REHVA Smart Buildings (SB) Task Force (TF)
(REHVA SB TF)

Intended publication

- Guidebook (ideally 60-80 pages) - examples;
- Soft copy (interactive PDF with hyperlinks) and hard copy.

Potential target groups

- Industry, building professionals (including students), decision makers (e.g. end-users, building operators, owners/tenants, financial institutions, policy makers).

Objectives and added value to the market

The aim of this Task Force is to provide a full picture and guidance for building professionals and decision makers about the concept of Smart Buildings that is bound to become mainstream in the next decade. Using an evidence-based approach the impact of Smart Buildings on several aspects such as user adapted indoor environment quality, continuously optimized operational performance and energy grid interaction, will be assessed. The task force will aggregate existing publications on this subject and provide state-of-art knowledge, insights into EU regulations and case studies.
The main added value of this guidebook would be to provide an overview on the different aspects of Smart Buildings and to steer the direction for further in-depth information on specific issues, thus increasing awareness and knowledge on this upcoming essential concept of the construction sector.
The Task Force will build on existing REHVA publications where found relevant.

Indicative List of contents

1) Introduction to Smart Buildings
   a) Terminology
   b) Publications
   c) EU Policy
   d) Rapidly evolving technology
   e) Market outlook
   f) Benefits
2) Technical aspects of Smart Buildings
   a) Affected Domains (e.g. architecture, technical building systems, safety, security, e-mobility)
   b) Data protection, privacy and cybersecurity
   c) Interoperability
   d) Communication protocols and standards (IoT, SAREF)
   e) Tools
      i) Technology areas (e.g. machine learning, data mining, artificial intelligence, model predictive controls);
      ii) Tasks (e.g. fault detection and diagnostics, fault prevention, productivity estimation);
3) User-building interaction
   a) Wearable technology
   b) Building technology (e.g. indoor environment quality sensors)
   c) User-adapted building performance & user centred solutions – health, well-being, comfort, productivity, satisfaction
4) Continuously optimized building performance
   a) Traditional practices (e.g. building performance follow-up, ongoing commissioning)
   b) Emerging practices (e.g. BIM, Building Passports)
   c) A promising future
5) Building-energy grid interaction
   a) Building storage solutions
   b) District heating and cooling
   c) Electrical grid
6) Case studies
7) References

TF chair and members

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- The TF is open for all experts with relevant knowledge on the topic. REHVA members, supporters and partners have higher priority.

Potential independent reviewers

- Prof. Olli Seppanen (FINVAC, Finland);
- Dr. Paul Waide, Waide Strategic Efficiency;
- Bonnie Brook, eu.bac;
- Others to be determined during the development of the guidebook.

Indicative time schedule

- Task Force proposal of topic defence in REHVA`s Technology and Research Committee (TRC) meeting on **21st and 23rd April 2018** in Brussels;
- Task Force Work & Business Plans (**deadline end October 2018**)
- Task Force Work & Business Plans defence in REHVA`s Technology and Research Committee (TRC) meeting on **12 November 2018** in Brussels;
- 1st draft of individual chapters --> 1st draft of GB (**deadline end April 2019**)
- Collection of comments from all TF members on 1st draft of GB (aggregated chapters) (**deadline end July 2019**)
- 2nd draft of GB + generic proofreading and hyperlinks check (**deadline end August 2019**)
- 2nd draft of GB for internal review (**deadline 15 September 2019**)
- 3rd draft of GB + terminology washing/careful proofreading (**deadline end September 2019**)
- 3rd draft of GB for external review procedure (**deadline end December 2019 - update in 2020 according to developments of 2nd SRI study**)
- External proofreading, final layout, advertisements & printing (**deadline before REHVA Annual Meeting 2020**)

Please note this time schedule does not include TF meetings and possible events that shall be organized for collecting feedback from certain target groups.

Short analysis of existing publications (EU & INT)

- https://www.cstc.be/homepage/index.cfm?cat=publications&sub=search&id=REF00010655
- http://bpie.eu/publication/smart-buildings-in-a-decarbonised-energy-system/
- http://bpie.eu/publication/is-europe-ready-for-the-smart-buildings-revolution/
- …

Indicative budget

- Editorial work (including English washing/proof reading) and typesetting costs 4.500 euros (2.500 euros + 2.000 euros)
- Printing and shipping costs 4.000 euros/500 guidebooks or 4.500/1.000 guidebooks

Potential sales

- Potential sales through REHVA network:
  - Most popular guidebook 500 copies/year **max** (max annual income 25.000 euros);
  - Most popular guidebook 3.000 copies **so far** (max life cycle income 150.000 euros);
  - 50 euros/hard copy – 40 euros/ebook;
  - 20% discount for supporters (**not for new books**!) + more than 100 books special discounts;
  - REHVA national associations to buy translation rights for selling the guidebook in national language.
- Potential sales through other channels:
  - Universities & TF members: pre-orders 3 copies/university x 27 REHVA members = 81 copies (~4.050 euros)
    - KTH: 40 copies;
    - VITO/University of Antwerp: 2 copies;
    - SC PREXING CONSULTING SRL: 10 copies.
- Potential collaboration after launch for indirect promotion: BACS Academy on Leonardo Energy.

Indicative financial plan 2020

Costs 2020	**9.000€**
Editorial and typesetting	4.500€
Printing & shipping	4.500€
Revenues 2020	**9.050€**
Pre-orders universities & TF members (81 copies x 50€/copy)	4.050€
REHVA network (100 copies x 50€/copy)	5.000€
Budget balance 2020	**+50€**