Summary of space utilisation and management software for Deakin University

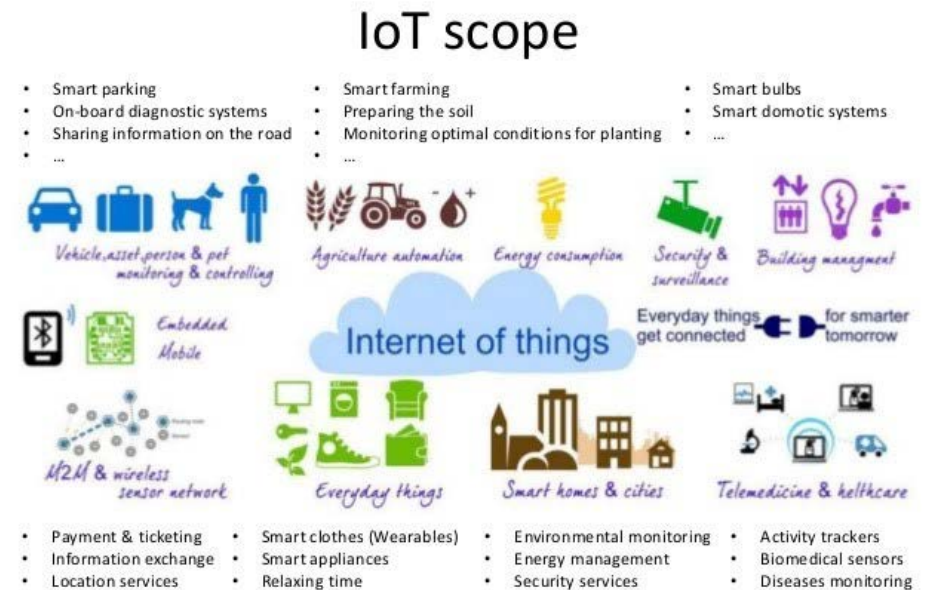# Space utilisation and management software

This document has been prepared for Deakin University. It focuses on the latest space utlilisation and space management software available at the time of research (2017).

The document provides an introduction to the Internet of Things "IoT" and a summary on the following software and hardware solutions current available:

1. Asure Software
2. Beco
3. Condeco
4. CoWorkr
5. FreeSpace
6. Inovu
7. Locatee
8. Occupeye
9. Redstone Connect
10. Serraview
11. Spaceti
12. Webcore
13. Workwell

Introduction to the Internet of Things "IoT"

/ The Internet of Things "IoT" refers to the growing range of connected devices that send data across the Internet. A "thing" is any object with embedded electronics that can transfer data over a network — without any human interaction. Wearable devices, environmental sensors, machinery in factories, components in a vehicle or devices in homes and buildings can all be connected to deliver insights and drive transformation.

/ IoT is set to revolutionise the workplace, and turn it into an 'intelligent workplace', where data-driven technology will transform the way people work. It is argued that although devices such as smart watches and smart glasses will certainly be very useful, it is the inter-connectedness of these devices that is important. Much of the infrastructure of smart devices are already set up within the workplace, but the real change will come once these devices are connected.

/ IoT in the workplace will help to lower energy output and costs, with companies installing automated heating and lighting systems that detect when to be powered on and off. Not only is this good for the environment, but it also helps businesses to save money. Costs are also cut as connected machines can detect when they are about to break down, allowing business owners to replace in advance, saving time and money. Employee patterns can also be detected via data collected through connected devices, therefore helping the company to see where costs can be cut in terms of what equipment is being used and how much.

/ The IoT will also improve workforce communication and make daily life more time efficient. Making meetings and checking your calendar on your smart watch and other wearable devices will allow a constant flow of information between employees. It also allows a more flexible work space, where, thanks to technology, employees may be no longer required to be physically present in the office.

IoT scope

- Smart parking
- On-board diagnostic systems
- Sharing information on the road
- ...

- Smart farming
- Preparing the soil
- Monitoring optimal conditions for planting
- ...

- Smart bulbs
- Smart domotic systems
- ...

Vehicle,asset,person & pet monitoring & controlling

Agriculture automation

Energy consumption

Security & surveillance

Building management

Embedded Mobile

Internet of things

Everyday things get connected — for smarter tomorrow

M2M & wireless sensor network

Everyday things

Smart homes & cities

Telemedicine & helthcare

- Payment & ticketing
- Information exchange
- Location services

- Smart clothes (Wearables)
- Smart appliances
- Relaxing time

- Environmental monitoring
- Energy management
- Security services

- Activity trackers
- Biomedical sensors
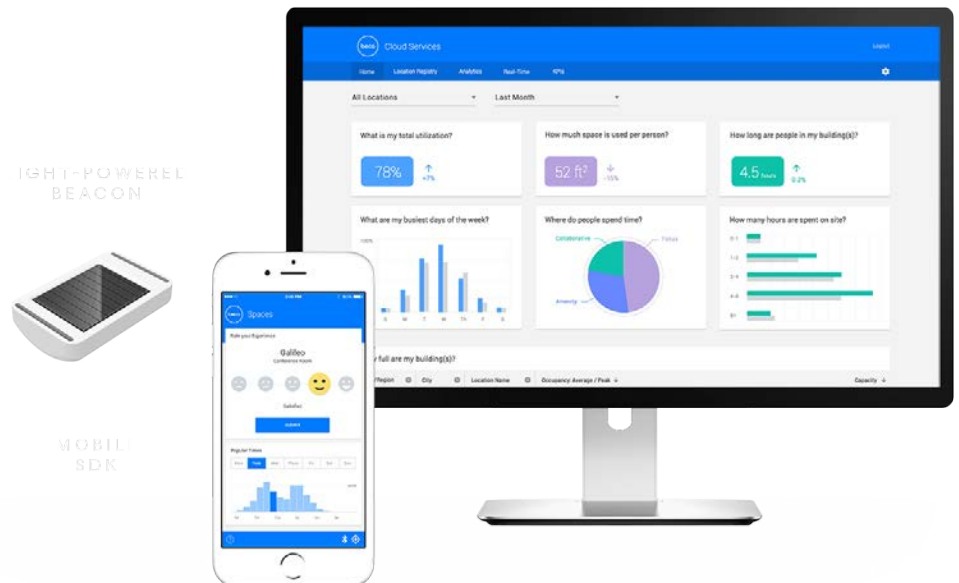- Diseases monitoring

Asure Software

Founded in Texas, USA

/ Asure Software was founded on the premise that providing exceptional facility management tools can increase workplace productivity. They deliver on this promise by equipping customers with innovative suite of solutions which range from HCM workforce management solutions, time and attendance to workspace asset optimisation and meeting room management solutions, cloud-based time & labour management and workspace management software solutions that take integral business processes to the next level.

/ SmartMove:
  – Efficiently manage people, space, and asset data. SmartMove's user-friendly, up-to-date metrics system and interactive floor plans help you manage day-to-day logistics quickly and easily. SmartMove is accessible across all devices from computers to tablets.

/ Full service room scheduling:
  – Schedule rooms, resources (e.g. desks) and services.
  – Cloud-based solution allows users to connect from any device, use touch panels and kiosks to reserve rooms and workspaces. Changes are updated in real time.
  – Integrates with MS Outlook
  – Track guest arrival and departure for improved service and security.

/ Hoteling and mobile workforce management:
  – Graphical floorplan allows users to search for bookable spaces or colleagues.

Beco

Founded in Montreal, Canada

/ Beco optimizes the way companies use their real estate. Their space analytics platform delivers real-time and ongoing visibility into space utilisation, workplace performance, and use of building amenities.

/ Beco's patented technology will bring your building online in hours, not months. Their cloud-based dashboards help answer the big questions in contemporary workplace strategy, while our APIs make it simple to deliver mobile workplace experiences.

/ Beco can be used to connect people to the workplace and maximize the productivity of your corporate offices, retail stores, and beyond.

/ Beco uses light powered beacons that connect to a mobile app; it therefore runs independently of the corporate network

/ Optimize Spaces:

– Identify underperforming buildings and spaces to save money.

– Fit more people into existing spaces and optimize seating and neighborhoods.

– Deliver real-time availability of shared resources, like meeting rooms, gyms and cafes to your workforce.

/ Connect your Workforce:

– Capture employee sentiment about their work experience, in real-time.

– Activate indoor navigation, wayfinding, and space-finding in large spaces.

– Find a free desk, meeting room, or co-worker in free-addressing and activity based work environments.

Condeco

Founded in London, UK

/ Room booking
- Mobile apps lets users book, amend and cancel meeting room bookings. Web-based system allows users to reserve meeting rooms, record visitors, book catering / AV resources
- The MS Outlook calendar plug-in allows users to schedule meetings, invite attendees, order catering and book resources
- Detailed reports deliver intelligence on room and resource usage, user activity and more
- Visitor management module streamlines meeting invites and visitor passes and notifies the host of arrivals
- Auto-bump feature releases the room within a set timeframe, e.g. 10 minutes

/ Desk booking
- Easily set up and manage bookable desk groups
- Create hot desks that can be used by anybody, fixed desks reserved for certain departments, or flexible desks, available for specific times
- Kiosk allows you to search the floor for colleagues, free desks and book a desk next to them
- Detailed reports provide data on how often desks are booked and if they were actually used

/ Digital signage
- Meeting room and desk booking panels
- Desk booking kiosk
- Way finder

/ Occupancy sensing
- Helps to understand how desks, meeting rooms and break out spaces are used in extraordinary detail.
- A cloud based solution that runs outside the corporate network.
- Internet-enabled sensors gather data day-by-day and hour-by-hour basis
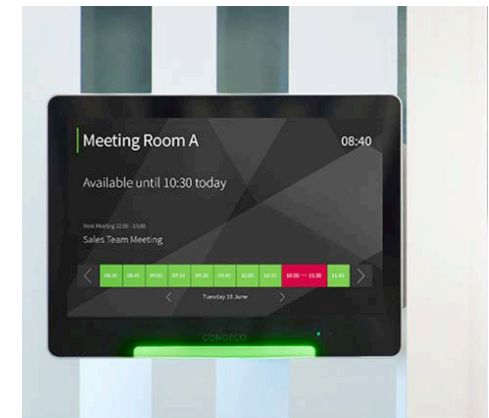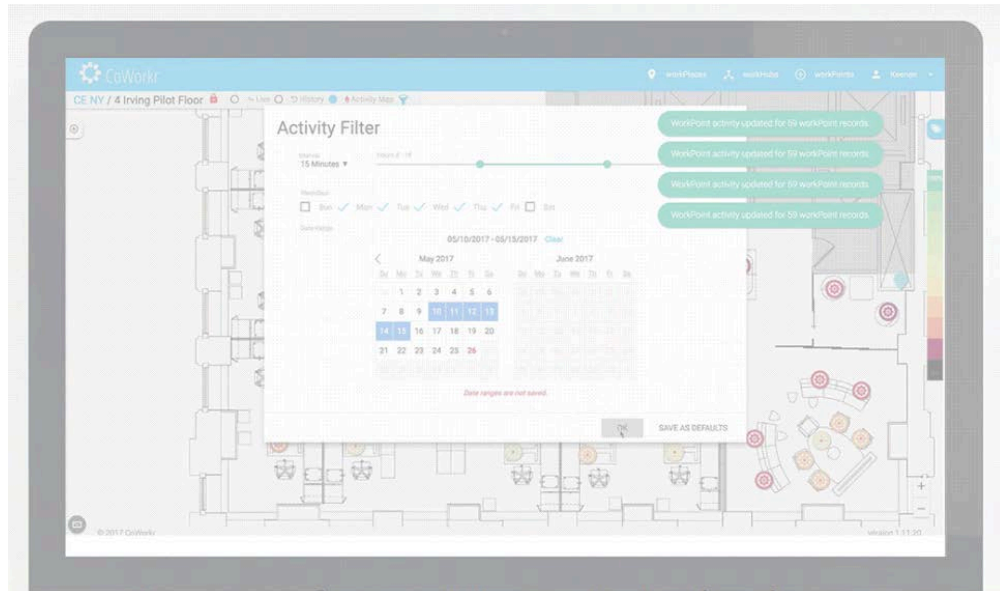

kiosk terminal

desk booking panel

way finding screen

meeting room and booking panel

CoWorkr

Founded in San Francisco, USA

/ CoWorkr is a full service platform built on bleeding edge sensor technology and a secure Google cloud environment. Their API, data integrates with other apps to enhance chat, room booking, CAFM, and BIM software.

/ Data:
  – Small unobtrusive sensors that are designed to work on all types of furniture (rolling chairs, traditional desks, soft seating etc.)
  – No Network Access Required (sensors stream data using CoWorkr's cellular hubs)
  – Unparalleled High-Resolution
    • Watch real-time activity or analyse the historical trends and insights

/ Dashboards:
  – Analytics floorplan
  – Comprehensive insights
    • Worker metrics calculated hourly, daily or at any custom time range
    • Highest worker capacity, the specific peak time and percentage occurrence
    • Empty seats or workers at any given time in any location
    • Duration of time spent at any work setting, such as meeting rooms
  – Downloadable data

/ Integrations:
  – Connect to your Apps
  – Encrypted REST API
  – Real-Time data requests

/ Security:
  – Cloud powered by Google
  – No personal data collected
  – ISO 27017 Cloud Security

Freespace

Founded in London, UK

/ Freespace maximises the benefits of unassigned work environments for its users by providing live information and insights about available spaces across the office.

/ Users can obtain live information about available spaces on a display screen or your phone from anywhere in the office. They can then use this data to instantly find suitable spaces on a floor plan.

/ Freespace makes spaces intelligent; it does not track people. It is impossible to differentiate one office user from another using data available within Freespace.

/ An unoccupied space is given the ability register as available on our cloud platform and to sense for user presence. As soon as presence is detected, the system switches off until the space is left unoccupied for a preset period of time. Freed spaces are made available for the next user.

/ Freespace helps reinforcing policies fairly for all. Meeting rooms not occupied within 20 minutes of the booked start time are automatically released. Task desks left unused for 2 hours are made available for others. You can even create rules for specific departments. Whatever your policy, we will ensure it is applied uniformly for everyone.

/ Freespace gives the users alerts and general information about the office to help them make the right decisions at the right time.
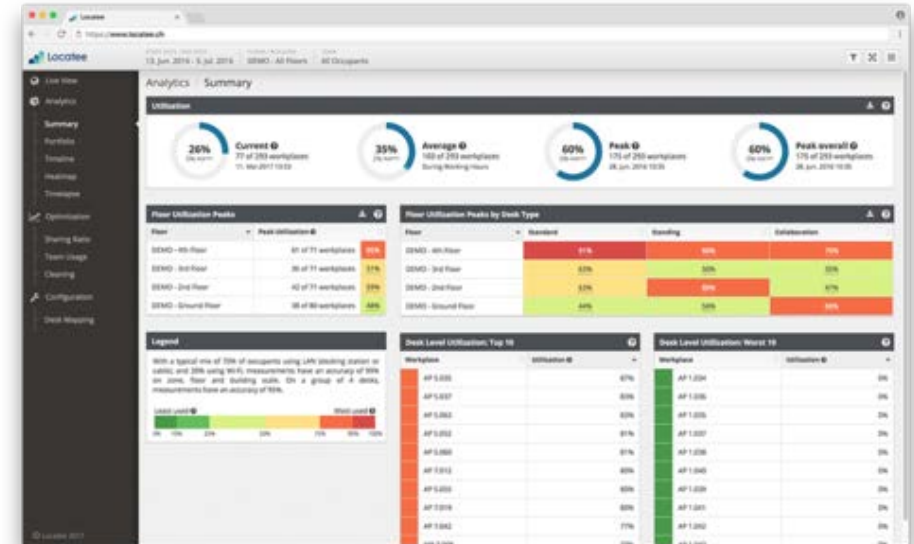
Inovu

Founded in London, UK

/ INOVU are a sensor company providing a simple and effective way of continually monitoring the way your organisation uses its space, by trending data over time they identify the patterns of behaviour to uncover opportunities for efficiency savings and informing office design.

/ INOVU battery operated sensors have been developed to specifically target occupancy measurement within the workplace environment. Data from the sensor is transferred via a radio signal which avoids the normal Wi-Fi signal bands and does not take the organisations valuable bandwidth.

/ Occupancy sensor:
  – Identifies the utilisation of a workplace position through movement and thermal measurement. In an office environment, this sensor would be placed at any location occupied by a person. The sensor continually monitors the occupation of the space. The data gained provides fact-based proof of occupancy over long periods of time.

/ Movement sensor:
  – The movement (PIR) sensor captures the movement of people within a meeting room or breakout area. This sensor is triggered when people come into the space and also when people move within the area. The sensor provides confirmation that the space is in use, it does not provide a level of occupancy or count of people in the space.

/ Environment sensor:
  – INOVU offer two environment sensors CO_2 (with temp/humidity) with a range of 0ppm to 5,000ppm and Noise (with temp/humidity) providing a range of 40dB to 100dB. Both sensors are battery powered.

/ People counter:
  – A third party people counter for high volumes of counting into conference facilities or to provide an overall count of people into a floor or building. These sensors are thermal cameras and require PoE cable connections.
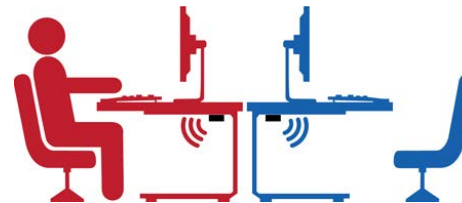
Locatee

Founded in Zürich, Switzerland

/ Locatee's mission is to redefine the place where employees spend more of their days – in the office building. They believe that connecting employees with their office buildings through technology enables organisations to strive. Their goal is thus to empower organisations to create more engaging and collabourative work environments while significantly reducing cost for space, energy and other resources. Thanks to our platform smart and occupant-oriented office buildings become a reality – one square meter at a time.

/ Locatee applies advanced machine learning and indoor positioning algorithms to existing data sources from your IT infrastructure such as Wi-Fi and LAN in real-time. Understand what is going on across your entire portfolio without manual walk-through studies or costly hardware sensors. All completely automated and anonymized.

/ Workspace optimisation:
  – Understand how your office and buildings are performing, compare buildings across sites.
  – Understand how each workspace is used and monitor actual workspace utilisation.
  – Identify work patterns to avoid bottlenecks in capacity. Tailor desk sharing ratios to actual demand.
  – Identify and improve workspace layout improvements.

/ Facility operations:
  – Identify and resolve workplace issues.
  – Adjust cleaning cycles according to actual workspace utilisation.
  – Identify usage patterns and use real-time data for HVAC settings.

/ Workspace experience:
  – Find available rooms and desks with mobile apps.
  – Find available and book meeting rooms.
  – Find colleagues
  – Report location-specific feedback and workspace issues to improve workspace quality.

OccupEye

Founded in the UK

/ OccupEye is a fully integrated system that allows users to capture and analyse true 1:1 workspace utilisation data in real time, enabling organisations to make truly informed decisions that shape the future of their office environment and workstyles. The solution comprises a virtually unlimited number of wireless workplace utilisation sensors which transmit utilisation data to a small number of network receivers, which in turn feed the 'raw' occupancy logs back to client specific cloud-based analytics systems.

/ Wireless workspace utilisation sensors

– The battery powered sensors are designed and built specific to the task of accurately and efficiently monitoring workspace utilisation in today's office environment.

– Based on passive data collection technology (PIR), the sensors are triggered by both motion and heat, ensuring that the system is ultrasensitive, yet ultra-reliable when it comes to tracking real-time 1:1 space utilisation.

– A single unit can be used to monitor individual desk utilisation and defined staff workspace, as well as larger areas such as meeting rooms and break-out zones. Sensors can be mounted under desks, on walls, on ceilings, or even under chairs.

/ Web-based analytics and reporting dashboard

– The system's interface allows users to set up new surveys, manage existing surveys, control data associated with OccupEye Sensors and produce a range of flexible and hard-hitting utilisation reports. Reports include pie charts, bar charts, tables, graphs, binary logs and a range of other data presentation formats, each allowing for analysis of utilisation at every level; from portfolio to individual departments, floors, desk types, rooms and buildings.
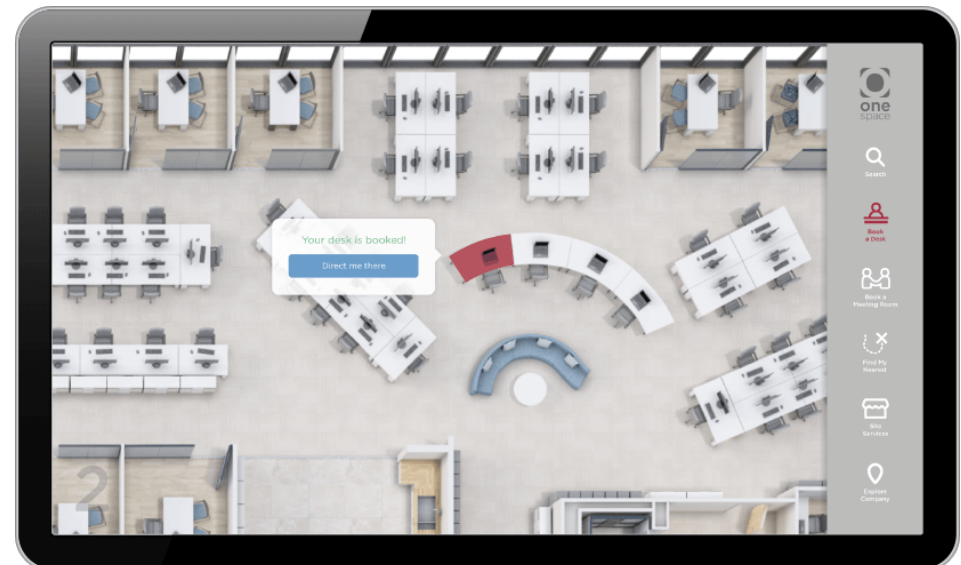
Redstone Connect

Founded in the UK

/ The OneSpace connected office enables a fixed workforce to adopt agility in the workplace. Connecting people to their workplace through technology, whilst maintaining wellbeing and employee satisfaction.

/ OneSpace enables a smart workforce, managing spaces within a building though wayfinding, space management including desks, rooms, collabourative work space and car parking, connecting to IoT for maximising efficiencies and user experience.

/ Through the integration of IoT and building systems, OneSpace can understand user journeys, data and space utilisation, allowing for asset decisions and savings to be driven by real data. By connecting temperature control, power management, lighting and spaces can allow us to create smarter performance through data and analytics, allowing for a continual listening and efficiency management of each building or destination.

/ Measuring environmental data from heat, humidity and air quality, to desk utilisation, people movement and occupancy.

/ The physical sensor solutions are easy to install & start collecting data, often combined with our soft sensor to track every layer of space occupancy, utilisation and behaviour.

/ The Room Booking solution allows employees to book their ideal meeting room on your mobile, tablet or at the door. They can search via room size, location, which means you can find a suitable room in one click.

/ Integration with Microsoft Outlook and Google Calendar makes it easy for colleagues to use. They can also book on mobile, online, at the reception kiosk or make instant bookings at the meeting room door display.

/ Integrated catering and facilities management enables a complete service to be provided through one interface. This includes external room booking, full financial control and cross charging management integrated with your accounting system if required.

/ Desk booking software enables employees to make instant bookings based on real-time availability, find colleagues and book a desk next to them. All this functionality is available via interactive kiosks, mobile app, outlook integration, on-line portal and meeting room booking panels.

/ The interactive map-based kiosk UI shows a live view of the free desks. Colleagues can book with just one touch of their access card at the kiosk, go online, use the mobile app or use instant desk reservation as they dock their laptop or log in at their chosen desk. The live multilevel, campus-wide wayfinding solution can then route them to their chosen desk.

/ Visitor management experience simplifies the process of managing meeting attendees and site visitors for your reception teams and employees. Active check-in sensing at reception can even detect visitors arriving and notify their host automatically. The wayfinding can then route your visitor direct to the meeting room integrating with the building security to allow access to the building, lifts, etc. on approved routes. OneSpace also integrates with their Car Parking Module to deliver a complete car door to meeting room door service.

/ Click **here** to view video.

Serraview – Space planning (1/2)

Founded in Melbourne, Australia

/ Serraview is a custom built solution from the ground up to advance the way employees plan and manage your space. The intuitive tools are designed specifically around how you use workplace data, rather than the data itself.

/ Intuitive Space Planning
  – Supports all working styles - fixed seating, hybrid (fixed/activity based), or activity based. Track occupancy, allocation, and actual space utilisation. Stack plans and floor plans in the same view

/ Workplace Portal
  – CRM environment that allows business units to directly interact with real estate to verify departmental space consumption outside of the as-built data set. Validate occupancy on a scheduled or ad-hoc basis. Time stamp and audit capability.

/ Dashboards & Reporting
  – Identify outliers and opportunities through advanced reporting analytics. Interactive utilisation dashboards. Report editor to modify existing reports or build new ones.

/ Portfolio Modeller
  – Automatically right-size team allocations based on occupancy levels, actual utilisation, and implementing improved seating ratios. Create an unlimited number of scenario plans.

/ Strategic Scenario Planning
  – Develop relocation plans by pulling baseline data from Visual Block & Stack.

/ Utilisation Analytics
  – Collect growth forecast information from business units at any level of the organisation hierarchy. Overlay lease expiry & renewal dates. Indicate key capital works projects that will impact your space capacity.

/ Service Request Management
  – Provide a comprehensive service request ticketing system to management MAC (moves, adds, changes) for your business. Gain visibility about the number of moves and their cost. Submit space request tickets.

/ Streamlined Data Collection
  – Business migration managers are able to input their data directly into the office relocation management database. Central database with a friendly user interface to collect move data. Fully configurable data fields. Collect data once, use it for subsequent moves.

/ Storage, Car Parks & Lockers
  – Associate employees with their assets so everything gets moved at once. Track personal and team storage. Manage locker and parking lot allocations. Include storage, lockers and parking lots on a floor plan.

Serraview – Workforce enablement (2/2)

Founded in Melbourne, Australia

/ Real Time Presence Tracking

– Harness the power of the IoT to understand how space is actually being used. Drive desired outcomes through real time trend analysis. Leverage employee network presence information with SerraviewLive. Pre-built connectors with other leading utilisation technology providers.

/ Serraview Locator

– Mobile or kiosk experience designed to increase employee satisfaction and productivity. Locate a colleague. Just-in-time desk or room booking. Microsoft Exchange and Google calendar integration.
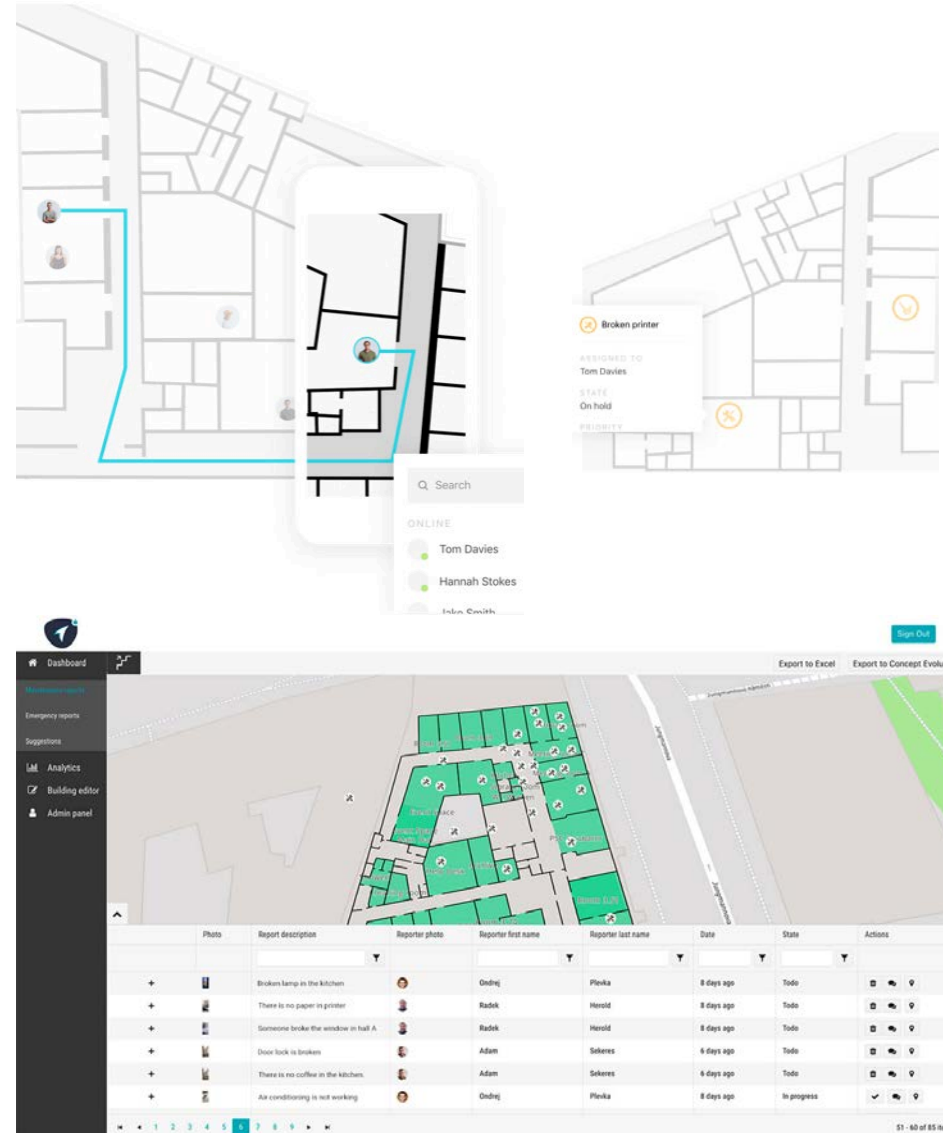
/ Room and Desk Availability

– Make strategic decisions based on data instead of perception. Monitor the effectiveness of fit outs to ensure employees have the space they needed. Evaluate space use habits and peak utilisation times in smart office environments. Visualize actual utilisation through heatmaps.

Spaceti

/ Increase your employees productivity, enhance their safety and improve their well-being by optimizing the work place through Spaceti technology.

/ Collect data from multiple sources to optimize how your physical space is used and maximize the well-being of your occupants.

/ Easily navigate inside an unfamiliar environment to find colleagues, free rooms and equipment.

/ Save time by immediate reporting of problems in a building.

/ The web dashboard gives users a real-time overview about occupancy, environment monitoring and maintenance reports. Locate, notify and manage crowds in an emergency.

/ People:
   – See who is present in the office, set group meeting points and navigate directly to co-workers.

/ Spaces:
   – Have an instant overview of available meeting rooms and navigate to the one that suits your activity.

/ Things:
   – Locate key equipment such as fire extinguishers and receive digital use instructions via voice or visual prompts.

/ Environment:
   – Monitor and analyze your building's environment with short-term and long-term temperature and humidity data.

Webcore

Founded in the UK

/ Space management:
  – Cloud based space data means data is accessible to all and is not siloed. Access space data through dynamic, one-click functionality. Data visibility and enables accurate space planning and tracking of workspace occupancy.
  – Maximize space usage and reduce costs by assigning space accountability to departments and re-organise chargeback.

/ Move manager:
  – Moves and relocations of any size can be forecasted, coordinated and scheduled. Forecast multiple scenarios using existing master plans to significantly reduce churn created through unnecessary moves.

/ Stack:
  – Easily view building use and occupancy across an entire portfolio.
  – Brings information together from different sources grouping data in one central location. Drill into data through; high level groupings, floor levels and departments.

/ Data editor:
  – A self-service module that provides users real-time editing capabilities of all key space data.
  – Adjust fixed workspace to agile workspace, support unmanaged buildings and plan for the future.

/ Locator:
  – Search for employees and cost centres.
  – A tool enabling users to find the exact location of employees and assets within a specific building and floor.
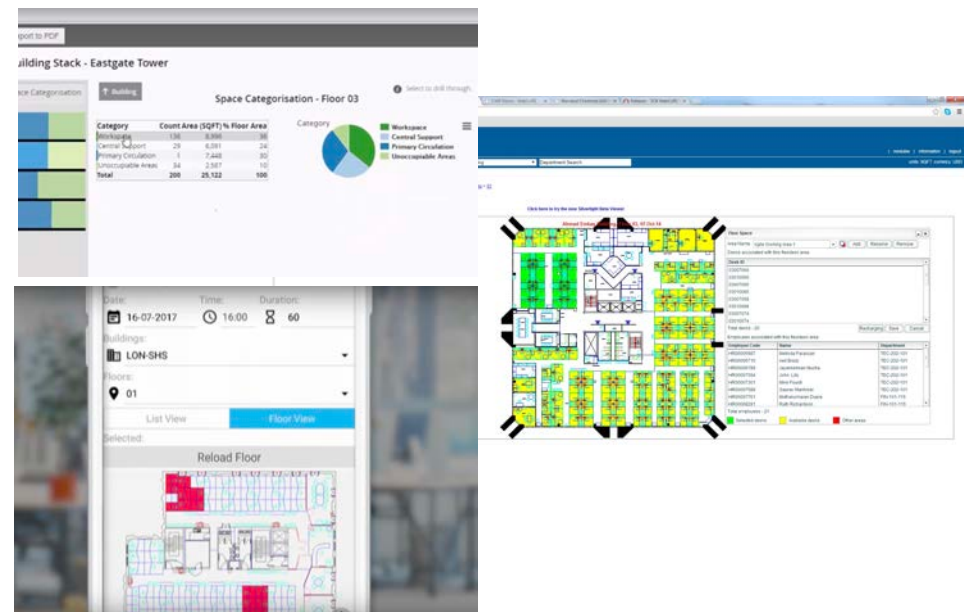
/ Report writer:
  – Extract only the data that matters.
  – Consolidates data into meaningful outputs. Outputs are interactive enabling detailed data inspections.

/ Strategic planning tool:
  – Create scenarios exploring future opportunities along multiple variables including space/ employee growth forecasting, improving employee satisfaction and performance and how to consolidate multiple departments across multiple sites.
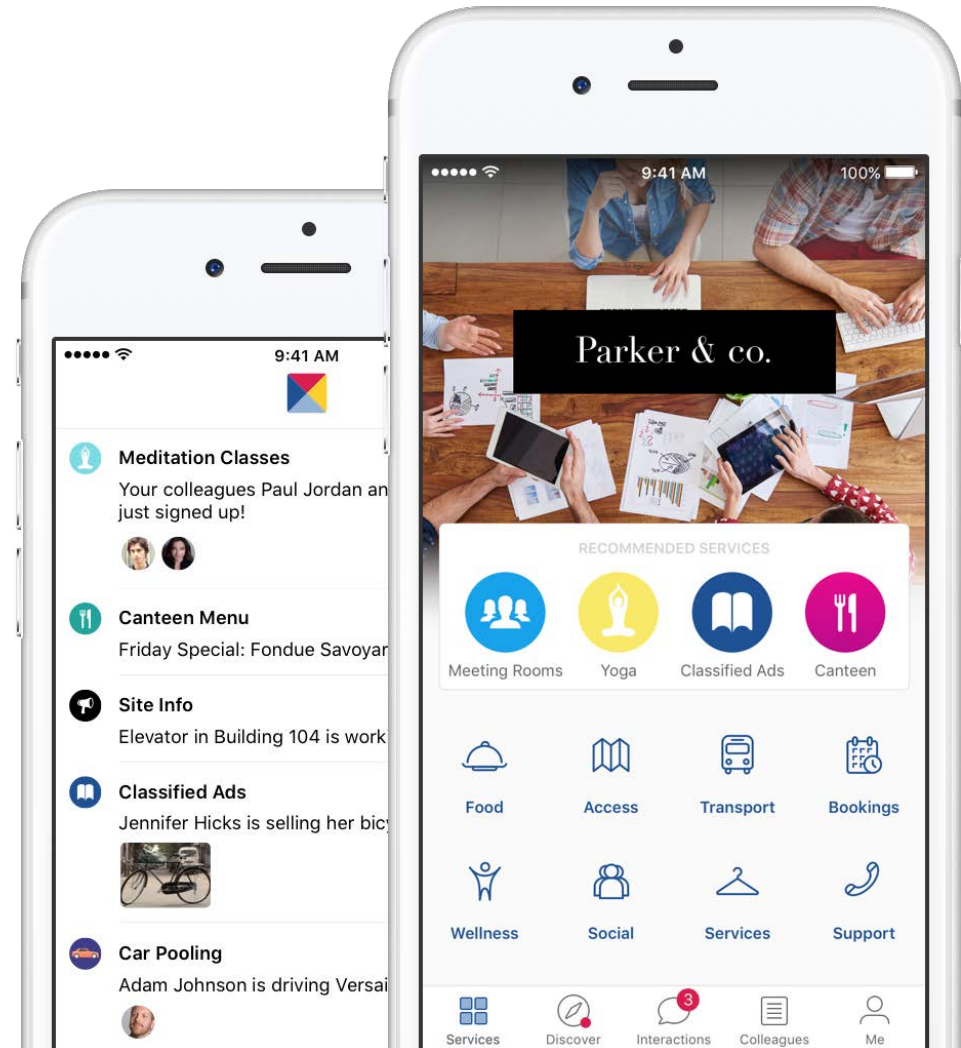
/ Desk booking:
  – The "Changing Workplace's Desk Booking" app allows your employees to fluidly structure their day from their mobile devices and answer any demands.
  – Strategically, monitor space usage and occupancy to identify trends across your portfolio and adjust your space.
  – Auto-bump feature releases the desk within a set timeframe, e.g. 10 minutes

Workwell

Founded in Paris, France

/ Workwell is the platform that centralises the access to all the services made available to employees in a building, in order to help them be happier and more productive at work.

/ It easily gives access from a single interface to services as varied as: carpooling, lighting and AC control, cafeteria menu, meeting room booking, concierge or any service you could imagine.

/ It is built as an open-platform, enabling third-parties to also publish their services in the app.

Calder

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work / space