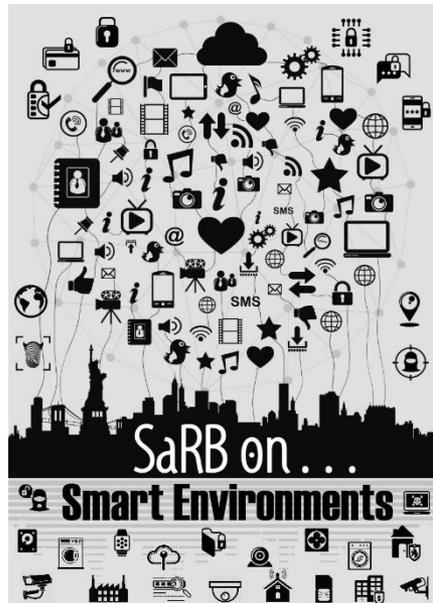

Smart Environments -

- What are they and who is responsible for Security?



Presented by :

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Disclaimer

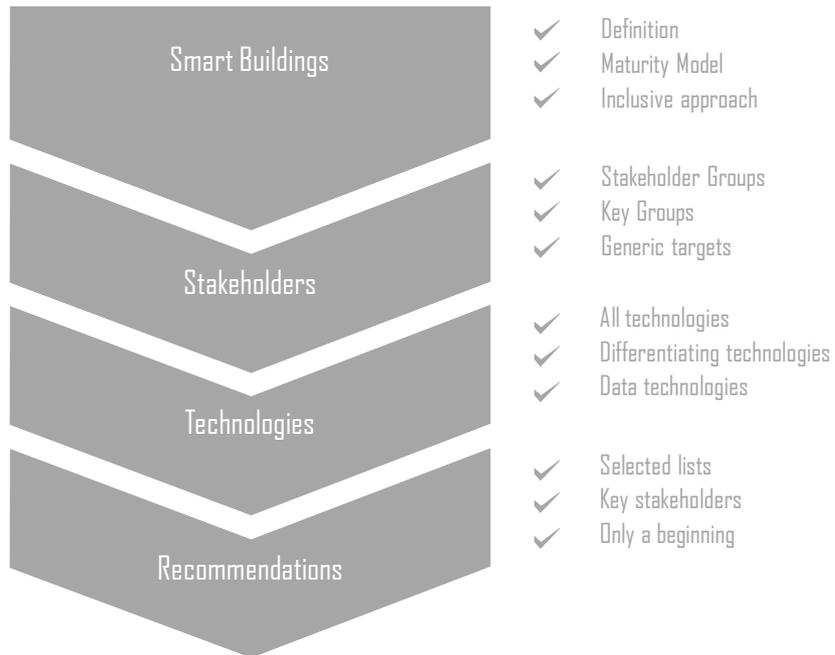
Presentation not endorsed by the IoT SF Smart Building Group

Please note that this presentation is taken from a White Paper written by James Willison and Sarb Sembhi, sponsored by Axis.

This presentation is not intended to be the work of the Smart Building Group, but a possible approach to the issues of getting started in Smart Building Security.

The Paper is available at: <https://www.axis-communications.com/Smart-buildings-and-smart-cities-security>

AGENDA





Definition

WHAT IS A SMART BUILDING?

"A Smart Building is one which utilises several different sensor technology systems to collect data and sharing it via a network to a unified management system to take actions or make decisions in order to provide benefits to building managers, occupants and visitors."

KEY ATTRIBUTES OF SMART ENVIRONMENTS



Connectivity

Connects to different technology systems



Sensors

where sensor technology system(s) are



Network

Connected via a network



Unified System

to a unified management system



Actions

to take actions or make decisions in order to



Stakeholder Benefits

provide benefits to its stakeholder.



Security

Security pre-requisite

The implied pre-requisite is that the whole technology that wraps around the building is secure so that it is able to function with the intended integrity, availability and confidentiality that is expected by all users.

BUT ...

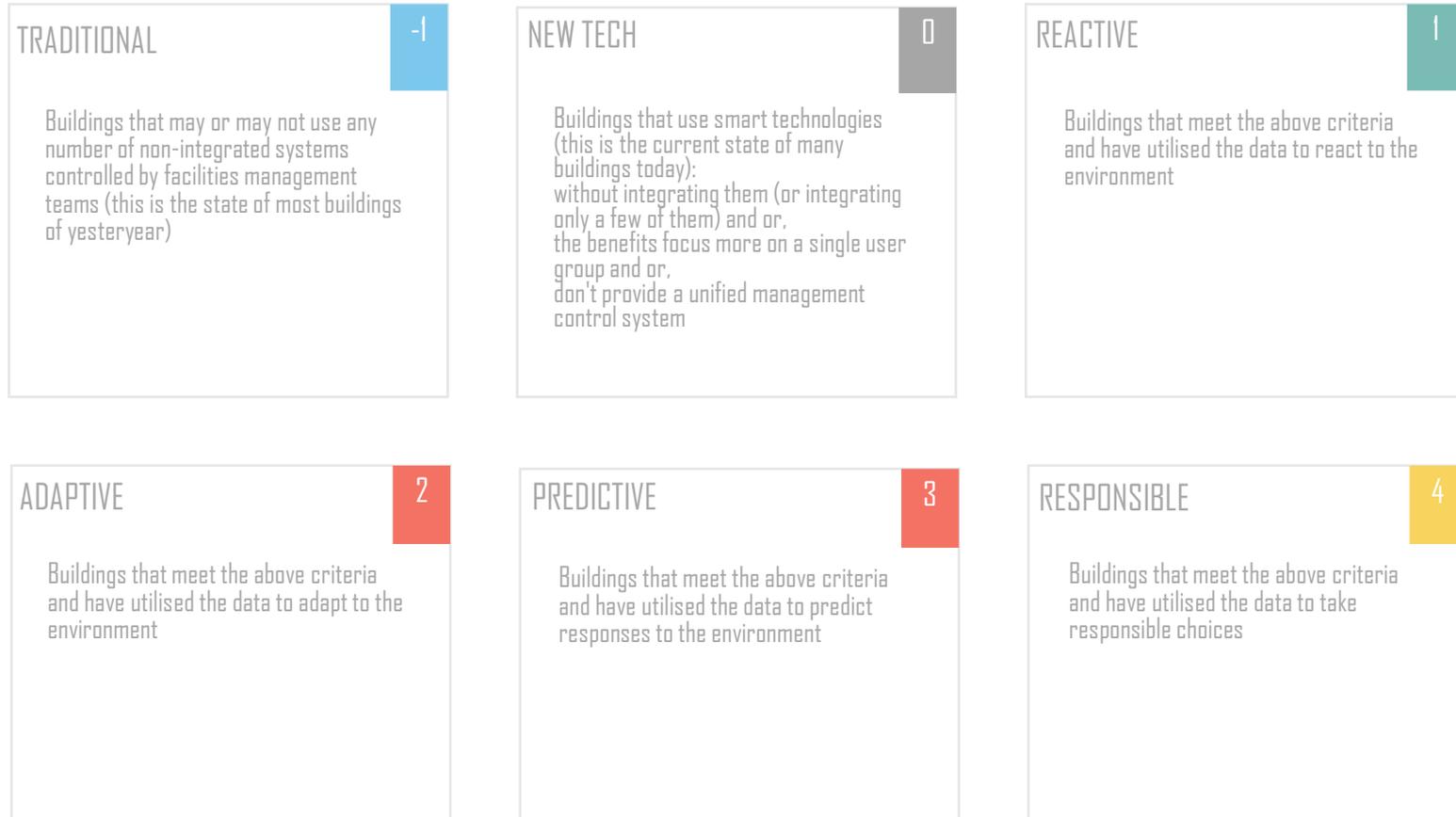
"A building only becomes smart when all systems are connected so that data from them can be used to make better benefit decisions, until that point it is only a building that uses smart technologies."



Maturity

SMART BUILDING MATURITY LEVELS

Levels -1, 0 and 1 to 4



This approach has been adapted from Buckman, A.H; Mayfield, M; Stephen B.M & Beck (2014)

What is a Smart Building? [https://doi.org/10.1108/](https://doi.org/10.1108/SASBE-01-2014-0003)

SASBE-01-2014-0003; accessed 22/05/19



Stakeholders

STAKEHOLDER GROUPS

Write your relevant text here



With at least 36 different possible stakeholders who want to benefit from the Smart Technology revolution, considering all of these is not a useful start for implementing security controls. So ...

KEY STAKEHOLDERS

Grouped generically



Owners

Forward thinking owners will create benefits for other stakeholders that can translate into additional benefits



Developers

These include those who write code libraries, as well as Apps that use API's, etc.



Integrators / Installers

This group will interpret system designs implement them, they must have the pre-requisite knowledge to install securely



Specifiers

Unless a strategic view of security is specified, change may be much slower



Marketing

This group has a lot to answer for when it comes to education and complacency. They can educate consumers better



Facilities Teams

These teams operate the systems on a day to day basis, and must be adequately trained to understand any anomalies



Manufacturers

Any producer of any component, device, software or systems, must consider the required controls for security



System Designers

This group often has the overall picture that sometimes others don't at later stages, providing guidance is essential



Maintenance

Ensuring the continued secure state of a system is vital



Technologies

TECHNOLOGIES FOR SMARTER SYSTEMS



AI

Artificial Intelligence

AI seems to be the must have technology in building control systems, such that some vendors have big data analytics but are calling it AI, and making up the AI part. They are often requesting all customer data for the approach to work. Any vendor that wants all of your data, either doesn't understand the data, AI, or the model or all three.

AI as a service which can be brought in separately afterwards will be available in a few years. Where there will be a good distinct separation of data from the AI service provided.



Open Data

Feeds into and out from Open Data sources

The types of and volumes of Open Data available is growing on a daily basis. This trend is likely to continue where large efficient organisations will share more and more data for interested researcher. The number of projects that will identify what constitutes as useful or quality data will also increase and help the overall better use of Open Data.



Recommendations

GETTING STARTED

The bleeding obvious and basics



STANDARDS AND FRAMEWORKS

There are many starting places to get you on your journey



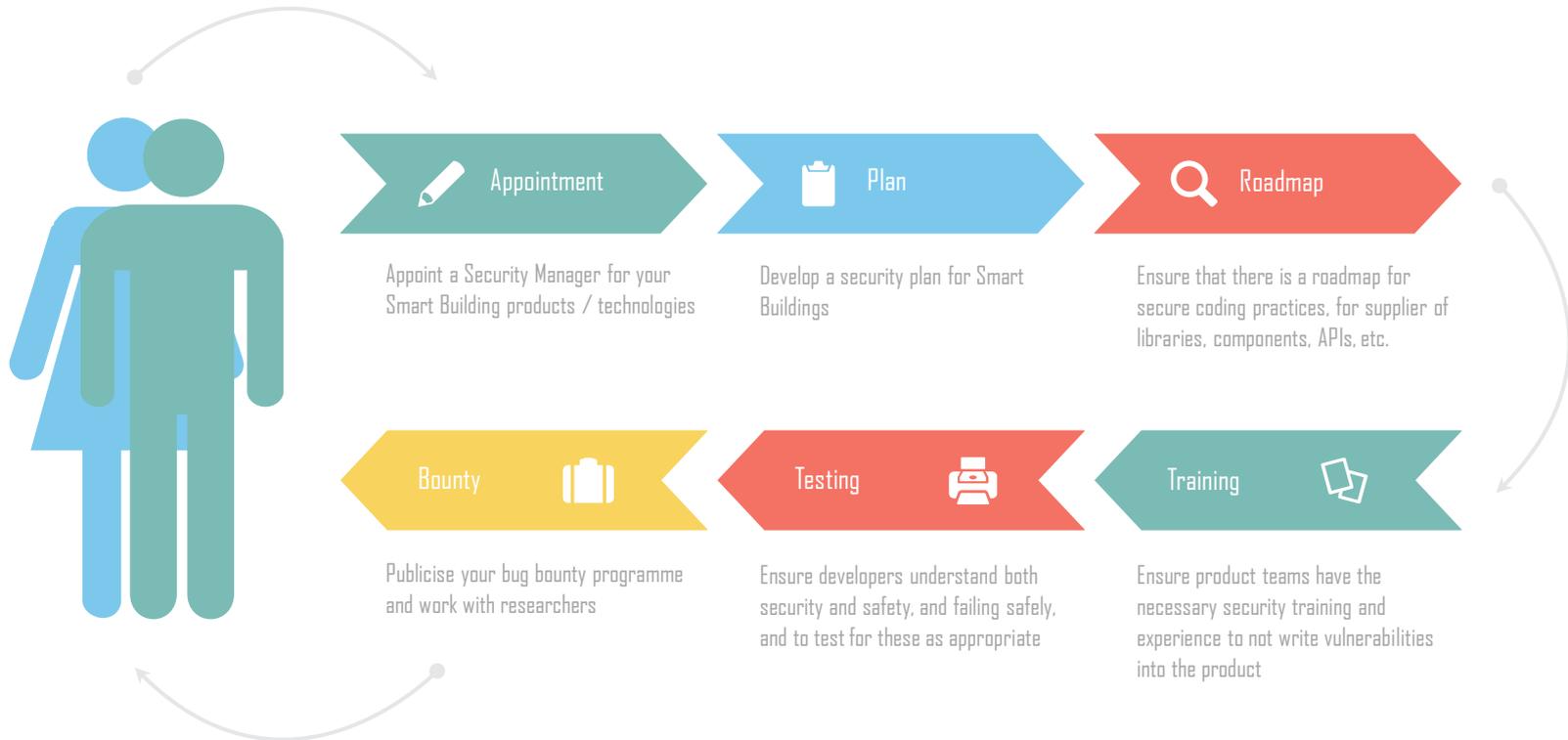
PRODUCT STRATEGY & SUPPORT

Would you buy a product with a short support plan?



PRODUCT, SYSTEM & SOLUTION

Write your relevant text here



PRIVACY & DATA PROTECTION

Write your relevant text here



CONVERGED SECURITY OPERATIONS

Can't Stop Building, be secure without a Converged Security Operations Centre?



MARKETING

This is the big area that is hardly ever done right



THANK YOU VERY MUCH

Questions later

