



Presented by:

- Divya Padala
- Dhruvi Naik
- Gowtham Pala
- Nimit Taswala

H&M's Operational Innovations in the Fashion Retail Industry

“Leveraging sustainability,
Technology, and Demand
Forecasting for Efficiency”



H&M's Operational Innovations

H&M is a global leader in the fast-fashion industry, known not only for its affordable and trendy clothing but also for its commitment to operational excellence. The company stands out for integrating sustainability, customer experience, and advanced technology into its retail operations.

In this presentation, we will focus on three main areas where H&M has innovated:

- ~ Sustainability in the supply chain: through recycling, responsible sourcing, and sustainable materials.
- ~ Automated checkout and mobile payment options: implemented to streamline the shopping experience.
- ~ Demand forecasting: using data analytics to manage inventory and meet consumer demands.

~ Sustainability Initiatives in the Supply Chain

One of H&M's most impactful innovations is its commitment to sustainability within its supply chain.

Key initiatives include:

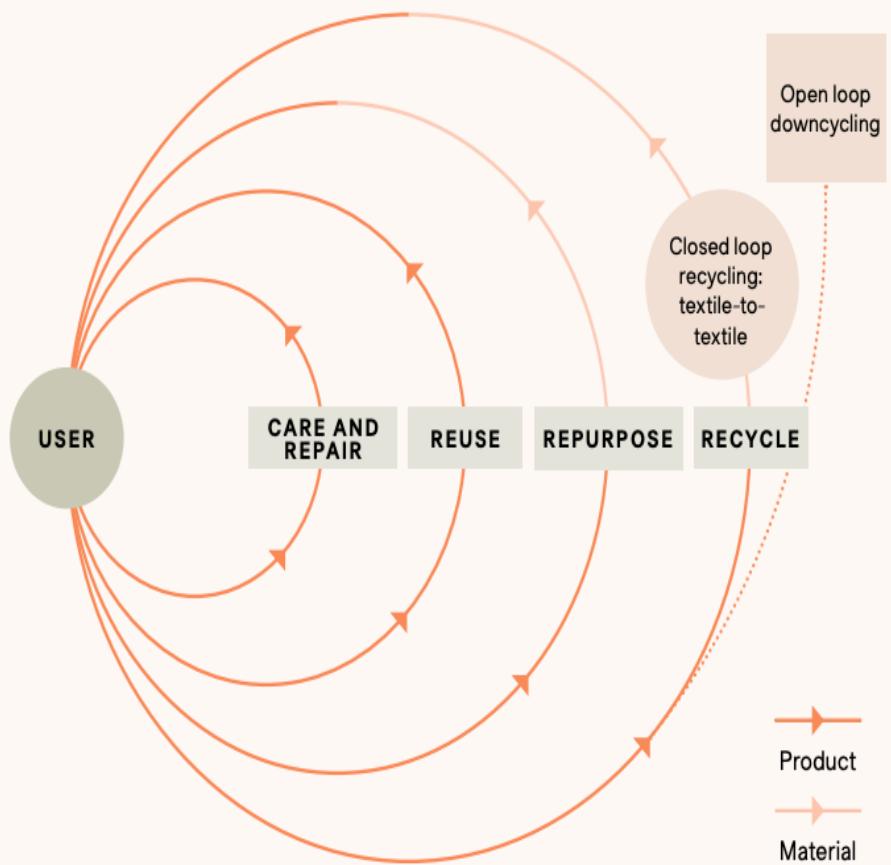
Recycling Programs: H&M allows customers to bring in old clothes for recycling. These materials are often used in their “Conscious” collection, which promotes eco-friendly fashion.

Sustainable Materials: H&M uses recycled materials, like recycled polyester, and organic options, like organic cotton. These sustainable materials reduce environmental impact.

Circular Fashion: The goal is to close the loop in fashion by designing products that can be reused or recycled, minimizing waste.

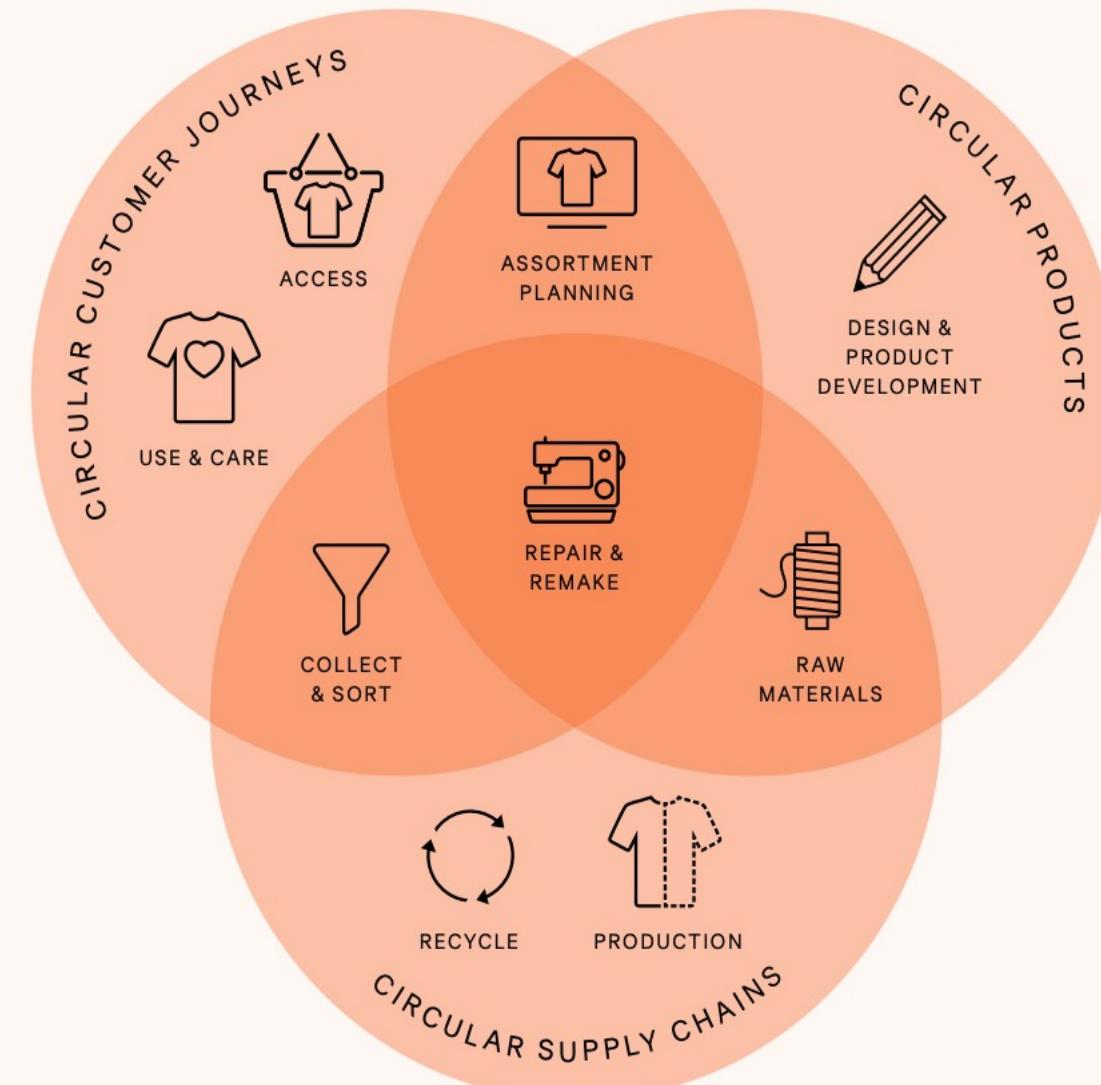
These initiatives have operational benefits, like reduced material costs and a more transparent supply chain. They align with H&M's commitment to being climate positive by 2040, aiming to drastically reduce emissions and environmental footprint. Through partnerships with sustainable suppliers, H&M ensures they meet ethical and environmental standards.

Customer-facing circular business models



Circular business models enable a product to circulate many times between users or customers. A product may be repaired, reused as a product (for example via a second-hand purchase), reused as

materials and remade into a new product, or recycled. Recycling can return materials to the fashion ecosystem (closed loop) or send them for use as resources in another industry (open loop).



Our materials vision

Our vision is to move towards a resilient and circular materials sector that stays within planetary boundaries, enhances livelihoods, and thrives on innovation.

We take a progressive approach to materials, continuously evaluating our material choices to reflect the latest science, best practice, and knowledge. This ensures we can quickly respond to shifting materials markets caused by global events, and societal and environmental change.

Our vision is built on three pillars:

- **Recycled.** We prioritise post-consumer closed-loop recycled materials that can be reused and recycled again.
- **Regenerative.** Our key virgin materials should be produced using regenerative agricultural practices that help improve soil health and store carbon while enhancing livelihoods and ecosystems.
- **Responsible.** We source materials with the aim to reduce environmental impact, respect human rights and protect animal welfare. We have a risk-based approach in our raw material sourcing to avoid any severe negative impacts on human rights and the environment. This work is guided by the OECD Due Diligence Guidance for Responsible Business Conduct, as well as by relevant H&M Group policies, including our Responsible Business Conduct Policy, Environmental Policy, Human Rights Policy, and Animal Welfare Policy.



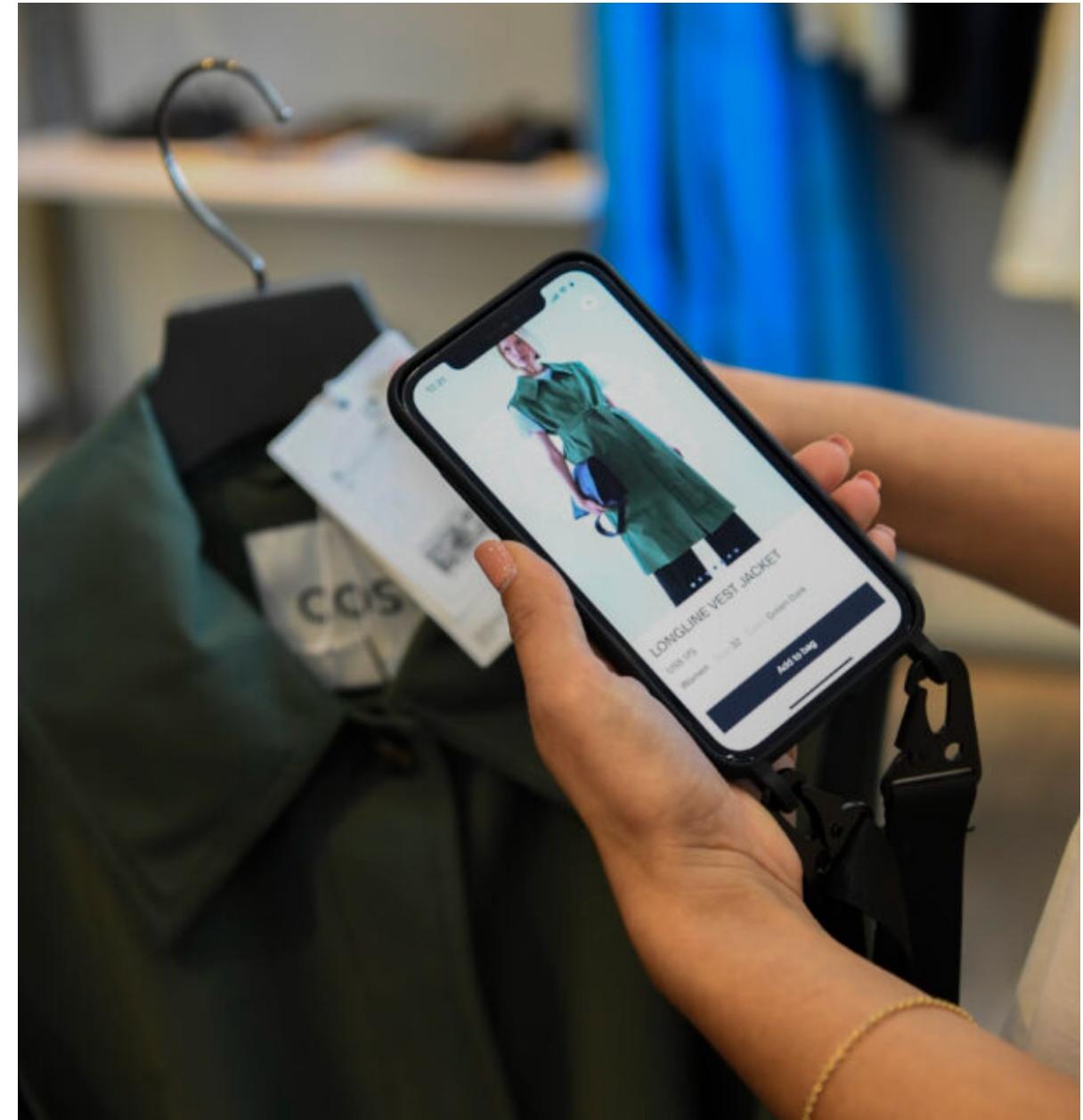
~ Automated Checkout & Mobile Payment Options

H&M has also integrated technology to improve the shopping experience with:

Automated Checkout: By implementing self-checkout kiosks and RFID technology, H&M has sped up the checkout process. This reduces customer wait times and makes shopping more convenient.

Mobile Payments: Customers can use contactless payment options, which became especially relevant post-pandemic. This integration supports a safer and more efficient shopping experience.

These technologies reduce the need for staff at checkout counters, allowing employees to focus on customer service. Automated checkout also cuts down on operational costs related to cash handling and labor. The initial setup is an investment, but the long-term savings in labor and increased customer satisfaction provide a solid return on investment, especially when scaled across U.S. stores.





H&M Group is now rolling out a pilot in COS stores, US, where tech-enabled in-store shopping solutions provide visitors with seamless payment options, personalized styling recommendations, faster checkout, and upgraded delivery/return options. This is one example of H&M Group's ambition to pilot new technologies that meet customers' demands.

~ Approach To Fast Fashion and Demand Forecasting

To support its fast-fashion model, H&M has adopted advanced demand forecasting techniques.

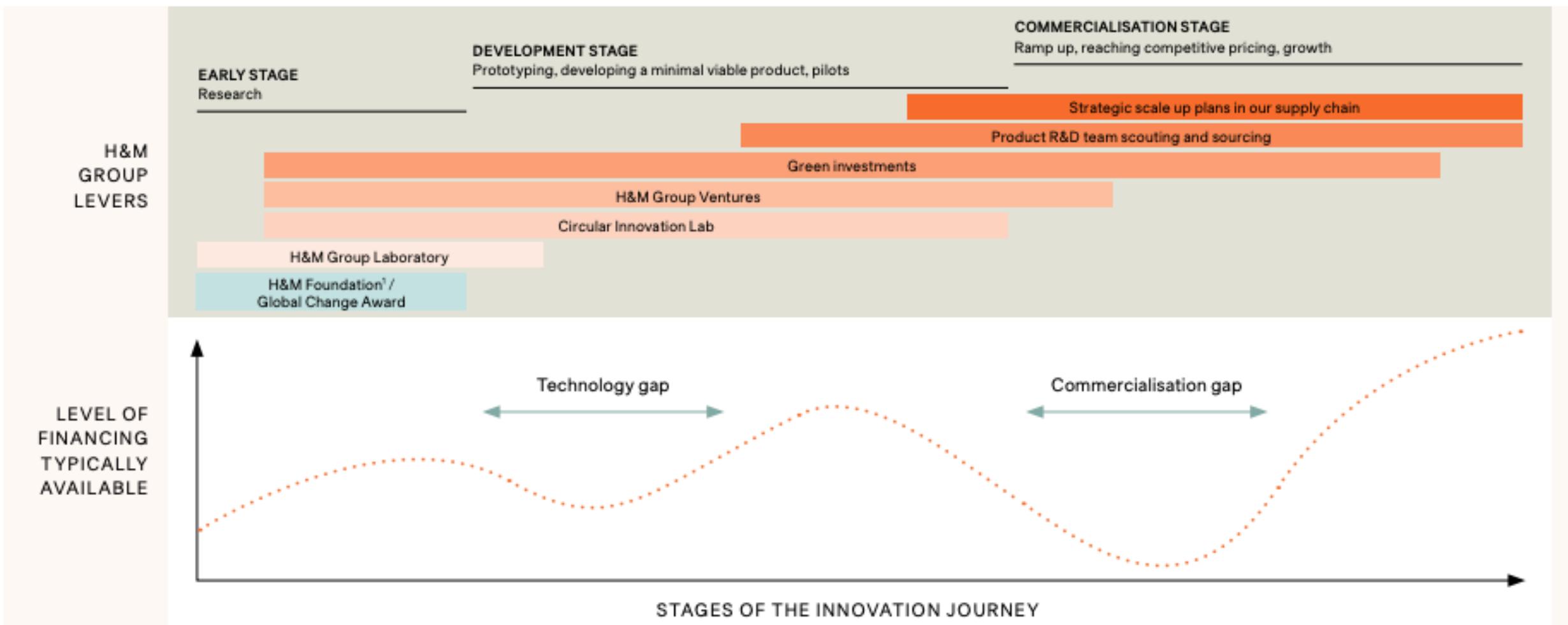
Here's how it works:

Demand Forecasting Techniques: H&M uses data analytics to predict trends and manage inventory, allowing the company to meet customer demand efficiently and reduce the risk of overstock or understock.

Comparison with Traditional Retail Models: Unlike traditional retailers that plan months in advance, H&M's model allows it to quickly design, produce, and distribute new items in response to trends. This agility is a key factor in its success in the fast-fashion market.

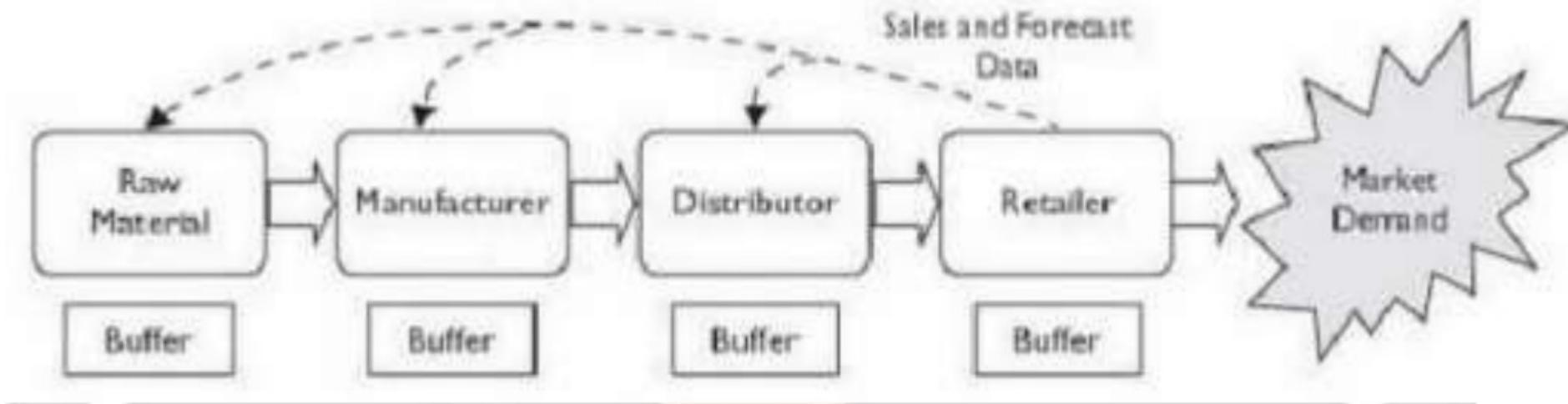
Operational and Financial Impacts: This approach leads to faster inventory turnover, lower markdowns, and reduced storage costs. It also frees up cash flow and reduces the financial risk associated with unsold inventory.

Investing in material and process innovation



Investing in innovation is a core part of our strategy that we dedicate significant resources to across H&M Group. We take a holistic approach, with the aim to support promising innovators through the common gaps in funding that occur at the development and commercialisation stages. We work with innovators at the start of their journey through our investment arm H&M Group Ventures and our Circular Innovation Lab — read more on page 31. H&M Foundation also supports fashion innovation at an early stage. To help bridge the commercialisation gap we continually support innovators to discuss material volume requirements with our brands and connect them closely to our supply chain network. Our brands make strategic plans and commitments with our supply chain. Our Green Investment arm engages at all stages of the innovation journey to fulfil our sustainability objectives through a cost-impact effective investment strategy.

¹ The H&M Foundation is a global non-profit foundation dedicated to finding, funding and accelerating solutions for a socially inclusive and planet positive textile industry. The Foundation is privately funded by the Stefan Persson family — founders and main owners of the H&M Group.



Demand Forecasting Techniques

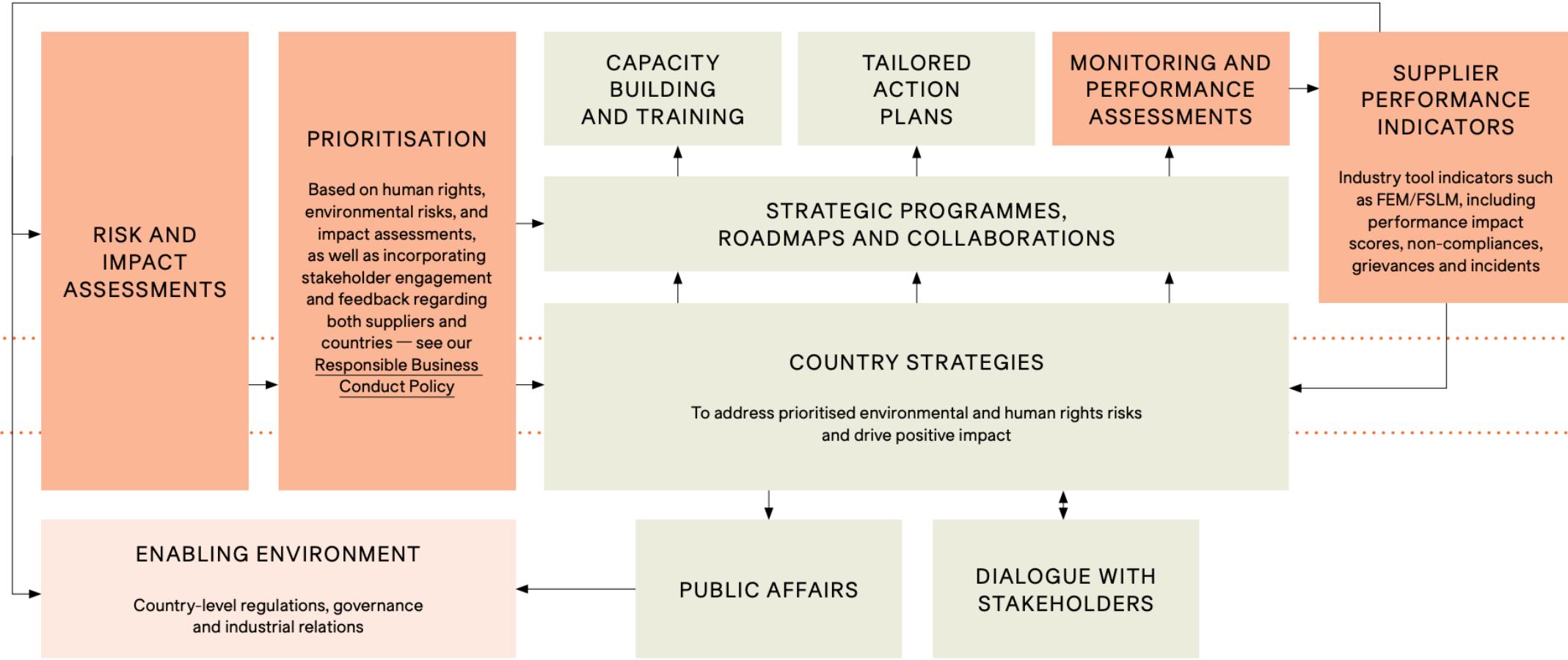
- Demand forecasting in supply chain operation plays a vital role in deciding the efficacy of a firm. Forecasting demand is a big challenge for a company.
- H&M has considered its supply chain as a single entity which help them to cater to their actual demand of a product. H&M thoroughly study's the end user demand data instead of forecasting demand based on orders received. H&M keeps an eye on uncertain events which might interrupt the manufacturing process in future so they keep their Buffer inventory ready which will not hurt production or sales. Buffer is determined by the unforeseen events in market demand and service required by the market.
- H&M also uses the data from their retail stores(POS) in forecasting the demand of certain products which are favorites among customers. H&M always try to fulfill their customer's demand effectively and efficiently and also tries to eliminate distortion in its supply chain and keeping themselves well versed with current fashion seasons.

Supply chain management ecosystem

Country / community level

Industry level

Factory level



Context



Assessment tools



Drives action

Financial & Environmental Impact

H&M's innovations bring both financial and environmental benefits:

Financial Impacts: By cutting costs on materials through recycling, reducing labor needs with automation, and increasing inventory turnover, H&M achieves significant cost savings. Additionally, by enhancing the customer experience, it drives sales and builds brand loyalty.

Environmental Impacts: Through its sustainability initiatives, H&M has managed to reduce its carbon footprint by investing in energy-efficient practices and sustainable materials. The brand's circular fashion approach helps reduce waste by encouraging recycling and reuse.

These financial and environmental benefits make H&M's business model more resilient and contribute to its long-term growth in a market that increasingly values corporate responsibility.

ENVIRONMENTAL IMPACT KPIS

KPI	2023	2022	2021	2020	TARGET OR GOAL
Climate: % absolute reduction (scope 1 and 2) in GHG emissions compared with 2019 baseline* ^{1,2,3,4}	-24	-10	-22	+12	-56% by 2030
Climate: % absolute reduction (scope 3) in GHG emissions compared with 2019 baseline* ^{1,2,3,4}	-22	-15	-10	-12	-56% by 2030
Climate: % renewable electricity in our own operations*	94	92	95	90	100% by 2030
Water: % absolute reduction of freshwater consumption against a 2022 baseline ⁴	-14	Baseline year	-	-	-30% by 2030
Water: % facilities with direct discharge that meet prioritised ZDHC Conventional Parameters — Foundational Level	93	Baseline year: 74	-	-	100% by 2025
Chemicals: % Manufacturing Restricted Substances List compliance for chemical inputs ⁵	97	97	95	88	100%

How we address our environmental & social impact areas

	STEP	ACTIONS
ACTIONS FOR WIDER AND ACCELERATED CHANGE WITHIN AND BEYOND OUR VALUE CHAIN	5. Advocate for systemic change	<ul style="list-style-type: none"> — Influence sustainability legislation and policies in our sector and beyond to further accelerate or initiate the transformation. — Engage and collaborate with business partners, peers, customers, and stakeholders from civil society to enable and inspire change.
IMPACT TARGETS	4. Contribute to addressing impact	<ul style="list-style-type: none"> — Form partnerships to invest in positive impact outside our value chain, such as innovations that transform the wider fashion industry. — Protect and restore high value ecosystems and priority basins to preserve natural services.
FOUNDATION	3. Address direct & indirect impact	<ul style="list-style-type: none"> — Prioritise impacts based on strongest linkage to business activities, known salient issues and highest materiality score. — Reduce negative effects and achieve progress on objectives to create lasting impact through mitigation activities.
	2. Calculate & disclose impact	<ul style="list-style-type: none"> — Collect verifiable data in accordance with the latest industry models and science. — Disclose results in line with legal requirements and communication best practice.
	1. Identify, quantify & mitigate risk	<ul style="list-style-type: none"> — Identify risks and measure financial, people and planet effects in line with the latest science and prioritise risks based on international frameworks. — Co-create governance structures and management systems to follow up on business plans to mitigate risks or build resilience.

2023 highlights

For topic-specific performance data read the relevant sections throughout this report, and the summary tables in the [Annual and Sustainability Report](#).



22%

reduction in scope 3 emissions from our 2019 baseline, excluding indirect use-phase emissions.



29%

reduction in electricity intensity in our stores from our 2016 baseline, **exceeding our 25% goal** 7 years early.

Signed a letter of intent for a co-investment in the first early-development

offshore wind project

in Bangladesh through the [Global Fashion Agenda](#).



Achieved an absolute **plastic packaging reduction** of

55%

compared to our 2018 baseline.

Increased our **share of recycled or sustainably sourced materials** to

85%

including **25%** recycled materials.

Launched

Looper Textile Co.

an independent joint venture with Remondis that provides local municipalities and retailers with solutions to extend the useful life of unwanted garments via **reuse and recycling**.

One of

17

companies piloting the **Science Based Targets Network (SBTN)** method including the target validation process for land and freshwater.



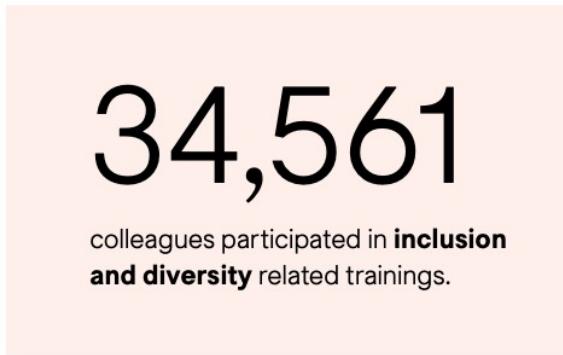
65%

of worker representatives in our tier 1 production supply chain are **female**.

Around

SEK 2.1 billion

spent on recycled and **sustainably sourced materials** and decarbonisation.



34,561

colleagues participated in **inclusion and diversity** related trainings.



200,000+

workers in our supply chain responded to the **worker voice survey**, representing 783 supplier factories.

More than

686,000

beneficiaries of **community engagement activities**.

Key sustainability goals

Climate

- **2030:** Reduce absolute scope 1 and 2 greenhouse gas (GHG) emissions by 56 percent (baseline 2019).
- **2030:** Reduce absolute scope 3 greenhouse gas (GHG) emissions by 56 percent (baseline 2019).

Water & oceans

- **2030:** Reduce absolute total freshwater use by 30 percent (baseline 2022).

Biodiversity & land

- **2025:** 100 percent wood and wood-based material in products and packaging to come from either Forest Stewardship Council (FSC) certified sources or be made of recycled material.

Resource use

- **2025:** 30 percent of our materials to be recycled.
- **2030:** 100 percent of our materials¹ to be either recycled or sustainably sourced.
- **2030:** aim for 50 percent of our materials to be recycled.

Social impact

- **Ongoing:** Safe & inclusive workplaces for all.
- **Ongoing:** All sites have access to remedy.

Review our performance against our sustainability goals pages 80-88. More detail is available in our Sustainability Disclosure at hmgroup.com/sustainability/sustainability-reporting.

Summary

Key Insights: H&M's integration of sustainability and technology demonstrates how operational innovations can enhance both profitability and brand reputation. Automated checkout, sustainability in supply chains, and demand forecasting are valuable tools that contribute to H&M's success.

Implications for the Fashion Retail Industry: H&M's practices could serve as a model for other retailers. By balancing profitability with sustainability, H&M has set an example for the industry on how to respond to consumer demands for ethical and efficient business practices.

Final Thoughts

As H&M continues to scale these initiatives, it will likely face challenges, especially as it expands sustainability efforts. However, its commitment to innovation has proven beneficial, and these practices are essential for H&M to remain competitive and relevant.

References

Here are the sources we used in our research:

Below are the reports of previous years sustainability report:

- [Sustainability Report 2023](#)
- [Sustainability Report 2022](#)

Below are the references:

- [Insight into Supply chain Strategy](#)
- [Sustainability Disclosure](#)
- [H&M goes Digital.](#)
- [H&M Strategy.](#)
- [An Analysis Of Supply Chain Management](#)
- [Tech enabled shopping experiences](#)
- [Sustainability & Circulatory](#)

THANK YOU

