

Smarter<sup>UK</sup> techUK's Smart Infrastructure Initiative

# Internet of Things (IoT) Use Cases

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### **tech<sup>uk</sup>**

## Smarter<sup>UK</sup>

techUK's Smart Infrastructure Initiative

SmarterUK was formed in 2015 with the twin goals of:

nnuh

• Helping to drive smarter infrastructure in the UK

 Supporting and championing the UK smart infrastructure and IoT sector at home and overseas



Living PlanIT was formed in 2006, with the vision that urban environments need a software platform to support the long term viability of economic, social and environmental sustainability.

#### Waves of Digital Disruption

## 1995+

Music Photography Video Rental

. . .

Print Media TV Travel HR

2010 +



Banking Healthcare Automotive Retail Education Telco

## 2020+

All Safe havens will be subject to digital disruption

Digital Transformation By Jo Caudron and Dado Van Peteghem



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"I don't like the sound of 'disruptive' ... can we get some mildly troubling technology?"

brianmooredraws.com



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### Disruptive Technology

Telephone - 75 years

Mobile phone – 16 years

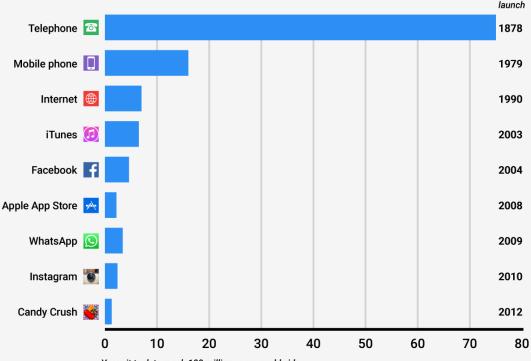
WhatsApp – 3 years

Candy Crush – 1 year, 3 months

Pace of change increasing

POKEMON GO – 25 DAYS!

#### HOW MUCH TIME IT TOOK TO REACH 100 MILLION USERS WORLDWIDE



Years it took to reach 100 million users worldwide

SOURCE: Boston Consulting Group ITU; Statista; BCG research; mobilephonehistory.co.uk; Scientific American, Internet Live Stats; iTunes; Fortune; OS X Daily; VentureBeat; Wired; Digital Quarterly; TechCrunch; AppMtr.com

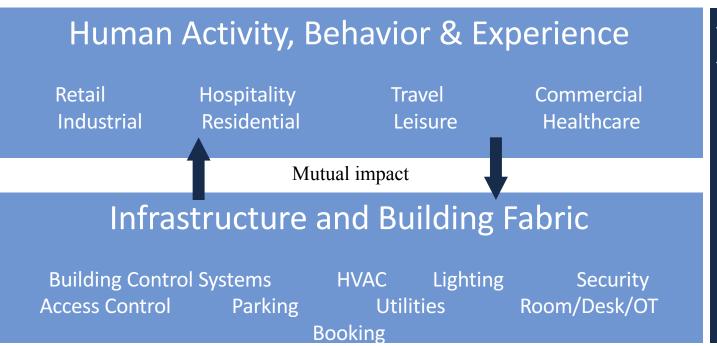
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#### It's about people









#### Five Broad Examples – Enhancing Experiences

- Working
- Shopping
- Leisure
- Traveling
- Staying healthy



#### Working - Smart Office, London

Using IoT to understand the movement and activity of people in the work environment

Monitoring hot desk occupancy, smart lockers and meeting room occupancy

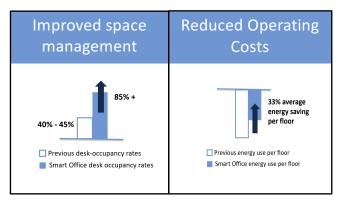
Prediction and pattern detection

Proactively shaping the use of resources

Project demonstrated significant benefits including:

- Improved workspace efficiency
- Significant energy savings
- Human and social benefits (through improved employee satisfaction, lower staff turnover and reduced absenteeism)







#### Shopping – Mailbox Retail Mall, UK

Second largest mixed use building in the UK after the Shard

Unique smart retail experience built on flexible IoT platform

- Tracks the flows and movements of customers, integrated with point of sales data and environmental conditions
- Enables dynamic, real-time and personalized communications and content delivery to customers
- Provides an enhanced customer experience, increasing satisfaction and loyalty
- Increases footfall
- Delivers operational efficiencies
- Drives additional retail sales and revenue





#### Leisure – hospitality, entertainment, dining, hotels

Destination, sense of place

Personalized experience

The Fladgate Partnership is a 256 year old company behind some of Portugal's most respected Port houses

Recently launched the €100m World of Wine project in Porto

Five culture zones across of 30,000 square metres

Will showcase Portuguese wine, cork, a History of the City of Porto, a fashion and design area and a drinking vessels museum, together with 12 new restaurants and bars, and two hotels

Once complete, the project is expected to attract a million visitors a year.









### Travelling – London City Airport

UK Government National IoT Demonstrator Project

Living PlanIT led a consortium of partners in a successful 12 month demonstrator

The PlanIT Urban Operating System (UOS) was used as a common underlying IoT platform for a range of use cases across the airport

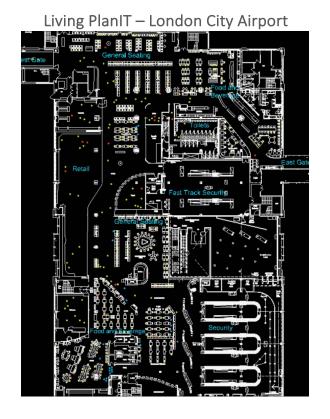
Personalized journey planning with dynamic passenger communications direct to smartphones, in real-time

Preordering and remotely ordering food and beverages, click-and-collect duty free, smart loyalty scheme

Create a personal relation with regular, high value passenger

Proactive queue management and shaping

Real-time operational dashboards showing passenger flows





#### Staying Healthy – Health & Wellbeing

People in the developed world, on average, spend over 90% of their lives in and around buildings

Every minute of that time, the environment around them is having a direct and measurable impact on their physiology

Factors such as light levels, temperature, humidity, air/water quality, volatile organic chemicals (VOC) and more can impact human physical and mental health in multiple ways that can be measured and, ultimately, influenced

By combining a number of techniques, all unlocked by a shared data and control platform (the UOS), we can measure, understand, and start to mitigate negative impacts in innovative ways

Our work with BRE (Building Research Establishment), IWBI (International Well Building Institute) and other partners will help to create and deliver new standards for health and wellbeing

This is as true within our daily lives – home, work – as it is in traditional healthcare environments such as hospitals



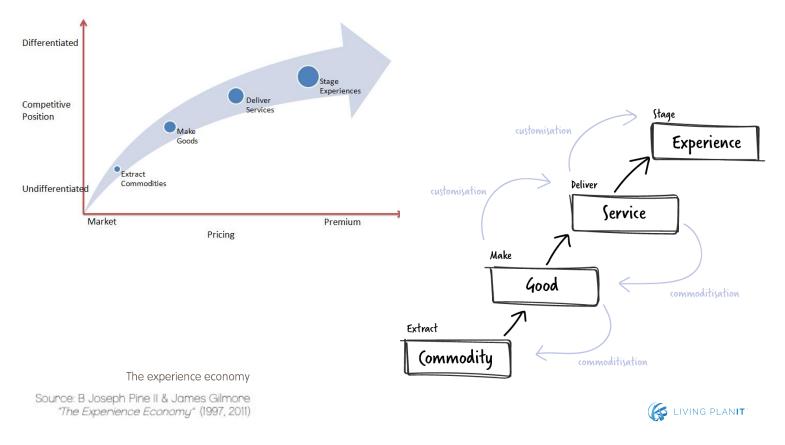


#### **Westfield** Health



#### It's About Enhancing Human Experiences

The Progression of Economic Value





#### "We need to rethink our strategy of hoping the internet will just go away."



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