PointGrab

SMART SENSING FOR COMMERCIAL REAL ESTATE

用于商业地产的智能传感

2020年六月

PointGrab - CogniPoint™

Rich, real-time, and actionable information about building occupants, based on computer vision technology

以计算机视觉技术提供丰富、实时、可行性的建筑租户/住户信息

❖ Renowned Company – Acclaimed Technology

知名公司 - 广受好评的技术

- Proven track record since 2008

  自2008年以来的成绩有目共睹
- Pioneers in the fields of computer vision and deep learning

  计算机视觉和深度学习领域的先驱
- Installed in 27,000,000 consumer electronics devices of world leading OEMs

  已通过世界一级代工厂牌安装在2700万台的消费电子设备中

❖ Backed by strategic industry leaders

受行业龙头的战略支持

signify ABB ECOMACHINES VENTURES

❖ Established partnerships and integrations with high-profile Application Providers

与高知名度的应用程序供应商建立合作并进行整合

SMARTSPACE SOFTWARE · Gooee · MAPIQ · Cloudbooking · rifiniti · SPOR AV · JLL · Diversified. · GROUPEOPTIM · LONE ROOFTOP building intelligence · ICONICS Make the Invisible Visible™ · SPACEWELL · Catalyst · innomate

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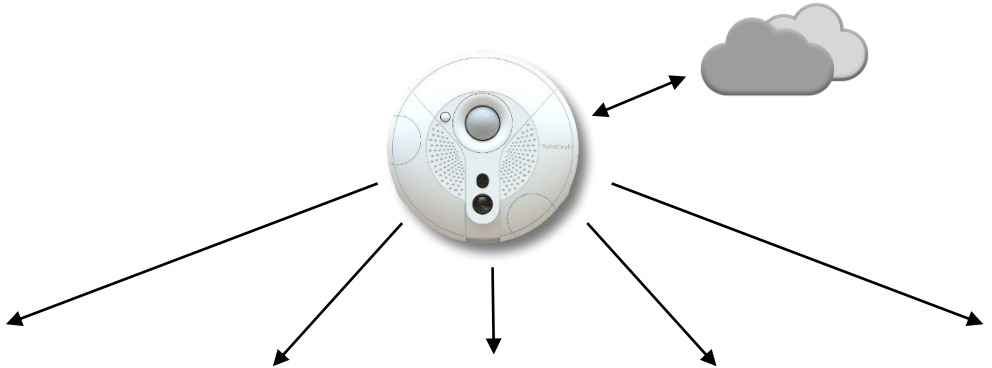
POINTGRAB 解决方案

CogniPoint™ 匿名传感平台 Anonymous Sensing Platform



Single person Location
每个人的位置

Desk level Count
办公桌计数

Meeting Room Count
会议室计数

Floor Count
楼层计数

Traffic Line In/Out
流动路线(进/出)

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CogniPoint™ 传感平台的价值主张 Sensing Platform value proposition

Help organizations utilize and manage real-estate and human resources

帮助企业优化和管理地产与人力资源

- Utilizing hot desking deployments on a real time basis
  对于进行办公室轮用进行实时分配
- Utilizing meeting rooms usage
  掌握会议室使用状况
- Real-time people count and distance between occupants
  实时统计空间内人数并掌握其之间的距离
- Enable density monitoring in each space
  实现空间内的人群密度监控
- Efficient density and crowd management between zones on the floor/building
  在楼层/大楼的各区域间进行有效的人群密度和人群管理
- Real time representation of the data as well as historical analysis for future utilization of space and services.
  实时显示当下的数据以及历史分析，供未来在空间和服务上的部署使用

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Channel Partners Network (Partial List) 渠道合作伙伴网(部分列表)

App Providers 应用程序供应商	Facility Management 设施管理	System Integrators 系统集成商	Telecom 电信	Lighting & Furniture 照明和家具
SMARTSPACE SOFTWARE	JLL	Honeywell	TELSTRA	OSRAM
Savvy	ENGIE by people for people	wipro	Deutsche Telekom	Steelcase
MAPIQ	mitie	Catalyst		signify
FM:Systems	ISS	GROUPEOPTIM		AURORA
Gooee	ELECTRA	RICOH imagine. change.		ZUMTOBEL
ASURESOFTWARE		innomate		
Spica		Diversified.		
SPACEWELL		utelogy		
Cloudbooking		axians		
octo		SPOR AV		
LONE ROOFTOP building intelligence				
Locatee				
ICONICS				
metrikus Connect. Respond. Transform.				
IOT W@REZ				
locarise				

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End Customers (Partial List) 终端用户 (部分列表)

Banks and Financials 银行和金融业	Consultancies 咨询公司	Universities 大学	Telecom 电信	Other 其他
BANK OF AMERICA	Deloitte.	THE UNIVERSITY OF MELBOURNE	TELSTRA	Coca-Cola
Deutsche Bank	accenture	CityU 香港城市大學 City University of Hong Kong	Deutsche Telekom	DIAGEO
Standard Chartered	McKinsey&Company	WAGENINGEN UNIVERSITY & RESEARCH	BT	RENAULT
ABN·AMRO		inholland university of applied sciences	Virgin media	ROLLS ROYCE
AMERICAN EXPRESS		DEAKIN UNIVERSITY	proximus	Booking.com
absa		Bar-Ilan University	vodafone	CONVERSE
VISA		Swansea University Prifysgol Abertawe		THOMSON REUTERS
Cal				MERCK
Van Lanschot SINCE 1737				lendlease
				TOMTOM

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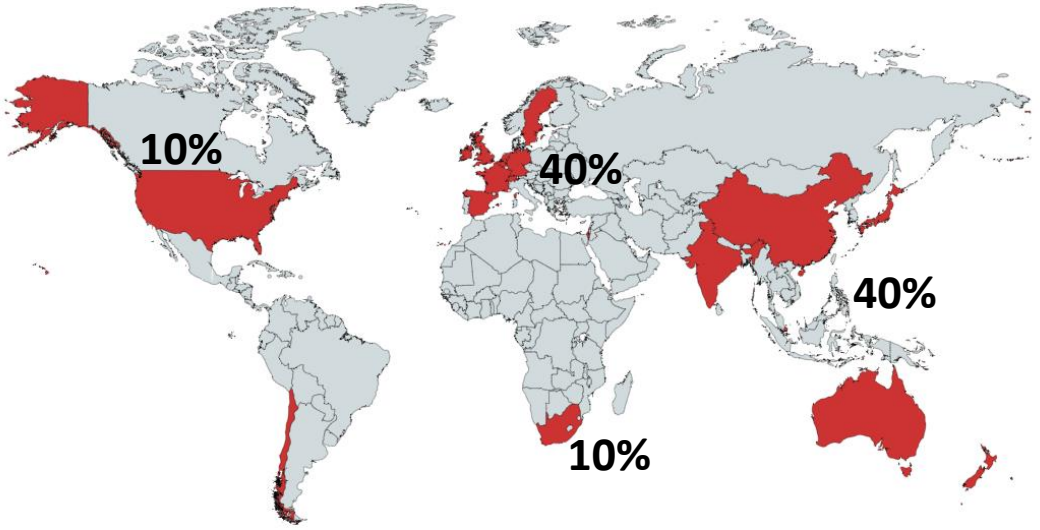
POINTGRAB IN NUMBERS 量化



Installations 安装
>180

SENSORS 传感器
> 20,000

Sq. Meters 平方米
> 70万

Events Per Day 每日事件
> 2800万

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CogniPoint™ 传感平台主要特点 Sensing Platform - Key Features

- Real-time/historical in-depth realization of occupants' usage of the workspace
  实时/历史性数据，深入理解人们对于空间的使用
  - Counting (and Presence) 计数(和出现)
  - Traffic lines 流动路线
  - Location 定位
- Based on computer-vision and deep learning technologies 由计算机视觉和深度学习技术驱动
- Non-intrusive, Anonymized and Secured - no images are transmitted or stored
  非侵入式、具匿名性和安全性，不传输或储存任何图像
- Wide field of view - one sensor covers up to 48m² (~520ft²) (depending on ceiling height)
  视野宽广：一个传感器可覆盖48平米(约520平方英尺，取决于天花板高度)
- User-friendly management system 用户友好的管理系统
- REST API for seamless integration with 3rd party applications and building automation systems
  通过REST API可与第三方应用程序和建筑自动化系统无缝集成
- Flexible deployment 灵活部署
  - Networking: PoE or Wifi (on demand) 网络: 以太网供电或WiFi(按需要)
  - Cloud/Private Cloud 公/私云
  - On-premise (upon request) 依要求就地
- Remote upgrades - future use case expansion and continuous improvement
  远程升级: 为未来用例扩展和不断改进

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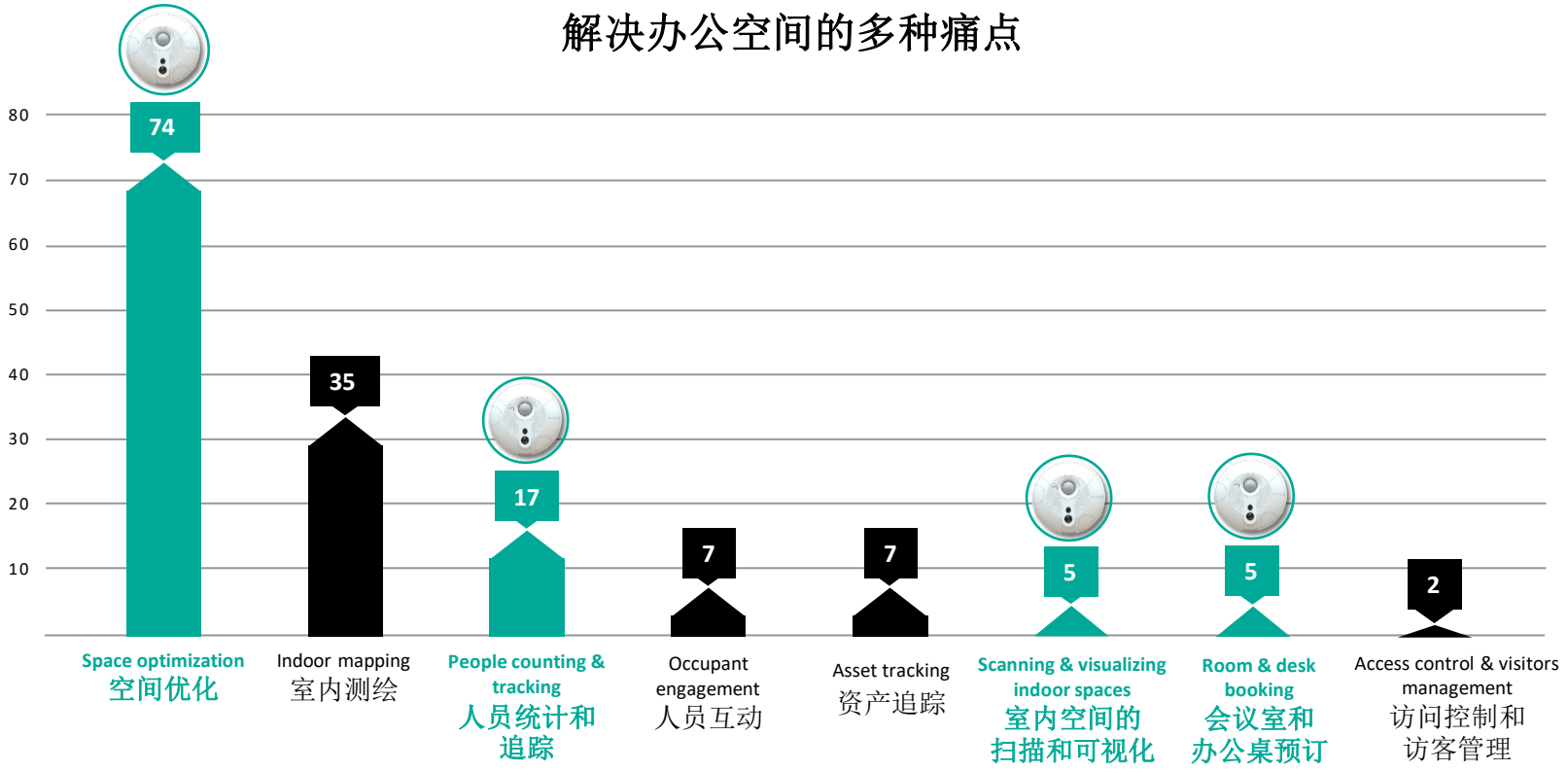
POINTGRAB 价值主张 VALUE PROPOSITION

Addressing multiple pains within the office space

解决办公空间的多种痛点



占有用例分析(针对144家企业的调查) Occupancy use cases analysis (survey of 144 corporates) – Memoori 2018

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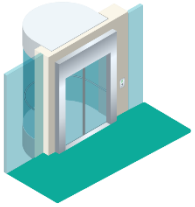
OUR VISION 我们的愿景

The Office Works for the Employee 让办公空间为员工工作

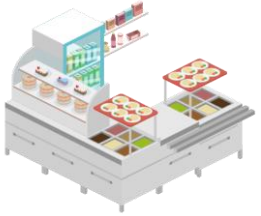


08:00

Entering the building The elevator is greeting the employee
进入大楼
电梯等待员工进入

09:30

Finding Your Desk
The system allocate list of free desks based on your preferences
找到您的办公桌
系统根据您的喜好显示出可用的办公桌列表



12:30

Lunch Time
Get Real-time data on the queues of your favorite restaurant
午餐时间
即时获得受您青睐之餐厅的实时排队状况

15:30

Collaboration
You are looking for a free meeting room for 3 people without reservation
协作
在没有事先预约下，您正寻找一间空闲且可容纳三人的会议室

17:00

Gym
Check out if your favorite Treadmill is available
健身房
查看您喜欢的跑步机是否正可供您使用

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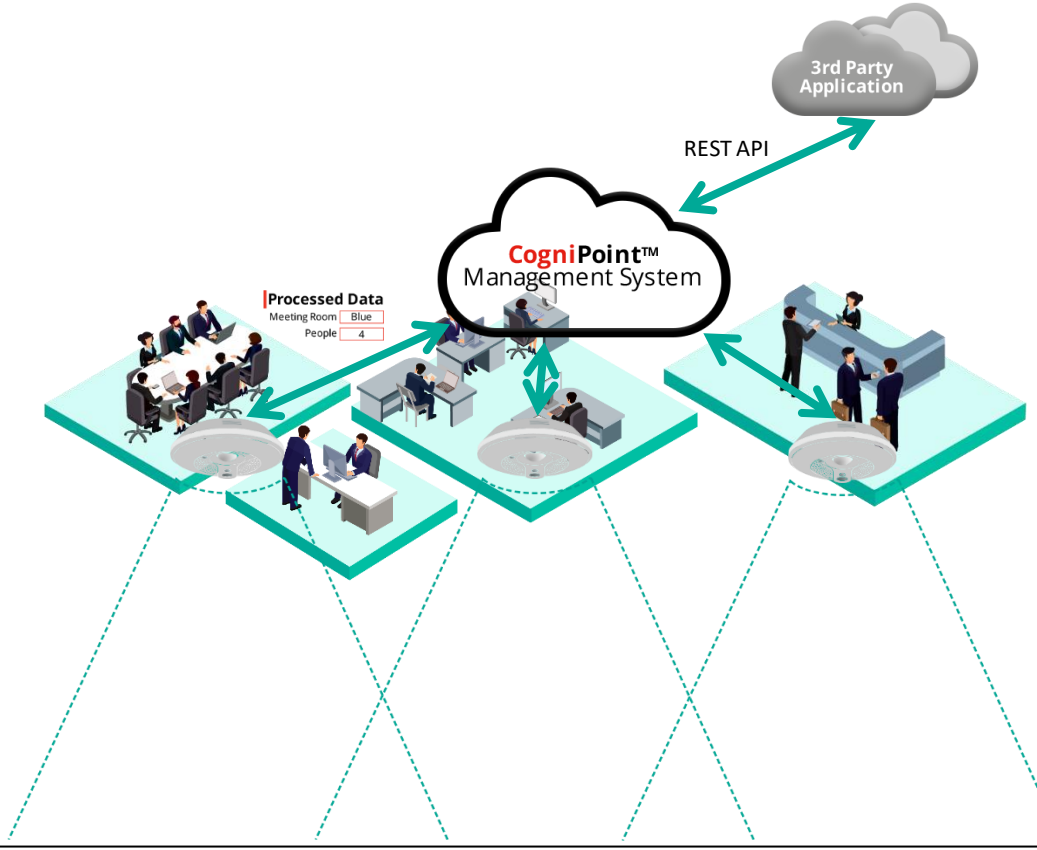
CogniPoint™ 高层架构，数据流 High level architecture , Data Flow

- Smart Building Services: 智能大楼服务
  - Space Management 空间管理
  - Facility Management 设施管理
  - Lighting Control 照明控制
  - HVAC Control 暖通空调控制

- CogniPoint™ Management System 管理系统
  - Device Configuration and Commissioning
    设备配置和调试
  - Device Management and Health Monitoring
    设备管理和状态监测
  - Firmware Updates
    固件更新
  - Forwarding of Analytics to 3rd party applications
    将分析结果传给第三方应用程序

- CogniPoint™ sensors send analytics to the CogniPoint™ Management System
  传感器发送分析结果给管理系统

- CogniPoint™ sensors analyze the office space
  传感器分析办公空间



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DELOITTE LONDON – CUSTOMER CASE STUDY

客户案例研究 - 德勤伦敦办公室

1039 Sensors Covering 24K m^2 over 16 floors

1039个传感器，覆盖16个楼层24000平米

Area Type 区域类型	Total 总计
Workstations 工作站	>2,500
Meeting Rooms 会议室	654
Traffic Lines 流动路线	65
Events Per Day 每日事件	400万

Occupied 使用中

Empty 空闲

https://cpms.pointgrab.com/

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德勤伦敦 - 受证明的投资回报

Deloitte London HQ (>1,000 PointGrab Sensors installed)

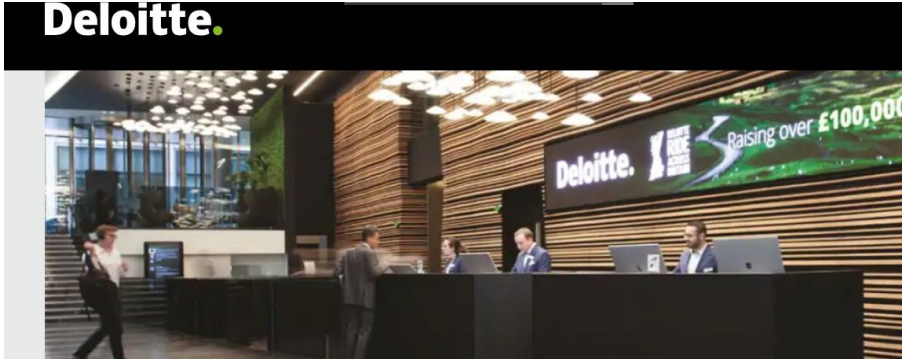
德勤伦敦总部安装超过一千个PointGrab传感器

"The story of our London HQ transformation" 我们伦敦总部转型的故事

- In our old environment 45% of offices and 30% of desks were unused at any one time
  我们总部里之前有45%的办公室和30%的办公桌在任何时候都是闲置不受使用的

"Our new London campus" 我们伦敦的新园区

- Accommodated **30%** more people, working in 3% less space" 用少了3%的工作空间多容纳了**30%**的员工



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PointGrab Smart Sensing Solution is Deployed at Deloitte's London Headquarters

PointGrab's Smart Sensing Solution is Deployed at Deloitte's London Headquarters

PointGrab, the machine learning and computer vision PropTech pioneer, has been selected by Deloitte to deploy its smart sensing platform at Deloitte's new UK and North West Europe headquarters in London. Deloitte's UK headquarters is the largest office building in the world to achieve leading certifications for being both an exemplary "green" building and one ergonomically designed to enhance the well-being of its occupants.

The new 270,000 sqft. building, which Deloitte occupied in July 2018, is the culmination of a four-year programme defining the workplace of the future for the firm's employees and clients. The

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DYNAMIC WORKSPACE MANAGEMENT 动态工作区管理

Real-Time Desk & Meeting-Room Allocation/Booking

实时办公桌和会议室的分配和预订

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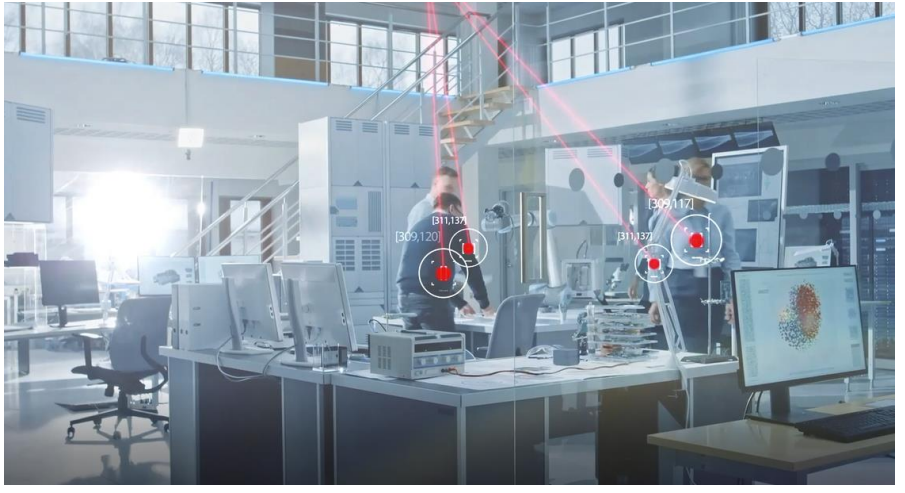
COVID-19 USE CASES 疫情下用例

The most advanced data source for Social Distancing Monitoring

可落实社交距离监测的最先进数据来源

- Accurate X,Y object positioning shared via existing REST API
  通过现有的REST API共享物件精确的X、Y位置
- Seamless integration to 3rd party applications for swift turnaround on use case creation
  无缝与第三方应用程序集成，以便迅速创建使用案例
- Highly granular location reporting interval - can be configured to a minimum of 1 second
  高粒度的定位回报间隔，最短可配置为1秒
- Location events PUSH'ed to appropriate partners/customers handlers and database of utmost security and privacy
  定位事件会被推送到相关的合作伙伴/客户处理程序和最安全且保护隐私的数据库中
- Openly available for subscription to any interested customers and platforms
  公开供任何有兴趣客户和平台订阅



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Meeting Room Utilization – Analytics Dashboard (Tableau Integration)
会议室使用分析仪表盘(与Tableau集成)

Meeting Room Analytics Dashboard

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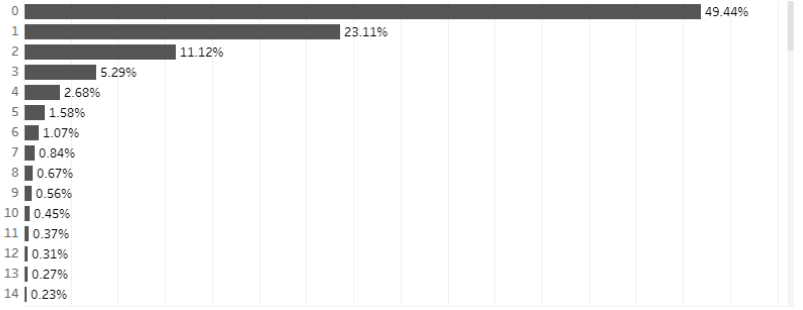
Number of meeting rooms per floor

Click on a floor to see occupancy

How many people are using the meeting room out of the total time?



Hours

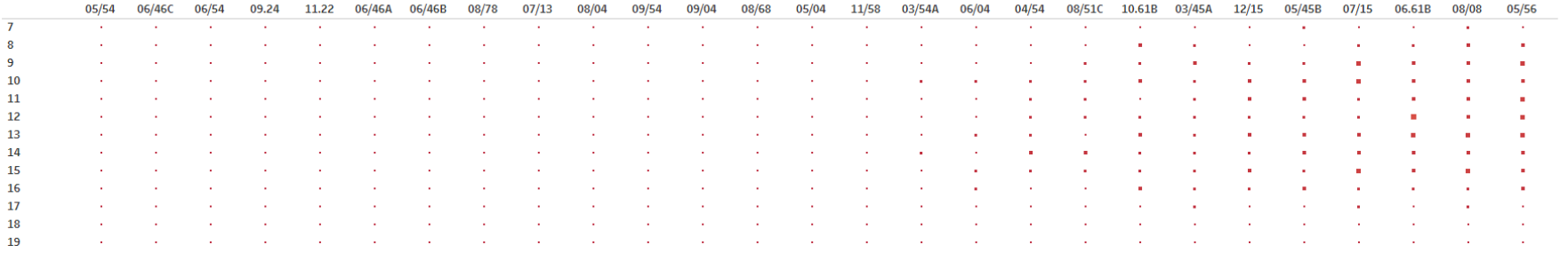
- [x] (All)
- [x] 7
- [x] 8
- [x] 9
- [x] 10
- [x] 11
- [x] 12
- [x] 13
- [x] 14
- [x] 15
- [x] 16
- [x] 17
- [x] 18
- [x] 19

Cancel Apply

Meeting Room List

(All)

Occupancy level of meeting rooms during working hours



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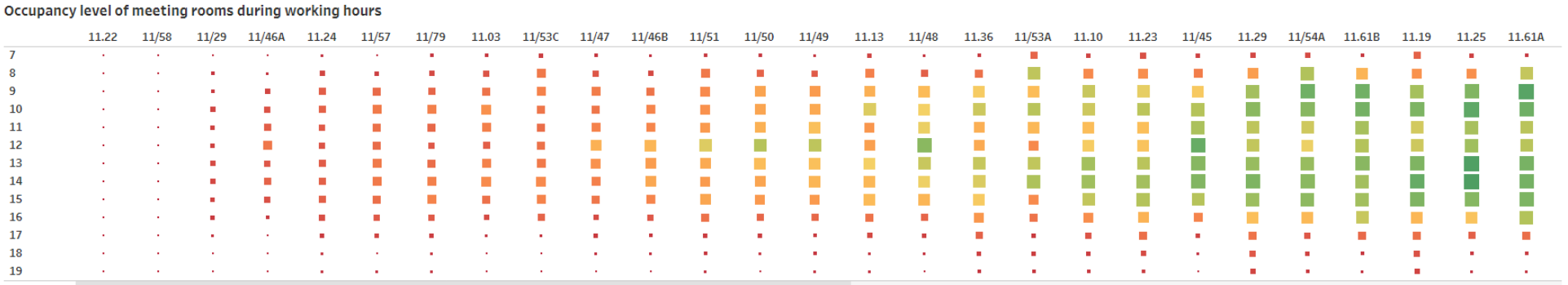
Meeting Room Utilization – Floor 11 (Tableau Integration)

11层楼的会议室使用率(与Tableau集成)

Occupancy levels of meeting rooms during working hours

会议室在办公时间内的使用状况



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Desk Utilization – Full Building (Tableau Integration)
整栋楼的办公桌使用情况(与Tableau集成)

Desks Analytics Dashboard

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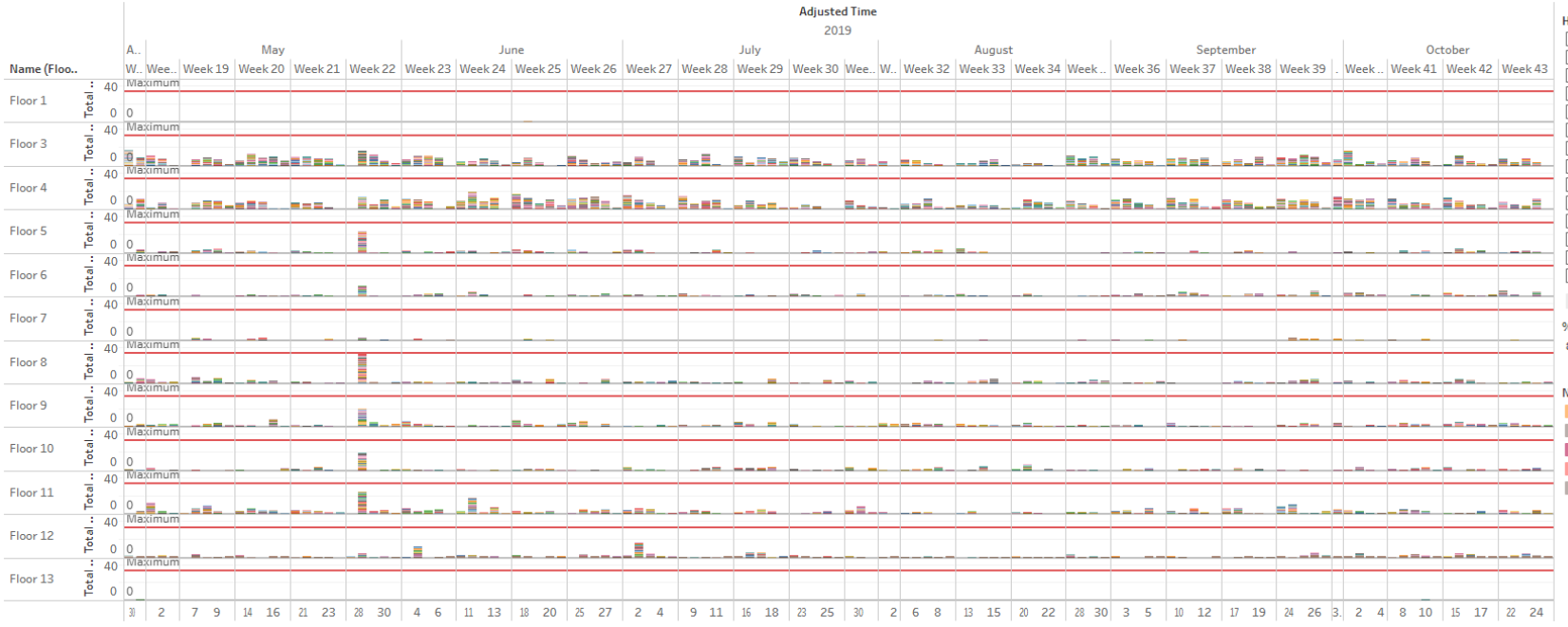
Desks list with a daily occupancy level of 80.8% to 100.0%



Name (Floors)
(All)

Hours
(All)
7
8
9
10
11
12
13
14
15
16
17
18
19
Cancel
Apply

% Utilization
80.3%
100.0%

Name (Logical Areas Of Interest)
01/01B
03/01B
03/01C
03/02A
03/03A
03/03B
03/03C
03/04A
03/04B
03/04C

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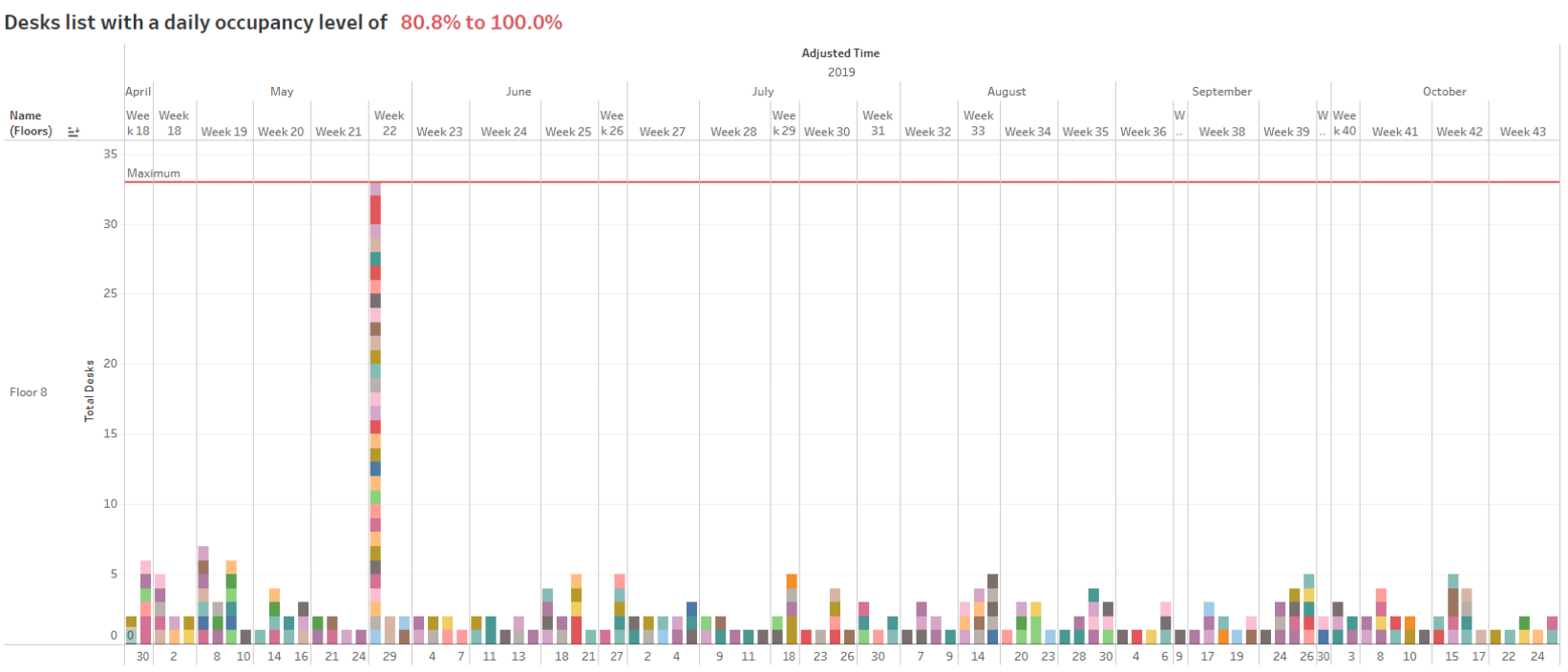
Most Utilized Desks (above 80%) – 8th Floor (Tableau Integration)
第8层楼使用率最高(80%以上)的办公桌 - (与Tableau整合)

Desks Analytics Dashboard

PointGrab

Desks list with a daily occupancy level of 80.8% to 100.0%



Name (Floors)
Floor 8

Hours
(All)
7
8
9
10
11
12
13
14
15
16
17
18
19
Cancel
Apply

% Utilization
80.3%
100.0%

Name (Logical Areas Of Interest)
08/01B
08/01C
08/02A
08/02B
08/03C
08/06B
08/06C
08/19A
08/19B
08/19C

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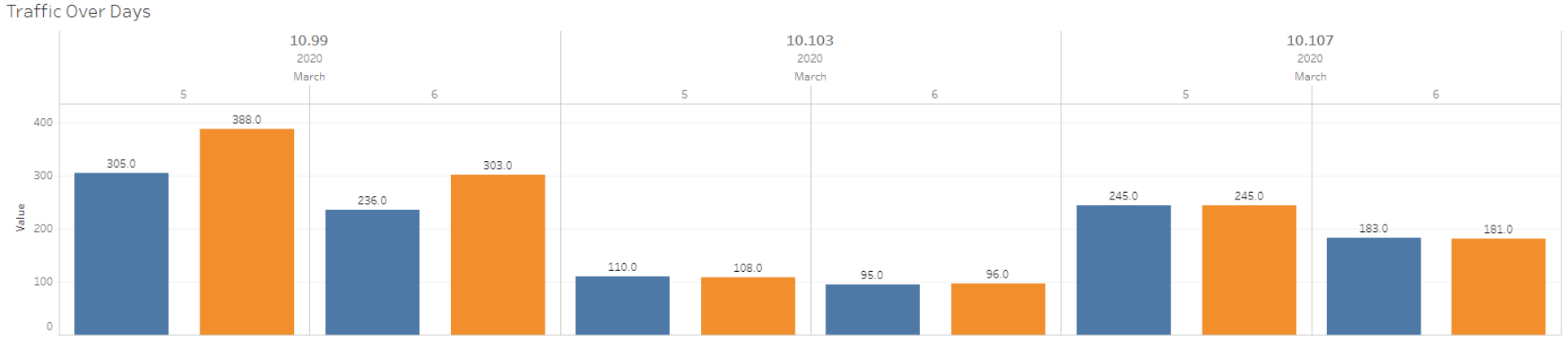
Traffic Flow Analytics (Tableau Integration)
流动分析(与Tableau集成)



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Heatmaps – 1 month long (Sensor Detection Area)
一个月的热力图(传感器检测区)

POINTGRAB IP 专利

Strong IP Protecting Unique Features

受有力的知识产权保护的独特功能

24 patents successfully granted 24项专利已取得

- Gestures – 4 UK patents, 5 Israeli patents, 3 USA patents
  手势识别 - 4项英国专利、5项以色列专利、3项美国专利
- Building automation 5 Israeli patents, 7 USA patents
  建筑自动化 - 5项以色列专利、7项美国专利

29 patent applications pending worldwide 29项专利在全球各地待批中

- Gestures – 2 Israeli applications
  手势识别 - 在以色列有2项专利待批
- Building automation: 11 Israeli applications, 13 USA
  建筑自动化 - 在以色列有11项专利待批、13项在美国待批
- and 3 international applications
  3项国际专利申请待批

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COMPETITIVE LANDSCAPE 竞争分析

PointGrab is the only solution offering accurate and rich data at a low operational cost, while ensuring full occupants privacy

是唯一以低运营成本，同时在完全保护受传感人士隐私情况下提供准确且多元数据的解决方案

	Thermal 热传感	RF 射频	Indoor Location (BLE/Wi-Fi Beacons) 室内定位 (低功耗蓝牙/WiFi信标)	IT Based (Docking Stations) 基于信息技术(扩展坞)	PIR/Capacitive 被动红外/电容式传感	CogniPoint
Tech Maturity 技术成熟度	Early 早期	Prototype 原型	Mature 成熟	Mature 成熟	Mature 成熟	**Mature 成熟**
Desk Occupancy 办公桌使用情况	✓			✓	✓	✓
Zone Count 区域计数	✓	✓	✓			✓
Multi-Zone Count 多区计数			✓			✓
Traffic Line (In/Out) 流动路线(进/出)						✓
Passive Users Count 被动用户计数	✓	✓			✓	✓
Objects Recognition 物体识别						2021
TCO 总体拥有成本	$$$$	$$$	$$	$	$$	$$

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THANK YOU 谢谢