

Designing the future of the semiconductor industry

How a “think global, act local” approach can drive real estate success

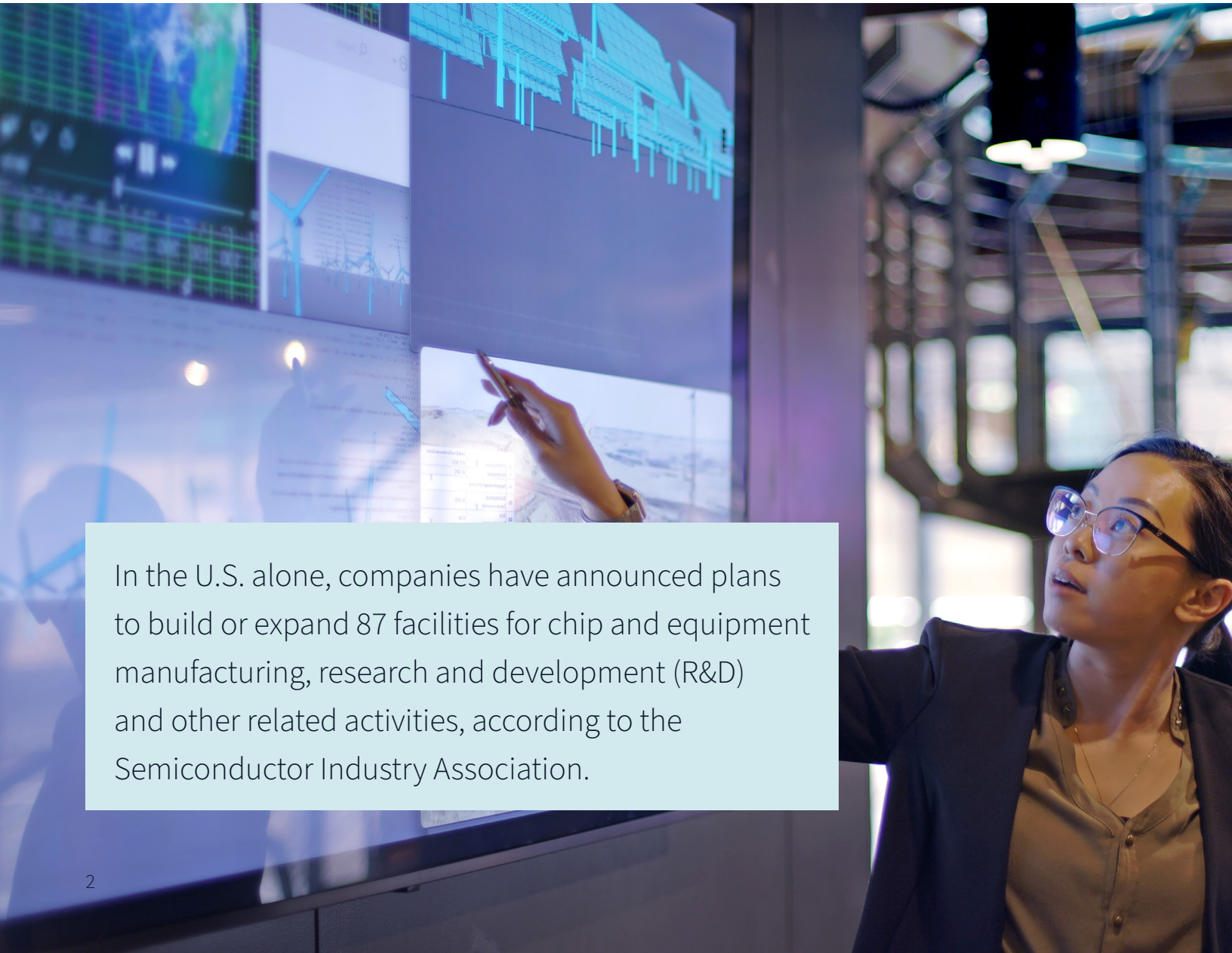
JLL SEE A BRIGHTER WAY

The race to satiate the world's appetite for computer chips has created a construction boom. Striving to diversify supply chains and expand production capacity, semiconductor and adjacent technology manufacturing companies are entering new markets and evaluating whether existing facilities are equipped for future needs.

Meanwhile, emerging tech hubs, from Guadalajara, Mexico, to European countries such as Poland and Germany, are growing rapidly.

Facing intense pressure to achieve speed to market, tech companies must move quickly to seize opportunities. However, the success of any individual facility also requires thinking strategically about how it fits into a company's broader real estate portfolio.

Whether building or retrofitting a manufacturing plant, R&D center or corporate office, a "think global, act local" approach can help semiconductor and advanced manufacturing companies achieve cost savings, talent, sustainability and brand goals.



In the U.S. alone, companies have announced plans to build or expand 87 facilities for chip and equipment manufacturing, research and development (R&D) and other related activities, according to the Semiconductor Industry Association.

Think global: Support business goals with a consistent approach

Centralizing strategy and planning across the whole real estate portfolio offers numerous advantages for technology companies with various facilities spread across the globe. A centralized approach helps drive down costs, deliver a consistent employee experience and achieve sustainability goals more easily.

How should the "think global" mindset come to life in facility design and construction? Companies can reap rewards by taking a global view in the following areas:

Workplace, design and construction standards

If you want all facilities to meet specific safety, sustainability and brand experience guidelines, you need one set of standards to apply across your entire portfolio. This starts with having a global playbook that all teams use when designing and planning projects. It also helps to have a centralized team overseeing projects across the globe to ensure local vendors consistently apply the standards.

Sustainability strategy

A technology company's real estate portfolio often includes several types of buildings, such as offices, manufacturing facilities and data centers — each with vastly different energy consumption levels.

Achieving your company's sustainability commitments requires looking holistically at the portfolio to determine not only how to minimize each facility's environmental footprint, but also how making progress at each facility adds up to deliver a bigger impact.

Capital planning

A global capital plan enables you to allocate resources more strategically and optimize costs. Looking at your whole portfolio, you can evaluate which existing facilities require retrofits to bring them up to the current standards or meet new business needs. From there, you can prioritize projects based on urgency, cost and expected return.



Act local: Address cultural and regulatory differences in each market

While global consistency is important for many reasons, resource availability, cultural differences and local regulations require a tailored approach at the site level. For example, local building codes vary considerably from market to market — in California, you will need to meet certain standards for earthquake prevention and energy efficiency, while different regulations will apply in India or Israel.

The following activities will require local expertise to navigate challenges and geographical differences effectively.

Workplace design

As the place where company culture comes alive, workplaces should have a similar feel around the world. However, infusing each office with local touches helps it feel special for the people who work there. Moreover, employee needs and expectations differ from market to market.

For example, offices with strong in-person cultures may require a higher ratio of individual workstations per employee than locations where employees work remotely more frequently. Additionally, markets with highly competitive labor markets often command more comprehensive amenities to attract and retain talent.

Vendor selection and management

Whether developing new construction, retrofitting an older location or decommissioning a facility, you will likely rely on local partners to execute the work. A project manager with experience in the local market can help you navigate the options and identify local construction companies and other vendors that meet your needs.

In addition to being well-versed in local regulatory requirements, your project manager should have deep knowledge of your company and industry standards to help bridge any gaps. For example, some local governments don't require electrical or plumbing inspections that are expected in other parts of the world, so your contractor may not automatically build those activities into the timeline and cost. An experienced project manager will educate your local vendors on your global standards and make sure they are met.



Power sourcing

Electricity is one of the most critical resources for a tech manufacturing or data center facility. Minimizing power disruptions requires selecting locations that are adequately serviced by a reliable electric grid and building appropriate redundancies. You may also need to work with local utility providers to upgrade infrastructure. These activities all benefit from local expertise.

Facility optimization

When designing a new building — particularly a manufacturing facility — involving the people who will ultimately manage the facility early in the planning process can help optimize the design for operations.

Facility management professionals who understand the intricate workflows that will occur in the building can advise on layouts and design elements that will minimize bottlenecks, streamline processes, allow easy maintenance access and enhance the performance of critical building equipment.

Bringing it all together

The technology industry's rapid evolution will continue to drive demand for new and sustainable spaces to innovate and manufacture semiconductors. Corporate real estate, design and construction professionals will play a critical role in ensuring their companies have the right facilities to keep pace with that change.

Amid rapid growth, having a partner who understands the whole picture can help you achieve consistent standards throughout your real estate portfolio while respecting each location's unique regulatory and cultural differences.

JLL brings together experts in design, project management, workplace strategy, facility management and local markets to help companies position their real estate portfolios for growth.





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