



THE 21<sup>ST</sup> INTERNATIONAL  
OPERATIONS & MAINTENANCE  
CONFERENCE IN THE ARAB COUNTRIES

# integrated technical solutions for smart maintenance management

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 #OmaintecConf

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# Introduction

## **The Experience Is assets**

The practical experience accumulated over the years is one of the most important intangible assets of facilities and asset management organizations.

## **Knowledge transfer**

Organizations spend high budgets to maintain these knowledge and transfer them from experienced employees to new employees with little experience.



# The Solutions



## BIM

Building Information Modeling



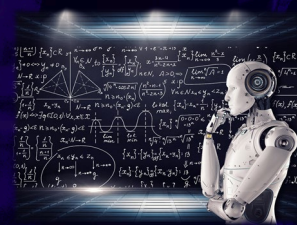
## AR

Augmented Reality



## INS

Indoor Navigation Systems



## EX

Expert System



## RFID

Radio Frequency Identification



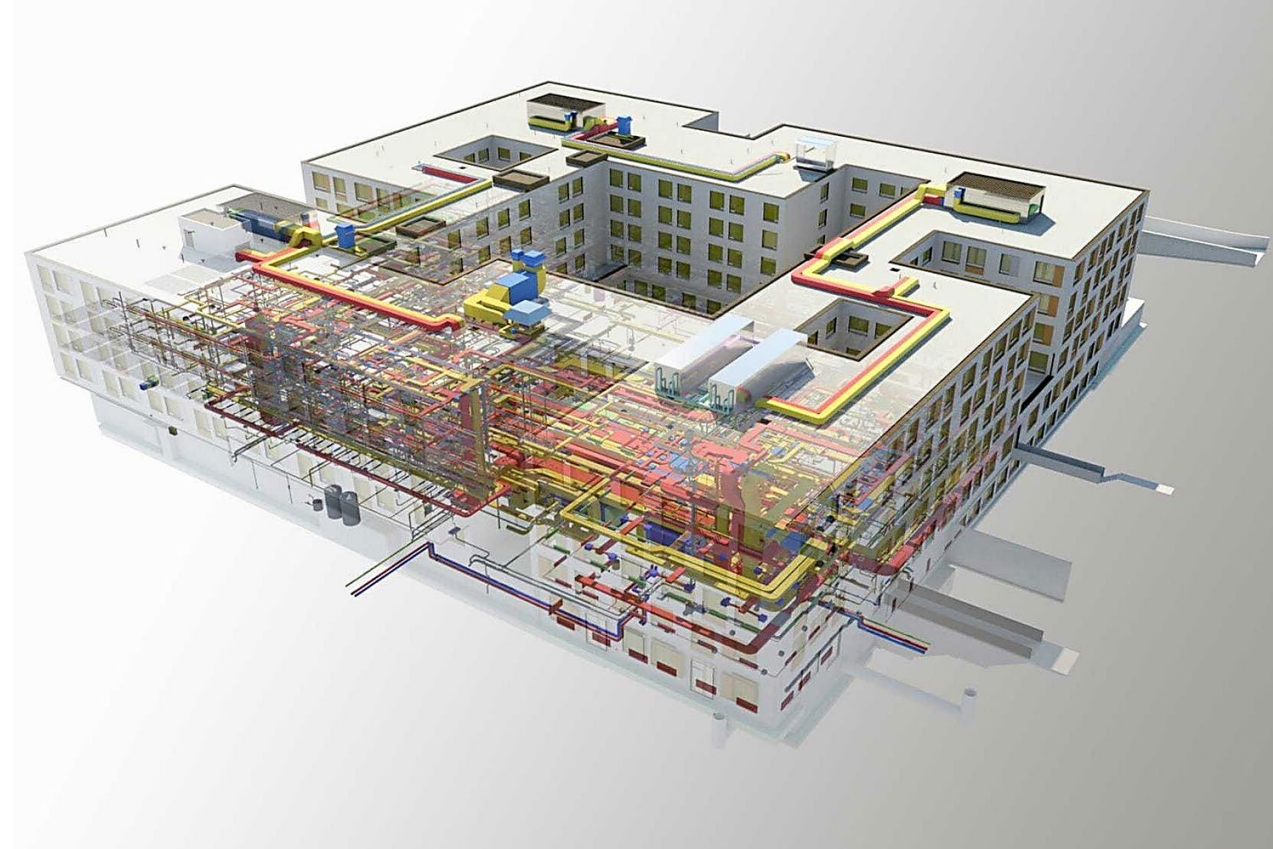
## RMM

Remote Maintenance Management

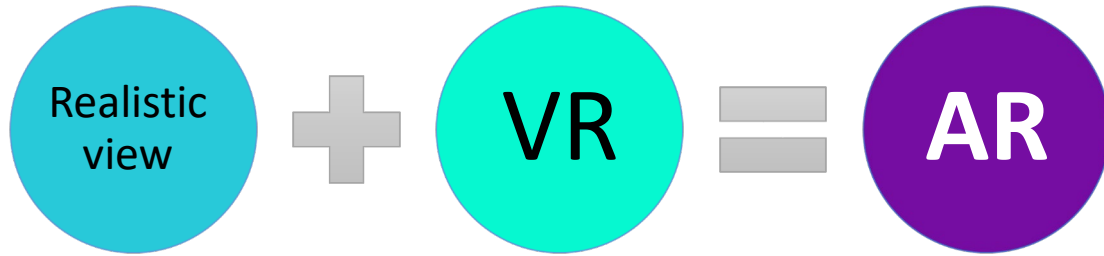


# Building Information Modeling (BIM)

- New technology in architecture
- BIM allows facility managers to study alternatives
- Estimating replacement and improvement costs for facilities



# Augmented Reality (AR)

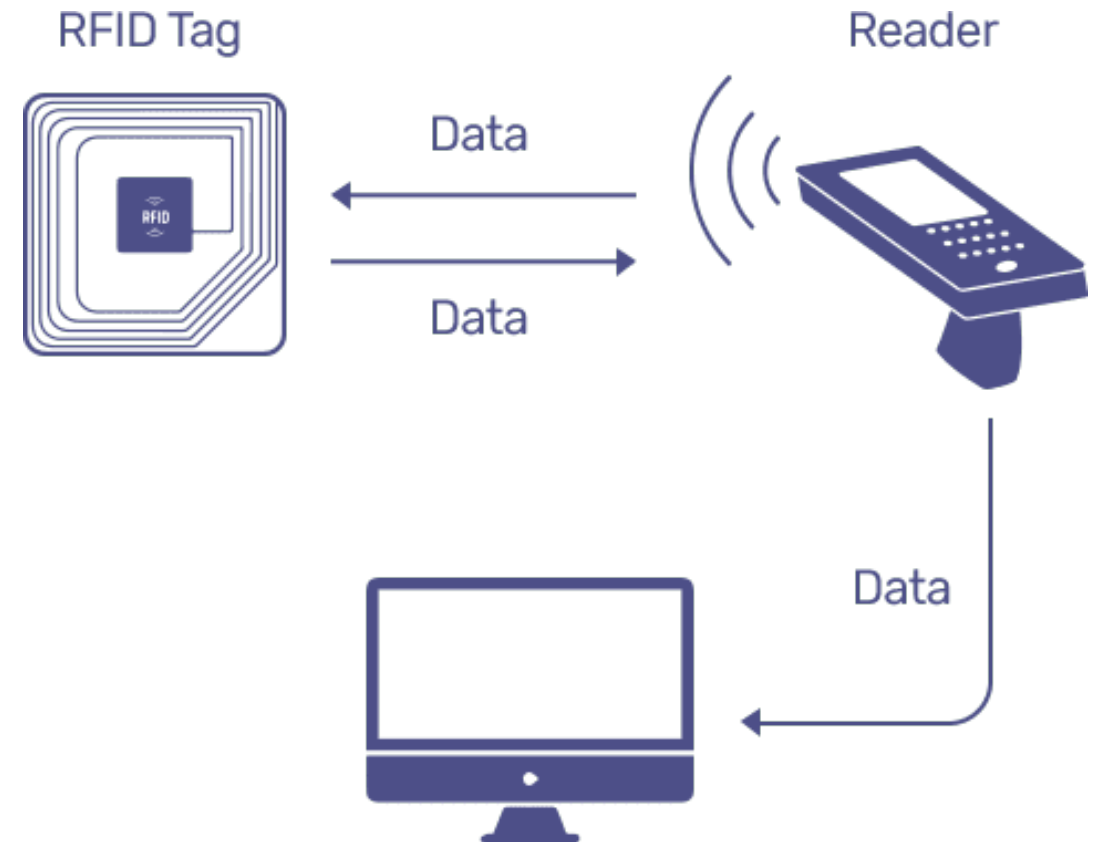


Augmented reality technology is used in many fields such as training, education, entertainment, military applications, medical applications...etc.



# Radio Frequency Identification (RFID)

- Micro transmitter station.
- Connect things with the database
- Common in follow-up supply chains, products in large production lines and animals.





# Indoor Navigation Systems (INS)

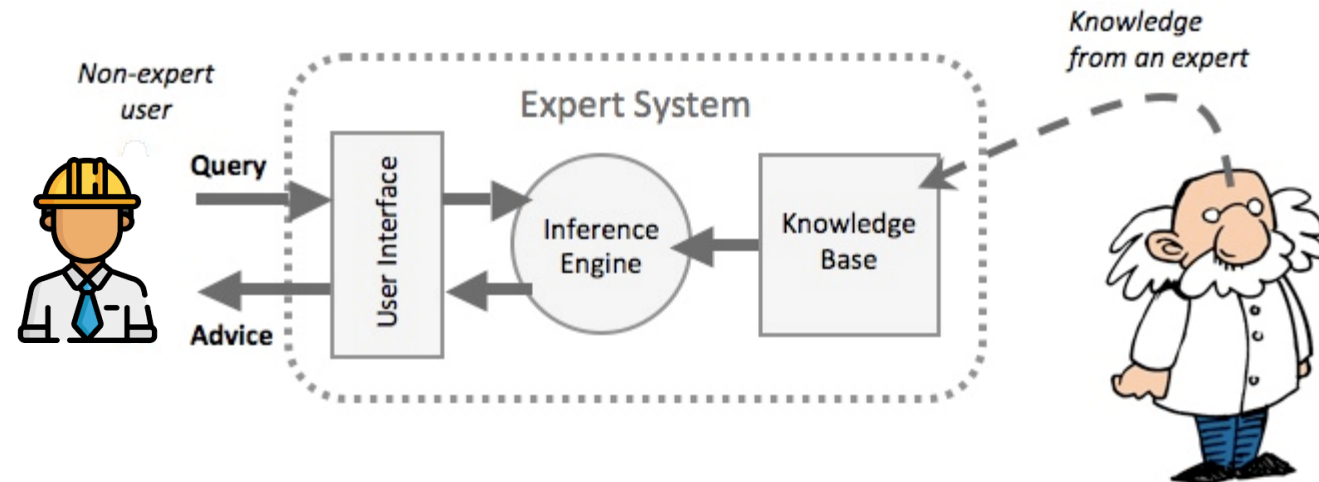
- Indoor navigation directs users with a higher degree of precision ,thro the buildings.
- It does not require a GPS signal.
- Indoor navigation can leverage augmented reality.





# Expert System (ES)

- Artificial intelligence uses human knowledge stored in a knowledge base.
- Provides solutions or advice that lead to solutions.
- Knowledge engineering is the construction of an expert system and its practitioners are called knowledge engineers.





# Remote Maintenance Management (RMM)

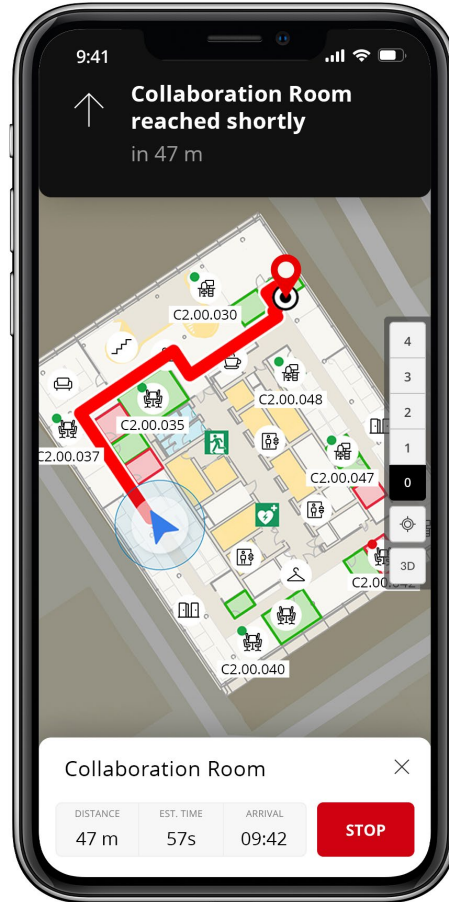
- Common at information technology systems.
- Reducing operation and maintenance cost.
- Build cumulative experience with maintenance teams.
- Providing urgent advice for emergency maintenance.
- Sharing economy opportunity in facilities management.



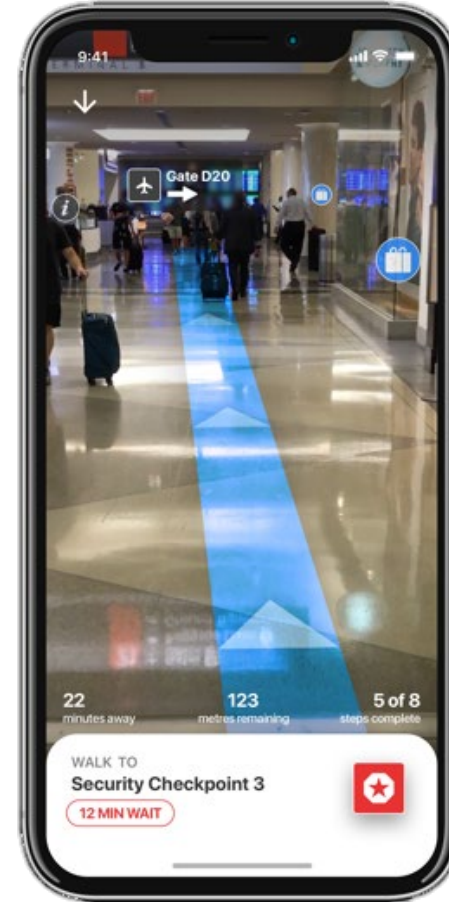


# Business Model

(INS) Indoor Navigation Systems

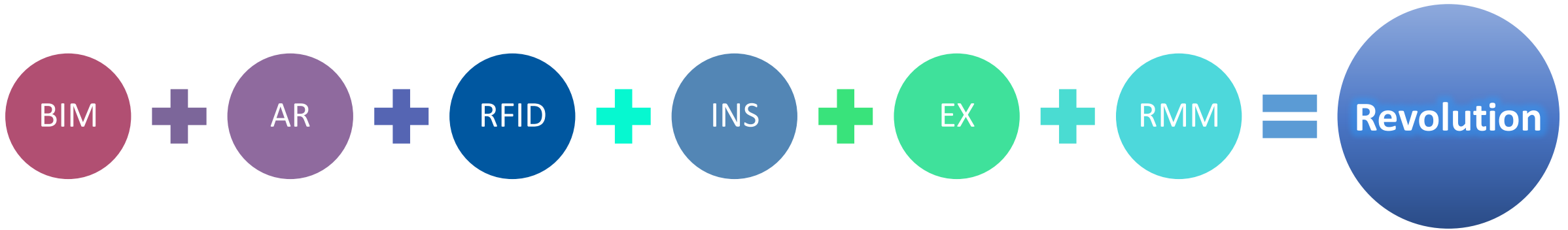


(INS) Indoor Navigation Systems & Augmented Reality (AR)





# Business Model





## Conclusion

- Providing huge raw data for **data mining**.
- Economics is an important part of the sustainability of facilities
- Sharing economy and facilities management



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# THANK YOU!

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