|  |  |  |
| --- | --- | --- |
| BRR | February 10  2016 | |
| Making Facility Management more intelligent and efficient. | | Business requirements review |

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision record** | | | |
| Version | Date | Attendees | Comment |
| 1.0.0 | 10.02.16 | Arshad Shakil,  Badis Madani,  [Håkon Hedlund](https://www.facebook.com/hakon.hedlund)**,**  Zhili Shao |  |
| 1.1.0 | 16.02.16 | Arshad Shakil,  Badis Madani,  [Håkon Hedlund](https://www.facebook.com/hakon.hedlund)**,**  Zhili Shao | Add new content to FM description, FM patterns and their problems. Also, add some comments and references. |

Contents

[1. Identification 3](#_Toc444438326)

[2. Problem formulation 3](#_Toc444438327)

# Identification

Facility Management (is abbreviated to FM) the integration of processes within an organization (like school, hotel, hospital, department complexes and so on) to maintain and develop the agreed services which support and improve the effectiveness of its primary activities. FM’s most important services are building management, which includes lighting control system, HVAC, Access control, Fire alarm, CCTV and so on.

HVAC system, which stands for heating, ventilation, and air conditioning, is one important FM service in almost every building. Its responsibility is providing a comfortable environment for users in the buildings. For the traditional HVAC control system, the user normal has no access to adjust the temperature, humidity, air quality. Even when they can manually set the parameters from control panel, it’s still very hard to get what they want, because a comfortable environment is not just about one sector, it’s a combine of temperature, humidity, air quality and so on. For the HVAC system maintainers, they also have to work hard to make sure the HVAC system work very well.

# Problem formulation

The traditional HVAC system needs an improvement to optimize users’ experience and make maintainers’ work efficient.

For the HVAC users, a comfortable customized indoor environment is needed. The HVAC control system should be intelligent enough to make the setting process easy. There should be more methods for system configuration except fixed control panel. Also for the configuration strategies, more factors such as time, weather should be added. In order to make the system work atomically, some algorithms can be designed to adjust the indoor environment.

For the HVAC maintainers, they always have responsibility to concern about the electricity cost of HVAC system. When some problem happens to the HVAC system, they often spend much more time on troubleshooting rather than fixing the problem. So a troubleshooting mechanism will help them a lot.

These problems about HVAC control system has existed for a long time. Now new technology gives us more possibility to solve them.