AUSTRALIAN FASHION COUNCIL

REQUEST FOR PROPOSAL:

Feasibility Study on an Australian Clothing Smart Factory

MAY 2025

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1. THE BRIEF

1.1. Introduction

The Australian Fashion Council (AFC), in partnership with Epson Australia, is conducting a comprehensive feasibility study to establish Australia's first industry-led clothing smart factory. This innovative facility will position Australia as a leader in advanced clothing manufacturing while rebuilding local supply chains, showcasing advanced machinery & technologies and creating pathways for industry upskilling and workforce development.

The AFC is seeking a research partner to conduct the feasibility study for an Australian clothing smart factory. The feasibility study is the critical first step toward establishing a smart factory pilot program, with the aim to assess market viability, technical and operational requirements and outline a detailed implementation roadmap. The objective of the feasibility study is to inform the AFC's advocacy efforts to position Australia as a future leader in advanced manufacturing

1.2 Key Details Overview

- **Study Name**: Australian Clothing Smart Factory Feasibility Study
- **Timeframe**: 6 months (July 2025 - December 2025)
- **Location**: Australia-wide analysis with focus on major manufacturing hotspots
- **Scope**: Comprehensive market, technical, operational, financial and impact feasibility analysis
- **Methodology**: Industry consultation (including 1:1 stakeholder interviews, targeted surveys, workshops), market research, financial modeling, technical assessment
- **Expected Output**: Detailed feasibility report with actionable recommendations and implementation plan to launch a smart factory pilot program.

1.3. Study Objectives

1. Foster industry endorsement of an industry-led smart factory to drive innovation and advanced manufacturing of clothing & textiles in Australia.
2. Validate the commercial viability of an Australian smart factory model.
3. Outline a phased implementation plan for a smart factory pilot program.
4. Develop a collaborative partnership model to facilitate investment in the pilot program from commercial and industry partners, all levels of government and education providers.
5. Align the study and pilot program proposal with the AFC's broader strategic objectives for Australian manufacturing and the National Manufacturing Strategy.
6. Align the pilot program proposal with Federal, State and Local government policy on manufacturing, innovation, industry and training.

2. BACKGROUND

2.1. Australian Fashion Council

The Australian Fashion Council (AFC) is the not-for-profit peak body for fashion and textiles with a 70-year history of helping this industry adapt, evolve and thrive. We care about Australian designers, manufacturers and brands, helping businesses transform and thrive, and positioning Australian fashion globally.

AFC members are Australian founded or majority owned businesses involved in producing fabric, clothing, footwear or accessories. Our members are also the individuals that contribute creatively and economically to the Australian fashion and textile industry.

The AFC's mission is to champion a prosperous, innovative, and creative Australian fashion and textile industry. A key strategic priority to achieve this mission is securing the long-term growth of Australia's manufacturing sector. In May this year, the AFC announced the development of a National Manufacturing Strategy to outline an actionable roadmap to revitalise Australia's clothing and textile manufacturing sector. The adoption of innovative manufacturing processes and facilities will be critical to combat rising labor costs, address industry skills shortages, and create a competitive manufacturing environment in Australia.

2.2. Industry Context

2.2.1. Challenges and Opportunities

The Australian fashion and textile industry stands at a critical juncture. While recognised domestically and globally as a design powerhouse, the manufacturing sector faces significant challenges including:

- Significant decline in local manufacturing capacity over recent decades caused by lack of investment and support to drive growth of advanced manufacturing
- Increasing competition from low cost off-shore manufacturing hubs
- Critical skills gaps and a limited incoming workforce from both young and migrant workers
- Limited government understanding of the industry's complexity resulting in limited grants, programs & initiatives applicable to clothing & textile businesses
- Oversupply of design training offerings and graduates with limited focus on production and technical skills and an outdated apprenticeship framework
- Increasing global competition and pressure from international ultra-fast fashion marketplaces
- Cost-of-living pressures impacting discretionary spending
- U.S. tariffs having a major impact on the Australian fashion industry

Despite these challenges, unprecedented opportunities exist with:

- Green shoots appearing with the next generation of local manufacturing embracing innovative technologies
- Growing government recognition of fashion's economic and cultural importance
- Increasing international regulation enforcing supply chain visibility
- Increased consumer interest in local manufacturing and Australian-made / owned provenance
- Renewed international spotlight on Australian designers and renewed appetite for export
- Consumer awareness of spending and quality vs. cost

2.2.2. Economic Contribution

Nationally, the Australian fashion and textile industry contributes:

- $28 billion to the Australian economy, with potential to grow to $38 billion over ten years
- $7.2 billion in export value (exceeding wine and beer exports, on par with meat exports)
- 1.5% to Australia's GDP (three times the contribution of forestry)
- 500,000 jobs nationwide (employing more than mining and utilities industries combined), 77% of whom are women, paying $15 billion in wages annually

Of this total, the fashion & textile manufacturing sector contributes:

- $2.6 billion to the Australian economy
- $1.4 billion in wages & salaries paid
- 28,000 jobs and 60% of the workforce are women (compared to 28% in manufacturing generally)

2.3. What is a Smart Factory?

A clothing smart factory is an automated production facility that enables on-demand, customisable garment manufacturing with minimal waste and fast turnaround times. By bringing together digital design and advanced manufacturing technologies with AI-powered systems and analytics, smart factories can enable quick, flexible, highly customisable production runs. Smart factories can support rapid responses to market trends without the high minimum order quantities (MOQs) that come with offshore manufacturing and result in the overproduction of clothing.

3. SCOPE OF WORK

3.1 Required Feasibility Study Components

Research partners should respond on the following:

1. **Feasibility study proposal**

   Present a proposal to conduct a comprehensive feasibility study, including:

   - Industry engagement and consultation strategy
     i. Outline a stakeholder engagement approach to inform and consult stakeholders from the Australian fashion and textile industry and internationally.

ii. Present an engagement methodology, including 1:1 stakeholder interviews, expert-led workshops, industry surveys where applicable.
iii. Proposed stakeholder list (can be submitted as a summary and not a detailed list).

- Market analysis
- Technical feasibility assessment
- Operational feasibility
- Financial analysis and revenue model
- Risk assessment
- Considerations for an environmental and social impact assessment

2. **Partnerships and investment model**
   - Outline an approach to identify potential funding sources and commercial partnerships.
3. **Communications strategy**
   - Outline an approach to engage and inform government stakeholders concurrently to the development of the feasibility study.
4. **Budget allocation and project management**
   - Proposed budget to undertake the feasibility study
   - Project timeline with key project milestones.
5. **Experience and and examples of previous work**
   - Details of proposed project team and their capability and experience to deliver this work
   - Provide examples of previous feasibility studies and/or reports and presentations.

3.2 Target Stakeholders for Consultation

3.2.1 Industry stakeholders

A targeted industry consultation plan should be developed to inform the feasibility study, including but not limited to the below stakeholder groups:

- **Industry**
  - Brands
  - Manufacturers
  - Manufacturing equipment suppliers
  - Technology and software providers
  - Service providers
  - Industry bodies
  - Smart factories established internationally
- **Education**
  - TAFE and vocational training providers
  - Universities offering fashion & textile programs

- Research institutions

3.2.2 Government Stakeholders

The communications strategy should outline a plan to engage and inform key government departments and agencies following the development of the feasibility study, with the objective to seek financial investment and support for the smart factory pilot program. The engagement strategy should include but not limited to:

- **Federal Government**
  - Department of Industry, Science and Resources
  - Department of Employment and Workplace Relations
  - Department of Climate Change, Energy, the Environment and Water
  - Australian Trade and Investment Commission (Austrade)
- **State Government**
  - NSW Premier and Cabinet
  - Investment NSW
  - Create NSW
  - Creative Victoria
- **Local government**
  - City of Sydney
  - Greater Sydney councils
  - City of Melbourne
  - City of Adelaide

See here for further considerations for the feasibility study. Your response should demonstrate understanding of the fashion and textile industry, experience with feasibility studies for manufacturing facilities, programs or initiatives, and methodological approaches that will deliver an actionable feasibility study while delivering on the AFC's strategic objectives.

4. WHY THIS SMART FACTORY MATTERS

The feasibility study for an Australian clothing smart factory will serve as a critical first step toward rebuilding and driving greater connectivity for Australia's national manufacturing sector by:

- **Retaining sovereign clothing manufacturing capability** - Local manufacturing can enhance business resilience against global supply chain disruptions. Smart factories showcase innovative manufacturing processes which are essential to retain sovereign capabilities to make clothing and textile products for defence, police and hospitals.

- **Rebuilding local supply chains** - Smart factories support brands to source suppliers to build a connected, localised supply chain. The smart factory ultimately acts as an incubator to connect brands with larger manufacturers once they have tested the market and can commit to larger orders.
- **Driving digital innovation** - Smart factories act as a showroom to manufacturing businesses as to what is possible with advanced TCF manufacturing, providing a testbed environment to trial new machinery, technology and software.
- **Upskilling fashion and textile workforce** - By establishing collaborative partnerships with educational institutions, smart factories can be an interface between industry and education providers by providing a hands-on learning environment to drive the next generation of fashion manufacturing roles.
- **Complying with environmental regulations and reducing impact** - The environmental benefits of smart factories include proximity to both the upstream and downstream activities along the clothing value chain. Brands can reduce the risk of overproduction by working with the smart factory to use just-in-time (JIT) and on-demand manufacturing processes.
- **Increasing value of Australian made** - Support brands to leverage Australian-Made marketing potential by building consumer awareness of the processes behind clothing and textile manufacturing.

5. KEY STUDY OUTCOMES

- Comprehensive market feasibility assessment with identified target customers, market size and engagement strategy
- Technical feasibility assessment including machinery, software, technology and infrastructure requirements
- Operational feasibility framework with proposed governance structure, staffing model and training requirements
- Outline a mixed revenue operational model for the smart factory
- Detailed financial analysis including setup costs, operating costs, and 5-year projections including a break-even analysis and foundational funding requirements
- Location analysis with recommended sites and infrastructure requirements
- Risk assessment with mitigation strategies
- Social and environmental impact assessment
- Implementation roadmap for the smart factory pilot program
- Government engagement strategy with opportunities identified for foundational funding and support
- Partnership strategy for technology and software providers, manufacturing equipment suppliers and educational institutions

6. APPLICANT EXPERIENCE

Project applicants will be able to demonstrate a breadth of knowledge and experience across the below areas:

Technology & Innovation

- Strong knowledge of automation and digital integration in manufacturing (not required to be clothing & textile specific)
- Knowledge of smart factory information systems and software and an understanding of technologies implemented in smart factories internationally
- Familiarity with advanced garment manufacturing equipment
- Knowledge of just-in-time and on-demand production systems

Fashion and Textile Industry Expertise

- Understanding of the Australian fashion and textile manufacturing ecosystem
- Knowledge of current challenges and opportunities in the sector
- Understanding of clothing supply chains and clothing manufacturing processes

Stakeholder Engagement and Communication

- Proven ability to engage diverse stakeholders across industry & governments
- Experience conducting structured interviews and focus groups
- Understanding of Australian government priorities in manufacturing and innovation

Research & Analysis Skills

- Experience conducting comprehensive feasibility studies, research reports or comprehensive business case studies
- Experience developing implementation roadmaps
- Ability to translate technical findings into strategic recommendations
- Experience developing financial projections
- Skills in capital investment analysis and ROI modeling
- Expertise in operating cost structure analysis
- Project management experience

7. BUDGET

Please provide a budget range to undertake the feasibility study, outlining a scaled approach to understand the minimum and maximum output for the budget.

8. RESPONSE TO BRIEF

Proposals due by Sunday, 15 June 2025.

9. APPENDIX

DETAILED FEASIBILITY STUDY FRAMEWORK

The following outlines considerations for the feasibility study to address:

Market Feasibility

- Identify the target market for the smart factory and develop a market strategy to service emerging to enterprise brands.
- Map the Australian manufacturing ecosystem and identify strengths and gaps of existing manufacturers as they relate to the smart factory proposal
- Conduct research into smart factories internationally and scope the opportunity to build a smart factory network with Australian and international smart factories.
- Capture consumer and industry trends driving demand for Australian-made, sustainable fashion, customization and repair, influence of circular economy

Technical Feasibility

- Determine specialised product focus of the smart factory. The study should include a comparison of knitwear compared to a cut-make-trim facility and consider the surrounding manufacturing ecosystem.
- Map input materials with priority given to sourcing local fibres, materials, trims. Consider developing a materials library to consolidate production orders across core materials
- Develop a smart factory production workflow and scope an end-to-end service model
- Identify required machinery and software, including but not limited to: knitwear machinery, sewing machines, automated pocket, buttonhole and collar machinery, digital printer, laser cutter, curing oven
- Scope build for a digital smart factory portal, including capability to connect to digital manufacturer database
- Scope logistics and distribution potential for smart factory, including shipping providers, warehousing and just-in-time inventory

Operational Feasibility

- Scope a mixed revenue operational model:
    - Subscription vs production services - sampling & prototyping on-demand production runs for small and enterprise brands
    - In-kind partnerships for machinery and software

    - Research & development grants
    - Training provider services
- Scope location and smart factory infrastructure. Location scouting to consider commercial/light manufacturing zoning, proximity to suppliers and logistics hubs, brands & students, manufacturers, consumers and foot traffic
- Scope a connected production model connecting Australian and international smart factories
- Identify workforce & skill requirements to operate the smart factory.
- Identify training programs for machinery operation, digital tools, production management. Plan for integration with surrounding education providers

Financial Feasibility

- Scope initial investment & setup costs including equipment purchase and infrastructure requirements to establish the smart factory.
- Identify potential in-kind partnerships to supply machinery and software
- Develop an operating cost budget, including but not limited to: staffing and training, overheads including rent, utilities, raw materials procurement, software subscriptions, maintenance & tech updates
- Develop a 5 year profit and loss forecast, including break-even analysis
- Scope potential funding and grants from government and commercial partnerships
- Scope governance model of the factory with the AFC

Risk Assessment

- Conduct a comprehensive risk assessment including:
    - Market risk assessment - competition from offshore manufacturers, changing brand demand/awareness for Australian-made, cost considerations of Australian made
    - Operational risk assessment - supply chain disruptions for raw materials, skilled labour and training challenges, high maintenance costs, technology failures
    - Financial risk assessment - high initial investment costs, brand adoption of new models of production
    - Compliance & legal risk assessment - Unions, workplace safety & fair wage compliance

Social & Environmental Impact

- Outline considerations for a social and environmental impact assessment.