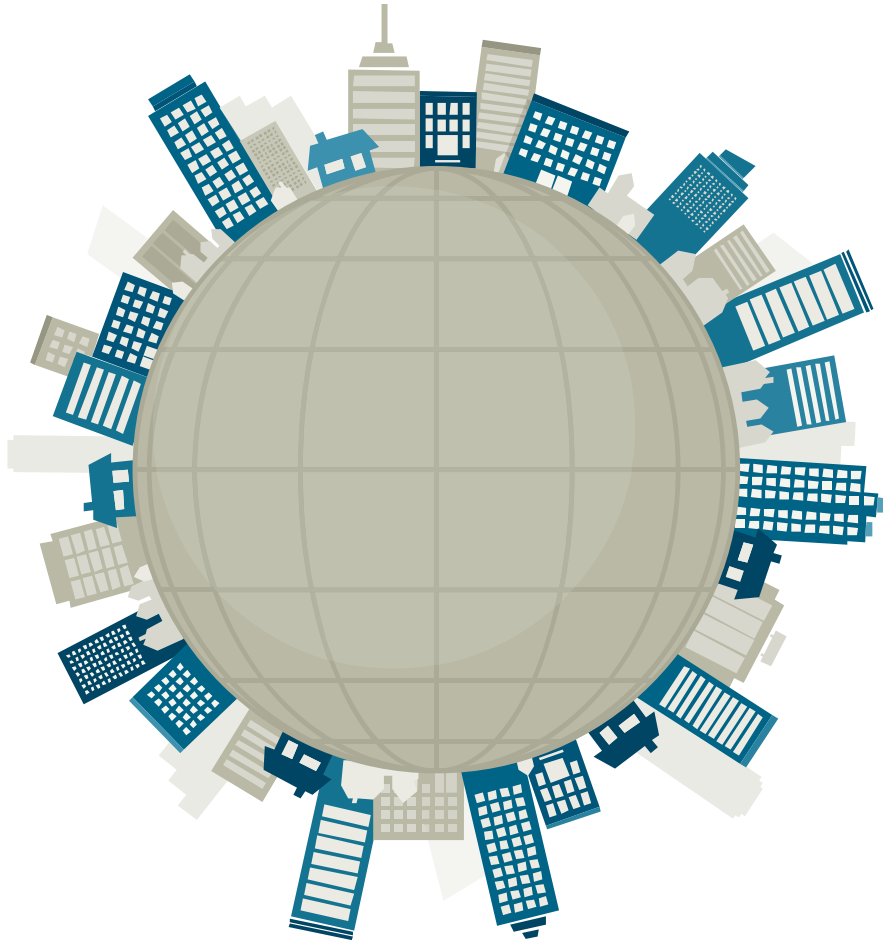


Smart Buildings The Implications for the Security Industry

These factors are currently influencing building owners/operators worldwide

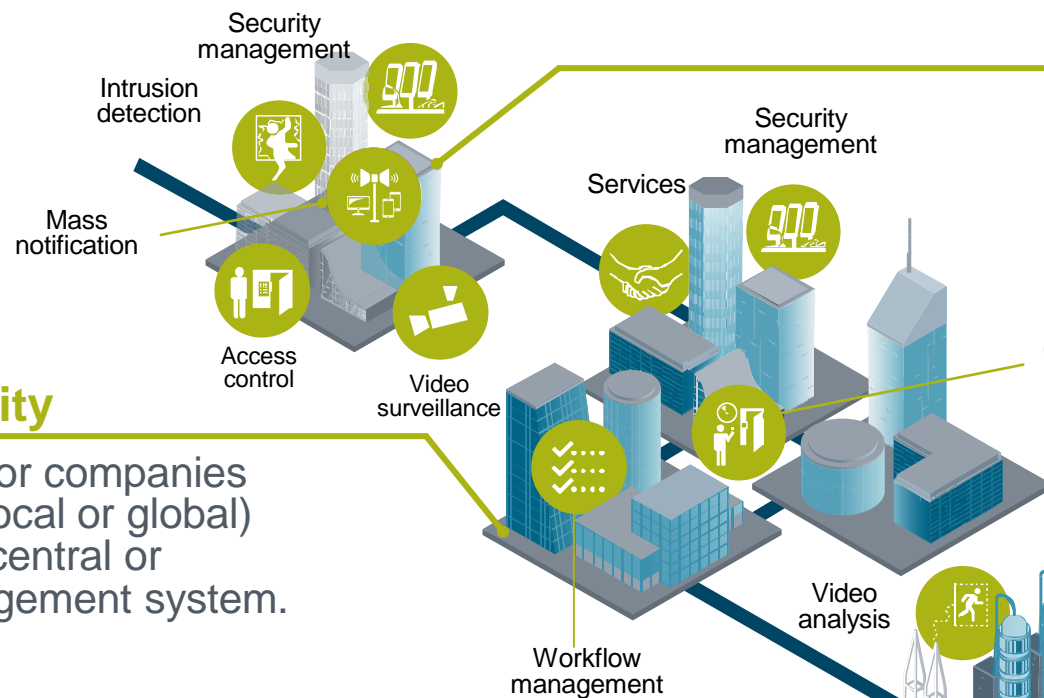


- **Security:** Dealing with increases in internal and external criminal activities, but also the threat of terrorism
- **Cyber Security:** Counter measures to avoid unauthorised access to data and targeted activities utilising software weaknesses
- **Conformity:** Adherence to international (ISO) and European (EN) norms addressing for example ICT security, business continuity and building safety.
- **Digitalization:** Broad use of mobile internet and increasing deployment of cloud based services.
- **Cost:** Continuous efforts to optimise OPEX and CAPEX in a rapid changing environment

Different building operators have different security needs

Building and campus

Individual buildings or campus installations require traditional security solutions with the option of close integration into existing building automation systems.



Central/decentralized identity management

Video analysis

Deployment of emergency services personnel

Perimeter protection

Emergency response

Critical infrastructure

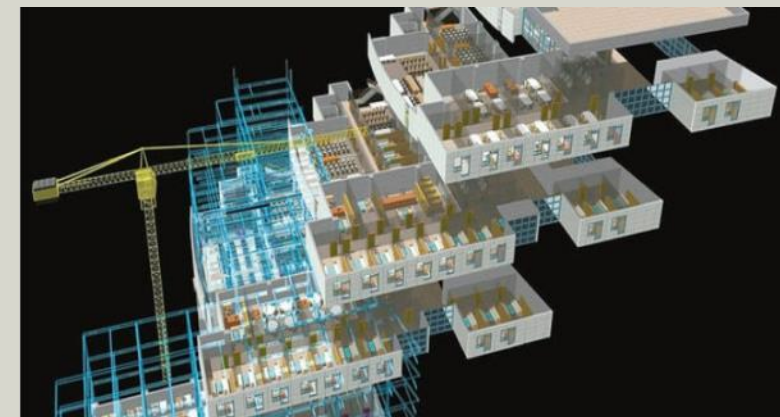
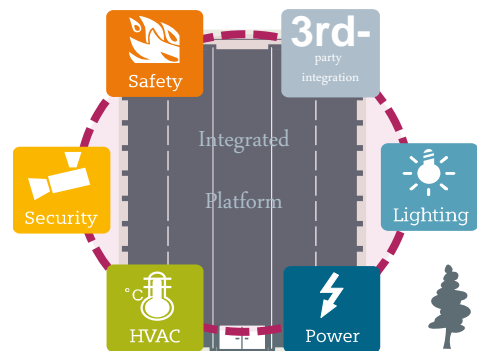
Individual sectors, such as production plants, energy providers, life science facilities or airports must ensure business continuity in these complex environments.

Industrial control centre

Enterprise security

Integrated security for companies with multiple sites (local or global) with a higher-level, central or decentralized management system.

From the automated building to the fully digital building in three stages



Automated

Integration of systems allows for fully and partly automated processes

2010

Connected

Systems share data allowing buildings to be intelligent / smart

2015

2020

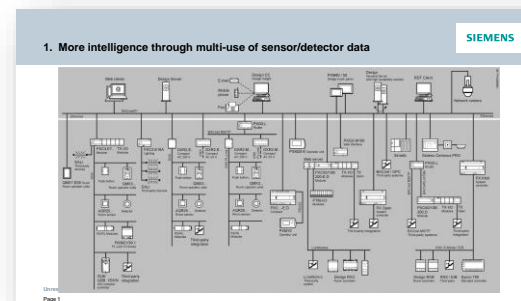
Digital

Comprehensive data sharing across all building aspects (BIM, positioning)

2020+

Three examples for implications for security industry in smart buildings

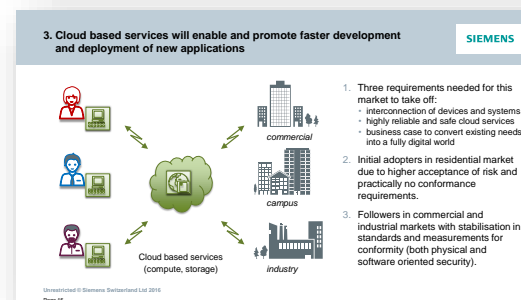
1. Multi-use of sensor/detector data
 → Internet of Things / Industry 4.0



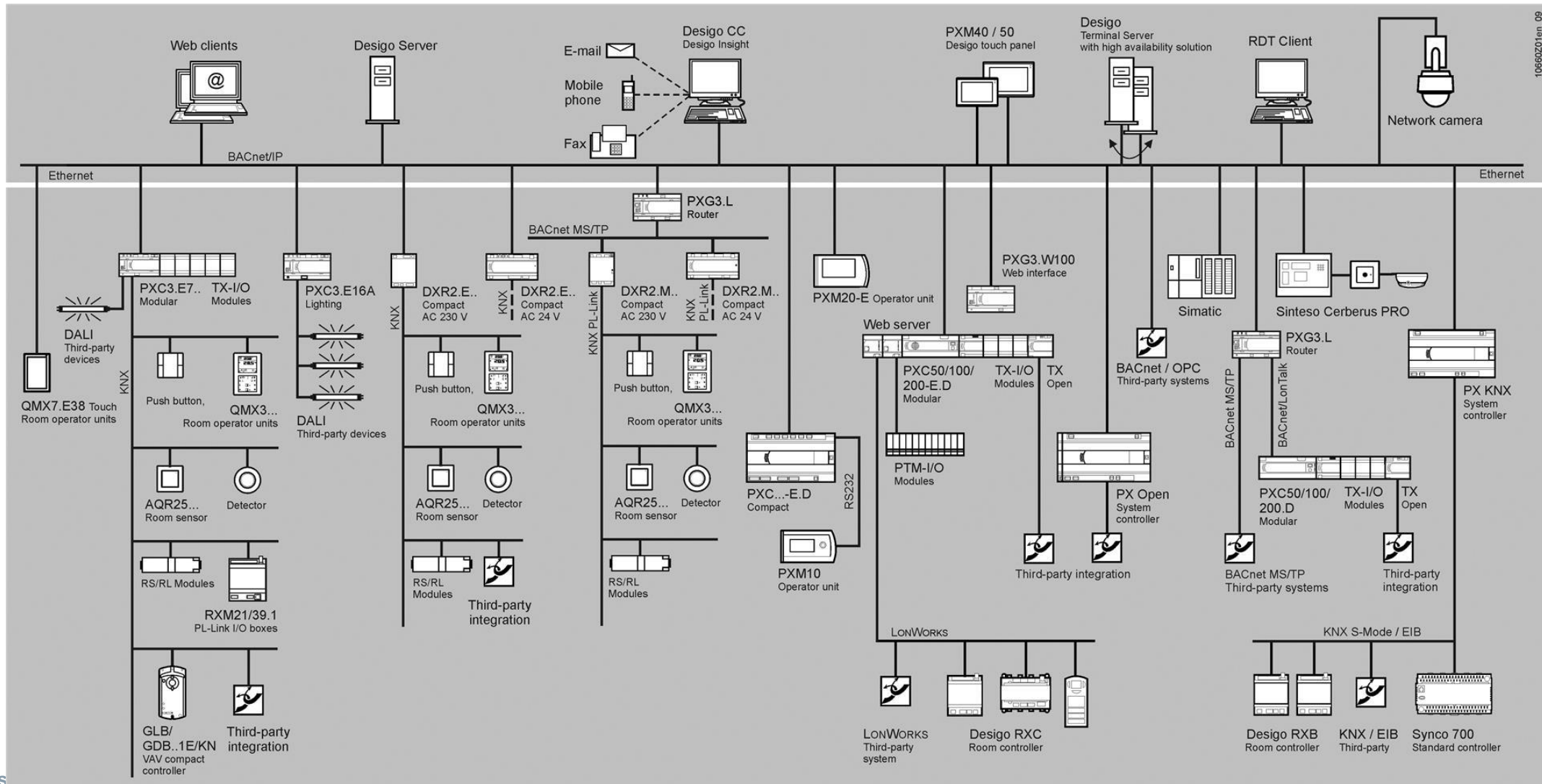
2. Simulation and verification
 → Building Information Modelling



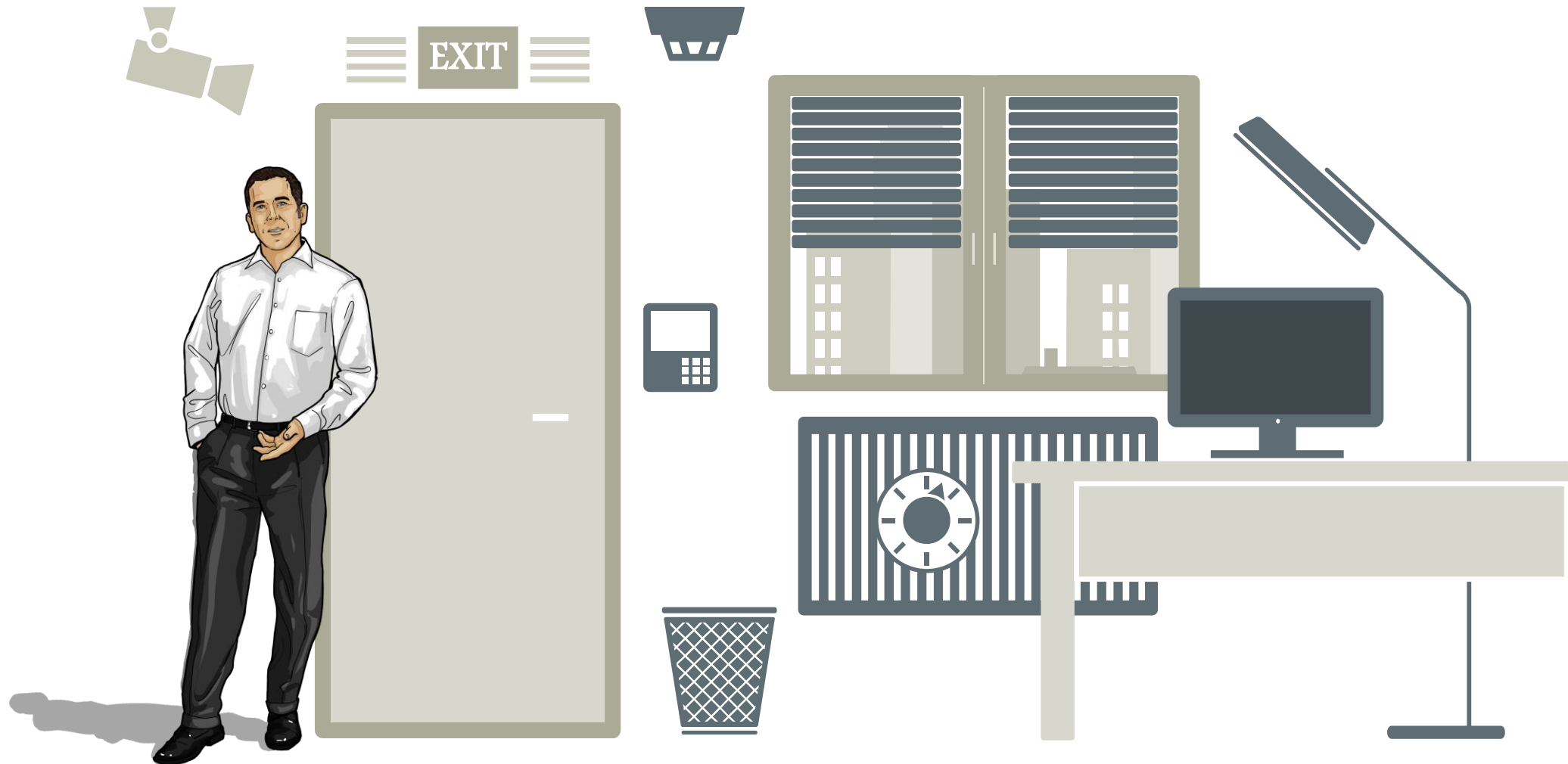
3. Fast deployment of new applications
 → Cloud based services



1. More intelligence through multi-use of sensor/detector data



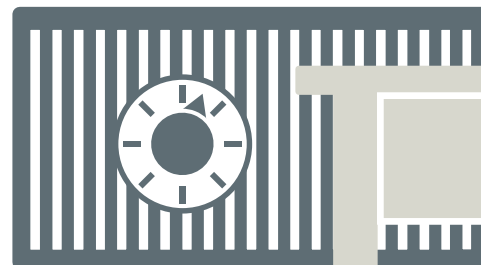
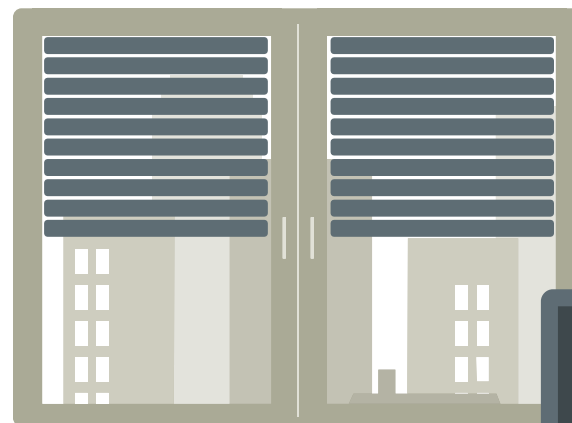
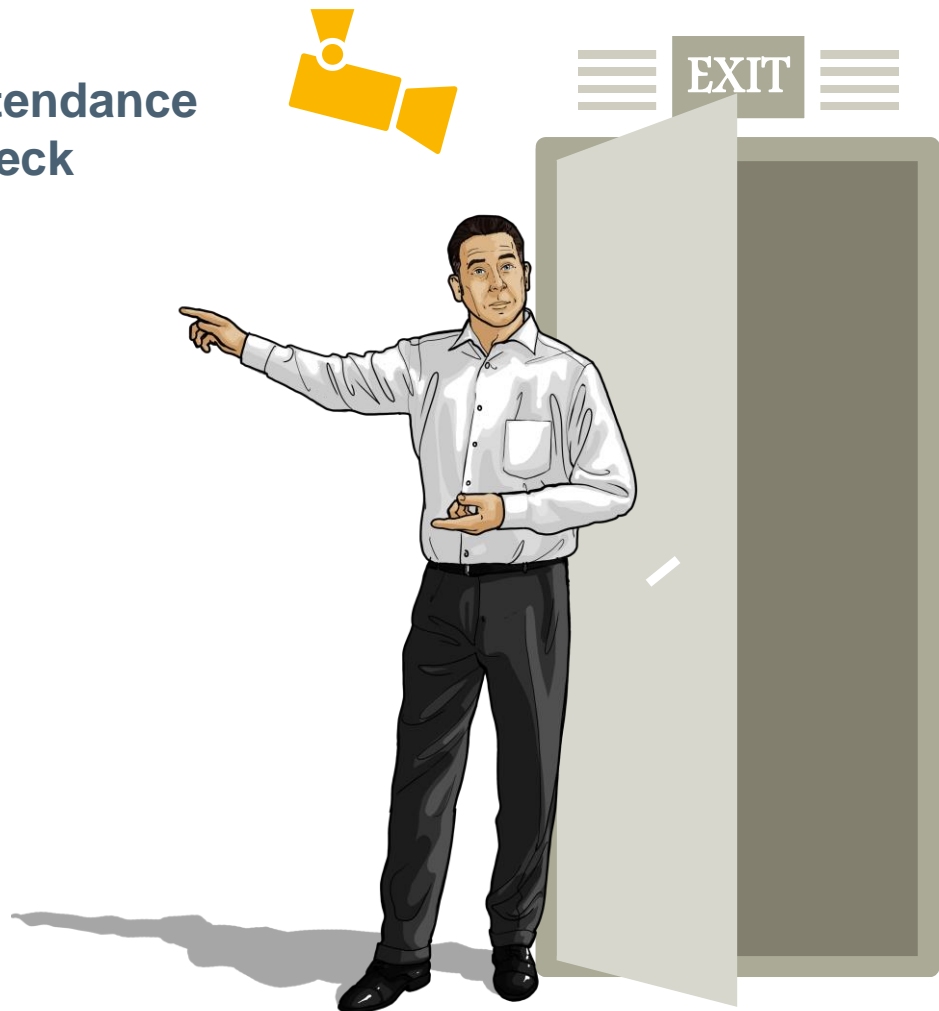
Integrated and automated Office infrastructure



Integrated and automated Office infrastructure



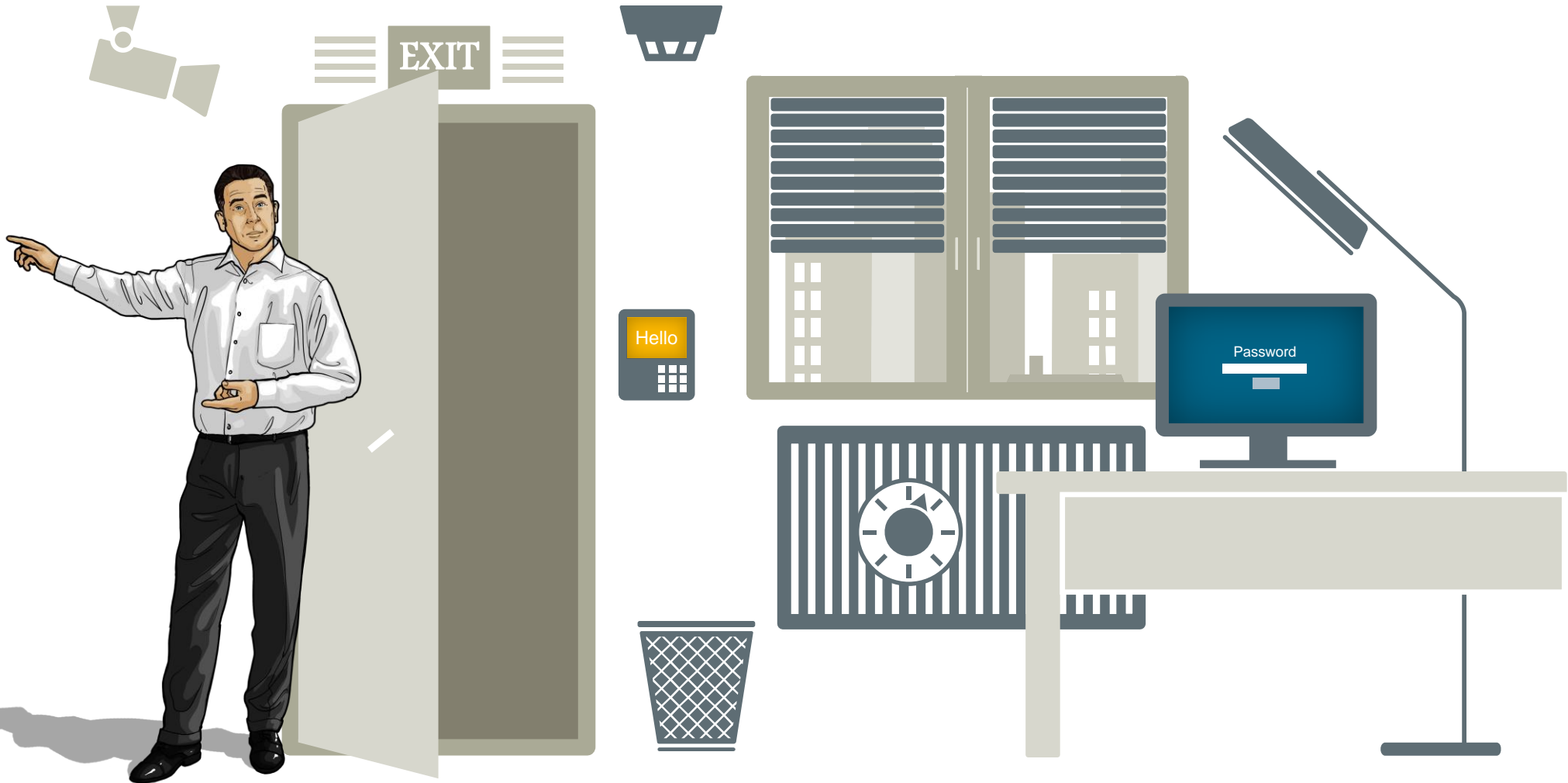
Attendance
check



Integrated and automated Office infrastructure



Power activation



Integrated and automated Office infrastructure



Light activation



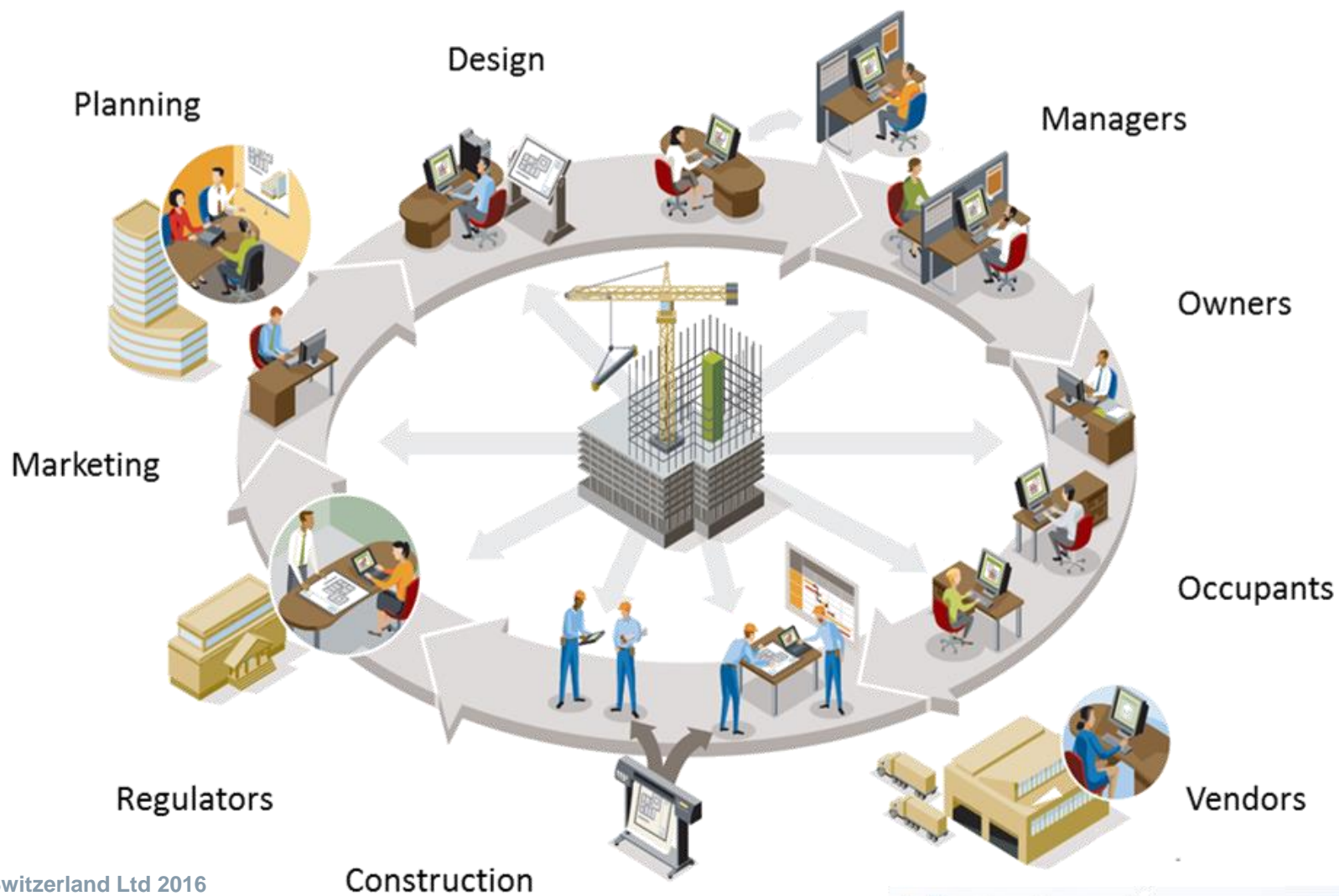
Integrated and automated Office infrastructure



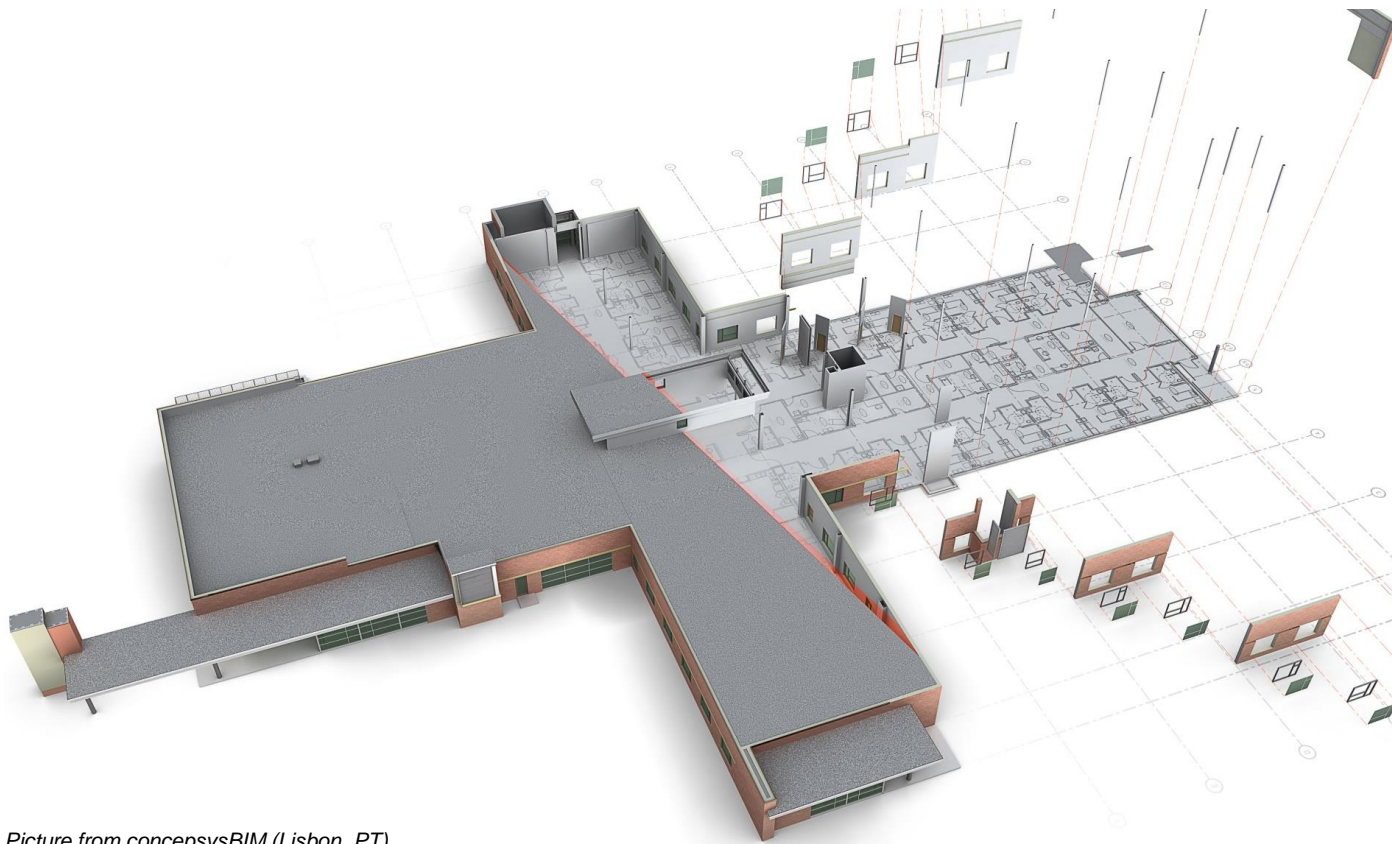
Temperature adjustment



2. Simulation and verification before and after Build



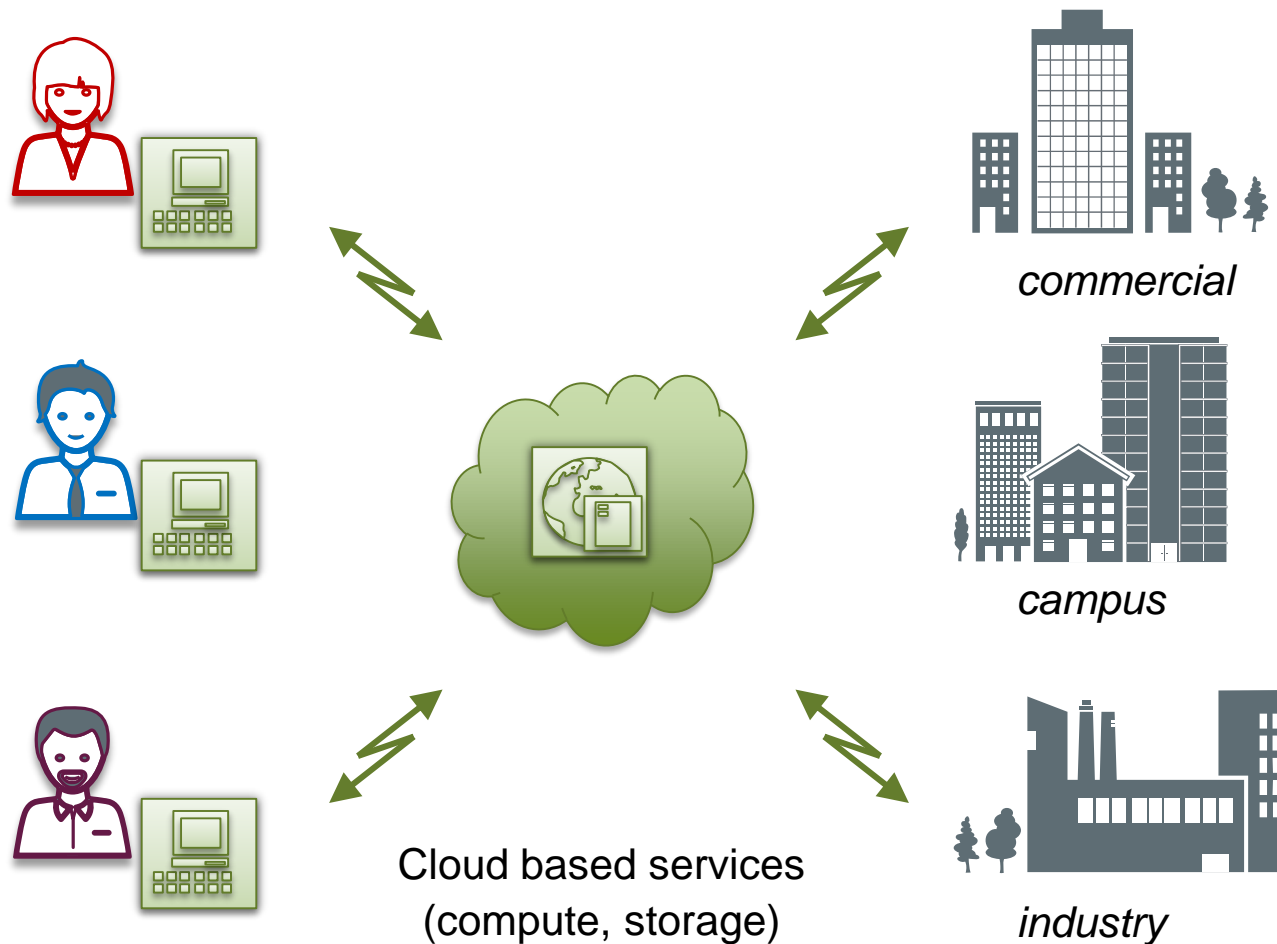
Concept review within Building Information Modelling



Picture from conceptsysBIM (Lisbon, PT)

1. Aligning passive and active measures based on the initial risk assessment results.
2. Camera placement considering operational criteria such as possible obstacles and minimal lighting.
3. Simulation of access control and egress paths dependent on the operation in the building (day, night, weekends)
4. Testing adaptations and retrofits prior to making physical and technical changes.

3. Cloud based services will enable and promote faster development and deployment of new applications



1. Three requirements needed for this market to take off:
 - interconnection of devices and systems
 - highly reliable and safe cloud services
 - business case to convert existing needs into a fully digital world
2. Initial adopters in residential market due to higher acceptance of risk and practically no conformance requirements.
3. Followers in commercial and industrial markets with stabilisation in standards and measurements for conformity (both physical and software oriented security).

**Thank you for your
attention!**



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