Zürcher Hochschule
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Life Sciences und
Facility Management

IFM Institut für
Facility Management

Facility Management

Workshop with Chinese Research Institutions

Proposal

Institute of Facility Management (IFM, ZHAW)

Research Group: Property Management

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1 INTRODUCTION

1.1 IFM

The Institute for Facility Management (IFM) is a leader in the field of Facility Management (FM) in Europe. The IFM is the only academic institution in Switzerland to offer a comprehensive range of Facility Management services: teaching at the Bachelor's and Master's level, continuing education (MAS), research and development, and services. The institute works closely with business and public organisations. In applied research and development and in consulting, new solutions are developed and the optimisation of FM processes is supported. The institute provides advice on strategic decisions and supports change processes. It works on a scientific and application-oriented basis in the research and development of new business fields, strategies, processes and areas of application related to FM. Through its research activities, the institute contributes to develop and innovate in processes, organisation, methods and products related FM. At the same time it promotes a theoretical and methodological understanding of the aspects, topics and activities being studied.

Specific research fields are selected that address needs of the market or society and that relate to the expertise of IFM. The methodological and technical skills of various FM subdisciplines are systematically applied. The institute's innovative strength in applied research and development is based on interdisciplinary cooperation among its members.

1.2 Competence groups

IFM has three competence groups; each group has a main research focus.

Property management expert group: deals with the construction of buildings, public infrastructures and services, lifecycle management, workspace, energy and sustainability, population aging problem and urban FM. The main focus is professional operated buildings. The group has experts in researching sustainable buildings and developed **SGNI** to certify sustainable buildings.

Business administration/HR expert group: main research areas are FM-related workplace management, HR management, for example, analysing the effects of the working environment on health, performance, satisfaction and comfort.

Hospitality management expert group: major area of concentration is new or further development of practical processes and methodologies, and strategic considerations regarding the added value of companies' service and support divisions.

The three competence groups work cooperatively to support the goal of success in research projects and development for IFM.

1.3 Reasons for workshop

Following the trend of globalization and internationalization, research cooperatively with international academics is necessary for sharing knowledge and for achieving synergies.

Especially, FM is a multi-disciplinary subject. Many global issues can be better solved when considering suitable FM strategies. Such as sustainable living environment, energy reduction, user-oriented building design, etc. FM is still developing and is increasingly recognized as an important profession worldwide.

The workshop with Chinese academics will mainly focus on building-related FM. The aim is to understand what FM can do to improve building performance, quality and user satisfaction. Different cases will be selected from China and Switzerland to analyse how FM functions in reality. The workshop also helps to exchange knowledge between the two countries. The knowledge exchange process is critical for FM, because FM needs to enlarge the research view and increase the application value in order to benefit the whole society.

2 TOPICS FOR WORKSHOP

Several FM-related research topics for the workshop are briefly introduced below. Chinese institutions who are interested in the workshop and willing to participate could select three topics from them. The final three selected topics will be as the focus for the workshop. Chinese institutions could also suggest some other topics that are relevant to FM and necessary to discuss in the workshop.

2.1 Building-related energy management

In the workshop, participants exchange expertise and techniques in energy management for buildings.

Professors who have experiences in research and practice will introduce tools and models for energy management. Best practices will be illustrated to give a better understanding on this topic.

2.2 Sustainability in construction field

It is worthwhile to discuss how the sustainability issue adopted in building-construction field in the two countries. What are the strategies from FM can be conducted in construction field.

Academics will introduce labels are used to certify green buildings in two countries, such as LEED, BREEAM, SGNI (DGNB). Differences among these labels, advantages and disadvantages will be introduced and discussed.

Best-practice site visit in Switzerland is necessary for this topic.

2.3 Building performance

There are several indicators of building performance, such as quality, usability, etc. Building performance directly relates to user satisfaction and the value in real estate market. Therefore, academics will discuss how is the building situations in the two countries. For example, the life-span of a building; the materials are used in construction; how to measure the building quality; etc.

2.4 New trends and demands of buildings

For both office buildings and residential buildings, new trends and demands are emerging. For example, open-plan offices have been adapted in European countries for a long period. China has started to conduct this concept in designing office buildings, but how about the effect? Does it fit the culture and needs?

Other trends such as multi-functional buildings (first-floor: shopping mall, restaurant; upper floor: offices) are also interesting to discuss and share experience in the workshop.

2.5 Usability

From FM point of view, usability of a building defines the efficiency of a building. How many spaces are occupied in an office building? Why some buildings have high leasing rate but some don't? For those buildings with poor usability, how to improve them? All this questions are necessary to discuss in the workshop in order to advance the development in building industry.

2.6 User satisfaction of building

FM emphasizes user-oriented buildings, because people use the building and evaluate the comfort level according to individual standards. Therefore, it is important to understand how different people perceive the building.

This topic can be discussed in the workshop base on ages, genders and generations, who have different needs and expectations towards the buildings.

2.7 Life cycle cost

Life cycle cost (LCC) analysis is becoming increasingly important in nowadays building industry. For all the stakeholders, who involve in a building project, the purposes of LCC analysis include optimization of investment and design; benchmarks for life-cycle management; budgetary planning; etc. It would be beneficial for the participants of the workshop to discuss and exchange knowledge in terms of promoting building information transparency.

2.8 BIM (Building information management)

Information management is at the core of project and construction management processes. As well as in FM, BIM plays an important role in optimizing operational tasks. Increasingly developed building information modelling tools help to simulate and illustrate building constructions, which enhance information transparency for FM. With the help of BIM, construction and building management are becoming more efficient and effective.

Experts of BIM from Switzerland will introduce the development, functions and effects of BIM in European countries. Chinese professors can introduce the application and situation of BIM in China. Knowledge and issues will be shared and discussed in the workshop.

3 DESIRED PARTNERS

Since the workshop is FM-related and mainly focuses on building industry. Desired partners for the workshop could be institutions who research on building related topics, such as institutes of architecture, property management, real estate management, workplace design and management, and sustainability development in building industry.

4 WORKSHOP PLAN

The international exploratory workshop will last 2 to 5 days in Switzerland. A maximum of 10 researchers will be involved. The purpose of the workshop is to bring scientists with different backgrounds together to work on a similar question. Each institute can appoint one professor and one PhD student to participate the workshop. The expense (include the travel and living expense of Chinese delegation) for the workshop will be funded by a funding platform in Switzerland. The workshop procedure is illustrated as follow.

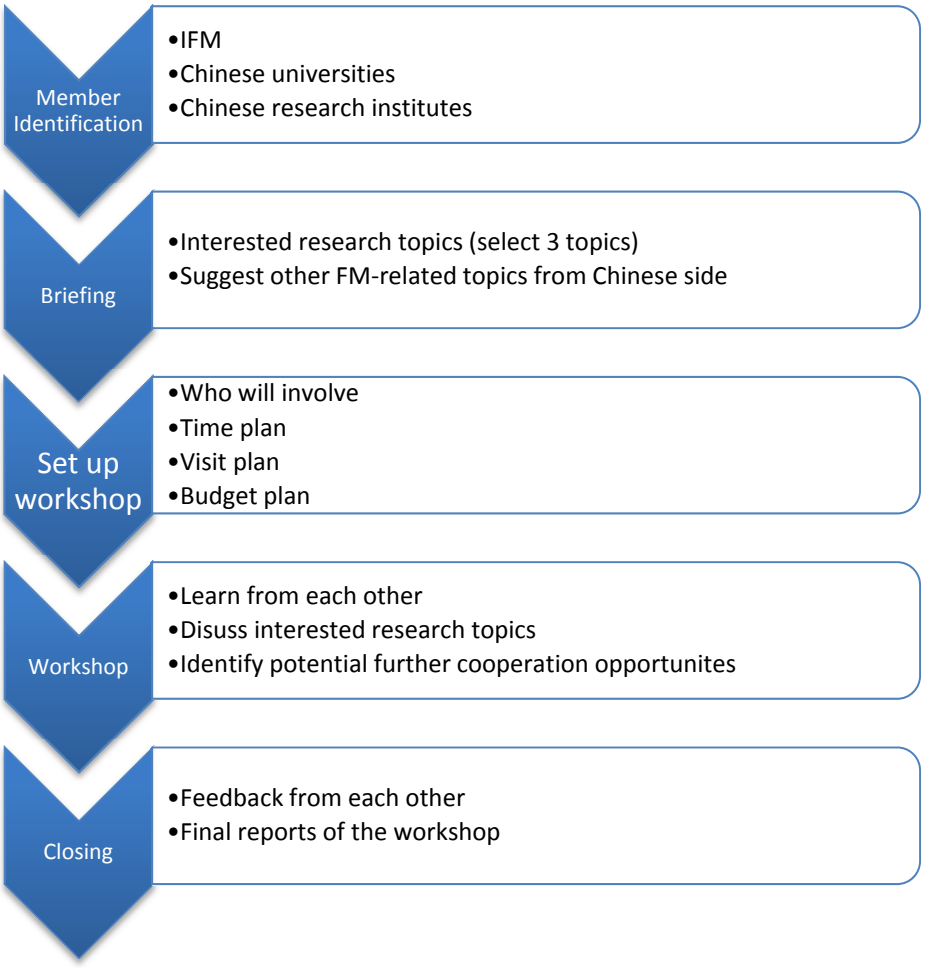

Figure 1: Workshop procedure

5 BENEFITS

The workshop with Chinese research institutes can bring the global issues together to discuss and find potential solutions. It is a beneficial platform for academics to share knowledge and exchange opinions. Especially nowadays, local issues can grow to global issues. Therefore, academics from different countries should communicate and share knowledge in order to build a sustainable developing living environment. Due to the co-operative workshop, problems in research field can be better solved; further potential project can be identified to work on together in the future.

5.1 Benefits for Chinese participants

- To learn what is FM and what FM can do in daily live.
- What can be adapted in China from the knowledge in Switzerland?
- What are the current research topics in Europe? Whether they are relevant in China?
- Learn from the best practices that can be adopted in China.
- Future opportunities in FM research topics.

5.2 Benefits for IFM

- How Chinese understand FM?
- How is the situation of FM in China?
- Culture difference in dealing with FM between two countries.
- Global issues that can be identified from the workshop as further research topics.
- Reputation in FM field internationally.

APPENDIX TIME PLAN (PROPOSED)

Day 1	15:00-15:15	Welcoming speech	IFM (Prof. Thomas Wehrmüller)
	15:15-15:45	Presentation IFM ZHAW	Prof. Dr.-Ing. Stefan Jäschke Brülhart
	15:45-16:30	Presentation Chinese universities	Professors from Chinese universities, each university 15mins
	16:30-17:00	Break	
	17:00-17:30	Workshop introduction	Prof. Dr.-Ing. Stefan Jäschke Brülhart MSc. FM Ying Ying Cui
	17:30-18:00	Discussions of expectations and goals	All workshop participants
	19:00-	Dinner	
Day 2	09:00-10:00	Workshop, selected topic 1, knowledge and examples presentations	All workshop participants (coordinator: Ying)
	10:00-10:15	Break	
	10:15-11:15	Continue the workshop, summary and future cooperative opportunities	All workshop participants (coordinator: Ying)
	11:30-13:00	Lunch break	
	13:00-16:00	Site visit	
	16:00-17:00	Discussion and summary of the day	
	18:30-	Dinner	
Day 3	09:00-10:00	Workshop, selected topic 2, knowledge and examples presentations	All workshop participants (coordinator: Ying)
	10:00-10:15	Break	
	10:15-11:15	Continue the workshop, summary and future cooperative opportunities	All workshop participants (coordinator: Ying)
	11:30-13:00	Lunch break	
	13:00-16:00	Site visit	
	16:00-17:00	Discussion and summary of the day	
	18:30-	Dinner	

Day 4	09:00-10:00	Workshop, selected topic 3, knowledge and examples presentations	All workshop participants (coordinator: Ying)
	10:00-10:15	Break	
	10:15-11:15	Continue the workshop, summary and future cooperative opportunities	All workshop participants (coordinator: Ying)
	11:30-13:00	Lunch break	
	13:00-16:00	Site visit	
	16:00-17:00	Discussion and summary of the day	
	18:30-	Dinner	
Day 5	09:00-10:00	Closing, summary	IFM, Prof. Thomas Wehrmüller Prof. Dr.-Ing. Stefan Jäschke Brülhart
	10:00-11:00	Summary from Chinese universities	