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Supplemental data

Appendix A: Interview template

Value creation from environmental certification for buildings

General follow-up questions

Can you be specific?

Can you illustrate with an example?

In what way?

Building and choice of environmental certification system

- a) Name of building/buildings:
- b) According to what system is the building certified?

Motive, drivers and strategies

- a) The motive for environmental certification – level/certification/environmental initiative?
- b) Organisational level of decisions:
 - Which people drove the question internally/externally?
- c) Strategy/motive for choice of system?
- d) Different systems for different types of buildings? Flagship buildings or all buildings?
- e) Strategy change/development through time?

Value creation: Expectations and results

- a) Which areas for value creation did you expect when you made the decision to certify/include environmental measures?
- b) What benefits, results or areas for value creation were realised?
- c) Are there certain areas for value creation that will persist in time, and others that will diminish quickly?
- d) What connections do you see between value creation and specific environmental measures/the certification itself?

Communication about the building's environmental certification and the organisations environmental initiatives?

- a) Did you include the building's environmental certification/measures in an active communication strategy? Please describe!
- b) To which target group(s)? (for existing and potential clients, local authority, investors, property valuers, internally in the organization)
- c) How were the results of the communication? Was there a connection to a specific environmental measure?

Future areas for value creation

- a) What should affect/justify/drive questions of environmental certification in the future?
- b) What sort of areas for value creation from environmental certification do you see in five years, 10 years?

Examples for support in interviews

1. "economic" value creation:
 - Increased income or reduced costs?
 - Building development cost or purchase cost?
 - Operating costs?
 - Did you expect to recoup increased costs?
 - Results
2. Credibility/public relations/branding
3. Environmental awareness and expertise
 - How is knowledge/expertise/awareness affected in the organisation/amongst employees
4. Attracting and retaining staff
5. Value creation in relation to other actors
 - Examples of advantages in relations with others. E.g. tenants, local authority, investors, internally in the company or others.
6. New technology
 - Have you developed new technology?
7. Sustainability initiatives?
 - Have your sustainability initiatives been strengthened?
8. Environmental management system
 - Has the certification contributed to improved results in the environmental management system?
9. Other areas for value creation from environmentally certified buildings/environmental measures
10. Had you expected other areas for value creation?

Appendix B: Questionnaire survey questions

Financial parameters and factors directly influencing them

1. Were you/your organisation developer for the building in question?

Yes	
No	

Rubric: When we ask about different areas for value creation through environmental certification and environmental measures, please make your judgement by comparing the current building with an otherwise similar building without environmental certification and special environmental measures.

2. (For those answering YES to question 1) In your experience, what effect did the building's environmental certification/environmental measures have on the total project cost for developing the building in question?

	Much lower (>10%)	Lower (1 – 10%)	No noticeable difference	Higher (1 – 10%)	Much higher (>10%)	Don't know
Project cost was...						

Comments on this question:

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3. (For those answering NO to question 1) In your experience, what effect did the building's environmental certification/environmental measures have on the building's purchase cost?

	Much lower (>10 %)	Lower (1 – 10%)	No noticeable difference	Higher (1 – 10%)	Much higher (>10%)	Don't know
Purchase cost was...						

Comments on this question:

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For the following 5 questions in this section, we ask you to consider two time perspectives:

- Short term: i.e. now and the next year
- Long term: i.e. a timespan important when considering the economic performance of the building, though at least 10 years from now

4. In your experience what effect did the building's environmental certification/environmental measures have on the *rental rate* (kr/m²)?

	Reduction by more than 10%	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know
<i>Short term</i>						
<i>Long term</i>						

Comments on this question:

5. In your experience, what effect did the building's environmental certification/environmental measures have on the vacancy rate?

	Reduction by more than 10%	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know
<i>Short term</i>						
<i>Long term</i>						

Comments on this question:

6. In your experience what effect did the building's environmental certification/environmental measures have on tenant fit-out costs?

	Reduction by more than 10 %	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know
<i>Short term</i>						
<i>Long term</i>						

Comments on this question:

7. In your experience what effect did the building's environmental certification/environmental measures have on energy costs?

	Reduction by more than 25%	Reduction by up to 25%	No noticeable difference	Increase by up to 25%	Increase by more than 25%	Don't know
<i>Short term</i>						
<i>Long term</i>						

Comments on this question:

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8. In your experience what effect did the building's environmental certification/environmental measures have on other ongoing operation and maintenance costs?

	Reduction by more than 10%	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know
<i>Short term</i>						
<i>Long term</i>						

Comments on this question:

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9. What effect do you believe the building's environmental certification/environmental measures may have on future renovation and rebuilding costs?

	Reduction by more than 10%	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know
<i>Long term only</i>						

Comments on this question:

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10. What effect do you believe the building's environmental certification/environmental measures may have on sale price in a hypothetical future transaction?

	Reduction by more than 10 %	Reduction by up to 10%	No noticeable difference	Increase by up to 10%	Increase by more than 10%	Don't know

Comments on this question:

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11. How do you believe the building's environmental certification/environmental measures may affect time-on-market in a hypothetical future transaction?

	Large increase	Increase	No noticeable difference	Decrease	Large decrease	Don't know

Comments on this question:

Relations with other stakeholders

12. To what extent has the fact that the building is environmentally certified been advantageous in relations with...

	Not particularly advantageous	Advantageous	Don't know
Tenants (and potential future tenants)			
Municipal authority (for example through development rights, planning regulations, energy plant etc.)			
Investors (for example funds and similar)			
Internally in the company			

Comments on this question:

13. In your experience how did the building's environmental certification/environmental measures affect...

	Not at all	Somewhat	Greatly	Don't know
...environmental awareness and expertise amongst employees?				
...The company's credibility and brand in environmental issues?				
... The company's ability to attract and retain competent staff?				

Comments on this question:

Separate environmental measures

14. How important are the following specific environmental measures for value creation?

	Not important for value creation	Important for value creation	Very important for value creation	Don't know	Not relevant for the building in question
Local renewable energy production (on the property)					
Energy and environmental management system/plan					
Information and education for building users about how to reduce energy demand					
Technology for user control of indoor environment and energy demand					
Other advanced control technology for mechanical and electrical installations					
Energy efficient climate envelope/mechanical and electrical installations					
Advanced measures for low electricity demand (lighting, appliances, etc.)					
Waste handling solutions in the building					
Extra measures for good sound insulation					
Extra measures for solar shading					
Other special measures for good indoor environmental quality					
Follow up of environmental quality with building users (questionnaire or similar)					
Building material with low environmental impact					
Building-related measures to facilitate cycling as a means of transport					
Building-related measures to facilitate environmental impact mitigation from car use (car share, e-car charging stations)					
Proximity to services (public transport etc.)					
Outdoor environmental improvement on the property					
Measures for low water use					

Other environmental measures: