

AI FOR TEXTILE FACTORIES AND FASHION BRANDS

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How AI can help the Textile & Fashion Industry



Sales & Forecasts (cust. exp. marketing, digital models, ...)



Product Development (design, prototyping, ...)



Supply Chain (fast, digital, traceable, zero waste, robots,...)

— lack of digitalization

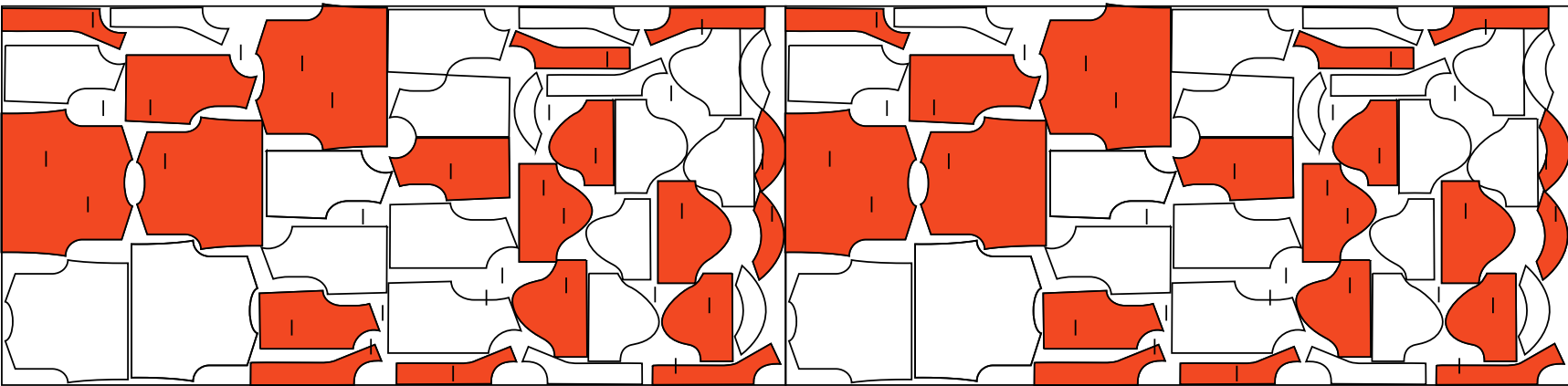


Pictures from
Gilberto's phone

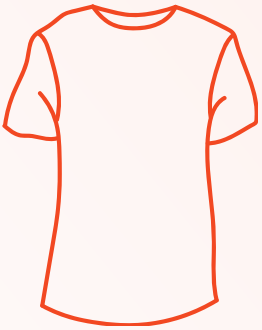
SAVINGS WILL COME FROM FABRIC

Fabric makes up 40% of the total t-shirt cost. This is where the savings will come.

MONEY IS LEFT ON THE (CUTTING) TABLE



THE TRUE COST OF A T-SHIRT



FABRIC

37.5% \$1.5

LABOUR

20% \$0.8

PRINTS

15% \$0.6

QC

10% \$0.4

ACCESSORIES

7.5% \$0.3

PACKAGING

5% \$0.2

FREIGHT / LOGISTICS

5% \$0.2

TOTAL COST

100% \$4

Fabric Visibility is a black box



HANDWRITTEN RECORDS



DISPUTES



PDFs



UNCERTAIN QUALITY



PHONE CALLS



MANUAL INSPECTION



UNKNOWN LOCATIONS



MISSING DOCUMENTS



ORDER DELAYS

Issues begin at the fabric mill...

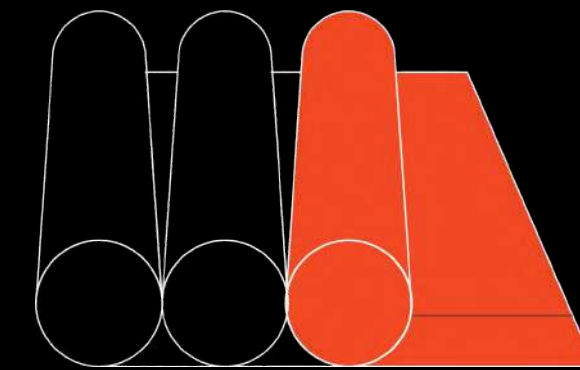


Defective Garment
is rated **Poor**

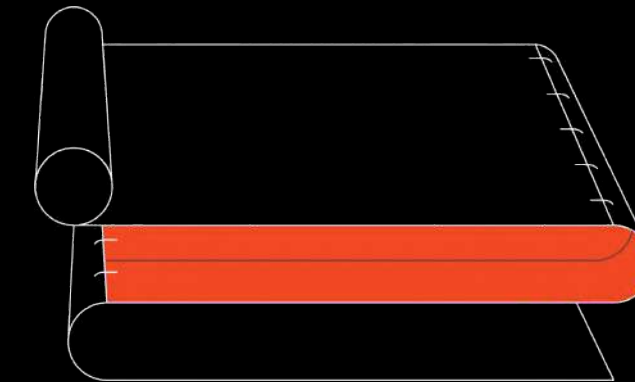
Based on 12,364 reviews



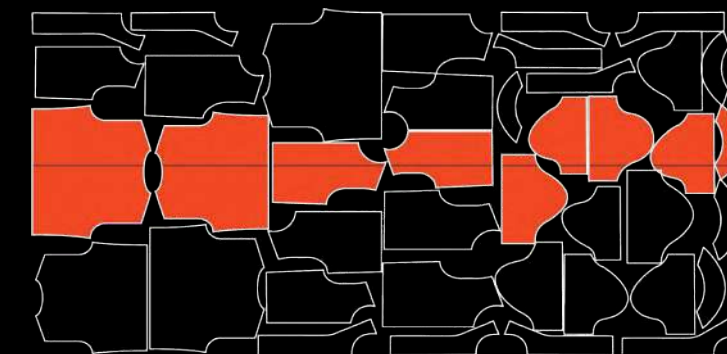
★ Trustpilot



K N I T T I N G



D Y E I N G

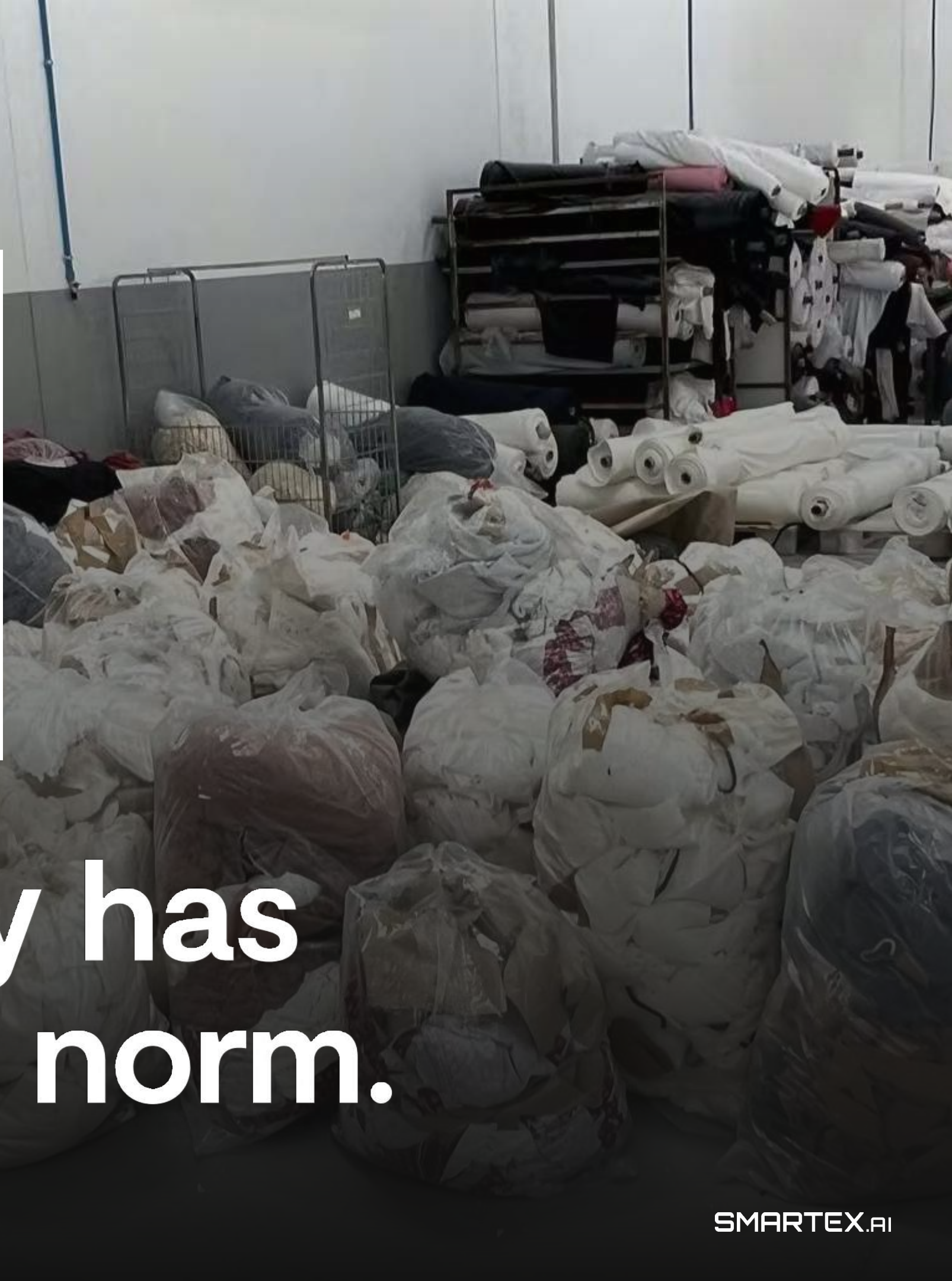


G A R M E N T

Let's better understand
the problem

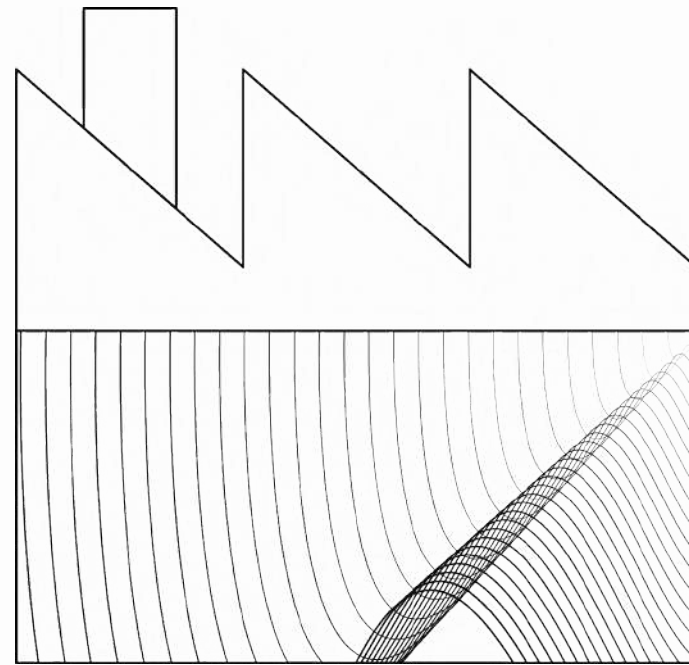
Handwritten text at the top: **PANEL CHECK & REJECTION**

	REJECT QTY	REJECT %	REMARKS
30	17.	21.25%	N-1 me
15	3.5	1.11%	It con
10	86.5	10.67%	S-ma
65	6.	3.63%	B-m
35	1.	2.85%	It
490	25.5	5.179%	It con, t
531	23.		
270	10.5		
756	19.		
908	10.5		
	36-	3.15%	Pim



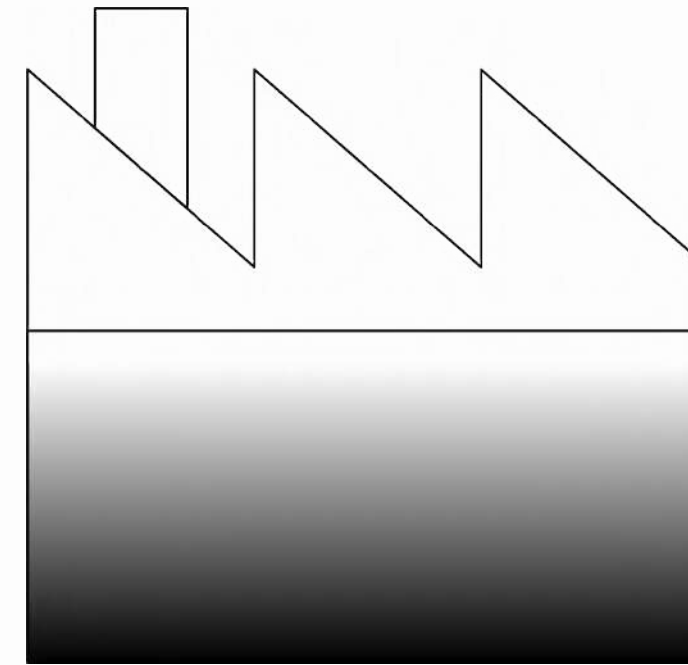
Inefficiency has become the norm.

Reported Waste



K N I T T I N G

0.1–0.5%



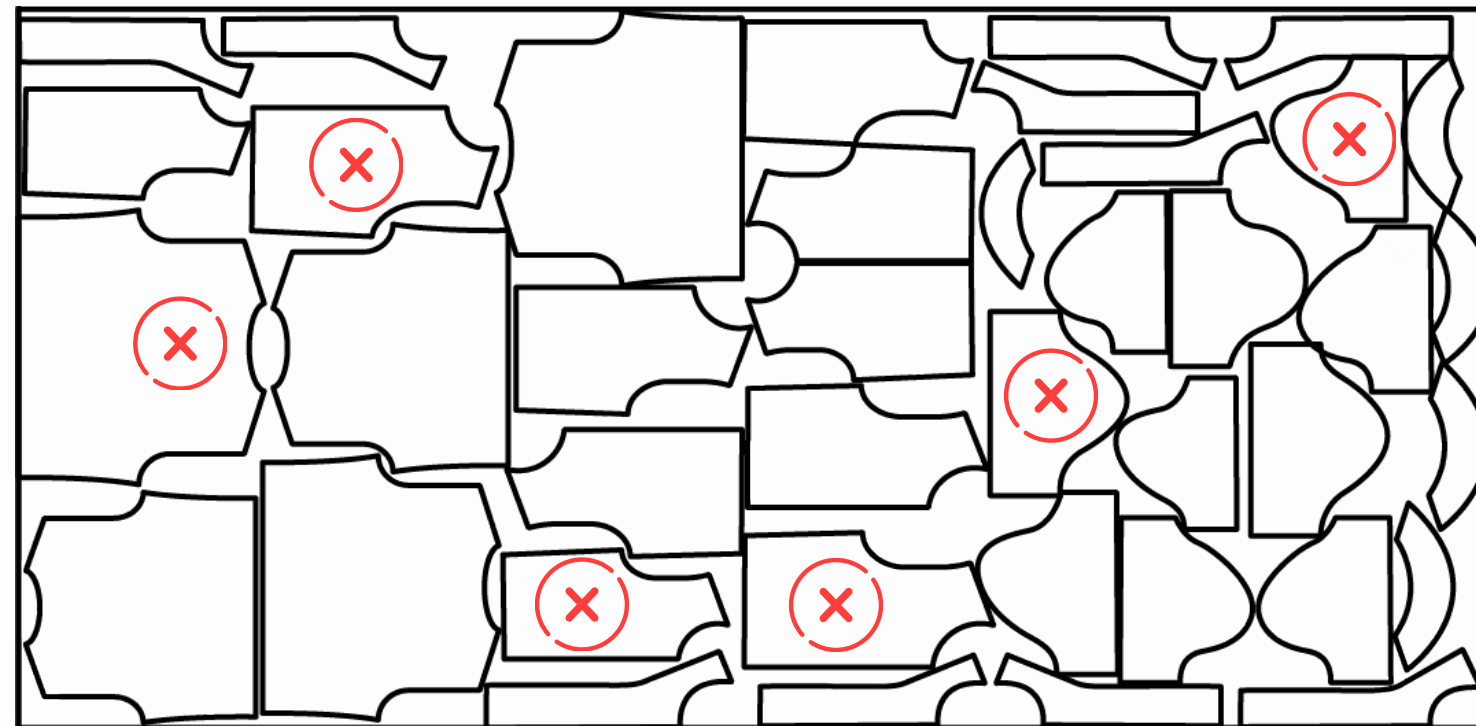
D Y E H O U S E S

0.5–3%

Industry Problem

Reported Waste

G A R M E N T F A C I L I T I E S



4-27%

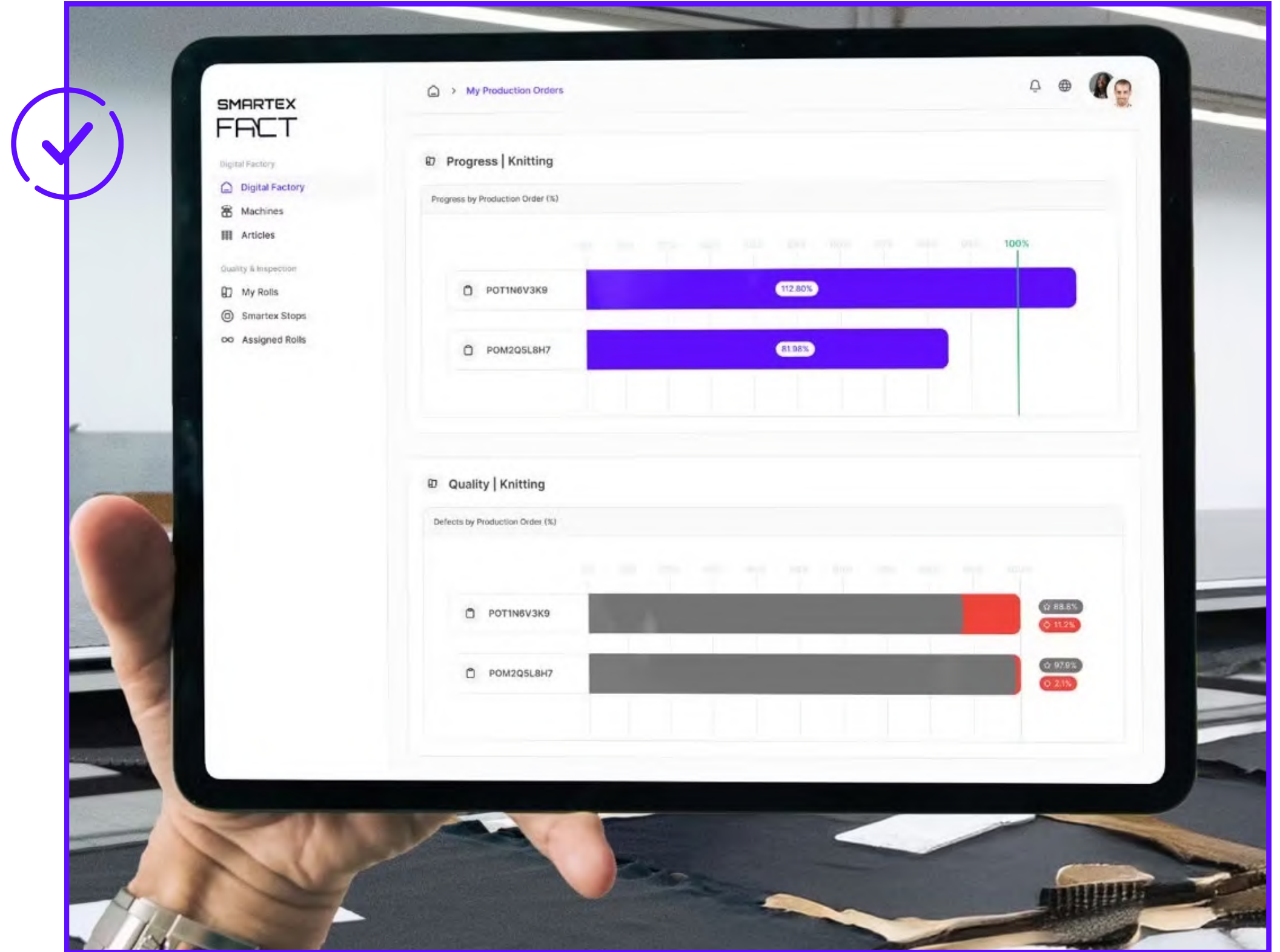
Industry Problem

**Why hasn't this been
stopped yet?**

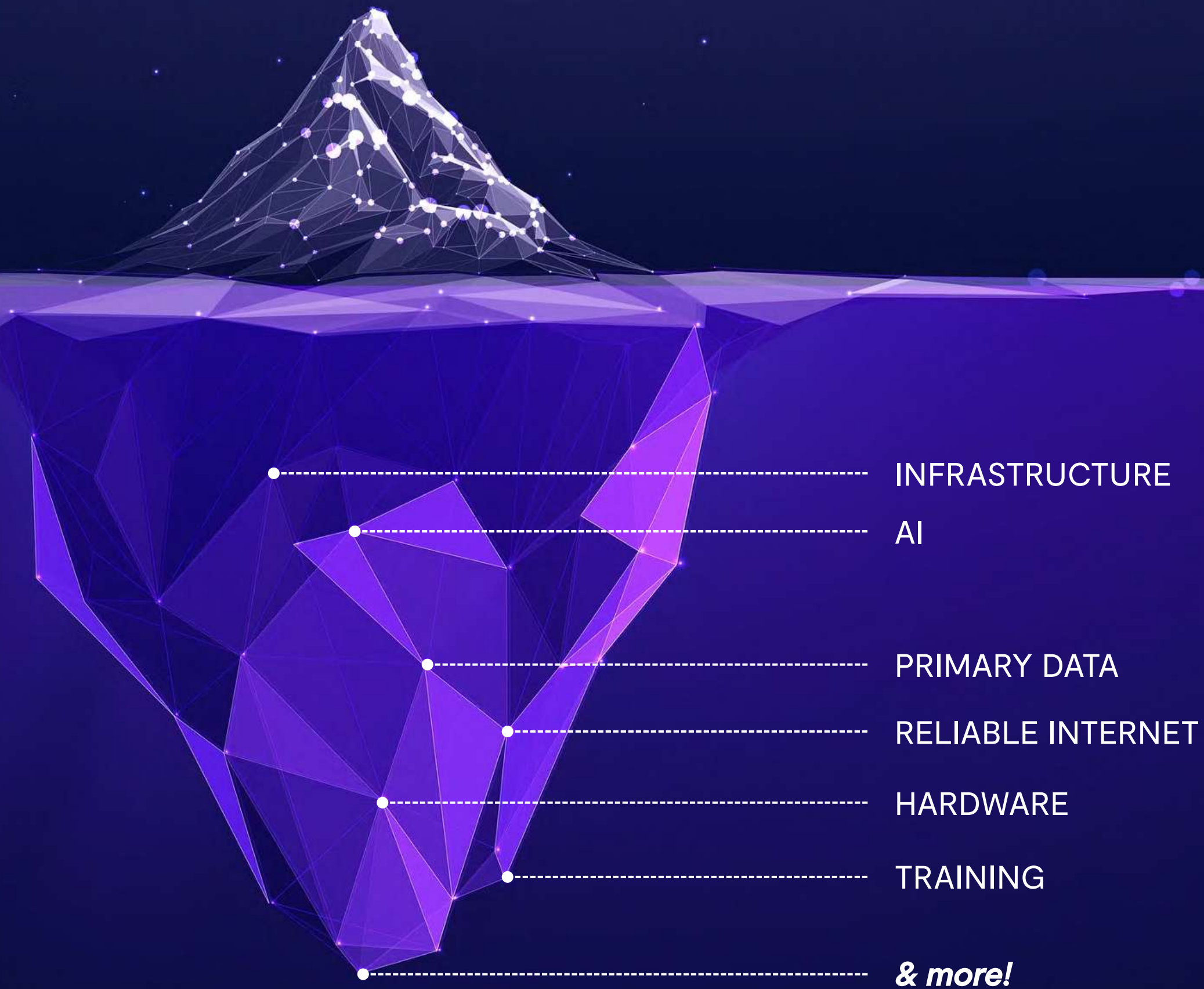
SUBJECTIVE, **UNRELIABLE** & SLOW QUALITY CONTROL

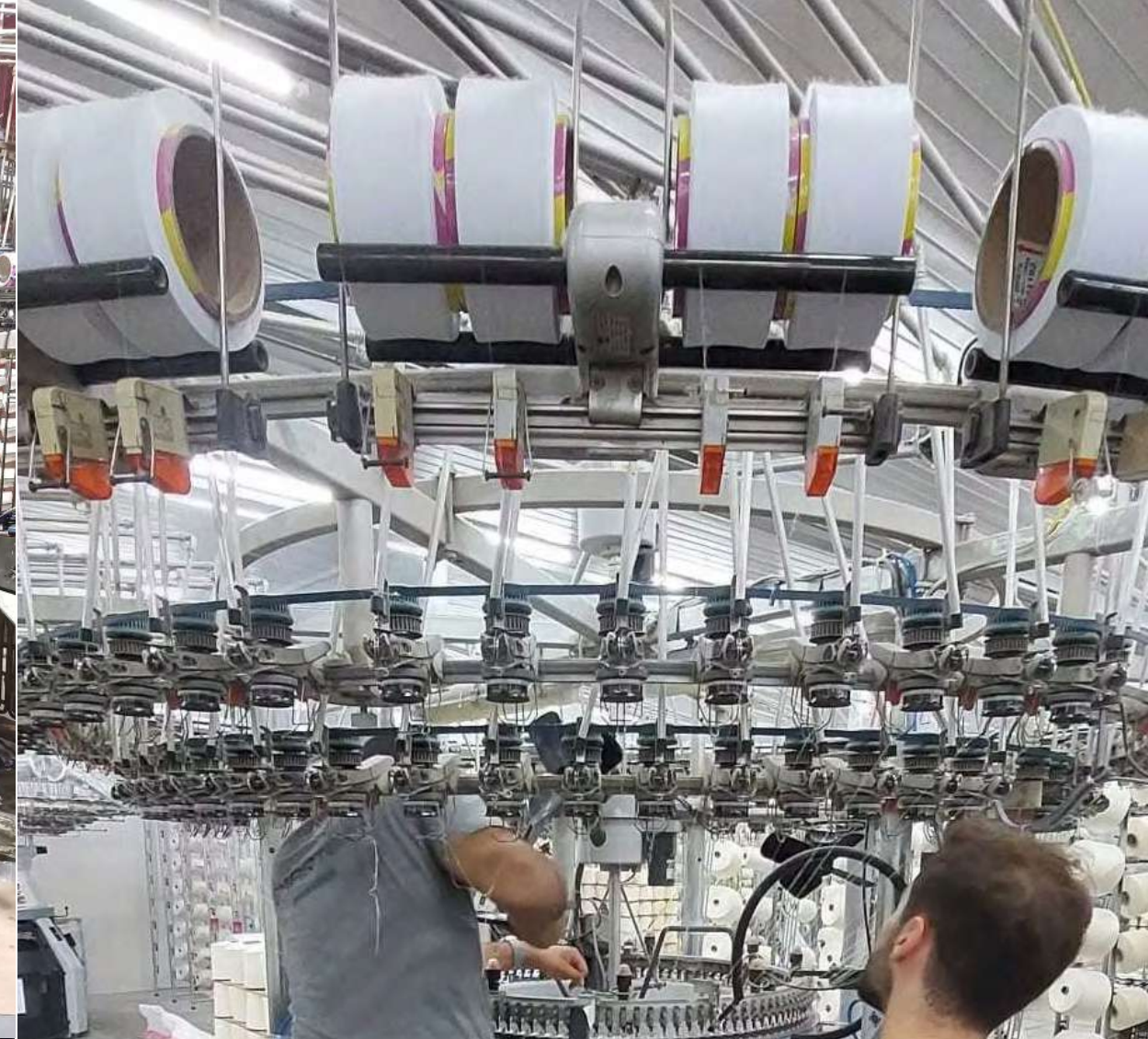


The Future of Fabric: Real-time Visibility into Production & Quality



But you need a lot
underneath to make
this happen...



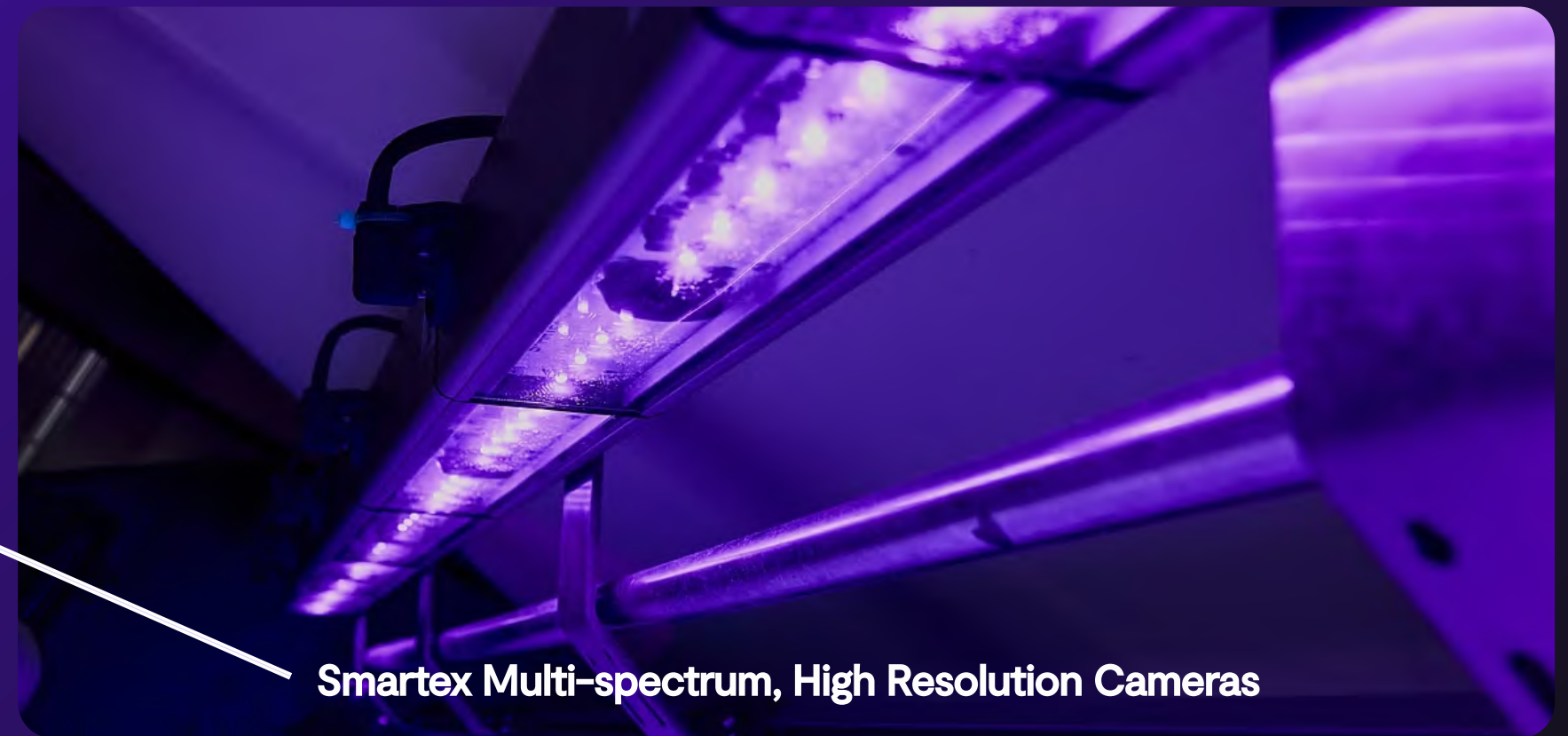


Try Pitch

SMARTEX.AI

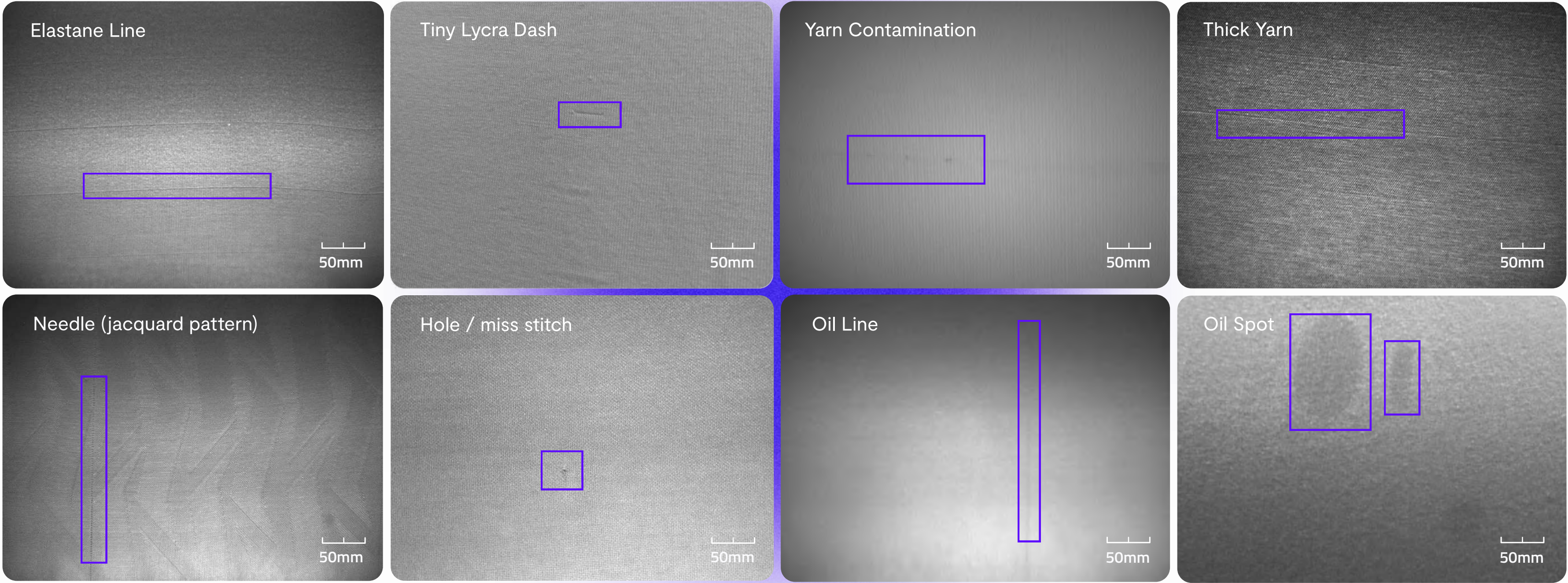
Solution #1

AI-enabled, real time inspection



Smartex Multi-spectrum, High Resolution Cameras

A FEW OF THE DEFECTS DETECTED...



Jersey, Interlock, Pique, Italian, Fleece & others.

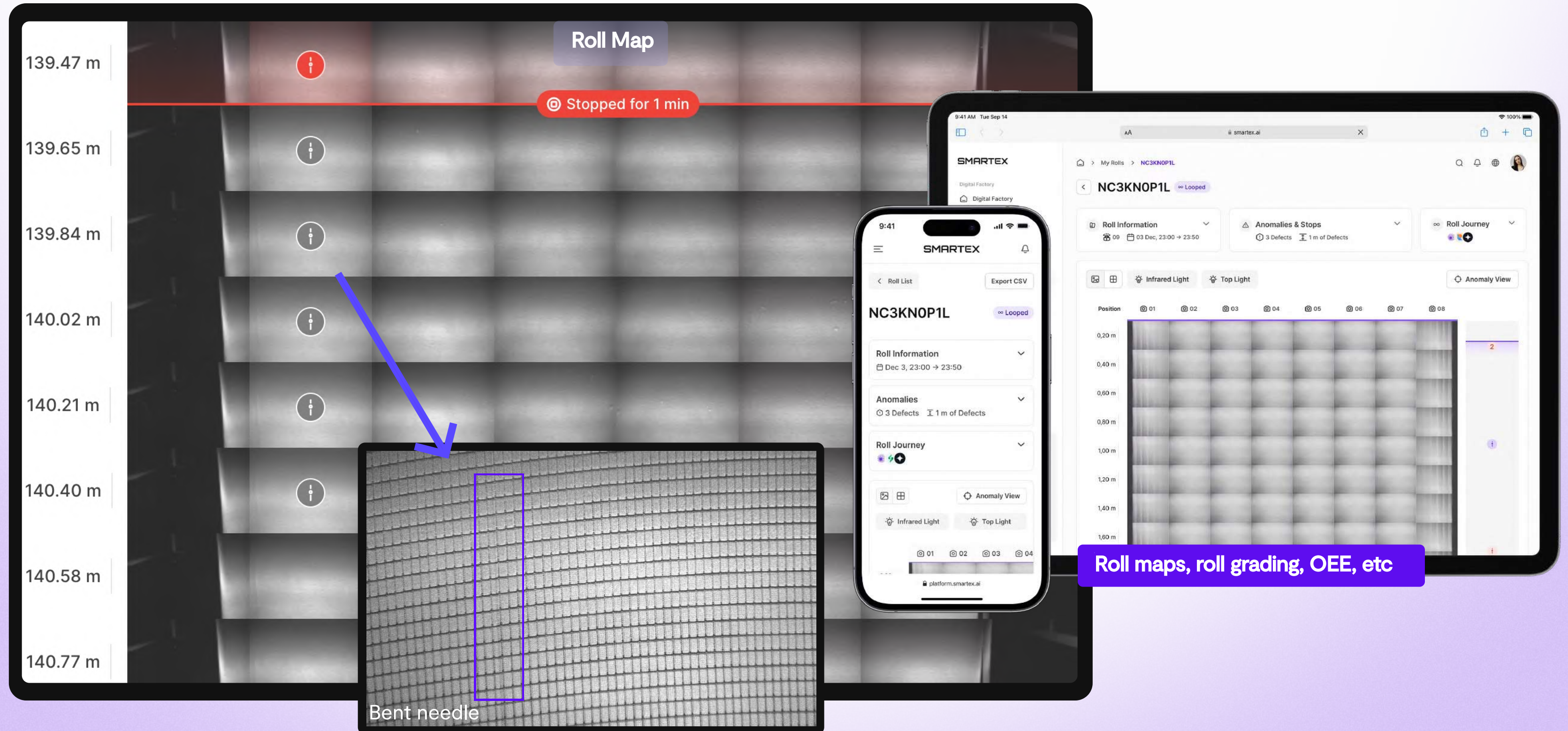
Conventional Cotton, Organic Cotton, Lyocell, Viscose Polyester and more, 100% or blended (with or without elastane).

Raw Yarns, Dyed Yarns, Melange Yarns, etc.

Try Pitch

SMARTEX.AI

Your factory in your pocket



Produced Rolls

Roll 1

Machine 32

Grade A



Roll 2

Machine 11

Grade A



Roll 3

Machine 04

Grade B



Roll 4

Machine 15

Grade D

Roll 5

Machine 32

Grade A



Roll 6

21

Grade A



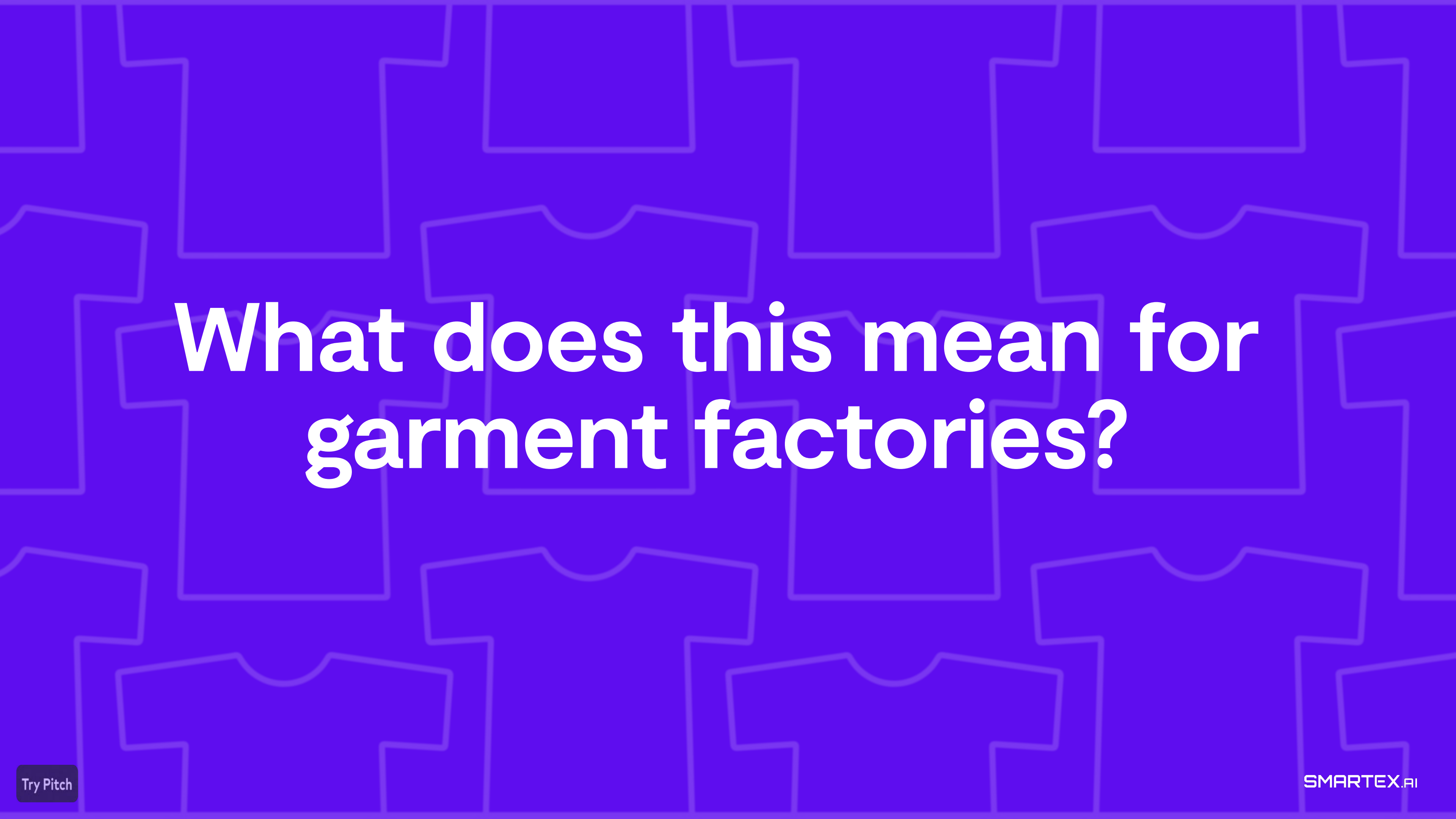
Machine 11

Grade B



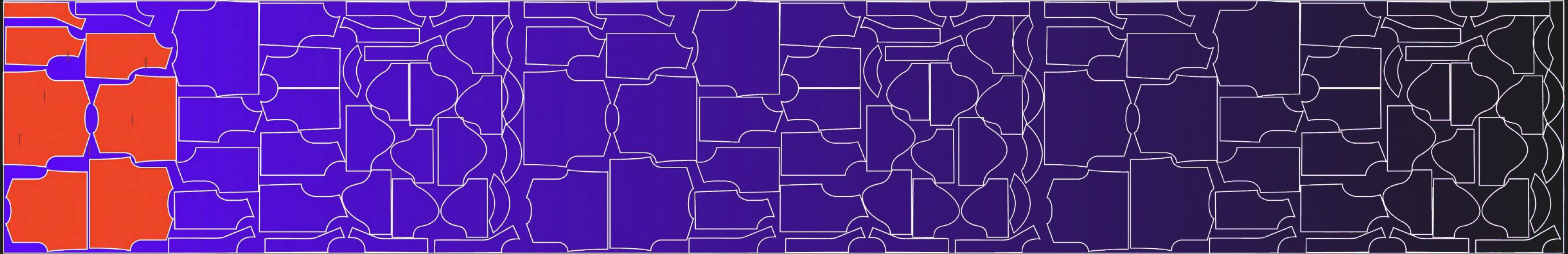
Inspection, 10x faster.

Gain full control + Save time & money + Guarantee consistent quality

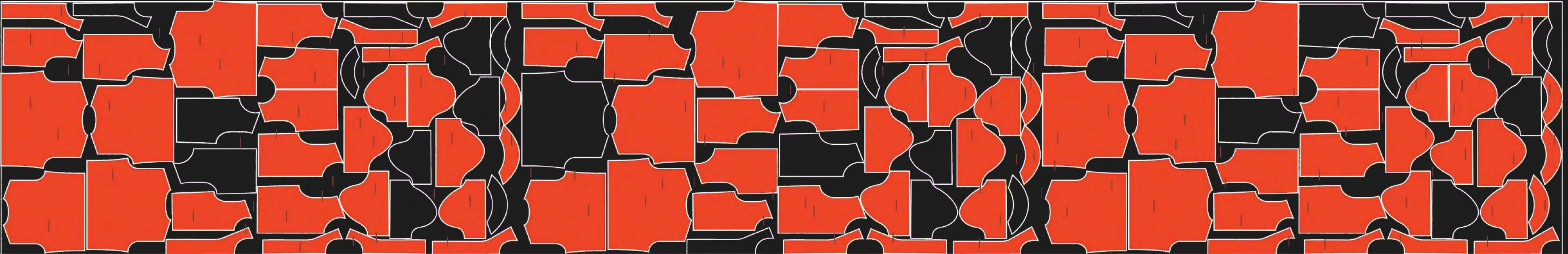


What does this mean for garment factories?

Smartex Inspected Fabric

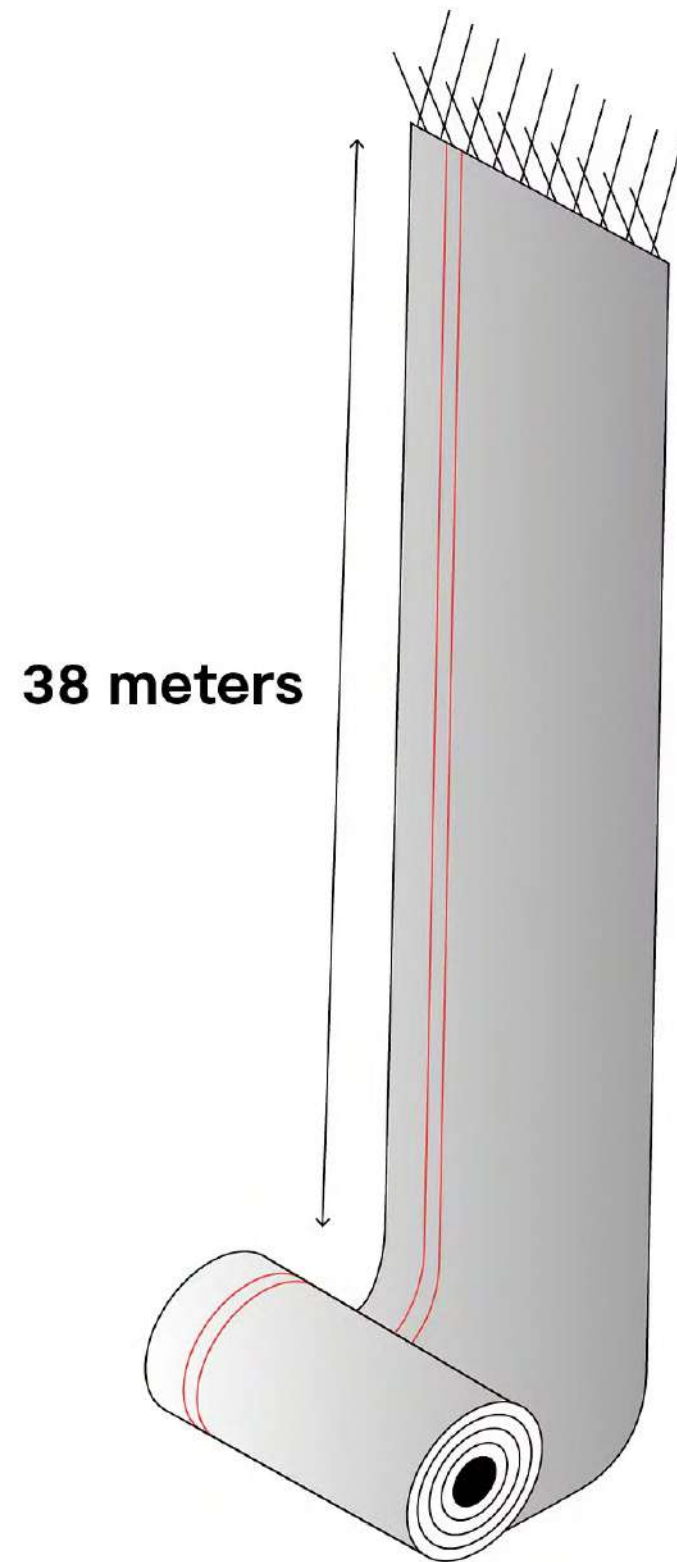


Regular Fabric



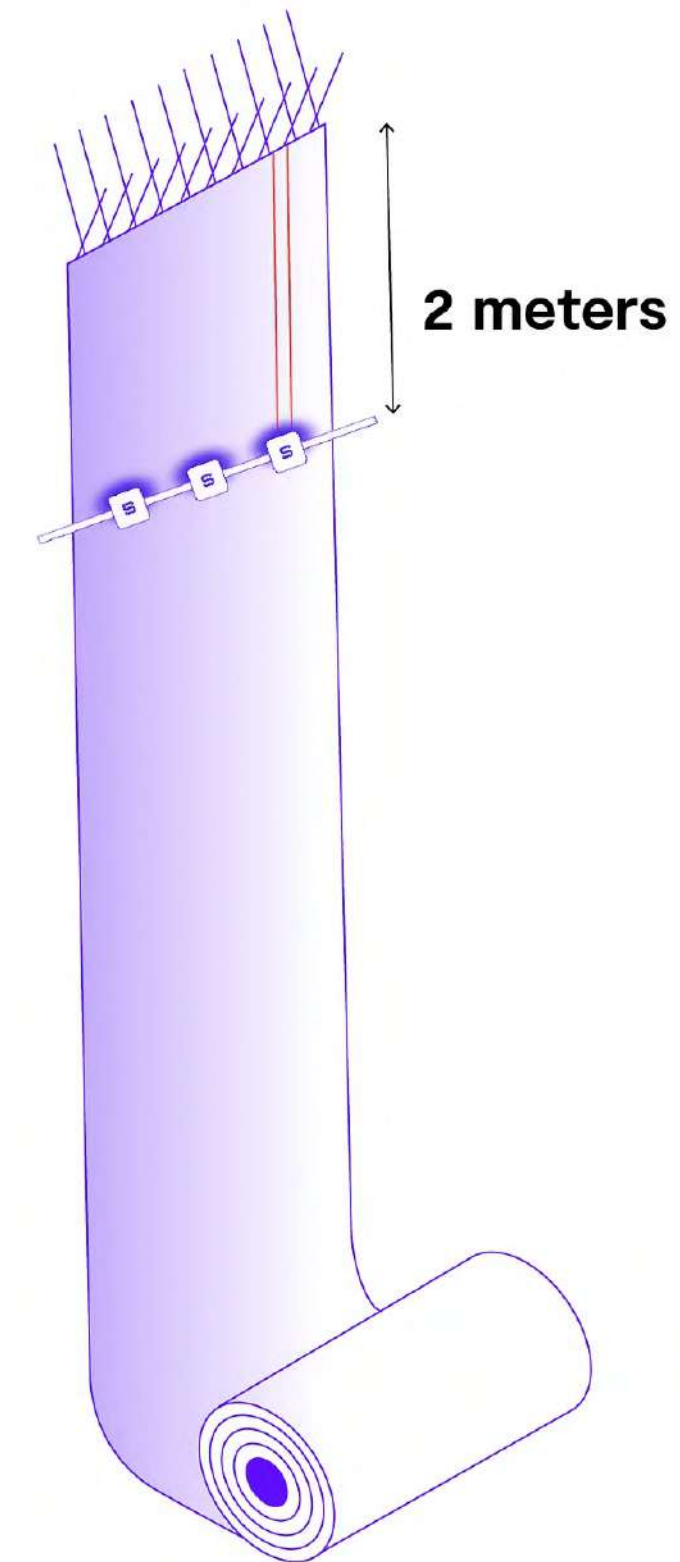
**✗ Without
SMARTEX**

Defective Production Continues



**✓ With
SMARTEX**

Defective Production Stops



SMARTEX.AI

AREA OF INSPECTION

🗨️ ***Fabric is too stretched & it's impossible to see all defects*** — especially elasticity related defects, tensions, lycra drops, etc.

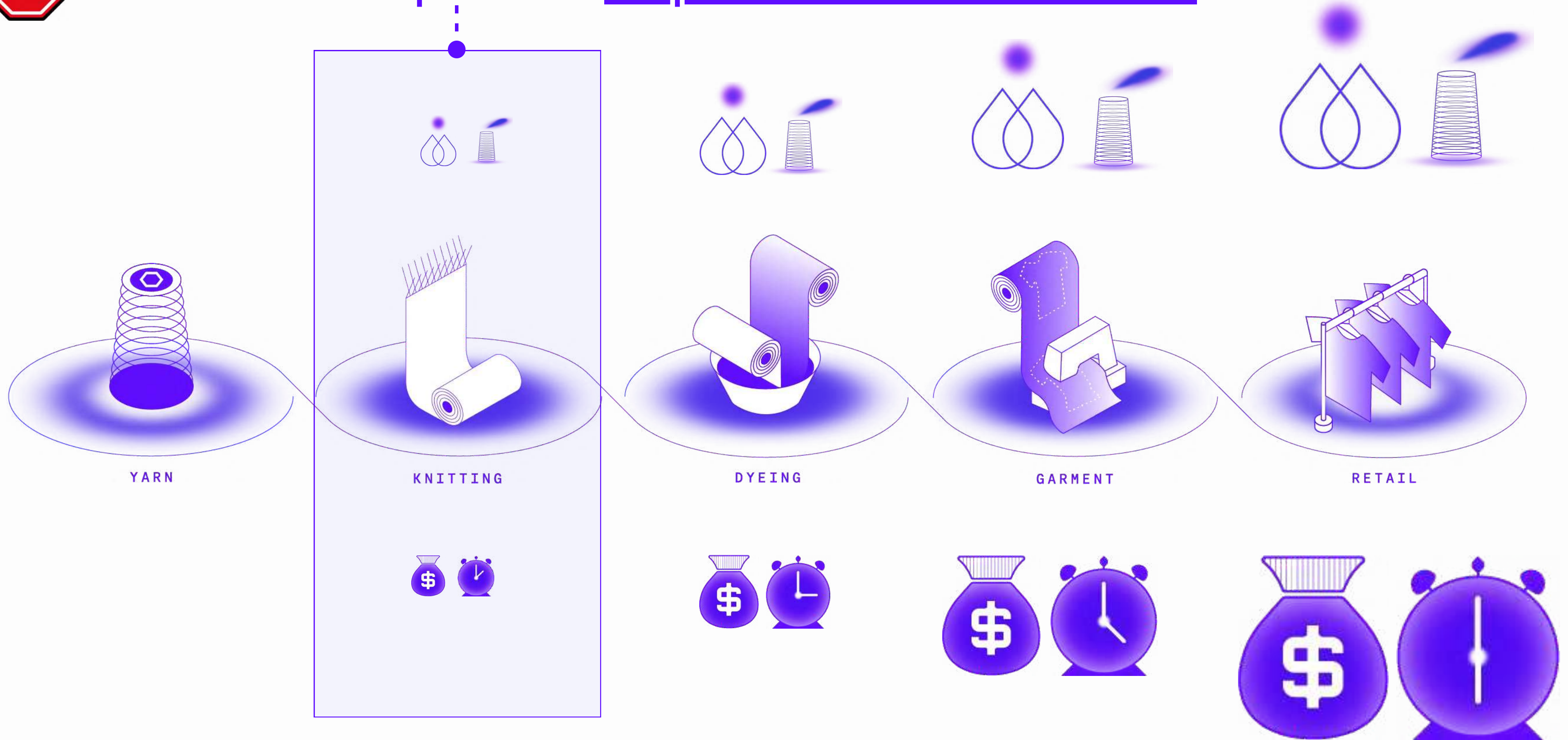
🗨️ ***Impossible to detect elasticity & other defects***

👍 ***Possible to detect elasticity & other defects***

👍 ***Fabric is relaxed like during inspection & it's possible to see all defects.*** Although ~1m of fabric has been produced, all defects can be caught & continuous defects are prevented.



Most effective place to stop structural fabric faults



4 Cents Less Per Garment

VERIFIED RESULTS - FAKIR FASHION



H&M

80% Less Garment Waste

VERIFIED RESULTS - IMPETUS



30% More Cutting Panels

VERIFIED RESULTS - TRIWOOL



HUGO BOSS

50% Less Fabric Waste

VERIFIED RESULTS - POCARGIL



ZARA



ARVIND
INDIA



15,892 t-shirts
5,019 kg fabric
40Ne yarn and Lycra 20Den
(Recycled Lycra)
160 GSM



Savings

10¢

per garment

Garments per Kg of fabric

+8%

Avg Garment Cost

-8%

\$ Monthly License Pay-off

1 day

Pure profit for rest of month



FAKHRUDDIN
BANGLADESH



27,364 t-shirts
5,679 kg fabric
Single Jersey
100% Cotton (25% recycled)
160 GSM



Savings

3.8¢

per garment

Payback Period

4 mo

Paid by Profit

Time Spent Repairing Defects

-55%

Fabric Yield

+2%

PRICE / PROFIT

3-10¢

off your cost sheet

SPEED

50%

less time repairing defective panels

SMARTEX INSPECTED FABRIC

*  apparel
impact
institute

QUALITY

35%

more Grade A fabric

65%

less Grade F fabric

SUSTAINABILITY

58kg

CO2e saved per ton
of production*

80%

reduction in kilograms of
defective fabric production

Solution #2



**Indestructible
quality records**

Unique LOOP ID

Fast Track (Grade A roll)

Time & Date Roll Completed

Article Type

PO #

Machine # & Weight

Roll #

Factory

EYXZHF25

2023-06-08 05:30

Jersey 96% Cotton 4
% Lycra

OF0023222515

23 20kg

6

LOOPTEX



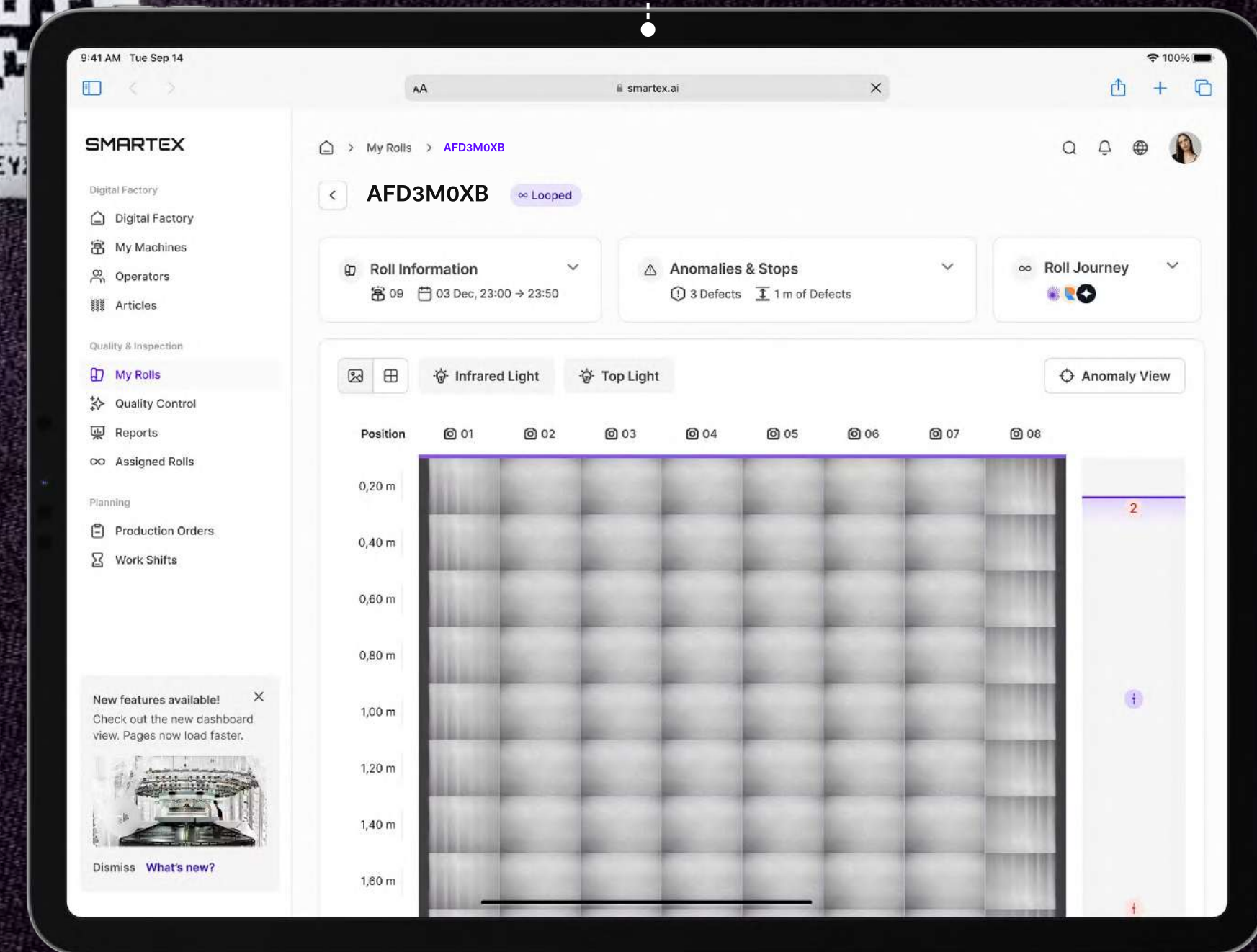
SMARTEX LOOPTEX

QR Code link to digital roll

The LOOP Passport

Reliable Evidence of

Smartex Inspected Fabric





Past



Try Pitch



NOW



*The foundation of
your Digital Product
Passport:*



Solution #3...

Finished Fabric Inspection



SMARTEX.AI



CTRL

Camera bar – AI defect inspection



CTRL

Spectrometers – color inspection

Finished Fabric Inspection

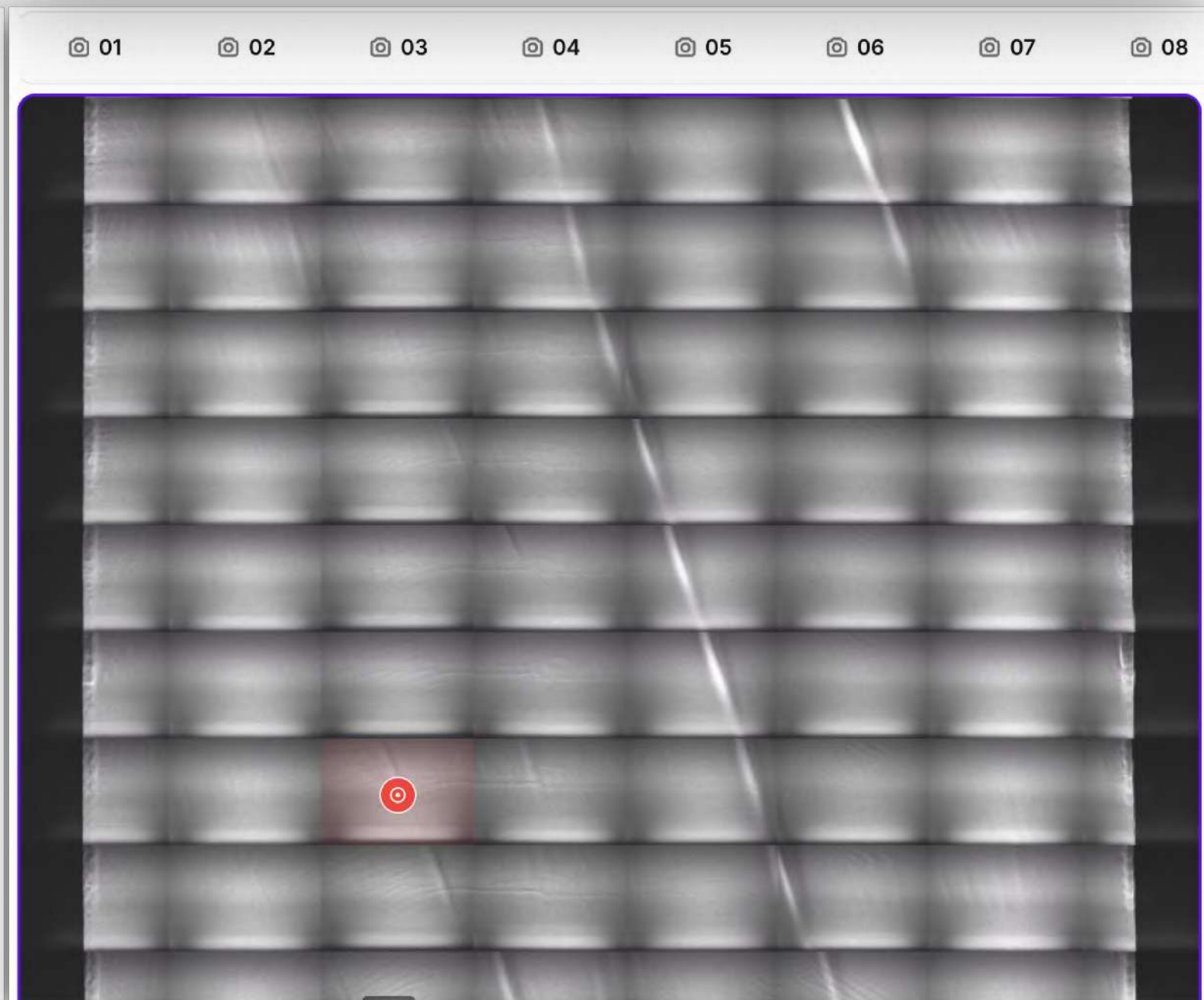
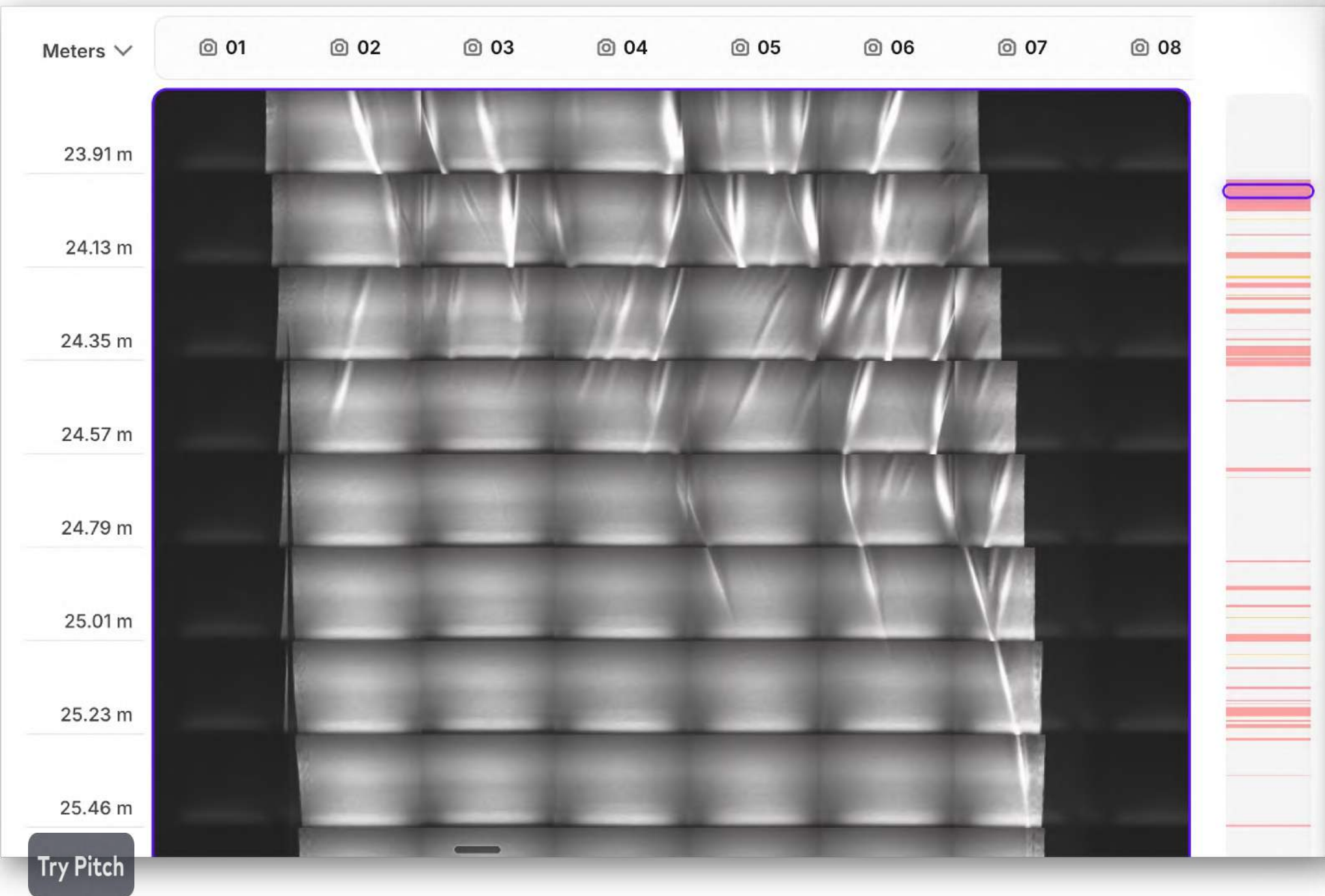
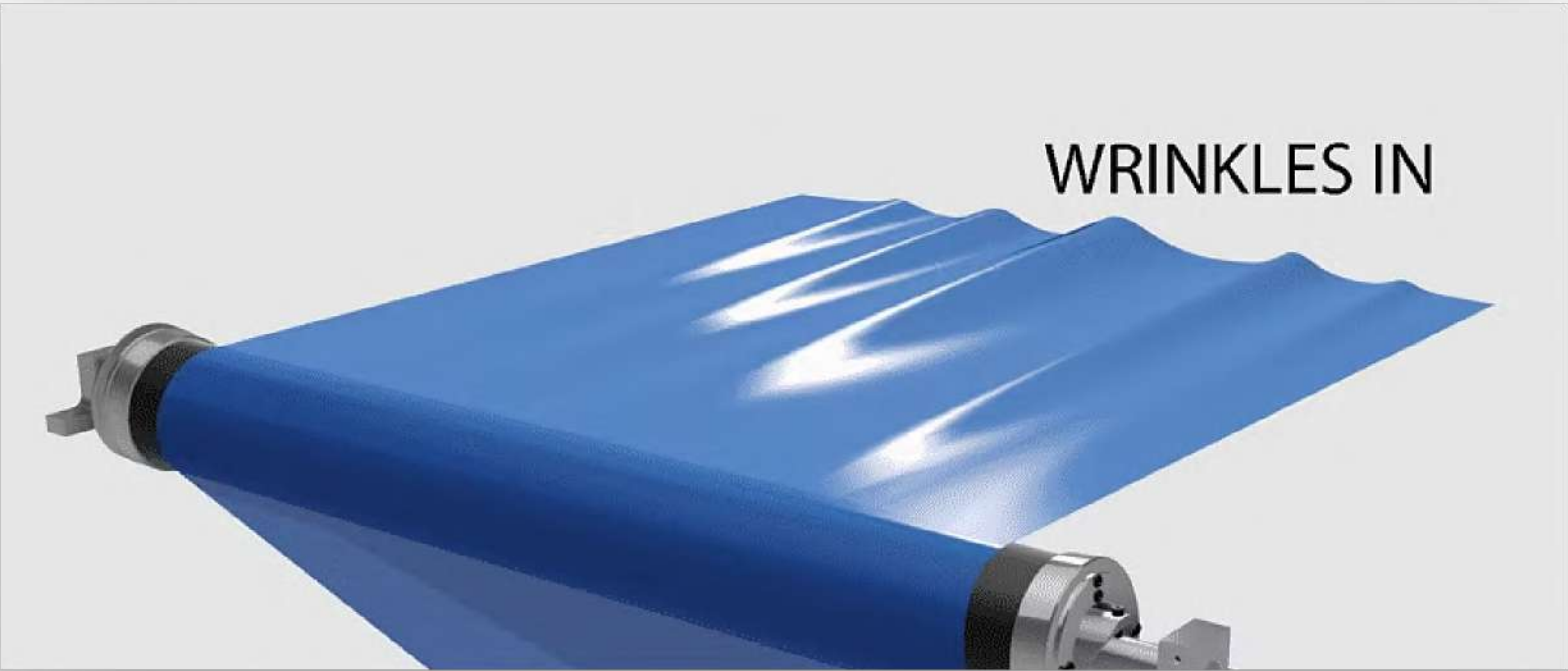
→ Automated 24/7 Inspection
→ Increased Speed & Accuracy

→ Accountable Quality Control
→ Strengthened Brand Reputation

→ Access to Data & Reporting
→ Increased Operator Efficiency

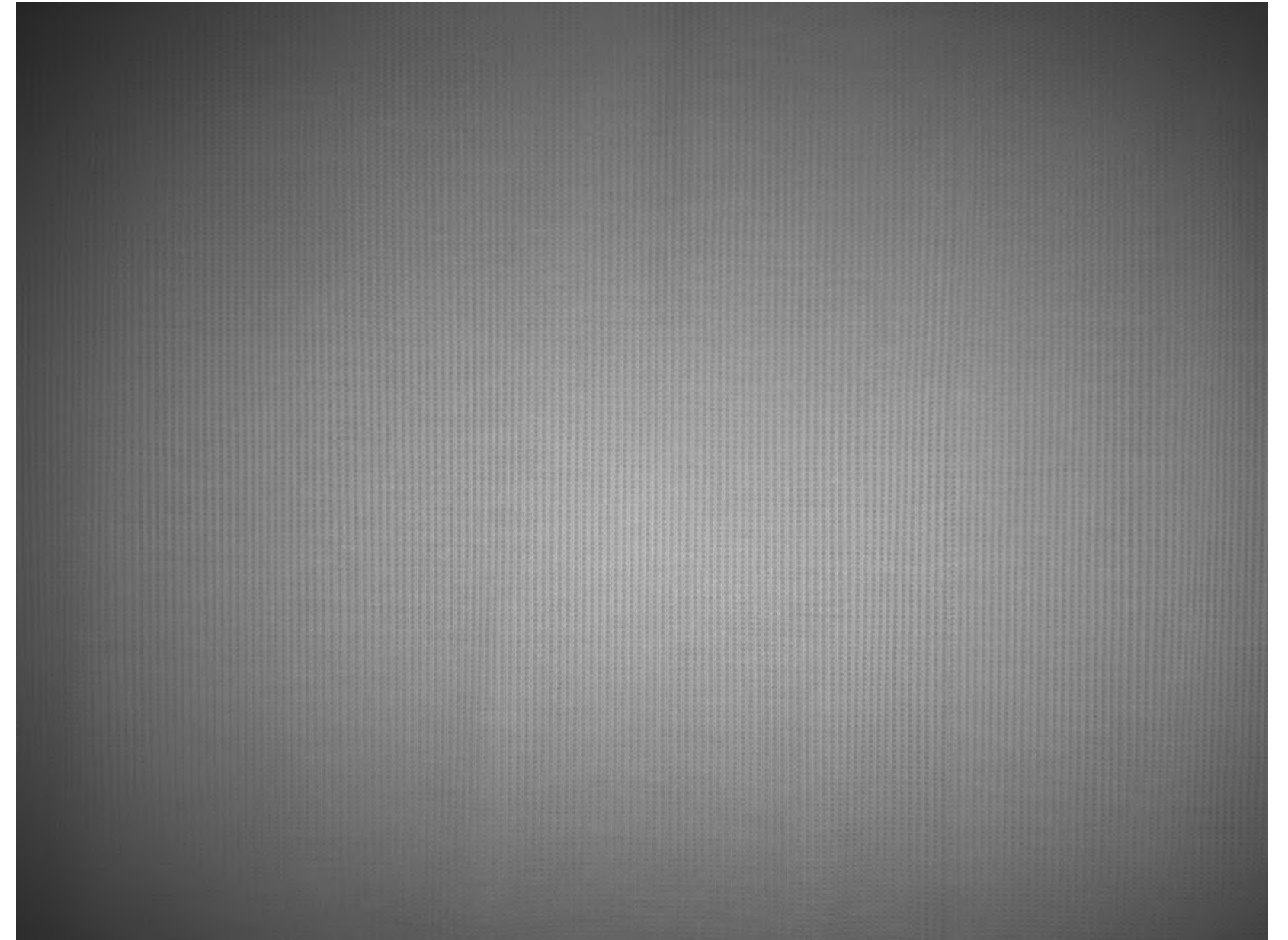
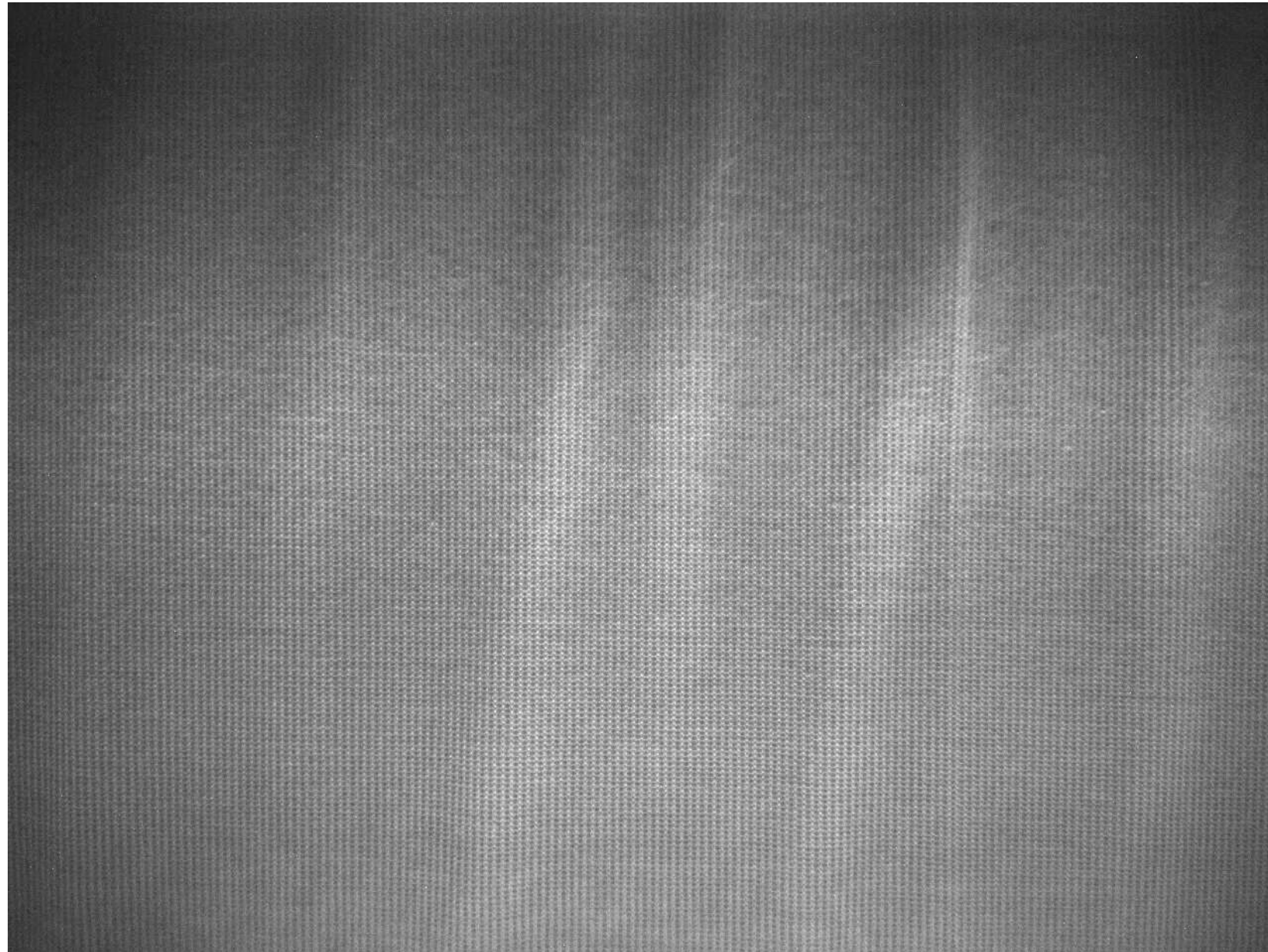
Some examples & Challenges:

Why so many companies tried & never scaled?



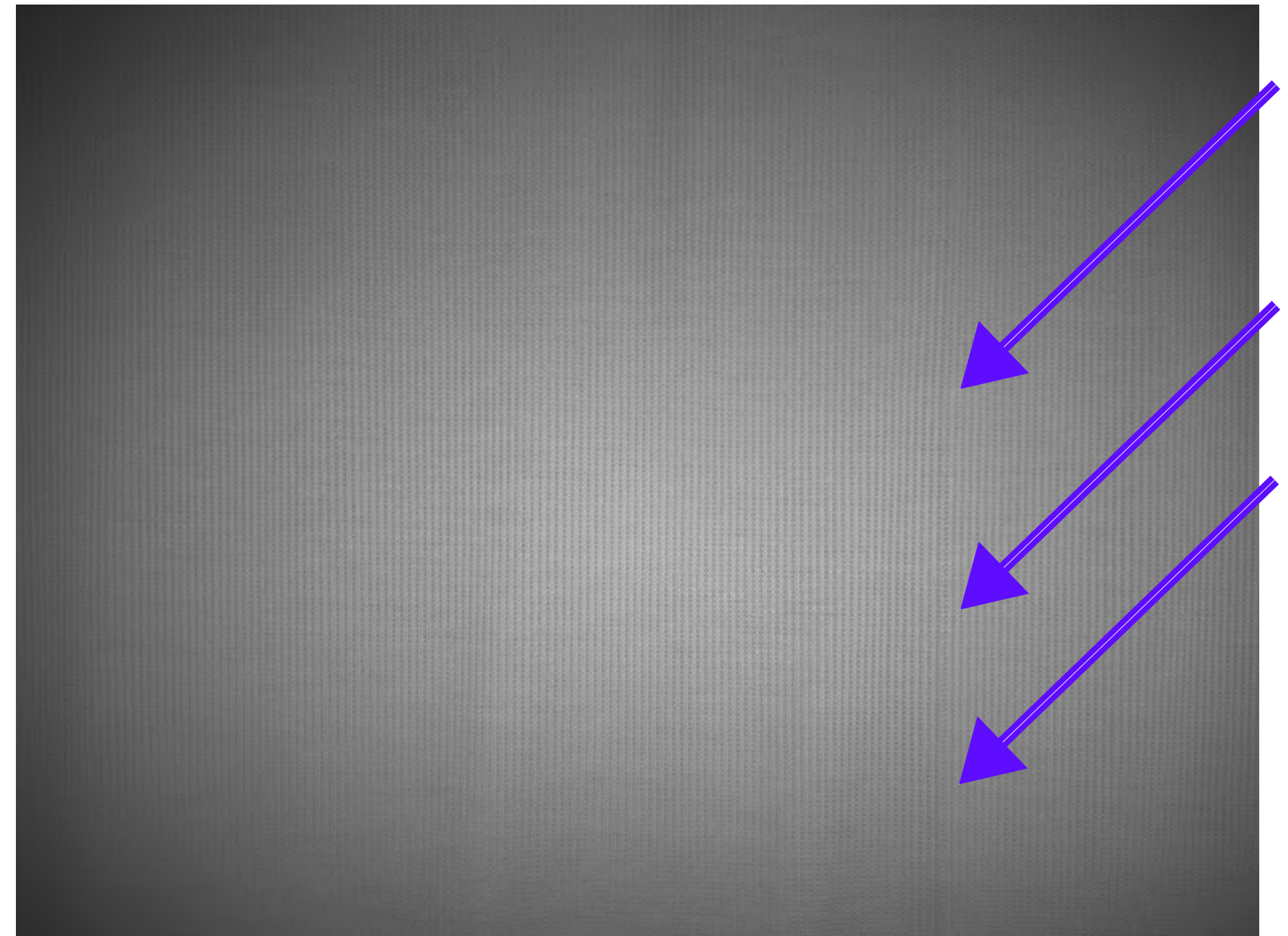
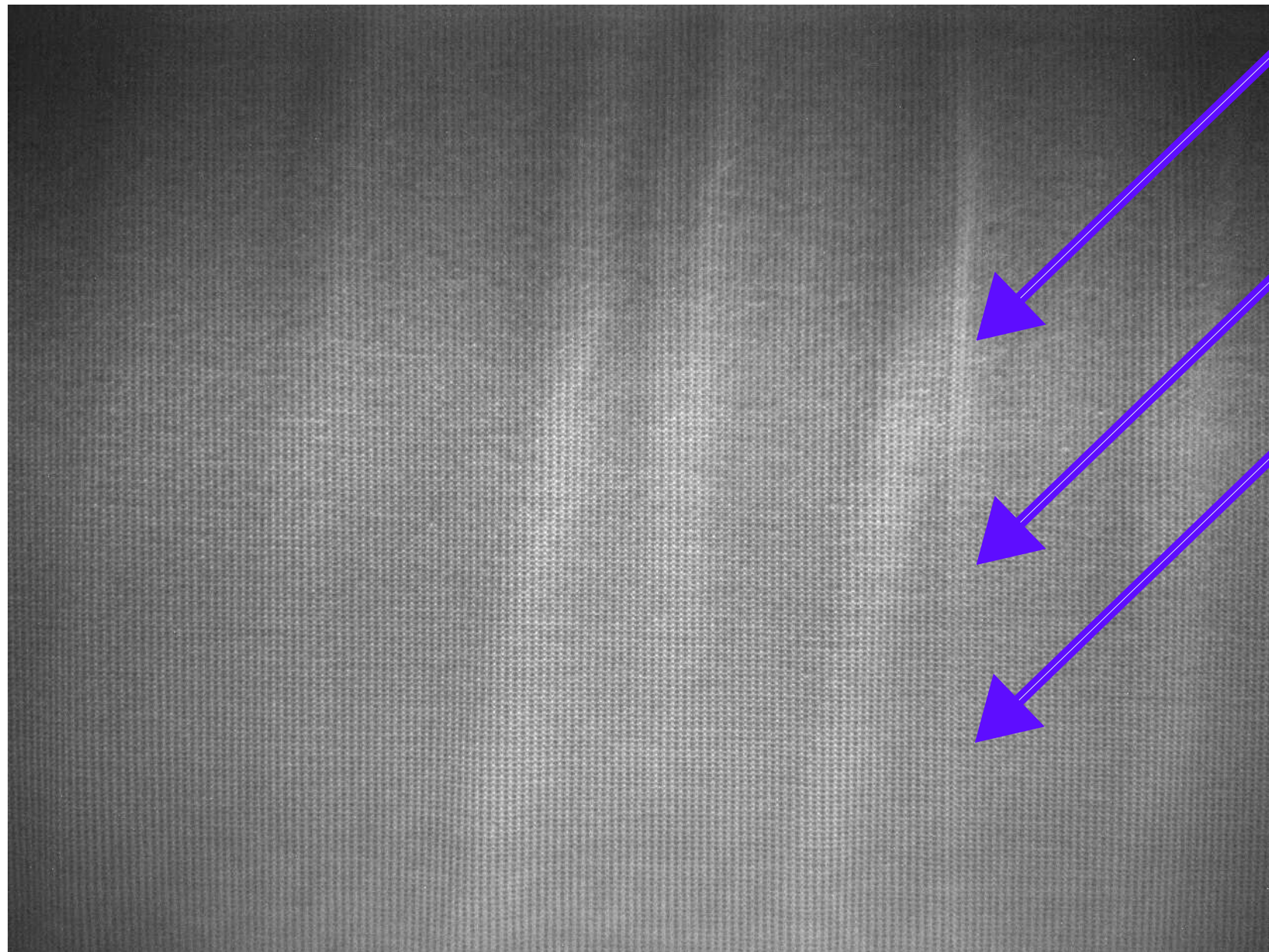
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Why so many companies tried & never scaled?



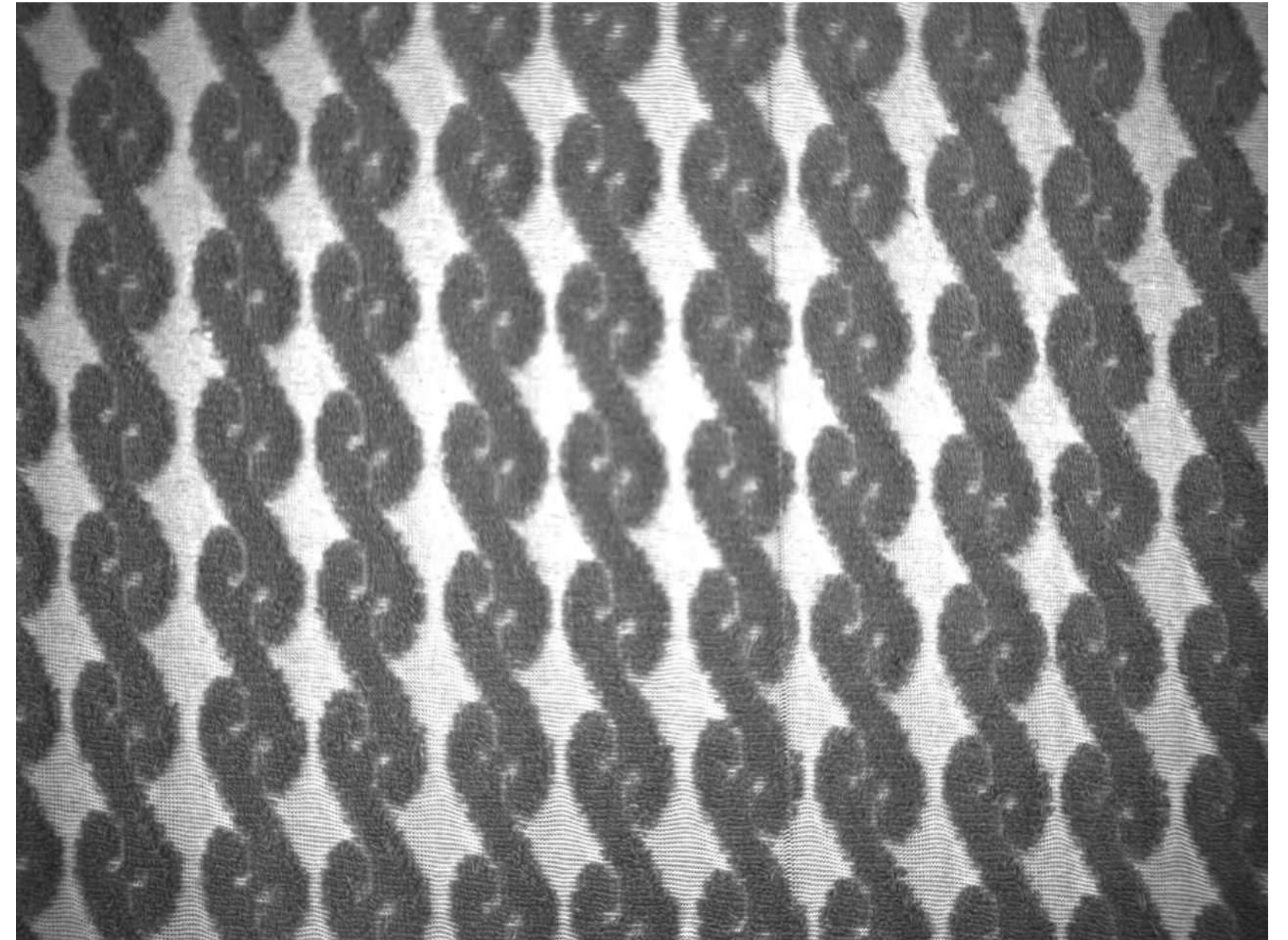
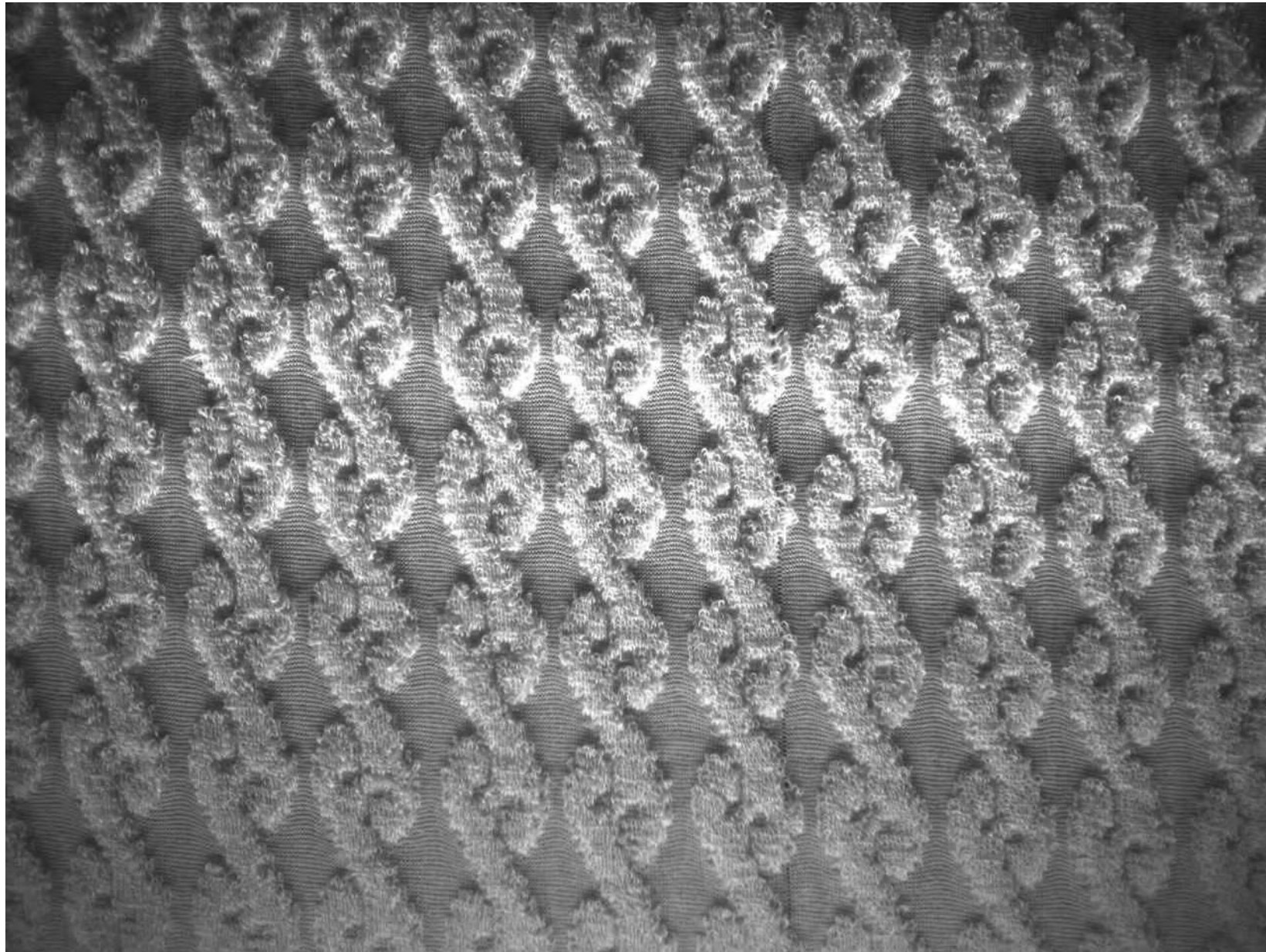
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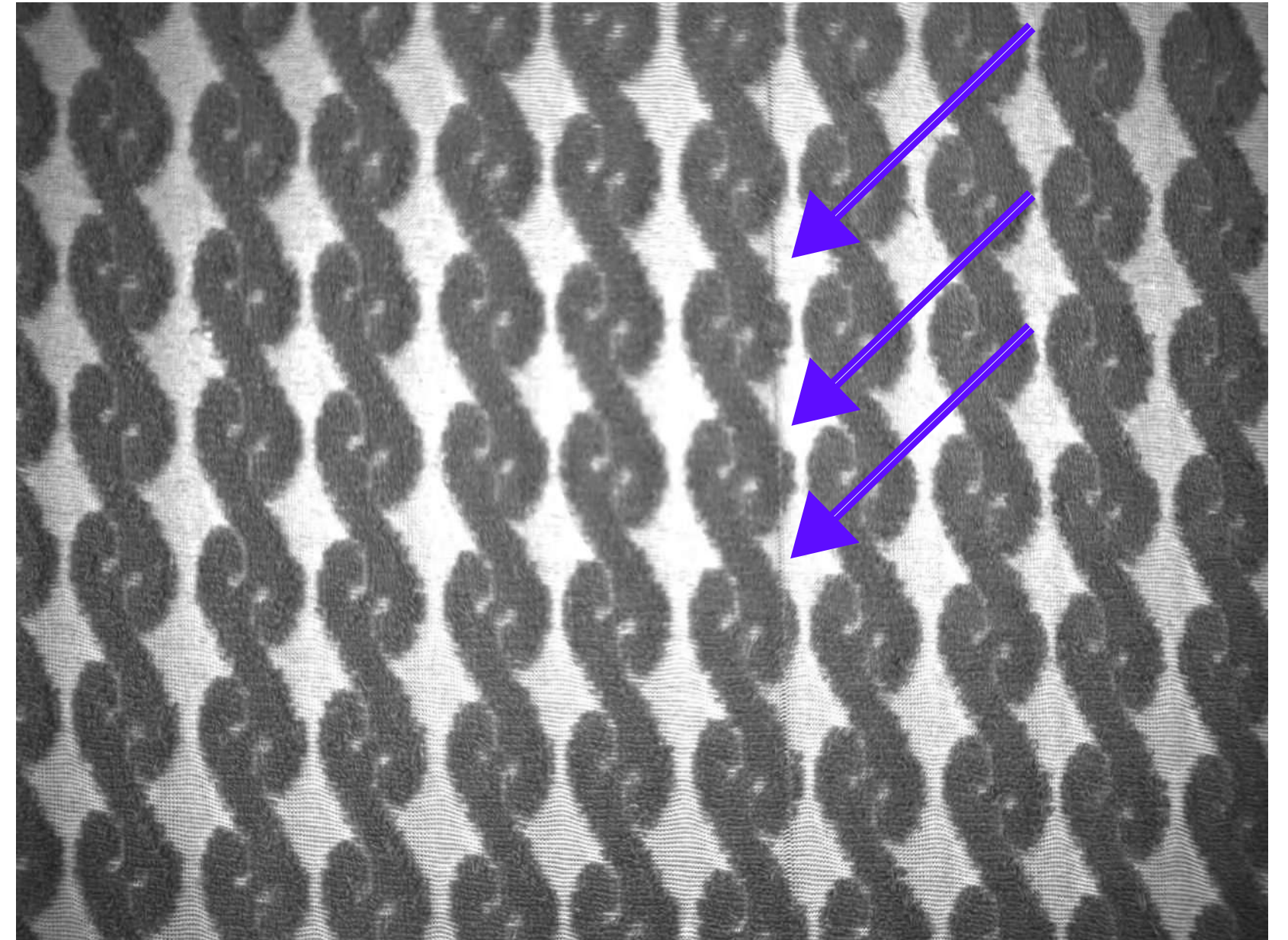
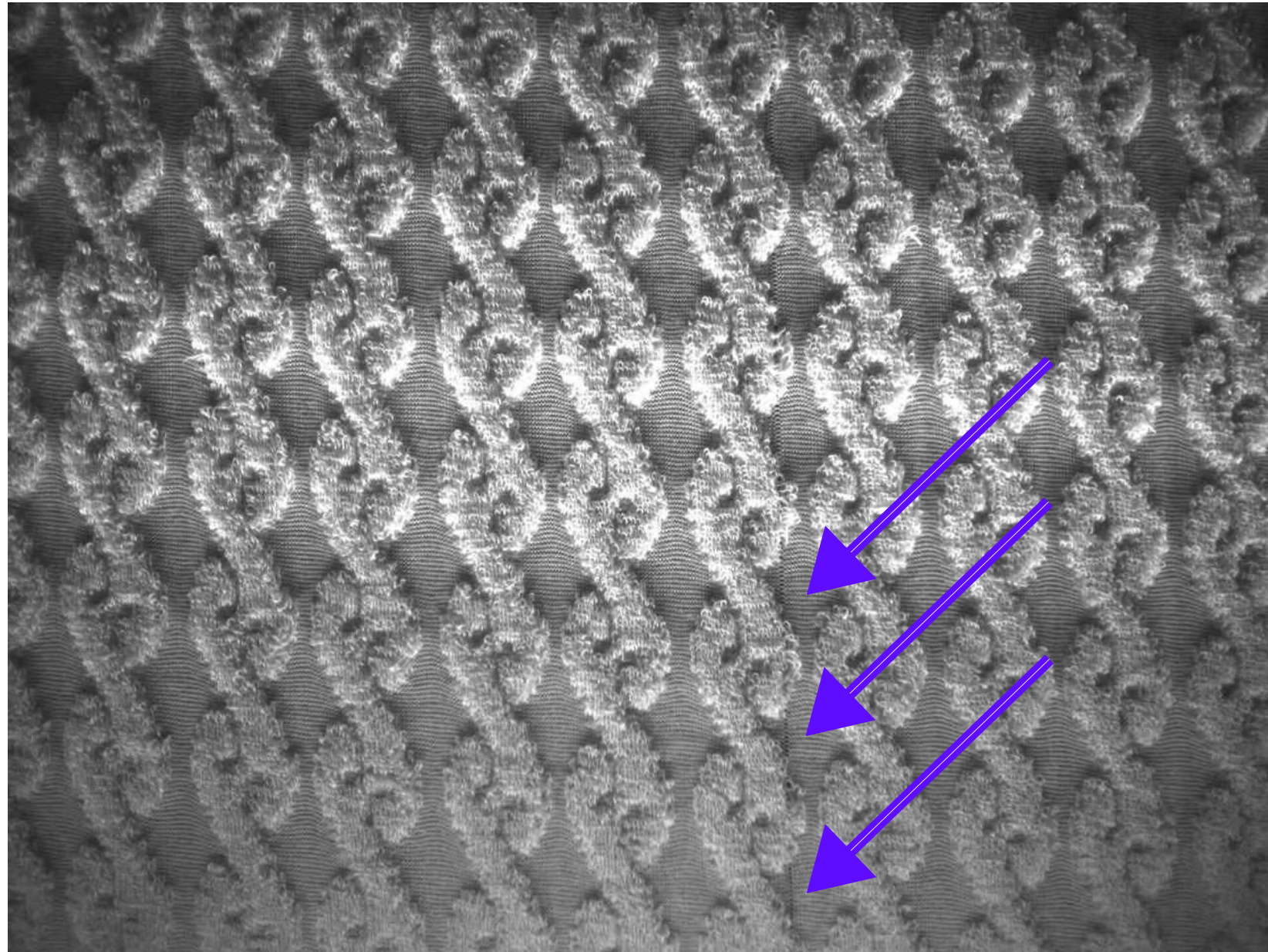
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Why so many companies tried & never scaled?



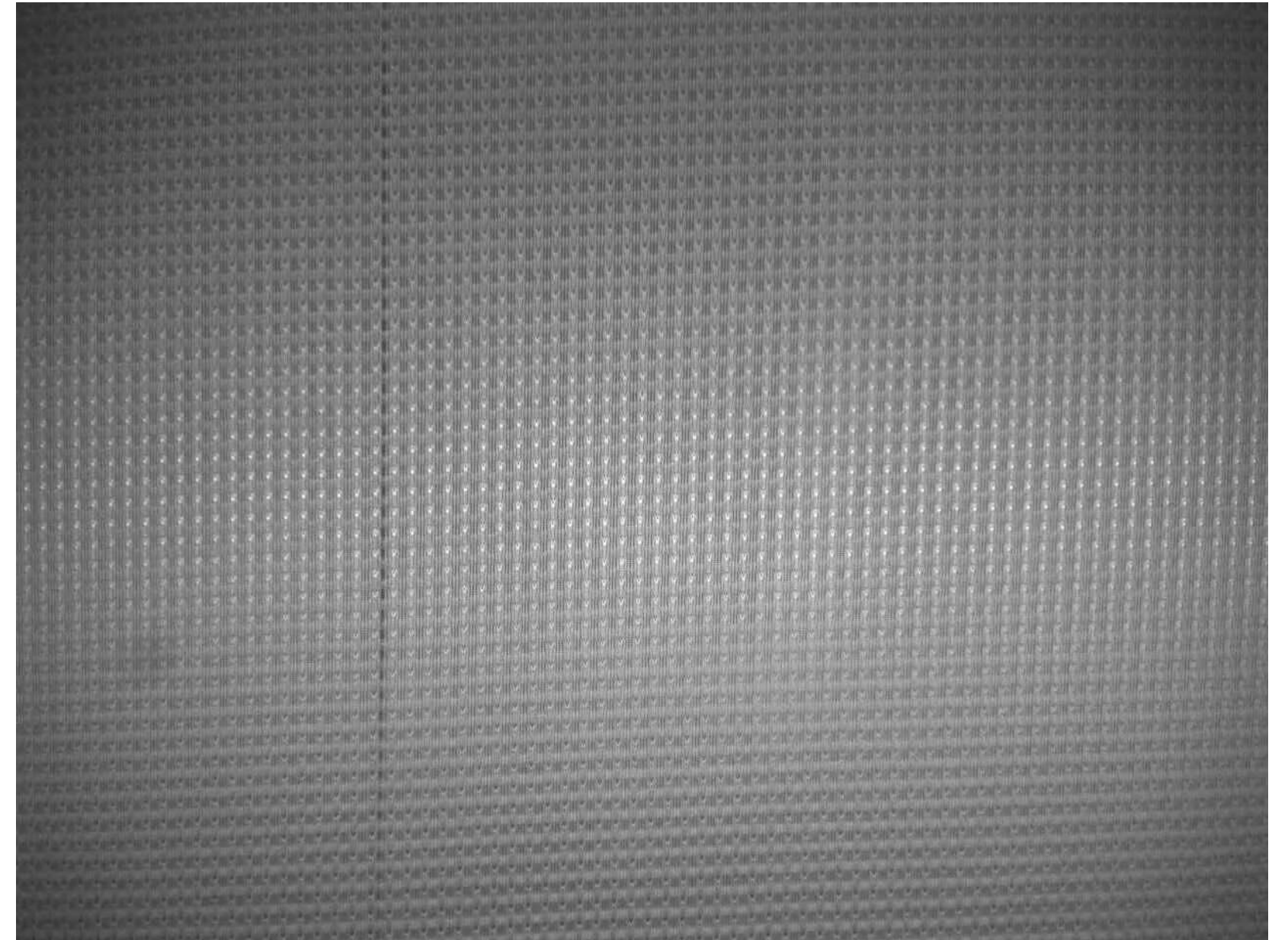
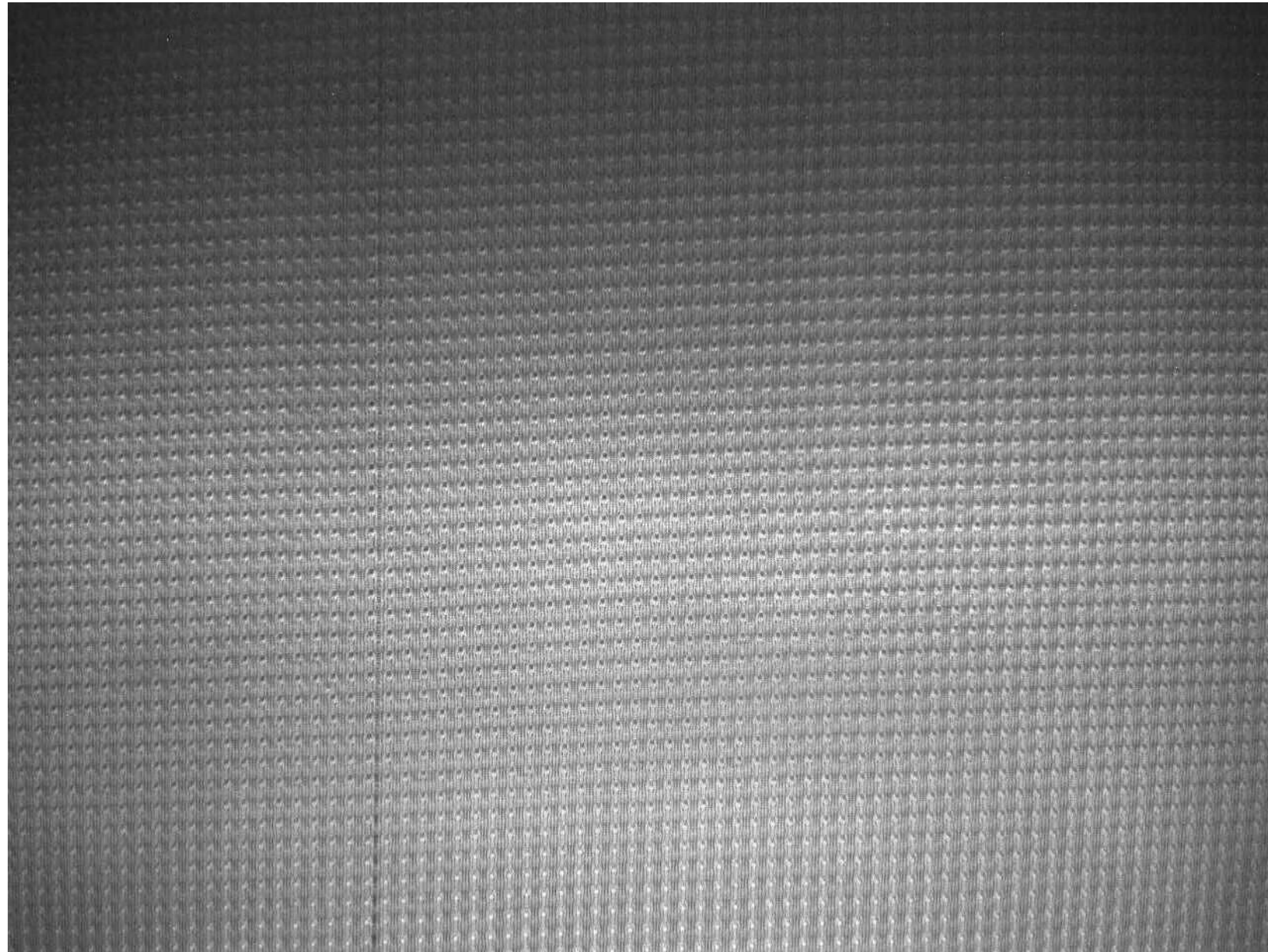
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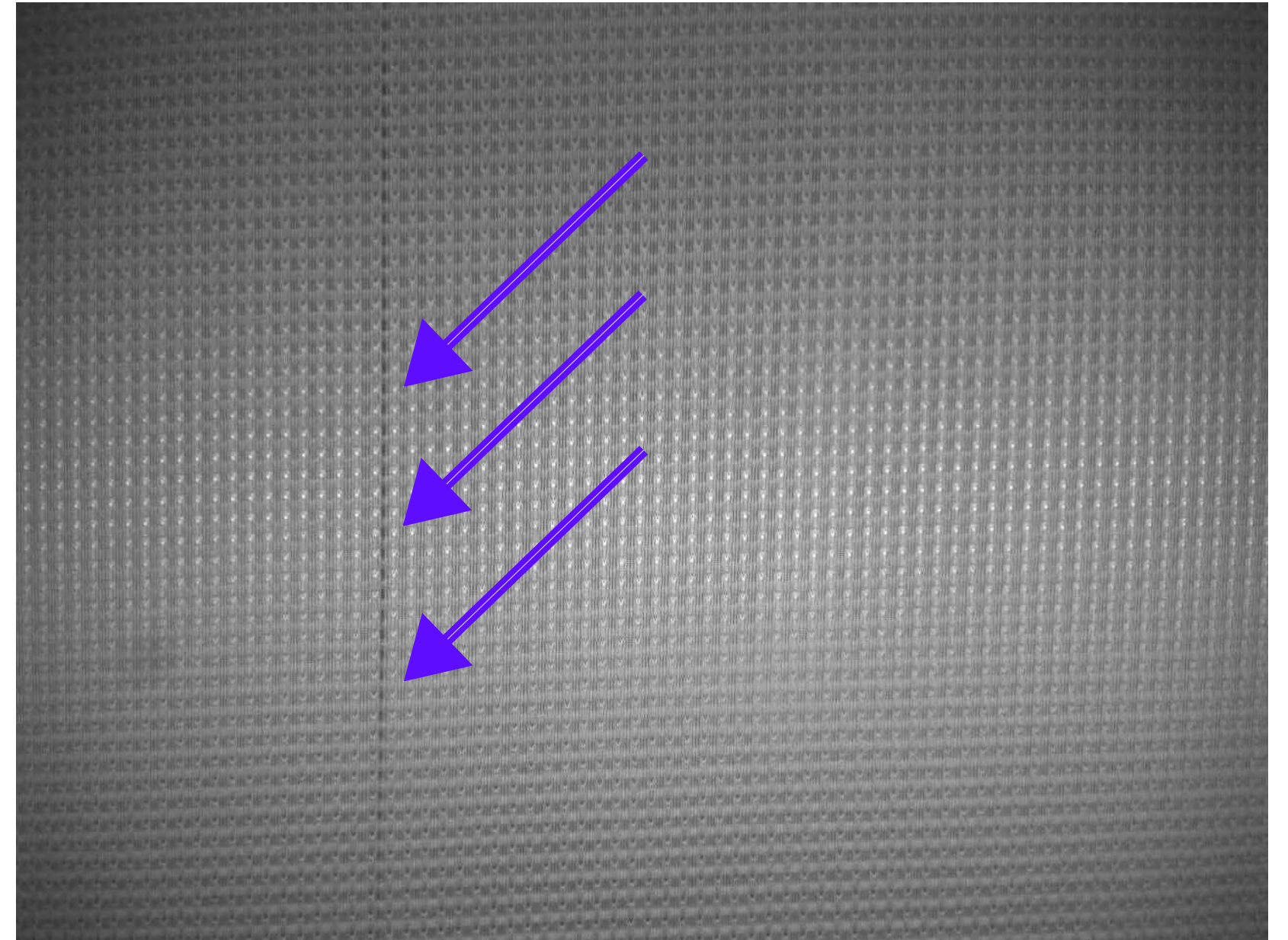
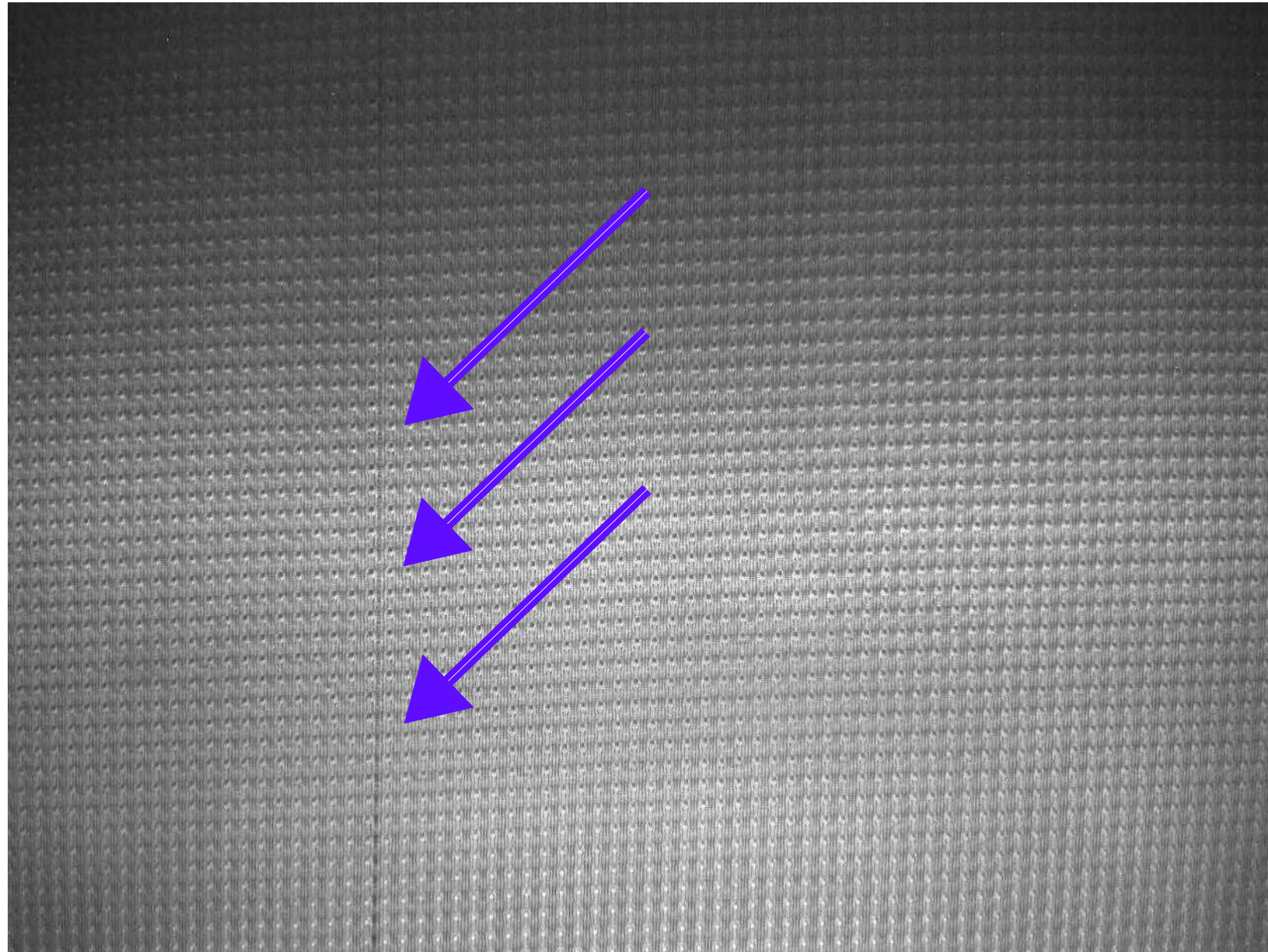
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Why so many companies tried & never scaled?



Some examples:

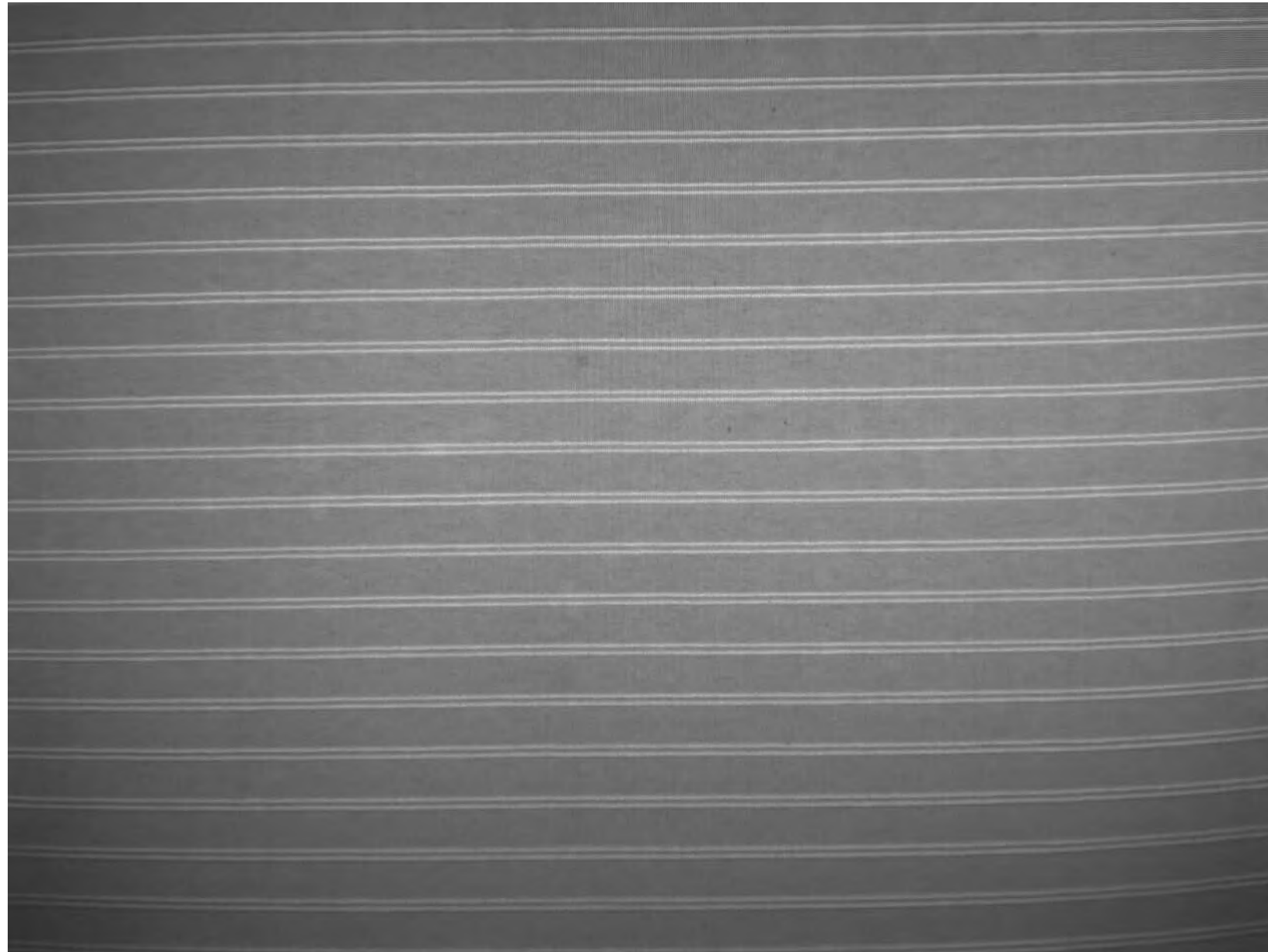
Why so many companies tried & never scaled?



Some examples:

Why so many companies tried & never scaled?

WHAT HUMANS SEE



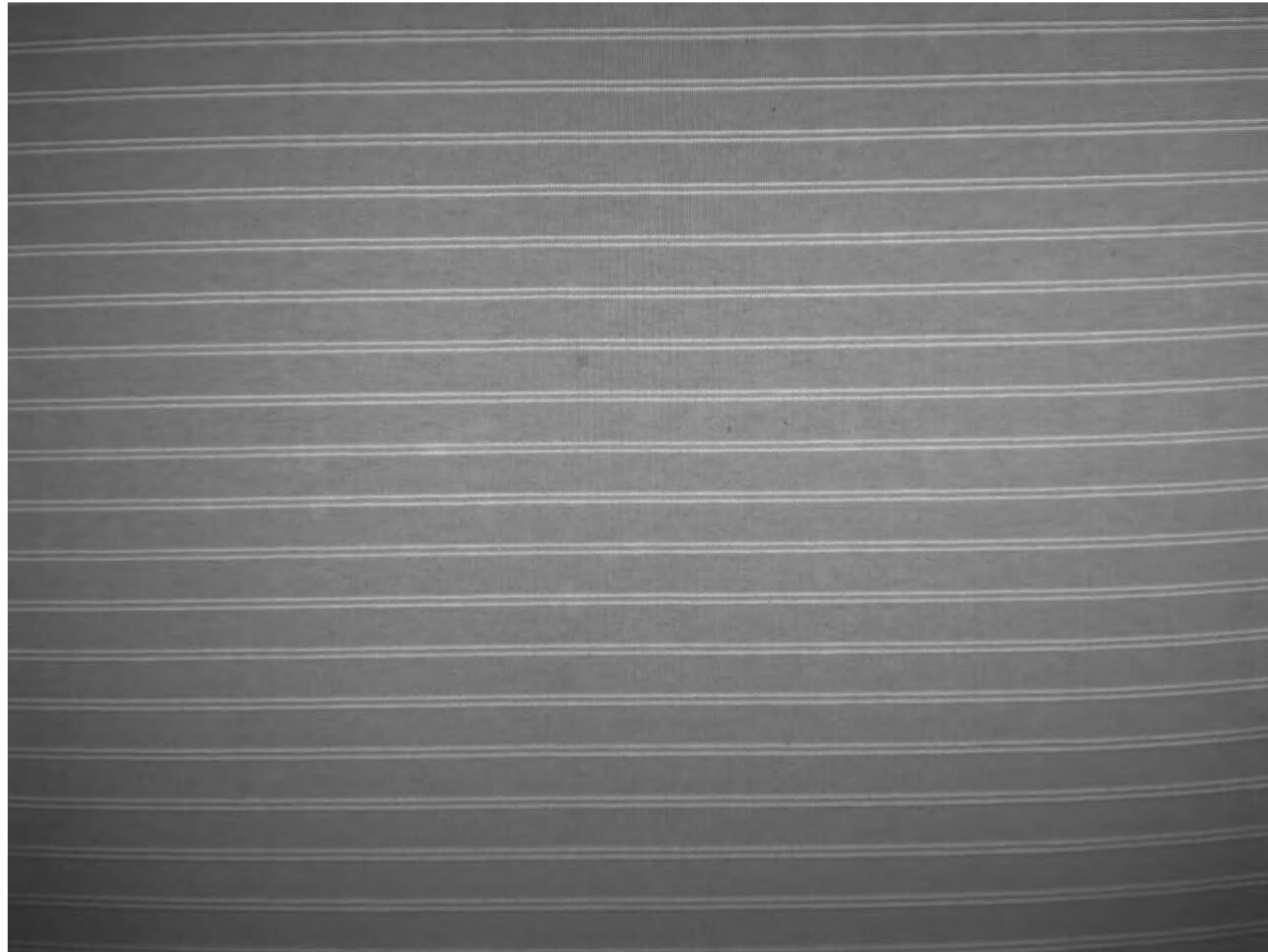
WHAT MULTI-SPECTRUM CAMERA SEES



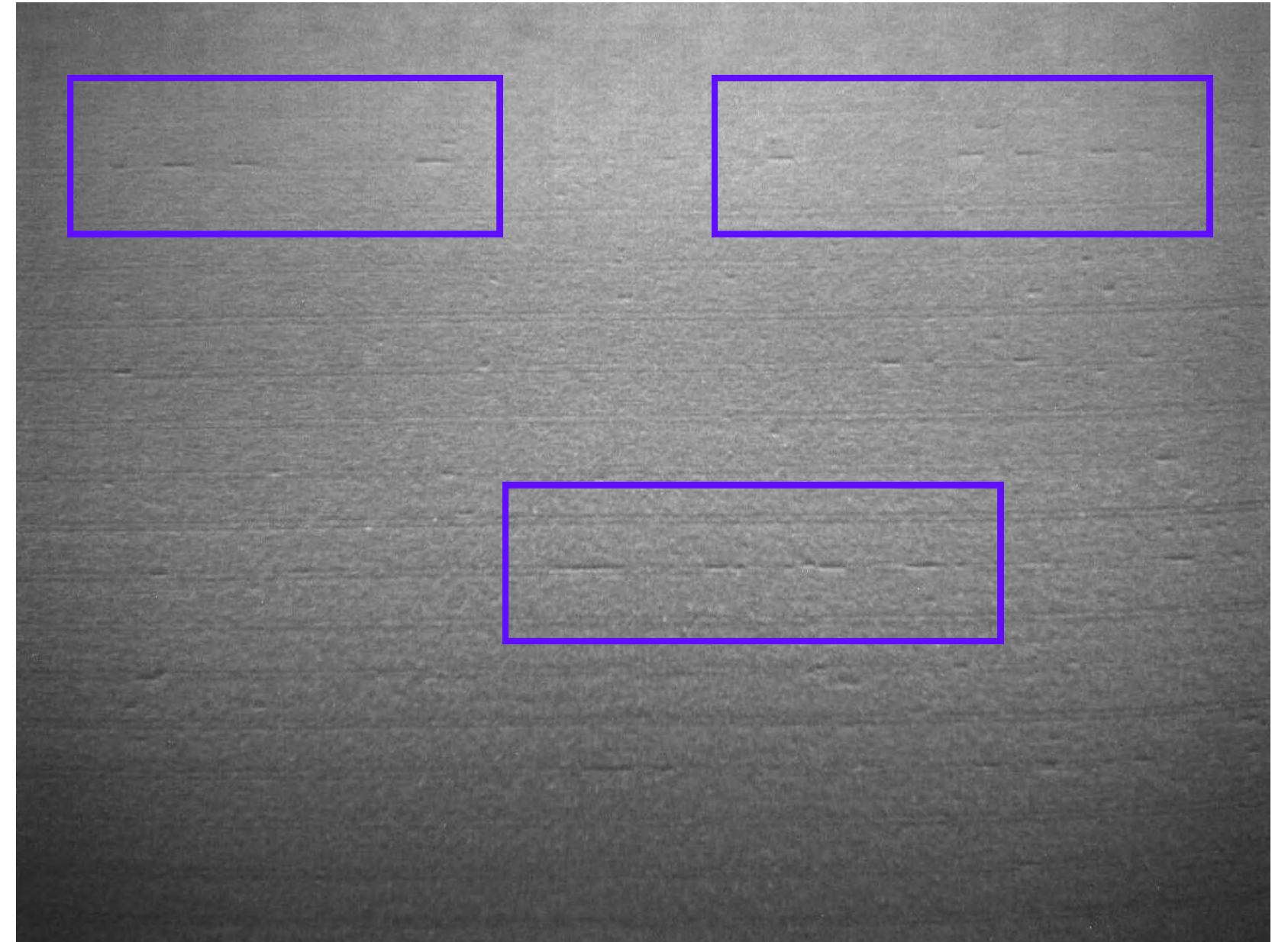
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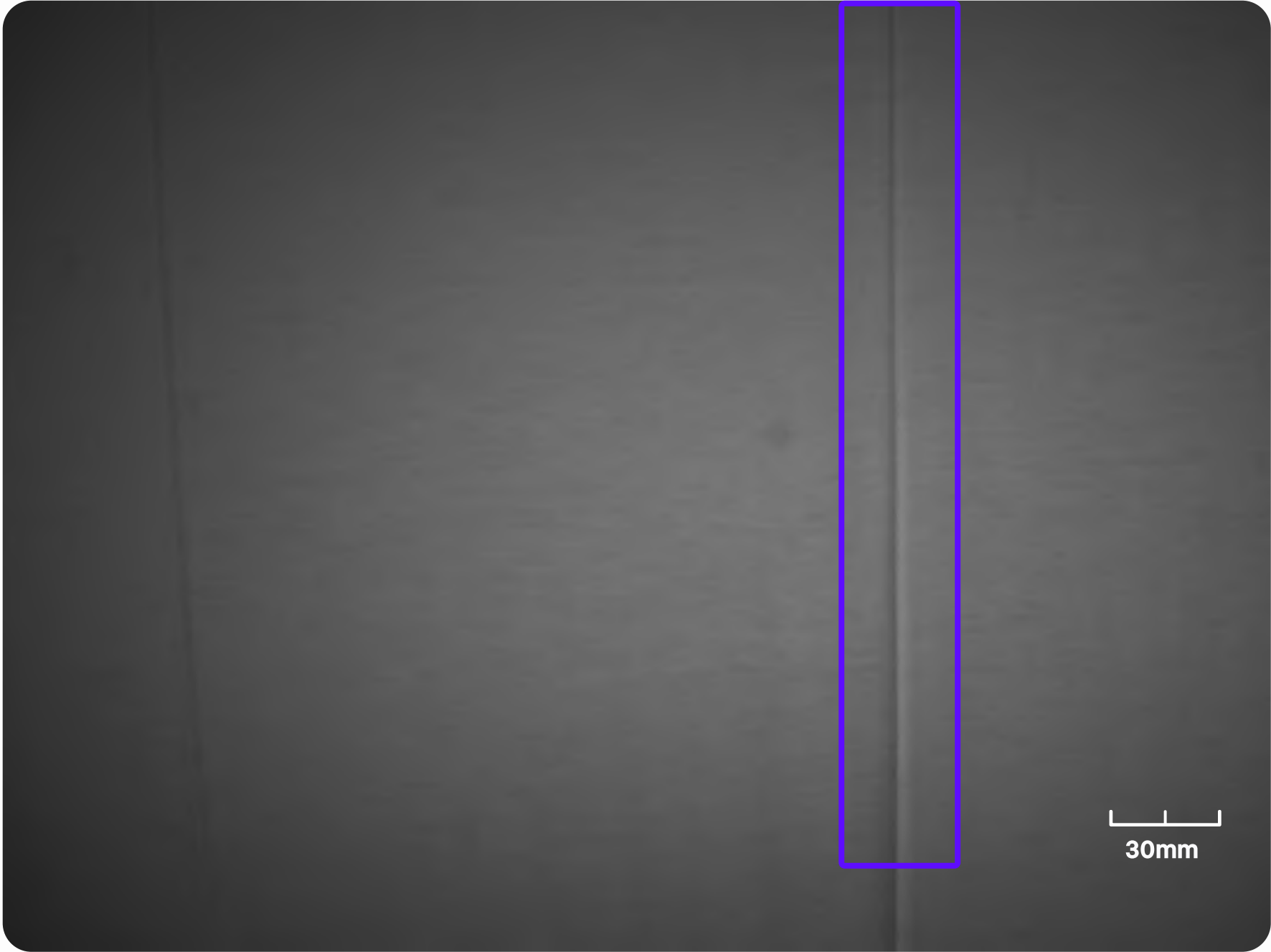
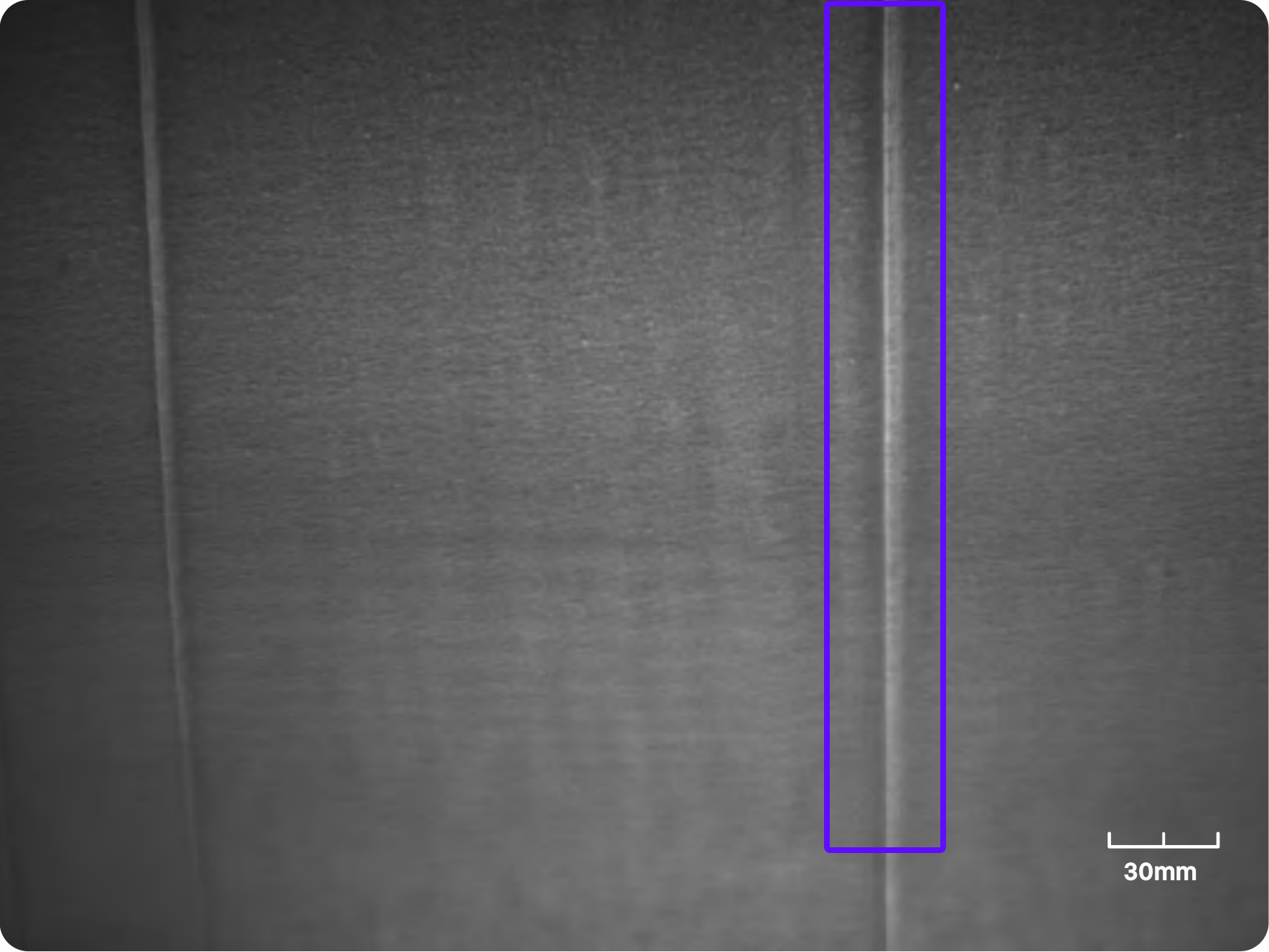
WHAT HUMANS SEE

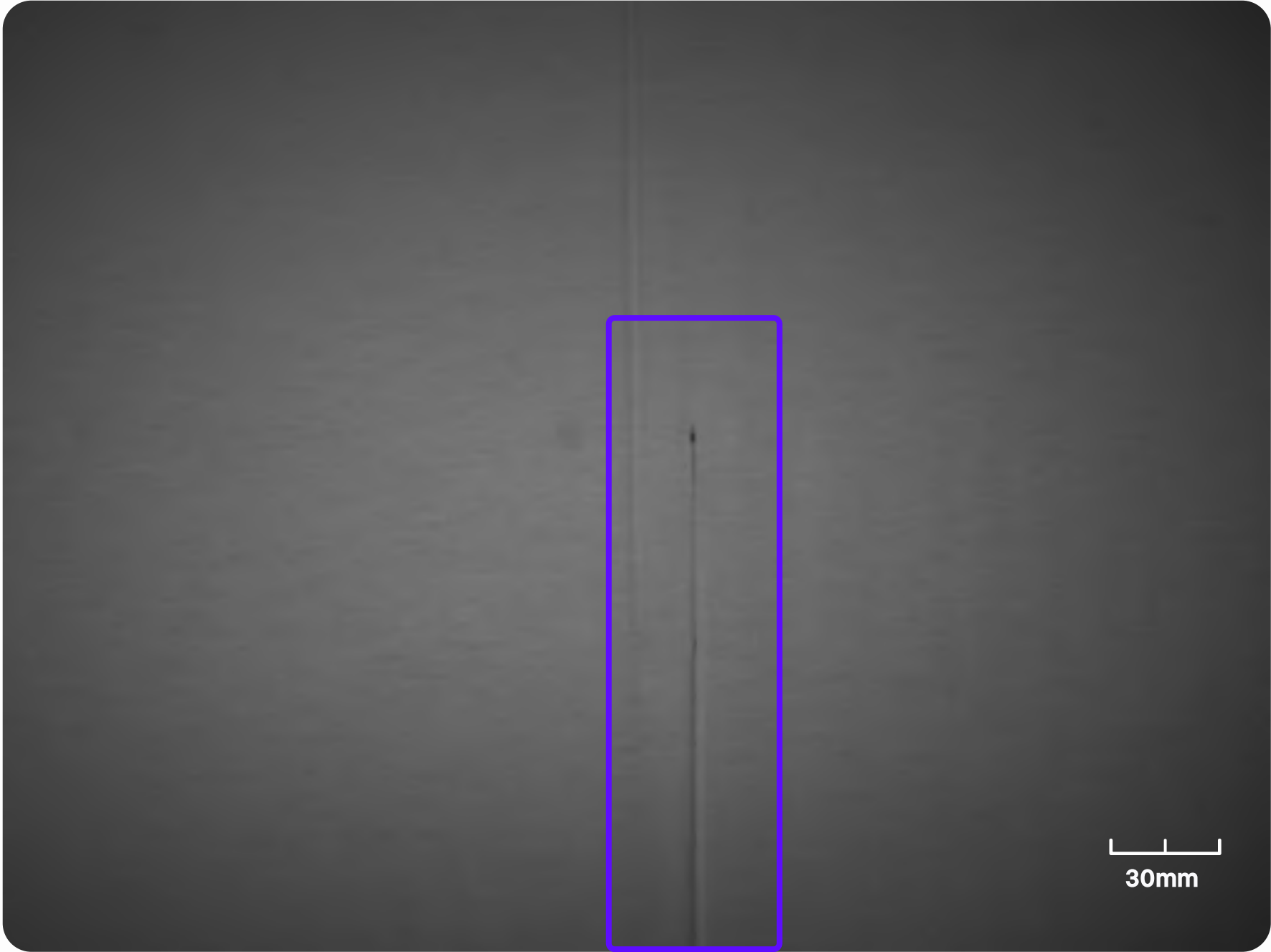
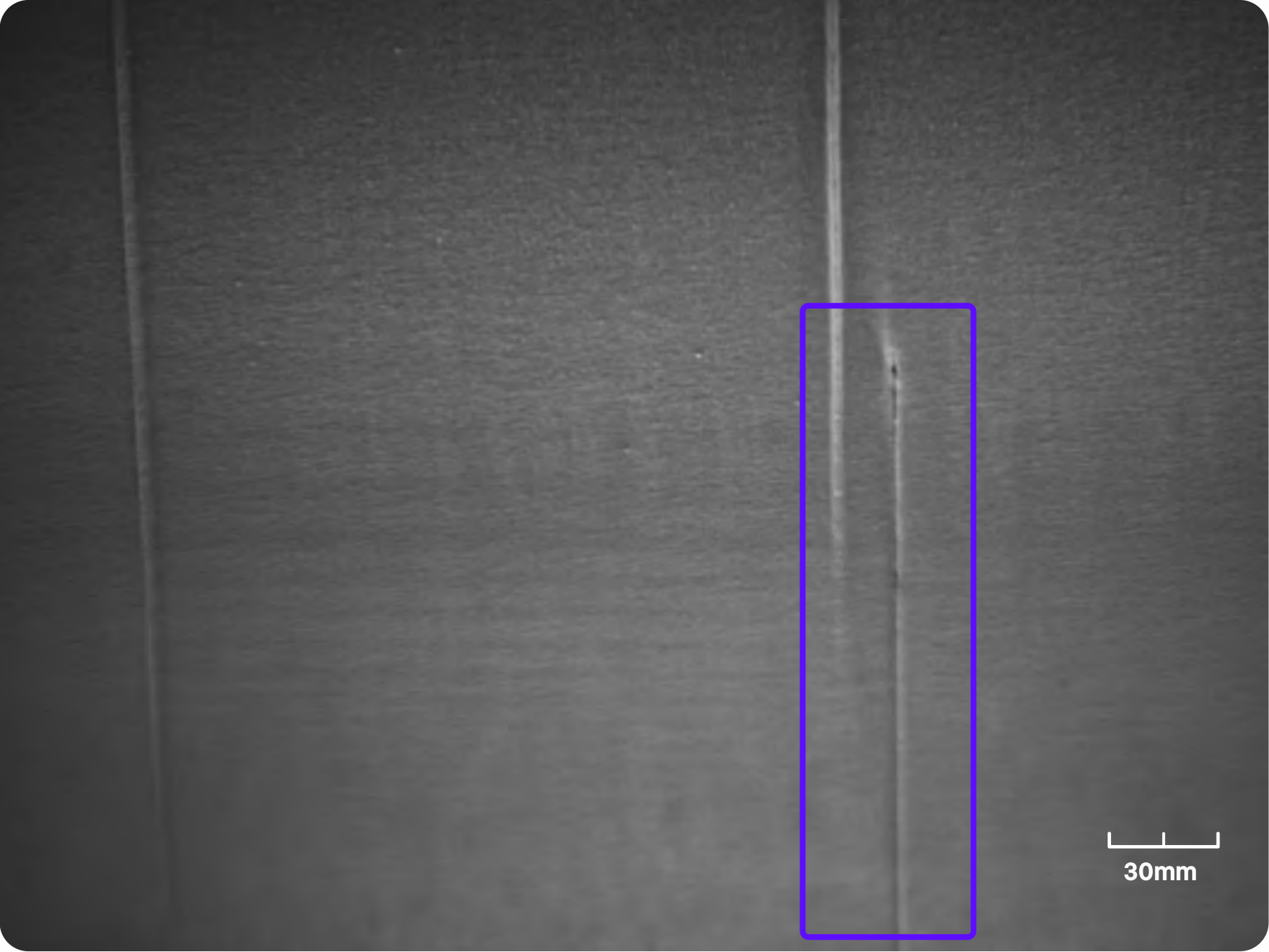


WHAT MULTI-SPECTRUM CAMERA SEES

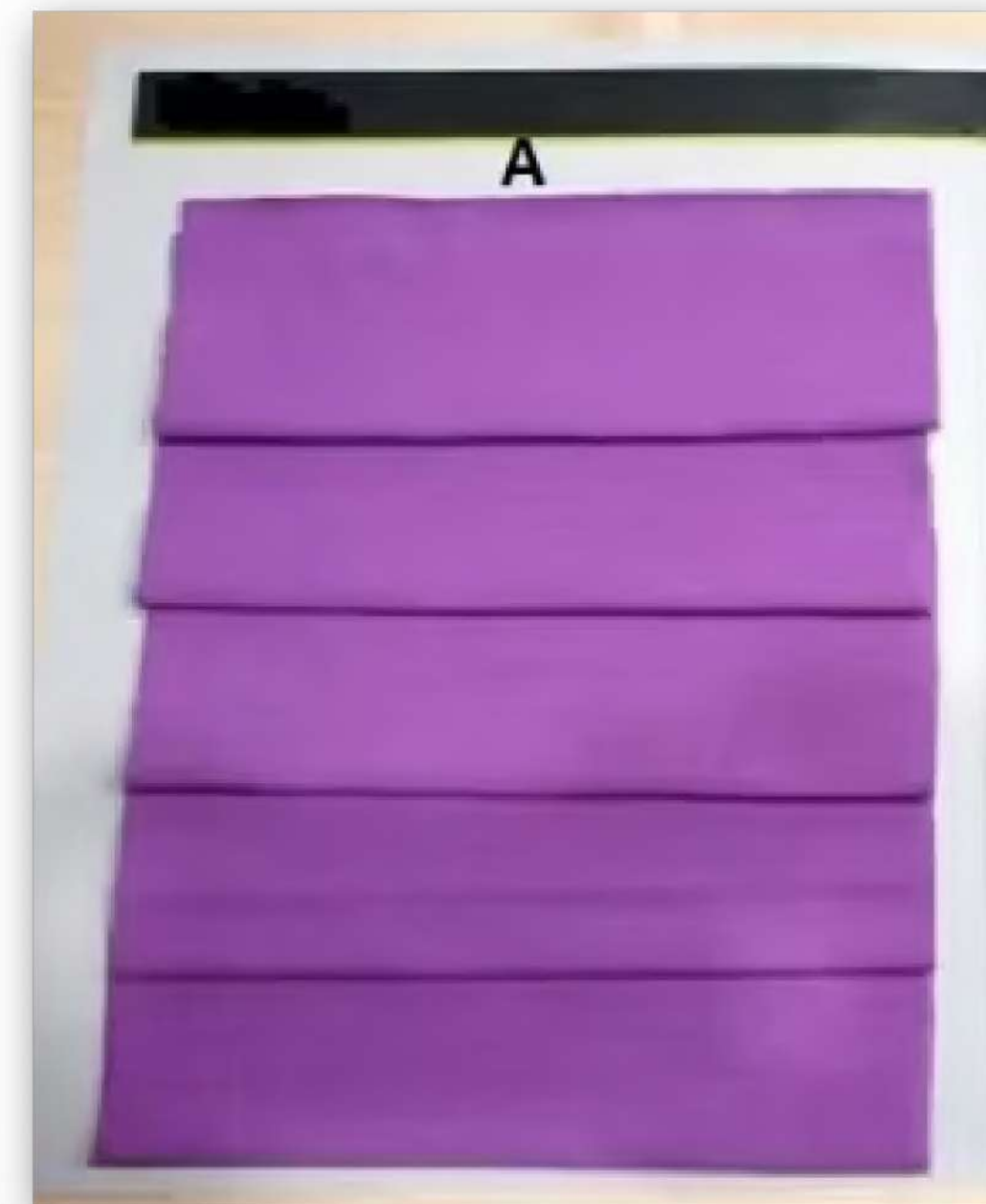








Color Shading & Color Groups



Example: Garment Factory in ~2 weeks



2,000+ garments & panels waste avoided

By early detecting defects & color variations,
optimization of panel cut

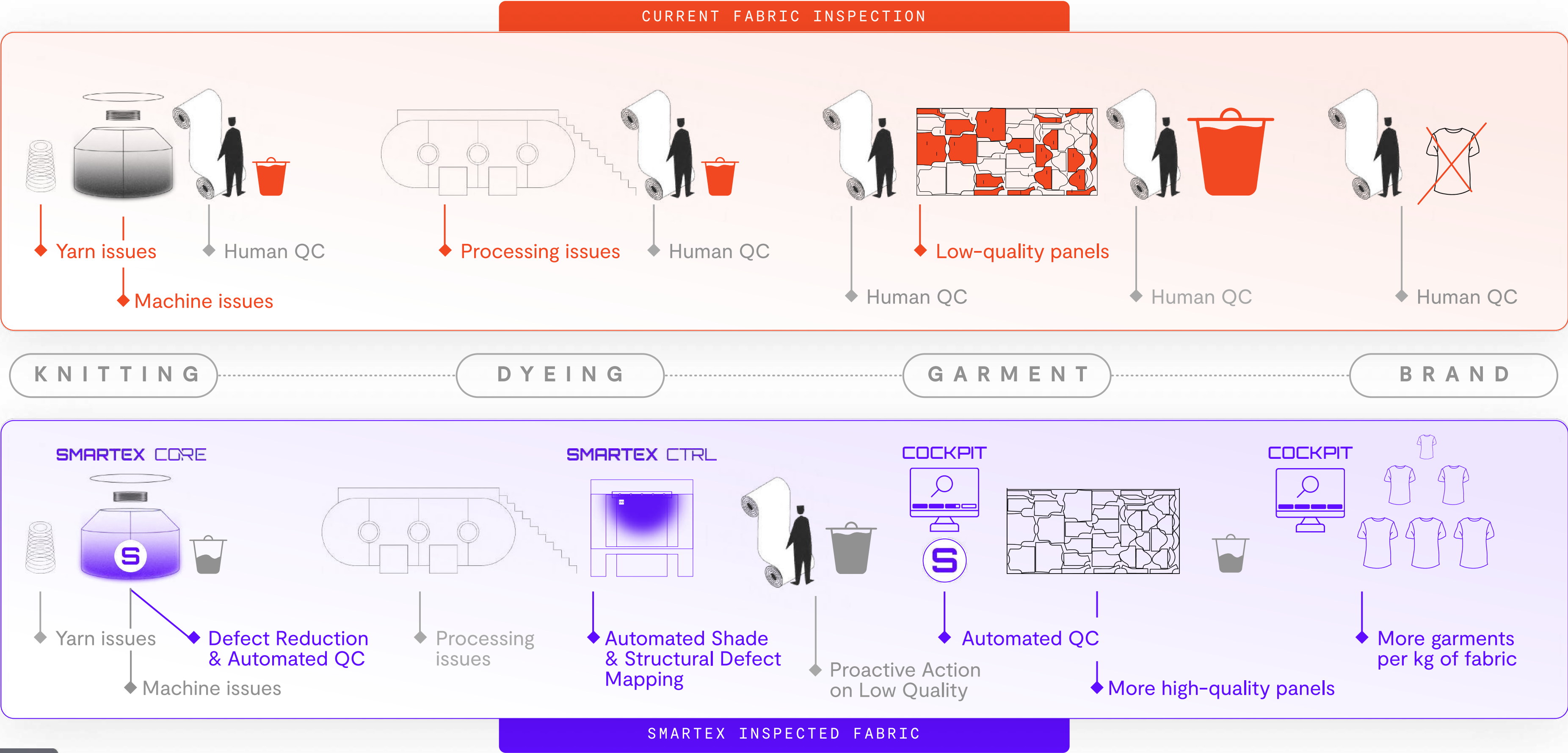


10,000 Kgs of bad fabrics avoided to cut

By cutting rolls in color groups & re-dyeing rolls after
early color shading detection

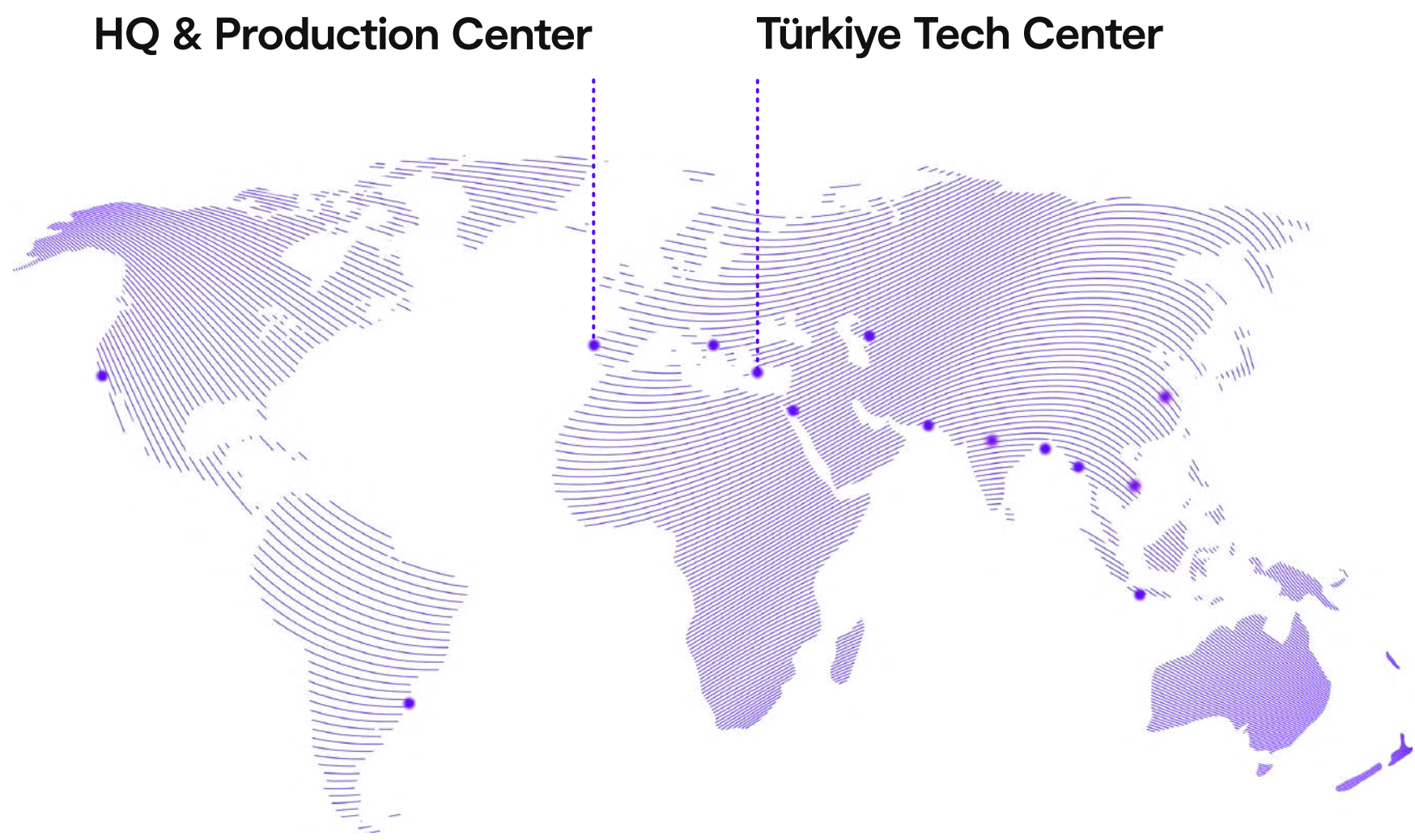
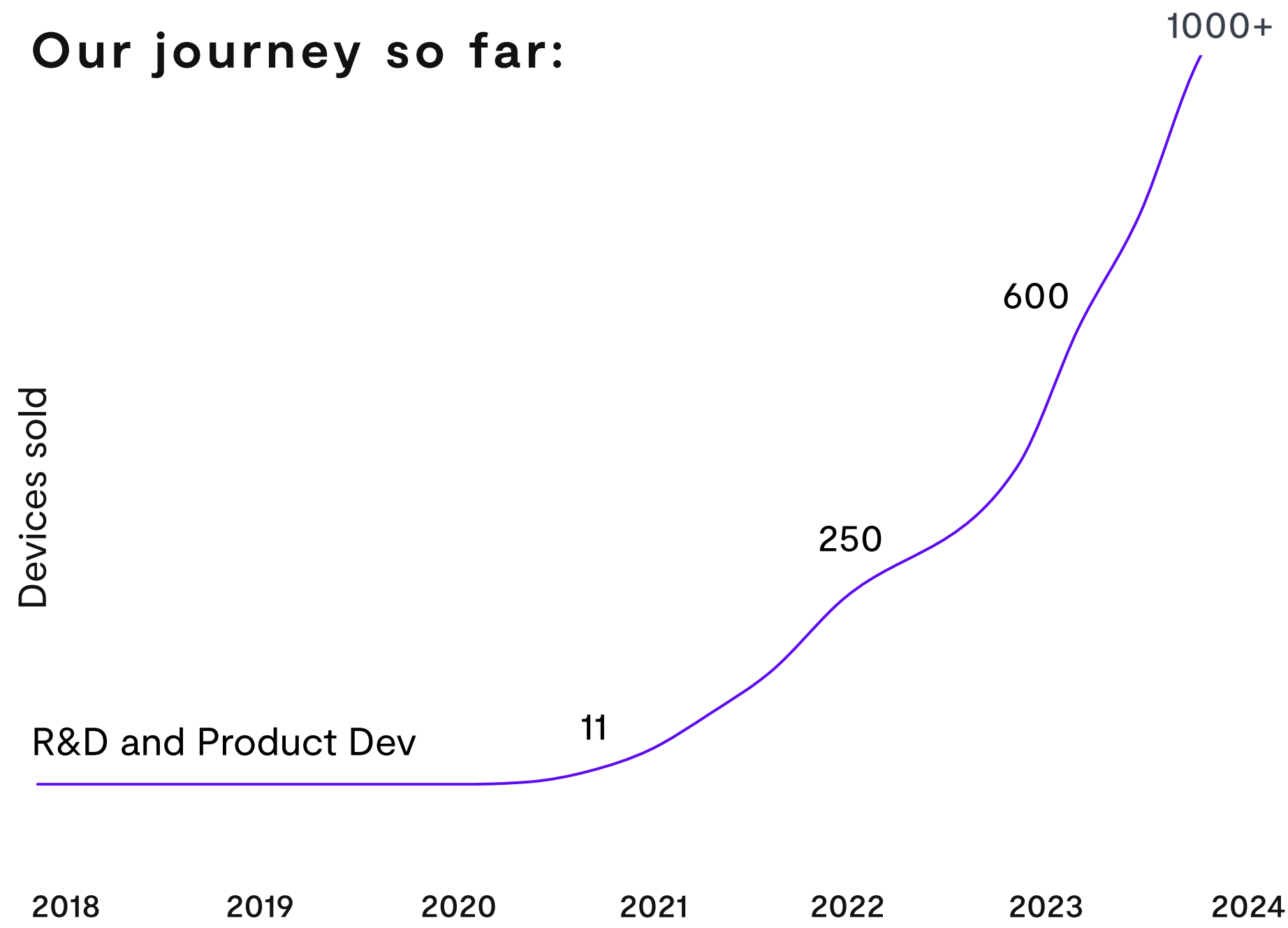
The Smartex Ecosystem

The Smartex QC System



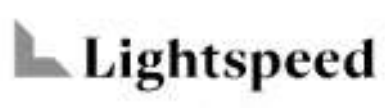
SMARTEX.AI

Our journey so far:



COMPANY TRACTION:

80+ clients	\$40M total funding
1000+ devices sold	70+ employees





4,000,000+

equivalent amount in t-shirts

+9B L of water — 6M Kg CO2 — 26M kWh

Experience the Benefits of
Smartex Inspected Fabric:

- ✓ ***Fewer Delays***
- ✓ ***Less Waste***
- ✓ ***Higher Quality***
- ✓ ***Live Tracking***

Try Pitch

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gilberto@smartex.ai

Website:

www.smartex.ai

