





REAL ESTATE ASSET
MANAGEMENT OPTIMISATION
ON THE CHINESE MAINLAND

ADAPTING TO A TRANSITIONING MARKET

DECEMBER 2024

Greater China Research

Better never settles



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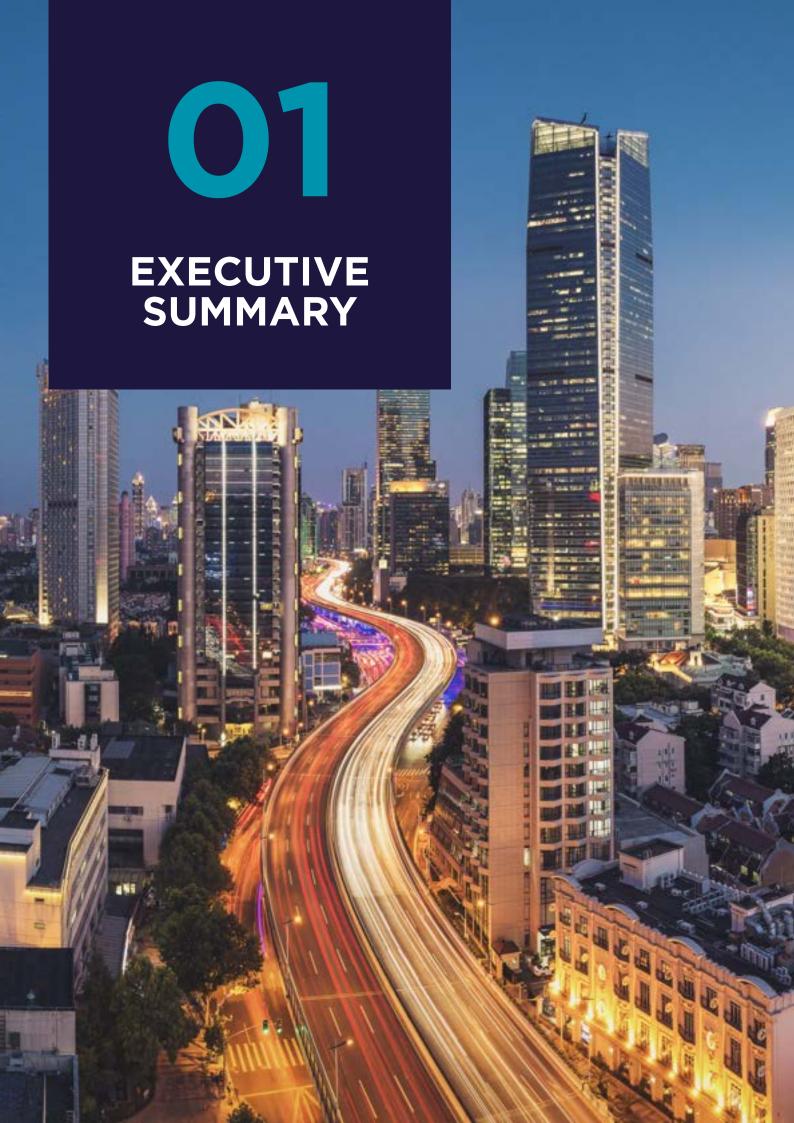
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Our Think-In report for 2024 explores the importance of real estate asset management optimisation on the Chinese mainland during a time of market change. Specifically, our report focuses on three major commercial property sectors, namely office, retail and industrial and centres on:

- How to adapt to shifting market dynamics (for office, and particularly for Grade A office);
- How to adapt to a new era of consumption (for retail, and particularly for shopping centres),
 and;
- How to adapt to game-changing smart technology (for industrial, and particularly for factory space).

Finally, our Think-In report closes by outlining the importance of establishing an overall full-lifecycle real estate asset management working model and the value-add that this model can bring to real estate investors, developers and owners on the Chinese mainland.



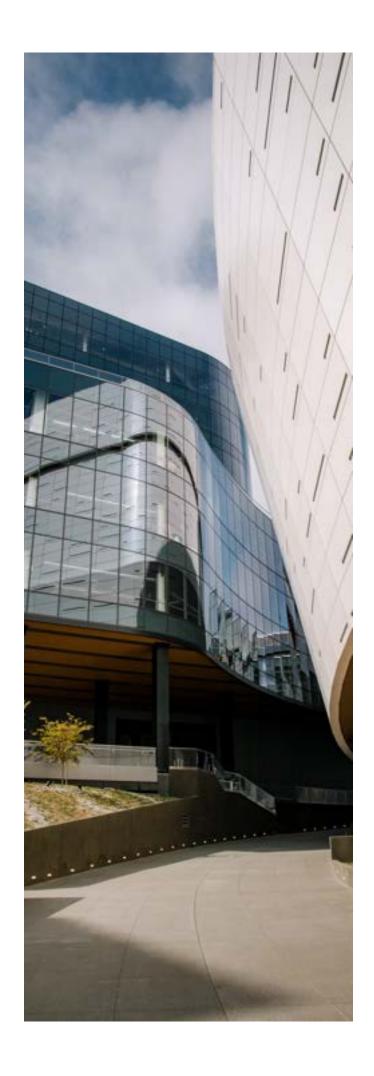
The Evolving Landscape:

- **Grade A Office Buildings:** The Grade A office market on the Chinese mainland is shifting towards a tenant-driven environment, requiring landlords to enhance asset management, adapt leasing strategies, and prioritise sustainability.
- **Shopping Centres:** Shopping centres are facing a new era of consumption on the Chinese mainland, driven by a focus on consumer shopping experiences, quality, and value. To succeed, shopping centres in the region need to embrace innovation, leverage technology, and cater to evolving consumer preferences.
- **Factory Space:** The Chinese mainland is rapidly transitioning towards intelligent manufacturing, with a focus on smart factories and digital technologies. Asset management plays a critical role in optimising these spaces and ensuring efficiency.

Real Estate Asset Management Optimisation Within the Chinese Mainland:

- The Importance of Real Estate
 Asset Management: Our report
 stresses that effective real estate
 asset management is crucial for
 maximising value, efficiency, and
 sustainability across office, retail,
 and industrial factory properties,
 especially in continually
 developing markets like the
 Chinese mainland.
- Office Properties: Landlords on the Chinese mainland need to prioritise maximising occupancy, maintaining building value, optimising operational costs, enhancing tenant satisfaction, and adapting to market trends to succeed.
- Retail Properties: Retailers on the Chinese mainland must focus on driving sales and foot traffic, optimising space utilisation, maintaining brand consistency, enhancing customer experience, and adapting to changing consumer preferences.
- Industrial Factory Properties:

 Smart factories on the Chinese mainland need to utilise the latest technology to ensure operational efficiency, extend asset lifespan, improve safety and compliance, reduce operational costs, and enhance environmental sustainability.



Key Recommendations for Grade A Offices, Shopping Centres and Smart Factory Space on the Chinese Mainland:

- **Grade A Offices Refine Tenant Profile:** Target specific industry sectors and develop a tenant performance review system. (Can be applicable to shopping centres as well).
- **Grade A Offices Enhance Asset Management:** Improve both hard and soft asset management services in all sectors. (Can be applicable to shopping centres as well).
- **Grade A Offices Prioritise Amenities:** Invest in new and improved amenities to create a dynamic and attractive environment for tenants and visitors. (Can be applicable to shopping centres as well).
- **Grade A Offices Consider Asset-Light Models:** Explore asset-light models to reduce costs and streamline operations in office properties. (Can be applicable to shopping centres and smart factory space as well).
- **Grade A Offices Optimise Leasing Strategies:** Offer competitive rentals, attractive incentives, and desirable features to attract and retain tenants. (Can be applicable to shopping centres as well).
- **Grade A Offices Embrace Sustainability:** Gain green certifications and implement sustainable practices. (Can be applicable to shopping centres and smart factory space as well).
- Shopping Centres Embrace Innovation: Move away from traditional designs and explore new concepts to create more engaging and dynamic experiences. (Can be applicable to Grade A offices as well).
- **Shopping Centres Leverage Technology:** Utilise technology to enhance customer experiences, improve efficiency, and gather valuable data. (Can be applicable to Grade A offices and smart factory space as well).
- **Shopping Centres Capitalise on Emerging Trends:** Adapt to trends like "dopamine consumption" and "micro vacations" in retail properties.
- Shopping Centres Integrate New Performing Arts Spaces: Incorporate performing arts spaces into shopping centres to attract customers and create a more dynamic environment.
- Smart Factory Space Incorporate game-changing technology: Having the ability to seamlessly amalgamate the latest technology, including IoT, BIM, AI, and XR, into asset management practices will enhance asset management efficiency, work safety, and property sustainability. (Can be applicable to Grade A offices and shopping centres as well).

Our Think-In report for 2024 concludes by emphasising that by embracing these recommendations while taking advantage of an established overall full-lifecycle real estate asset management working model, related businesses will be able to both smoothly navigate the evolving landscapes of office, retail, and industrial factory properties on the Chinese mainland and better realise a more sustainable and successful future, especially for businesses with a sizeable, bundled property portfolio in the region.



Real estate asset management is crucial for maximising the value and efficiency of real estate, including Grade A offices, shopping centres and smart factory space on the Chinese Mainland (Figure 1).

Figure 1: The basic workings of real estate asset management



Source: Finance Strategists, Cushman & Wakefield Research



Here's a breakdown of its importance for each type:

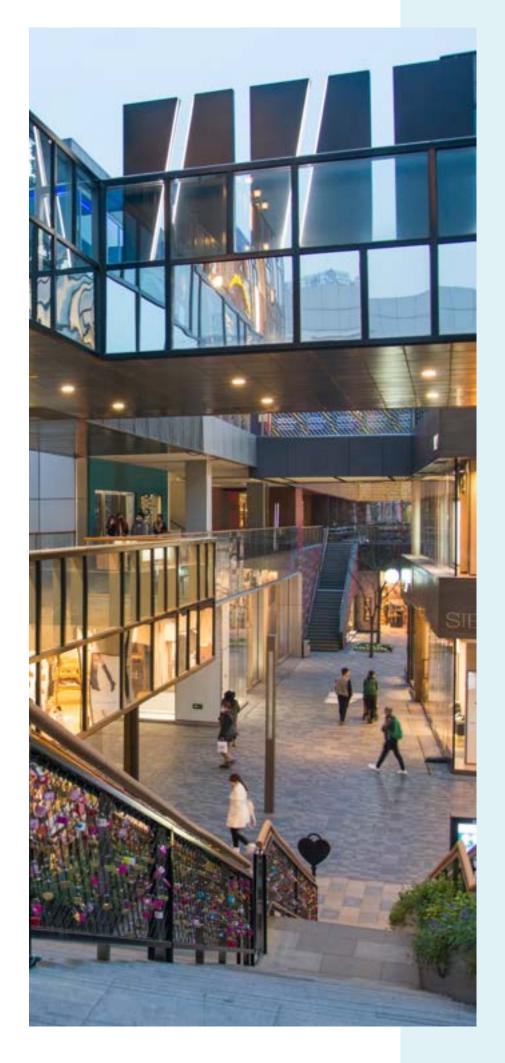
Grade A Office Properties on the Chinese Mainland:

- Maximising Occupancy:
 Effective asset
 management helps
 landlords attract and retain
 tenants, ensuring high
 occupancy rates. This
 translates to higher
 revenue and a more stable
 financial performance.
- Maintaining Building
 Value: Regular
 maintenance, repairs, and
 upgrades preserve the
 building's value, enhancing
 its attractiveness to
 tenants and increasing its
 resale value.
- Optimising Operational Costs: Efficient energy management, HVAC optimisation, and waste reduction measures minimise operational costs, boosting profitability.
- Enhancing Tenant
 Satisfaction: Providing a
 safe, comfortable, and
 well-maintained workspace
 increases tenant
 satisfaction, leading to
 longer lease terms and
 positive word-of-mouth
 referrals.
- Adapting to Market
 Trends: Staying abreast of market trends and tenant preferences allows landlords to adapt their properties, amenities, and services to meet evolving needs.



Shopping Centre Properties on the Chinese Mainland:

- Driving Sales and Foot
 Traffic: Effective asset
 management creates an
 appealing and inviting
 environment for shoppers,
 encouraging them to visit
 and spend more.
- Optimising Space
 Utilisation: Strategic
 layout planning,
 merchandising, and display
 strategies maximise space
 utilisation, leading to
 higher sales and revenue.
- Maintaining Brand
 Consistency: Consistent
 maintenance and upkeep
 ensure a clean, well maintained environment
 that reflects positively on
 the brand image and
 attracts customers.
- Enhancing Customer Experience: Providing a comfortable, safe, and convenient shopping experience fosters customer loyalty and repeat business.
- Adapting to Changing
 Consumer Preferences:
 Staying ahead of trends in
 consumer behaviour allows
 retailers to adapt their
 offerings, marketing
 strategies, and store
 design to meet evolving
 needs.



Smart Factory Properties on the Chinese Mainland:

- Ensuring Operational
 Efficiency: Proper asset
 management minimises
 downtime, optimises
 production processes, and
 ensures smooth
 operations, leading to
 increased productivity and
 higher output.
- Extending Asset Lifespan:
 Regular maintenance and preventive measures extend the lifespan of equipment and machinery, reducing the need for costly replacements.
- Improving Safety and Compliance: Adhering to safety regulations, implementing safety protocols, and providing worker training minimises accidents and ensures a safe working environment.
- Reducing Operational Costs: Optimising energy consumption, implementing efficient waste management practices, and minimising downtime through preventive maintenance reduce operational costs.
- Enhancing Environmental Sustainability:

Implementing environmentally friendly practices, such as reducing waste, conserving energy, and minimising emissions, enhances the property's sustainability and reduces its environmental impact.





In conclusion, real estate asset management is essential for the success of Grade A office, shopping centre, and smart factory properties on the Chinese mainland. By effectively managing assets, owners and operators can maximise value, minimise risk, enhance operational efficiency, improve safety, and ensure a sustainable future for their properties (Figure 2).

Figure 2: Selected benefits and challenges associated with real estate asset management



BENEFITS

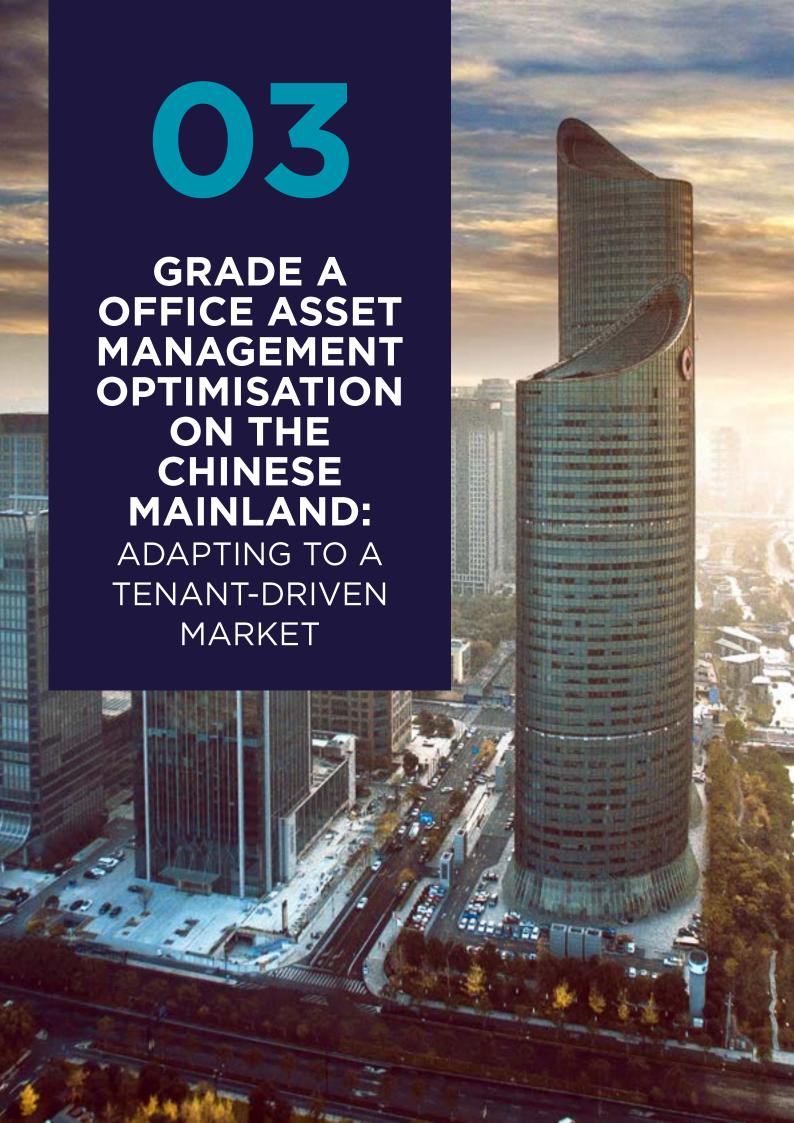
- Property Value Enhancement
- Revenue Streams Increase
- Effective Risk Management
- Operational Efficiency Enhancement
- Safety Improvement



RISKS/CHALLENGES

- Market Fluctuations
- Regulatory Compliance
- Tenant Retention
- Property Maintenance

Source: Finance Strategists, Cushman & Wakefield Research



The Chinese mainland's Grade A office market is undergoing a significant transformation, shifting from a landlord-centric to a tenant-driven environment. This dynamic shift, driven by evolving market conditions and tenant preferences, necessitates a fundamental reassessment of asset management strategies for landlords in the region seeking to thrive in this competitive landscape. Surveys of peer real estate professionals really are useful when it comes to forward-looking asset management strategy formulation and a recent survey of Grade A office landlords on the Chinese mainland, conducted by Cushman & Wakefield, provides valuable insights into the key challenges and opportunities facing this sector in this region.

Figure 3: Grade A office landlords on the Chinese mainland - View on the current state of the office market on the Chinese mainland



Source: Cushman & Wakefield Research

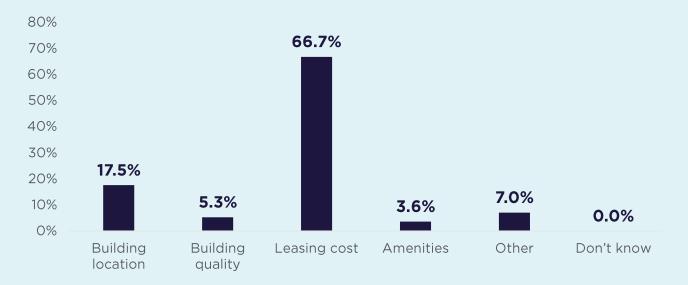
The survey reveals that the majority of landlords on the Chinese mainland perceive the region's market as tenant-favourable, with high availability rates and a growing pool of discerning tenants (Figure 3).



This shift has significantly impacted tenant leasing decisions, with cost emerging as the primary driver, followed by building location. While traditional factors like building quality

and amenities remain important, tenants on the Chinese mainland are increasingly prioritising ESG credentials, innovative services, and industry agglomeration (Figure 4).

Figure 4: Grade A office landlords on the Chinese mainland - What do you think is the number one item currently driving their office leasing location decision making?

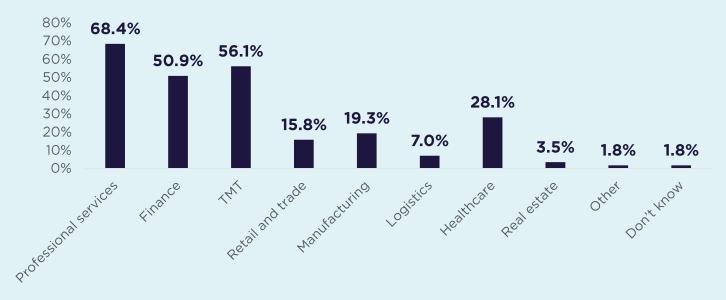


Source: Cushman & Wakefield Research

This evolving landscape necessitates a proactive approach from landlords on the Chinese mainland, who must adapt their leasing strategies to attract and retain tenants.

The survey highlights the need for landlords in the region to concentrate on renewals and attract new tenants, particularly domestic companies in professional services, finance, and TMT (Figure 5).

Figure 5: Grade A office landlords on the Chinese mainland - Which types of industries will you look to further target in the near future?





These industries have consistently demonstrated strong demand for prime office space, and their continued growth presents significant opportunities for landlords on the Chinese mainland. To cater to these tenants, landlords in the region must refine their tenant profile mix, ensuring a healthy balance between anchor and smaller tenants, and fostering a diverse and resilient portfolio.

Beyond leasing strategies, the survey underscores the importance of enhancing asset management practices. Landlords on the Chinese mainland are increasingly focusing on improving both hard and soft asset management services, recognising that these factors play a crucial role in attracting and retaining tenants. Hard asset management involves optimising building maintenance, HVAC systems, lighting, and plumbing, while soft asset management focuses on enhancing tenant social needs services, property services response speed, and space development services. These improvements are essential for creating a dynamic and attractive work environment that meets the evolving needs of tenants on the Chinese mainland (Figure 6 and Figure 7).

Figure 6: Grade A office landlords on the Chinese mainland - What new/improved hard office building asset management strategy features are you looking to incorporate/improve upon in the near future?

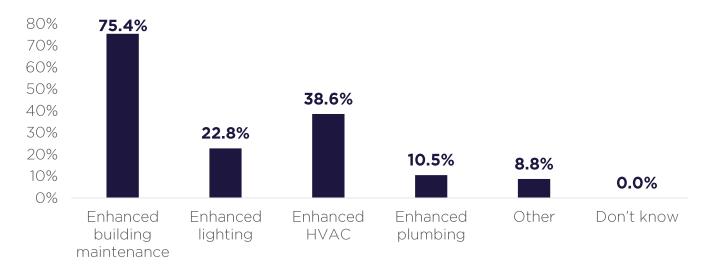
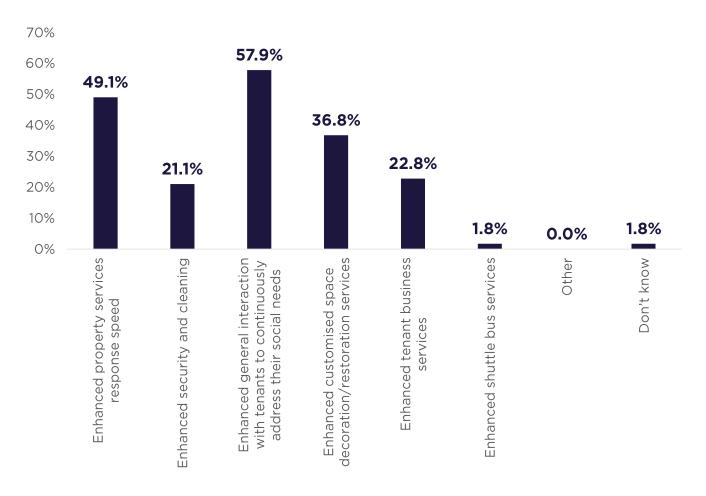


Figure 7: Grade A office landlords on the Chinese mainland - What new/improved soft office building asset management strategy features are you looking to incorporate/improve upon in the near future?

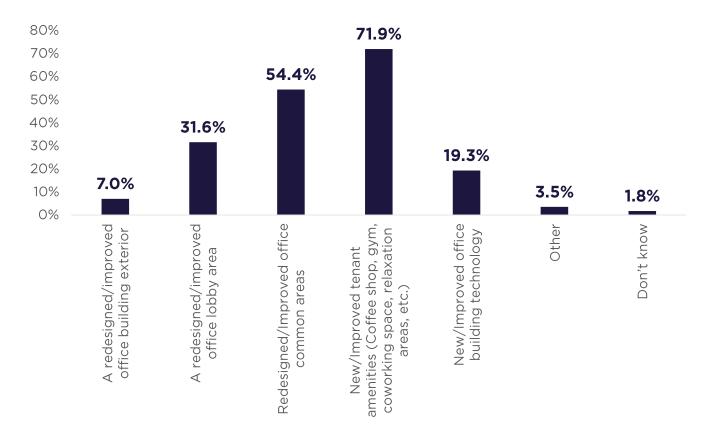






New/improved office building facility offerings and features are items which all landlords on the Chinese mainland see as being important when looking to attract/retain tenants. Ranking top in the survey was a prioritisation of new/improved amenities, followed by a redesigning/improvement of common areas, and lobby areas to create a dynamic and attractive work environment (Figure 8).

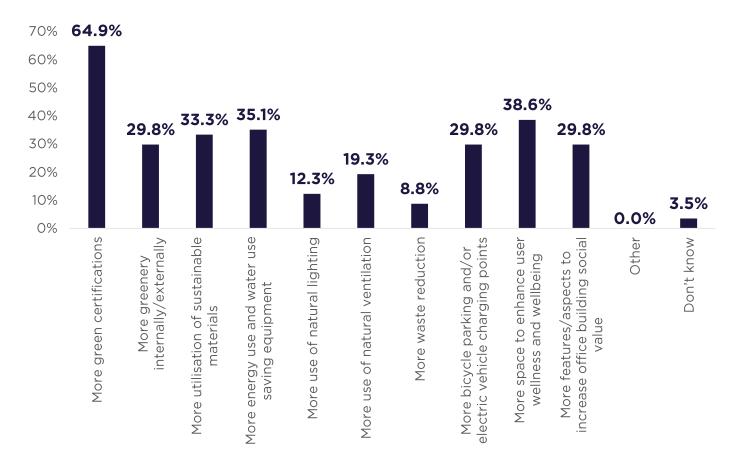
Figure 8: Grade A office landlords on the Chinese mainland – What new/improved office building facility offerings and features are you looking to provide your tenants in the near future?



Sustainability is another key theme emerging in the survey. Landlords on the Chinese mainland are prioritising green offerings, features, and credentials, driven by the growing demand from tenants who are increasingly focused on ESG goals. The survey reveals that green buildings on the Chinese mainland are commanding rental premiums, underscoring the value of sustainability initiatives. Landlords in the region are actively seeking green certifications, incorporating sustainable materials, and installing energy and watersaving equipment to meet these tenant demands (Figure 9).



Figure 9: Grade A office landlords on the Chinese mainland - What green offerings/features/credentials related to your office building/s are you looking at improving upon in the near future?

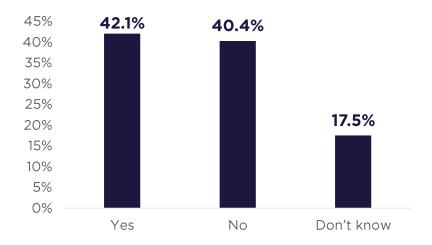


The survey also explores the growing trend of asset-light asset management models, driven by cost considerations. While there is a 50/50 split among landlords on the Chinese mainland considering this approach, the survey suggests that cost optimisation will drive further adoption in the future Figure 10).

This model involves outsourcing more of the property, facility, and tenant services, allowing landlords in the region to focus on core competencies and reduce operational costs.

Ultimately, the survey emphasises the importance of optimising leasing management strategies to achieve optimal returns (Figure 11).

Figure 10: Grade A office landlords on the Chinese mainland – Are you looking to take an asset-light asset management business model approach and outsource more of your property, facility and tenant services in the near future?



Source: Cushman & Wakefield Research

Figure 11: Grade A office landlords on the Chinese mainland – What near-future change do you feel will bring the greatest return?



Source: Cushman & Wakefield Research

One of the essential components of real estate asset management is professional leasing advisory, and Grade A office landlords on the Chinese mainland recognise that offering competitive rentals, attractive tenant incentives, and desirable office features are crucial for attracting and retaining tenants in the region. Following this train of thought, through professional leasing advisory advice provided by Cushman & Wakefield, a good example of a building that has outperformed the market in term of leasing performance is Central Plaza, a Grade A office building in downtown Case Study 1 in the Appendix).

Figure 12: Central Plaza, Shanghai/Shang hai Grade A Office - Leasing performance (Q3 2024)

Source:

Cushman & Wakefield Research





22.2%

By focusing on tenant needs and tenant satisfaction, improving asset quality, and embracing sustainability, Grade A office landlords, not just in Shanghai, but also elsewhere on the Chinese mainland can create a competitive advantage and ensure the long-term viability of their properties.



GRADE A OFFICE ASSET MANAGEMENT OPTIMISATION ON THE CHINESE MAINLAND

Adapting to a Tenant-driven Market



In conclusion, surveys of peer real estate professionals are useful tools when it comes to forward-looking asset management strategy formulation and one such recent survey of Grade A office landlords on the Chinese mainland, conducted by Cushman & Wakefield clearly illustrated that the Chinese mainland's Grade A office market is evolving rapidly, presenting both challenges and opportunities for landlords in the region. Those who adapt their strategies to meet the changing demands of tenants and the market will be best positioned for success. Finally, by embracing a tenant-centric approach, enhancing asset management practices, and prioritising sustainability, landlords on the Chinese mainland can navigate this evolving landscape and create a thriving future for their properties.





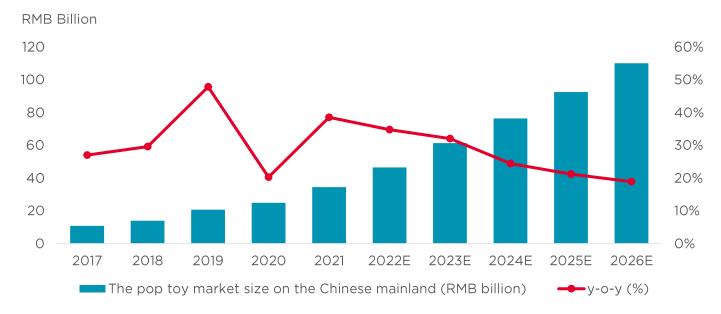
The retail landscape on the Chinese mainland is undergoing a dramatic transformation, driven by a confluence of economic growth, evolving consumer preferences, and technological advancements. In the meantime, shopping centres, once the dominant force in retail in the region, are facing unprecedented challenges and opportunities as they adapt to a new era of consumption.

Over the recent few years, there has been a fundamental shift in consumer behaviour on the Chinese mainland, moving away from a focus on material goods and towards experiences, quality, and value. This shift is driven by several factors, including:

The Rise of "Dopamine Consumption"

Consumers within the Chinese mainland are increasingly seeking out experiences that provide emotional satisfaction, such as pop toys, concerts, and travel. This trend reflects a desire for richer, more experiential, and higher-quality emotional and spiritual fulfilment (Figure 13).

Figure 13: The pop toy market size on the Chinese mainland (2017-2026)



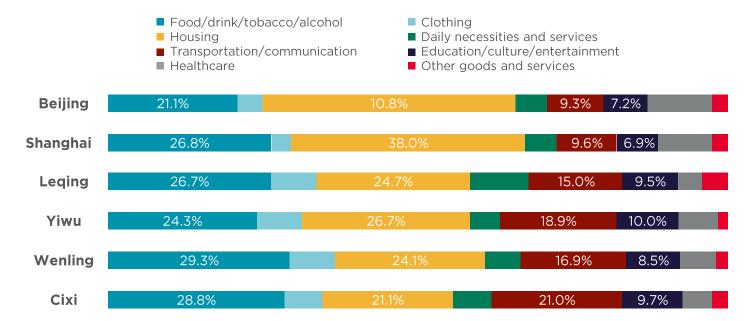
Source: Frost & Sullivan, Cushman & Wakefield Research



The Upgrading of County-Level Consumption

The consumption potential of residents in counties within the Chinese mainland is growing rapidly, driven by rising incomes and a shift towards quality and personalised products. This presents a significant opportunity for shopping centres in the region to expand their reach and cater to a broader customer base (Figure 14).

Figure 14: Comparison of consumption expenditure structure among urban residents in Beijing, Shanghai and some economically robust counties on the Chinese mainland (2022)



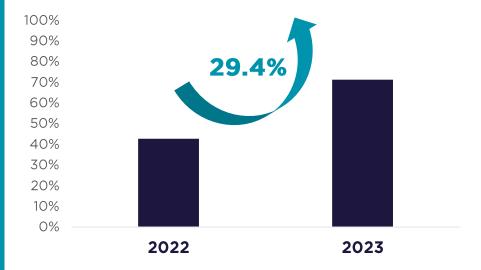
Source: Statistical Bureaus in China's Cities and Counties, Cushman & Wakefield Research



The Popularity of Interest-Driven Consumption

Consumers within the Chinese mainland are becoming more active participants in the consumption process. seeking out information and engaging with brands through social media and online platforms. Traditional advertising is losing its effectiveness, and brands are increasingly turning to short videos, live streaming, and social media to connect with consumers (Figure 15).

Figure 15: The proportion of consumers who have bought goods by watching short videos or live broadcasts on the Chinese mainland (2022-2023)



Source: 2024 China Network Audiovisual User Survey, Cushman & Wakefield Research

In response to these evolving dynamics, shopping centres on the Chinese mainland are adapting their real estate asset management strategy in several key ways:

Embracing "Non-Standard Shopping Centres"

Shopping centres on the Chinese mainland are moving away from traditional formats and embracing new designs and concepts that offer a more diverse and engaging experience. This includes integrating parks, cultural spaces, and historical blocks into the shopping centre design, creating unique retail concepts that cater to specific customer needs and interests (Figure 16).

Figure 16: The current stock of pedestrian streets and retail properties on the Chinese mainland (April 2024)

2,116 pedestrian streets,

where retail space is above 20,000 sq m; The total inventory of pedestrian streets now

exceeds 100 million sq m.



7,068 retail properties,

where the GFA is above 30,000 sq m; The total inventory of retail properties now

exceeds 549 million sq m.

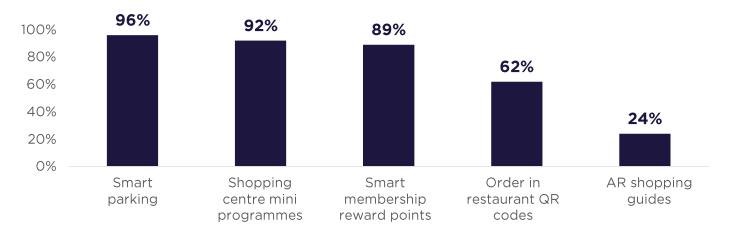


Source: Cushman & Wakefield Retail Services, Cushman & Wakefield Research

Leveraging "Black Technology"

Shopping centres on the Chinese mainland are leveraging technology to create more immersive and personalised experiences, including smart parking, AR shopping guides, and interactive digital displays. This allows shopping centres in the region to enhance customer satisfaction, create a more seamless shopping experience, and gather valuable data about customer preferences (Figure 17).

Figure 17: The penetration rate for intelligent applications in shopping centres in first- and second-tier cities on the Chinese mainland (April 2024)



Source: Cushman & Wakefield Research

Adding Vibrancy with Creative Fairs

Creative fairs are becoming increasingly popular on the Chinese mainland, offering a unique blend of shopping. entertainment, and cultural experiences. They provide a platform for local artists and designers to showcase their work and attract a diverse audience, adding a vibrant and engaging element to the shopping centre experience (Figure 18).

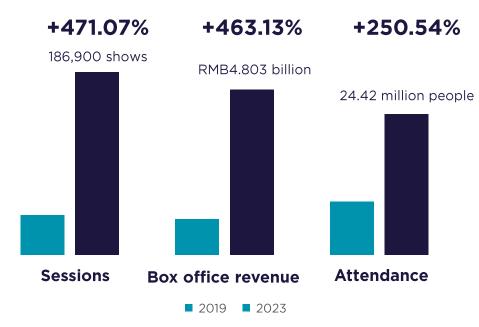
Figure 18: Number of creative fairs in first-tier cites, tier 1.5 cities and second-tier cities on the Chinese mainland (April 2023 and April 2024)



Incorporating New Performing Arts Spaces

Shopping centres on the Chinese mainland are incorporating new performing arts spaces, such as small theatres and concert halls, to attract customers and create a more dynamic and engaging environment. This allows shopping centres to cater to the growing demand for entertainment and cultural experiences, while also creating a sense of excitement and energy within the shopping centre (Figure 19).

Figure 19: Sessions, box office revenue and attendance in new performing arts spaces on the Chinese mainland (2019 and 2023)

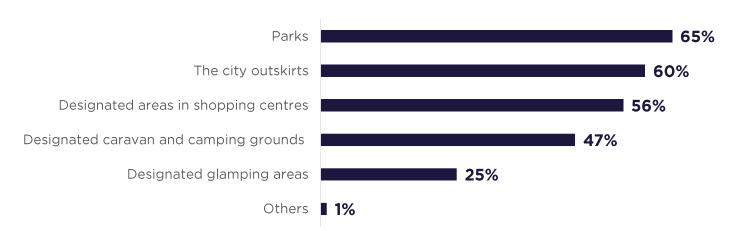


Source: China Association of Performing Arts, Cushman & Wakefield Research

Capitalising on "Micro Vacations"

Consumers on the Chinese mainland are seeking out short, relaxing getaways near home, such as camping and city walks. Shopping centres are responding to this trend by creating dedicated spaces and hosting related events, offering a convenient and accessible alternative to traditional travel (Figure 20).

Figure 20: Main venues for consumers on the Chinese mainland to go camping (2024)



Source: Cushman & Wakefield Research

By embracing these real estate asset management strategies, shopping centres on the Chinese mainland can create a more engaging, personalised, and sustainable shopping experience that attracts and retains customers in a dynamic and ever-changing new-era market.

SHOPPING CENTRE ASSET MANAGEMENT OPTIMISATION ON THE CHINESE MAINLAND

Adapting to a New Era of Consumption



When considering engagement enhancement, an essential component of real estate asset management which can assist in this goal is professional project rejuvenation advisory. A good example of a shopping centre on the Chinese mainland which has outdone the market by undertaking project renovation is Xidan Joy City, a high-end shopping centre in central Beijing. Upon completion of Cushman & Wakefield's professional project rejuvenation advisory and the corresponding upgrading renovation work, Xidan Joy City was then favourably positioned to attract new F&B brands, which engaged new consumers and, through this enhanced engagement, generated an increase in sales revenue (Figure 21 and Case Study 2 in the Appendix).



Figure 21: Xidan Joy City, Beijing – Chat Garden – Business performance upon renovation

Number of Newly
Introduced F&B Outlets

11

Sales Revenue for the First Quarter After Renovation Completion RMB 7 Million

Source: Cushman & Wakefield Research

Through this successfully delivered professional project rejuvenation advisory and the analogous upgrading renovation work, Joy City Xidan has been able to engage, attract and retain customers in a dynamic and everchanging new-era market as well as continuing to ensure it preserves its benchmark project status in the market it is located in.



The Chinese mainland is experiencing a rapid transition towards intelligent Industry 4.0 manufacturing, with a focus on smart factories and digital technologies (Figure 22, Figure 23 and Figure 24).

Figure 22: Industry 1.0, 2.0, 3.0 and 4.0







Industry 1.0

Mechanisation and the introduction of steam and water power

Industry 2.0

Mass production assembly lines using electrical power

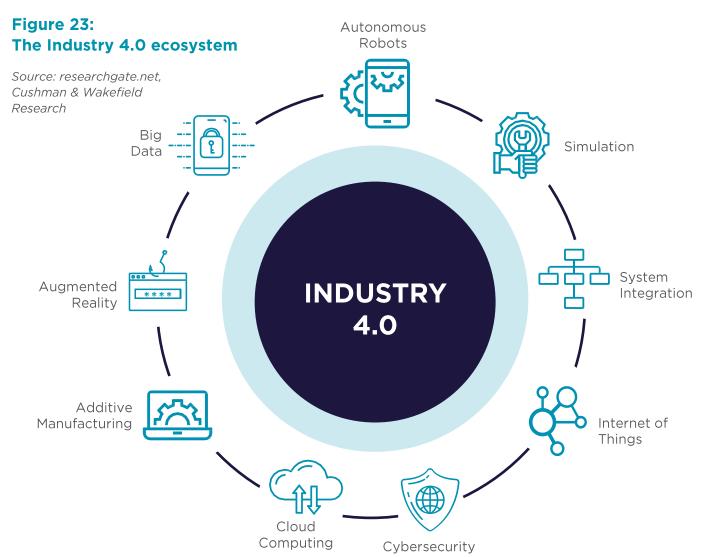
Industry 3.0

Automated production, computers, ITsystems and robotics

Industry 4.0

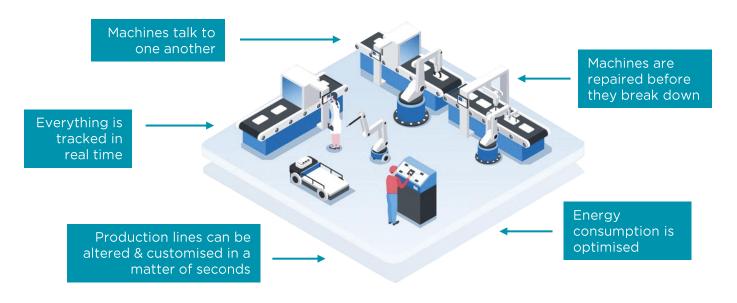
The Smart Factory Autonomous systems, IoT, machine learning

Source: Spectral Engines, Cushman & Wakefield Research



Cushman & Wakefield

Figure 24: What occurs in a smart factory?



Source: altamira, Cushman & Wakefield Research

This shift is driven by a combination of government initiatives, private sector investments, and a growing awareness of the significant benefits that smart factories offer. These benefits include increased productivity, cost reduction, and a digital transformation driven by technologies like 5G, cloud computing, and Al.

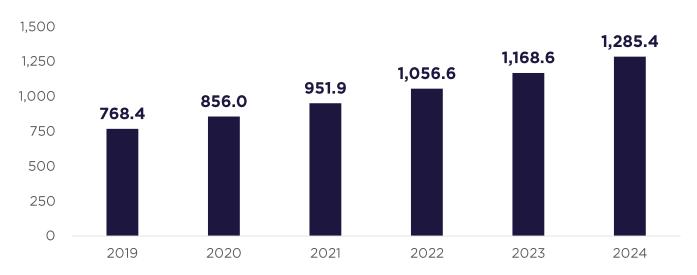
Smart factories on the Chinese mainland are no different from other property types when it comes to how critically important best-practice asset management is to expediate facility operational success. In brief, there is still the need for efficient oversight and maintenance of assets to ensure smooth operation and maximised productivity...and technology, including IoT, BIM, and AI, when properly integrated, can enhance efficiency, safety, and sustainability in smart factory spaces on the Chinese mainland. In addition, and ahead, emerging technologies within the Chinese mainland, like XR, digital twins, and cobots, are poised to revolutionise the smart factory ecosystem and smart factory space asset management in particular.



The rise of lighthouse factories, unmanned factories, and smart factories is now evident across the Chinese mainland, driven by the government's initiatives and private sector investments (Figure 25).

Figure 25: Size of the smart factory market on the Chinese mainland (2019-2024)

Market size (RMB billion)



Note*: 2024 is an estimated figure.

Source: Statista, Cushman & Wakefield Research



These smart factories have led to significant improvements in production efficiency, with a reported average increase of 50%, and cost savings, with an average decrease of 30% in operating costs.

A comprehensive asset management programme that encompasses regular maintenance and inspections, safety and compliance, space optimisation, energy efficiency, technology integration, environmental sustainability, and continuous improvement is essential to ensure ongoing improvements in production efficiency and cost savings. In addition, dedicated asset management technology can be integrated into asset management best practices for smart factory spaces. Examples of these technologies used now on the Chinese mainland include:

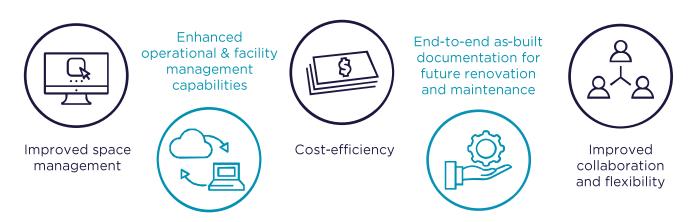
Internet of Things (IoT) and Sensors

IoT sensors can be deployed throughout the smart factory to gather real-time data on various parameters, including temperature, humidity, air quality, equipment vibration, and energy consumption. This data provides valuable insights into the factory's operational health and can be used for predictive maintenance, energy optimisation, and real-time monitoring.

Building Information Modelling (BIM)

BIM creates a detailed 3D model of the smart factory, including its layout, infrastructure, and equipment. This virtual representation facilitates planning, design and maintenance tasks, as well as space optimisation, cost efficiency and work cooperation (Figure 26).

Figure 26: BIM and selected facilities management benefits



Source: United BIM, Cushman & Wakefield Research

Facility Management Software

Software solutions streamline work order processes, track assets, and analyse data to identify trends and patterns, supporting informed decision-making and continuous optimisation.



Mobile Applications

Mobile apps enable technicians to access work orders, update progress, and communicate with facility managers in real-time, streamlining communication and ensuring timely completion of tasks. They can also provide access to training materials, troubleshooting guides, and technical support for facility staff.

Augmented Reality (AR) and Virtual Reality (VR)

AR can overlay digital information onto the real-world view, providing technicians with step-by-step instructions for maintenance tasks. VR can create immersive simulations for training facility staff on safety procedures, equipment operation, and emergency response. Both technologies can also be used for space planning and visualisation.

Cybersecurity

As technology becomes more integrated into asset management, cybersecurity becomes paramount. Robust security measures are essential to protect sensitive data, prevent unauthorised access, and maintain operational continuity. This includes firewalls, intrusion detection systems, and regular security audits, as well as employee training on cybersecurity best practices.

There are also several emerging technologies that are poised to revolutionise smart factory space asset management in the future on the Chinese mainland, including:

Machine Learning (ML) and Artificial Intelligence (AI)

ML and AI algorithms can analyse data from sensors and other sources to predict equipment failures before they occur, optimise workflows, and improve overall efficiency. AI-powered vision systems can also analyse images and identify defects in products, ensuring consistent quality and reducing the need for manual inspections.

Extended Reality (XR)

XR technologies, including VR, AR, and MR, can create immersive training environments for workers involved in property and facilities management, allowing them to learn complex tasks and procedures in a safe and controlled setting. They can also provide technicians with real-time guidance during maintenance and repair tasks, enabling them to access information and instructions remotely. XR technologies can also be used for design and planning, creating virtual models of factory spaces to facilitate more efficient layout planning, visualisation of equipment placement, and simulation of workflows.

Digital Twins

Digital twins are virtual representations of physical assets, such as machines and equipment, that collect real-time data from sensors and other sources. This data provides insights into asset performance, health, and potential issues, and can be used for predictive analytics, simulation, and asset management optimisation.

Collaborative Robots (Cobots)

Cobots are designed to work alongside humans within the work environment. In the case of smart factory asset management, cobots can automate repetitive tasks and enhance worker productivity. In addition, with ease, cobots can perform property and facility management tasks that are physically demanding and/or hazardous for humans.



Blockchain Technology

Blockchain can create a secure and immutable record of all transactions related to smart factory asset management, providing complete visibility into the origin and movement of materials and services. This enhances traceability, reduces fraud, and improves work efficiency. Blockchain's decentralised nature also enhances data security, making it resistant to hacking and manipulation (Figure 27).

The nodes authenticate the transaction and the user's status The transaction is disseminated to a A transaction is P2P network comprising of requested computers known as nodes The new block is then appended to the existing blockchain. The data and information contained are fixed Once authenticated, the transaction is conjoined with The transaction other transactions to form a is concluded new block of data for the ledger

Figure 27: The Blockchain transaction process

Source: Cushman & Wakefield Research

Beyond 5G

Future wireless technologies will provide ultra-fast and reliable connectivity, enabling real-time data exchange between devices and systems in the smart factory. This will support more sophisticated automation, remote control, and data analytics. Future wireless technologies will also further facilitate edge computing, allowing data processing to occur closer to the source, reducing latency and enabling faster decision-making for real-time smart factory operations.

Emerging technologies are certainly integral to future individual smart factory asset performance success, but we mustn't forget the bigger smart factory real estate picture as well. When considering the bigger picture, and a larger smart factory industrial park, one element of a solid real estate asset management working model is overall park market and product positioning plan formulation. A robust formulated positioning plan needs to include:

- An industrial positioning plan;
- · A customer positioning plan;
- A product positioning plan;
- Investment list suggestions;
- Investment strategy suggestions, and;
- A financial plan...

...amongst other items.

One good example of a successfully executed industrial park market and product positioning plan within the Chinese mainland region is the positioning plan associated with the Nanjing Xingang Biomedical Industrial Park in Nanjing, which was delivered by Cushman & Wakefield (Figure 28 and Case Study 3 in the Appendix).

Figure 28: Nanjing Xingang Biomedical Industrial Park - Park positioning plan results

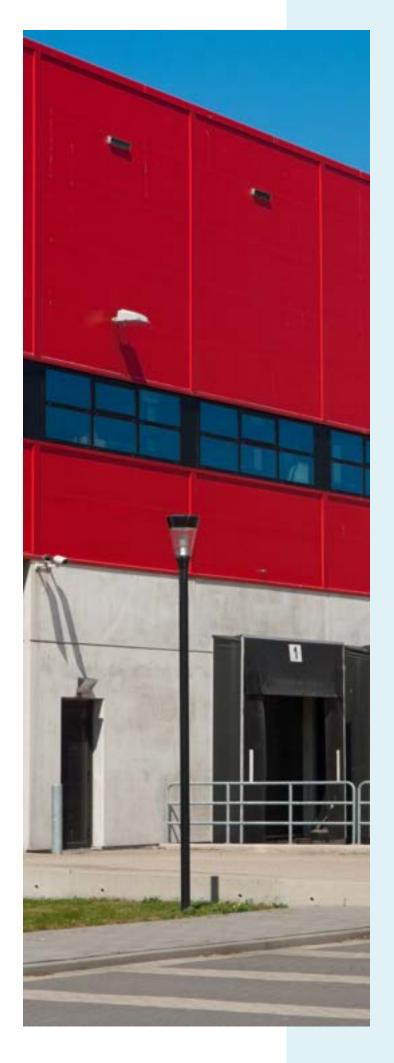
The Overall Park Positioning Plan

Well Received - By the Related Local Authorities and the Park Owner

The Overall Park Positioning Plan

Allowed the Park to Enjoy a Marketbeating New-tenant-attraction Start

Source: Cushman & Wakefield Research



FACTORY SPACE ASSET MANAGEMENT OPTIMISATION ON THE CHINESE MAINLAND

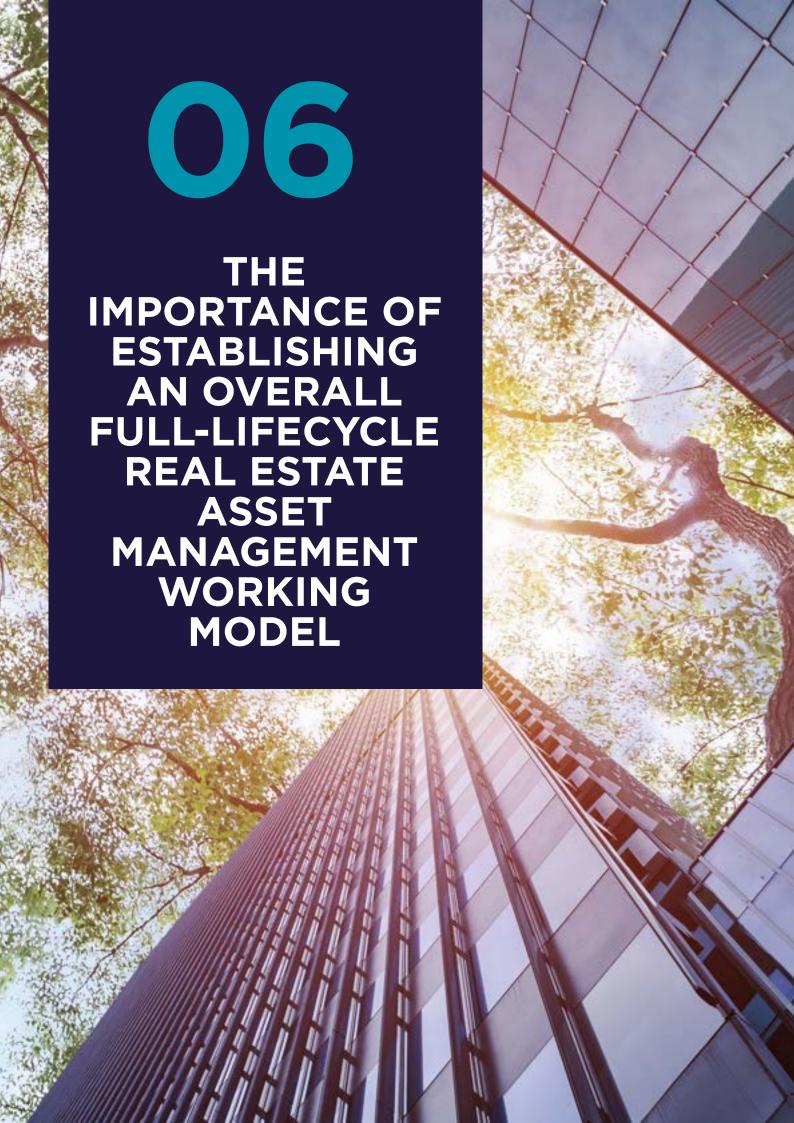
Adapting to Smart Manufacturing





Finally, by integrating cuttingedge technology as well as
strong project market and
product positioning plans, smart
factories on the Chinese
mainland will not only ensure the
overriding business continues to
be sustainable but will also make
sure the prevailing business
remains competitive for the
years to come.





Today, the majority of real estate stakeholders on the Chinese mainland are very aware of the importance of real estate asset optimisation and the need to adapt to the transitioning marketplace we are finding ourselves in.

Many within the industry are also aware of the need to bring together professional real estate asset management experts and technical professionals from various fields, who have both international experience with a localised touch – and have them operate as

Factories

Airports

one team. Many also see the critical need for the same team to be in a position to offer a real estate asset management platform and programme that contains:

- Comprehensive;
- Systematic;
- · Objective, and;
- · Professional...

...real estate asset management services and operating concepts that cover a plethora of property types in the region (Figure 29).

Data Centres

Metro Stations

Business Park

Properties

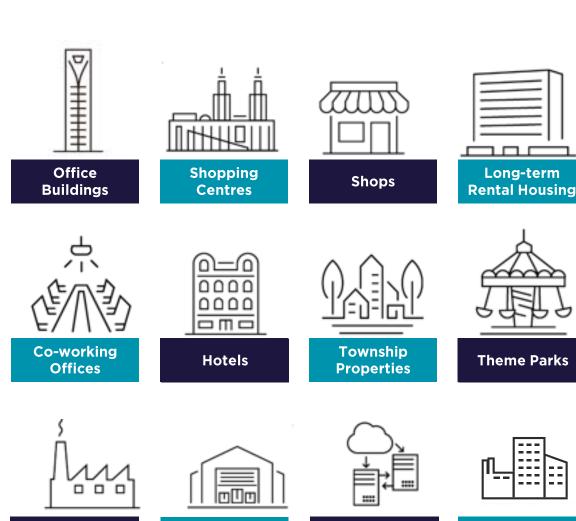
Bus Stations

Figure 29:

The main property types serviced by a comprehensive full-service real estate asset management services provider on the Chinese mainland

Source:

Cushman & Wakefield Research



Warehouses

Railway

Stations

THE IMPORTANCE OF ESTABLISHING AN OVERALL **FULL-LIFECYCLE REAL ESTATE ASSET** MANAGEMENT WORKING MODEL



Finally, there is also a vital need for a full chain of customised real estate asset management services to be offered throughout a real estate asset's entire life cycle by the platform and programme - from the acquisition phase, to the holding phase, and, finally, to the exit phase - so as to, firstly, help real estate assets on the Chinese mainland stand out in this competitive market and, secondly, to maximise the investment returns of these same assets (Figure 30).

Figure 30: The real estate asset life cycle and the essential associated real estate asset management components and services

The four essential components

01 Acquisition

Acquisition Strategy Advisory

Feasibility and Financial Analysis

· Due Diligence Services

- Start-Up Funding Advisory



- Introduction of LPs / Joint Venture **Partners**
- Securitisation Advisory
- Alternative Funding Advisory
- Disposal Sales Agency

02 Operation

- Strategic Market and Product Positioning Advisory
- Leasing / Sales Strategy Advisory
- Professional Leasing / Sales Agency
- Taxation and Accounting Advisory
- Portfolio Management Services
- Property and Facility Management Services
- Environmental Health and Safety Advisory
- KPI Objectives and Implementation Plan Advisory

03 Value-Add

- Tenant Mix and Tenancy Optimisation Advisory
- Asset Image Enhancement Advisorv
- Timely Renovation and Asset **Upgrading Advisory**
- Sustainability Advisory
- Tenant Retention Planning Advisory





Adapting to Change is Key

The Chinese mainland market is undergoing rapid shifts in all sectors, driven by evolving consumer preferences, technological advancements, and a changing economic landscape. Businesses must adapt their strategies to thrive.



Real Estate Asset Management is Crucial

An effective asset management strategy is essential for maximising value, efficiency, and sustainability across office, retail, and industrial factory properties on the Chinese mainland, especially for stakeholders with a sizeable, bundled property portfolio in the region.



Office Properties

Landlords on the Chinese mainland need to focus on attracting and retaining tenants, maintaining building value, optimising operational costs, and enhancing tenant satisfaction. They must also adapt to evolving market trends and tenant preferences.



Retail Properties

Retailers on the Chinese mainland need to prioritise driving sales and foot traffic, optimising space utilisation, maintaining brand consistency, enhancing customer experience, and adapting to changing consumer preferences.



Industrial Factory Properties

Smart industrial factory facilities on the Chinese mainland must focus on ensuring operational efficiency, extending asset lifespan, improving safety and compliance, reducing operational costs, and enhancing environmental sustainability.

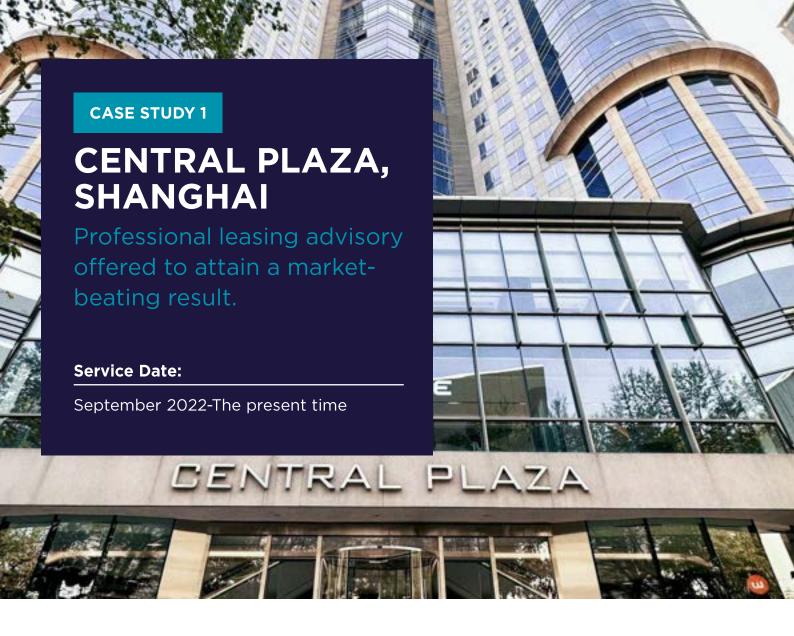


Embrace Technology and Innovation

All property sectors on the Chinese mainland need to continue embrace the latest technology and innovation and explore new asset management concepts and strategies to remain competitive in a rapidly transitioning market.







Service Scope:

- Professional office leasing consultancy This has continued to involve an analysis of the future development trend of the surrounding business environment and real estate market to devise a continuously evolving, objective and pragmatic leasing strategy for Central Plaza.
- Professional office leasing management services
 This continues to include ongoing lease negotiation services.
- Professional tenant management services This continues to involve conducting regular tenant occupancy satisfaction surveys to formulate an ever-changing but comprehensive strategy to improve the occupier experience.

Service Execution:

 Apart from our professional service scope service offerings, we have also continued to provide the landlord with relevant office market reports and the latest office market news and developments affecting Shanghai and the Central Plaza surrounding area on a regular basis.

Service Results:

- Through smooth and timely continued communication with the tenants in the building, the lease renewal rate has remained high at over 90%.
- At the beginning of 2024, we correctly anticipated the market trend and made strategic adjustments to our formulated leasing strategy. Thus, by the end of the third quarter, we successfully leased about 4,200 sq m in the building to several tenants, including some signature Fortune 500 enterprises.
- By the end of Q3 2024, a market-beating occupancy rate of 90% had been achieved.



Service Scope:

- Professional project positioning services
- Professional design optimisation services
- Professional programme scheduling services

Completed alongside Woods Bagot

Service Execution:

- The professional project rejuvenation advisory services provided were from the initial stages of Xidan Joy City's revamp to its completion, offering full-service support throughout the whole advisory process.
- The renovation and upgrading of the themed spaces on the 6th and 7th floors of Xidan Joy City were conducted and completed according to the schedule.

Service Results:

- The provided professional project rejuvenation advisory services, which offered full-service support throughout the process, has now allowed the 230,000 sq m Xidan Joy City to continue to enjoy its benchmark project status in Beijing.
- In particular, Xidan Joy City's Chat Garden officially opened in January 2018 and this special renovation-inspired feature and offering was instrumental in attracting 11 new catering brands to Xidan Joy City.
- On renovation completion, the monthly sales generated by Chat Garden exceeded RMB7 million during the following quarter.



Service Scope:

 Professional project market and product positioning advisory – For the whole industrial park

Service Execution:

- In-depth research was conducted on the development of the biomedical industry on the Chinese mainland, with interviews carried out on the customer needs among targeted industries.
- Professional biomedical industry benchmarking research and on-site investigation was carried out.
- The overall park market and product positioning plan was formulated. This plan included industrial positioning, customer positioning, product positioning, investment list suggestions,

- investment strategy suggestions, and a financial plan.
- Upon the construction and development of the park, systematic and regular follow-up advisory has been delivered.

Service Results:

- The delivered overall park market and product positioning plan has been well received by the related local authorities as well as the park owner.
- The delivered overall park market and product positioning plan has also been well received by the market, which has allowed the park to get off to a market-beating start in terms of new tenant attraction.





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