Diffusion of 3D Knitting:
The Fashion Designer & the Digital Divide

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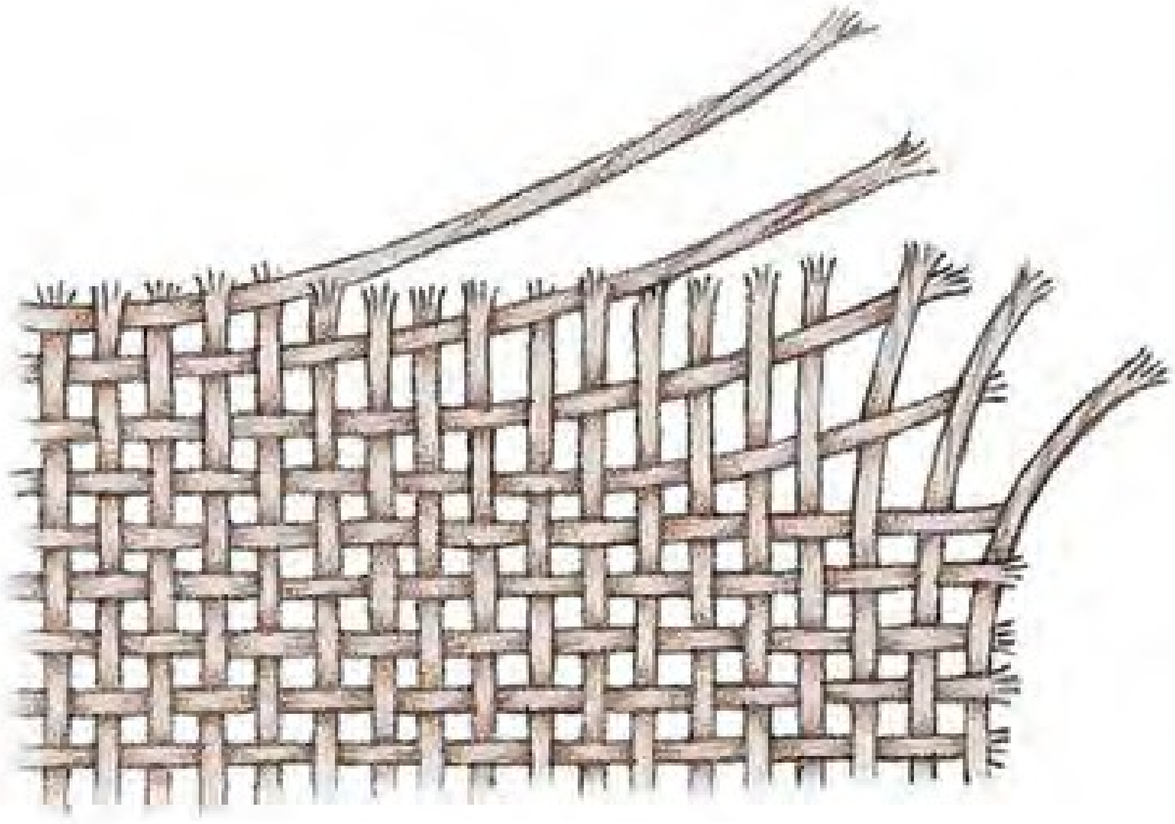
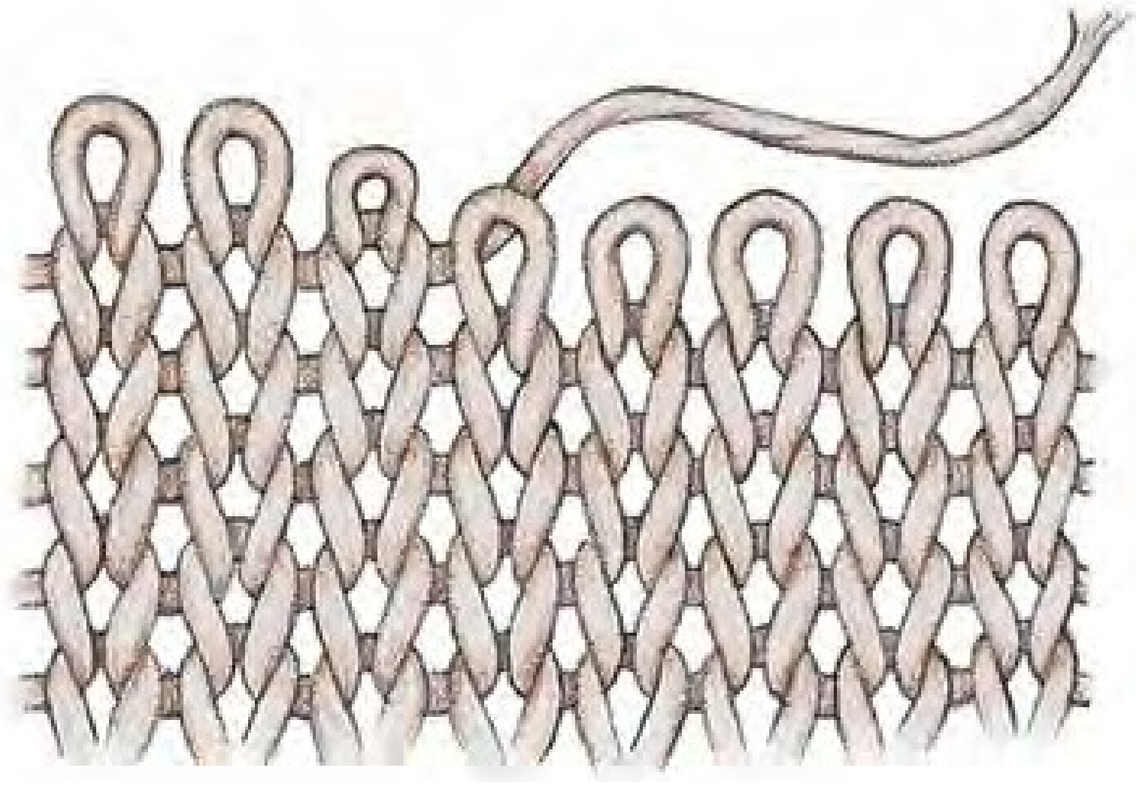
Knitwear is a $200 billion industry

source: businessoffashion.com

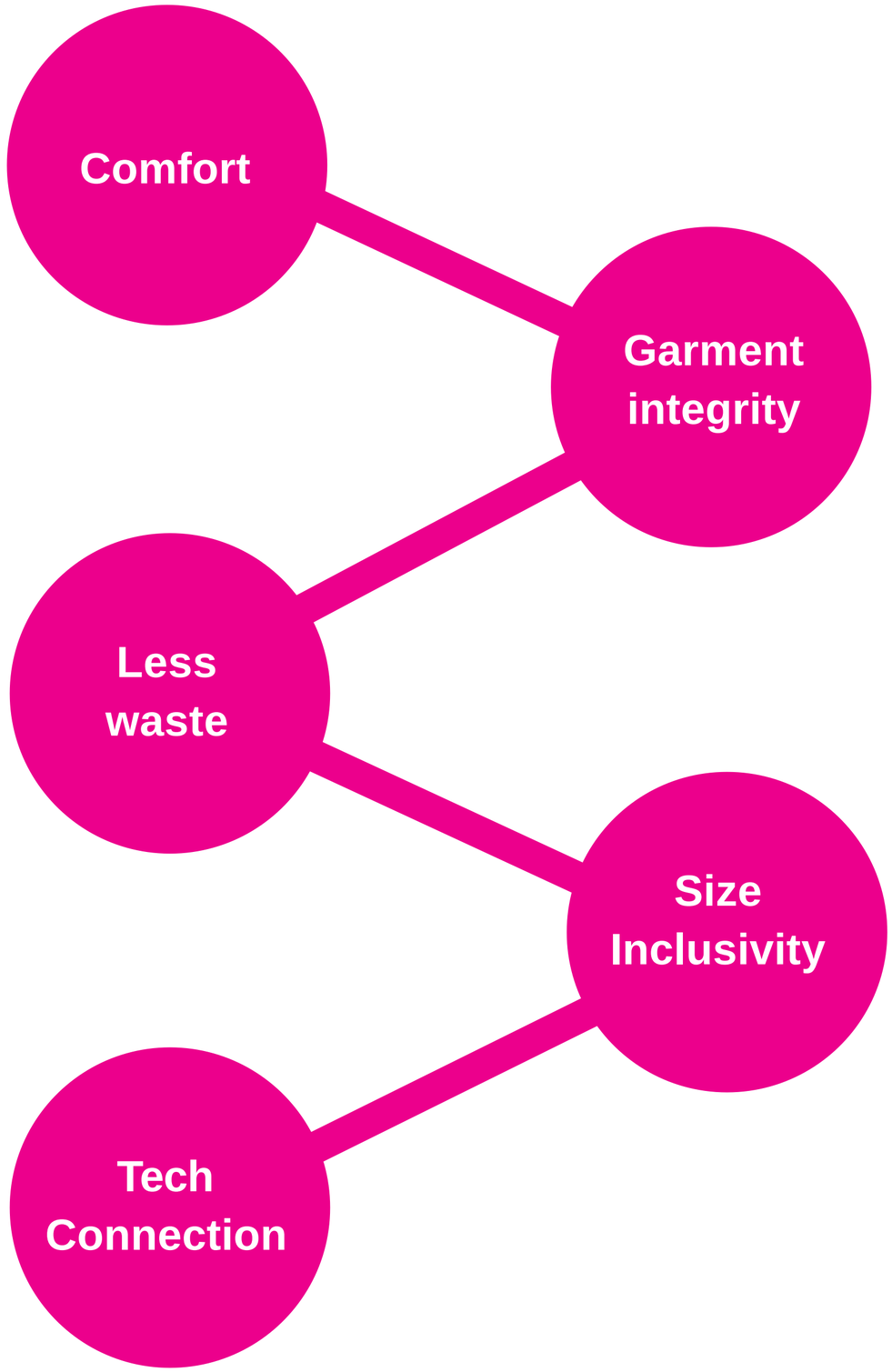
3D Knitting





woven material VS knit material

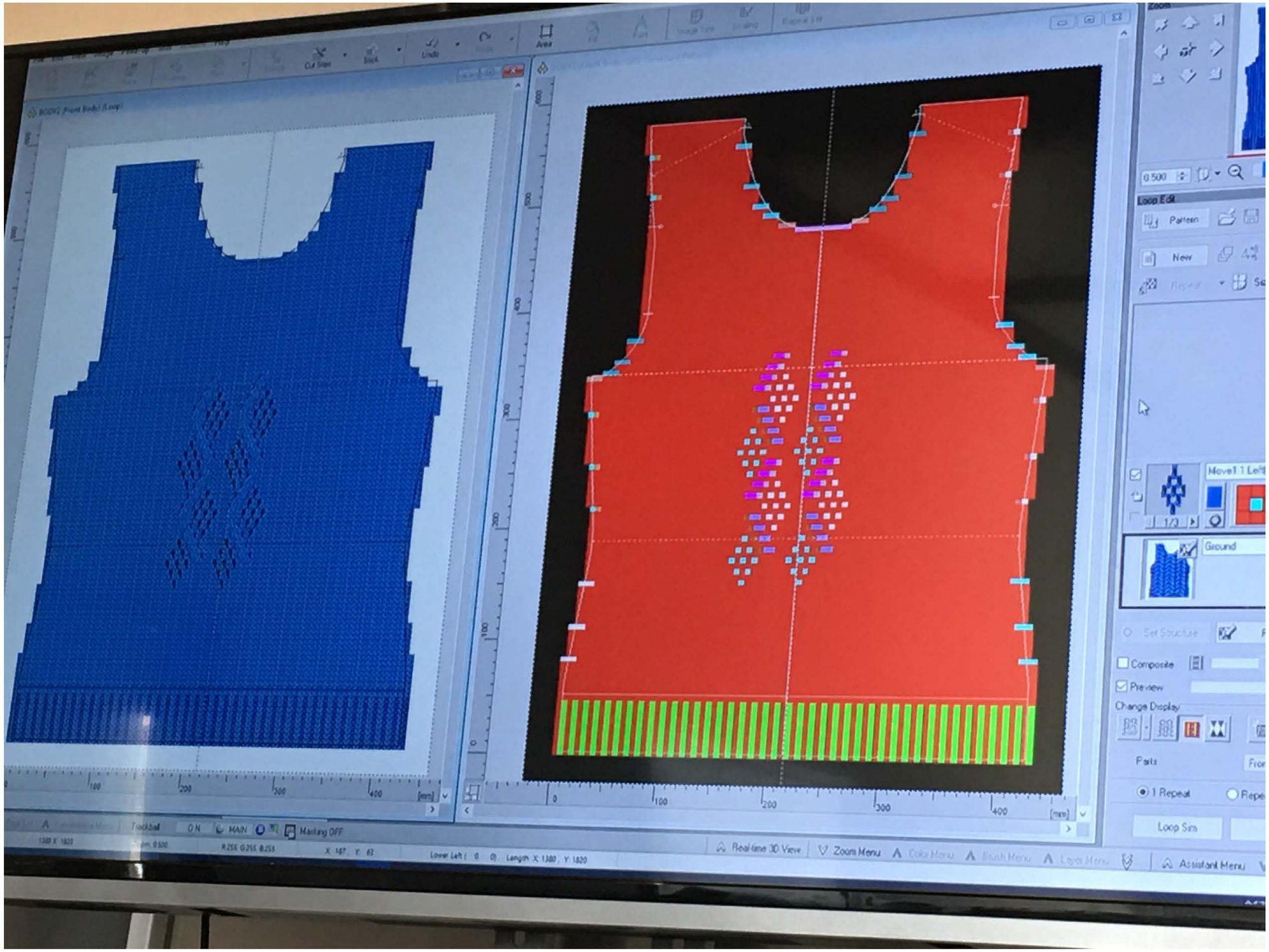
Autograph
M


Comfort
Garment integrity
Less waste
Size Inclusivity
Tech Connection

MYANT

Digital fabrication **synthesizes** design + material creation

3D Knitting
Benefits
Design Process
Method
Theme & Implications
End


Loop Edit
Pattern
New
Move1 1 Left
Ground
Set Structure
Composite
Preview
Change Display
Parts
1 Repeat
Loop Sim
Tracking OFF
Real-time 3D View
Zoom Menu
Assistant Menu

Designers' experiences

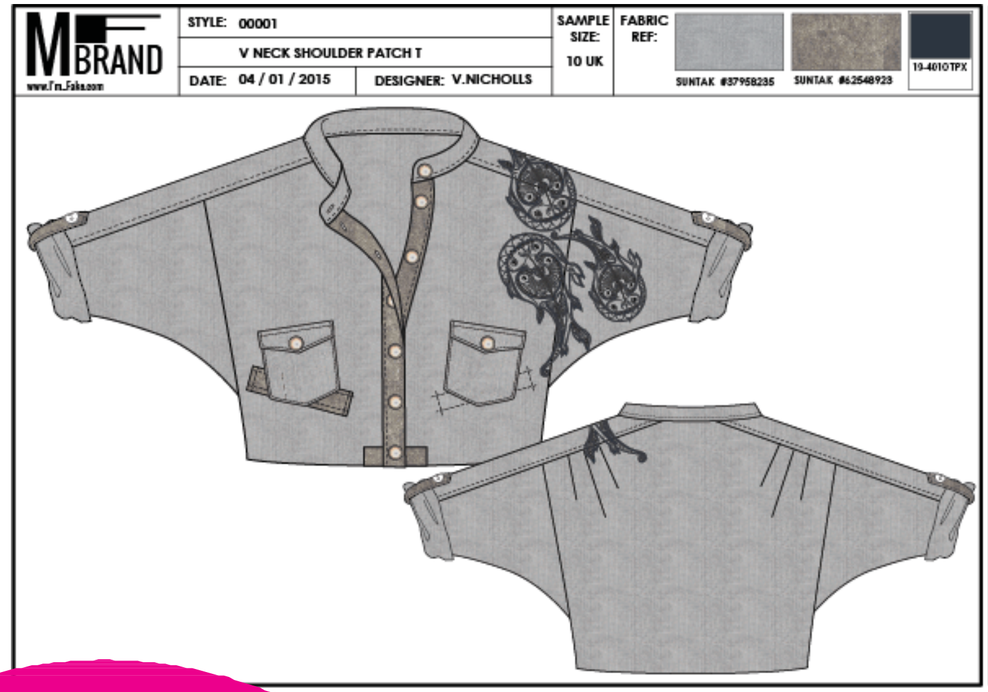
will inform the future

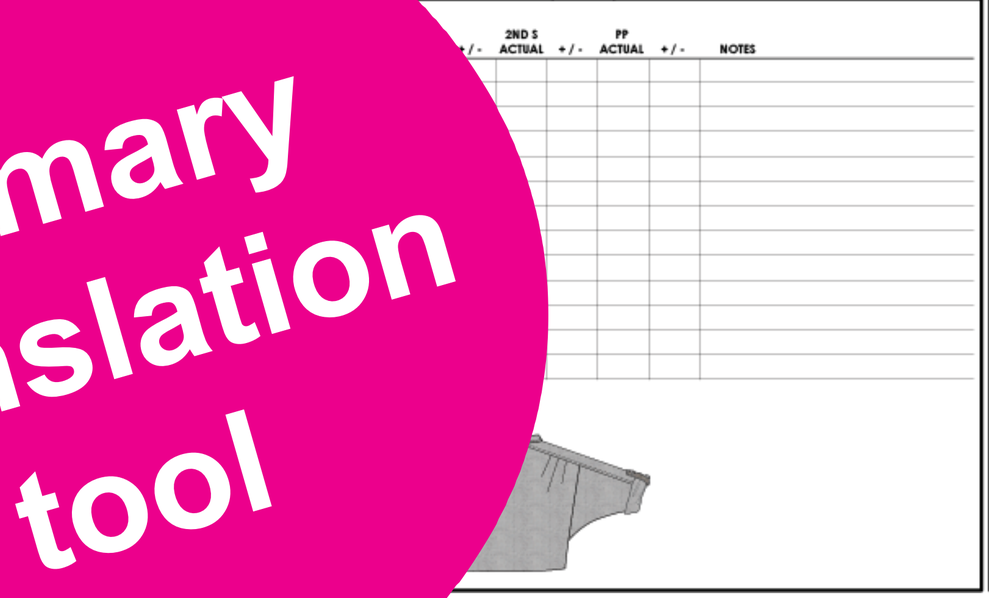
Artifacts + environment = touchstones

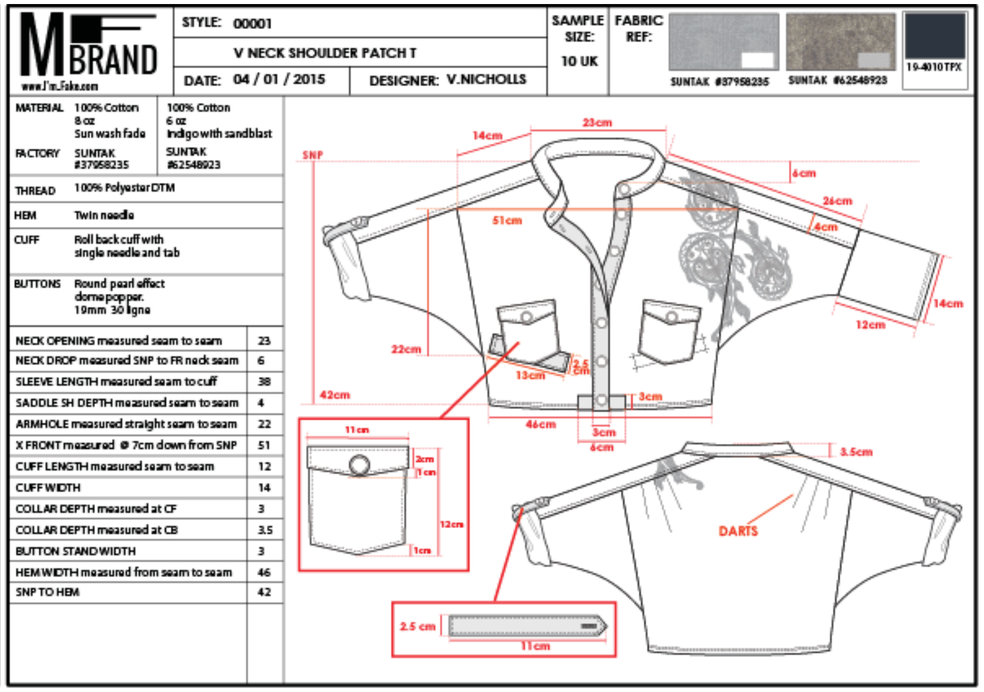
Themes

1. Communication Issues
2. Knowledge gaps
3. Reliance on programmers
4. Barriers to education

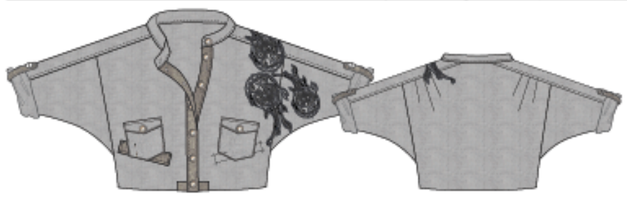
primary translation tool







	SAMPLE 10 UK	8 UK	10 UK	12 UK	14 UK	16 UK	GRADE
NECK OPENING measured from seam to seam	23	22.5	23	23.5	24	24.5	0.5
NECK DROP measured from SNP to front neck seam	6	6	6	6	6	6	0
SLEEVE LENGTH measured from seam to cuff	38	37.7	38	38.3	38.6	38.9	0.3
SADDLE SHOULDER DEPTH measured from seam to seam	4	4	4	4	4	4	0
ARMHOLE DEPTH measured straight from seam to seam	22	21	22	23	24	25	1
X FRONT measured from armhole seam to armhole seam	51	48.5	51	53.5	56	58.5	2.5
CUFF LENGTH measured seam to seam	12	12	12	12	12	12	0
CUFF WIDTH	14	13.5	14	14.5	15	15.5	0.5
COLLAR DEPTH measured at CF	3	3	3	3	3	3	0
COLLAR DEPTH measured at CB	3.5	3.5	3.5	3.5	3.5	3.5	0
BUTTON STAND WIDTH	3	3	3	3	3	3	0
HEM WIDTH measured from seam to seam	46	43.5	46	48.5	51	53.5	2.5
SNP TO HEM	42	41	42	43	44	45	1



source:
createafashionbrand.com

Machine capabilities and limitations inform design

More training opportunities are needed

10
PGM Pro

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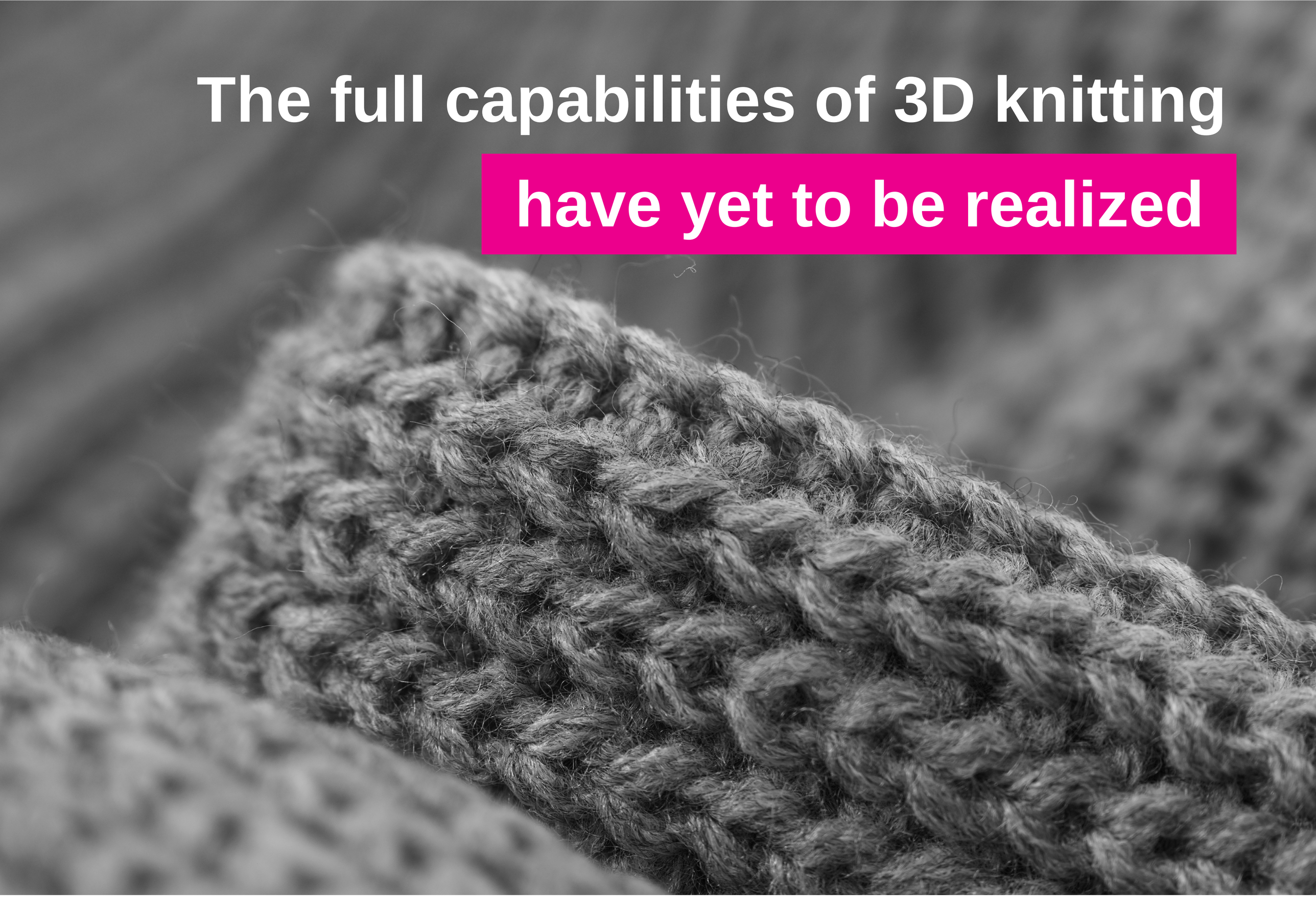
PGM Pro

The full capabilities of 3D knitting

have yet to be realized



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