JLL SEE A BRIGHTER WAY

Disruptive Technologies

Service Summary

Disruptive Technologies is a pioneer in delivering scalable, wireless data insights. Its postage-stamp sized sensors, always-on connectivity, and secure cloud platform make it simple to collect data from any building or asset; including the most confined, hard-to-reach spaces.

By enabling continuous monitoring of temperature, humidity, activity, and more, Disruptive Technologies helps organizations simplify compliance, save money, meet sustainability targets and power smarter operations. The Disruptive Technologies IoT Sensing Platform is an enterprise-grade sensing solution that provides public sector organisations with real-time, actionable data about their physical environments.

By deploying the world's smallest wireless sensors, the platform captures critical data points such as temperature, occupancy, and humidity from across the government estate. This information is securely transmitted to a powerful cloud platform, enabling real time data-driven insights. The solution replaces manual checks and assumptions with continuous, automated monitoring to improve efficiency and service delivery.

Detailed Service Description

The Disruptive Technologies platform provides unparalleled visibility into the conditions and utilisation of physical spaces and assets. The service is founded on a simple and robust methodology: Sense, Transmit, and Analyse.

First, the platform uses tiny, high-performance wireless sensors to sense specific environmental conditions. These sensors can be discreetly placed on any surface without disrupting operations, to capture data points like temperature, proximity, water presence, and CO2 levels with high accuracy.

Next, data is securely and wirelessly transmitted from the sensors to the cloud via cellular or Ethernet-based Cloud Connectors. This Transmit stage ensures reliable data flow from thousands of sensors across multiple sites and buildings into a single, unified system.

Finally, the platform allows organisations to Analyse the data through the "Studio" cloud application. This intuitive dashboard provides tools for data visualisation, sensor management, and custom alerts. With a powerful API, the data can also be integrated into third-party systems, enabling organisations to automate workflows and make faster, more informed decisions regarding building operations, compliance, and space management.

Key Features

- Miniature Wireless Sensor Portfolio: The platform features a range of discreet sensors, each with a battery life of up to 15 years and a simple and fast installation method. The portfolio includes sensors for Temperature, Proximity (for occupancy and open/close status), Water Leak Detection, Humidity, and CO2 monitoring.
- Cloud Platform & Analytics (Studio): The "Studio" cloud platform serves as the central hub for managing the entire sensor network. It provides user-friendly dashboards for visualising historical and real-time data, configuring alert thresholds and notifications, managing user access, and monitoring the health of all deployed sensors and Cloud Connectors. It can generate automated compliance reports and automatically creates work orders in the customers CMMS.
- Secure and Scalable "Always on" Connectivity: Data is relayed 24X7 from sensors using proprietary wireless communication to Cloud Connectors, which then use cellular or Ethernet networks to connect to the cloud. The architecture is designed for massive scalability, supporting deployments from a few sensors in a single room to tens of thousands across a national property portfolio.
- Data Integration and Open API: Disruptive Technologies provides a comprehensive REST API and webhooks, allowing organisations to securely export raw sensor data into their own data lakes, BI tools, or integrated workplace management systems (IWMS). Disruptive Technologies offers a full REST API for custom development and seamless integration.

Sensor Portfolio

The Disruptive Technologies platform includes a suite of specialised, miniature wireless sensors designed for specific monitoring tasks. All sensors share core characteristics, including a compact design for rapid deployment, a battery life of up to 15 years, and secure wireless communication. The following sensors are currently available:

- Desk Occupancy Sensor: This sensor combines proximity detection with motion sensing to provide precise desk-level occupancy monitoring. It accurately identifies when a workstation is actively occupied, differentiating between temporary absence and full vacancy. The sensor enables detailed workplace utilisation analytics, supports hot-desking initiatives, and helps optimise office space allocation by providing real-time and historical occupancy data for individual workstations.

- Proximity Sensor: This non-contact sensor detects the presence of an object within its sensing range. It is highly versatile and commonly used for monitoring space utilisation by detecting occupancy at desks and in small meeting rooms. It can also be configured to monitor the open/closed status of doors, windows, and cabinets to enhance security and operational awareness.
- Water Sensor: This sensor detects the presence of water on a surface. By providing an immediate alert when a leak begins, it enables facilities teams to act quickly to prevent catastrophic water damage, reduce repair costs, and minimise operational disruption in critical facilities.

- Temperature Sensor: This sensor provides high-accuracy temperature readings from -40°C to +85°C. It is ideal for a range of public sector applications, including monitoring hot and cold-water systems to help mitigate Legionella risk, ensuring compliance in temperature-sensitive cold storage, optimising HVAC energy consumption, and protecting sensitive assets.
- Humidity Sensor: This sensor measures relative humidity levels in the air. It is used to maintain optimal environmental conditions for occupant health and comfort, prevent the growth of mould in buildings, and preserve sensitive materials in archives, museums, and libraries.
- Door & Window Sensor: Specifically designed to detect open and closed states of doors, windows, and cabinets using a magnetic contact mechanism. Supports building security, energy efficiency by detecting draughts, access logging, and compliance in secure or sensitive areas.

- CO2 Sensor: This sensor measures the concentration of carbon dioxide (CO2) in parts per million (PPM). It is a critical tool for managing indoor air quality (IAQ) to support employee well-being and productivity. The data helps to ensure ventilation systems are operating efficiently and that spaces are healthy for occupants.
- Touch Sensor: This sensor detects when it has been touched by a person. Its primary use is for on-demand service requests, enabling staff to request cleaning, facility support, or room-service with a simple press. It can also be used as a feedback mechanism or to manually log an event.
- Motion Sensor: This passive infrared (PIR) sensor detects human presence by sensing body heat within a wider area. It is effective for monitoring motion and activity levels in larger spaces, corridors, and open-plan zones, providing valuable data for space utilisation analysis and energy management strategies like smart lighting.

Benefits for the Public Sector

- Operational Efficiency & Cost Reduction: The platform enables the automation of manual monitoring tasks. Continuous temperature data can optimise HVAC performance to reduce energy consumption, proximity data can inform smart cleaning schedules based on actual space usage, and instant water leak alerts can prevent costly building damage and repairs.
- Compliance & Risk Management: Automate critical compliance logging for public health and safety regulations. Use temperature sensors for automated monitoring of hot and cold-water systems to help mitigate Legionella risk, or to ensure cold storage for food and pharmaceuticals remains within specified temperature ranges.
- Sustainability Goals: Provide the granular data needed to measure, manage, and report on sustainability initiatives. Monitor energy consumption, optimise resource allocation, and validate the impact of efficiency projects to support ESG (Environmental, Social, and Governance) targets. Specific quantitative metrics on cost savings achieved by clients are not publicly detailed.
- Data-Driven Decision Making: Leverage accurate data on how spaces and assets are being used to inform strategic decisions. Analyse desk and meeting room occupancy to right-size office space, monitor asset usage to optimise maintenance schedules, and improve the overall performance of the public estate.

- Implementation and Support Deployment is designed for speed and simplicity. The wireless sensors are installed via a "peel-and-stick" adhesive, and the Cloud Connectors are plug-and-play devices requiring only a power source and network connection. The entire system can be configured and managed remotely through the Studio cloud platform. Disruptive Technologies provides extensive online documentation, developer portals with API guides, and a dedicated support service to assist clients with deployment and ongoing operations.
- Security and Privacy The platform is built with security as a core component. It features end-to-end encryption, ensuring data is secure from the sensor, through the Cloud Connector, and to the cloud. As the sensors measure environmental conditions and do not capture any video, audio, or biometric data, the solution is private by design and does not collect any Personally Identifiable Information (PII). While security is a key feature, specific certifications like SOC2 or ISO 27001 are not listed on their public website.

Why JLL & Disruptive Technologies?

Disruptive Technologies offers the UK public sector a transformative approach to building and asset management. With the world's smallest, most reliable wireless sensors and a secure, cloud-based analytics platform, public sector organisations can move beyond manual checks and assumptions to a culture of data-driven decision making. The result is improved efficiency, reduced operational risk, stronger compliance, and measurable progress toward sustainability targets.

Our solution is proven, trusted, and built for rapid, scalable deployment across estates of any size or complexity. With industry-leading support, open integration capabilities, and a commitment to privacy and security by design, Disruptive Technologies empowers government bodies to take control of their buildings, safeguard resources, and deliver greater value to the public.

JLL stands ready to support your transformation with expert advice, project delivery, and ongoing service. To learn how Disruptive Technologies can help you optimise your estate, enhance compliance, and achieve your strategic objectives, please contact our team or request a demonstration today.