

European Facility Management Conference

EFMC
2017 **MADRID**

Knowledge • Innovation • Inspiration

Swiss-COBie: Development of a Design for Information Exchange Between Planners, Contractors and FM in Switzerland

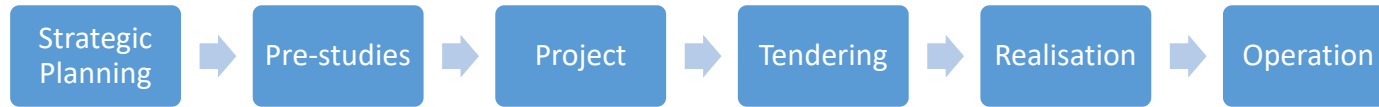
Marc El-Arousy

Student MSc, Zurich University of Applied Sciences (ZHAW), Switzerland

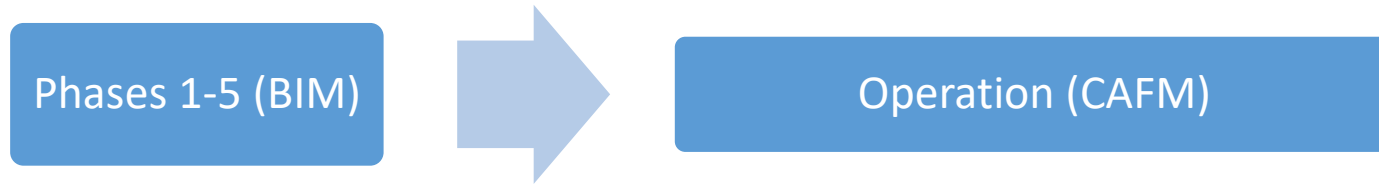
Simon Ashworth (ZHAW), Switzerland

Carsten Druhmman (ZHAW), Switzerland

Phases of a building's life according to SIA 112



Information for FMs from phase 1-5 to manage building



- Principle tool for FMs is CAFM
- How to get best quality information from BIM to CAFM?
- COBie is established in UK & US. Could COBie be used in Switzerland?

Agenda

- Theory/literature
- Methodology
 - Data analysis
- Results
- Discussion
- Conclusion
- Recommendations

Theory/literature

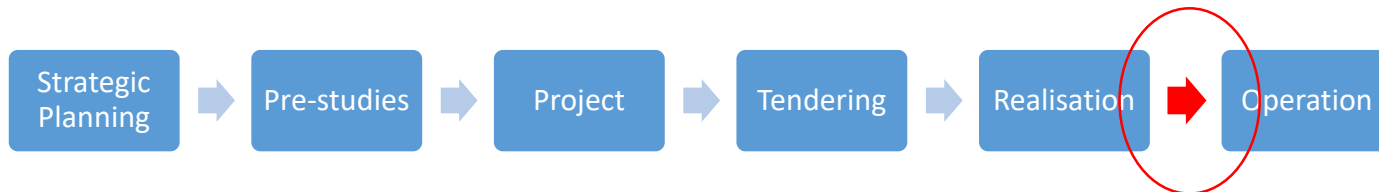
- BIM used in construction, CAFM in operation phase
- “BIM can support FMs successfully and outstanding” (Abdullah et al. 2013)
- “FM should be involved in the planning process from an early stage” (Kassem et al. 2015)
- Transferring information from BIM to CAFM difficult
- In Switzerland, currently no standardized information exchange between planners, contractors and FMs
- COBie might be the solution for information exchange between BIM and CAFM as well as standardization for information exchange in Switzerland
- COBie-standards are already in practice (BS 1192-4 (2014))
- In Switzerland, SIA 2051 (basics for appliance of BIM method) guideline currently in development



Planners &
Contractors

FMs

Users



Methodology

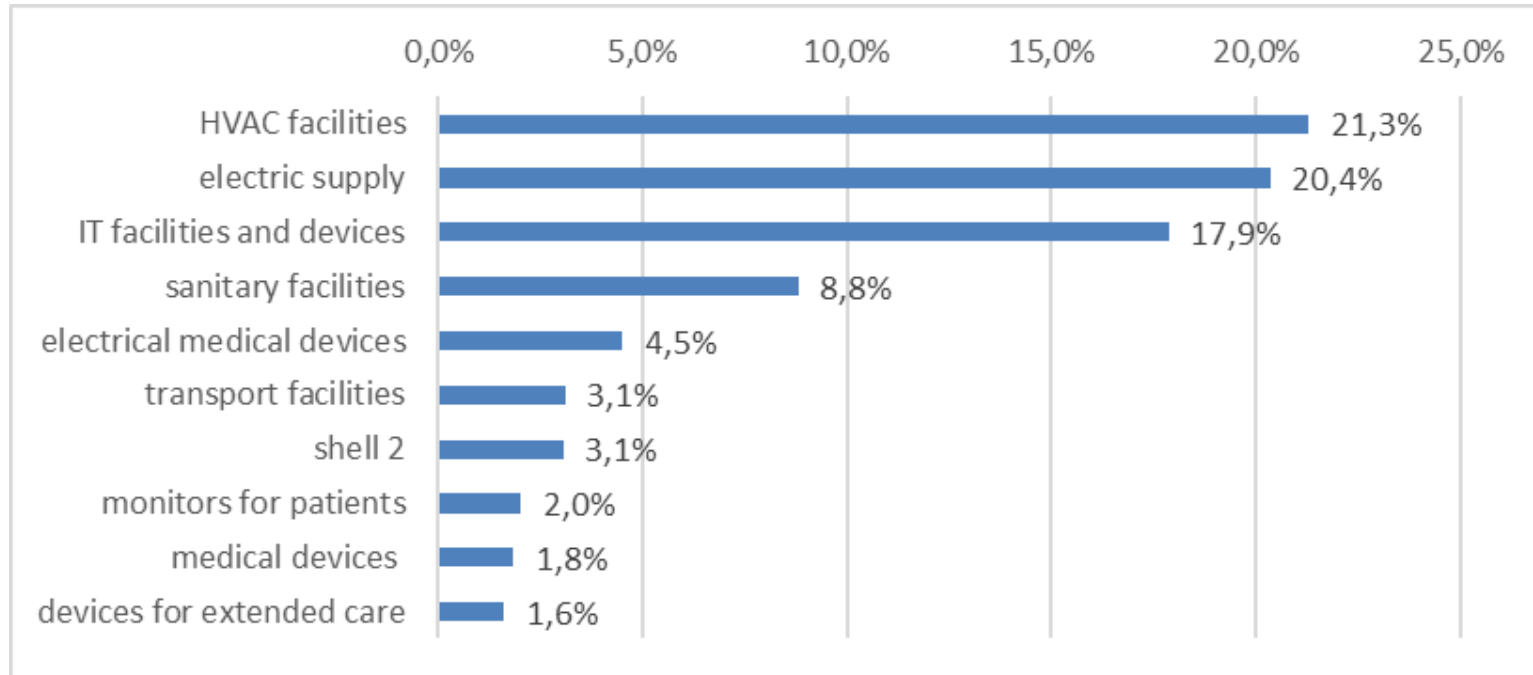
- 3 research questions:
 - 1. what information relating to assets/buildings do the users need most in operation?
 - 2. when does, the information need to be exchanged during the planning and construction process?
 - 3. how can FM benefit from a Swiss-COBie?
- Review literature/industry best practices in Switzerland
- Analysis of data given by three different company's CAFM systems provided by IC Information AG
- Semi-structured interviews

Data analysis

- Permission to access data from three companies by their provider (IC Information AG)
- Data transferred into Excel-Spreadsheet
- Quality of data and Results depended on how the users code their data

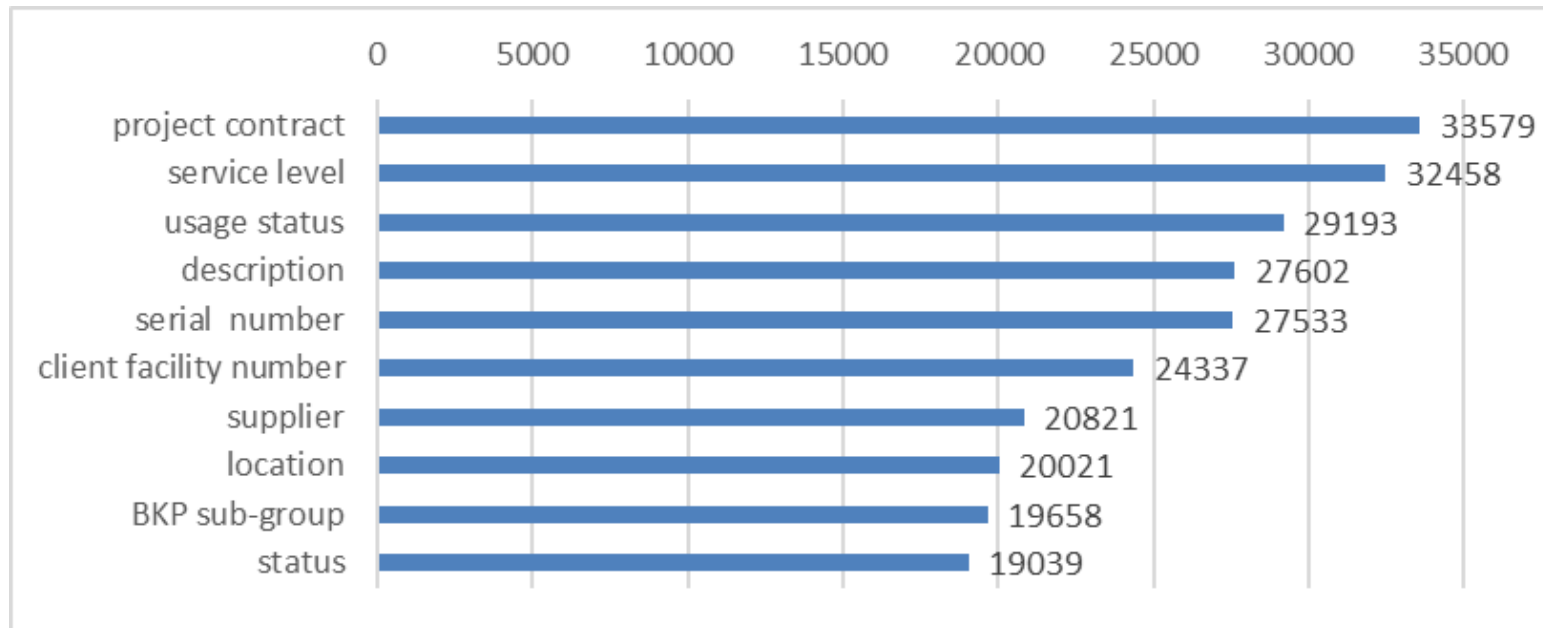
Results, Question 1

What information relating to assets/buildings do the users need most in operation?



Results, Question 1

What information relating to assets/buildings do the users need most in operation?



Results, Question 2

When does the information need to be exchanged during the planning and construction process?

- Difficult to establish a clear answer because:
 - No well documented BIM case studies in Switzerland
 - Interviewees had no experience in BIM projects
 - Old fashion way: Before operation phase
 - Most companies are not adequately prepared for digitasid asset data

Results, Question 3

How can FM benefit from a Swiss-COBie?

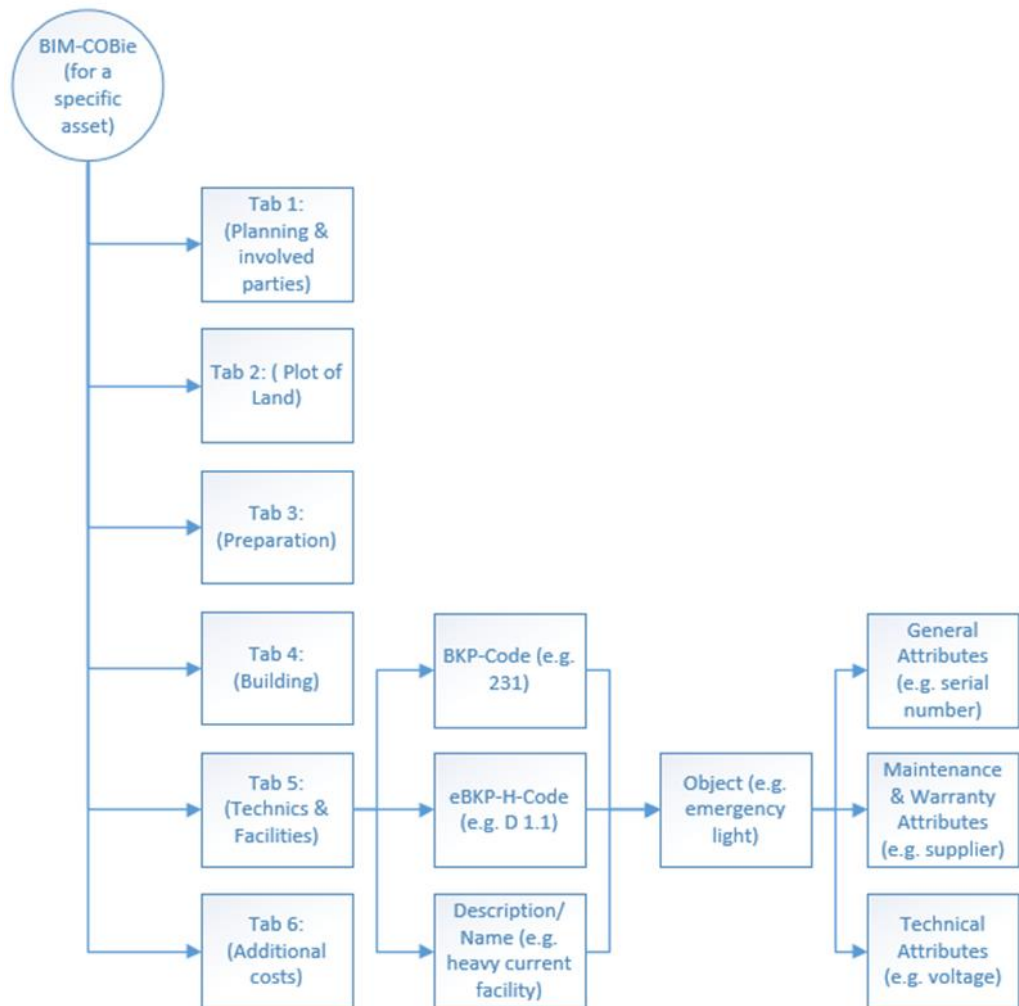
- All three interviewees agreed that FM will definitely benefit from a Swiss-COBie...
- ...but it should be aligned with construction standards currently in use (SIA, e-BKP-H, etc.)

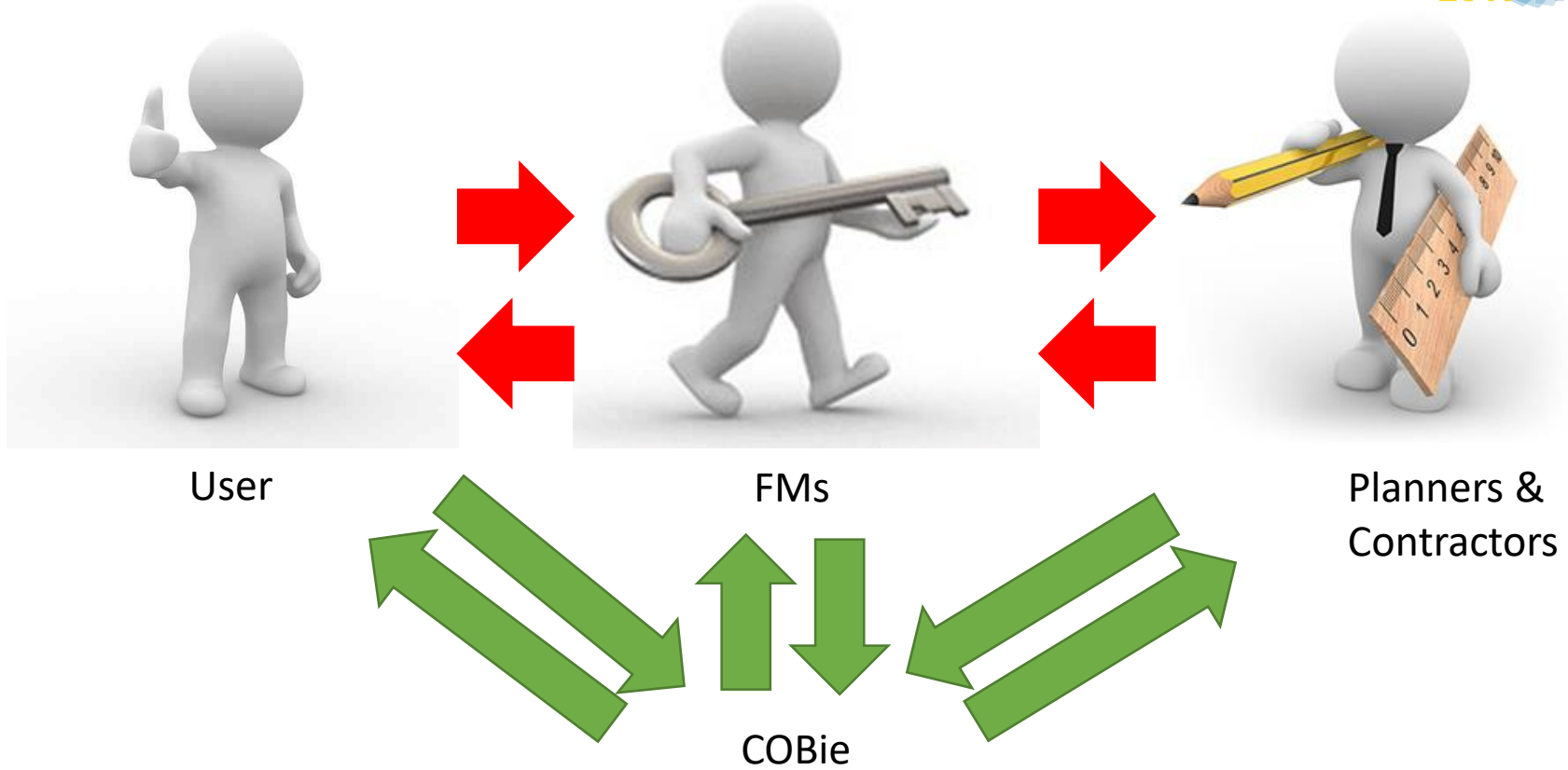
Discussion

- Quality of results depended on the user's data management
- Interviewees had limited knowledge of their CAFM system and how to use COBie in practice
- Three companies are not enough to give a clear picture

Conclusion

- COBie should be based on local standards
- PAS 1192-4:2014 was considered but seen to be over-detailed for use in Switzerland
- Therefore, COBie standard for Swiss Construction & FM market is needed
- Swiss-COBie should be treated as an industry standard but gives enough freedom for adjustments
- The success of Swiss-COBie depends on FM being involved in the planning and construction process





Recommendations

- FM should be more “pushier” towards planners & contractors
- FM should learn more about BIM
- Swiss-COBie needs to be verified and approved by local institutions
- Because of local rules and standards COBie preferably should be adapted to meet the local market conditions.
- COBie should be recommended in the EIR

Suggestions for future research

- Perform same approach with more and more diverse companies
- Conduct BIM case studies for Switzerland

Thank you very much for your attention



Marc El-Arousy

Student, MSc Facility
Management

Zurich University of Applied
Sciences ZHAW

elaromar@students.zhaw.ch