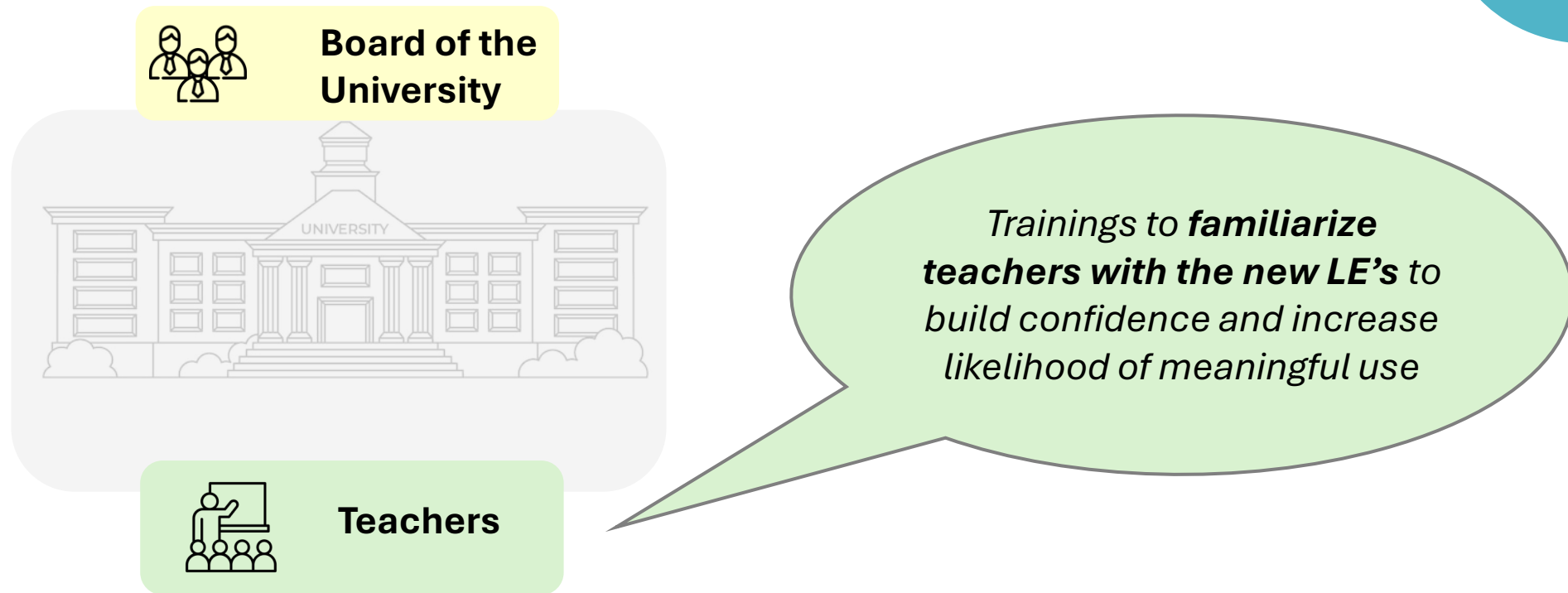
*The shift to Active Blended Learning fails due to **lack of institutional embedding***



Embedding the shift toward
Active Blended Learning
within the university's
institutional organization



The shift to Active Blended Learning fails due to *lack of institutional embedding*



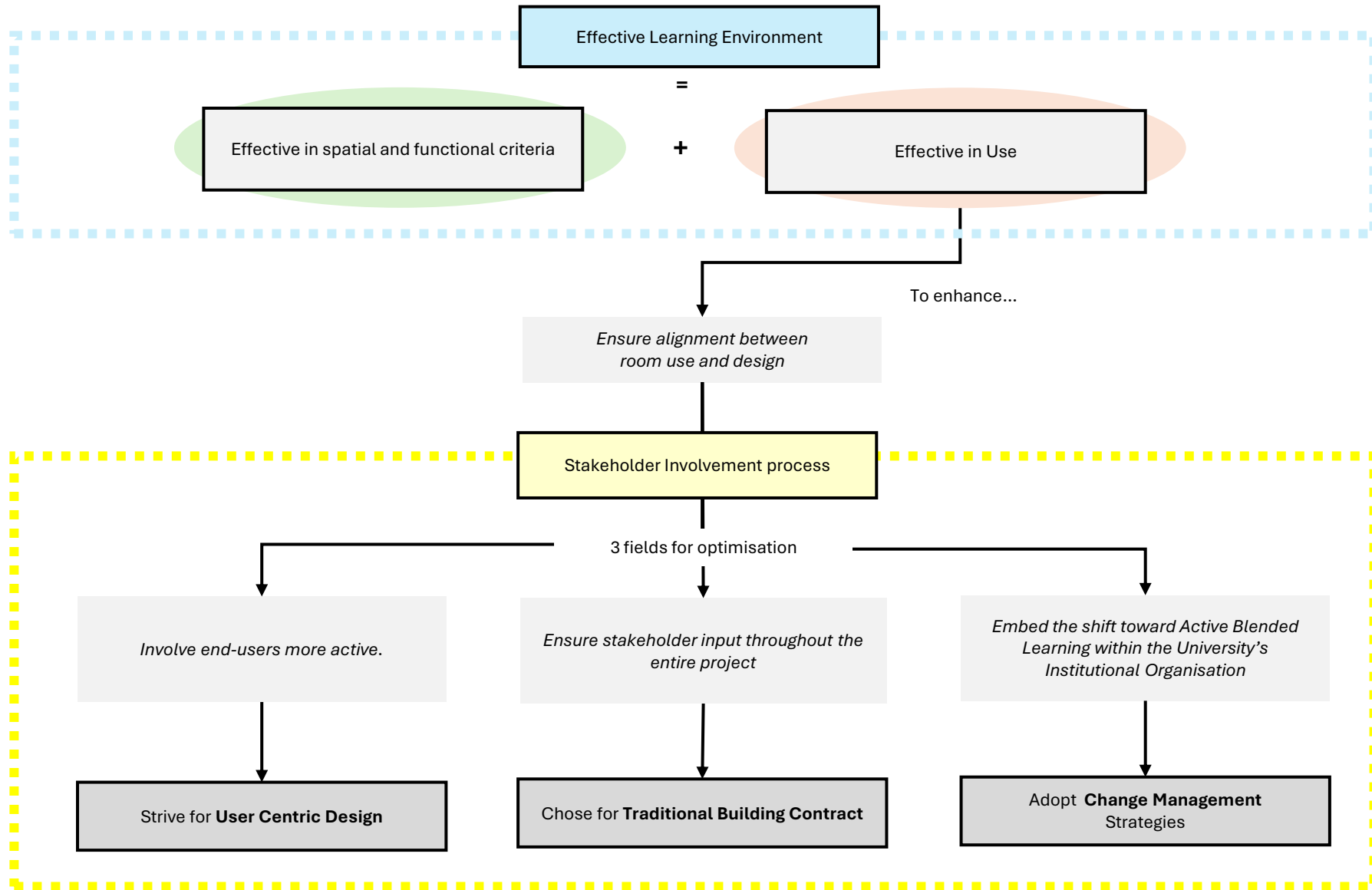
Optimisation #3: Adopt Change Management Strategies

IV



Discussion & Conclusion

*‘How can **stakeholder involvement process** be optimised
in the creation of **effective learning environments** in
university real estate?’*





Limitations & Recommendations

Limitations

1

Limited case availability

Assessed all cases against six blended learning characteristics

2

Difficult access to student participants

Reconstructed perspectives through other interviewees

3

Potential bias from lesson context

Surveys distributed across multiple lessons

Recommendations

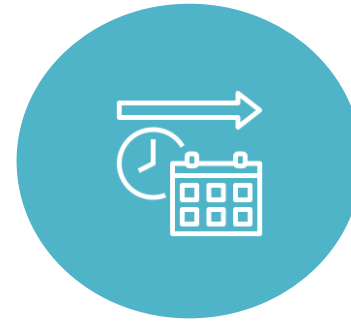
For future research



Another type of
Learning
Environment



Learning
Environments
designed with
User-Centric
Design



Long-term
perspective on
Stakeholder
Involvement
Outcomes

Thank you for your attention!

Are there any questions?



Campus **NL**

