



Open Architectures for Intelligent Solid State Lighting Systems

# OpenAIS WP 1 Scenarios & Use Cases

## Symposium

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Supported by the Horizon 2020  
funding of the European Union

# // Stakeholder Scenarios

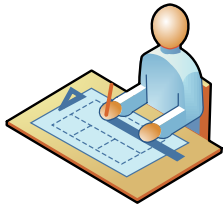


SALES

Easy to Specify + design  
Easy to Make  
Easy to Estimate  
Clear Value proposition  
Easy Use of controls



USE



PROJECT

Simple and secure install  
Tools used to configure  
Wired and Wireless  
Simplicity of IoT



SUPPORT

Advanced configs  
Interoperability  
Easy maintenance  
DIY

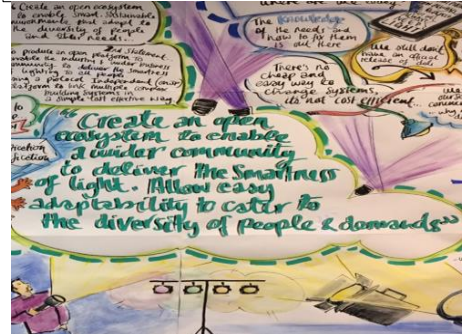
Automation  
Personalised control  
Apps  
HCL/"WELL" building  
as a human right.

# // Context, 2020-40 New Ways of Working

- “New Ways of Working” – “Digerati”, collaboration, temp spaces
- “Smart Moves” – mobility, F2F when needed
- “Youniverse” – personalised experience, ‘my favourites’
  
- 70% of 2040 jobs unknown, 40% contract
- Knowledge workers very mobile, transport automated
- Multipurpose environments, digitised, flexible, personal
- Wellbeing becomes a significant **expectation**
  
- Office owners innovate to thrive
  - Renters not owner occupiers AND Shorter leases
  - Regular space re-configuration
  
- HR attraction and retention getting harder

# // Aims and Vision

**“Create an open ecosystem to enable a wider community to deliver the smartness of light. Allow easy adaptability to cater for the diversity of people and demands”**



Vision



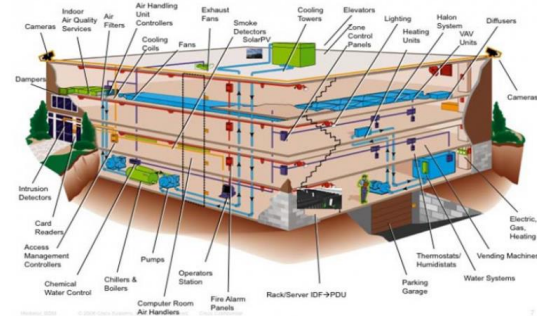
Pilot Main  
Scenarios



EASY LIFE



INCREASE  
BUILDING VALUE



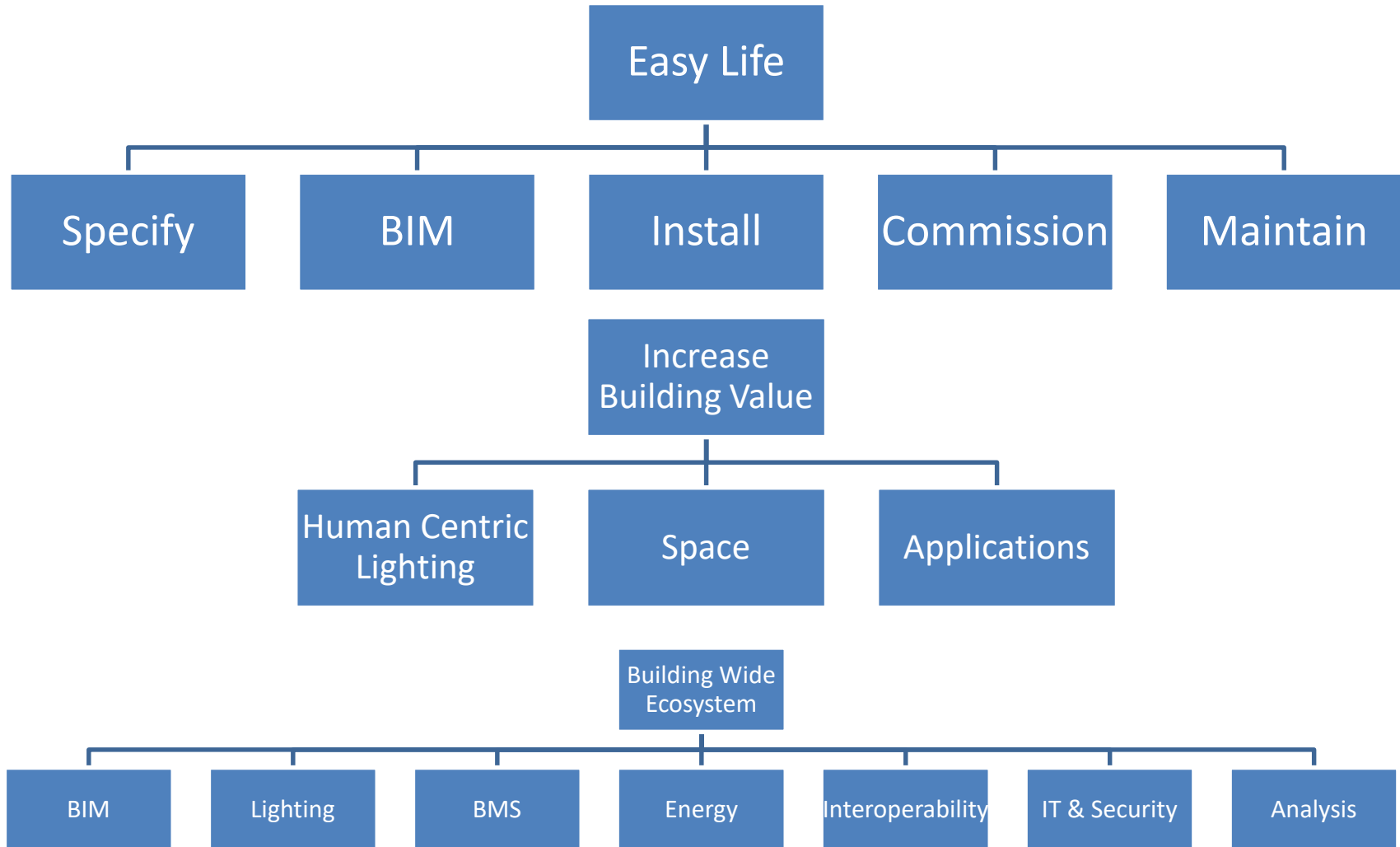
BUILDING WIDE  
ECOSYSTEM

# // Some skeptical barriers were there

- Glass ceiling < 6% projects have controls
  - But innovation thrives & there is appetite for change
- Fear of IT complexity and upfront costs
  - But consultants moving to TCO & IoT solves this(!)
- Electrical vs Mechanical barrier to intelligent controls
  - But IP and IT convergence is happening in buildings
- Acknowledge - current ways not quite good enough
- Lament - past lost chances of openness

OpenAIS opportunity lies in using IoT to unlock the 94%  
Open Season for makers of Chips, Lights, Apps & IoT stuff

# // Topics and Use Cases -> User Requirements



700 ideas->50 super scenarios->15 Topics-> 34 Use Cases->250 User Requirements

# // Expectations rising, tech enabling

## Connected systems & flexible workspace

Integration – Blinds, Room booking, Guard controls, AV systems, Occupancy

## User knows better lighting at home

Decorative, Colour, TuWh lighting

Automation, Voice intervention, Apps

## FM Business pressures

Easy maintenance

Space management

Integrated room controls

Obvious Scenes and Modes built-in. Automation

Occupancy knowledge

Energy data analysis and tenant billing

Mobile, flexible working

Predictive scheduling of energy commitments

Workplace and Workforce productivity

# Smart Lighting

# Smart Building

# Smarter Users

- Groups and Group Modes
  - Crossover and multiple sub-group memberships
  - Ripple, Synchronised dimming, reaction time
- Power
  - Emerging PoE technology improves OpenAIS acceptance
  - IP and PoE 'zombie power' concerns
- Scalability
  - Task , ceiling, decorative and large areas
  - Wired vs Wireless
- IT Communications
  - IPv4 legacy - Common Network Systems
  - Unobtrusive communications and data security
- Data, Sensors & Actuators
  - Sharing nicely between systems
- Emergency Lighting
  - Enable emerging features
- Applications and Embeddable logic controls
  - Innovator and differentiator OPEN opportunity



- Time, Money and Training
  - Intuitive and quick by design
- BIM, BIM Tools and Location
  - Map luminaires to positions
  - Use BIM knowledge to automate processes
  - BIM Apps to compare reality with the promise
- Install and Commissioning
  - Is the IT In and power on?
  - Wired or Wireless?
  - Basic or Advanced Commissioning?
  - Automated configuring of many objects
  - Pre-configuration vs late configuration
- Graceful Degradation
  - Resilience and Recovery

# // Conclusion – Scenarios mostly known



- IoT is the new way to solve this for 2020 and beyond
- What we cannot solve – should solve itself
  - Cost – volume and demand
  - Complexity – competition, disruptive players and disruptive business models
  - Conflict (M&E) – Ease of install and App based tools
    - » Rise of the Master Systems Integrator

Everyone deserves the Smartness of Light  
Make it Open, Easy, Add Value and Share Nicely

# Thank you

[www.openais.eu](http://www.openais.eu)



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