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Recent real estate trends shaping Singapore's burgeoning biomedical hub infrastructure

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Michael Murphy, Director, Southeast Asia, Linesight "Pharmaceutical companies are increasingly choosing Singapore as a preferred location for their regional or global headquarters due to a combination of strategic advantages"



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Life sciences facilities and biomedical hubs throughout Asia are booming, including Singapore, which has led to an extraordinary demand for specialized infrastructure throughout Asia's biomedical hub construction industry. The life sciences industry maintains high performance standards and technical requirements in areas such as pharmaceuticals, biotechnology, medical devices, lab space, food processing, and more. Thus, a biomedical science facility must adhere to Occupational Safety and Health Administration (OSHA) standards, secure aseptic lab requirements, comply with ESG regulations, and overall be precise compared to a general construction project. Further, the Specialized infrastructure of Life science construction focuses critically on clean rooms and biosafety levels (BL) for biological storage and experimentations and other energy-efficient-environmental safety models.

Life sciences construction entails anticipating all these challenges to optimize compliance and stipulations at the infrastructure. When constructing bioscience infrastructure, life science-specific construction teams are required to evaluate design and remodeling factors, to effectively manage timelines, resources and investment. The strategic evaluation of facility requirement is always expected to develop sustainable blueprints to construct an economical and regulatory compliant infrastructure. A pioneering initiative to benchmark global life sciences construction data is being led by **Linesight**, a

multinational firm that provides specialized insights to a wide range of sectors, including Life Sciences to achieve better cost efficiency. **Michael Murphy, Director, Southeast Asia at Linesight** shared further insights on its initiative to benchmark in the life sciences construction sector.

- **To establish coordinated and integrated operations for the construction of biological and pharmaceutical facilities, what are the fundamentals Linesight focuses on?**

Linesight's core disciplines, which includes Project Management, Cost Management, Scheduling, Procurement, and Project Controls, play vital roles in ensuring the success of construction projects in these highly regulated industries.

  - **Project Management** defines the project scope, manages risks, coordinates with stakeholders, and controls delivery.
  - **Cost Management** estimates costs, manages expenditure, explores cost-saving opportunities and controls budgets.
  - **Scheduling** sequences construction activities, tracks milestones, and optimizes resource allocation.
  - **Procurement** sources appropriate and best in class vendors, equipment and materials, manages suppliers, and ensures compliance during award.
  - **Project Controls** measures performance, monitors changes, and maintains comprehensive documentation and reporting on key metrics for early identification of risks and identify mitigation options with all stakeholders.

These disciplines collectively ensure that projects meet regulatory standards, stay within budget, and are completed efficiently, meeting the stringent requirements of pharmaceutical and biological facilities.

- **How likely is the emerging biomedical hub boom in Singapore impacting real estate infrastructure trends? What are the underlying demand and supply dynamics?**

Singapore’s booming life sciences sector is leading to a surge in demand for associated real estate infrastructure from local and global players. While designated clusters and parks, such as Singapore Science Park are already in place around Singapore, further investment in infrastructure is expected to increase significantly with wide-ranging impact on related sectors.

Life science hubs create demand for additional facilities such as manufacturing, research and development and specialized real estate including laboratories, office spaces and supporting infrastructure. Demand dynamics created by such hubs impacts supporting industries such as logistics, transport and healthcare.

Strong economic conditions coupled with positive investor sentiment may also impact supply chain dynamics, which can attract more businesses into the market and further strengthen the growing biomedical sector.

- **How does Linesight strategize a robust cost estimate at the beginning of the project? How do life cycle costing expertise establish control framework and identify risk?**

Linesight employs a systematic approach to develop a robust cost estimate at the beginning of a project, leveraging life cycle costing expertise to establish a control framework and identify potential risks. This strategy focuses on several key aspects, such as Comprehensive Scope Definition, Detail costs analysis leveraging historical internal and external benchmark data [Linesight has recently conducted an industry wide benchmarking exercise with over 17 industry clients taking part]. Linesight also incorporates the latest industry technology and software to incorporate stakeholder inputs and provide reliable, accurate and consistent cost estimates. In addition to initial construction costs, Linesight considers the long-term costs associated with the project's operation, maintenance, and eventual decommissioning. This life cycle costing analysis provides a holistic view of the project's total cost of ownership. From this, Linesight's experts identify potential risks that could impact project costs, from design changes to economic fluctuations, and establish a risk management framework, including contingency plans and risk mitigation strategies.

- **Why are pharmaceutical companies increasingly looking to Singapore for their Asia or global headquarters? What sets Singapore as an ideal location for bio-pharma companies?**

Singapore is emerging as a thriving hub for the life sciences industry that is expected to be valued over $2 billion by 2028. The city-state maintains its competitive edge as a biomedical hub with its skilled talent pool, robust logistical network, and well-developed physical infrastructure.

Pharmaceutical companies are increasingly choosing Singapore as a preferred location for their regional or global headquarters due to a combination of strategic advantages.

Singapore's central location in Asia provides easy access to key markets, making it a natural choice for companies aiming to expand their presence in the region.

Singapore offers a stable political environment and a robust regulatory framework that prioritizes intellectual property protection and safety standards. This predictability is attractive to pharmaceutical firms seeking long-term investments.

The country has also invested heavily in research and development, fostering a culture of innovation. With world-class research institutions and incentives for research collaborations, Singapore is a hub for cutting-edge scientific advancements.

Singapore's skilled and diverse workforce is another significant draw, especially in pharmaceuticals and biotechnology. Its modern infrastructure, including the Changi Airport and a well-connected port, supports operational efficiencies.

Tax benefits, particularly for research and development activities, offer cost savings. The quality of life in Singapore, along with its collaborative ecosystem and commitment to sustainability, further enhance its attractiveness to talent and industry leaders.

Finally, Singapore serves as a gateway to the rapidly growing Asia-Pacific healthcare market, facilitating clinical trials and market access.

In summary, Singapore's strategic location, political stability, regulatory excellence, innovation ecosystem, skilled workforce, infrastructure, tax incentives, quality of life, access to markets, and commitment to sustainability collectively position it as an ideal location for pharmaceutical companies to establish their Asia or global headquarters.

- **What are some of the best practices pharmaceutical players can consider to help them better navigate the macro headwinds and align with their strategic objectives in the region?**

Pharmaceutical companies aiming to navigate macro headwinds and align with their strategic objectives in the Asia-Pacific region can employ several best practices. First, comprehensive market research and analysis is crucial to understand regional dynamics and identify growth opportunities. In collaborating with local partners, such as Linesight, companies get a strong understanding of the local market conditions as well as the best and most efficient path for delivery. Similarly, building a resilient supply chain with diversified sourcing options enhances stability.

Other best practices that will assist in guiding companies through challenging times include focusing on talent development and creating a positive company culture within organisations (key to retaining top talent), and adopting technology with regards to data analytics, sales and marketing to assist with better informed decision making and efficiency. It is also advised pharmaceutical players should invest time and energy into their Corporate and Sustainability Responsibility (CSR) initiatives to positively impact the communities in which they operate.

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