Towards a Triple Benefit

Summary of the strategic pre-study · Aalto University and University of Helsinki

Finland faces three connected challenges during 2026–2035: strengthening defence and security of supply, renewing industrial competitiveness, and advancing the green transition towards carbon neutrality by 2035. These draw on overlapping capabilities, infrastructure and investment resources. This study examines where procurement and other public instruments could reduce specific security-of-supply vulnerabilities while strengthening competitiveness and supporting the transition.

SCOPE AND METHOD The study assesses energy, chemicals, materials and digital. Food and water, health, finance and payments, and transport and logistics are outside its scope, not judged less vulnerable. Import dependence constitutes a capability gap only where a critical function remains materially exposed under disruption after existing mitigation. Capability concerns inform six investment areas, assessed through two separate lenses; four case studies examine intervention pathways. The scoring is qualitative and not yet calibrated.

KEY FINDINGS

1. **Combined benefits depend on reinforcing mechanisms.** Securing grid equipment can strengthen electricity-system resilience while enabling electrification. Domestic hydrogen and captured carbon could substitute selected imported fossil feedstocks while supporting industrial renewal.
2. **The green transition changes Finland's dependency profile.** Reduced reliance on imported fossil fuels can be accompanied by greater dependence on grid equipment, specialised materials, processing capability and semiconductors.
3. **Budget size alone does not determine combined benefits.** For the interventions examined, opportunities appear most readily actionable in security-of-supply procurement under general rules and selected dual-use applications. This does not establish a general ranking of civilian and military procurement.
4. **The instrument follows the barrier, not the sector.** Bankable offtake and material-loop coordination call for different instruments. Accessing European and allied financing also requires dedicated preparation and coordination capacity.

WHAT TO DO FIRST

1. Establish which procurement regime applies to each spearhead, and who the buyer is.
2. Commission a restoration-capability assessment for critical electricity equipment.
3. Test bankable demand for the hydrogen and captured-carbon platform with identified anchor buyers.
4. Designate responsibility for preparing European and allied co-financing.

WHERE TO FOCUS

Domestic molecules

A shared hydrogen and captured-carbon feedstock platform could substitute selected imported fossil feedstocks. Working objectives for preparation are 50–100 kt H_2/year of committed anchor demand and approximately 0.1 Mt CO_2/year of captured-carbon supply by 2035. These are initial scales, not validated investment thresholds or estimates of critical demand.

Critical electricity equipment

Reserves and contracted repair, procurement and production capacity would allow Finland to restore a defined share of its critical grid infrastructure within an agreed period while grid expansion continues. This is also the clearest dual-use case.

Secondary aluminium

Domestic recovery capacity could supply a defined share of strategically relevant aluminium demand. It is a promising candidate, but the evidence does not yet support treating it as a spearhead.

MECHANISMS AND FURTHER PREPARATION

Preparation should match instruments to barriers and contracts to market conditions, coordinate civil and defence demand where appropriate, develop European funding pathways early, and tie environmental criteria to lifecycle performance and certification. Before deployment, the priorities require calibration, critical uses and residual disruption exposure must be established, and case-specific uncertainties resolved.

FOR THE READER

The strategic pre-study *KOVIS: Towards a Triple Benefit – Public Investment for Comprehensive Security, Competitiveness and the Green Transition in Finland* was commissioned by the Solutions Group (Ratkaisuryhmä), a cross-sectoral group convened by Aalto University and the University of Helsinki that brings together researchers, cities, companies, startups, ministries, foundations and funders. The study was funded by the National Emergency Supply Agency and carried out by Aalto University and the University of Helsinki, led by Matthias Re, DSc (Tech.), and Jenni Ahti, MSocSc. It draws on national and European policy documents, security-of-supply and sectoral assessments, statistical and market data, and academic literature.

In addition to this technical report, the KOVIS project has produced 12 recommendations that apply triple-benefit thinking to current policy frameworks. The recommendations were drafted by Demos Helsinki, drawing on the report, ten expert interviews conducted in parallel and the policy authors' analysis. The interviews do not form part of the evidence base assessed in the study. The recommendations are published separately.

More information: www.aalto.fi/en/sustainability/kovis-finland-cannot-afford-three-separate-futures

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