

RESHAPING FROM WITHIN: ITALIAN FASHION AT THE INTERSECTION OF HERITAGE, CIRCULARITY AND DIGITAL TRANSFORMATION

CHIARA SCARPITTI

Università degli Studi della Campania, Italy
chiara.scarpitti@unicampania.it
Orcid 0000-0002-3905-3842

ALESSANDRA SPAGNOLI

Politecnico di Milano, Italy
alessandra.spagnoli@polimi.it
Orcid 0000-0001-9650-5094

Copyright: © Author(s). This is an open access, peer-reviewed article published by Firenze University Press and distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.
Data Availability Statement: All relevant data are within the paper and its Supporting Information files.
Competing Interests: The Author(s) declare(s) no conflict of interest

DOI:

Abstract

The special issue *RHITA. Reshaping Italian Fashion* gathers reflections, contributions and research outcomes from the PRIN 2022 PNRR project *RHITA. ResHaping made in ITALy*, which investigates circular and digital transitions for Italian fashion heritage and manufacturing through a consortium of five fashion design research universities: University of Campania “Luigi Vanvitelli”, Politecnico di Milano, University of Florence, IUAV University of Venice, and University of Siena.

Italian fashion operates today at the intersection of two interconnected transitions, circular and digital, that must be negotiated without sacrificing the territorial specificity, distributed knowledge, and craftsmanship excellence that define Made in Italy. RHITA frames these transitions not as external pressures to comply with, but as an opportunity for an endogenous process of reshaping in which design mediates heterogeneous forms of productive, relational, cultural and digital knowledge, turning fragmentation into a systemic resource. The project is structured around three interconnected priorities: the valorisation of human capital and collective intelligence; the affirmation of cultural and productive identity through recognition of local differences; and the implementation of circular and inclusive models through digitally-mediated stakeholder collaboration. The methodological approach is grounded in a design-driven perspective, combining cross-disciplinary convergence, participatory co-design, and a dialogic model of cooperation.

Keywords: *Made in Italy, Circular Fashion, Digital Inclusivity, Territorial Knowledge, Design-driven Innovation.*

Fashion is one of the cultural and productive systems through which contemporary societies articulate identity, meanings and consumption practices. As a complex system, fashion intersects aesthetic, economic, symbolic and material dimensions, operating simultaneously as a visual language, a device for identity construction, an industrial sector and a social phenomenon (Kawamura, 2008). In the Italian context, this multidimensionality takes on particular connotations, as fashion is not only a manufacturing industry, but also a cultural heritage layered over time (Mora, 2010), an expression of craftsmanship handed down through generations, and a testament to the deep relationships between territories, communities, and production

practices. It is in this perspective that Made in Italy transcends the purely productive dimension to become a collective narrative, a condensation of stories, places and skills that are embodied in material objects and the processes that generate them.

The ecological and digital transition of the fashion sector is now one of the most complex and urgent challenges for European production systems, raising not only technical and regulatory issues, but also the very possibility of preserving and reactivating this cultural heritage in ways that are compatible with the new imperatives of environmental sustainability and social responsibility (Niinimäki et al., 2020; Peters et al., 2021). While the European Union is introducing

a stringent regulatory framework - from the Strategy for Sustainable and Circular Textiles to the Regulation on Eco-design for Sustainable Products (ESPR) (European Commission, 2020) – which imposes requirements for eco-design, durability, extended producer responsibility and traceability, on the other hand, national production systems are called upon to find their own ways of responding to these transformations, capable of combining regulatory compliance with the preservation of the cultural and manufacturing specificities that constitute their distinctive value. At the same time, the acceleration of digital technologies – from collaborative platforms to blockchain traceability systems, from artificial intelligence to phygital solutions that integrate physical and digital dimensions – opens up unprecedented opportunities to rethink organisational models, supply chain logic and forms of coordination between actors distributed throughout the territory. However, the adoption of these technologies in the context of the Italian fashion system requires digital inclusivity strategies that reduce barriers to access and encourage local appropriation, capable of enhancing local knowledge.

In this scenario, the Italian case presents unique characteristics that make it a particularly significant laboratory for observing how sustainable and digital transition can be articulated in fragmented, territorially rooted production contexts based on distributed knowledge rather than large industrial concentrations. Roberto Camagni's framework of territorial capital is particularly illuminating here: each territory combines productive, cognitive, relational, social, human and environmental assets into a distinctive configuration (Camagni, 2009), and design can function as a mediating agent capable of activating and recombining these heterogeneous forms of capital towards sustainable innovation trajectories. The very characteristics that have historically determined its success, including the concentration of specialised skills in territorial districts (Brun & Castelli, 2008; Rinallo & Golfetto, 2006), the prevalence of small and medium-sized enterprises, and the integration of craftsmanship excellence and design innovation (Aage & Belussi, 2011), now present an ambivalent situation in the face of sustainability challenges: on the one hand, they represent valuable cultural and operational resources for building alternative models of development; on the other, they require forms of

innovation that are capable of responding to the specificities of the system (Tebaldi et al., 2022; Colucci & Vecchi, 2021).

In this complex transition scenario, the special issue *RHITA. Reshaping Italian Fashion* stems from the activities of the national research project PRIN 2022 PNRR *RHITA. ResHaping made in ITALy. Circular models for Italian fashion heritage and manufactures through digital inclusivity and conscious innovation*, funded by the Ministry of University and Research as part of the National Recovery and Resilience Plan. The project has consolidated a national network of five universities (University of Campania “Luigi Vanvitelli”, Politecnico di Milano, University of Florence, IUAV University of Venice, and University of Siena) spread across four regions (Campania, Lombardy, Tuscany, Veneto), representing four cultural and productive landscapes of Italian fashion. The rationale for this multi-regional configuration is not merely logistical: as Vandana Shiva argues, the disappearance of diversity eliminates alternatives, while transitioning to diversity as a mode of thinking and acting liberates a multiplicity of choices (Shiva, 1995). Applied to the Italian fashion context, this principle suggests that the resilience and innovative potential of Made in Italy reside precisely in its plurality of productive cultures – and that any transition model must preserve rather than flatten these differences. This territorial configuration reflects the distributed and specialised nature of the Italian fashion system: each region represents a distinct productive ecosystem, characterised by localised knowledge and skills ranging from the textile and tanning districts of Tuscany to the excellence of Como silk, from the sartorial tradition of Campania to the Venetian production of knitwear, leather goods and accessories. Yet this geography is not static. Drawing on Deleuze and Guattari's concept of re-territorialisation (Deleuze & Guattari, 1980), Italian fashion territories can be understood as spaces of mobility and relational tension rather than fixed containers of local identity: the technological and sustainability-driven transformations currently underway are simultaneously dissolving established district boundaries and generating new forms of trans-territorial aggregation, in which proximity is redefined around shared values, practices and innovation agendas rather than mere geographical contiguity. *RHITA* positions itself precisely within

this re-territorialising dynamic, building a network that does not flatten regional specificities but reconfigures their relations through collaborative, digitally-mediated forms of knowledge exchange. RHITA starts from the fundamental recognition that this dual transition (sustainable and digital) must emerge from a process of reshaping (redefinition, remodelling) that brings together cultural heritage, territorial knowledge, technological innovation and new forms of collaborative governance, taking the form of an endogenous process capable of enhancing the specificities of the Italian production system while orienting it towards environmental and social sustainability objectives. In this sense, the project investigated how the Italian fashion system is finding its own autonomous way to reorient itself towards more sustainable and circular models, focusing in particular on forms of innovation capable of redesigning organisational configurations, business models and production processes without sacrificing the cultural identity and manufacturing quality that constitute the distinctive core of Made in Italy. The very notion of reshaping as an endogenous and culturally grounded process of transition finds its most developed articulation in research that frames the competitive distinctiveness of Made in Italy not as a static inheritance but as a living system of values (Ranzo & Scarpitti, 2020), practices and productive intelligence to be actively renewed (Morace & Santoro, 2014).

RHITA's strategic objectives are structured around three interconnected priorities: enhancing human capital by strengthening collective intelligence as a driver of conscious innovation; affirming Italian cultural and productive identity by recognising differences and the heritage of local cultures and strengthening the manufacturing and production system in relation to the configuration of a new fashion value chain; implementing the Italian circular fashion system model through structured processes of awareness building and integration among stakeholders and the dissemination of inclusive digital operating models.

To achieve these objectives, RHITA has adopted a methodological approach rooted in a design-driven perspective shared by all the research units involved and nourished by theoretical-applied approaches and research methodologies specifically adopted

by each unit according to its own characteristics and expertise. By its very nature, the design-driven approach promotes sustainable and inclusive innovation, adopting a human-centred perspective that harnesses the potential of technology to introduce meaningful, culturally and socially responsible innovations (Ceschin & Gaziulusoy, 2016). This approach is based on three main pillars: the cross- and inter-disciplinary dimension, capable of bringing together humanistic, technological and design components by sharing a common language and shaping open and dialogical operational tools; the participatory and collaborative nature, which enables co-creation processes among all project participants to respond to the diverse needs of stakeholders; the ability to inform and visualise interpretative frameworks and operational models capable of guiding design strategies and actions, materialising new knowledge and directing innovation towards shared and inclusive solutions. The collaborative model underpinning RHITA finds a pertinent theoretical reference in Richard Sennett's notion of dialogic cooperation, which distinguishes between dialectic – a mode that risks erasing difference in its drive towards synthesis – and dialogue, which instead makes differences available for interpretation and shared understanding (Sennett, 2012). This distinction is operative in RHITA's methodology: the project does not seek to impose a unified vision across its five research units, but rather to establish a dialogic space in which complementary competences, distinct territorial roots and divergent research trajectories are brought into productive relation without being reduced to a common denominator.

The project was divided into three interconnected phases. "Shaping Fashion Made in Italy" conducted a critical review of the Italian fashion system as a multifaceted network of industries, territories and creative practices. Through three complementary mappings dedicated respectively to identity and values (museums, archives, institutions that preserve heritage), education (universities and schools that train future professionals in the sector in the four regions), and manufacturing (companies, industrial districts and supply chains that constitute the productive backbone, from clothing to accessories, from textiles to leather goods), this phase has provided a detailed picture of the contemporary Italian fashion landscape, connecting historical heritage and contemporary

values. “Reshaping Fashion Made in Italy” gathered the voices of companies, artisans and innovators through interviews that offer a living portrait of how Italian fashion is evolving, organised into thematic areas that reflect the transformations taking place (from material innovation to regulatory changes, from waste-to-value practices to new collaborative models) and connected to the three guiding dimensions of the project (circular, phygital, education), tracing a constellation of perspectives on how the Italian fashion system is imagining its future. “RHITA projects” embodied a co-design approach in which researchers, SMEs, designers and local communities collaborated to test innovative ideas through territorial pilots, translating heritage and design and manufacturing know-how into experimental practices that connect design and technology to imagine sustainable futures for Italian fashion. Across the three phases, the project developed and implemented a Web 3.0 digital platform, conceived as a collaborative ecosystem for networking, communication and dissemination of regional fashion supply chains, based on the principles of awareness, circularity and inclusiveness. The platform is configured as a “digital dialogue space” in which to reformulate the connections between institutions, training and local actors in the supply chain, investigating and enhancing the cultural and productive landscape of Italian fashion.

The contributions collected in this special issue present the results of these research activities, offering a comprehensive overview of the transformations taking place in the Italian fashion system and proposing project directions for a transition that is at once ecologically responsible, economically sustainable and culturally rooted in the specific characteristics of Made in Italy. The structure of the issue reflects the conceptual and methodological architecture of the project, divided into sections that progressively lead the reader from the theoretical-philosophical and systemic framework to concrete territorial practices, passing through the exploration of the environmental, social and productive dimensions of the transition underway.

SETTING THE STAGE. MATERIALITY, SYSTEMS, AND DIGITAL FASHION ECOSYSTEMS

The opening section of this special issue, *Setting the Stage. Materiality, systems, and digital fashion*

ecosystems, lays the theoretical, systemic and operational foundations for the entire special issue. The three contributions that comprise it offer complementary interpretations (philosophical-theoretical, systemic-design, and technological-infrastructure) to frame the complexity of the transition underway in the Italian fashion system, thus articulating the conceptual framework and operational tools through which the subsequent contributions can be read and brought into dialogue.

Chiara Scarpitti's contribution opens the volume with a radical theoretical framework: reading the RHITA project as a laboratory for rethinking the fashion system through the paradigm of expanded materiality. Drawing on Spinoza's materialism and Karen Barad's agential realism, the author proposes an intra-active vision in which matter, bodies, technologies and territories emerge as co-constituted and relational phenomena. Digital technology is conceived as a technology of material densification; sustainability as systemic productive friction, a critical device capable of making interdependencies and limits visible. The contribution closes with a ten-point manifesto that guides the reading of the subsequent contributions.

Alessandra Spagnoli addresses one of the constitutive tensions of the Italian fashion system, placing the structural condition of fragmentation (industrial districts, SMEs, localised knowledge and relational governance) in relation to the systemic needs of the circular transition. The contribution argues that circularity is not a technical-technological challenge, but an organisational and cultural problem, requiring the simultaneous design of coordination infrastructures, shared meanings and hybrid processes. Fragmentation thus ceases to be seen as a constraint and emerges as a productive condition from which new forms of horizontal coordination can arise.

The third contribution, by **Michela Carlomagno, Francesco Izzo and Rosanna Veneziano**, completes the framework of the special issue by presenting the RHITA digital platform as a socio-technical ecosystem for knowledge sharing among actors in the fashion supply chain. Through a comparative analysis of case studies, the paper identifies recurring patterns and design opportunities, laying the foundations for the

definition of pre-design requirements for accessible, low-tech and environmentally responsible platforms.

ROOTS & REACTIVATION. FASHION HERITAGE AND TERRITORIAL IDENTITIES AS A FOUNDATION FOR RESHAPING

The first thematic section, *Roots & Reactivation. Fashion heritage and territorial identities as a foundation for reshaping*, brings together three contributions that examine the cultural heritage of Italian fashion as an active epistemic resource, investigating its potential to guide the transformation processes of the contemporary production system.

Ornella Cirillo e Anna Chiara Bonanno present the results of a systematic mapping of fashion heritage in Campania, examining archives and museums in their function as territorial cultural infrastructures. Through the adoption of a critical framework of analysis, the research highlights the strengths and weaknesses of regional heritage systems in relation to the transformations underway, providing an overview of the specific features that distinguish Campania's heritage within the broader national landscape and identifying trajectories for its critical and contemporary enhancement.

Gabriele Monti addresses the theme of Made in Italy archives by developing operational definitions and mapping actions. The contribution argues that fashion archives are not mere repositories of historical memory, but active agents in contemporary design practice: exhibitions and curatorial projects become devices for reactivating historical knowledge, making it operational for present and future innovation processes.

The section concludes with **Alessandra Varisco**, who proposes a definition of design and production heritage through the case study of the workshop *Disegni, Illustrazioni, e Cartamodelli* (Drawings, Illustrations, and Paper Patterns). The contribution demonstrates how the use of phygital practices for the reactivation of historical sources of fashion manufacturing can constitute a methodological device capable of mediating between heritage documentation and contemporary production knowledge in the context of the reshaping of the

Italian fashion system.

DIMENSIONS OF TRANSITION. ENVIRONMENTAL, SOCIAL AND SYSTEMIC FASHION TRANSFORMATIONS

The second section, *Dimensions of Transition. Environmental, social and systemic fashion transformations*, brings together three contributions that explore the environmental, productive and social dimensions through which the Italian fashion system is undergoing a structural transformation. The three studies critically examine the conditions of possibility for transition, highlighting both the opportunities and vulnerabilities that characterise the Italian production ecosystem in the face of new sustainability requirements.

The contribution by **Andrea Quartu, Paolo Franzo and Elisabetta Cianfanelli** examines the transformations underway in the Italian fashion system, questioning the contemporary conditions under which Made in Italy can be reproduced and reformulated. Through the analysis of circular practices, phygital approaches to fashion and informal education initiatives, the paper provides a detailed map of the paths of transformation that are reshaping the territorial and productive identities of Italian fashion.

Margherita Tufarelli introduces the perspective of waste ecologies to interpret the ecological transition of Italian fashion manufacturing. Pre- and post-consumer waste streams, long neglected or treated as residues, become strategic sites for innovation, while revealing structural vulnerabilities and unprecedented opportunities in specialised Italian industrial districts. The contribution proposes circular pathways to orient manufacturing systems towards regenerative models.

The contribution by **Annamaria Recupero, Giuseppe De Filco and Patrizia Marti** introduces the social component into the debate on sustainability, recognising it as a constitutive and not an accessory part of sustainable fashion. The article examines the relationship between fashion, disability and bodily diversity, proposing inclusive design approaches capable of overcoming normative bodily standards, orienting the system towards authentic forms of social responsibility and design inclusion.

GROUNDING PRACTICES. SUPPLY CHAINS, MANUFACTURING, AND CIRCULAR FASHION

The third section, *Grounding Practices. Supply chains, manufacturing, and circular fashion applications*, grounds the theoretical and systemic reflections of the previous sections in the concrete reality of practices, supply chains and case studies located in the territories of Made in Italy. The four contributions that comprise it document practical experiences that translate the issues of circularity, territorial regeneration and sustainable consumption into operational devices, collaboration models and intervention protocols.

Edoardo Brunello analyses the tanning and leather goods supply chain, a strategic sector for Made in Italy and fundamental to the economies of the territories involved in RHITA, as an exemplary case of how territorial systems negotiate global pressures while maintaining their local specificity. The international competitiveness of the Italian fashion system increasingly depends on its ability to integrate production specialisation, sustainable innovation and shared cultural values, and universities are emerging as a privileged space for mediating between distributed creativity and responsible production practices.

Roberto Liberti and Luigi Chierchia present Yamamay Reloaded, a project that integrates upcycling practices on unsold fast fashion garments with principles of sustainable development. Developed through collaboration between universities, social enterprises (Prism S.r.l.) and brands (Yamayay), the case study demonstrates how value co-creation models can generate social, environmental and economic impact, while addressing the challenges of textile waste in Italian fashion supply chains.

Entering the Wellness Textile sector, **Maria Antonietta Sbordone and Ilenia Amato** propose Adaptive Doing as an operational strategy for the regeneration of production systems. Conceived as a dynamic and situated design paradigm, the approach integrates adaptive processes and experimental practices oriented towards sustainability, well-being and territorial resilience, demonstrating how the enhancement of local resources and traditional knowledge can drive material innovation.

The section concludes with a contribution by **Gabriela Fabro Cardoso and Valeria M. Iannilli**, which explores how fashion consumers interpret sustainability today, highlighting the gap between stated intentions and actual purchasing behaviour. Through participatory workshops based on scenarios, narratives and visual tools, the research reconstructs the attitudes, motivations and obstacles that influence everyday choices, proposing co-design approaches to bridge the intention-action gap in sustainable fashion consumption.

A SHARED LEXICON

The volume concludes with *A Shared Lexicon*, a section that distils and establishes the language that emerged from the entire RHITA project. The glossary, edited by **Raffaele La Marca, Annarita Bianco and Michela Musto**, provides conceptual tools for navigating the future of fashion ecosystems, systematising the key terminology that emerged from the research and building a shared vocabulary for understanding design innovation, value chains, knowledge infrastructures and digital systems across the sector. The lexicon is configured as a device that enables dialogue between different actors, disciplines and operational scales, establishing a common syntax for the transformation of the fashion system.

REFERENCES

- Aage, T., & Belussi, F. (2011). From fashion to design: Creative networks in industrial districts. In C. Belussi & U. Staber (Eds.), *Managing situated creativity in cultural industries* (pp. 103–118). Routledge.
- Brun, A., & Castelli, C. (2008). Supply chain strategy in the fashion industry: Developing a portfolio model depending on product, retail channel and brand. *International Journal of Production Economics*, 116(2), 169–181. <https://doi.org/10.1016/j.ijpe.2008.09.011>
- Camagni, R. (2009). Per un concetto di capitale territoriale. In D. Borri & F. Ferlaino (Eds.), *Crescita e sviluppo regionale: Strumenti, sistemi, azioni* (pp. 66–90). Franco Angeli.
- Ceschin, F., & Gaziulusoy, I. (2016). Evolution of design for sustainability: From product design to design for system innovations and transitions. *Design Studies*, 47, 118–163. <https://doi.org/10.1016/j.destud.2016.09.002>
- Colucci, M., & Vecchi, A. (2021). Close the loop: Evidence on the implementation of the circular economy from the Italian fashion industry. *Business Strategy and the Environment*, 30(2), 856–873. <https://doi.org/10.1002/bse.2658>
- Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: Capitalism and schizophrenia* (B. Massumi, Trans.). University of Minnesota Press. (Original work published 1980)
- European Commission. (2020). A new circular economy action plan: For a cleaner and more competitive Europe.

- Publications Office of the European Union. <https://doi.org/10.2779/05068>
- Kawamura, Y. (2008). *Fashion-ology: An introduction to fashion studies*. Berg.
- Mora, E. (2010). *Geografie della moda*. Franco Angeli.
- Morace, F., & Santoro, B. (2014). *Italian factor: Moltiplicare il valore di un Paese*. Egea.
- Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. *Nature Reviews Earth & Environment*, 1(4), 189–200. <https://doi.org/10.1038/s43017-020-0039-9>
- Peters, G., Li, M., & Lenzen, M. (2021). The need to decelerate fast fashion in a hot climate—A global sustainability perspective on the garment industry. *Journal of Cleaner Production*, 295, 126390. <https://doi.org/10.1016/j.jclepro.2021.126390>
- Ranzo, P. & Scarpitti, C. (2020). Clothes Free Fashion. Il paesaggio valoriale della moda italiana. *MD Journal - Designed & Made in Italy*, 9, 136–145.
- Rinallo, D., & Golfetto, F. (2006). Representing markets: The shaping of fashion trends by French and Italian fabric companies. *Industrial Marketing Management*, 35(7), 856–869. <https://doi.org/10.1016/j.indmarman.2006.05.015>
- Sennett, R. (2012). *Together: The rituals, pleasures and politics of cooperation*. Yale University Press.
- Shiva, V. (1993). *Monocultures of the mind: Perspectives on biodiversity and biotechnology*. Zed Books.
- Tebaldi, L., Brun, A., & Bottani, E. (2022). Evidences on sustainability issues in the fashion supply chain: An empirical study in Italy. *Sustainable Production and Consumption*, 33, 651–663. <https://doi.org/10.1016/j.spc.2022.07.032>