Progress in evidence based workplace management
Vision Statement
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Mission Statement
To serve as a global Facility Management consultants' resource and representative for Knowledge Sharing, Networking and Business Opportunities in support of our impact upon the built environment and value to their clients.
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Today’s Presentation

Moderator:
Josh Amos, IFMA Components Liaison

Presentation Title:
“Progress in evidence based workplace management”

Presenter: Wim Pullen –
Center for People and Buildings
Presentation Logistics

- Polls will be used throughout the webinar
- Q&A at the end of the presentation
- Quick survey at the conclusion of the Webinar
- PowerPoint & Recorded Webinar will be available online via FMCC’s Website (fmcc.ifma.org)
- Your Participation is Greatly Appreciated!
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Learning Objectives

1. Learn about evidence based workplace management
2. Learn about the big questions
3. Become informed about state of the art of workplace research
Presenter Bio

- Wim Pullen (1956) is the Director and co-founder of the Center for People and Buildings since September 2000. The Center for People and Buildings (CfPB) is a not-for-profit research and educational knowledge center. It develops scientific research and educational programs.

- Wim holds a MSc degree in geodetic engineering from Delft University of Technology. His career showed his different interests: Meteorology and Oceanography at the Ministry of Defense, Real Estate development, Public Buildings Policy and Research at the Dutch Government Buildings Agency.

- Wim was (board)member of several Dutch professional bodies e.g. Institute for Construction Law, Council for Real Estate and Geographical Information. He serves on the editorial board of a number of journals in his field: Journal of Corporate Real Estate, Journal of Facilities Management, Corporate Real Estate Journal.
Participant Poll #1

[Text]?
Introductory end user statements

• “It would be wonderful if we can predict whether (and how much) a new workplace concept for knowledge workers contributes to growth of their labour productivity”.

• “To prove that the implementation of such concept can be done without increased resistance i.e. to decrease the amount of time gossiping disadvantages of the new work environment”.

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IMAGINE THIS IS YOU....
This is a very bad decision
If you are deciding on a new workplace concept this example raises questions:

• What is the average age of the workforce?
• Consequences of retirement age at 70 years?
• What is people’s workplace reference?
• How to cope with expected resistance?
• Which answers are in your business case?
His first job interview
I GOT THE JOB! BUT...

What will the outcome be for me?
Evidence based....

- Prevent bad decisions
- Clear view on outcomes
- Reliable business cases
Scope of this lecture

- Offices, knowledge workers
- Schools, Cure (hospitals) & Care (nursing homes)

What about....

- farmers, construction workers, fire-fighters, miners, soldiers, and **manufacturing workers**
Rana plaza, April 24, 2013
Table of contents

• Part 1: Evidence based: why, what?
• Part 2: Selected topics
• Part 3: How to proceed in practice?
Part 1: Evidence based: why, what

- What do we mean by…
- Brief history of evidence based
- What are the benefits of…
- Progress in evidence based…

Sorry this is the boring part of the lecture
Part 2: Selected topics

1. User (perceived) productivity and workplace characteristics
2. Employee age and new workplaces
3. Unchanging patterns of work
4. Balancing communication and concentration
Part 3 How to proceed in practice?

• How do I get this knowledge?
• Staying up to date
• Change of mind
Part 1

What is... being said

Thinking, Fast and Slow
Daniel Kahneman

Antifragile
Things That Gain from Disorder
Nassim Nicholas Taleb
What is...

Evidence-based (workplace) management is about making decisions through the conscientious, explicit, and judicious use of four sources of information:

1. practitioner expertise and judgment,
2. evidence from the local context,
3. a critical evaluation of the best available research evidence,
4. the perspectives of those people who might be affected by the decision.

Rob B. Briner, David Denyer, and Denise M. Rousseau (2009), Evidence-Based Management: Concept Cleanup Time?. In: ACAD MANAGE PERSPECT November 1, 2009 vol. 23 no. 4 19-32
What is, what is not

<table>
<thead>
<tr>
<th>Evidence-Based Management Is . . .</th>
<th>Evidence-Based Management Is Not . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Something managers and practitioners do</td>
<td>● Something management scholars do</td>
</tr>
<tr>
<td>● Something practitioners already do to some extent</td>
<td>● A brand-new way of making decisions</td>
</tr>
<tr>
<td>● About the practice of management</td>
<td>● About conducting particular types of academic research</td>
</tr>
<tr>
<td>● A family of related approaches to decision making</td>
<td>● A single decision-making method</td>
</tr>
<tr>
<td>● A way of thinking about how to make decisions</td>
<td>● A rigid, one-size-fits-all decision-making formula</td>
</tr>
<tr>
<td>● About using different types of information</td>
<td>● About privileging evidence from academic research</td>
</tr>
<tr>
<td>● About using a wide range of different kinds of research evidence</td>
<td>● About using only certain types of research evidence irrespective of the problem</td>
</tr>
<tr>
<td>depending on the problem</td>
<td></td>
</tr>
<tr>
<td>● Practitioners using research evidence as just one of several sources</td>
<td>● Scholars or research evidence telling practitioners what they</td>
</tr>
<tr>
<td>of information</td>
<td>should do</td>
</tr>
<tr>
<td>● A means of getting existing management research out to practitioners</td>
<td>● About conducting research only about management practices</td>
</tr>
<tr>
<td>● Likely to help both the process and outcome of practitioner decision making</td>
<td>● The solution to all management problems</td>
</tr>
<tr>
<td>● About questioning ideas such as “best practice”</td>
<td>● About identifying and promoting “best practice”</td>
</tr>
</tbody>
</table>

Rob B. Briner, David Denyer, and Denise M. Rousseau (2009), Evidence-Based Management: Concept Cleanup Time?. In: ACAD MANAGE PERSPECT November 1, 2009 vol. 23no. 4 19-32
Misconception

Simply applying widely-used and vaguely ‘approved’ tools and techniques is the same as doing evidence-based practice (e.g., assessment centres, employee engagement surveys, leadership development, 360 degree feedback, training, team development, coaching).

Absolutely not!!

• What is the evidence for the problem the technique/solution is aiming to fix?
• Has there been a thorough initial assessment?
• Will it fix it better than other techniques?
• What are the costs and benefits here?
• How much valid evidence shows that this technique is, in general, effective?
• Does it show that it will be effective here?
• Even using a technique which evidence shows might ‘work’ in some contexts in some ways is NOT evidence-based practice

### Example: productivity in the workplace

<table>
<thead>
<tr>
<th>Type of intervention</th>
<th>Increase</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incentive not to take sick leave</td>
<td>2.2%</td>
<td>2.2% decrease in absenteeism</td>
</tr>
<tr>
<td>Paid leave programme</td>
<td>36%</td>
<td>36% decrease in unscheduled absences</td>
</tr>
<tr>
<td>Different organisational structure</td>
<td>8%</td>
<td>7% increase in transactions over ten years; errors reduced by a factor of 5</td>
</tr>
<tr>
<td>Introduction of teleworking</td>
<td>22%</td>
<td>63% decrease in costs of absenteeism; higher productivity (self-reported)</td>
</tr>
<tr>
<td>Introduction of teleworking</td>
<td>22.5%</td>
<td>Higher productivity (assessment)</td>
</tr>
<tr>
<td>Introduction of teleworking</td>
<td>58%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Different physical working environment</td>
<td>3%</td>
<td>3% reduction in salary costs</td>
</tr>
<tr>
<td>High-quality design</td>
<td>6%</td>
<td>Assessment made by respondents</td>
</tr>
<tr>
<td>Extensive building renovations</td>
<td>25%</td>
<td>30% less space required</td>
</tr>
<tr>
<td>Different design to facilitate teamwork</td>
<td>2.5%</td>
<td>75% reduction in meeting time; 60% reduction in duplicate files; 44% reduction in cost of floor space per employee</td>
</tr>
<tr>
<td>Teams: more privacy; better installations; ergonomic furniture</td>
<td>9%</td>
<td>0% decrease in errors and claims; 1.5%-4.4% drop in absenteeism</td>
</tr>
<tr>
<td>Ergonomic furniture</td>
<td>20.6%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Ergonomic furniture</td>
<td>21%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Ergonomic furniture</td>
<td>23%</td>
<td>50% drop in absenteeism</td>
</tr>
<tr>
<td>Green environment</td>
<td>15%</td>
<td>15% drop in absenteeism</td>
</tr>
<tr>
<td>Combined information systems</td>
<td>30%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>High-quality lighting</td>
<td>5%</td>
<td>Higher productivity, lower costs for maintenance and insurance premiums</td>
</tr>
<tr>
<td>High-quality lighting</td>
<td>6%</td>
<td>Higher productivity, fewer errors, lower maintenance costs</td>
</tr>
<tr>
<td>High-quality lighting</td>
<td>9%</td>
<td>Cost savings; drop in theft in parking areas</td>
</tr>
<tr>
<td>Improved lighting</td>
<td>11.3%</td>
<td>Lower energy and maintenance costs</td>
</tr>
<tr>
<td>Improved lighting</td>
<td>13.2%</td>
<td>25% drop in absenteeism; 69% decrease in lighting energy; 73% drop in operating costs</td>
</tr>
<tr>
<td>Thermal comfort, lighting, acoustic and air quality</td>
<td>6%</td>
<td>8%-45% drop in absenteeism</td>
</tr>
<tr>
<td>Noise reduction</td>
<td>7%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Noise reduction</td>
<td>13%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Indoor climate</td>
<td>10%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Personal control of temperature</td>
<td>16%</td>
<td>Not mentioned</td>
</tr>
<tr>
<td>Voice response system</td>
<td>20%</td>
<td>Not mentioned</td>
</tr>
</tbody>
</table>

‘A study by the GSA Office of Government-wide Policy in Washington measured the effect of physical variables on productivity in quantitative terms. The report entitled *Productivity and the Workplace (2001)* was issued by the Innovative Workplace Division headed by Stan Kaczmarczyk. It describes the results of 30 case studies ’...

An omission in the research report is the lack of clear descriptions of the types of intervention and an explanation of the findings. Moreover, no information about the original situation is provided. An inadequate point of departure may account for the huge gain in productivity’.

Brief history

• Netherlands always forward thinking and acting in NWOW
• Govt and Financials early adopters of NWOW
• Late nineties: lot of stories, not much data
• 2000 Start of Center for People and Buildings
• 15 years of systematic data collection in casestudies on office-use and (re)design
• Analysis, patterns, improvements
Benefits for end user organizations

Evidence-based practice can help because it’s about the conscientious, explicit, and judicious use of different sources of information.

Do we know? Does it matter?

Benefits for consultants and designers

- Experience is no longer enough as usp
- Taking your responsibility as a professional
- You are not paid for work but for a contribution to increased performance
“When assessing workplace strategy: test, don’t guess”

prof Frank Becker,
Cornell University
Part 2: Selected topics

1. User (perceived) productivity and workplace characteristics
2. Employee age and new workplaces
3. Changing patterns of work
1. productivity and workplace features

Average CEO’s are optimists and easily say:
“Investments in workplaces will raise productivity; The only question is how much?”

Average Workplace Managers are optimists and easily answer:
‘Indeed, investments in workplaces will raise productivity
I will tell you how much!’
An Evidence based perspective seeks dialogue

• what do you mean: ‘the workplace’?
• what is productivity?
• what do you expect to happen in the workplace?
• why do you ask for productivity?
• what are the alternatives for productivity?
Stakeholder perceptions

- Image, innovation
- Costs
- Healthy & happy
- Work

Workplace
The perceptions of productivity
"the ratio of a volume measure of output to a volume measure of input"

Labor productivity
The three most commonly used measures of input are:
- hours worked;
- workforce jobs;
- number of people in employment.

Total factor productivity
TFP is determined by the ratio between the produced output and the sum of input factors labor and capital (like workplaces, IT).
Productivity slowdown

Labor productivity growth in the Netherlands has slowed down since the mid 1970s. Moreover, the performance of Dutch labor productivity growth since the mid-1980s is quite disappointing compared to that in other OECD countries.

However, the productivity performance in commercial services has deteriorated. In fact, if adjusted for labor quality changes, productivity growth in commercial services is even lower in the 1990s. TFP-growth has all but ceased. This could point to an inefficient production process.

Source: H. van der Wiel, Productivity slowdown in commercial services, CPB report 98/1
Productivity: an economic concept, not the holy grail!
But what about...

1. Continuity: A new workplace can attract and retain staff

2. Perception: Although there is no increase in productivity growth, the individual perception of 'progress' can increase employee satisfaction

3. Well being, sustainability: Productivity growth can play a role; but what about consuming less?
factors highest association productivity.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Productivity measure</th>
<th>Mean correlation weighted by sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. social cohesion</td>
<td>team performance, hard outcome</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td>team performance, behavioral</td>
<td>.70</td>
</tr>
<tr>
<td>2. perceived supervisory support</td>
<td>employee performance</td>
<td>.53</td>
</tr>
<tr>
<td>3. information sharing</td>
<td>team performance</td>
<td>.51</td>
</tr>
</tbody>
</table>

Q: What is the influence of facilities experience of employees in office buildings on their perceived labor productivity?

• CfPB WODI database
• >120 case studies
• > 20,000 respondents
• Limited to the Netherlands & Belgium
predicting perceived productivity

Perceived support of my productivity

Concentration

Functionality and comfort of workspace

Number and diversity of spaces

Privacy

Those two features have stronger influence than the other two variables
2. Employee age and new workplaces
Development in retirement age

Source: CBS
Office types of a life time of work

Assigned workplaces

Open

Enclosed

free
Research in NL

• What are the perceptions of office layout and use from people in different age groups?
• Results taken from a cross case study: 83 cases; n=15,574
  – 6404 respondents in cellular offices; assigned desks
  – 6171 respondents in open office type, non assigned desks
### Overall results

<table>
<thead>
<tr>
<th></th>
<th>&lt;31 years</th>
<th>31-40 years</th>
<th>41-50 years</th>
<th>51-60 years</th>
<th>&gt; 60 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall value office concept</strong></td>
<td>****</td>
<td>****</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td><strong>Overall value pleasant work environment</strong></td>
<td></td>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td><strong>Overall value support of productivity by work environment</strong></td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

- Flexible offices: higher rating over cellular
  - ** P ≤0,01
  - * P ≤0,05

- Flexible offices: lower rating over cellular
### Results on variables -1

<table>
<thead>
<tr>
<th></th>
<th>&lt;31 years</th>
<th>31-40 years</th>
<th>41-50 years</th>
<th>51-60 years</th>
<th>&gt; 60 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Privacy</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Opportunities to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>concentrate</td>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Opportunities to</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>communicate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities for remote</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>working</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing own ideas about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>working environment</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Flexible offices: higher rating over cellular**

**Flexible offices: lower rating over cellular**
## Results on variables -2

<table>
<thead>
<tr>
<th></th>
<th>&lt;31 years</th>
<th>31-40 years</th>
<th>41-50 years</th>
<th>51-60 years</th>
<th>&gt; 60 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archive /Storage facilities</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>ICT and ICT supporting services</td>
<td>**</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility services</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoor climate</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acoustics</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

- **Flexible offices: higher rating over cellular**
- **Flexible offices: lower rating over cellular**
<table>
<thead>
<tr>
<th></th>
<th>&lt;31 years</th>
<th>31-40 years</th>
<th>41-50 years</th>
<th>51-60 years</th>
<th>&gt; 60 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility of the building</td>
<td></td>
<td>**</td>
<td>**</td>
<td></td>
<td>**</td>
</tr>
<tr>
<td>Architecture and appearance of the building</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Subdivision and overall layout of the building</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and diversity of spaces</td>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Adjacency and locality of the spaces</td>
<td>*</td>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Openness and transparency of environment</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Functionality and comfort of the workspaces</td>
<td>*</td>
<td></td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Interior design appearance and ambiance</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>
Perceived productivity & Age

Five point scale

Reduction off 10%

Fixed office
Flexible office

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Results

• Cellular vs Flexible: mixed results
• Issue in Flex in all age groups: Privacy
• Positive on Flex for all age groups:
  – Remote working,
  – Appearance of building and interior design
  – Diversity of spaces
  – Layout
• Aging Issues in Flex: older less satisfied with:
  – Communication, acoustics, storage, IT, openness, ergonomics, adjacency, sharing, changing workplace (activity based)
Comments

- Results represent current design practice in NL
- Architects and consultants unaware of knowledge sources in environmental psychology
- Results show some correlations with functional cognitive aging
- Older employees will stay longer: pay attention to needs
- Better designed workplaces that incorporate lessons can be useful job resource
3. Changing patterns of work

• A lot of talk about disruptive changes
• Since seventies: work at home will increase
• What have we seen so far in the Netherlands
• NWOW is everywhere; what happens to
  – Places where people work?
  – Activities at the office?
Change of activity patterns

Activities at the office hardly changed during the past 8 years with 1 exception: decline of telephoning

Source: WODI database, CfPB Delft 2014
Time of work outside office increases

› Increase in opening hours and freedom in working hours leads to marginal change in office use in general; still mainly between 9-18 hrs (Cloïn, Mariëlle (red.) (2013). Met het oog op de tijd. Een blik op de tijdsbesteding van Nederlanders. Den Haag: SCP)

› Less time spent in the office leads to a lower occupation of the office in the past 10 years to an average in 2013 between 43-59 % with a maximum 77% (CfPB SUM scientific database 15.000 workplaces and commercial database Meet Company on 140.000 workplaces)

› Allowances for 4 days/ 9 hours leads to less use of the office on Friday and or Wednesday afternoons (CfPB SUM database)
At work, at home or elsewhere

Source: CfPB WODI database, 2014
Part 3 How to proceed in practice?

• Evidence based requires an critical attitude:
  – Don’t trust figures
  – Is that so?

• It requires dedication
  – Seek and you will find; ask questions about context
  – Read

• Get involved in R&D
Q&A

Wim Pullen

w.r.pullen@tudelft.nl

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Session 5 – Central Europe:
“Everything you wanted to know about social media but were too afraid to ask”

“Everything you wanted to know about social media but were too afraid to ask”

by Chris Payne (UK) and Markus Groll (Germany)

Date: June 10th, 2015
Time: 3:00 – 4:15 PM European Summer Time (Frankfurt) = 1:00 – 2:15 pm UTC

Presenter(s):

- Chris Payne, CSS Consultancy & FMCC STAG Member as Social Media Coordinator (UK)
- Markus Groll, Architect BYAK, Secretary + STAG Chair FMCC, CEO isar1 ag (Germany)

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- Food Service & Restaurant Council
- Information Technology: Council
- Legal Industry Council
- Manufacturing, Industrial & Logistics Council
- Museums/Cultural Institutions Council
- Public Sector Facilities Council
- Religious Facilities Council
- Research & Development Facilities Council
- Utilities Council

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Thank you for joining us!

Please take a moment to answer our brief survey at the conclusion of the webinar.

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