Measuring the added value in Corporate Real Estate alignment by using the Preference-based Accommodation Strategy design procedure

Arkesteijn, Monique; Binnekamp, Ruud; de Jonge, Hans

Publication date
2016

Citation (APA)

Important note
To cite this publication, please use the final published version (if applicable). Please check the document version above.

Copyright
Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy
Please contact us and provide details if you believe this document breaches copyrights. We will remove access to the work immediately and investigate your claim.
Measuring added value
in CRE alignment with a PAS design procedure

ERES conference, June, 9th 2016

Arkesteijn, M.H., R. Binnekamp, H. de Jonge

Corresponding authors: m.h.arkesteijn@tudelft.nl

Problem statement

CRE alignment long-standing issue

• Want to optimally add value with CRE to the organisation
• How are alternatives generated?
• How is the optimum chosen?
View on value

Value = quality = utility = preference

They have in common that they all are

about ‘a judgement’ about ‘something’

by ‘someone’

Problem statement

What is your overall satisfaction with our product?

Not at all satisfied 1 2 3 4 5 Extremely satisfied

What is your overall satisfaction with our product?

Not at all satisfied 1 2 3 4 5 Extremely satisfied

What is your overall satisfaction with our product?

Not at all satisfied 1 2 3 4 5 Extremely satisfied
Problem statement
Arkesteijn (et al 2015)

conclude that currently no CRE alignment model exists that allows designing an alternative, makes use of scales for direct measurement of added value/preference by the stakeholders and allows the aggregation of individual ratings into an overall performance rating

Preference-based accommodation strategy inter-actor design procedure
(Arkesteijn & Binnekamp 2012)

**Step 1:** Specify variables
**Step 2:** Rate preferences per variable
**Step 3:** Assign weights to variables
**Step 4:** Determine design constraints
**Step 5:** Generate design alternatives
**Step 6:** Select optimal design alternative

PAS iterative process: I-W-I-W-I
Research methodology

1. Are stakeholders able to determine their preferences as prescribed?

2. Are stakeholders able to optimize the design result?

3. How do the stakeholders evaluate the PAS procedure?

Two pilot studies PAS procedure

**Delft University of Technology**
Food Facilities TU Delft  ERES 2016
Lecture Halls TU Delft  ERES 2014

Current supply does not meet requirements
Results: selecting stakeholders

Executive Board
Project leader social innovation

Controller
strategic
policy makers

finacial
controllers

CREM
users
functional

technical managers
physical

Student council
Works council
Facility Management
& Real Estate department

Step 1: Specify a decision variable

Student: “I want to walk as little possible to the restaurant for lunch

Decision variable: walking distance to restaurant for lunch

Go to step 2: Rate preferences
Step 2: Rate preferences per variable

Student: Walking distance restaurant for lunch

'Top' reference

Step 2: Rate preferences per variable

Student: Walking distance restaurant for lunch

'Bottom' reference
Step 1: Specify a decision variable

Student: Walking distance to restaurant for lunch

Possible intermediate

Preference score (%)

[min]
Step 1: Specify a decision variable

**Student: Walking distance restaurant for lunch**

- Preference score for current situation (green triangle)
- Preference score for designed alternative (red square)

*chosen* intermediate
Step 3: Assigning Weights

- **Faculty Secretary**
  - % work places: 20%
  - Walking time for facility middle: 35%
  - Walking time for facility large: 20%
  - Sufficient acoustics: 5%
  - Ambiance: 0%

- **Works Council**
  - Walking time for facility middle: 40%
  - Walking time for facility large: 25%
  - Diversity: 25%
  - Costliness: 0%

- **Student Council**
  - Average vertical location: 10%
  - % doors outside to food facility: 30%
  - Walking time entrance to facility: 30%
  - % work places: 10%
  - Walking time for facility middle: 50%
  - Walking time for facility large: 15%

- **Project Leader Social Innovation**
  - Findability: 50%
  - % work places: 50%

Step 4: Determining Design Constraints

<table>
<thead>
<tr>
<th>Decision maker</th>
<th>Design constraint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>executive board</td>
<td>1. Minimum availability of food facility for lunch within the maximum walking time</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>2. Minimum availability of facility for lunch and dinner within the maximum walking time</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>3. Minimum availability of facility faculty club within the maximum walking time</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>4. Minimum average satisfaction of the preference score on the criteria acoustics, ambience and coziness</td>
<td>40%</td>
</tr>
<tr>
<td>Facility Management and Real Estate</td>
<td>5. Maximum investment costs</td>
<td>1,850,000 euro</td>
</tr>
<tr>
<td></td>
<td>6. Maximum operational costs</td>
<td>500,000 euro</td>
</tr>
</tbody>
</table>
Step 5: Generating design alternatives

- Current restaurant for lunch
- Current restaurant for lunch/diner
- New concept restaurant for lunch
- New concept restaurant for lunch/diner

FMVG

m² GFA: 2.070
∆ -1.421

Controller

Investment costs: € 1.85mln.
Operating costs: 93k; ∆ -181k

Step 6: Select optimal design alternative

Boundary conditions

Executive board
100; ∆ 5-100
98; ∆ 55

Controller

Investment costs: € 1.85mln.
Operating costs: 93k; ∆ -181k

CREM (Overall)
96; ∆ 52

Faculty secretary
100; ∆ 48

PL social innovation
100; ∆ 48

Works council
98; ∆ 48

Student council
81; ∆ 48

FMVG
m² GFA: 2.070 m²;
∆ -1.421
Research answers

1. Stakeholders were able to determine their preferences as prescribed

2. Stakeholders were able to optimize the design result

3. Stakeholders valued the PAS procedure

Evaluation

- Experiences with the model
  
  Project leader social innovation: could not imagine to determine preference this way in the beginning. Later on: most enthusiastic.

- Attractiveness of the method
  
  Faculty Secretary: did not use any ’strategic’ games, because he was taken step by step through this approach. Satisfied with the solution.

- Perception of effectiveness of the method
  
  Student: The process is much faster and more solution-oriented. Like to use the model continuously.