

# JOHN LEWIS & PARTNERS PIONEERING DIGITAL TRANSFORMATION IN THE RETAIL INDUSTRY

IN PARTNERSHIP WITH DIGITAL INC.



DIGITAL INC.  
EXECUTIVE SUMMARY

Facing a rapidly changing retail landscape, John Lewis & Partners are demonstrating the power of digital transformation, creating a blueprint for retail companies seeking to navigate these turbulent times.

Their innovative step? Maximising the potential of their property assets by converting underused spaces like car parks into profitable 'build-to-rent' properties. This move into the UK's booming property market is a masterstroke of diversification that rejuvenates their physical assets and sparks new revenue streams.

Moreover, they have embraced the digital age, harnessing data to optimise their operations and bolster their sustainability. By shifting from repetitive, costly surveys to a comprehensive one-time scan of their properties, they've reaped significant efficiencies, reduced their carbon footprint and opened up a wealth of data-driven insights.

Their partnership with Digital Inc. has been instrumental in creating 'digital twins' of their extensive property portfolio. These advanced models allow John Lewis & Partners to reconfigure their distribution centres effectively, optimise logistics, improve energy efficiency, and enhance traffic flow, all crucial factors in meeting today's consumer demands.

The industry-leading practices pioneered by John Lewis & Partners are changing the game in the retail sector, offering invaluable insights for property managers and facilities heads. It's time for retail businesses to reassess their property portfolio, leverage digital tools, and rethink how to add value in these challenging times.

This comprehensive case study unravels the intricate digital tapestry woven by John Lewis & Partners, revealing their unique approach and providing a behind-the-scenes glimpse into their strategic pathway. Explore the specific actions they've undertaken, the technologies they've adopted, and gain an understanding of their innovative solutions. See for yourself how this new method is yielding significant results. This is a golden opportunity to delve into the fine details of how a major player is revolutionising asset management in the retail industry.

DIGITAL INC

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## JOHN LEWIS & PARTNERS PIONEERING DIGITAL TRANSFORMATION IN THE RETAIL INDUSTRY

In recent years, the retail sector has faced a multitude of challenges. From the global shift towards e-commerce to the socio-economic impact of the COVID-19 pandemic, businesses have been grappling with reduced footfall, increased rents, and the general preference for 'clicks over bricks'. These hurdles have led to sustained losses for many, pushing retailers to innovate and adapt. One such forward-thinking brand is John Lewis & Partners, a major UK retailer, which has initiated a strategic transformation to create additional revenue streams and balance the losses suffered on the high street.



*"Digital Inc. serves as a powerful resource – they provide an extra layer and bring our teams, both internal and outsourced, together."*



The Building Information Model of John Lewis's Headquarters

### Repurposing Assets for Greater Value

John Lewis & Partners boasts a comprehensive property portfolio that includes 34 department stores, 329 Waitrose grocery stores, 10 distribution centres, and a 15-storey central London Headquarters building. Many of these assets are located in affluent urban areas, where development land is at a premium. Recognising the opportunity, they have embarked on a journey to transform underutilised spaces, such as car parks and above-retail air space, into residential properties.

This innovative endeavour marks their entry into the UK's burgeoning 'build-to-rent' property market, bringing a new lease of life to their existing assets. By creatively repurposing these spaces, John Lewis & Partners have not only diversified their business but have also enhanced their property portfolio, demonstrating a proactive and resilient approach to asset management.

Their strategic shift serves as a compelling example for other businesses in the sector. In the face of a challenging retail landscape, it's time for businesses to reassess their property portfolio and identify potential avenues for value addition. If a shift in strategy can aid a major player like John Lewis & Partners, it could very well be the way forward for many others.







A typical Waitrose store modelled in BIM from highly accurate point cloud data

## HARNESSING DATA TO DRIVE EFFICIENCY AND SOCIAL RESPONSIBILITY

In the light of heightened environmental, social, and governance (ESG) considerations, the imperative to act sustainably has never been greater. Retailers, including John Lewis & Partners, are realising that proactive investments in technology and digital systems can significantly contribute to this cause while bringing considerable cost and time efficiencies.

*“Digital Inc. demonstrates that our relationship with them is for the long term. They’ll deliver the 1,000 lines of data, but they will help us hone in on the 20 we actually need right now, rather than leaving us drowning in data or unable to utilise it.”*

Consider the potential benefits of conducting a comprehensive scan of your assets: this approach can significantly reduce the need for multiple return visits. Previously, businesses often procured measured surveys on an ad hoc basis, focusing on localised areas of a store for configuration changes. This practice, while effective, came with substantial costs, time investment, and environmental impact due to the carbon footprint associated with repeated travel.

### Leveraging Technology for Sustainability

John Lewis & Partners is leading the way by opting for a holistic one-time survey approach. This not only saves vast amounts of time and money but also significantly reduces their carbon footprint, aligning with their commitment to sustainable and socially responsible practices by reducing the need for site visits.

Indeed, through the adoption of advanced digital models, John Lewis & Partners have been able to streamline the management of their extensive property portfolio. These digital tools provide a comprehensive overview of their department stores, grocery outlets, and distribution centres, facilitating easier and more efficient maintenance and oversight. This innovation in property management not only underlines their commitment to operational excellence but also to environmental sustainability. The data-driven insights gained through these digital models have become an indispensable tool in their asset management strategy, ranging from energy usage optimisation and shelf management to enhancing customer experience and increasing average customer spend.

Paul May, Property Programme & Systems Support Manager at John Lewis & Partners, underscores that the decision to invest in this data-driven approach isn't solely financially motivated. He explains, “The knowledge derived from data not only increases efficiency but also guides us towards a level of social responsibility that we believe is essential for our employees and our residents.”

This strategic approach by John Lewis & Partners highlights the dual benefit of technological adoption in the retail sector. It's not just about economic efficiency and business resilience, but also about embracing a sustainable path that respects our environment. As we navigate the demands of the 21st century, it's an approach that others in the sector might do well to consider.



Internals modelled to LOD300 including shop layout and building services



Car parks and service yards fully modelled and asset tagged



Petrol filling stations, access roads and landscape modelled in detail



# REVOLUTIONISING THEIR REFURBISHMENT STRATEGY THROUGH COMPREHENSIVE 3D DATA CAPTURE

Our partnership with John Lewis & Partners commenced in 2017 when Digital Inc. was chosen to undertake a comprehensive 3D survey and modelling project. This involved their expansive 3 million sqft campus in Bracknell and several Waitrose grocery stores. The project's goal extended beyond facilitating their ongoing refurbishment and upgrade projects, it also addressed the pressing need to adapt their distribution centres to meet the evolving demands of today's consumers, many of whom expect same-day delivery services. By providing an accurate and highly detailed digital model of their facilities, we empowered John Lewis & Partners to reconfigure their distribution centres more effectively, ensuring they remained at the forefront of the rapidly changing retail landscape.



## EXEMPLIFYING PROPERTY DIVERSITY & COMPLEXITY THROUGH BIM



A BIM representation of a Waitrose store showing the integrated multi-storey car park, demonstrating how advanced 3D modelling aids in efficient space management.



Overhead view of a BIM model of a distribution centre, highlighting the accurate mapping and modelling that facilitates effective reconfiguration to meet evolving consumer demands.



The intricate MEP model of John Lewis Reading store, showcasing how sophisticated digital modelling assists in the intelligent planning of systems.



BIM of a Waitrose store presenting the underground services precisely modelled and mapped, underscoring the utility of digital twins in retail property management and development.



## Development and Implementation of BIM Models

Since then, Digital Inc have meticulously developed BIM-ready models derived from highly accurate point clouds for over 100 stores, supporting the group's vision of fully realised digital twins of their entire portfolio, including warehouses, distribution centres, and office spaces.

## Overcoming Challenges and Immediate Benefits

Despite initial concerns about potential disruption to the stores' operations, Digital Inc.'s survey team has demonstrated exemplary adaptability, even conducting surveys out of hours if required. By capturing all essential data from both inside and outside each store within an average of two days, the impact on daily functioning has been kept to a minimum. This approach allows Waitrose to continue serving their customers without any significant interruptions. This swift, non-intrusive, and flexible data capture process exemplifies the benefits of integrating advanced 3D survey techniques into retail property management and development.

## DIGITAL INC. IMPACT FACTS & FIGURES

### Digitisation of Millions of Square Feet

Digital Inc. has digitally mapped and modelled their expansive 3 million sqft campus, a multitude of retail stores, and several commercial buildings since 2017, effectively supporting John Lewis & Partners' refurbishment strategy.

### Over 100 BIM-Ready Models

Our skilled team has meticulously developed BIM-ready models for over 100 stores across the country, making significant strides in the group's vision of establishing digital twins of their entire portfolio.

### Minimal Disruption Maximum Efficiency

Despite the scale and complexity of the task, our team's flexible and adaptive approach ensured all essential data capture was completed within an average of just two days per store, minimising the impact on the stores' daily functioning.



## THE TECHNOLOGICAL PATHWAY

Digital Inc's process of data capture and model creation is a multi-faceted endeavour, combining various technologies to achieve the most comprehensive and accurate results. The journey begins with establishing a robust, GPS-controlled framework. This crucial first step ensures the spatial accuracy of the data captured, providing a reliable foundation for all subsequent processes.

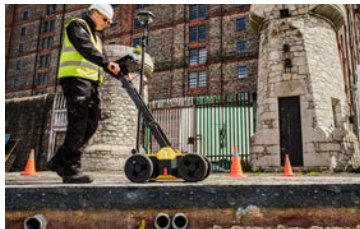
Once the GPS framework is in place, 3D laser scanning is carried out. This technology enables Digital Inc to capture vast amounts of highly detailed data quickly and accurately. Digital Inc's scanners capture not just the physical dimensions of the site but also the visual appearance, taking 360-degree photographs as they scan. This results in a coloured point cloud - a highly detailed 3D representation of the site that blends physical and visual data seamlessly.

### Advanced Surveying: GPR and Drones

To ensure every aspect of the site is captured, Digital Inc also employs Ground Penetrating Radar (GPR) technology. This allows them to map and trace underground services, adding another layer of detail to their data capture process.

In situations where the site is particularly large or has challenging spaces and locations to access, Digital Inc utilises drone technology.

Drones can cover large areas quickly and access spaces that would be difficult or impossible for a human surveyor, ensuring Digital Inc's point cloud data is as complete as possible.



### From Point Cloud Data to BIM creation

Once the data capture process is complete, Digital Inc moves on to processing and optimising the point cloud data. This involves cleaning the data, removing any noise or errors, and organising it into a usable format. This optimised point cloud data then forms the basis for the creation of the Building Information Model (BIM).

The BIM is created in alignment with the optimised specification to suit the needs of the design team. This model provides them with accurate 3D information in an intelligent, interactive format. It makes their design process more efficient and measured, minimising risk and uncertainties, and ultimately leading to better design outcomes.

## DIGITAL INC. IMPACT FACTS & FIGURES

### Efficient and Precise

Digital Inc's advanced data capture techniques quickly gather vast amounts of highly detailed and spatially accurate data, using state-of-the-art tools like GPS control, 3D laser scanning, Ground Penetrating Radar (GPR), and drone technology.

### Visual Richness

Digital Inc's 3D laser scanners capture the physical dimensions and visual appearance of the site, creating a coloured point cloud that seamlessly blends physical and visual data, contributing to a richer, more detailed Building Information Model (BIM).

### Intelligent Design

Digital Inc's BIM models, derived from optimised point cloud data, provide design teams with accurate 3D information in an intelligent, interactive format, reducing risk and uncertainty and leading to more efficient, effective design outcomes.





*Photo top left*  
A floor plan cutaway showing all FF&E modelled from point cloud data



*Photo bottom left*  
An internal render straight from the BIM, showing basic materials applied

*Photo far right*  
A sectional view of the BIM, showing structure, architecture and MEP disciplines.

## CREATING A DIGITAL TWIN FOR **JOHN LEWIS HQ**

In 2019, Digital Inc undertook an ambitious project with John Lewis, aiming to create a comprehensive digital replica, or 'digital twin', of their substantial 250,000 square foot headquarters. This project was more than just a mapping of their physical assets; it was about creating a virtual model that accurately represented the physical space, complete with all fixtures, fittings, and structural details.



## Enhancing Facilities Management and Environmental Strategy

Utilising the survey data collected and a comprehensive 360 photographic tour of each floor, Digital Inc developed a federated Building Information Model, including all fixtures, fittings, and service equipment. This enabled advancements in the building's facilities management and reporting, including carbon calculations to support the company's environmental strategy.

The development of this digital twin is instrumental for John Lewis in multiple ways. Firstly, it allows them to visualise their entire office space in a digital format, thereby facilitating a thorough understanding of how the space is being utilised.

They can now examine the workplace layout and evaluate if it is optimally supporting their employees' workflow and productivity.

Secondly, it allows adaptation to the changing dynamics of modern business operations. As work patterns begin to shift, with greater emphasis on flexibility and collaboration, the digital twin model became a powerful tool for the company. They can now simulate different scenarios, re-arrange workspaces virtually, and assess the potential impact before any physical changes are made.



## SUCCESS WITH **DISTRIBUTION CENTRES**

Digital Inc's partnership with John Lewis extended beyond their retail stores and headquarters, reaching into their expansive distribution centres. The success Digital Inc achieved in developing digital twins of their stores and offices was mirrored in these vast, operational spaces.

The vast size of these distribution centres presented a unique challenge for data capture. To overcome this, Digital Inc utilised drone technology, enabling them to efficiently gather comprehensive data from these large spaces. Additionally, the use of 3D mapping technology such as GPR (Ground Penetrating Radar) allowed Digital Inc to delve below the surface, capturing vital details of underground services.

Photo top left

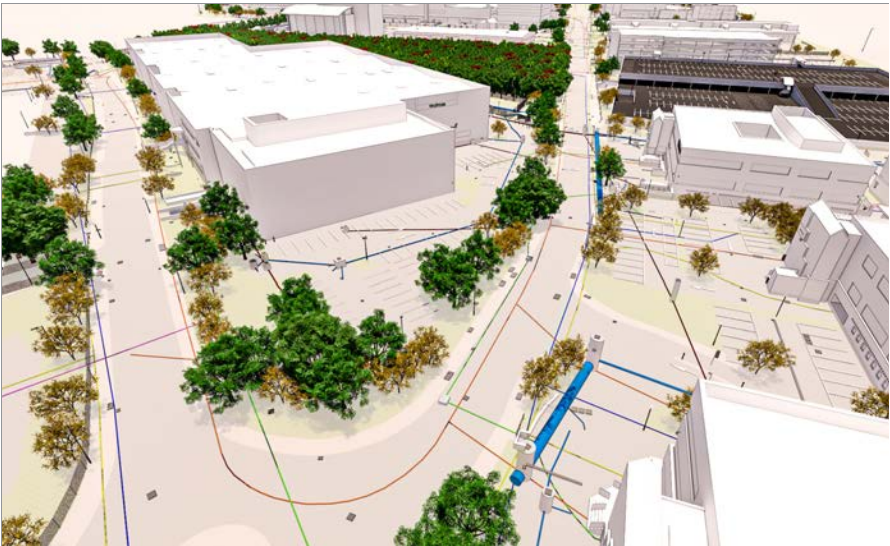
*Waitrose Campus Bracknell model showing underground utilities fully mapped and modelled.*

Photo bottom left

*The Aylesford Distribution Center fully modelled in BIM including underground utilities and surface features.*

Photo far right

*The Waitrose Campus Bracknell was surveyed using laser scanning and drones.*



## Enhanced Logistics, Energy Efficiency, and Traffic Flow

To begin with, digital models significantly enhance logistics management. They provide a comprehensive overview of the entire warehouse layout, accommodating the ever-evolving adaptations of space to embrace new systems, technology, and the increasing demand for online orders. This enables optimisation of storage locations, aisle widths, and workflows, resulting in amplified efficiency and productivity in daily operations.

Furthermore, these 3D models are instrumental in managing energy usage. They allow for an exhaustive analysis of lighting, heating, and cooling requirements across the distribution

centres. This comprehensive understanding paves the way for implementing energy-saving measures, contributing to John Lewis & Partners' commitment to environmental sustainability.

Moreover, these digital models facilitate improvements in traffic flow, both within and around the distribution centres. The capacity to virtually examine the movement of goods, people, and vehicles provides a tool for easily identifying bottlenecks and areas of congestion. These insights enable strategic adjustments to be made, enhancing overall traffic flow and safety, and ensuring the smooth transition of goods from distribution centres to customers' doors.





“

Paul May acknowledged Digital Inc's unique approach when comparing to the competition, stating, *“Digital Inc. had a different approach: upfront, open, honest, supportive, and able to advise on best practices and industry standards. Their expertise was evident from an early stage.”*

*“We need partners we can trust, collaborate, and work together.”*

*“Digital Inc. serves as a powerful resource – they provide an extra layer and bring our teams, both internal and outsourced, together.”*

*“They're focused on both today and tomorrow, rather than getting caught up in yesterday. They help us be prepared for the future, even if we're not ready to leverage it yet.”*

*“Digital Inc. demonstrates that our relationship with them is for the long term. They'll deliver the 1,000 lines of data, but they will help us hone in on the 20 we actually need right now, rather than leaving us drowning in data or unable to utilise it.”*



Paul May

Property Systems Manager  
at John Lewis

## CONTINUOUS ROLL-OUT AND DIGITISATION PLANS

John Lewis, as a forward-thinking client, recognises and reaps the benefits of Building Information Modelling (BIM) across their operations. They are fully committed to harnessing the power of digital transformation, proactively continuing to roll out full porperty portfolio digitisation.

This commitment to technological innovation not only enhances their operational efficiency but also empowers them to make data-driven decisions, leading to more strategic planning and development. It is this forward-thinking and digitally focused approach that sets John Lewis apart in the increasingly competitive retail landscape.

## TOWARDS A DIGITAL FUTURE: A WINNING PARTNERSHIP

Digital Inc.'s partnership with John Lewis & Partners showcases the strength of strategic collaboration. This fruitful alliance has reshaped the retailer's asset management landscape, fostering efficiency, and innovation.

From repurposing spaces to creating digital twins, our shared commitment to excellence has resulted in a successful partnership. We are thrilled to continue to aid John Lewis & Partners on their exciting digital journey. Together, we are setting industry benchmarks, pushing boundaries, and leveraging technology for optimal gains.

Our collaboration stands as a testament to what forward-thinking brands can achieve with innovative solutions. We invite you to join us on this trailblazing journey, as we continue to redefine the retail landscape.



SCALE OF  
OPERATIONS

9 million sq ft

Digital Inc. has executed scanning & modelling of over 9 million square feet across the entire John Lewis & Partners property portfolio.

SPEED OF  
DELIVERY

4 weeks

Digital Inc. typically finalises 3D scanning and BIM creation for a store in 4 weeks, boosting refurbishment planning efficiency.

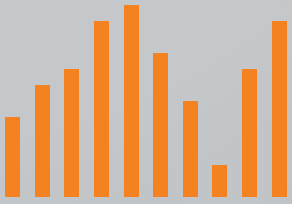
SIZE OF  
DATA

6.3 TB

Digital Inc. has gathered over 6.3 Terabytes of detailed, spatially accurate data, enabling comprehensive and precise digital modelling.



Circa one quarter of JLP portfolio  
digitised to date.



Up to 10 stores of varying sizes  
digitsied concurrently in one month.