



# SIRQUL™

## Sirqul IoT Platform for Healthcare

Hospitals & Assisted Living



# Enabling Healthcare Experiences with a Presence-Aware Ecosystem of Connected Care

## Presence-Aware, Connected Care Ecosystem



The patient experience starts at home with either personal or physician provided devices that help monitor them even away from the facility.

Connected healthcare facility providers have information about patients, staff, equipment and supplies to transform patients and guest experiences.

Expanding to the entire provider network connects patient needs with lab, pharmaceutical, and other services.

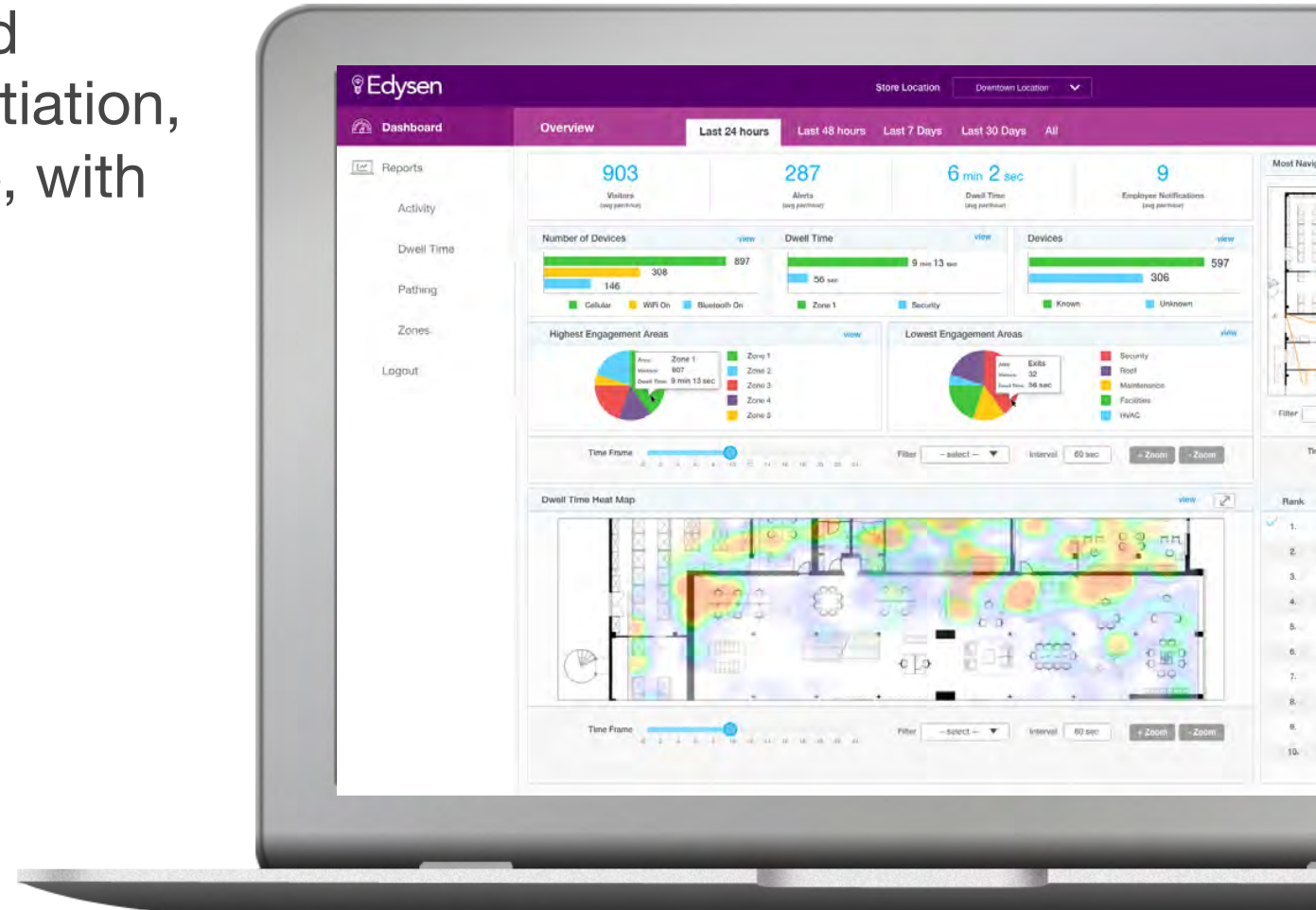
Including elements of the supply chain helps put the right supplies in the right place at the right time.



# • Sirqul Connected Care Solution

Sirqul's platform delivers increased quality of care and service differentiation, including prevention and response, with a 360 degree view of:

- Patient Experiences
- Staff Interactions
- Asset Tracking
- Facility Management



# • Why Sirqul?



Sirqul's IoT platform and Edysen hardware devices (cube and light socket adapter) passively collect data from continuous, unobtrusive monitoring of patient activity **without an app, tablet, or online survey.**

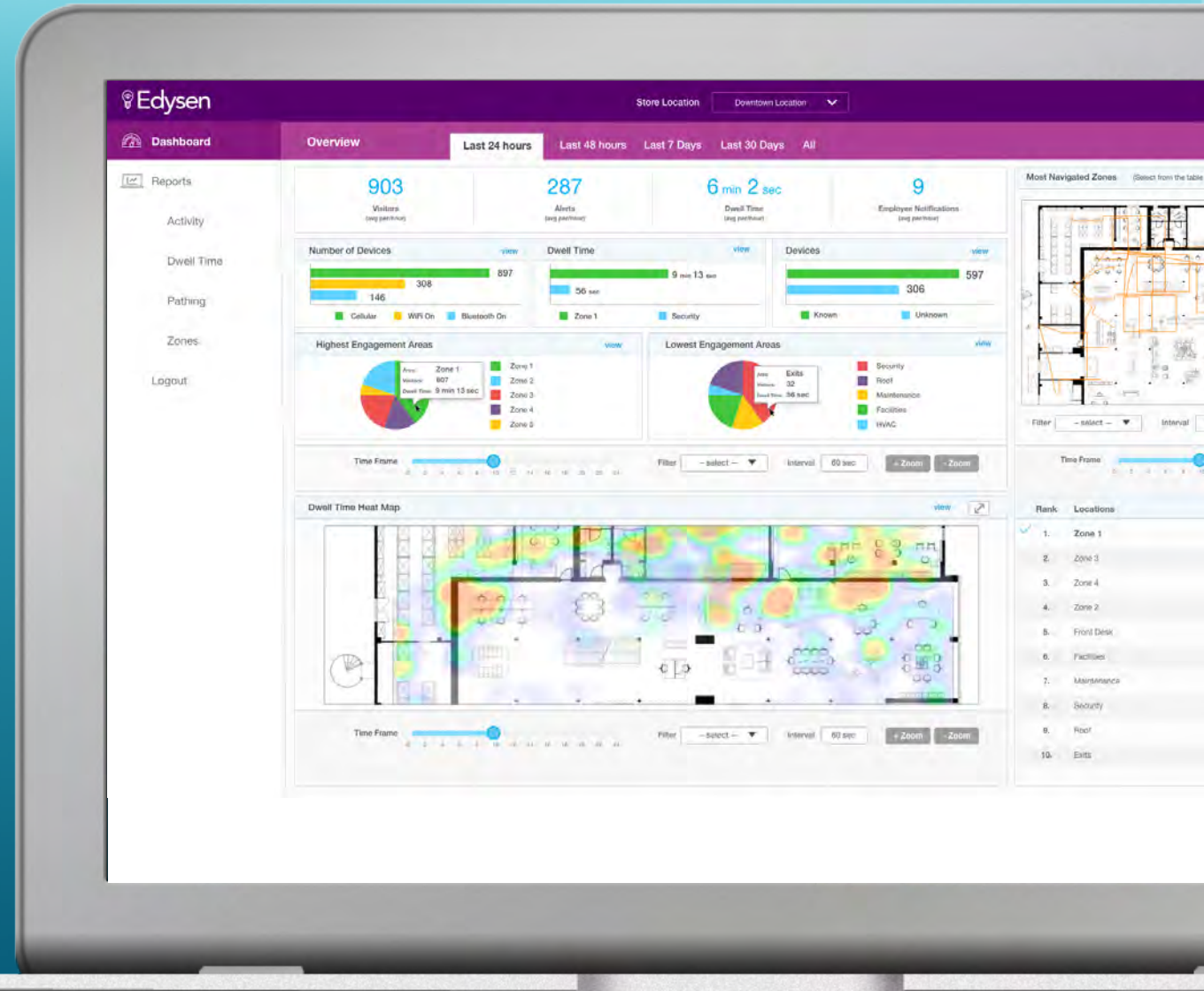
Passively monitoring residents' sleep, stress and activity levels from Wi-Fi and Bluetooth devices, Edysen delivers physicians, caretakers, and family insights into well-being with the ability to detect falls, proactively identify ailments, and respond to events with real-time and historic knowledge.



The suite of remote monitoring devices, sensors, and apps is an ever growing list. Sirqul offers the only future-proof, device agnostic, and interoperable remote monitoring system in one platform. Sirqul is ready and able to aggregate all health data and operations into one Brookdale-branded dashboard for easy access by both families, patient, and staff.

# Sirquel's Edysen Passively Collects Data

- **Track movements and behaviors:**  
Detect movements between living quarters such as the Bed, Kitchen, Living Room or within the facility. Monitor behaviors and interactions with staff and other community members as well.
- **Visualize, report, & custom queries:**  
Visit duration, frequency, zones visited, path analytics, dwell time, health trends, activity levels, and more.
- **Take action:**  
Alert staff nearby to assist, order food to room, pick-up medications, find facility rooms, send family member updates, or trigger alerts to physicians.



## Edysen Cube



- Android OS firmware support: 6.0 Marshmallow
- CPU: Rockchip RK3229
- Memory (eMCP): MCP-1GB LPDDR3 + 8GB eMMC
- WiFi/BT: IEEE 802.11 b/g/n and BT4.1 (BR/EDR + BLE)
- MFI IC: Authentication Coprocessor
- PMIC: Power management IC devices
- Power: USB to AC adapter or portable battery pack
- Wi-Fi and BT/BLE monitoring mode for passive tracking (no app required)

## Edysen Socket



- Android OS firmware support: 6.0 Marshmallow
- CPU: Rockchip RK3229
- Memory (eMCP): MCP-1GB LPDDR3 + 8GB eMMC
- WiFi/BT: IEEE 802.11 b/g/n and BT4.1 (BR/EDR + BLE)
- MFI IC: Authentication Coprocessor
- PMIC: Power management IC devices
- Power: Edison 26/27 bulb base (additional options at request)
- Bulb compatibility: Incandescent and Halogens. Dimmable LEDs and CFLs.
- Wi-Fi and BT/BLE monitoring mode for passive tracking (no app required)



## Traffic Analysis

- Live **heatmap** displays patient, employee and management traffic behavior
- **Track accurate dwell time** by area
- Detect **indoor traffic congestion** and resolve

## Floor Optimization

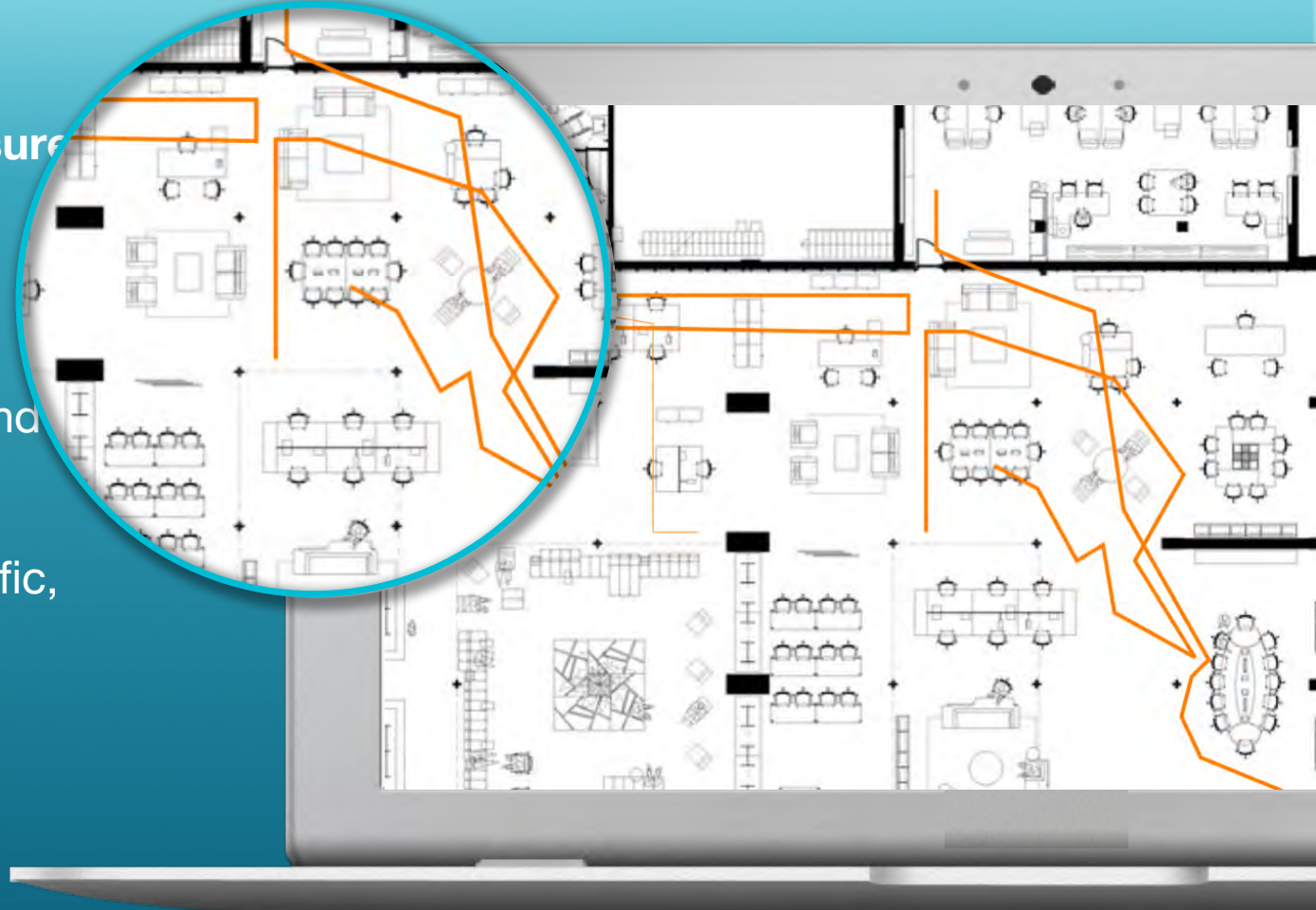
- Identify which **areas have synergy** to increase engagement
- Discover **under-utilized areas** and allocate assets
- Optimize **placement, security, staff and floorplan**
- **Visualize** and report (custom queries by patient, demographic, dwell time, location)
- Determine the **value of every square foot**.





Predictive simulation allows facility to **test, measure and iterate** floorplans, asset allocation, staffing all BEFORE incurring costs.

- **Simulate traffic, patient and staff behaviors** across healthcare professionals, employees and inventory
- **Evaluate changes and impact on KPIs** – traffic, notifications, dwell time and more
- **A/B test** asset locations, wait times and more

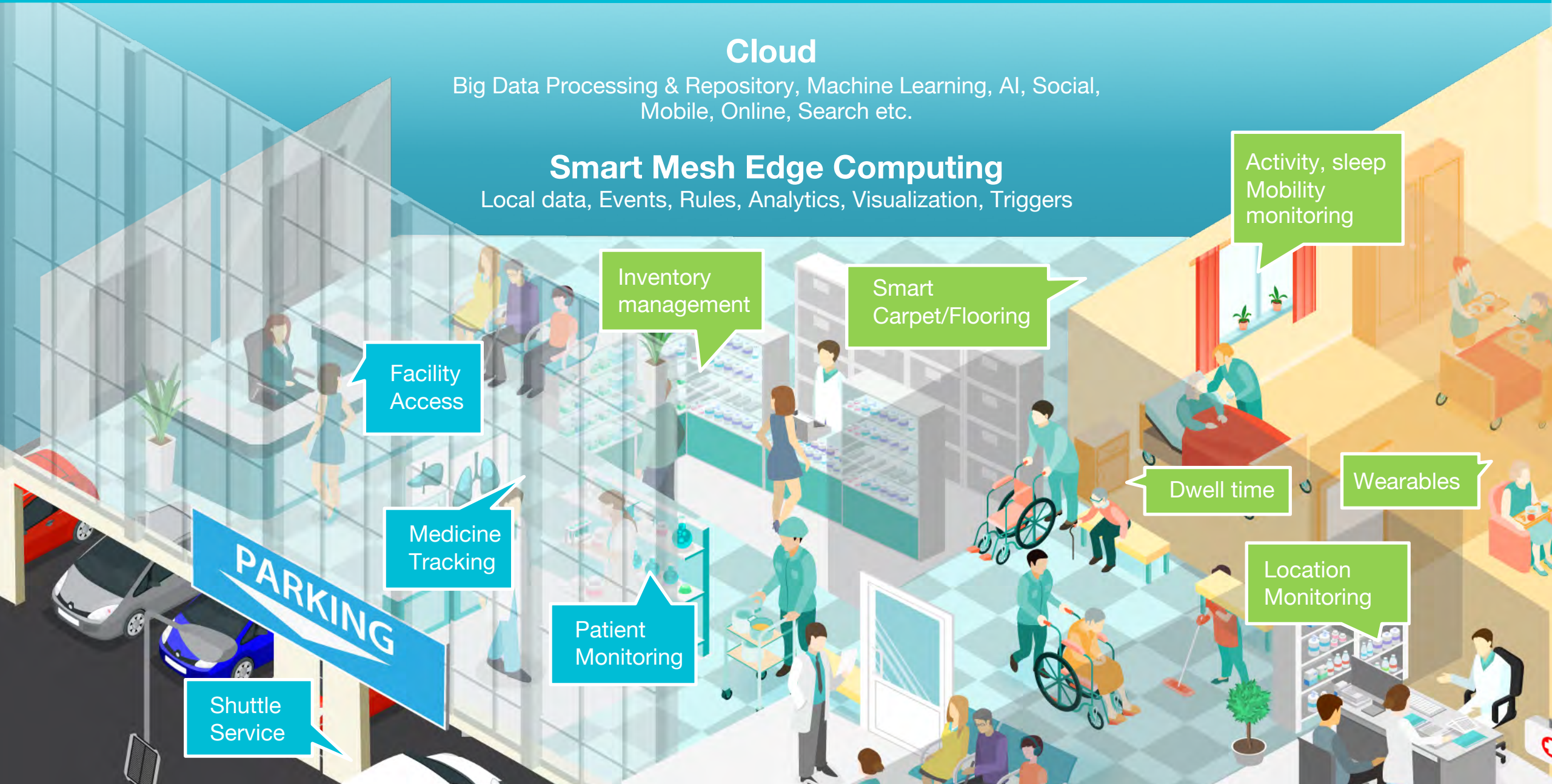


## Cloud

Big Data Processing & Repository, Machine Learning, AI, Social, Mobile, Online, Search etc.

## Smart Mesh Edge Computing

Local data, Events, Rules, Analytics, Visualization, Triggers



Facility Access

Inventory management

Smart Carpet/Flooring

Activity, sleep  
Mobility monitoring

Dwell time

Wearables

Location Monitoring

Patient Monitoring

Medicine Tracking

PARKING

Shuttle Service

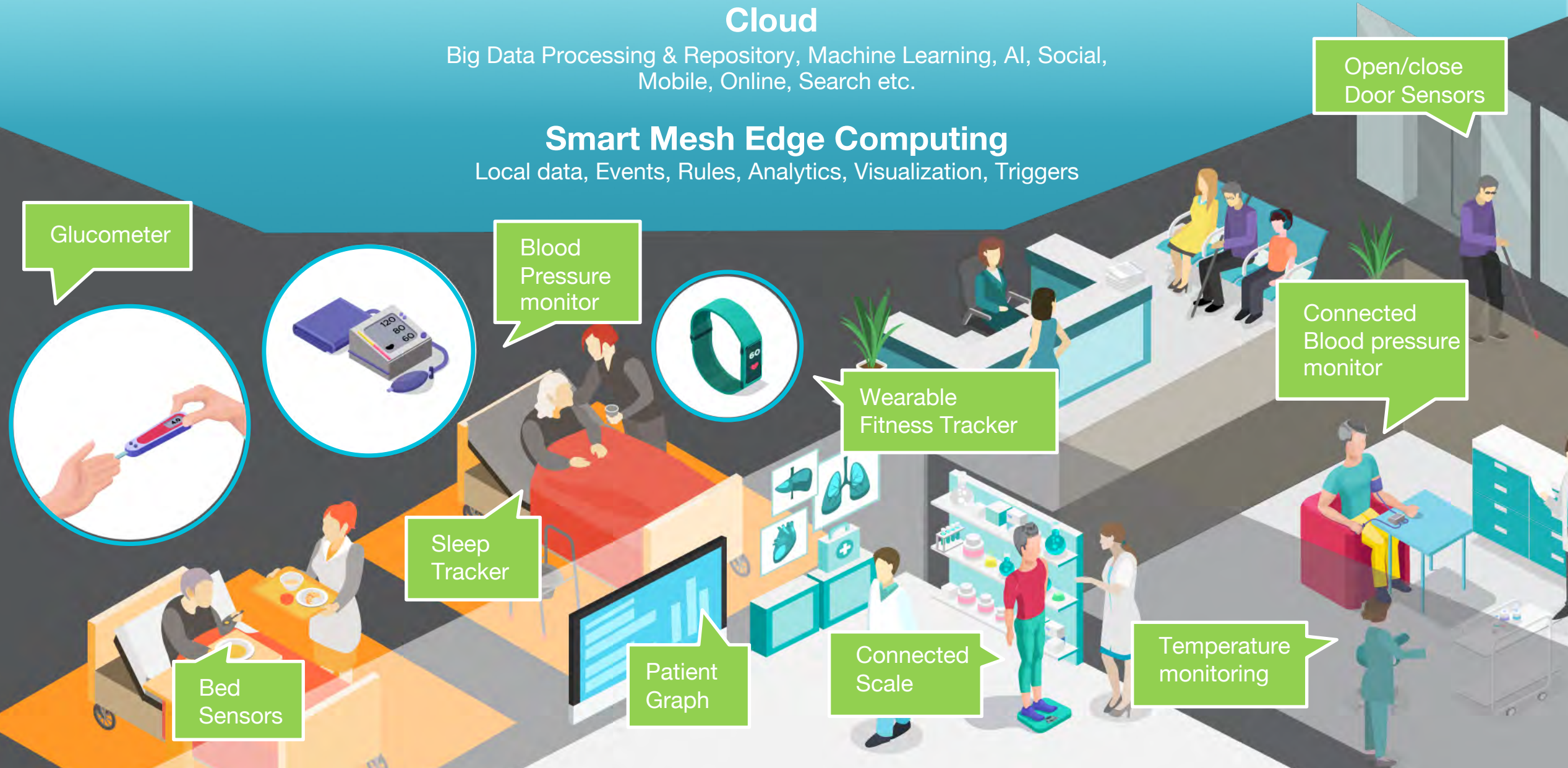


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**Facility  
Management**



**Patient  
Experiences**



**Staff  
Interactions**



**Asset Tracking**



## Caregivers & Resources





- Navigate multi-building campuses
- Alert staff for assistance with preventative and responsive care
- Detect behavioral patterns and meaningful health changes
- Live a more fulfilled life that is less invasive





- Easily locate records when entering a room and quickly identify patient needs
- Monitor patient with configurable notifications and alerts
- Update family members on patient location and health
- Increase communications with patient



- Dashboards around efficiency and productivity
- Presence awareness of teams
- The ability to quickly match the right provider for patient needs
- Benchmarks speed and efficiency
- Verifications of appointments and visits



- Locate equipment quickly and efficiently
- Incorporate equipment location into patient workflow (timed with response teams)
- Track inventory and manage supply chain





- Safety and security monitoring of patient, staff, and visitor movements
- Centralized presence awareness for emergency routing and procedures
- Location and navigation assistance
- Building management system integration for increased efficiencies and cost savings

- **Integrate with existing systems:** technologies, workflows, beacons, RFID, Wi-Fi, Bluetooth, other IoT devices, video surveillance, event calendar, weather, mobile app, and more with APIs, SDKs and web hooks.
- Integrate with a wide range of **new and existing IoT devices** via OTA app deployment
- Leverage **white-label app template** or **integrate SDKs** into existing app
- Import/export data feeds with **APIs to existing connected dashboards**



# Device Agnostic – Connect ANY Sensor or Device

Leveraging our existing software platform to meet the most common use cases, Sirqul makes it easy for facilities to connect any device & aggregate all health data into one dashboard.



Medication:  
**Pillsy**



Location:  
**Sirqul Edysen**



Bed Sensors:  
**Luna Lights**



Blood Pressure,  
Glucose, Weight:  
**Omron**



Emergency  
Bracelets



Activity  
Trackers



The smart cap that won't let you forget to take your medicine. Smart packaging, software and behavioral science to improve adherence in a user-friendly way.

- Automatically Track Doses
- Intelligent Reminders
- Double-Dose Alerts
- Easier, More Convenient Refills\*
- Track Side Effects and Results\*





# Appendix: About Sirqul

Sirqul has a global presence: Seattle, New York, Boston, Atlanta, Taipei, and a new Beijing partnership/investment







Robert Frederick  
*CEO & President*

## Robert Frederick *Chief Executive Officer & President*

- MIT, Media Lab (1995,1996)
- BlueTooth and connected devices startup acquired by Amazon.com (1999 for \$22MM)
- Led mobile commerce at Amazon (1999-2004 US, Europe, Asia)
- Tech founder AWS (2002)
- Authored 33 US Patents
- Bootstrapped profitable startup for 4 years
- Formed Sirqul in 2013 to take technology & platform to international customers



David Liu  
*Chairman*

## David Liu *Chairman*

- SVP / General Counsel for Compal Electronics, Fortune 500 company
- Patent / IP Litigator
- Serial Entrepreneur & Angel Investor
- Drives Asia Business from Taipei/Beijing, lives in Seattle, WA
- Joined Sirqul Board as a founding member, Investor
- Strong connection with International funds, and investors in Asia



Scott Kurttila  
*VP, Bus. Development*

## Scott Kurttila, *VP, Business Development*

- Georgetown University, MBA
- Founding Member of Amazon Affiliate Marketing Team
- Drove Mobile Operator Deals with Rob at Amazon
- SiriusXM (Director of Affiliate Marketing)
- American Media (Corporate Vice President)



Viki Zabala  
*Chief Marketing Officer*

## Viki Zabala *Chief Marketing Officer*

- University of Massachusetts Lowell. Beta Gamma Sigma Honor Society
- CMO MobPartner, acquired by Cheetah Mobile \$50M (2013-2015), VP of Marketing and Inside Sales, Fiksu acquired by Noosphere (2011-2013) and advisor to several mobile apps
- Sought-after Industry speaker on mobile innovation, gamification, engagement, ad tech and social commerce

# • Embed Over 73 Services and APIs into your Ecosystem

SIRQUL™



## Relevance

Hyper-location, Audience, Contextual Targeting, Preference, Personalization, Recommendations



## Inventory

Products, Services, Tickets, Vouchers, Coupons, Events, Search, Browse, Taxonomy, Filters, Classification



## Incentives

Points, Leaderboards, Rewards, Task Management, Gamification, Goals, Achievements



## Analytics

Dashboards, Visualization, Customizable Machine Learning Algorithms



## Location & Presence

Tracking, Path Prediction, Geofencing, Geotasking, Resource Management, Real-time Navigation, Simulations



## Crowd Sourcing

Notes/comments, Rights, Rules, Task Creation, Voting, Approvals, Media Ingestion, Chat Services



## Framework

Real-time bidding, Cart, Payments, Billing, Sensor/Device Connectivity, Edge Compute

Our mission is to create a truly disruptive and virally adopted full stack IoT platform with no heavy lifting — hardware, software and mobile. From the smallest development teams to Fortune 50, innovative organizations use Sirqul to reduce the time from IoT inspiration – to reality.



Mercedes-Benz



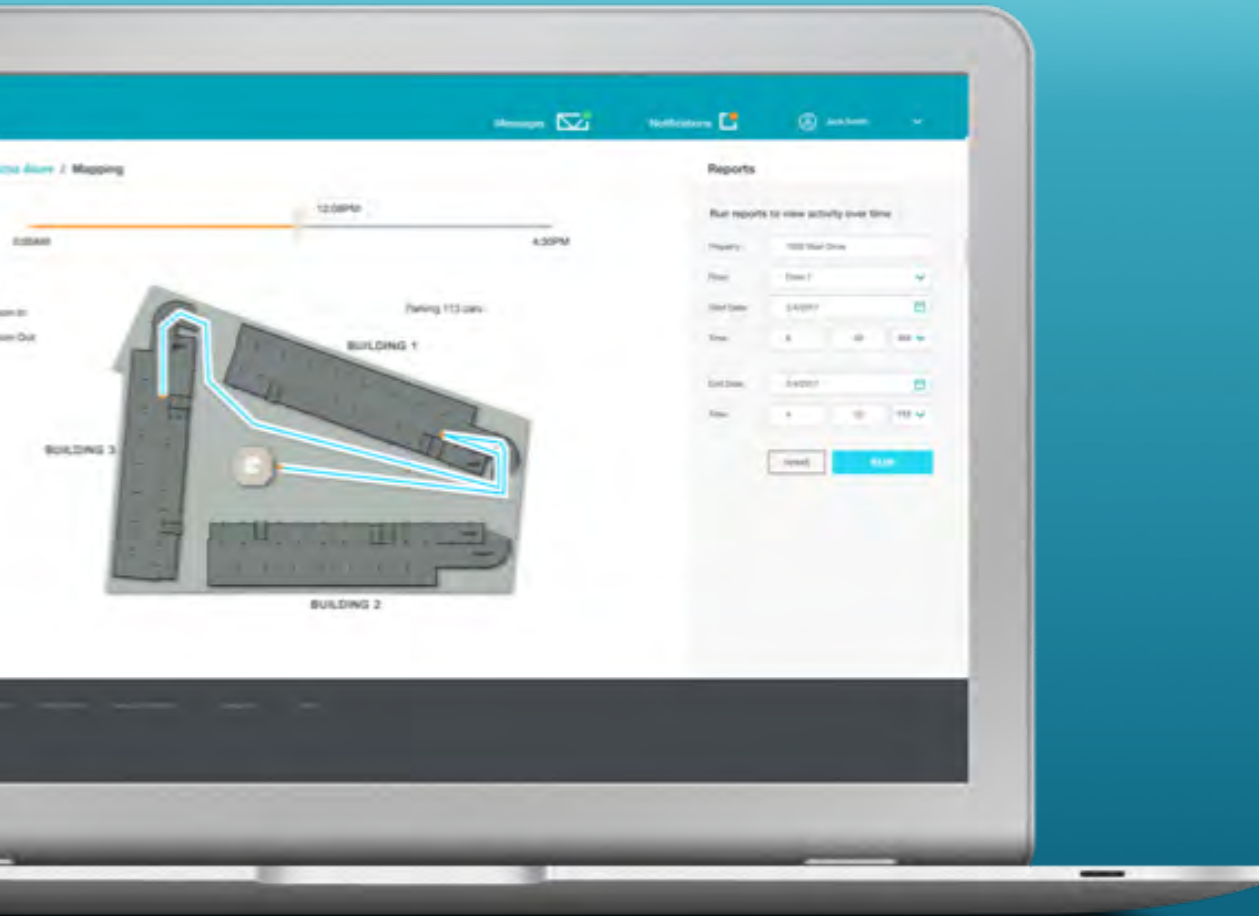




# Appendix: Additional Functionality



- **Employee task management** and missions (bathroom attendance, clean-up, assistance).
- **Align staff schedules** with traffic cycles across the day, week, or year.
- Improve **security and safety** – deploy to alleviate traffic or detect unknown devices in private areas
- **Predict maintenance** and reduce costs
- **Save energy** with automation and control of lighting, refrigerator/freezer/cooler, media, HVAC, and electricity.
- **Automate the collection of data** aggregated across numerous physical locations
- **Schedule maintenance** and deliver historical data records to pinpoint repair/updates



- **Detect, locate, and monitor all** cellular, Wi-Fi, and Bluetooth assets, equipment and personnel devices real- time
- **Provide location accuracy** down to the foot
- Distinguish between **known** and **rogue devices**
- Receive real time alerts to enforce “**no phone / no device**” zones
- Augment traditional security policies with **location-based controls**
- Provide **detailed insights** into usage, flow, relationships, and more between personnel, assets, and visitors
- Connect to 3rd party systems, create zone-based security, document access policies, augment existing safety and security systems



Thank You!

SIRQUL™

For additional questions and information, please contact:

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