September 27, 2018

Smart Campus

Technology is only part of the journey

DXC.technology

Agenda

Smart Campus IOT
What is it all about?

Real example
Curtin University and people counting

Key takeaways
Feasibility, desirability, ROI, partnerships

HITACHI

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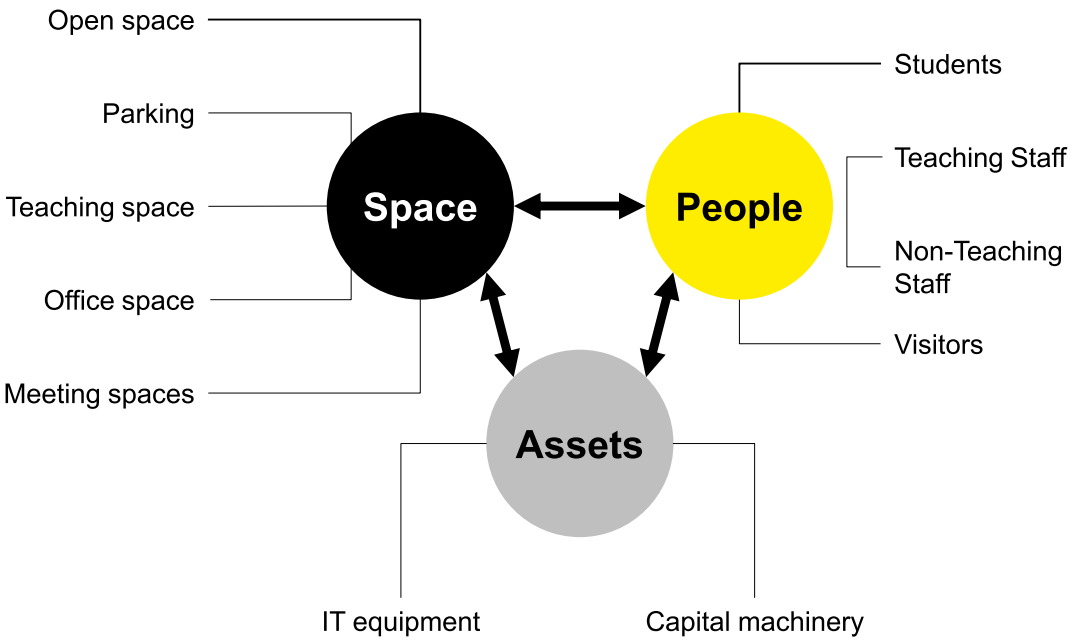
What makes a Smart Campus?

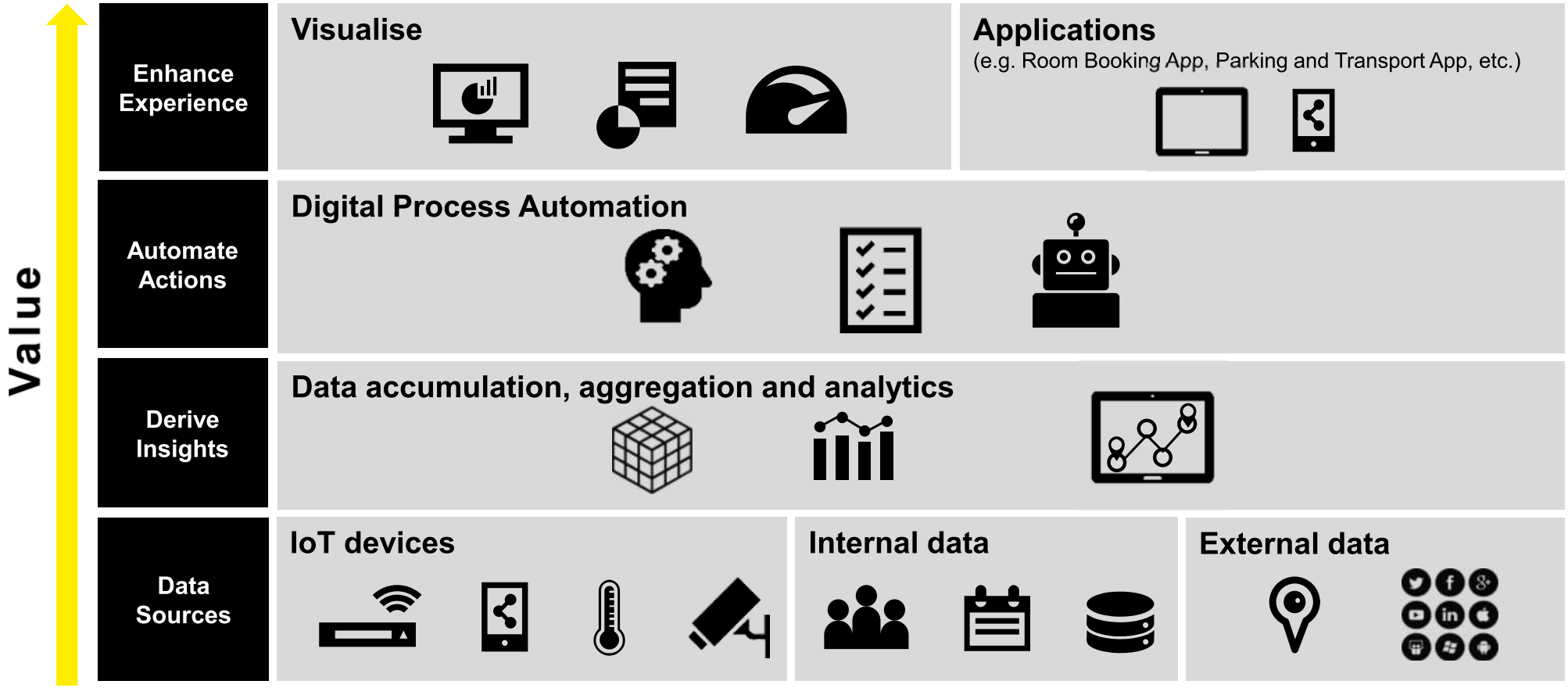
Non-exhaustive example landscape



The relationship between the space, people and asset offers unique data insight and opportunities for automation

Enabled through the collection of sensor data (new or existing)

Intersection of IoT, Analytics and Automation



Curtin University People Counting

Samuel Field
Director IT Architecture and Innovation
Curtin University

Learning spaces

How much is enough?

- Classrooms are expensive
- 10% unused bookings
  – 658 hours per week
- 42% seat utilisation
- One week snapshot.

Learning spaces

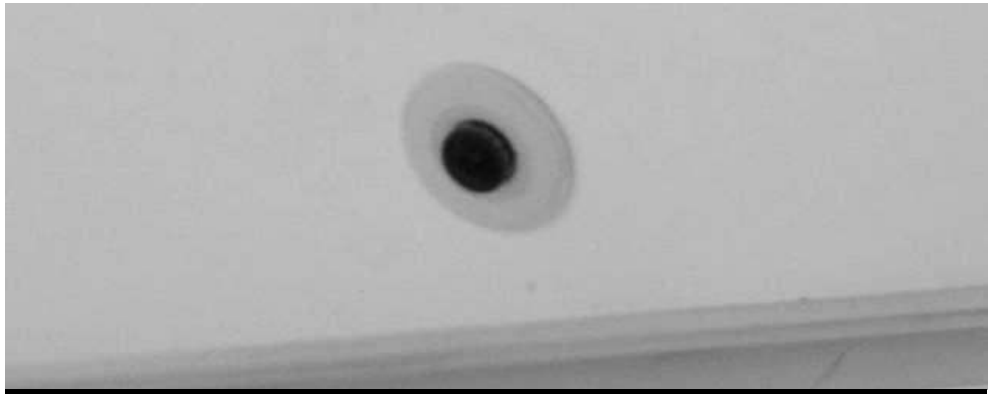
Sensing People

- No physical counts
- Count when ever the lights are on
- Merge Data

Count / Watch the Doors

- Let’s point cameras at the doors
- Let’s start ID’ing people
- Staff… let’s call the union

Test and learn



First Go

- 2D People Sensors
- Professional flush mounting

Round Two

- 3D People Sensors
- Velcro to the ceiling
- Re-use the flush mounting
- Press – let’s misreport this

Noise

Keeping track of Curtin University

- 1600 cameras
- 60,000 students
- 4000 staff
- 300,000sq m of floor space
- Facial recognition software
- Data and video analytics

Its future uses are still to be proven but the promise of what is currently not much more than a surveillance system is wide open. It's only a short leap, for example, for the university to monitor what URLs and addresses (including course materials) are accessed from devices, so eventually everyone attending will be working and studying in almost total transparency.

To Roscarel, the Orwellian concerns of previous generations about surveillance are still very real, but he points out Curtin complies with Australia's privacy legislation in its handling of vision and data. Except where specific consent is given, data collected is not linked to an individual.

CPA AUSTRALIA

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LEADERSHIP · STRATEGY · BUSINESS

Using Hitachi Data Systems to improve student life at Curtin University

EDUCATION | TECHNOLOGY | 01 Sep 2017

Curtin University in Western Australia is keeping track of its students and teachers with Hitachi Data Systems.

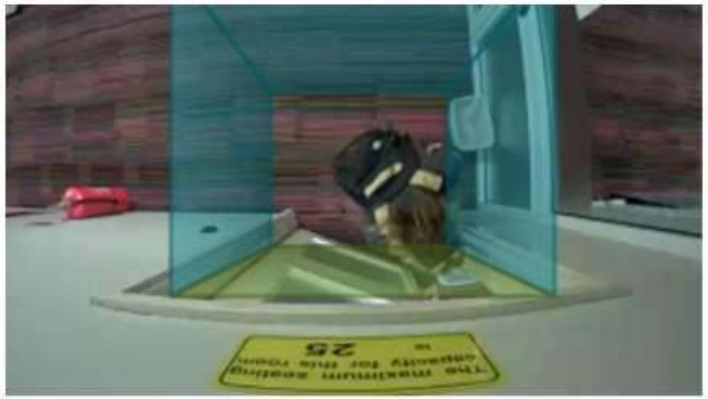
AXIS COMMUNICATIONS

Statistics | Live View | Settings | Maintenance | About

AXIS 3D People Counter

Live View for B303216CAMC

2018-09-05 08:00:33



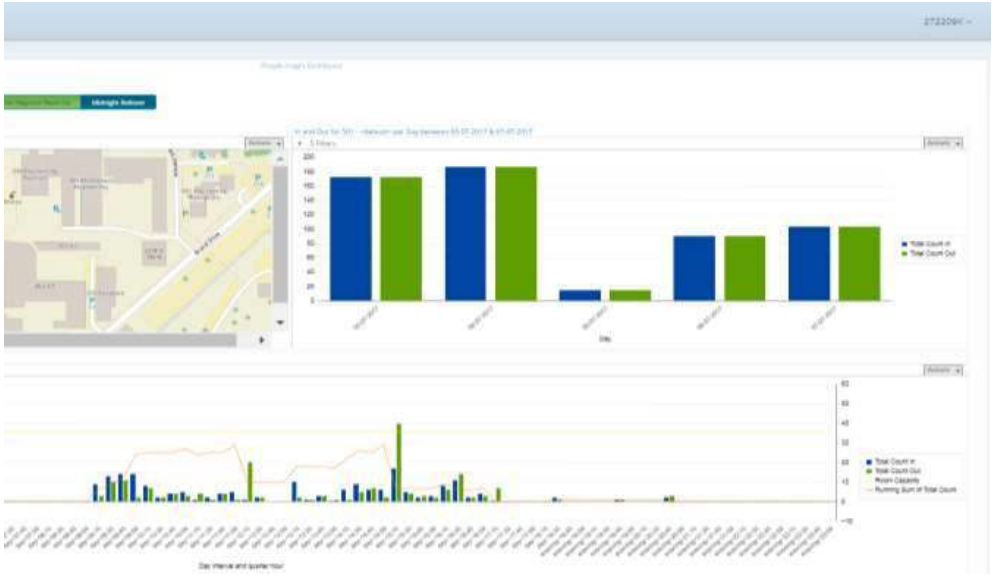
	In	Out
0 seconds ago	1	0
5 minutes ago	1	0
8 minutes ago	1	0

In ↓ 3

Out ↑ 0

Go large (or) go home

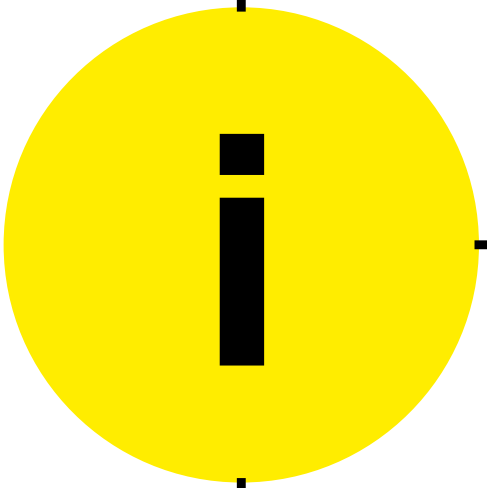
- 341 camera’s in 40 buildings
- Integrate data from different systems
- Out of Spec situations



Collaborate and co-operate

Function	**Properties**	**Electricians**	**Planning group**
Stakeholder management	**IT architecture**	**Infosec**	**Infrastructure delivery**
Application development	**Solution design**	**Service desk**	**Class timetable**
Account management	**Hitachi Vantara**	**Project management**	**Building liaison**
CITS – Networking and Data Centre	**Software Asset Management Team**		

Challenges



Technical

- Ghost counting
- Environmental differences
- Controlled trials at Curtin
- Software bugs

Physical

- Access
- Scheduling
- Flooding
- Lighting

People

- Human behaviour
- On site presence
- Advanced beta testing
- Enhancement

Learnings

Curtin

- Staged rollout
- Academic calendar matters
- Strong teamwork across silos
- Plan well
- Accept that the plan will change suddenly
- Focus on what matters
- Communication is sharing not telling
- Stakeholder co-ordination/activity management

Partners

- How do rapidly improve product
- Lab to real world for analytics
- Building and learning deployment practices
- Real world lighting, walls, ceilings, behaviours
- Maintaining deadlines
- Multi-vendor collaboration
- Communication is sharing
- Stakeholder co-ordination/activity Management

Success factors

Transparency

Let the team see what is wrong, when and how big. It'll surprise you how well they work with you to put it right.

Trust

Trust all parties to deliver on time, but in their own way. Most, if not all parties have work practices and experience gained over decades in their field – let each use their unique capabilities for the shared benefit.

Teamwork

Working between vendor, customer, and internal and external parties with the same levels of transparency openness and trust makes for a much more successful deployment.

Key takeaways

How to realise your Smart Campus strategy

- **Start small**, build to the bigger picture
- **Data value** – is the insight or data really useful?
- **Data accessibility** – is it readily available?
- **Partnerships** will be key, no single solution
- **Privacy and security** by design, not an afterthought
- **Collaborate** early and often

Thank you.