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SITUATION ASSESSMENT — تقدير موقف

Impact of Taiwan Strait Semiconductor Shocks on European Defence Industrial Sustainment

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01 Objective and purpose

> The European Union faces critical decisions on allocating microelectronics, stockpiling components and preserving defence manufacturing capacity. A cross-strait escalation that threatens a 50 percent cut in advanced semiconductor shipments forces leadership to decide how to sustain multi-year munitions output while shielding guided-weapons manufacturing from civilian competition for supply.

02 Situation and courses of action

Europe depends on imports for most of its advanced logic chips, and Taiwan manufactures more than 90 percent of the world’s leading-edge chips. The EU’s Act in Support of Ammunition Production (ASAP) aimed to lift annual 155mm artillery shell production capacity to 2 million rounds by the end of 2025, but production lines face persistent constraints in propellants, TNT, proximity fuzes and specialised microcontrollers. European defence primes, including MBDA, KNDS, Rheinmetall and Airbus Defence, rely increasingly on dual-use commercial off-the-shelf components, which exposes precision munitions assembly to East Asian maritime vulnerabilities. Competing foundries in the United States, Japan and South Korea operate near maximum capacity and cannot absorb a large European reallocation. At the same time, a major Pacific confrontation would draw heavily on US precision-guided munitions stocks, ruling out American inventories as a backstop for European defence.

Decision-makers have three courses of action:

— Course of Action 1: Enact emergency regulatory allocations that mandate the requisition and diversion of existing European commercial and dual-use microelectronic stocks to priority guided-weapons and radar programmes.

— Course of Action 2: Rely on spot-market procurement and bilateral negotiations with alternative manufacturing centres in South Korea, Japan and the United States to buy surge semiconductor capacity.

— Course of Action 3: Descope advanced precision-guided munitions production quotas and shift industrial capital to basic unguided artillery shells and conventional munitions.

Testing the options against the other side's capabilities. In a Taiwan Strait contingency, the adversary can impose maritime blockade cordons, sever regional sea lanes, and pre-emptively contract or interdict Asian commercial foundry output. Course of Action 2 fails this test: adversary naval operations and commercial pressure can cut East Asian maritime logistics, while existing foundry commitments in South Korea, Japan and the United States leave no spare capacity to offset a 50 percent export reduction. It is therefore dropped. Course of Action 1 survives because emergency internal reallocation operates entirely within European jurisdiction, out of reach of hostile naval interdiction. Course of Action 3 survives because unguided artillery production does not require imported advanced logic nodes.

03 Comparing the options

The surviving options are assessed for suitability, feasibility and acceptability.

— **Course of Action 1 (emergency component redirection):** high suitability, as it directly preserves assembly lines for complex weapons such as precision-guided missiles and counter-battery radars. Feasibility is moderate: it requires extensive administrative intervention and recertification waivers for dual-use components, but does not depend on new foreign foundry capacity. Acceptability is moderate: it imposes severe economic costs by starving European automotive and industrial sectors of chips, but prevents a critical depletion of military capability.

— **Course of Action 3 (descope to unguided ordnance):** low suitability, because abandoning precision-strike replenishment degrades modern deterrence and leaves armed forces vulnerable in high-intensity combat. Feasibility is high: conventional shells do not require advanced logic or complex proximity microcontrollers. Acceptability is low: Europe would lose technological parity and could not replace precision munitions consumed or withheld during a crisis.

04 Recommended decision

Execute Course of Action 1 immediately by establishing an emergency European defence microelectronics priority directive. The European Commission and member states should give defence prime contractors statutory priority over civilian manufacturers for all domestic stocks of dual-use chips, microcontrollers and advanced packaging materials. This keeps precision-guided munitions output at MBDA, Rheinmetall, KNDS and allied manufacturers running through mid-2027, while domestic fabrication facilities are completed.

05 Forward reading

Intent: European policy aims to build defence-industrial autonomy and reduce exposure to external supply shocks through concentrated investment and reliable strategic partnerships. Leadership intends to use regulatory mechanisms to channel available high-technology microelectronics to priority military programmes if foreign supply lines collapse. The adversary's strategy, in contrast, seeks to use maritime chokepoint interdiction to halt Western defence assembly and degrade sustained alliance capability.

Background: Past defence planning prioritised immediate cost efficiency over strategic material security, embedding a heavy reliance on overseas fabrication for advanced logic and precision subcomponents. Industrial planning was slow to recognise the divergence between standard artillery munitions and chip-dependent guided systems. Defence acceleration frameworks were introduced, but late implementation left European stockpiles too thin to buffer a sudden cut in supply.

Current picture: The European defence technological base is exposed at the same time to shortages of energetic materials and to heavy dependence on imported processors for smart military systems. Interruptions in component deliveries create intense competition between automotive firms and defence contractors for limited European inventories. Domestic fabrication projects such as the ESMC facility in Dresden, scheduled to begin production in 2027, cannot provide near-term relief for missile and radar assembly lines.

Outlook: Production lines for advanced defence systems and precision-guided munitions will **likely (55–80%)** face severe disruption over a two-year horizon, while unguided shell manufacturing maintains acceptable output. European authorities will **very likely (80–95%)** enforce emergency distribution rules giving military contractors priority over civilian industrial buyers. Building independent domestic microelectronics capacity will take until beyond 2027 and

into the next decade (confidence: high, based on published construction schedules for European fabs and known lead times for defence-grade retooling).

06 Information limits

The sources contain no empirical data on alternative rare-earth or microelectronics transit corridors across the Global South, and do not quantify cost premiums under grey-zone blockade conditions. Available documentation does not detail current national stockpiles of proximity fuzes or classified military chip reserves in individual EU member states. Verified reporting on sovereign raw-material swaps, or a sudden expansion of US military chip subsidies, would change the assessment.

07 Bottom line and recommendation

Bottom line: A 50 percent drop in Taiwanese semiconductor exports would quickly disrupt European precision-guided weapons manufacturing, and severely so over a two-year horizon, while leaving unguided artillery production largely intact. European defence output cannot rely on external backfill, given allied capacity limits and domestic fabrication timelines that run beyond 2027.

What it means for you: Your institution should prepare for sweeping statutory interventions that subordinate commercial chip consumption to sovereign defence requirements, with significant economic displacement.

Recommendation: If an East Asian maritime blockade materialises, invoke emergency defence production directives at once to direct domestic dual-use chip inventories to precision munitions lines.

Alternatives: Maintain commercial market allocation and accept an immediate freeze in guided-missile production, or permanently downgrade defence capability to unguided conventional munitions.

When to reassess: When the ESMC fab in Dresden begins production (scheduled for 2027), or on confirmed deployment of adversary naval cordons around Taiwanese shipping hubs.

08 Sources

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Editorial corrections: the ASAP target is annual capacity of 2 million shells by the end of 2025, not 2027; an unsourced figure for US munitions consumption was removed; the reference number was unified (REQ-166).