H&M Yours a quick fix for fast fashion.

Our partnership with **H&M Lab** illuminates a way out of fast fashion's downward spiral.

Here's how we integrated a more sustainable production on demand model into one of their traditional mass production lines.

THE BACKGROUND

Fashion brands of all sizes have a very expensive problem: excessive unsold inventory. While the industry is still growing as a whole, production remains inefficient and overstock is eating into per-unit profits.

H&M Lab is the innovation wing of the retail giant and their remit includes exploring sustainable solutions to this enormous challenge. In 2018 – the same year it was reported H&M was sitting on over $4 billion of unsold stock – we were approached by H&M Lab Germany to trial our production on demand model at a scale larger than any of our tests.

They saw in us potential to fix their overproduction problem by offering more consumer-centric products. Of course, we jumped at the opportunity!

THE CHALLENGES

The ultimate goal was to reduce lost sales. That means eliminating two things: production of clothes that don't sell and stockouts of clothes that do.

Traditionally, lost sales are an unavoidable part of a mass production model that is inherently speculative. In order to scale production, the design of every product, the sizes offered, and the order quantities are informed by what is essentially educated guesswork.

• DESIGN

Work typically begins on a product long before it hits the shelves. For smaller companies this process can take about a year, sometimes longer. At H&M it usually takes 6-12 months. Even so, there is always a risk of demand plummeting in that time.

• SIZING

Standardized sizing is one of many compromises necessary for traditional mass production to work. Consumers are often forced to decide between an imperfect fit or miss out on a product they otherwise love.
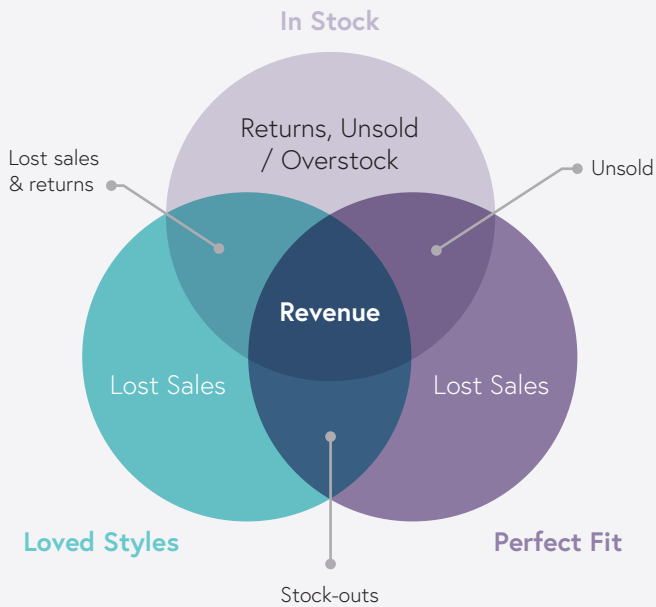
76%

This is the reason for a massive 76% of fashion retail returns!

• QUANTITY

Not only is it expensive to produce products that don't sell, it's also expensive to store and, eventually, dispose of them. For mass-produced products, the best thing that can happen is that they're popular enough to sell out. But this is far from an optimal outcome.

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How many potential sales are lost due to that product hitting a ceiling?

In Stock

Returns, Unsold / Overstock

Lost sales & returns

Unsold

Revenue

Lost Sales

Lost Sales

Loved Styles

Perfect Fit

Stock-outs

In Stock

Revenue with

ZyseMe

Loved Styles

Perfect Fit

There were two other factors to consider:

• VALUE

It goes without saying that consumers actually have to want the products offered. With the growing demand for sustainably produced products, it's possible that H&M might attract new customers by tackling overproduction and the resulting emissions and landfill. But this is hardly a tangible benefit. It was clear that we'd need to add value to the products in other ways too.

• INTEGRATION

H&M is a well-established company. They require adaptive solutions, not disruptive ones. Although we were free to experiment, it was essential that our solution integrate seamlessly with H&M's core business, their various stakeholders, and established processes.

Naturally, H&M Lab wasn't going to build us our dream on-demand factory. We would need to integrate with one of their existing manufacturers – all of whom had their own concerns about how we might affect their output. But we were prepared for this!

THE SOLUTIONS

• FRONT-END

Our sizing algorithm, the Zyser AI, was a key point of interest for H&M Lab. The sizing process was projected to become a core part of the customer journey, but in our initial discovery conversations we learnt that integrating the plug-in sizing questionnaire with H&M's online store wouldn't be possible until the product had been proven with a soft launch. A standalone H&M Lab site would be built for trialling new products. Our collaboration would be the inaugural offering, under the title ***H&M Yours***.

We settled on one of H&M's best-selling products for the launch: men's easy-iron slim-fit shirts. As well as offering customers their unique size, they would also be able to select between 100% organic cotton fabrics and colours. As well as making the offer more attractive, this would also allow us to test basic customization tools while keeping order management simple for the manufacturer at this early stage.

• PATTERN

Our sizing algorithm, the Zyser AI, was a key point The next step was to assess H&M's pattern and integrate it into our system. We prepared the patterns for custom-sizing and automated data creation, then ran tests to ensure the data and files we sent to production were in the form and format they required. We then needed to produce samples.

This meant visiting their selected manufacturing partner in Turkey to ensure our processes were aligned with their pattern and production experts. It is also possible to do this remotely, but in-person we were able to complete this step and run three rounds of sampling within just two days.

With this initial integration step finished, the manufacturer would now be able to bypass their pattern room completely with every new batch of custom orders.

• PRODUCTION

The manufacturer was used to producing volumes of 50,000 units per week. They were initially concerned that our pilot wouldn't fit easily within their day-to-day business – especially early on, when low consumer awareness would naturally mean low order quantities.

We alleviated these concerns by developing a lean and flexible process that could be built upon as sales increased. This enabled the manufacturer to decide how and when it would be worth ramping up efficiency.

We launched with the capacity to handle up to 250 units per week.

These are cut by hand and produced in their sample room. For higher volumes, capacity can be expanded by moving production into a dedicated assembly line and making use of the manufacturer's automatic cutting machines. **This would increase capacity by 1200% – up to 3000 units per week!**

This diagram compares H&M's standard mass production process (left) to the current on-demand process (middle) and the one we're scaling up to (right):
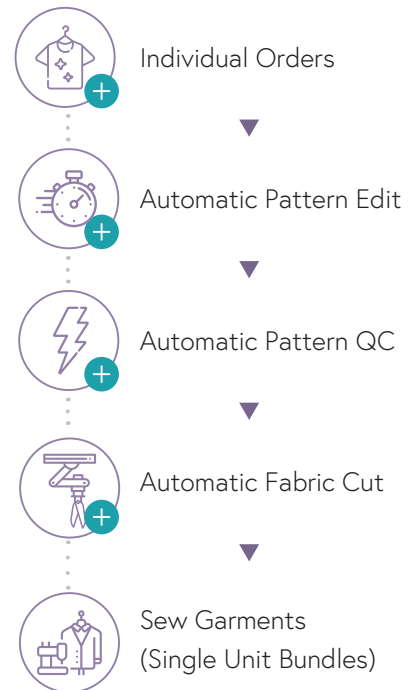
H&M STANDARD PROCESS	H&M LAB + ZYSEME CURRENT PROCESS	H&M LAB + ZYSEME SCALED-UP PROCESS
Bulk Pre-order	Individual Orders	Individual Orders
▼	▼	▼
Manual Pattern Edit	Automatic Pattern Edit	Automatic Pattern Edit
▼	▼	▼
Manual Pattern QC	Manual Pattern QC	Automatic Pattern QC
▼	▼	▼
Automatic Fabric Cut	Manual Fabric Cut	Automatic Fabric Cut
▼	▼	▼
Sew Garments (Large Batch Bundles)	Sew Garments (Single Unit Bundles)	Sew Garments (Single Unit Bundles)

We've marked the pros (green) and cons (red) of each process. As you can see, the current process saves time in the pattern room but this is offset somewhat by cutting the fabric manually. However, with scale, the manufacturer will switch to the automatic cutting machines. (We're also close to confirming elimination of the few remaining automated pattern kinks, meaning manual quality control will soon be a thing of the past.)

• ORDER MANAGEMENT

Order management is, of course, essential to the production process. Each custom order includes automatically nested marker files and quality control sheets, which enable the manufacturer to structure workflow and track the individual units throughout production.

We began by sending these files in batches twice a week. This makes the transition to on-demand easier for the manufacturer to manage alongside logistics planning. Once they're able to start production the moment an order arrives, the files will be sent one by one.

Markers and QC sheets are sorted and batched by fabric and colour. This ensures all shirts of the same fabric are cut before moving on to the next fabric roll, saving time and material. The QC sheet contains all vital information and also acts as an identifier throughout the process.

We also provide the manufacturer with daily updates on fabric usage so they can replenish their stock just in time.

THE BENEFITS

There were several clear benefits for the manufacturer:

• Low initial investment.

• Easy integration – one-time setup process similar to typical preparations for new patterns.

• Able to bypass pattern room after initial integration.

• Simple, hands-off order management – direct from customer order to ready-to-cut production files.

• Continuous orders mean production line capacity can be expanded in response to demand.

• Materials are prestocked according to forecasted demand but not used until the final item is ordered, ensuring higher sell-through rates.

• Single-unit nesting ensures efficient and accurate quality control for individual garments while maintaining comparable fabric yield to multi-unit nesting.

The sales benefits were especially positive:

• Increase in opportunity cost margin (ca. 10%) due to no stockouts.

• Eliminates need for product discounting.

• A typical alphanumeric size range can be easily expanded closer to the equivalent of XXS to 7XL. More sizes means broader market appeal.

• Close to zero returns!

Single-unit nesting
— approx. 1.54m /shirt
(0.35m in linear waste)
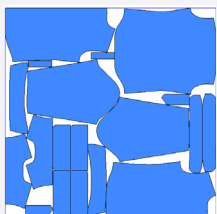
Multi-unit nesting
— approx. 1.51m /shirt
(0.32m in linear waste)

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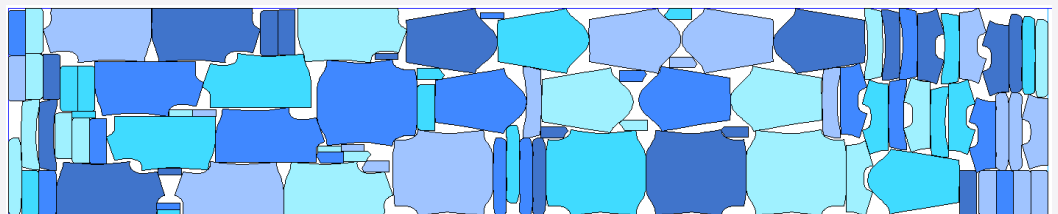
THE RESULTS

"This product is a loyalty machine."

Anne Wolthaus
Project Manager at H&M Lab Germany

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H&M Lab Germany was seeking sustainable solutions to their overproduction problem and we duly delivered. We did so through attractive, value-adding innovations that would ensure customer engagement and support, as well as drastically reducing reasons to return orders.

This is reflected in H&M Lab's data:

93%
of their customers were happy with the first shirt they received.
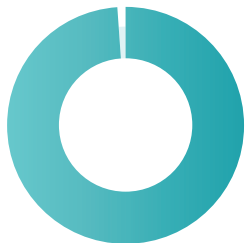
6.5% request a remake rather than return, raising overall satisfaction rate to
99%

> 9%
of customers soon ordered again (typically within 2 months).

Returning customers ordered an average of
03 shirts

> 90%
of customers said they would recommend H&M Yours to a friend.

The success of H&M Yours suggests production on demand would have a hugely positive impact on H&M's agility and liquidity.

Returns were down from 40% to almost zero,

with requests for shirts to be remade just 6.49% (well below what we'd determined acceptable). There is also no overstock that requires selling at discount. This means H&M's average discount rate of around 30% doesn't need to be accounted for in the original retail price.

Crucially, we proved that our processes could adapt to the needs of manufacturers so they don't have to cover the costs of an expensive transition or new machinery. The manufacturer in this case was able to complete orders **within 4–7 days**, assured that they were already paid for.

Not only were long payment periods no longer required, but their up-front costs were reduced too, with material stock reduced solely to what's necessary to cover them for 8–12 weeks. In the end, customers receive a uniquely fitted, 100% organic cotton shirt to their doorstep within just a week or two.

The Head of H&M Lab Germany sums it up:

> " Thanks to ZyseMe we're moving closer to our sustainability targets while reaching new customers. The feedback has been terrific! "

Oliver Lange
Head of H&M Lab Germany