Master Thesis Final Presentation

25 June 2019

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CONTENT

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Picture source

Picture source

Internet of Things (IoT) in Real Estate

Things

Smart Tools

Cloud

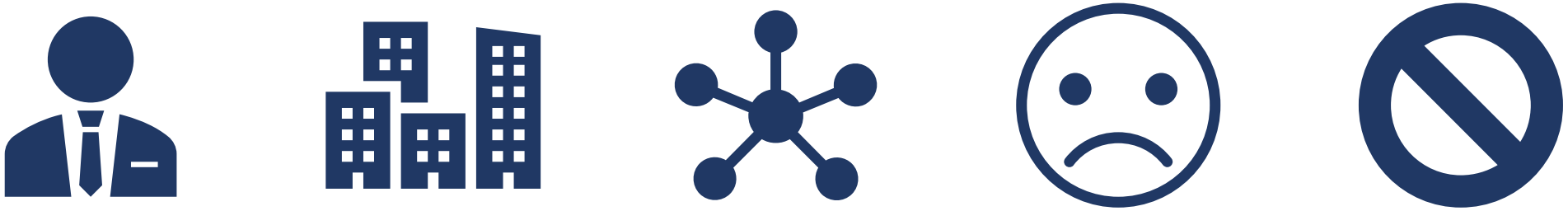
IoT devices

Picture source

Picture source

CONTENT

Paradox of IoT implementation initiative



Strategic change

Internet of Things (IoT) in Real Estate

Designing guideline for office employee-oriented IoT implementation process

CONTENT

GUIDELINE

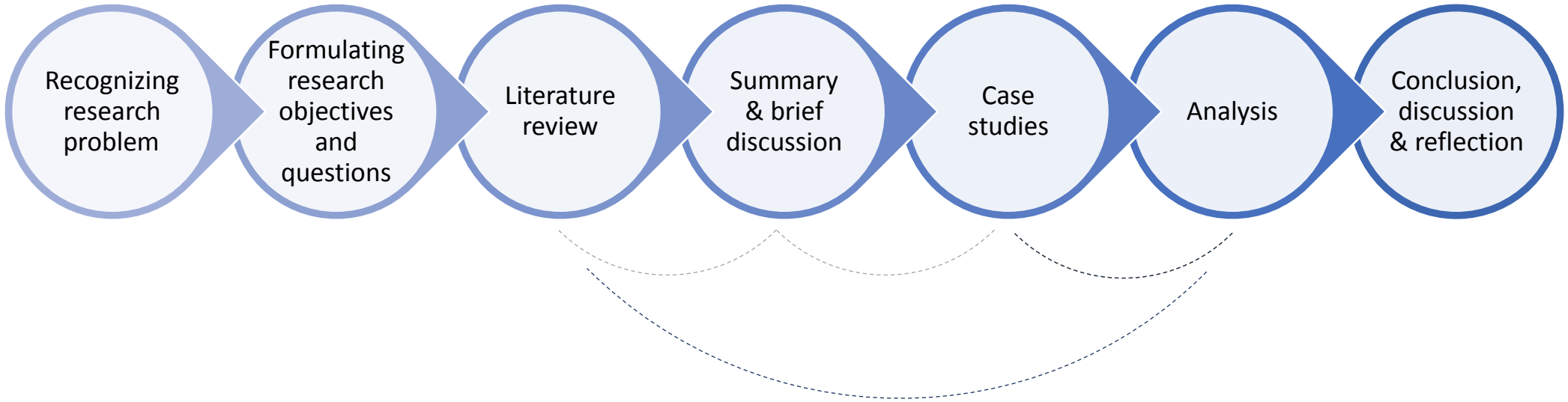
Expand knowledge on adding value to an office employee (end user) due to smart technology implementation

How can Corporate Real Estate Managers (CREM) shape Internet of Things (IoT) implementation initiative which adds value to office employees?

CONTENT

Research methodology

'Understand the meaning or knowledge constructed by people'



Case studies

The CORE

EDGE Olympic

ECORYS

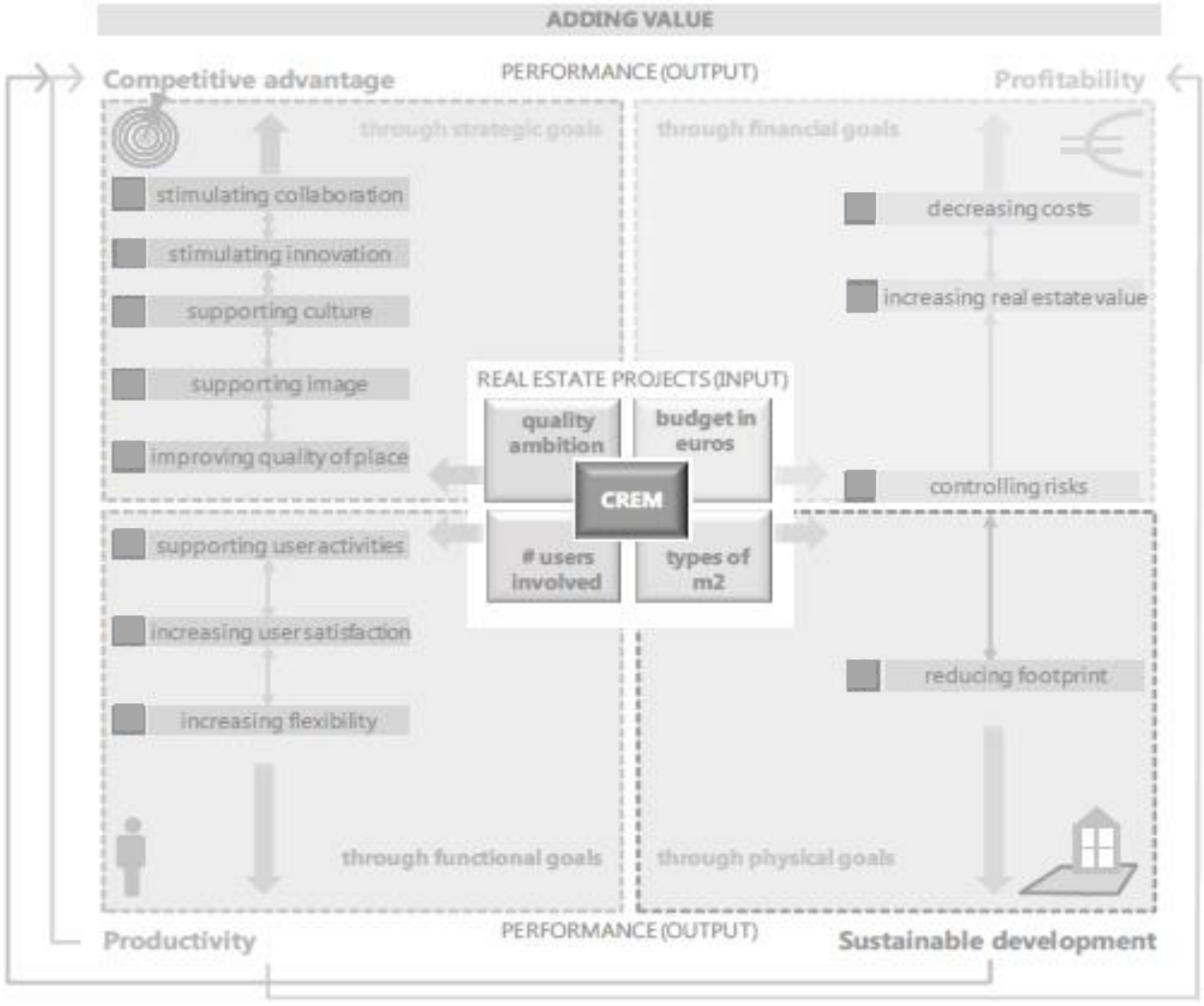
The EDGE

Outlook

CONTENT

Smart technology and the added value

CREM
Added value framework



Added value of the application

Let’s meet EllIoT in a smart office

Video

Application features

Ambient control
- Adjusting temperature
- Adjusting lightening

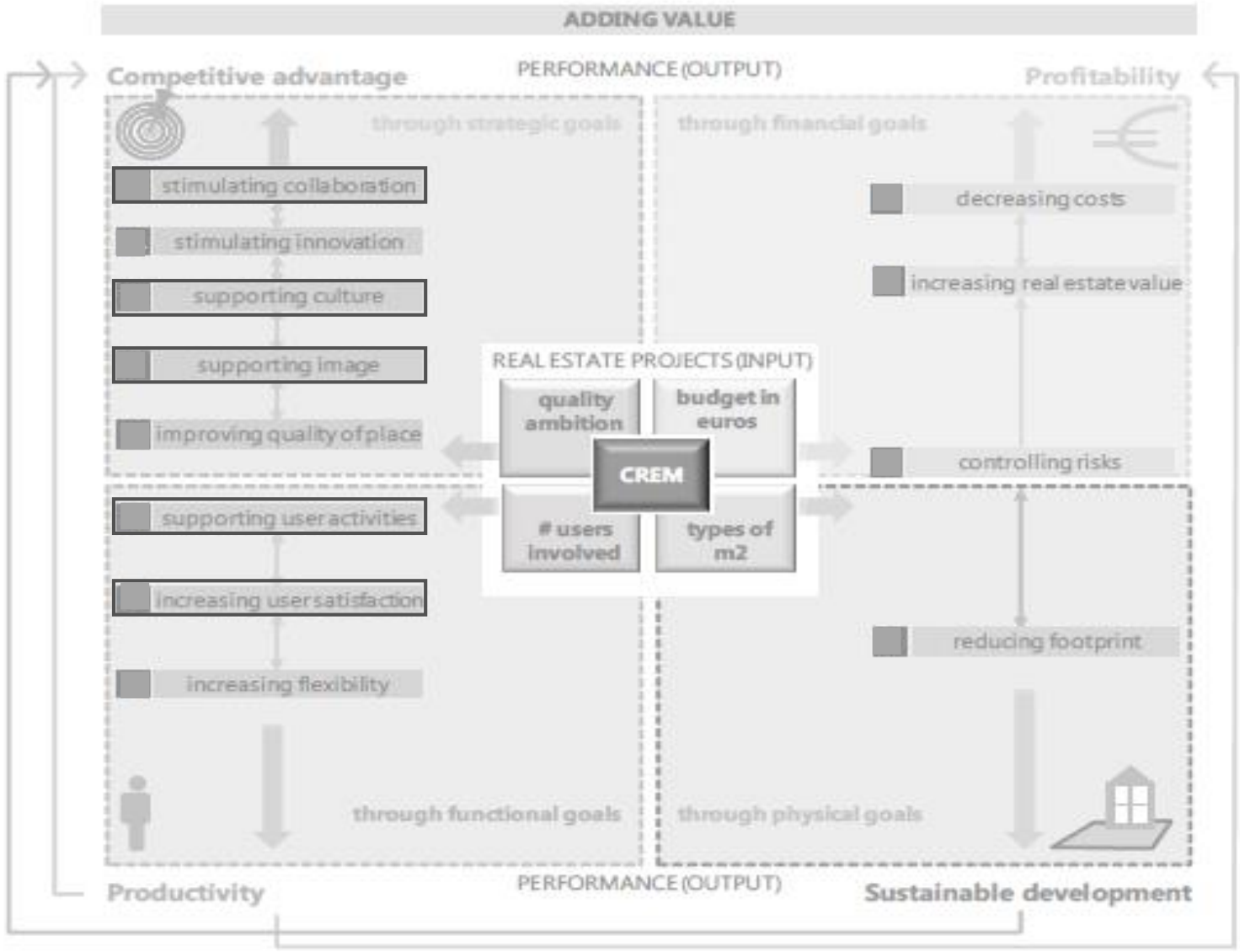
Real time occupancy data
- Desk status (free/occupied/booked)
- Room status (free/occupied/booked)
- No-show communicates

Booking workspaces
- Book a room
- Book a desk

Collaboration features
- Localizing employees/colleague finding
- Communicate (chats/vide calls)

Additional services
- Elevator synchronization (with end user location, after request)
- Parking overview (plots occupancy and wayfinding)
- Smart lockers (lockers occupancy and wayfinding)

Application features added value



Picture source: based on den Heijer, 2011

Added value of the data

Data

Application usage

- Application usage (features recognition)

Workplace

- Desk occupancy
- Room occupancy
- No-shows: booking data + occupancy
- Desk booking
- Room booking
- Noise level (heatmaps)

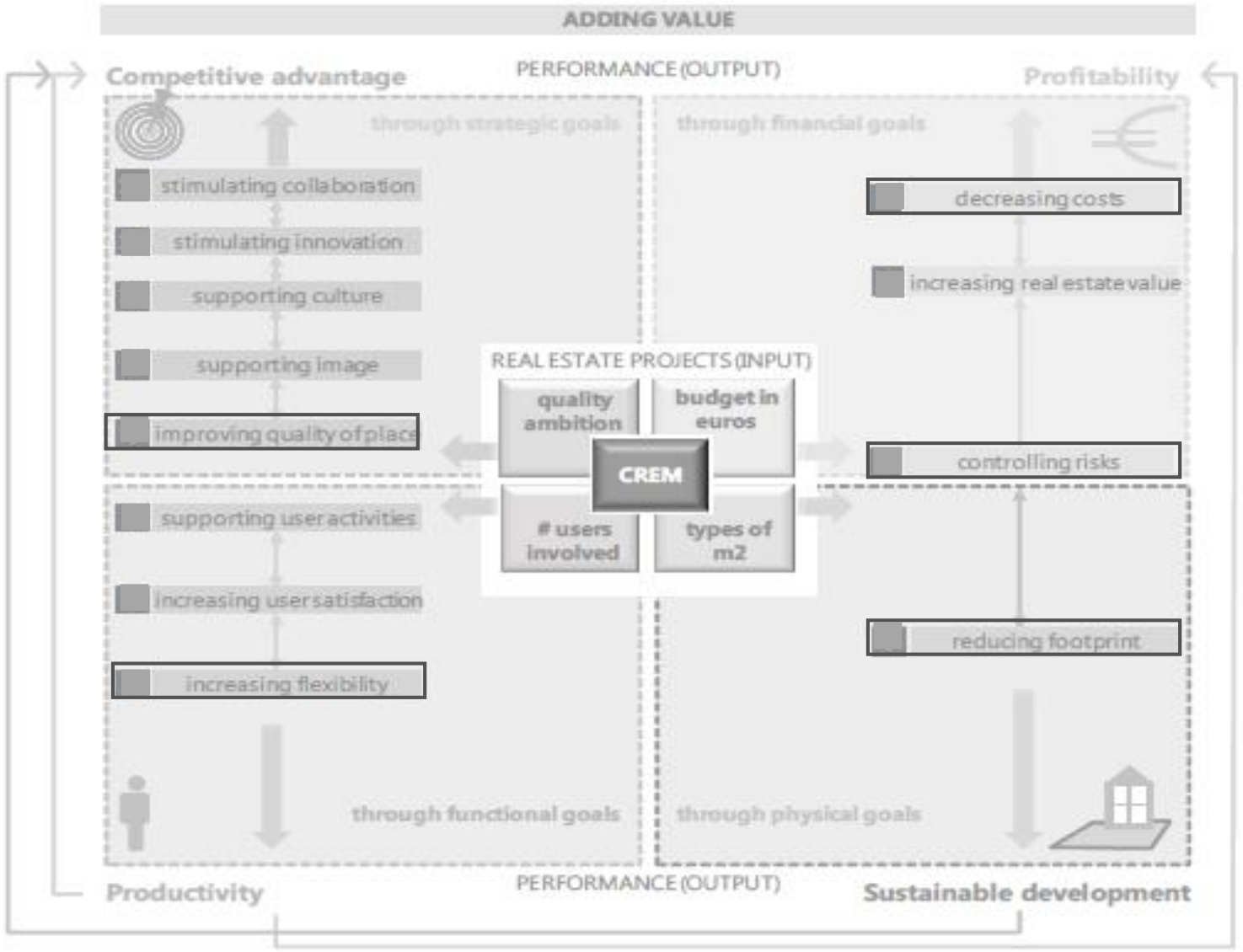
Building performance

- Energy performance
- Building usage monitoring for FM
- Installation monitoring for technical management
- Indoor climate, air quality

Additional occupancy data

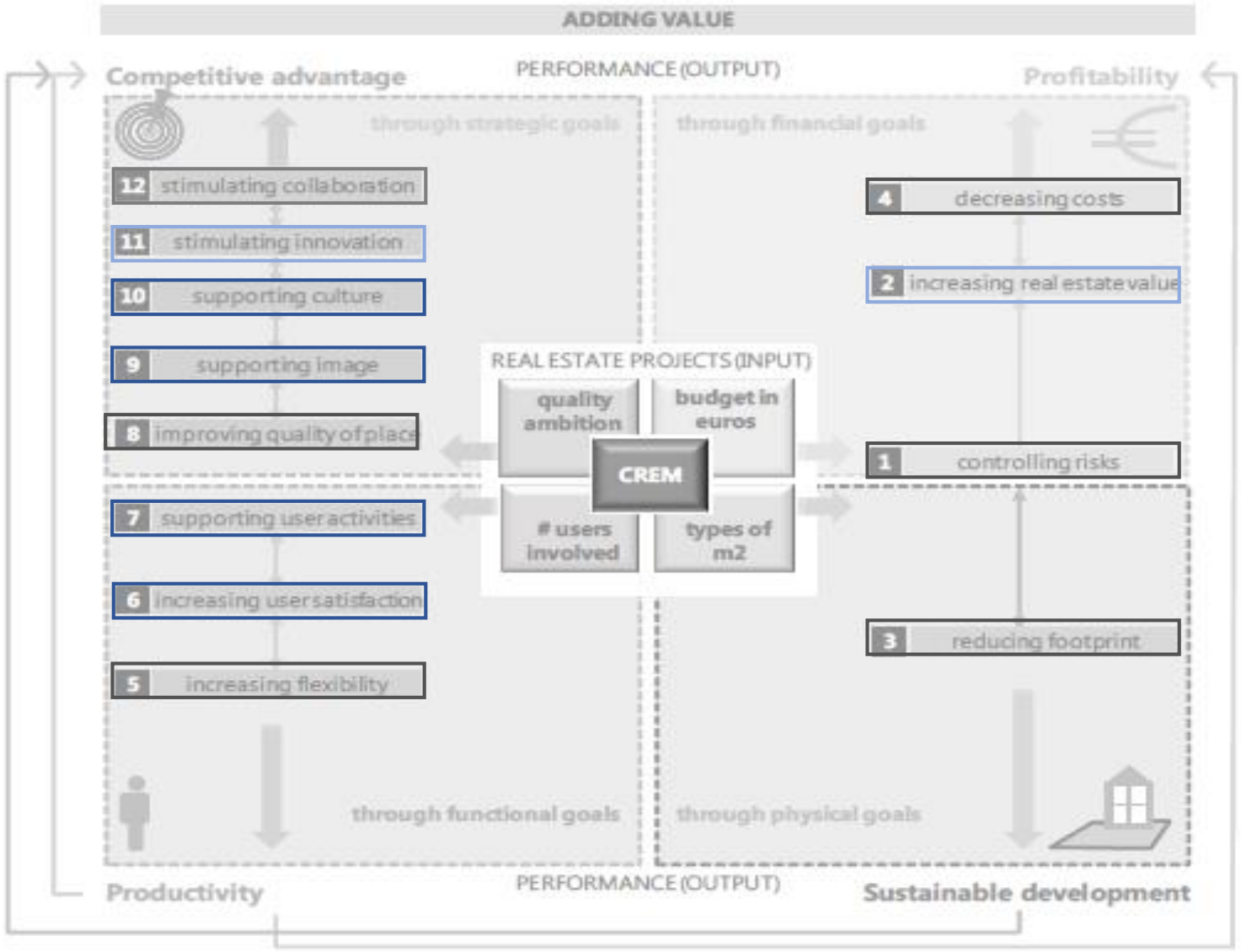
- Hallway occupancy (heatmaps)
- Gym occupancy
- Cafeteria occupancy
- People flow through the building (incl. wayfinding)

Data added value



Picture source: based on den Heijer, 2011

IoT added value



Picture source: based on den Heijer, 2011

CONTENT

IoT implementation process: phases

Strategy & planning

Deployment

Organizational support

IoT implementation process: actors

IoT implementation process: barriers

Lack of strategic vision

Data security

Privacy concerns

Technical issues

Application quality, control over privacy settings

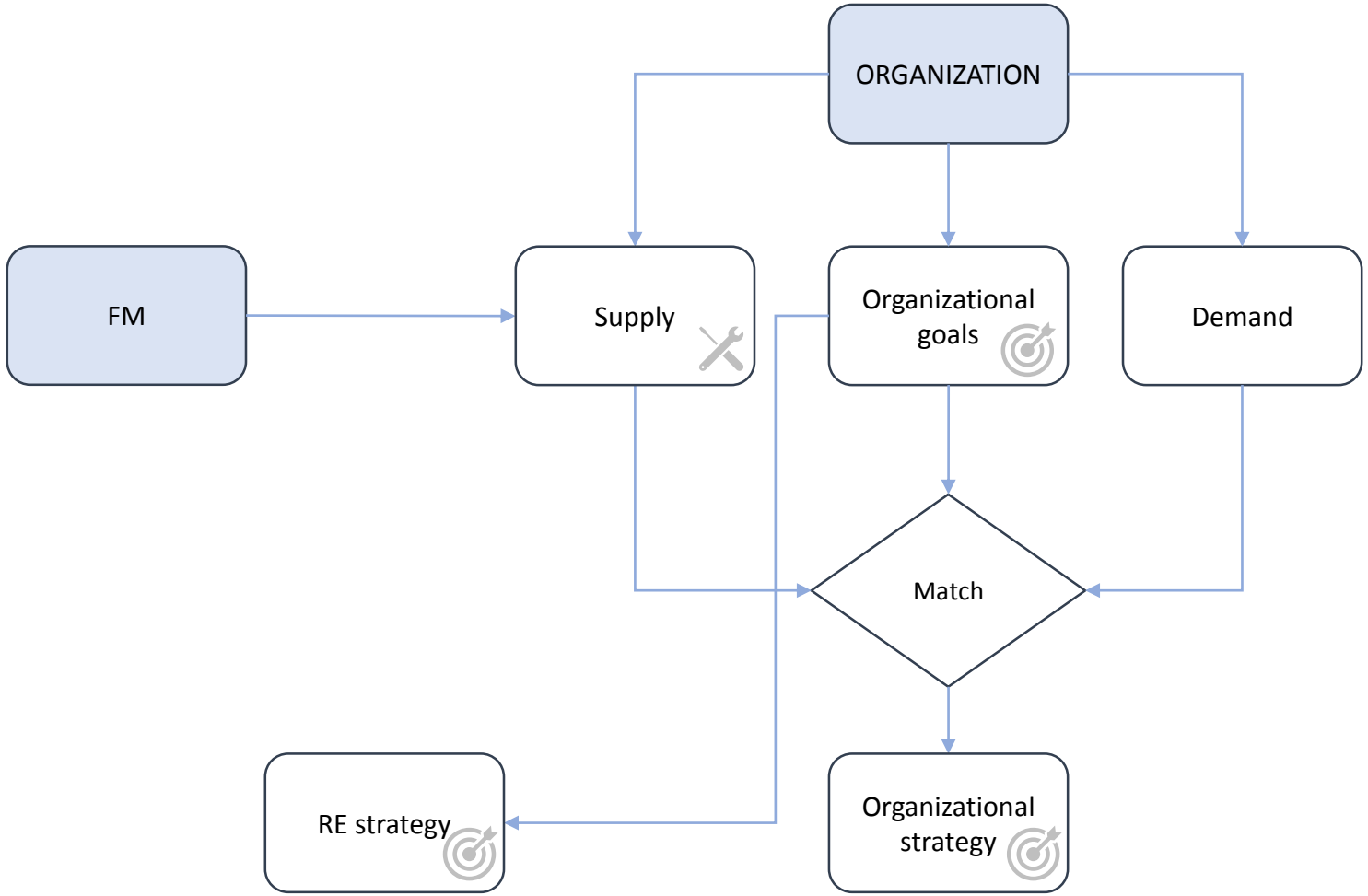
Ensuring direct feedback

Internal communication, role's division

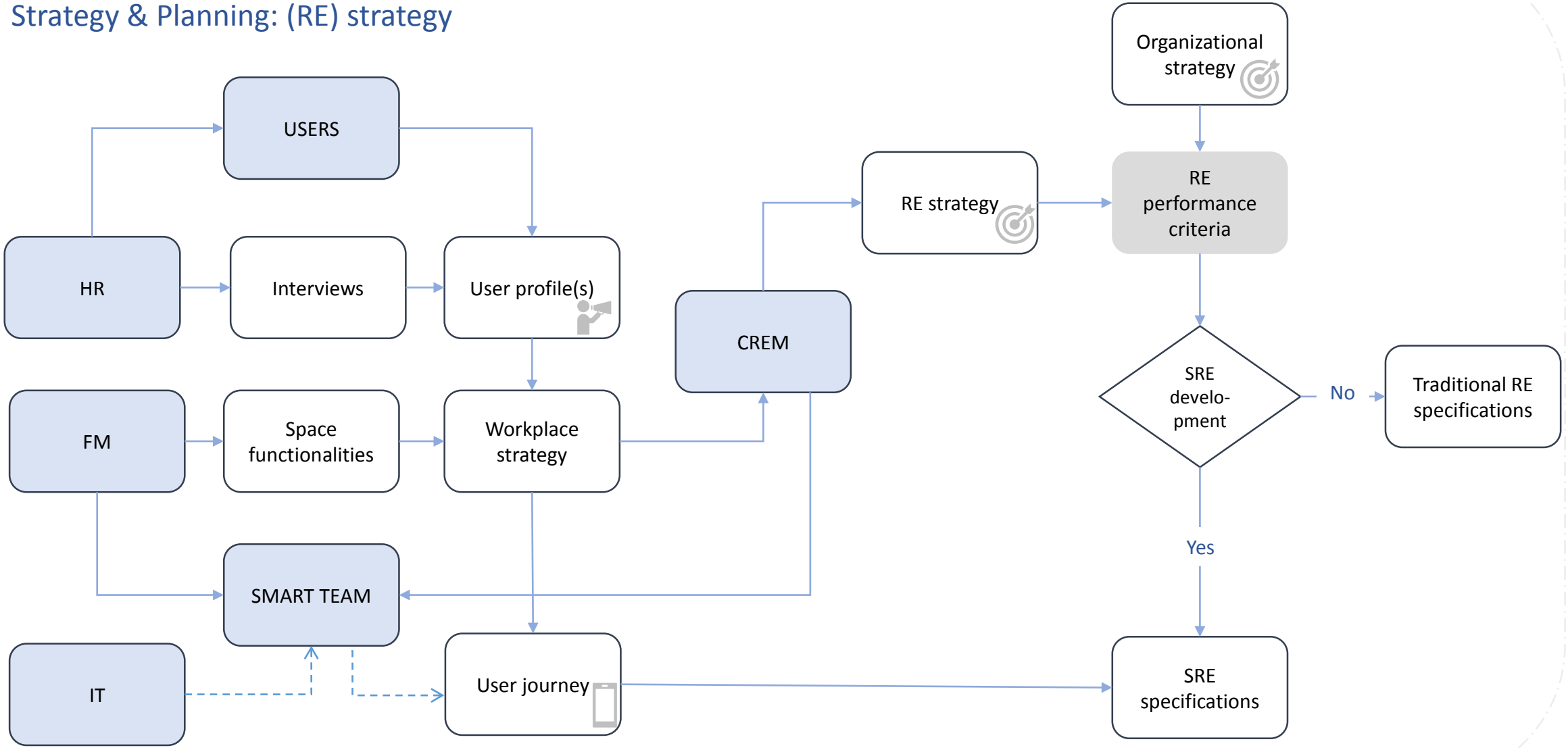
Scaling up: handing over the app

Process design

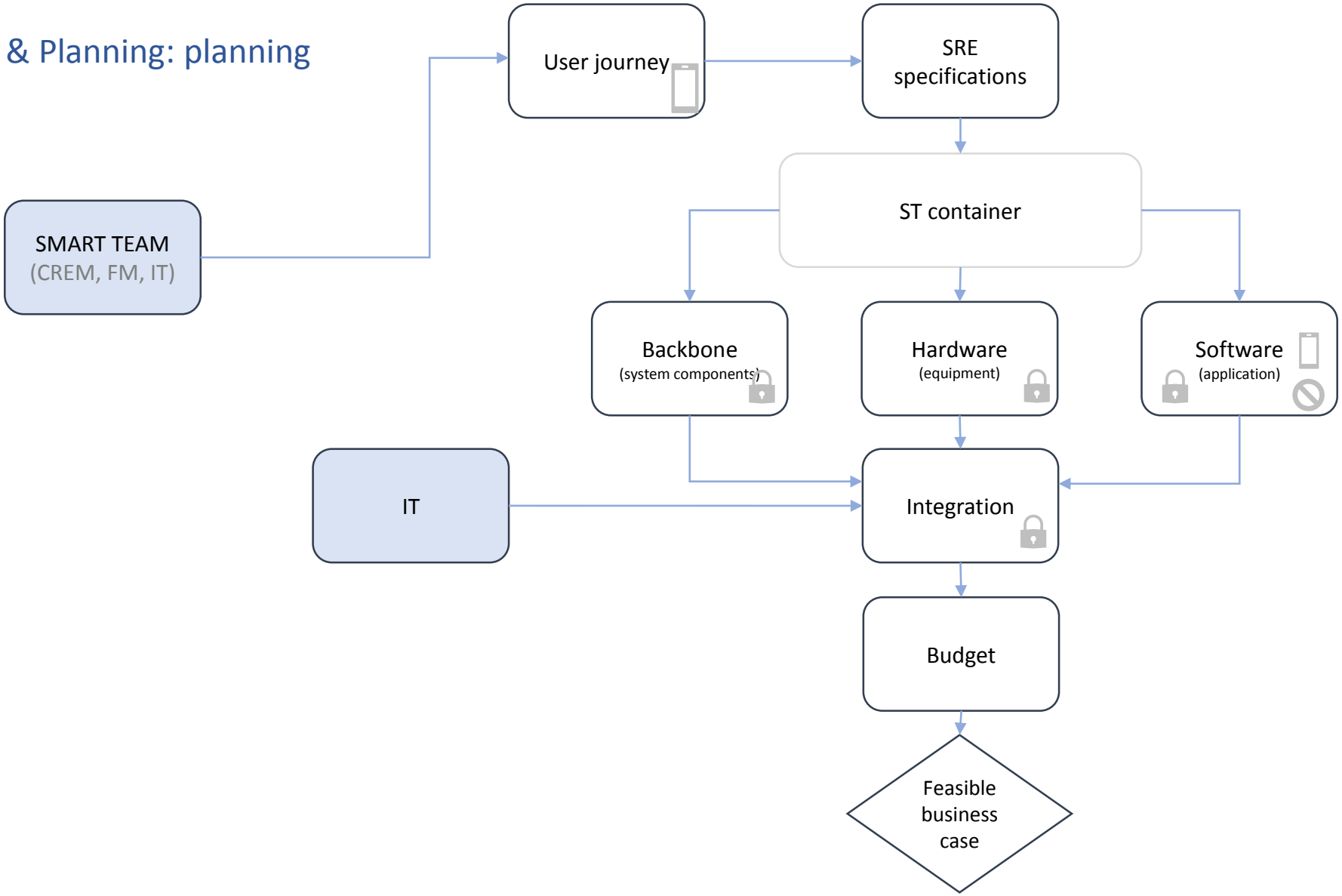
Strategy & Planning: (organizational) strategy



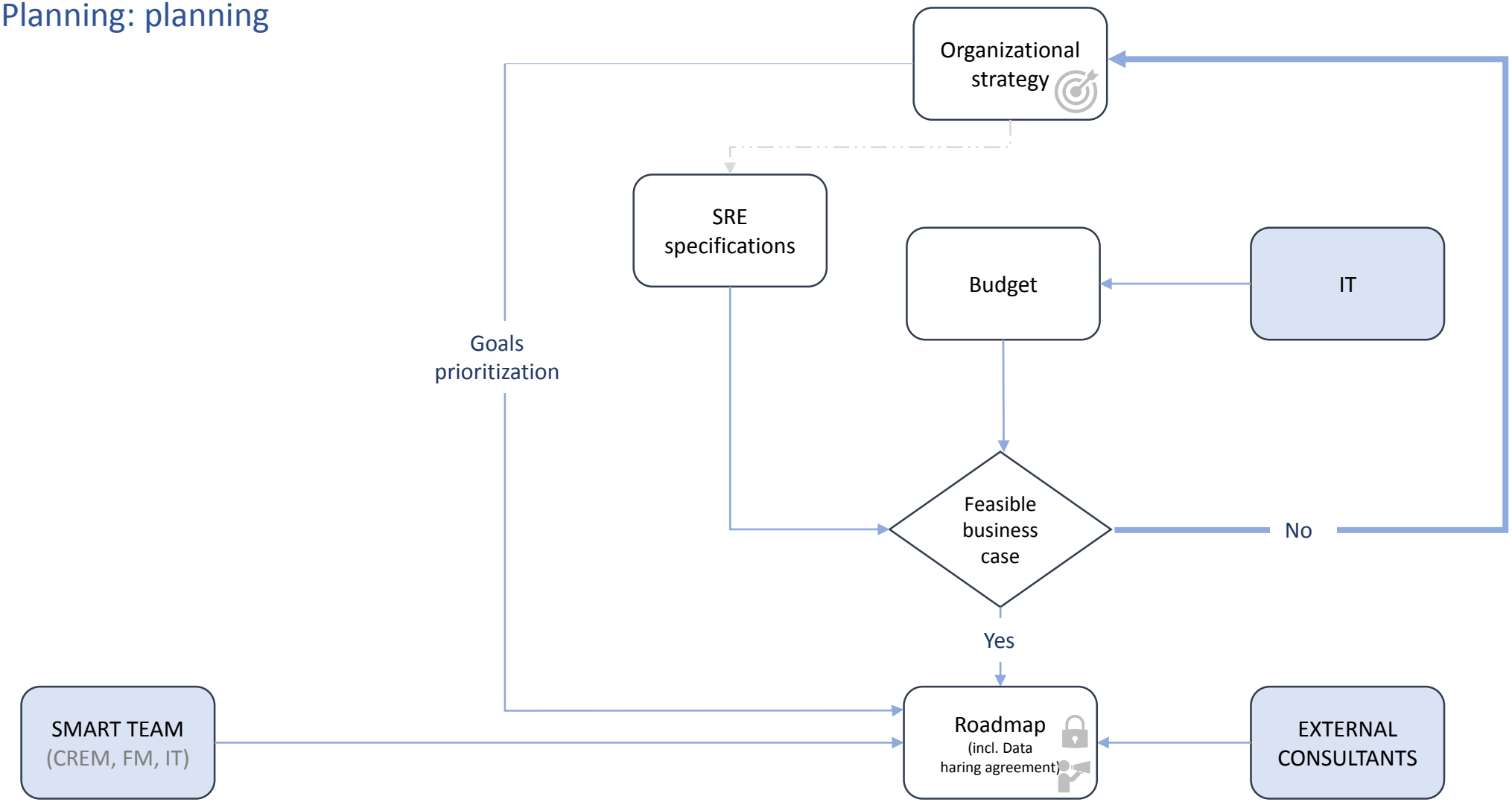
Strategy & Planning: (RE) strategy



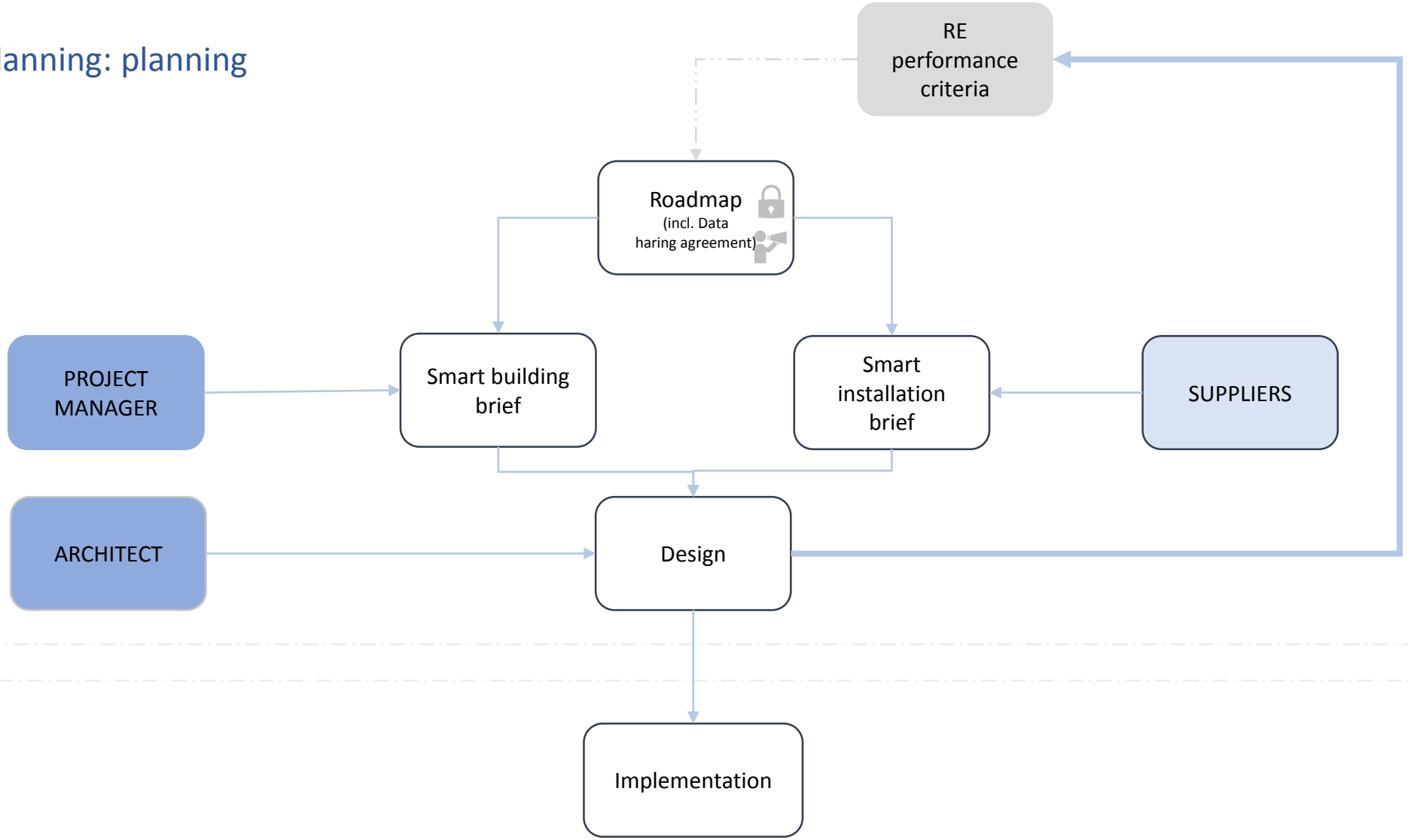
Strategy & Planning: planning



Strategy & Planning: planning

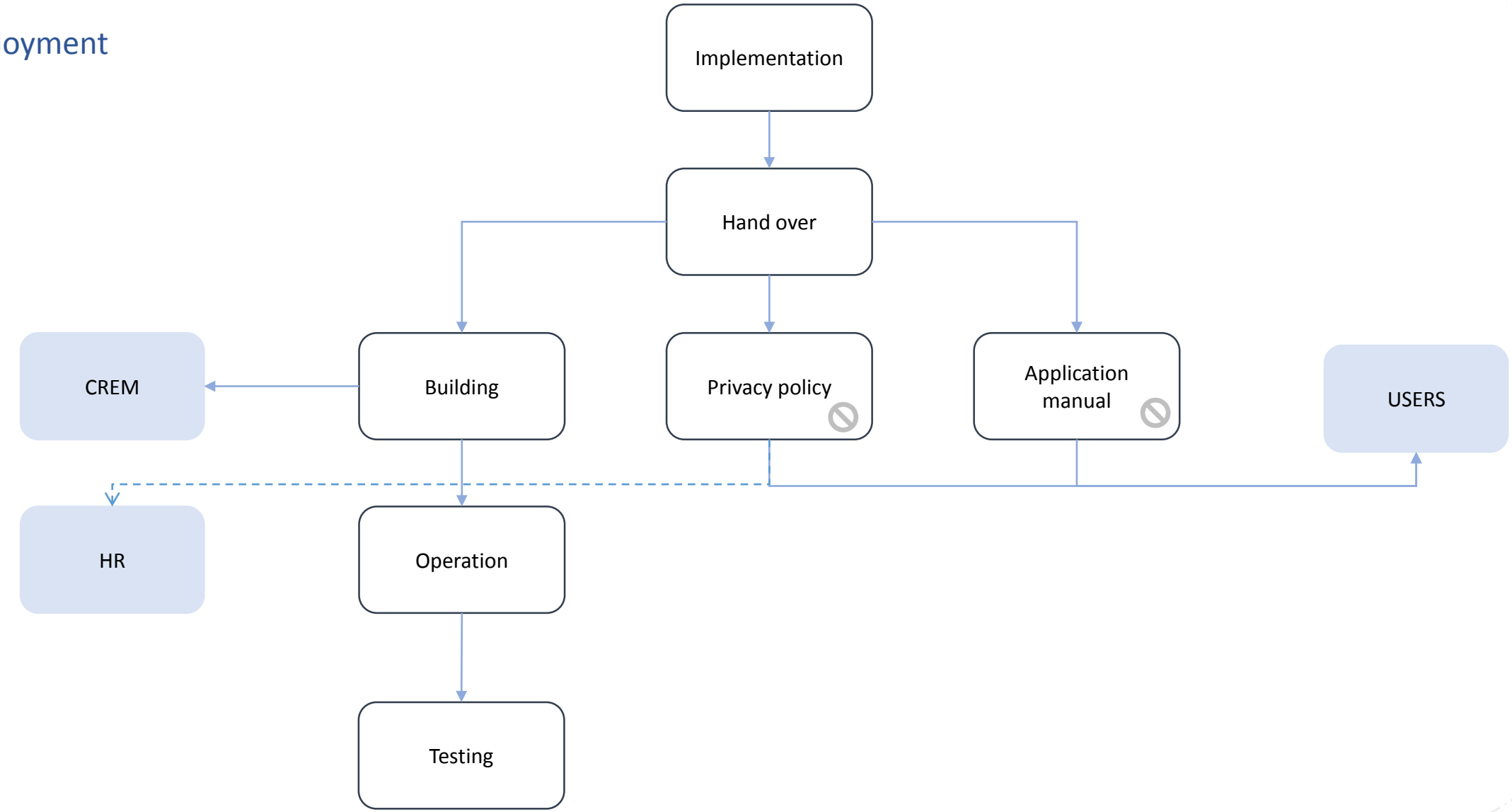


Strategy & Planning: planning

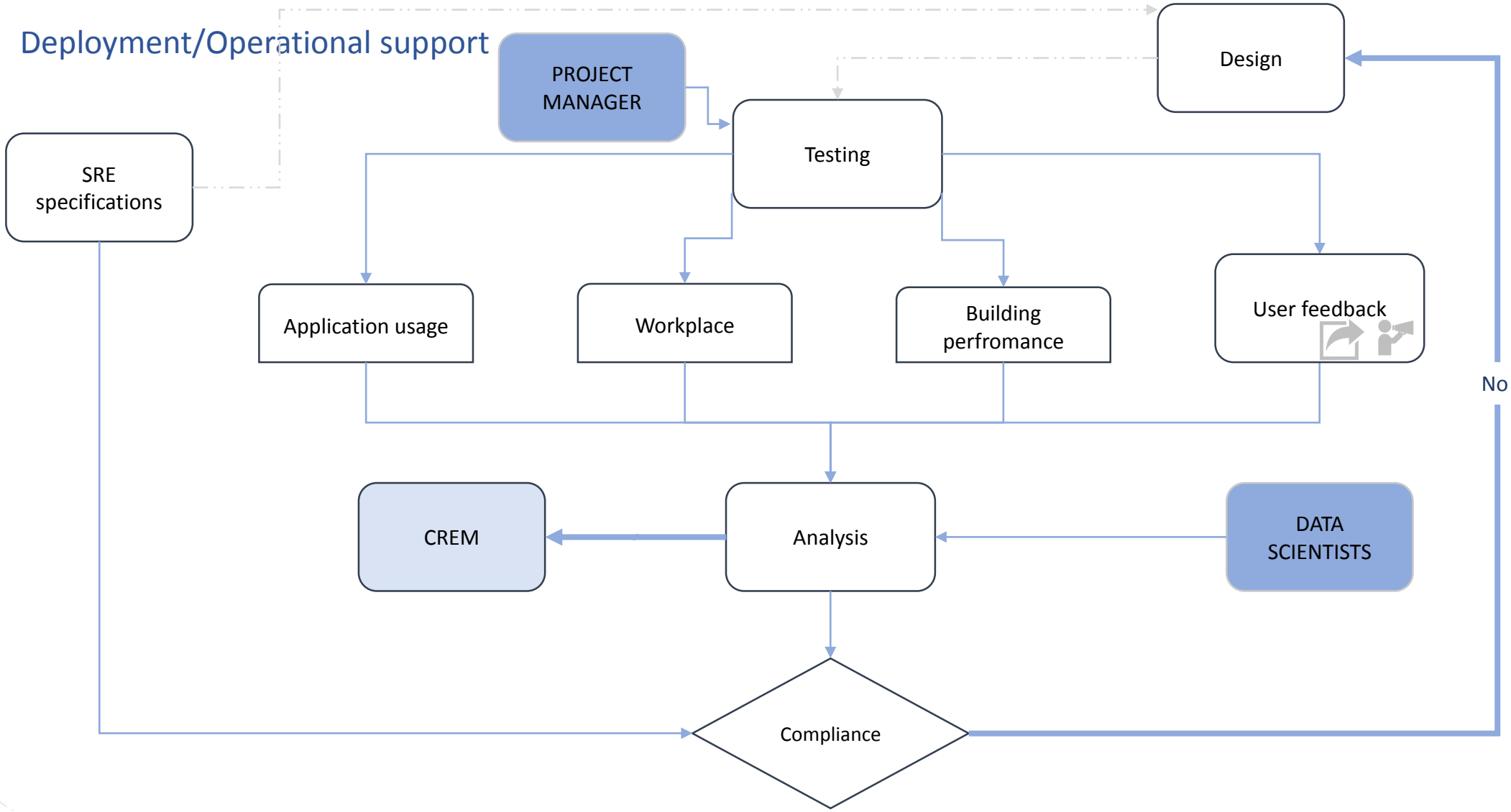


Deployment

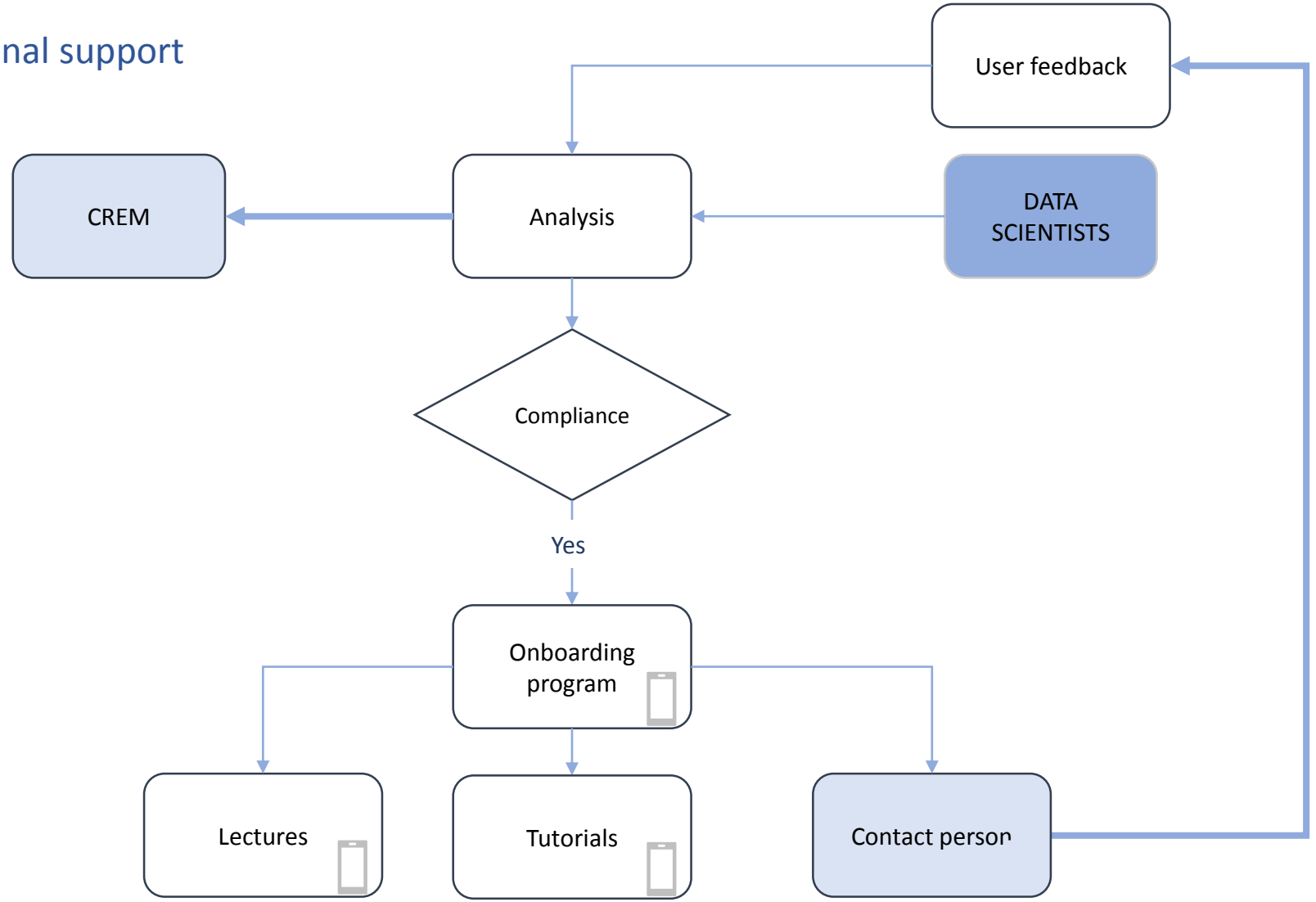
Deployment


Implementation
Hand over
CREM
Building
Privacy policy
Application manual
USERS
HR
Operation
Testing

Deployment/Operational support



Deployment/Operational support

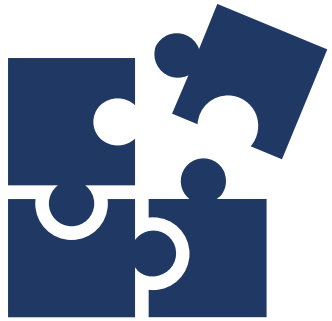


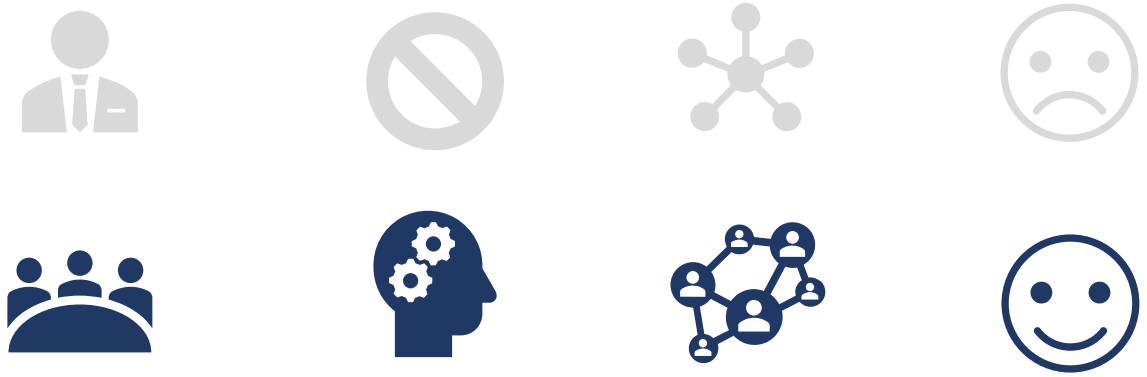
CONTENT

How can Corporate Real Estate Managers (CREM) shape Internet of Things (IoT) implementation initiative which adds value to office employees?

- Follow the IoT implementation process framework,
- Implement the comprehensive IoT concept.

Research relevance





Recommendations for further research

- Scientifically defining the DIRECT added value of specific data to 4 different CREM perspectives
- Applying and testing the IoT implementation process framework

CONTENT

- Smart RE Tools graduation lab: new direction
- Research methodology:
    - Clear research objectives
    - Explorative character
    - Interviewees selection
- Research disseminations
- Graduation internship
- Practice observation – early adopters
- About the last year

Thank you for your attention

Please address you questions