



SMART ENERGY COMMUNITY

VOOR WONINGEN EN
BEDRIJFSGEBOUWEN

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Smart Building Engineer

 **Deerns**

Deerns SMART BUILDING ASSESSMENT



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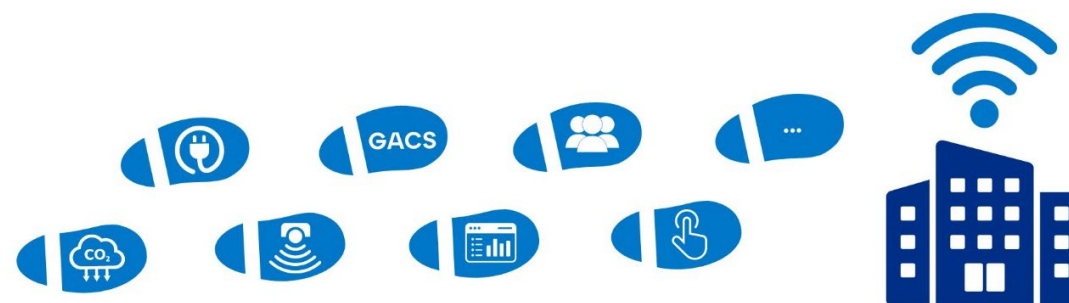
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Why Smart Buildings ?

There are currently many reasons to improve your real estate



- Sustainability (Law and regulations)
- High energy prices
- Employee shortage
- Focus on health & wellbeing
- Changing to a new way of working
- Wanting to improve operations
- Resilient and futureproof building
- Accountability (& reporting) of businesses [ESG]



Smart Buildings is not a goal but a journey !





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Why Smart Buildings ?

There are currently



• Sustain



• High c



• Emplc



• Focus

• Chang



• Wanti

• Resilient and futureproof building

• Accountability (& reporting) of businesses [ESG]

Poll question: Barriers to Smart Building Assessment

"What do you think is the main challenge in conducting a comprehensive smart building assessment?"

- A) Availability of accurate technical documentation
- B) Access to reliable on-site inspections
- C) Engagement and cooperation of building technicians
- D) Defining clear ambitions and goals
- E) Cost and time required for the assessment



Goal but a journey !





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Begin the journey with Deerns Smart Building Assessment

Composed of four layers

1. Assessment on each domain

Assess the current level of each domain

2. Define Ambition

Define the ambition for each domain

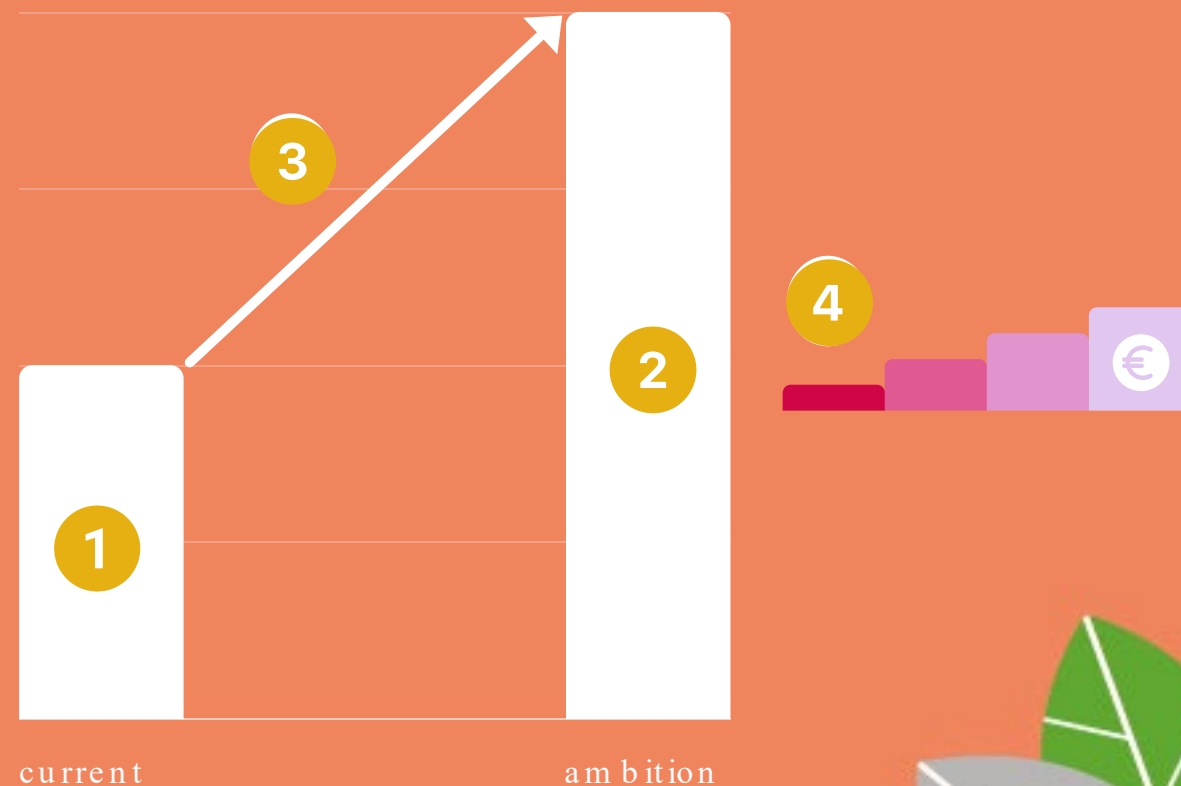
3. Gap Analysis & Building Upgrade Plan

Define the gap between current and desired level & the interventions to reach the desired level

4. Cost Analysis

Investment needed for the interventions

smart building level





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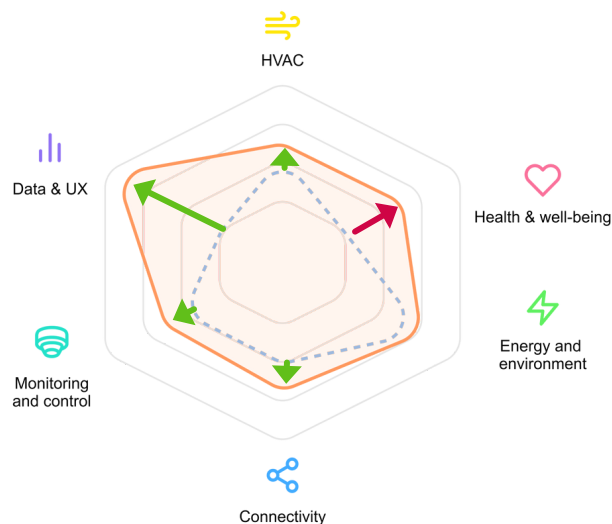
What is the Deerns Smart Building Assessment

- **6 domains**

- HVAC
- Health and wellbeing
- Energy and environment
- Connectivity
- Monitoring and control
- Data & User experience

- **~80 smart building check items**

- **4 levels**



- Current level
- Am b ition
- ex: Upgrade BMS
- ex: AirQ sensors

Report with documented and visualized

- Current status of asset
- Smart ambitions for the asset
- Cost analysis of the ambition

Smart Building strategy / blueprint Portfolio investment

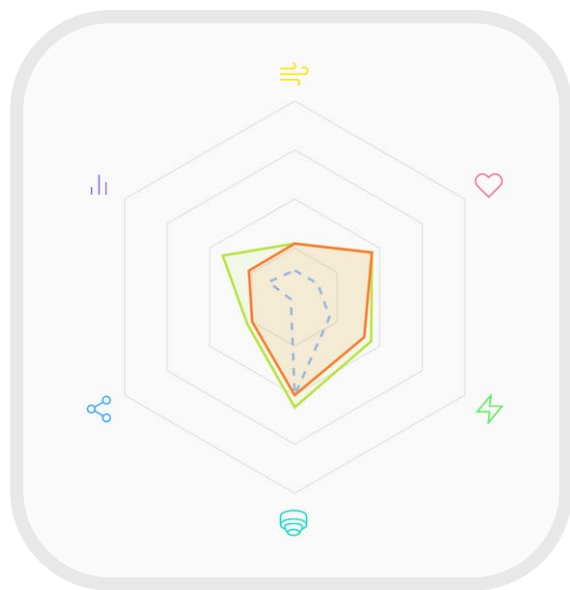




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Old Office Building Assessment



Domain	Current status	Budget specific	Maximum achievable
HVAC	0.5	1.1	1.1
Health & Wellbeing	0.5	1.8	1.8
Energy & Environment	0.8	1.6	1.8
Monitoring & Control	2.0	2.0	2.3
Connectivity	0.1	1.0	1.1
Data & UX	0.6	1.1	1.7

Current status

Based on the building documents, site-visit, interview with building technician

Budget Specific

Based on building owner ambitions → Deerns can help define these with (user) workshops

Maximum Achievable





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Deerns Smart Building Assessment & EU Smart Readiness Indicator

The SB Assessment follows the SRI plus extra items

The below domains prove a valuable addition when designing and developing a smart building



1. IT and IoT infrastructure domain

- Critical for a Smart Building
- Enables to prepare a **smart ready building**, capable of supporting and integrating different smart building technologies.



2. Data and User experience domain

- The questions target the expectations of occupants of the building.
- Enhances building performance insights and provides actionable insights for owners and operators



3. Tenant focused questions

- Space management tools, water submetering, gas submetering, are recommended to bring the users of the building onboard for achieving the full efficiency of a smart building.
- Improves transparency, sustainability, occupant satisfaction, accountability.





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More questions ?

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