

US Semiconductor Supply Chain Assembly and Test

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Units

Agenda

Who Is Amkor and What Do We Do?

Why Arizona?

Benefits Amkor Brings

Facility Description

Hiring

Infrastructure (Water, Traffic)

Safety

Schedule

Learning From Others

Q&A

About Amkor (Amkor by the Numbers)

Trusted Partner

Founded in

1968

Engaged with Industry

Leaders

Broad geographic footprint

11 / **12M** sq ft
Countries Manufacturing Space
 in 8 Countries

Building the Future

\$749M

2023 CapEx

Best in Class

R&D

Drives Innovation

~30,000

Employees

Leadership Position

#1

Automotive OSAT

\$6.5B

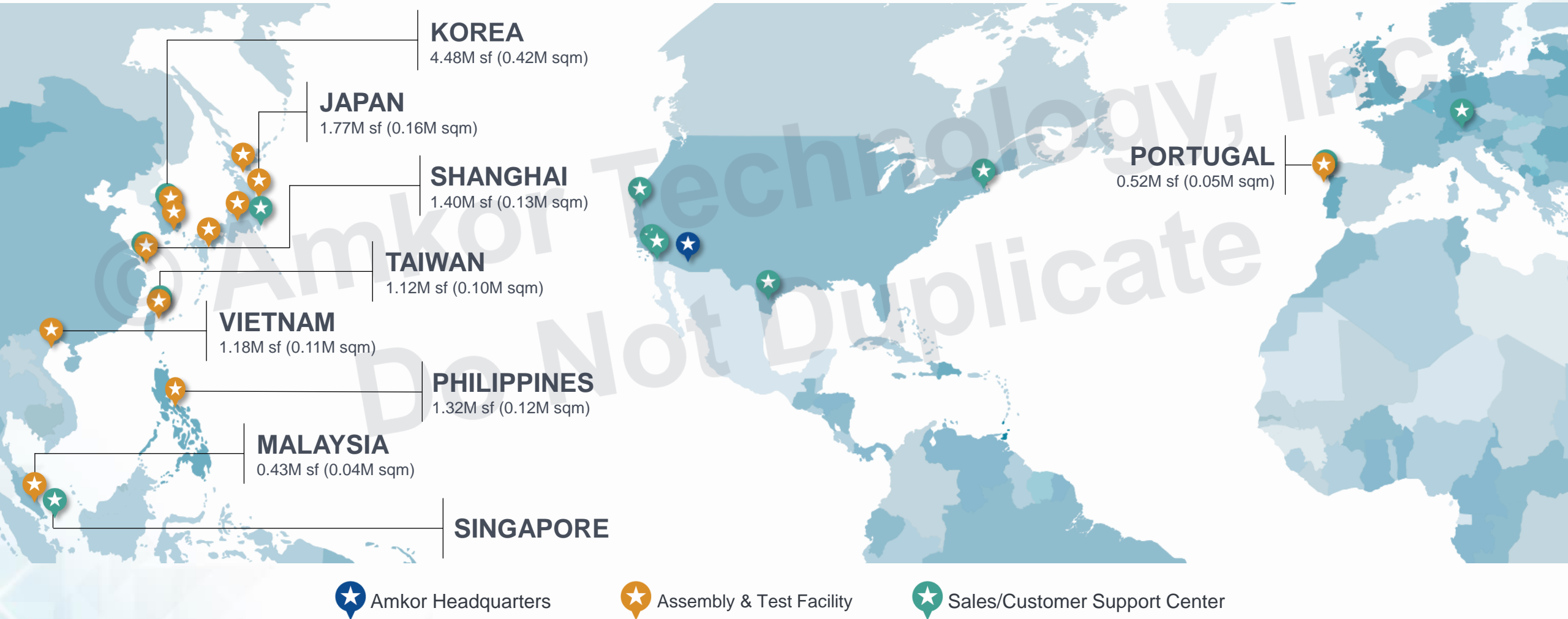
Revenue in 2023

77%

2023 Advanced Packaging
% of Revenue

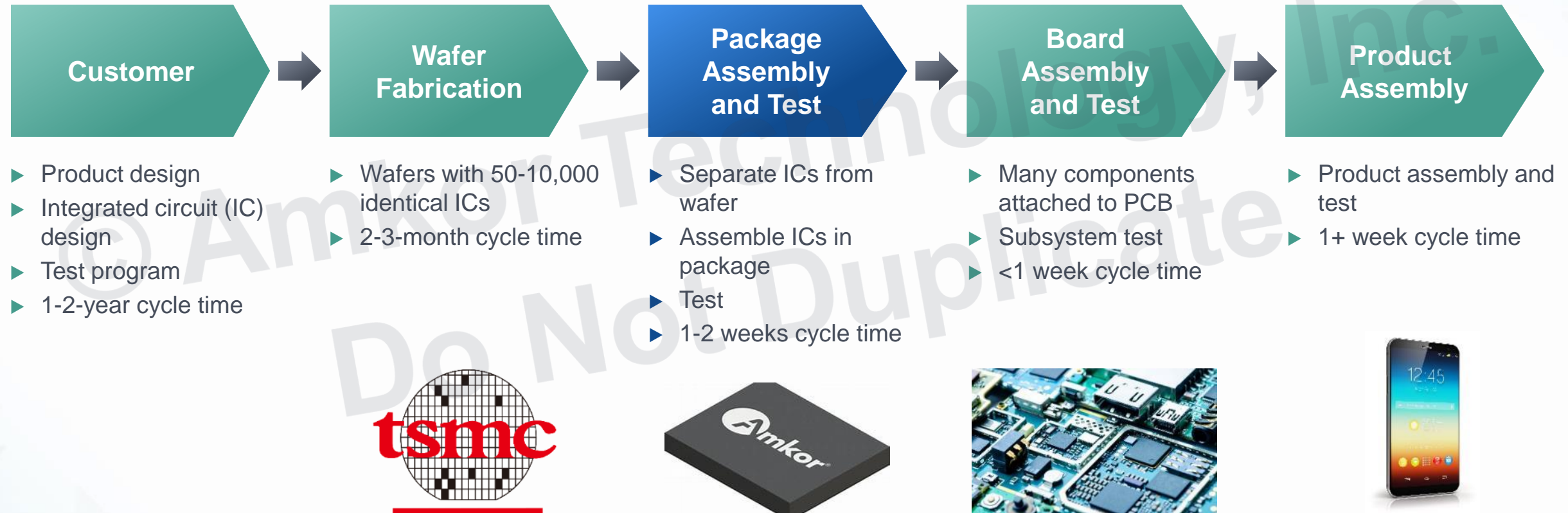
Broad Geographic Footprint

12 Million Square Feet (1.1M sqm) of Manufacturing Space



Where Amkor Fits in the Semiconductor Supply Chain

Product Flow →



Why is Amkor Building Our Next Factory in Arizona?

- ▶ The US government via the CHIPS Act identified the need for a semiconductor assembly and test facility in the USA
- ▶ The US government asked Amkor to build a facility in the US to provide supply chain security for semiconductor assembly and test
- ▶ Amkor considered sites in many states. We selected Peoria after discussions with customers and local officials
- ▶ The Phoenix area is advantageous for co-location with TSMC
 - ▷ TSMC is the largest silicon foundry in the world
- ▶ The facility will benefit from education, suppliers, and services that support TSMC, Intel, and others



What Does Amkor Bring to Peoria and the Greater Phoenix Area?

- ▶ ~2,000 new, high-paying jobs, with benefits
- ▶ Good working conditions
- ▶ Internal training, tuition reimbursement for continuing education
- ▶ Collaboration with local education entities to increase STEM education
 - ▷ WEST-MEC encourages high school student to pursue STEM classes
 - ▷ Maricopa Community College for 2-year degree technician
 - ▷ ASU and GCU are primary partners for 4-year degree engineers
 - ▷ All are using Amkor job descriptions to guide curricula
- ▶ Peoria tax base
- ▶ Peoria jobs (direct and indirect) to reduce driving to areas outside of Peoria for work
- ▶ Local childcare

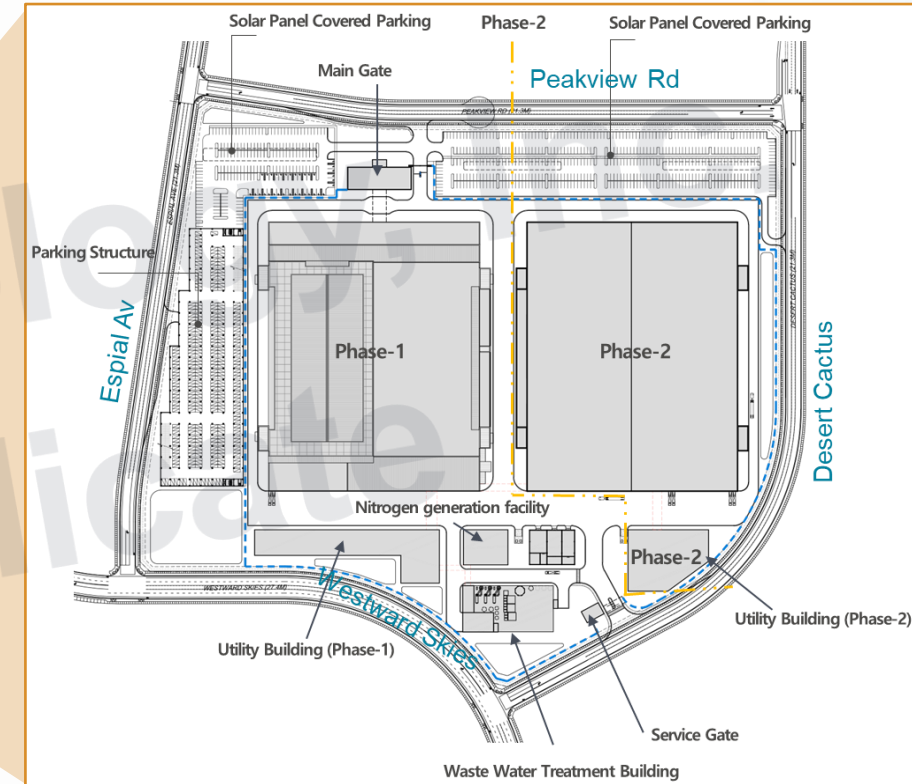
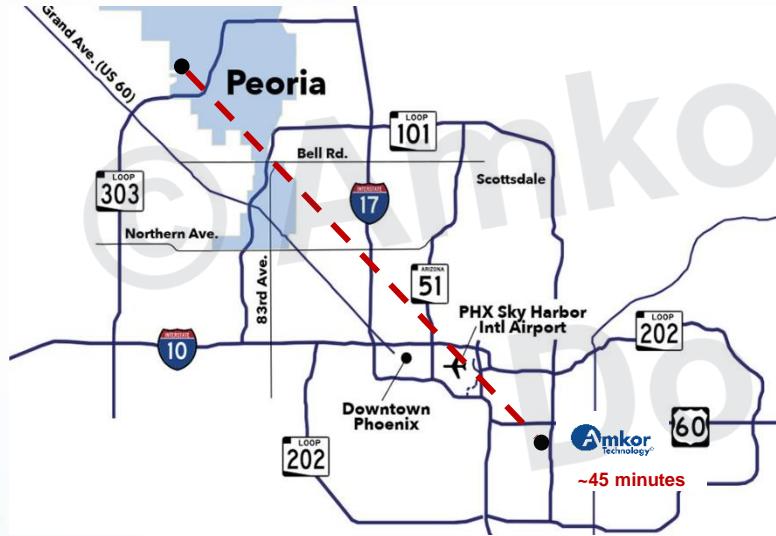


Amkor Technology Arizona (ATA)



- ▶ 55 acres in Peoria, AZ
- ▶ Advanced Packaging and Test Technologies to support AI, high performance computing and mobile applications
- ▶ Highly automated for fast cycle time and labor cost competitiveness
- ▶ Enables fast yield feedback to US wafer fabs
- ▶ Phase 1 will employ ~1,300 employees
- ▶ Approximately 2 million sq ft and 2,000 employees at full build out
- ▶ Design review still in-progress

Site Plan

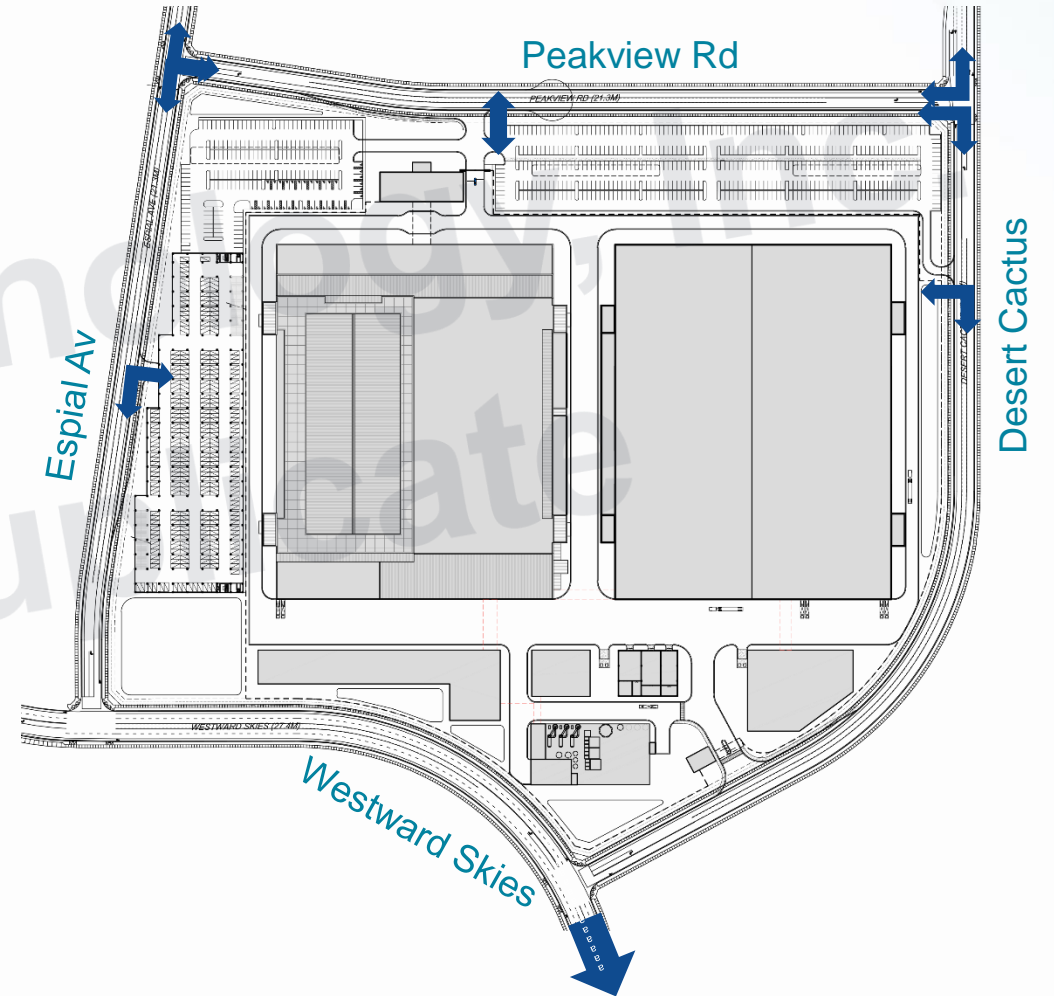


- ▶ Phase 1 Building Area: ~1.3M sq ft
- ▶ Phase 2 Building Area: ~1.0M sq ft (future)

Traffic Estimates

- ▶ Westward Skies will connect to Vistancia Blvd, which connects to a Loop 303 exit
- ▶ Amkor will direct most employee traffic to flow southward, away from residential areas, towards Loop 303
- ▶ Amkor and the City of Peoria are engaging traffic consultants to advise on road and intersection design
- ▶ Relative flow estimates (vehicle trips per day)

	Shopping Center (D11/D12)	School (D19)	Amkor
Total flow per day	9588	4400	4148
Total flow per hour	881 (pm)	2250 (am)	2054 (pm)



Hiring Needs

- ▶ **~30% Engineers:** Bachelor degree
 - ▷ Materials science, electrical engineering, mechanical engineering, chemical engineering, etc.
 - ▷ A mix of backgrounds is beneficial to better decision-making
- ▶ **~25% Technicians:** Associate degree
 - ▷ Process, maintenance, test fields
- ▶ **~25% Operators:** High school diploma
- ▶ **~20% Manufacturing support:** Miscellaneous bachelor of art and bachelor of science degrees
 - ▷ Facilities, procurement, supply chain, planning, customer service, quality assurance, etc.



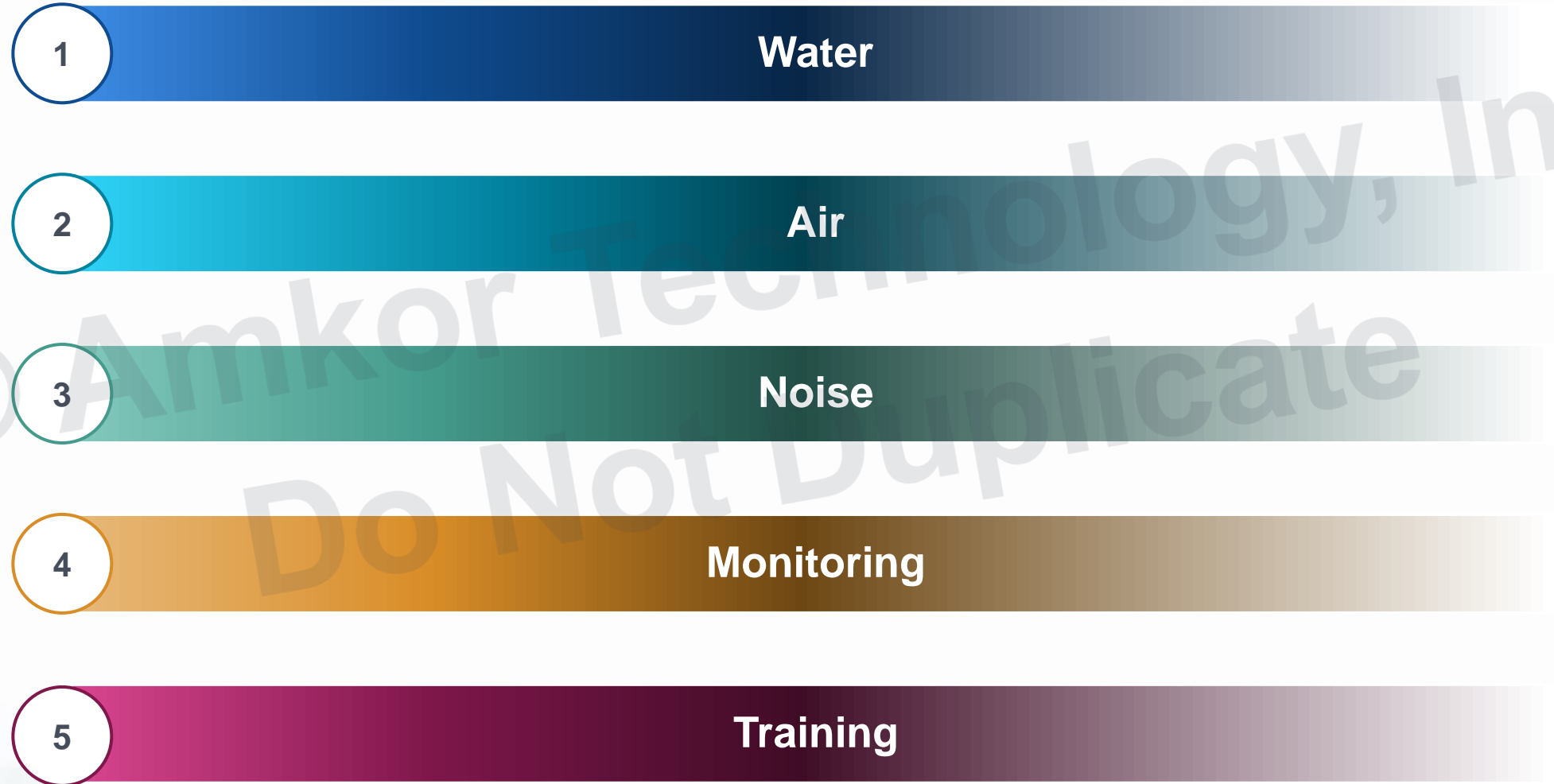
Local Hiring

- ▶ Experienced people with these skill sets mostly do not exist in the US
- ▶ Amkor will train new hires
- ▶ Hiring will be local
- ▶ Trainers will come from our Asian facilities and will live in Peoria for 1-2 years and then return to their homes
- ▶ First local hires may work at one of Amkor's Asian factories for a year until the facility is ready





Environmental Safety and Compliance at Amkor



Water

- ▶ Amkor expects to use a maximum of 1.9M gal/day (minimum 80% reclaimed)
- ▶ Amkor will design, construct, operate and monitor an industrial wastewater pretreatment program in accordance with all applicable federal, state and municipal requirements
- ▶ Amkor will purify the incoming water to enable it to be used in semiconductor assembly
- ▶ Amkor has experience with wastewater pre-treatment in all our facilities
- ▶ Amkor and the City committed to collaborate on determining the best path to process the wastewater and enable it to be re-used in Amkor's process



Monitors and sampling at each step

Atmospheric Management System

Manufacturing Process



Air Output



Wet Scrubber

(removes particles and gaseous emissions)



Regenerative Thermal Oxidizer

(destroys volatile organic compounds, hazardous air pollutants, and odors by converting the emissions into CO₂ and H₂O through heating)

Clean Air

(Meeting County, State, and Federal Requirements)

Amkor

- ▶ Monthly monitoring to ensure emissions remain below 50% of the legal limit
- ▶ Duplicate systems to enable periodic maintenance and back-up

Noise

- ▶ Peoria city code requirement
 - ▷ 6 am-10 pm: 80 dBA max
 - ▷ 10 pm-6 am: 70 dBA max
- ▶ Measured at property line
- ▶ Amkor expects to be significantly below the maximum noise limit allowed
- ▶ Measurements at largest Amkor facility
 - ▷ 44-59 dB

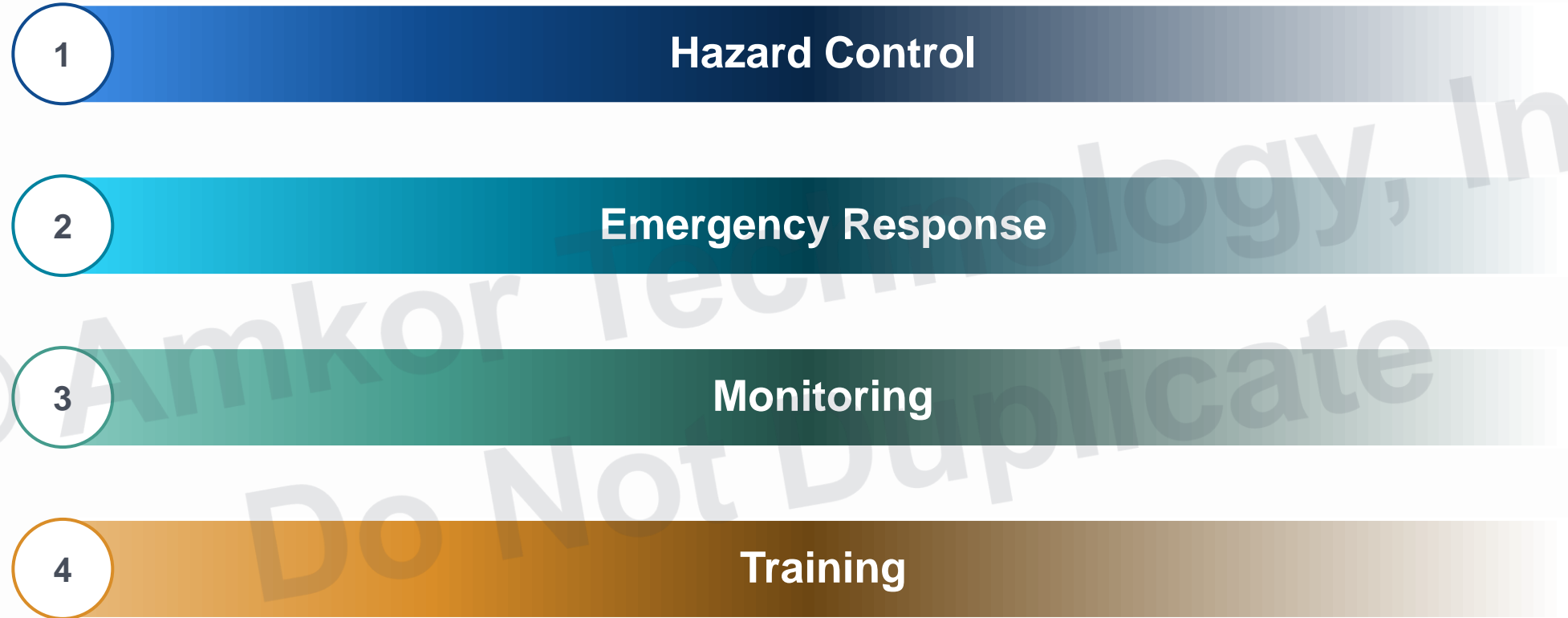


Amkor's Environmental Commitment

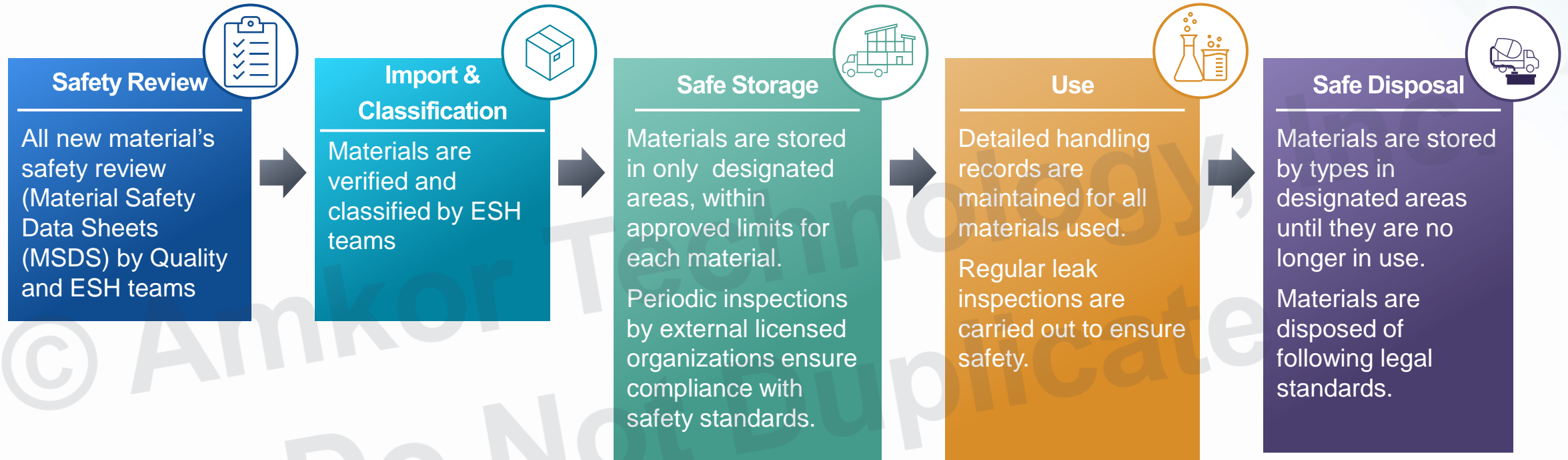
- ▶ Net zero goal
 - ▷ Reduce absolute Scope 1 and 2 GHG emissions by 55% by 2033
 - ▷ Net zero greenhouse gas emissions by 2050
 - ▷ Targets submitted to SBTi for validation
- ▶ Aligned with leading industry standards
 - ▷ Responsible Business Alliance, Responsible Mineral Initiative and Sustainability Accounting Standards Board
- ▶ Water and waste goals: 20% reduction in water usage and waste generation by 2030
- ▶ Amkor supports Peoria's path to maximize water reclamation



Personal Safety at Amkor: Systems Based



Hazard Control Management System

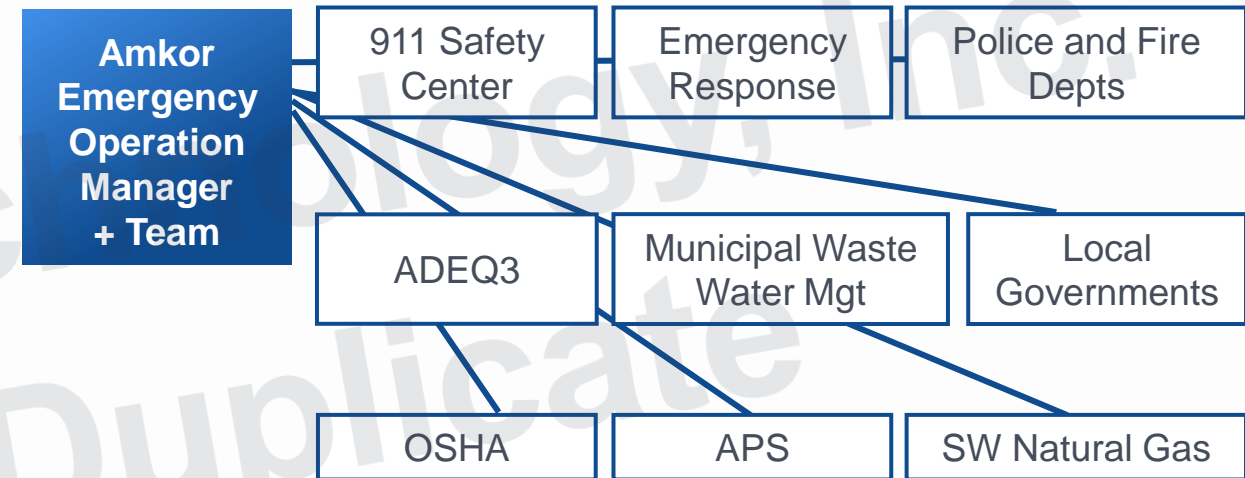


Key Safety Management Methods

- ▶ **Work method:** Maintenance and repair work requires safety work permit issuance by Amkor ESH (Environment Safety & Health) team. EHS team monitors safety during maintenance and repair work as well
- ▶ **Equipment maintenance:** Pipe connections and valves are inspected regularly for leaks. Quality team audits maintenance records and procedures
- ▶ **Safety devices:** EHS team installs and regularly inspects safety and emergency shut-off valves etc.

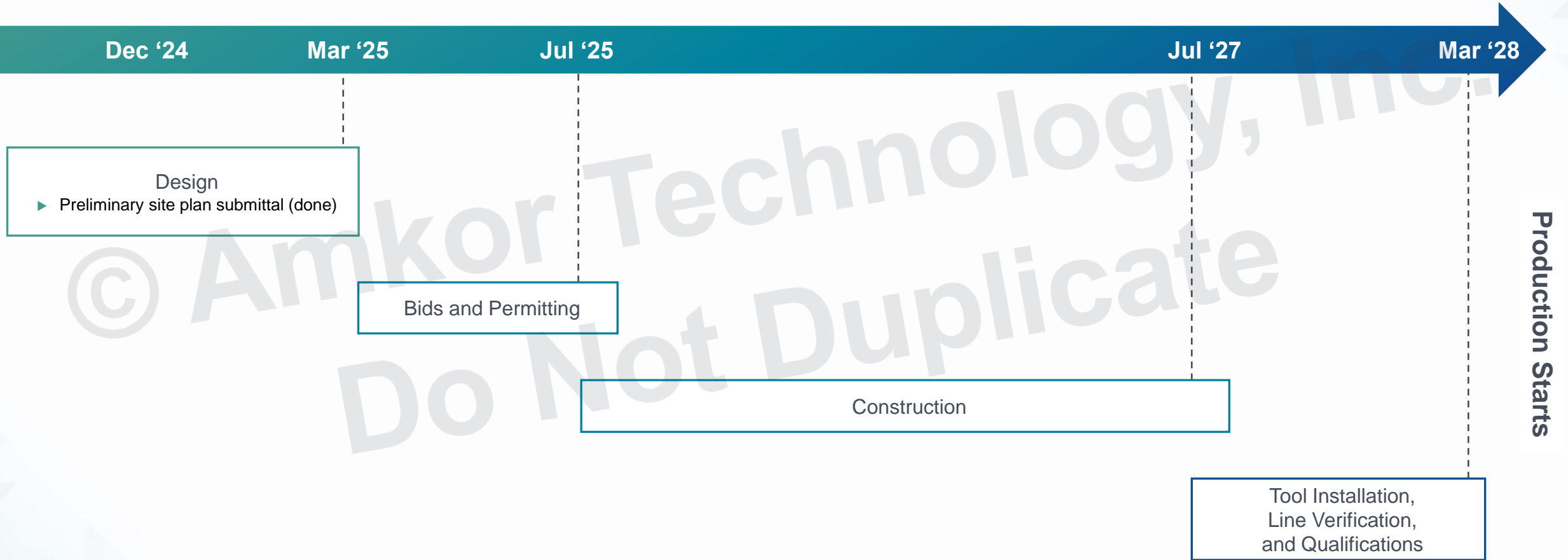
Emergency Response System

- ▶ All Amkor facilities have emergency response system
- ▶ External response teams are brought into Amkor to understand operations and facilities
- ▶ Procedures are documented and trained
- ▶ Best practices are shared between Amkor facilities
- ▶ Amkor assigns specific employees to the internal emergency response team
- ▶ Employees receive training as new hires; training is reinforced annually



Communication structure is reviewed with local authorities periodically and updated as needed

Amkor Technology Arizona Estimated Schedule



Learning From Others

- ▶ Educational partnerships
 - ▷ Leveraging existing frameworks
 - ▷ Incorporating Amkor-specific needs
- ▶ Government collaborations
 - ▷ City of Peoria
 - ▷ Greater Phoenix Economic Council (GPEC)
 - ▷ Arizona Commerce Authority
 - ▷ CHIPS Act alignment
- ▶ Industry partnerships
- ▶ Informal learning sharing
 - ▷ Drawing from lessons learned





ENABLING the FUTURE

Thank You

To learn more about Amkor Technology Arizona visit

<https://amkor.com/amkor-technology-arizona/>

Questions or Comments?

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Q & A

Amkor Technology Arizona website
<https://amkor.com/amkor-technology-arizona/>

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