



DHL SEMICONDUCTOR LOGISTICS

AN END-TO-END SOLUTION SUITE FOR CONSTRUCTION LOGISTICS



GROWING IMPORTANCE OF CONSTRUCTION LOGISTICS

We are living in a fast-paced digital world, where chips play a pivotal role in driving technological advancements. As our world embraces digitalization, the demand for chips in various devices continues to rise, and this demand is expected to continue to rise with the developments in artificial intelligence, autonomous driving and other technological advancements. To meet this surging demand, Semiconductor manufacturers are expanding and upgrading their manufacturing capacity, backed by governmental support to ensure the availability of Semiconductor technology.

This ambitious expansion comes with its share of significant logistics challenges. One of the key hurdles is the necessity to construct FABs in regions which may have limited existing Semiconductor support infrastructure.

Constructing multiple large capital projects simultaneously adds extra strain on meeting timelines, project planning, management and delivering resources. Moreover, some of these projects will take place in geographical areas that lack an established ecosystem for advanced manufacturing of sub-5-nm chips, including parts of the US, Germany, France, and India.

In such a scenario, efficient and well-coordinated logistics become paramount for successful project execution. For manufacturers and general construction companies alike, adopting "fit-for-purpose" commercial and operational logistics models for their FAB projects is crucial.



MANAGING COMPLEXITY

Responding to these challenges requires an integrated, flexible end-to-end approach with a strategic set of services for construction projects based on site, project type and customer segment

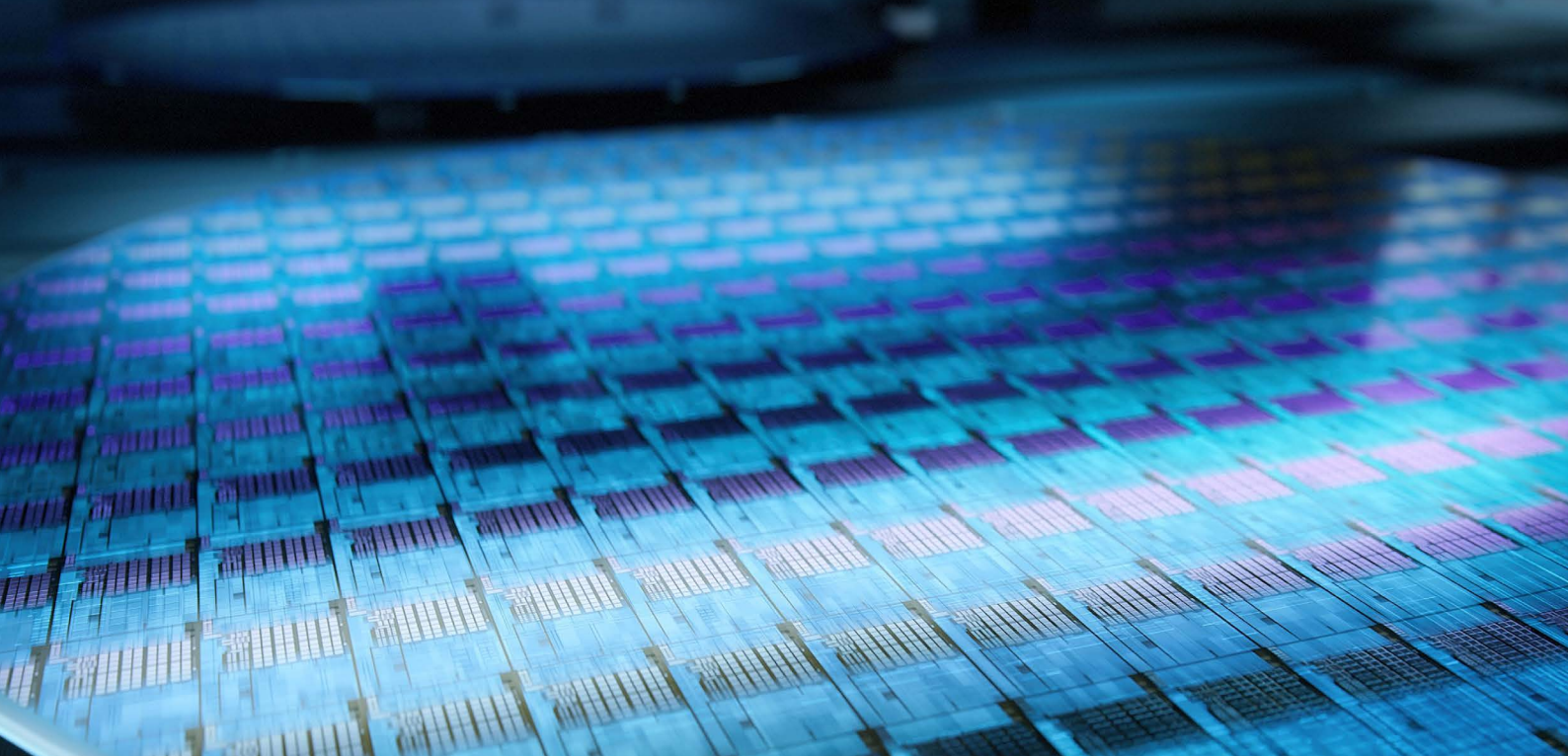
Your Challenges

- Accessing multimodal transport, specialized equipment and warehousing
- Transportation and inventory visibility
- Handling, of large, high-value capital equipment and materials
- Transport engineering, route planning and permit
- Coordination of multiple project stakeholders with varying logistics requirements
- Complex contract terms and conditions

DHL's Response

- Global capability to source transport, relevant equipment and warehousing capacity
- State of the art visibility tools incl. IoT based solutions
- IT systems to control materials flow, transport visibility, warehouse management
- Zero-defects mindset
- Certified team of logistics experts
- Expertise in engineering and transport design
- Site requirements, licensing and permitting and specialized cargo handling expertise
- Vendor and carrier management expertise
- Dedicated Control Tower for coordination including data analytics and performance reporting
- Commercial models according to IDM, foundry, general contractor and DHL requirements





CONSTRUCTION LOGISTICS SOLUTIONS

DHL offers a comprehensive Construction Logistics solutions that directly addresses the challenges faced by our customers in the Semiconductor Industry. Our end-to-end solution suite, certified Semiconductor logistics experts and dedicated Control Towers operate under a zero-defects mindset. We leverage our global transportation network, warehousing, laydown area and service logistics expertise to ensure the safe delivery and timely availability of your sensitive, high-value cargo.

Our solution is complemented by state-of-the-art visibility tools, materials and warehouse management systems including the use of IoT devices for shipment tracking.

Construction Logistics team delivers project success through a proven methodology using a phased approach starting with early stakeholder engagement, solution design, project planning through to logistics execution.

LOGISTICS STEPS ACROSS FAB CONSTRUCTION PROCESS



REASONS TO CHOOSE DHL

FOR ALL YOUR SEMICONDUCTOR SUPPLY CHAIN NEEDS

Your needs

- Global manufacturing demands bespoke supply chain solutions
- A proven zero-defects culture with stringent process controls

We deliver

- ✓ Bespoke Air, Ocean and Road Service solutions
- ✓ Qualified, trained and certified subject matter experts

- Attractive and cost-effective commercial model

- ✓ Customized commercial solutions depending on project type, location and ownership

- Specialized logistics expertise, and dedicated resources
- Coordination of multiple stakeholders across varying logistics requirements

- ✓ Contract warehousing and service logistics including laydown services
- ✓ Vendor and carrier management expertise

- Essential need for resilience and visibility in the Semiconductor ecosystem
- Trusted supply chain partner

- ✓ Trade and Vendor Compliance
- ✓ Providing life cycle continuity from your Construction Logistics project through to manufacturing and distribution

- A strong partner that helps you reduce supply chain scope 3 emissions

- ✓ DHL Group comprehensive GoGreen program

COMPLEXITY MEETS EXPERTISE


WORLDWIDE TO IRELAND

An example of our Construction Logistics solutions in action

A leading manufacturer required our supply chain expertise to support the development of one of Europe's largest Semiconductor facilities. This bespoke project involved a 300,000 sq. ft. space and 15 acres of yard area. Challenges included; managing the safe transportation, storage, and handling of regular and non-standard (oversized, overweight) equipment from various global and local suppliers. Our robust project team facilitated seamless coordination between the general construction company, suppliers, transportation

providers, and warehouse operations, ensuring accurate inventory management, visibility, and timely delivery to the project site. The service included project transportation, value-added services, vendor management (based on long standing relationships), large volumes of out-of-gauge cargo, vessel charters, truck transportation via air, road, and sea, significant warehousing and cargo handling facilities, all managed by our dedicated resources.





Following disruptions and shortages, the pivotal role of Semiconductor industry has been on full display in recent years. Having a robust supply chain setup that can seamlessly adapt to changing demand from your customers and external supply factors is crucial.

At DHL, we offer an integrated and adaptable end-to-end approach, providing a strategic array of services tailored to construction projects that consider the site, project type, and customer segment. Our team of seasoned supply chain experts is ready to support you, ensuring your business remains resilient even when confronted with unforeseen challenges.

**FOR MORE INFORMATION
PLEASE CONTACT US AT**

info.semicon@dhl.com

or visit us on dhl.com/semiconductor