



Deposited via The University of Leeds.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/231389/>

Version: Presentation

Conference or Workshop Item:

Almond, K. and Rainton, S. (Accepted: 2025) Influence and Impact of Future Fashion Factory Initiatives in the Delivery and Development of Fashion and Textile Pedagogy in Higher Education. In: Futurescan 6: Shifting Paradigms, 09-10 Sep 2025, Leicester, UK. (Unpublished)

This is an author produced version of a conference presentation originally presented at Futurescan 6, Leicester, UK, 9-10th September 2025.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.

Influence and Impact of Future Fashion Factory Initiatives in the Delivery and Development of Fashion and Textile Pedagogy in Higher Education

FutureScan 6: Shifting Paradigms

10th September 2025



In the beginning the Future Fashion Factory

Creative Cluster VISION:

- **Sector specific**
- **Long-term**
- **Sustainable**

Why Skills:

- **Capacity / Retention**
- **Conserve and develop**
- **Key building blocks**
- **Systemic change**

Methodology:

Reflective Practice
incorporating:

- **U-I Collaboration**
- **Co-development**
- **Impact focused**

Operationalising the Vision

CORE RESEARCH THEMES:

- **Industry-led co-development**
- **Embedded U-I 2-way learning**

RESPONSIVE R&D:

- **Challenge / impact led**
- **Long-term learning, facilitate change**
- **Impact focused**

R&D Projects funded

Proof of Market: 9

Proof of Concept: 32

Innovation Challenge: 14

55 projects in total

- Aesthetic Digital Communication
- Data-Driven Design / AI
- Late-stage Customisation
- Skills and Education
- Sustainable Circular Economies

An Integrated Approach

Skills as a cross-cutting priority!

Research-led:

- Every project delivered had a skills element.
- Senior academic / ECR mentoring.
- Development of understanding of industry drivers.



Education focused:

- Provide student opportunities.
- Incorporate learning within UG and PG modules.
- Workforce upskilling / CPD integration.



Industry-led skills outcomes (1)

Digital awareness & sustainable business models:

- Manufacturing workflow planning [Abraham Moon, Pennine Weavers]
- Digital analysis, predictive finishing / intelligent sensor system [WT Johnson]
- Creative digital design [Digitoile]
- Bespoke production, reducing waste [AWH, Vivobarefoot]
- Digital assistant, colour consistency [DP Dyers]



Industry-led skills outcomes (2)

Materials innovation:

- Innovative fibre, characterisation & product development [Materra, Ponda, SeFF]
- Sustainable alternatives [Amphico, Mykko, Ruby Moon, Sustainable Sequin Company]



- New products & business models [Joshua Ellis, Weffan]



Impact on HEI future developments

Call 1: AW Hainsworth & Yorkshire Textiles – Traditional skills/new technology



Digitising early designs from Leeds Industrial Museum to produce a 'new heritage' fabric for electronic jacquard manufacture

Hainsworth used the project to trial a new designer-led short service, for bespoke fabrics

Stimulated student innovation, the project inspired learning activities related to digitising traditional technology



Impact on HEI Future Developments

- Embedding ways of teaching which take learning from industry interactions.
- Use skills learnt in research initiatives to inform development of courses and modules at UG and PG level.
- Identify how these skills would ensure F&T graduates are equipped for the needs of future employment within industry.
- Embedded continuous skills development in teaching activities, encourage students to sustain a new approach to creative innovation when entering industry.

Case Studies: [Future Fashion Factory Report | Leeds Institute of Textiles and Colour \(LITAC\)](#)

Skills: FFF & Fashion Demonstrator


UNPICKING SKILLS REQUIREMENTS:

FFF x FD evidence building blocks

- UKFT / RCA workshops
- TCoE industry member evidence
- UKFT NOS alignment

Clear evidence / policy influencing


Impact
of Brexit and
COVID-19
on the UK
Fashion &
Textiles
Technology
Ecosystem

ual:  UNIVERSITY OF LEEDS

Sustainable
and
Circular
Practices
in the UK
Fashion and
Textile
Industry

A vision for an innovative practice,
development and business growth ecosystem
ual:  UNIVERSITY OF LEEDS

Innovation
Funding
for UK
Fashion
and
Textiles

An overview of R&D mechanisms to support
collaborative, industry-led academic research
ual:  UNIVERSITY OF LEEDS

National Occupational Standards – UKFT

UKFT is the Sector Skills Council (SSC) for UK fashion and textiles

SSCs: industry/employer-led, sector specific, contribute to development of:

- ❖ National Occupational Standards
- ❖ Apprenticeship frameworks and new apprenticeship standards

Examples of Activity

2020 – 2 new NOS suites consulted on, developed and published. Manufacturing Textiles Products and Manufacturing Sewn Products

Open now: [UKFT 2025 Sustainability Survey](#) (closes 15/09/25)

[IPO Design Consultation](#) (closes 27/11/25) UKFT a strategic partner

Scaling innovation – UKFT / RCA workshops

Primary Focus: UK-based industry, invited mix of micro, SME and LC organisations

Methodology: in-person workshop (2 hours)

to gain insights into where innovations are happening, support required to help embed and scale; guided discussion in 3 sections (innovation, scaling, adoption)

24 industrial organisations, 4 sector support organisations

Outcomes: 3 main strands of innovation across the group: circular business models, digital tooling enabled innovation, process and product development

Funding as a way of accessing skills not held in-house challenging, especially for early-stage businesses; collaboration / mechanisms to access potential customers; support required to connect with Business Angels/other investors.

Scaling & adoption requires collaboration, trusted partners, supply chain/brand support.

Industry Consultation – Textile Centre of Excellence

Primary Focus: manufacturing companies within the textile supply chain

Methodology: 2 x 10-question surveys (Survey Monkey)

(1) sustainability (2) adoption of digital technologies

150+ companies contacted, target response rate of <50 companies met.

Follow up face-to-face interviews with 20 companies to explore issues raised in more detail.

Outcomes:

- (1) summary document highlighting industry messages.
- (2) short paper identifying the requirements for a ‘textile company of the future’.
- (3) series of case studies highlighted best practice.
- (4) outline of current provision.
- (5) recommendations for future action.

Textile Centre of Excellence – Skills findings (1)

Identified Challenge

Confusion around sustainable / sustainability language & terminology

Lack of industry knowledge on the commercial benefits of sustainable / circular business practices.

Recommended Action

- ✓ Develop consistent definitions of key terms and approaches in accessible language for business.
- ✓ Integrate into online CPD provision.
- ✓ Create new learning content, to integrate into textile apprenticeship programmes.
- ✓ Roll out a more structured approach to knowledge, skills and behaviours required to embed change.

Textile Centre of Excellence – Skills findings (2)

Identified Challenge

Research found that digitisation would only benefit the sector, but lack of skills / awareness was a barrier to adoption.

Lack of industry awareness of the potential benefits of developments such as robotics, AI, sensor technology, connected networks and data analysis.

Recommended Action

- ✓ Design new learning content to emphasis advantages of digitisation across the supply chain.
- ✓ Bespoke short courses need to be available to upskill existing staff.
- ✓ Create new learning content to raise awareness of key digital technology products available.
- ✓ Secure the support of ‘Sector Champions’ at a national level to raise awareness.

Existing Skills Provision – is it aligned with need?

Primary Aims:

- to explore how well aligned HE provision is with industry need.
- to determine how well HE courses are aligned with NOS and/or provide support for sector change with a focus on sustainability and/or circular business models.

Methodology:

- web analysis, secondary data from websites of the top 50 UK universities for 'Art and Design' according to the Complete University Guide 2024.
- web searches focused on reference to 'sustainability' 'sustainable practice' 'NOS' 'national occupational standard'.

Existing Skills Provision – is it aligned with need?

Outcomes:

- 33 of the top 50 'Art & Design' HEIs offer fashion and textile courses.
- 45% appear aware of sustainability challenges (from course & module overviews).
- Sustainable practice was positioned alongside digitisation, societal & ethical factors.
- Equipping students with industry skills was regularly mentioned as a key aim.
- None of the courses mention National Occupational Standards.

Skills for Change

- ✓ **Broad skills base**
- ✓ **Connected supply chain**
- ✓ **Performance and regulation**
- ✓ **Planetary impact**

To understand product sustainability, to understand product performance and testing requirements, to have a good knowledge of cloth and the relationship between structure and fibre composition.

UKFT respondent

Recommendations

F&T Systemic Change:

- Industry consultation and co-development, STEAM focused, flexible responsive approach. Holistic. Alignment with NOS.
- EY though KS1-4 integration of materials knowledge.
- Connected pipeline approach to school–FE–HE–CPD transition.

Funding Bodies-targeted skills interventions:

- Mandate embedded skills activity for large-scale programmes.
- Collaborative F&T doctoral training centre.
- Innovator-investor connectivity & brokerage, business skills to encourage and support growth.

Acknowledgements

FUNDERS

Future Fashion Factory



Fashion Demonstrator



Research Team: Dr. Anja Connor-Crabb Dr. Sophie E L Bulman, Dr. Claire Bunyan, Dr. Yue Guo, Amy Hulme, Sue Rainton, Laura Solomon, Prof. Steven Toms, Dr. Alessandra Vecchi, Dr. Francesca Bonetti, Sally Angharad, Dr. Caroline Hemingray, Dr. Dawn Ellams, Dr. Lauren Junestrand, Bill MacBeth MBE, Dr. Kevin Almond

Cluster Directors: Prof. Stephen J. Russell, Prof. J. Harris



LITAC

Leeds Institute of Textiles and Colour

Thank you

Sue Rainton, LITAC Associate Director
s.rainton@leeds.ac.uk

Kevin Almond, Associate Professor
k.almond@leeds.ac.uk