The team behind the CSC

Gökhan BODUROĞLU
Technology Development



Atila ÜLKÜMEN
Business Development



Our R&D track record includes support from KOSGEB (Small and Medium Enterprises Development Organization of Türkiye), TÜBİTAK (The Scientific and Technological Research Council of Türkiye) and TTGV (Technology Development Foundation of Türkiye), and finalist recognition for our GM3/GCAD project at Türkiye's 8th Technology Awards.

ADVANCED FOOTWEAR MANUFACTURING TECHNOLOGIES

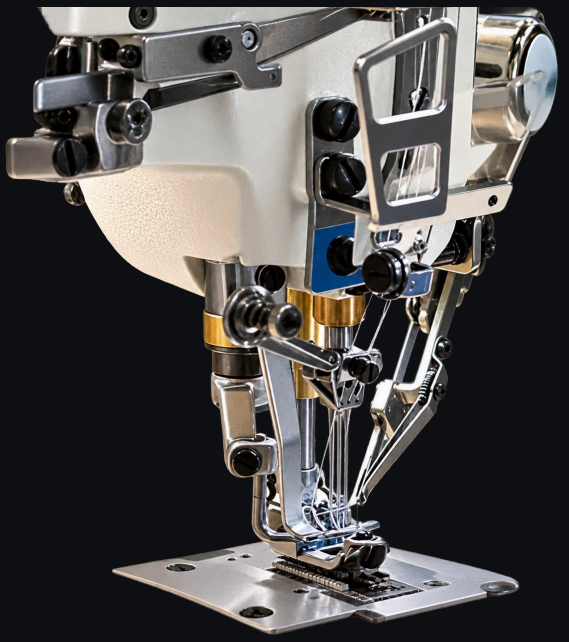
Technologies for Footwear Upper Manufacturing



60,000 YEARS OF SEWING







Still One Decision Remained Human.

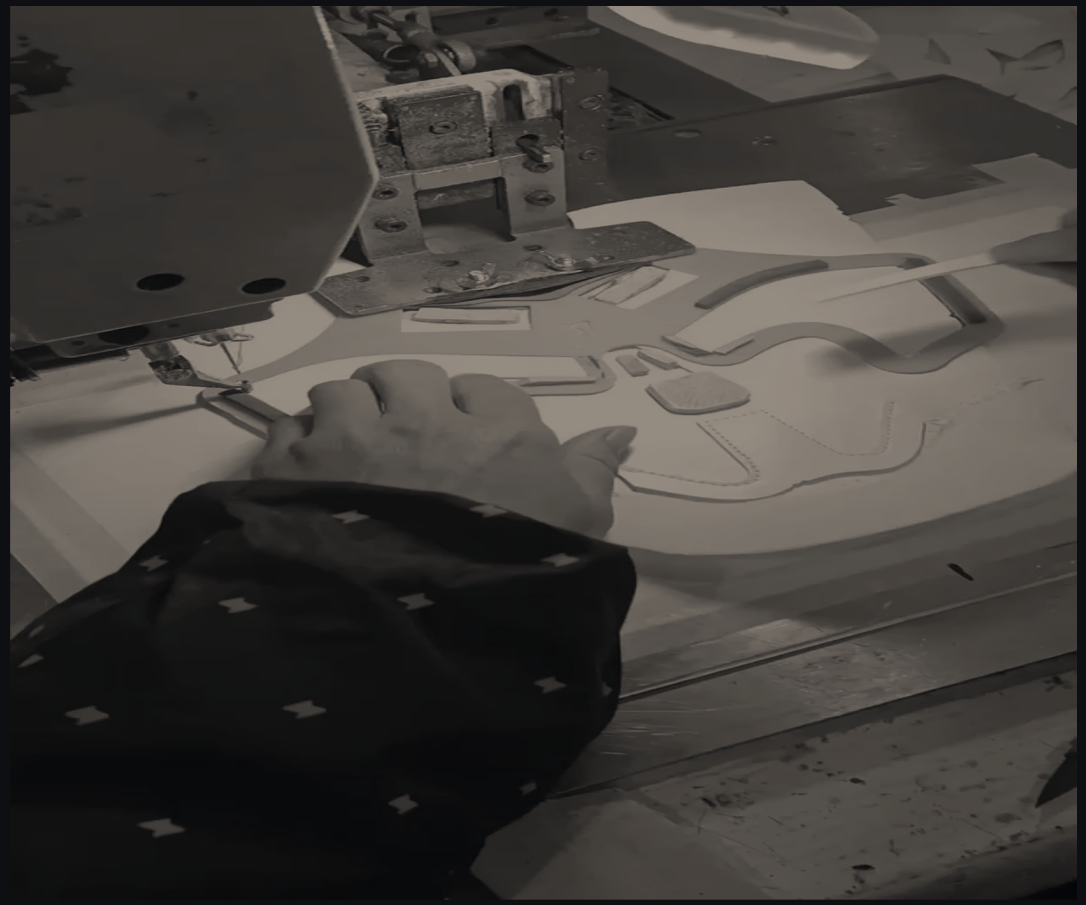
WHERE DOES THE NEXT STITCH GO?

WHY IS UPPER SEWING STILL A BOTTLENECK?

HUMAN SEWING



PATTERN SEWING



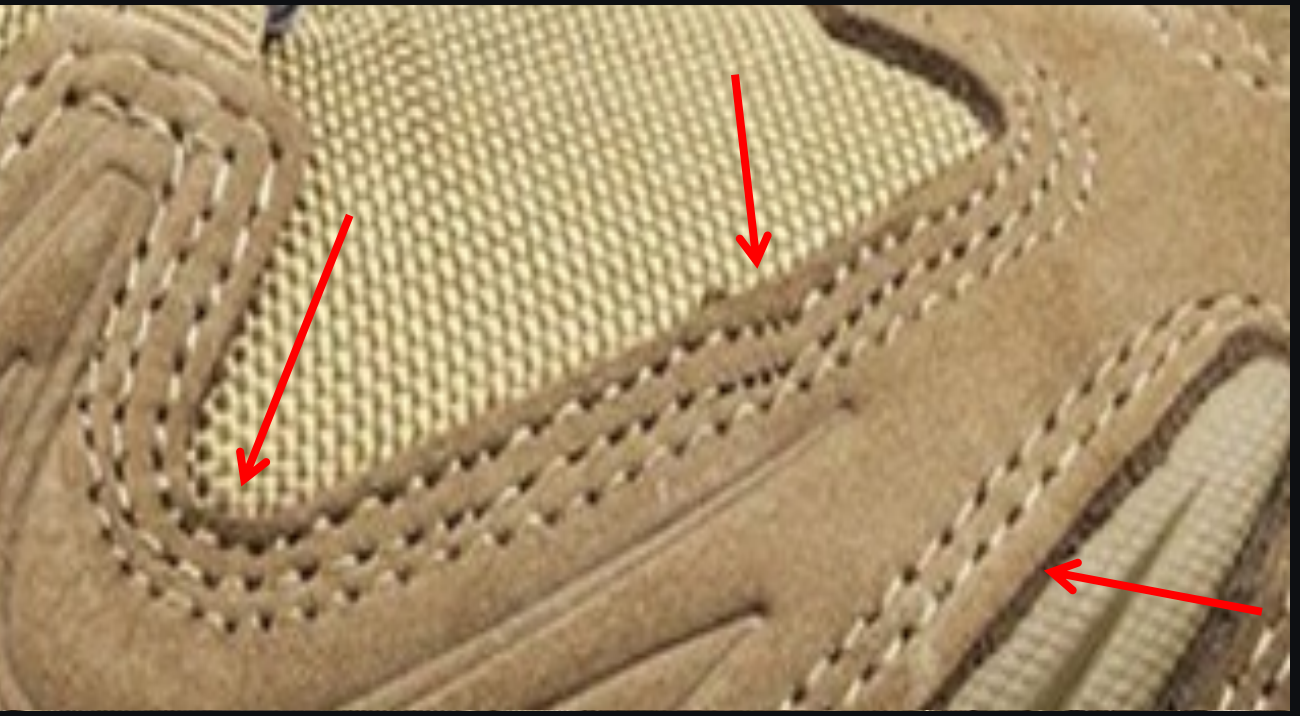
DIFFERENT METHODS, COMMON LIMITATION:

THE GEOMETRIC VARIABILITY OF FLEXIBLE UPPER PARTS.

DESIGNED GEOMETRY ≠ ACTUAL GEOMETRY

Stretch • Shift • Deform • Orientation

HUMAN SEWING



irregular offset & stitch lenght
Operator-dependent path & stitch consistency

PATTERN SEWING



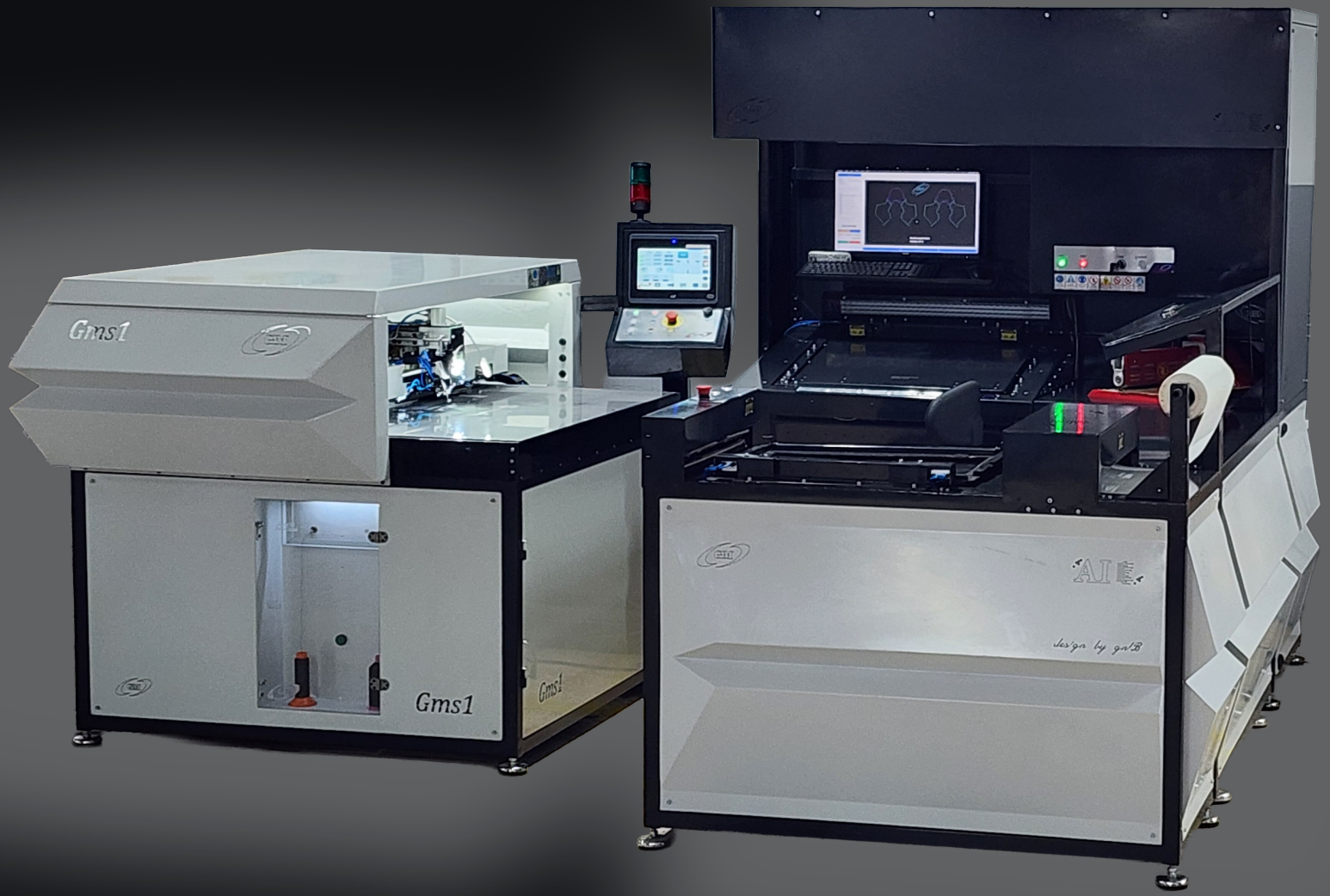
2 mm planning offset. Actual sewing path avarage -0.5 mm → 4 mm
Fixed path / Variable real part

SEWING PATH

FROM THE ACTUAL PART

IN EACH CYCLE





CSC

CORE SEWING CELL

AI-POWERED AUTONOMOUS UPPER-SEWING PLATFORM

HOW CSC WORKS



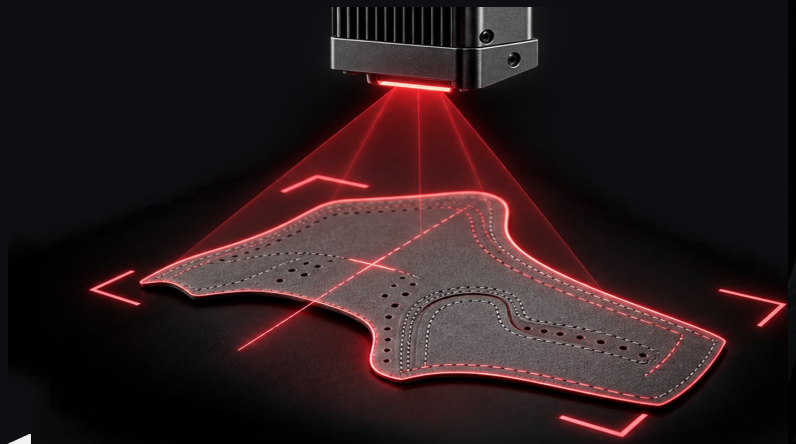
2 SEE

Actual Parts



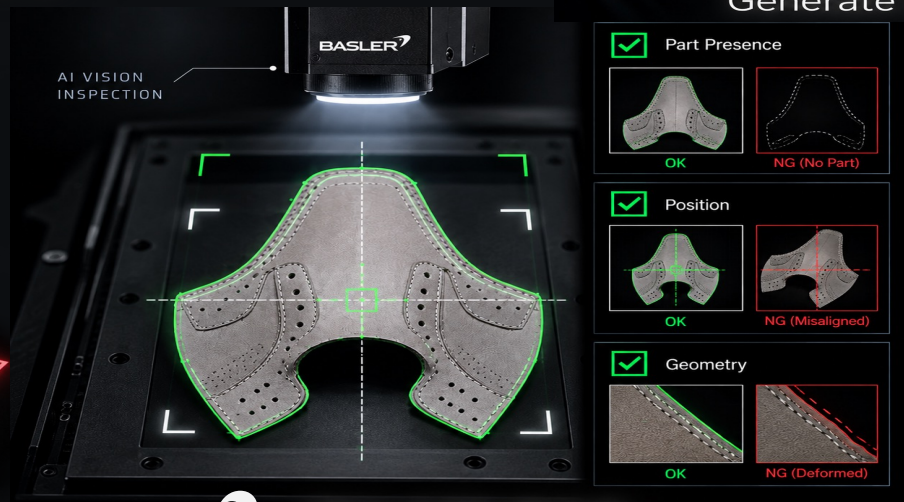
4 DECIDE

Generate the Sewing Path



1 OPTICAL POSITIONING

Jigless Part Placement



3 CHECK

Presence • Position • Geometry



5 SEW

Execute on the Actual Part



QUALITY CONTROL TODAY

AFTER PROCESS



CUTTING



UPPER SEWING



ASSEMBLY



FINISHING & BOXING



FINAL QC



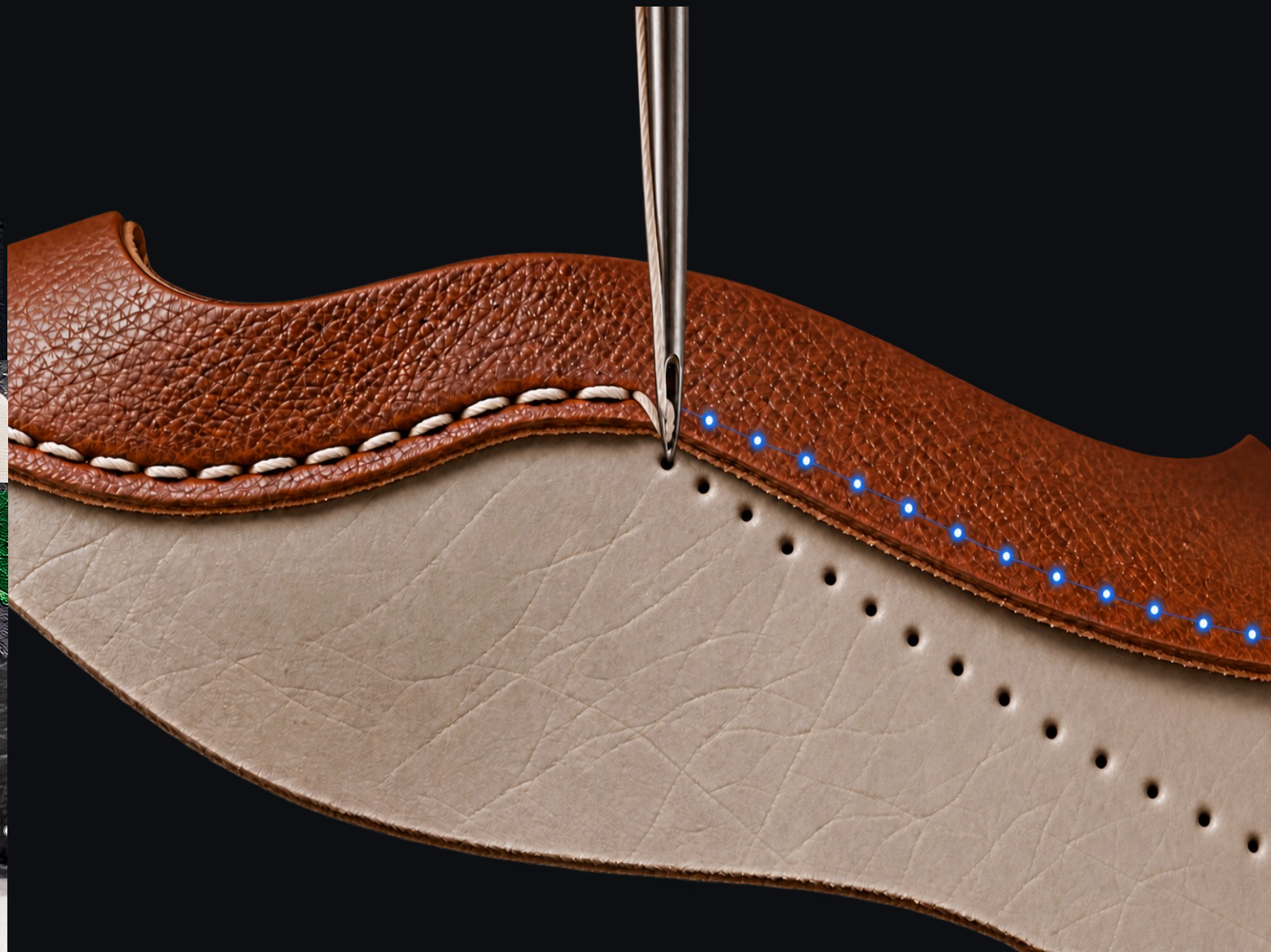
CUSTOMER

MORE WASTE CREATED AND MORE VALUE LOST ALONG THE PROCESS LINE

MORE PROCESS • MORE MATERIAL • MORE VALUE → GREATER CONSEQUENCE

PRE-CYCLE QC
BEFORE NEEDLE PENETRATION





CSC: REDEFINING THE PARADIGMS



NOT JUST A NEW AUTOMATION TECHNOLOGY.

A NEW PRODUCTION PLATFORM.

FROM HUMAN EXPERIENCE TO MACHINE EXPERIENCE

HUMAN EXPERIENCE

EMPLOYEE JOINS
New to the job



LOW PERFORMANCE

WORK
Gains experience through daily work



PERFORMANCE INCREASES

EXPERIENCE GROWS
Becomes skilled and efficient



HIGH PERFORMANCE

EMPLOYEE LEAVES
Experience leaves with the employee

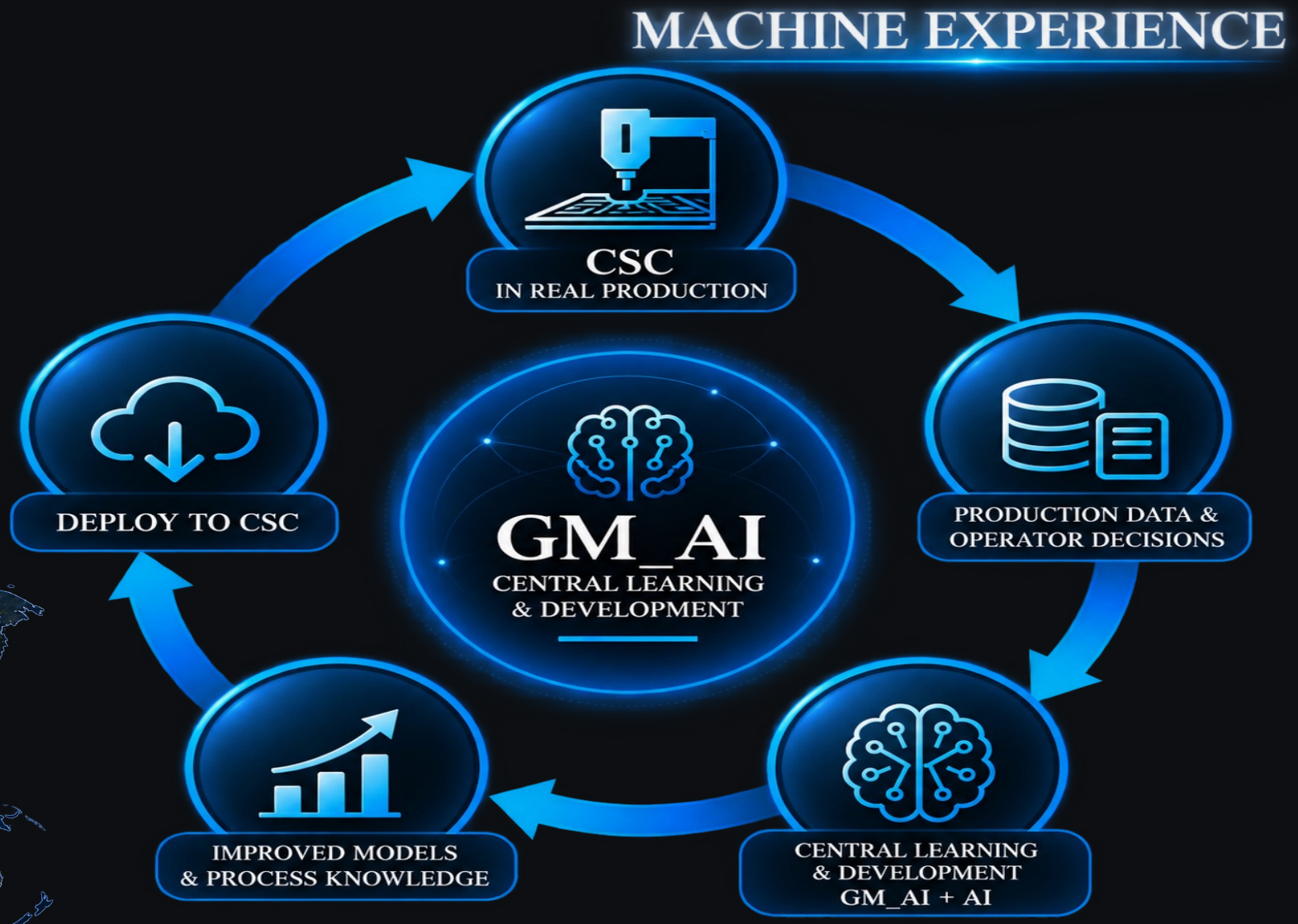


EXPERIENCE LEAVES
with the employee

EXPERIENCE BECOMES SYSTEM CAPABILITY

FROM HUMAN EXPERIENCE TO MACHINE EXPERIENCE





EXPERIENCE BECOMES SYSTEM CAPABILITY



1 YEAR IN COMMERCIAL PRODUCTION

REAL FACTORY • REAL OPERATORS • REAL PRODUCTS



FIELD PROVEN



EUROPEAN DISTRIBUTION

MARKET OPPORTUNITY

GLOBAL MARKET

~2.0M CONVENTIONAL SEWING STATIONS

~400K CSC-EQUIVALENT OPPORTUNITY

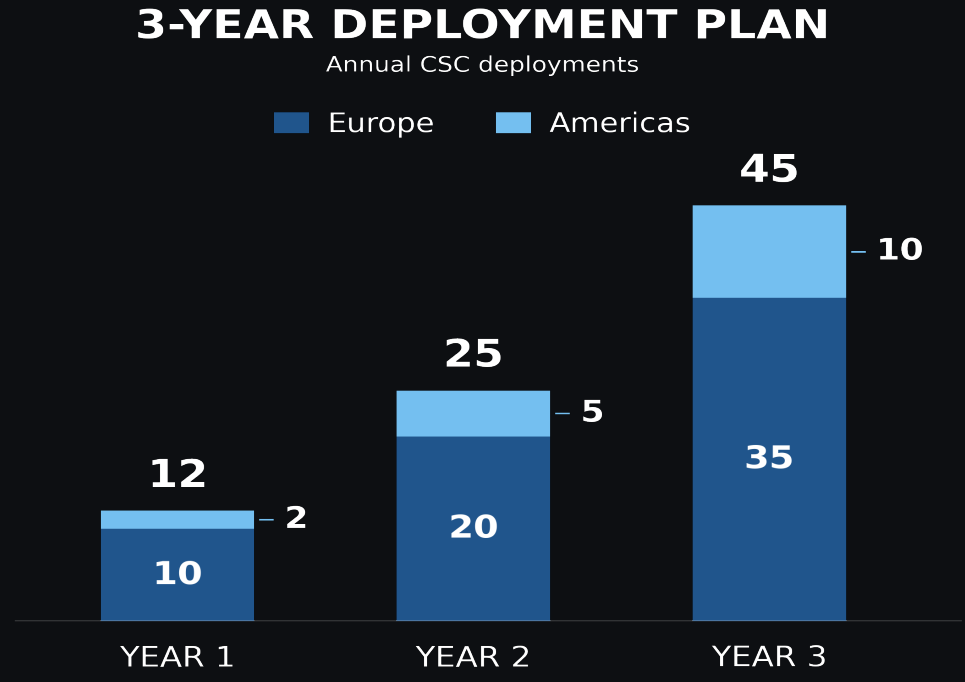
EUROPE + AMERICAS

~500K CONVENTIONAL

~10K

CSC 10% SCENARIO

SERVICEABLE OBTAINABLE MARKET



82 CSC · 3 YEAR TOTAL

More complex uppers. Faster payback.

CSC Hardware Investment

$ 110.000 / CSC

GM_AI HAREZMI Annual License

$ 6.000 / CSC / year

(First 12 Months of HAREZMI Included)

ITALY COST BASIS

CSC Investment Payback

Compared with in-house manual sewing

1 CSC INVESTMENT

$110,000

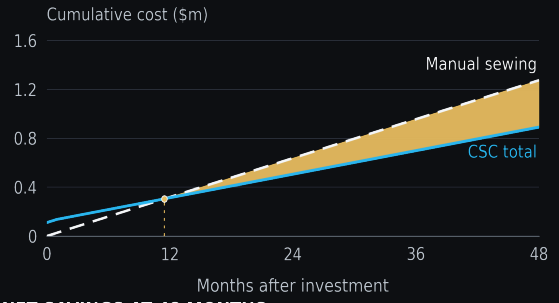
GM_AI license $6,000/year

LOW COMPLEXITY

31,500 pairs/year

PROJECTED PAYBACK

11.5 months



NET SAVINGS AT 48 MONTHS

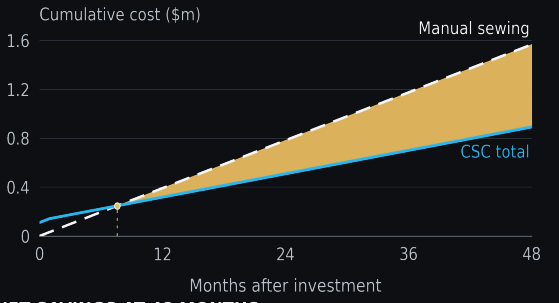
$384k

HIGH COMPLEXITY

15,750 pairs/year

PROJECTED PAYBACK

7.6 months



NET SAVINGS AT 48 MONTHS

$676k

Italy cost basis, restated numerically in USD. Equal output within each scenario.
Includes risk allowance, $6,000/year license and 1-month ramp-up. Freight, customs and site works excluded.

TÜRKİYE COST BASIS

CSC Investment Payback

Pattern and manual sewing line at 1,000 pairs/day

INVESTMENT PER CSC

$110,000

GM_AI license $6,000/CSC/year

LOW COMPLEXITY

6 CSC systems

$660,000 total investment

PROJECTED PAYBACK

30.6 months



LINE NET SAVINGS AT 48 MONTHS

$376k

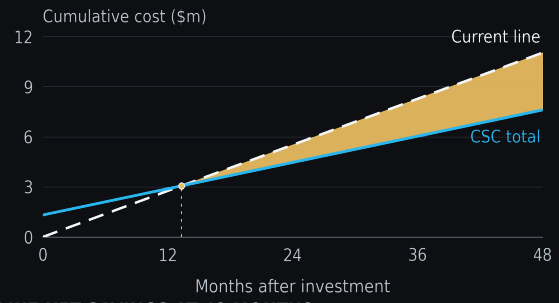
HIGH COMPLEXITY

12 CSC systems

$1,320,000 total investment

PROJECTED PAYBACK

13.3 months



LINE NET SAVINGS AT 48 MONTHS

$3.43m

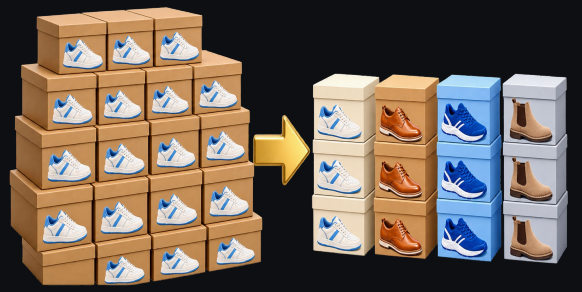
Türkiye cost basis. USD scenario at TRY 53/$1. Equal output: 250,000 pairs/year.
Includes $6,000/CSC/year license and risk allowance. Freight, customs and site works excluded.

WHY NOW AMERICAS?

SKILLED LABOR SHORTAGE /
NEW-GENERATION as DIGITAL OPERATOR



SMALLER BATCHES / MORE SKUs



EARLY ORDER / BIG STOCK



OFFSHORE PRODUCTION DEPENDENCY



OPPORTUNITY TO UPDATE USA TECHNOLOGY

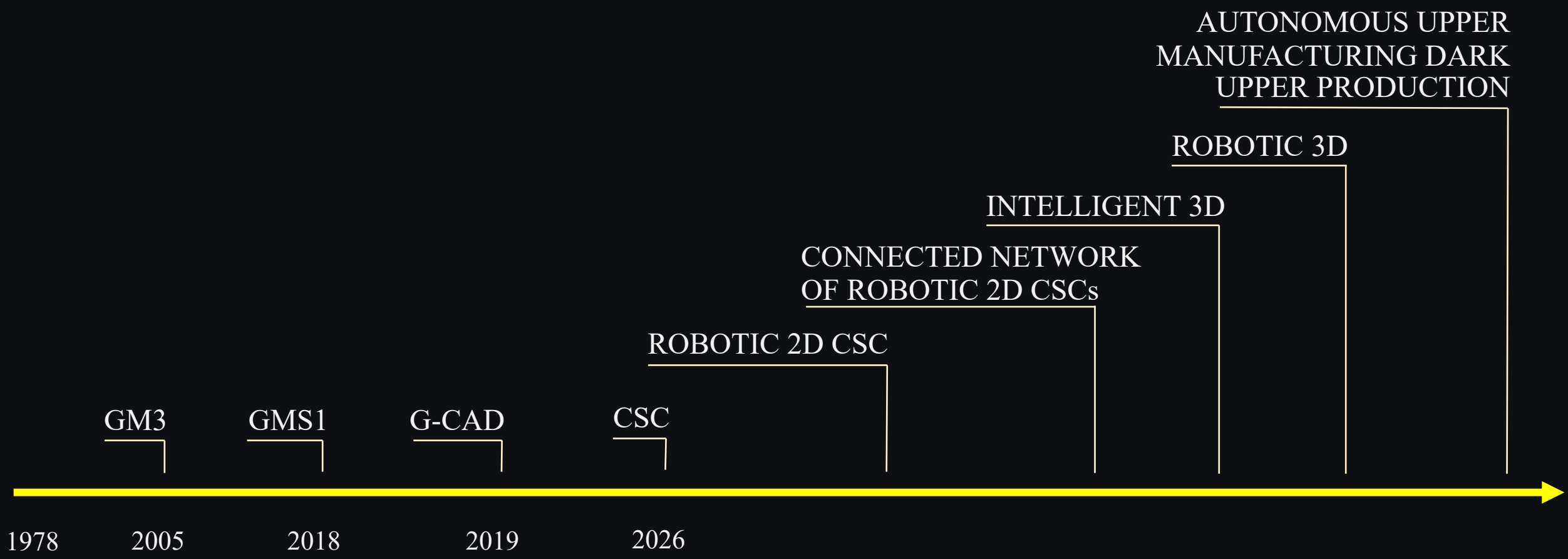


RESHORING - NEARSHORING - **INSOURCING**



THE CAPABILITY MUST MOVE WITH IT.

OUR JOURNEY OF INNOVATION



1978 – 2026 +4,300 FOOTWEAR MACHINES

NOT JUST CUSTOMERS

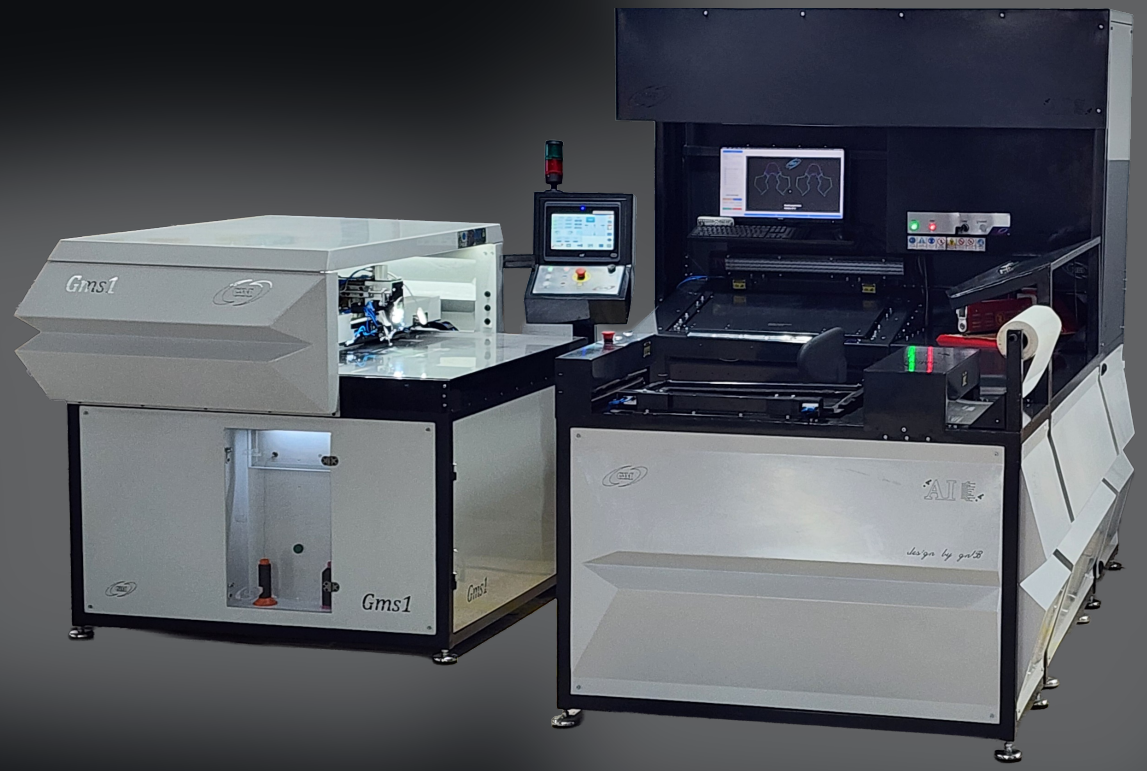
LONG-TERM TECHNOLOGY PARTNERS.



LET'S BUILD THE NEXT STAGE TOGETHER.

WHO DECIDES THE NEXT STITCH?





DISA

CORE SEWING CELL