



# Smart Office

Reimagining workspaces  
and empowering people

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# The role of the office has shifted from functional to emotional

Modern workspaces have evolved far beyond static desks and fluorescent lighting. Today, they are expected to foster flexibility, collaboration, wellbeing and environmental sustainability.

The office is not just a place where work happens. It's a place where people connect, create, and share a sense of belonging and purpose.

To meet the expectations of a workforce that's increasingly hybrid, mobile and experience-driven, organizations are rethinking how to create physical spaces that attract talent and support broader business goals.

According to NTT DATA's global GenAI report, over 90% of respondents are considering how GenAI can streamline employee workflows and support processes. In addition, 96% agree, 48% very strongly, that GenAI will have a material impact on improving productivity.<sup>1</sup>

In response to these dynamics, NTT DATA has developed Smart Office solutions that combine AI, cloud platforms, IoT and real-time analytics to create intelligent, responsive and efficient workspaces.

**Smart Office intelligently blends digital technologies with physical infrastructure to enhance productivity, comfort and operational efficiency. It transforms traditional offices into intelligent workspaces where AI-driven personalization creates a more engaging work experience.**

The integration of collaboration zones and wellness spaces fosters connection and community. This human-centric design builds trust and fuels creativity.

<sup>1</sup> NTT DATA. Global GenAI Report. 2024.





# Smart office building blocks

Smart Office enables digitally connected, sensor-enabled workspaces that respond in real time to the needs of both users and the business.



## IoT infrastructure

### Environmental monitoring sensors

Sensors embedded in the office monitor occupancy, temperature, CO2, and lighting in real-time for efficient management.

### WiFi cameras and tracking

Wi-Fi cameras and device tracking systems enhance visibility and control within the smart office environment.

### Automation and optimization

Integration of IoT devices enables automation to optimise space usage and reduce energy consumption effectively.



## Smart room systems

### Automated booking systems

Automated booking reduces conflicts and optimizes room usage for efficient collaboration.

### Integrated AV and VC tools

Audio-visual and video conferencing tools enable seamless communication for both in-person and remote participants.

### Presence management systems

Presence detection adjusts room settings automatically, enhancing user comfort and conserving resources.



## Facility integration

### Building management systems

BMS oversee HVAC, lighting, and security operations to ensure optimal facility performance and energy efficiency.

### Digital signage and wayfinding

Digital signage provides real-time information and navigation assistance, enhancing occupant convenience.

### Keyless entry, smart lockers and parking

Keyless entry systems and smart lockers improve security and convenience through advanced access control technologies. Parking management improves vehicle access.





## The importance of the network

The effectiveness of Smart Office solutions relies greatly on the quality of your organization's network infrastructure. Upgrading LAN and Wi-Fi systems offers the opportunity to enhance the employee experience across all touchpoints including attending sessions in meeting rooms and collaboration zones, connecting with employees in other locations and working on cloud-based workplace apps, while technologies such as Bluetooth Ambient IoT enable the real-time tracking of inventory and assets.

Today's advanced networking hardware supports a range of applications, such as geolocation tracking and monitoring building usage. In this setup, the network itself acts as a sensor, delivering valuable insights into space utilization and user behavior. However, you will need a common data environment to handle all the sensor data and enable real-time response.

By integrating business and IoT networking capabilities, you can unlock substantial cost savings. This convergence reduces redundancies and strengthens the security framework for IoT systems, resulting in a more efficient and resilient infrastructure.



### AI and analytics

#### Real-time dashboards

Dashboards offer real-time insights into operational metrics, enabling quick and informed decision-making.

#### Predictive maintenance

AI algorithms anticipate equipment failures and schedule timely maintenance to avoid downtime.

#### Energy optimization

Energy tools analyze usage patterns to reduce waste and promote sustainable office environments.

#### AI automation assistants

AI-powered assistants automate routine tasks, boosting productivity and supporting intelligent decision-making.



### User experience tools

#### Workspace management apps

Workspace apps help employees manage bookings, access services and interact with their environment seamlessly.

#### Indoor navigation systems

Indoor navigation systems guide users through complex office layouts to improve accessibility and efficiency.

#### Personalization features

Personalization features adapt office settings and interfaces to individual preferences, enhancing comfort and productivity.

#### Cloud and remote work tools

Cloud and remote work tools support flexible working arrangements ensuring connectivity and collaboration anywhere.





# A phased approach to implementation

1

## Assessment

### Review existing infrastructure and align workplace goals

A successful Smart Office strategy begins with strong alignment among key stakeholders such as real estate and facility management, HR and IT. A rapid assessment of how your digital workplace strategy aligns with business priorities is an important first step to smooth implementation.

2

## Pilot deployment

### Implement smart features in selected buildings, floors or office spaces

Rather than refurbishing or redesigning multiple buildings from scratch, most projects start with a pilot deployment to improve the employee experience in a single building, for example, a company's headquarters. Some may focus on only a specific floor or office space.

3

## Manage and evolve

### SLA-based services and feedback-driven updates

By leveraging insights from the pilot phase, such as usage data and feedback, you can initiate several service improvements, validate assumptions and uncover new opportunities for optimization.

4

## Scale up

### Integrate with enterprise business systems such as HR, ITSM and BMS

With a clear understanding of the business benefits of the solution, and a proven design and blueprints, you can now scale up and deploy the solution more widely for a consistent employee experience across multiple locations. At this stage, advanced integration with third-party platforms can be implemented for maximum value, including integration with building management systems (BMS).

\* ITSM: IT service management

5

## Ensure adoption

### Ensuring success by bridging the gap between technology implementation and user engagement

As organizations invest in collaboration tools, IoT-enabled environments and intelligent automation, they need to ensure that employees integrate the tools into their daily routines. Structured training and change management strategies foster confidence and encourage behavioural change, helping organizations overcome resistance and promote a culture of innovation and collaboration.



# The benefits of a Smart Office solution

Implementing Smart Office solutions delivers a wide array of benefits for enterprises. These include increased productivity, enhanced collaboration, improved employee comfort and satisfaction. Organizations achieve significant cost savings from energy efficiency and space optimization, and greater environmental sustainability. Enhanced security features for IoT devices and real-time data insights enable informed decision-making, making Smart Office solutions a strategic investment for modern workplaces.



## Optimized space utilization

IoT occupancy sensors and analytics dashboards help organizations consolidate or reallocate underused areas, while edge computing improves speed and autonomy of reserving meeting rooms and work desks.

### Impact

- Reduce real-estate costs by up to 30% through better planning and the use of hybrid workplace models such as hot-desking and hoteling.
- Improve the average utilization of office spaces by up to 60%.

## Energy savings and sustainability

Automated lighting, heating, ventilation and air-conditioning (HVAC), and smart meters minimize energy waste, as AI-driven systems adjust temperature and lighting based on real-time occupancy.

### Impact

- 20%–40% lower energy bills
- Support environmental, social and governance (ESG) and carbon-neutral goals
- Facilitate certifications like LEED, WELL and BREEAM\*

\*LEED: Leadership in Energy and Environmental Design

WELL: WELL Building Standard

BREAAM: Building Research Establishment Environmental Assessment Method

## Enhanced employee productivity, experience and satisfaction

Personalized workspace settings (temperature, lighting), seamless booking systems and indoor navigation tools allow employees to settle in quickly and comfortably, and improve the quality of hybrid meetings.

### Impact

- Up to 12% boost in productivity
- Higher employee satisfaction and retention





### Operational efficiency and predictive maintenance

Real-time monitoring and proactive alerts reduce disruptions. Predictive analytics detect potential equipment failures or cleaning needs based on usage patterns.

#### Impact

- Lower downtime
- Reduced facility maintenance costs
- Improved SLAs

### Health, safety and compliance

The monitoring of CO<sub>2</sub> levels, humidity and air quality in real time, in line with WELL standards, creates a healthier physical environment. When required, occupancy control supports social distancing or emergency protocols.

#### Impact

- Safer, healthier workspaces
- Alignment with regulatory and employee wellbeing requirements



### Data-driven decision-making

Smart dashboards provide actionable insights into space usage, energy consumption, collaboration patterns and environmental conditions. This information enables strategic decisions on leasing, renovations and workforce distribution.

#### Impact

- More agile and responsive workplace strategy
- Optimized real estate investments
- Improved employee productivity
- A more sustainable and future-ready workspace

### Cyber risk management and security resilience

Secure access controls, identity management and automated compliance enforcement reduce the risk of unauthorized access and data breaches. Real-time visibility into network activity, user behavior and device interactions to detect anomalies early while enabling proactive threat mitigation.

#### Impact

- Make informed decisions
- Respond swiftly to emerging threats
- Build a more resilient digital workplace ecosystem





# Measurable results and ROI

The ROI from Smart Office investments varies depending on the organization’s size and the scale of deployment. However, most companies begin to see measurable returns within 12 to 24 months.

Overall, we calculate that a company in Europe with 10,000m<sup>2</sup> of office space can save more than €1.5 million per year through combined cost reductions, with a payback of less than two years, by transitioning to Smart Office solutions.

## Factors contributing to ROI

Our calculations show the average gains that can be achieved from Smart Office solutions.

Category	ROI contribution
Optimization of real estate space	Estimated savings of between €200 and €600 per square meter per year in lease or rent costs
Energy savings	Around 20% to 40% lower annual utility bills
Productivity uplift	Estimated in the range of €3,000 to €5,000 per employee per year
Facility opex savings	Around 10% to 25% reduction in maintenance and cleaning costs
Better compliance with ESG and green initiatives	Non-financial benefits through sustainability credits





# Explore our Smart Office solutions

As a global leader in digital workplace transformation, we combine strategy, IoT engineering, cloud services and AI-powered insights to deliver end-to-end Smart Office programs, including advisory, integration and managed support. With extensive cross-industry experience, we create workspaces that are intelligent by design and adaptive by nature.

Learn more about our [Digital Workplace and CX solutions](#).

## Schedule a consultation

**Contact us** to discover how we can help you navigate the complexities of Smart Office technologies and empower your business to thrive in a connected world.

Visit [nttdata.com](https://nttdata.com) to learn more.

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