Smart Building Application Design

Starting point: marketing or sponsor driven priorities suggest the interop use cases. PDM connections. E.g., promoting upgrades with smart interfaces, e.g., wireless or Ethernet options to existing equipment. Ontology may or may not be present in existing implementations.

Device models / ontologies – Haystack appears to be usable. Focus then is on interop with problems and likely legacy applications already in place.

1. Elevator use
   a. Power responsibility
   b. Detecting outage
2. Building security (family of use case)
   a. Elevator + badging
   b. Badging system knows about visitors (ideally from the elevator)
3. Power management building
   a. Repair history
   b. Remediation FAQs
4. Emergency Plan Applications
   a. Who to Notify
   b. Zone managers for evacuation
5. Building topology / map (where is elevator, escape alternatives in event of fire, alignment with occupancy)

List of interoperability requirements

1. Who to call when power is out in the elevator. (Data: sensor switch in elevator; ID + accelerometers). Interface to legacy building s/w if local zone affected
2. Interop from sensor location / elevator to maps. Elevator services the penthouse, and that is stored in ontology. Could also map to renters / occupants.
3. What parts of the emergency plan to engage? Interop challenge to map sensor type to some part of the emergency plan. E.g. rule to force stair use during emergency.
4. Building tenant management application vs. elevator use
5. External sources for decision support/ smarter app

Mix of new sensors, new software, new interfaces (e.g., weather), existing sensors. E.g., triggers. Our app building
E.g., a trigger is from the emergency plan to notify the floor manager. Text vs. sneakernet to find if anybody is stuck.