


FORBEDRET ERGONOMI VIA 3D PRINT



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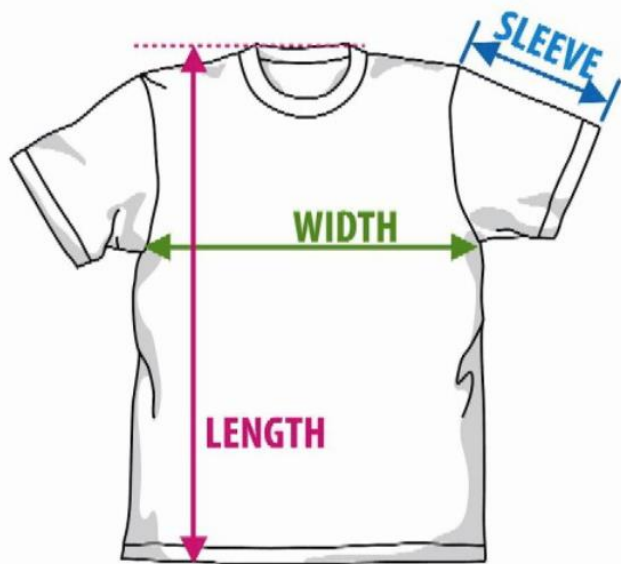
Uddannelsesansvarlig for
Sundhedsteknologi

Aarhus Universitet
Biomedical Engineering

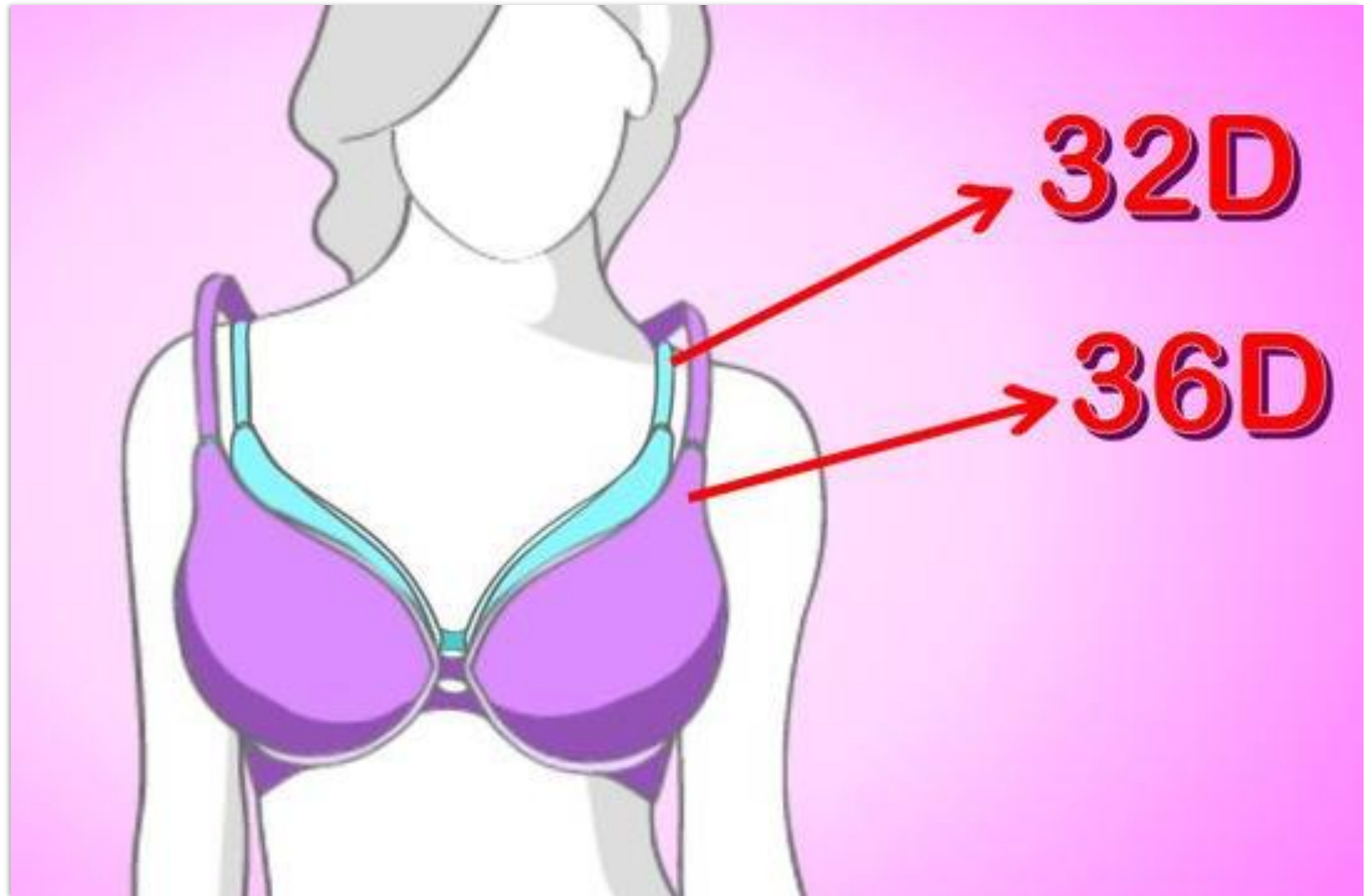
 41893236

 sat@ece.au.dk





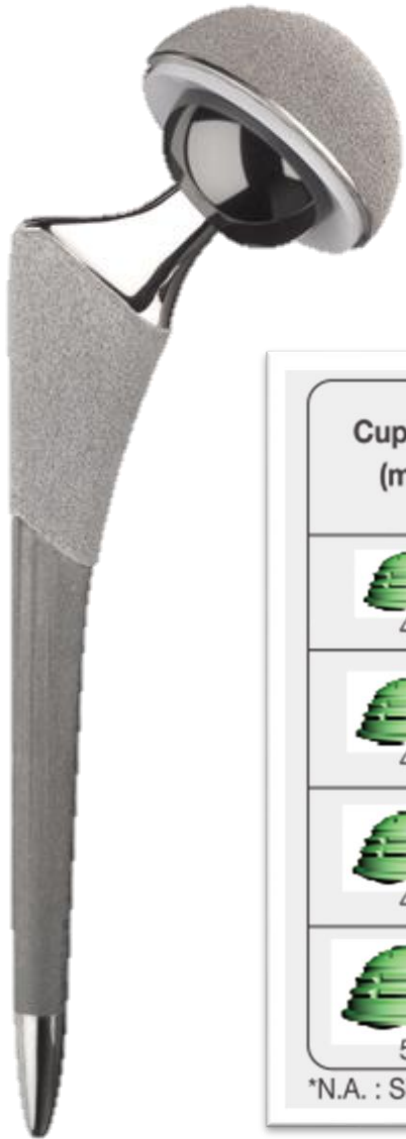
SIZE	LENGTH	WIDTH	SLEEVE
XS	59 _{cm}	42 _{cm}	17 _{cm}
S	65 _{cm}	49 _{cm}	19 _{cm}
M	69 _{cm}	52 _{cm}	20 _{cm}
L	73 _{cm}	55 _{cm}	22 _{cm}
XL	77 _{cm}	58 _{cm}	24 _{cm}















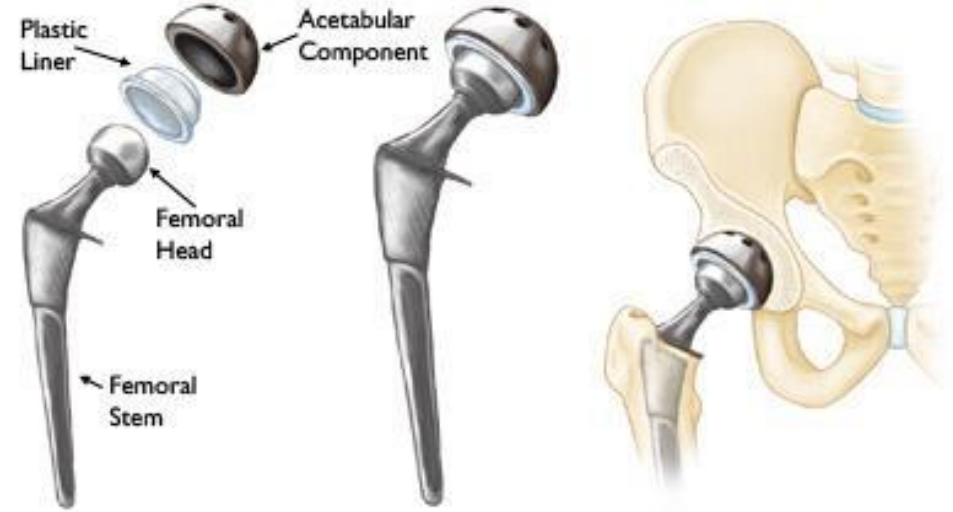
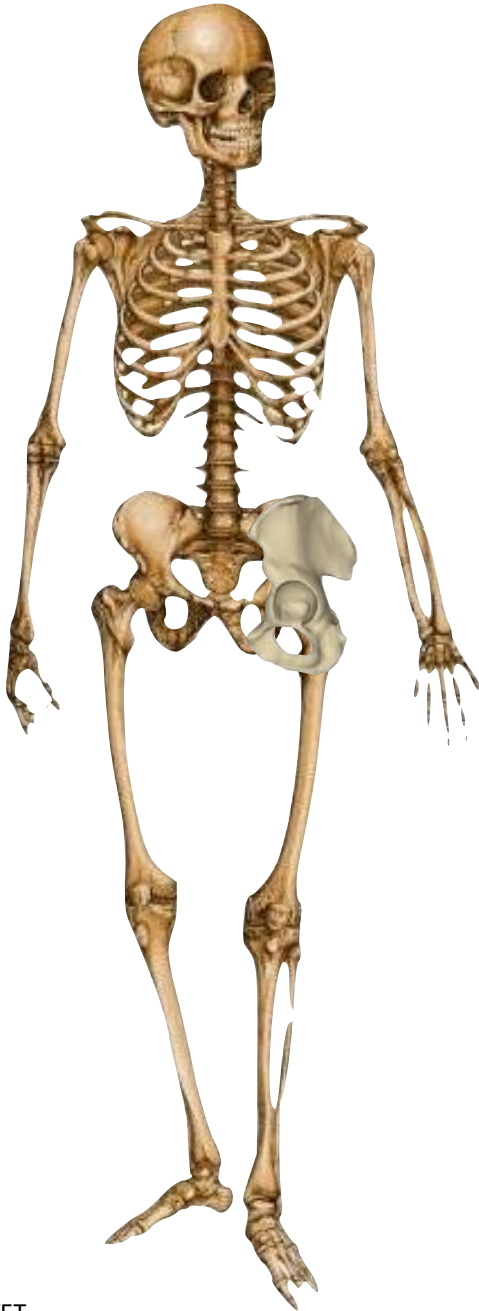




Cup Size (mm)	UOC	Stryker
	Full XPE Cup	Exeter Contemporary ⁴
 42	 26 mm	*N.A.
 44	 28 mm	26 mm
 48	 32 mm	28 mm
 52	 36 mm	32 mm

*N.A. : Size not available







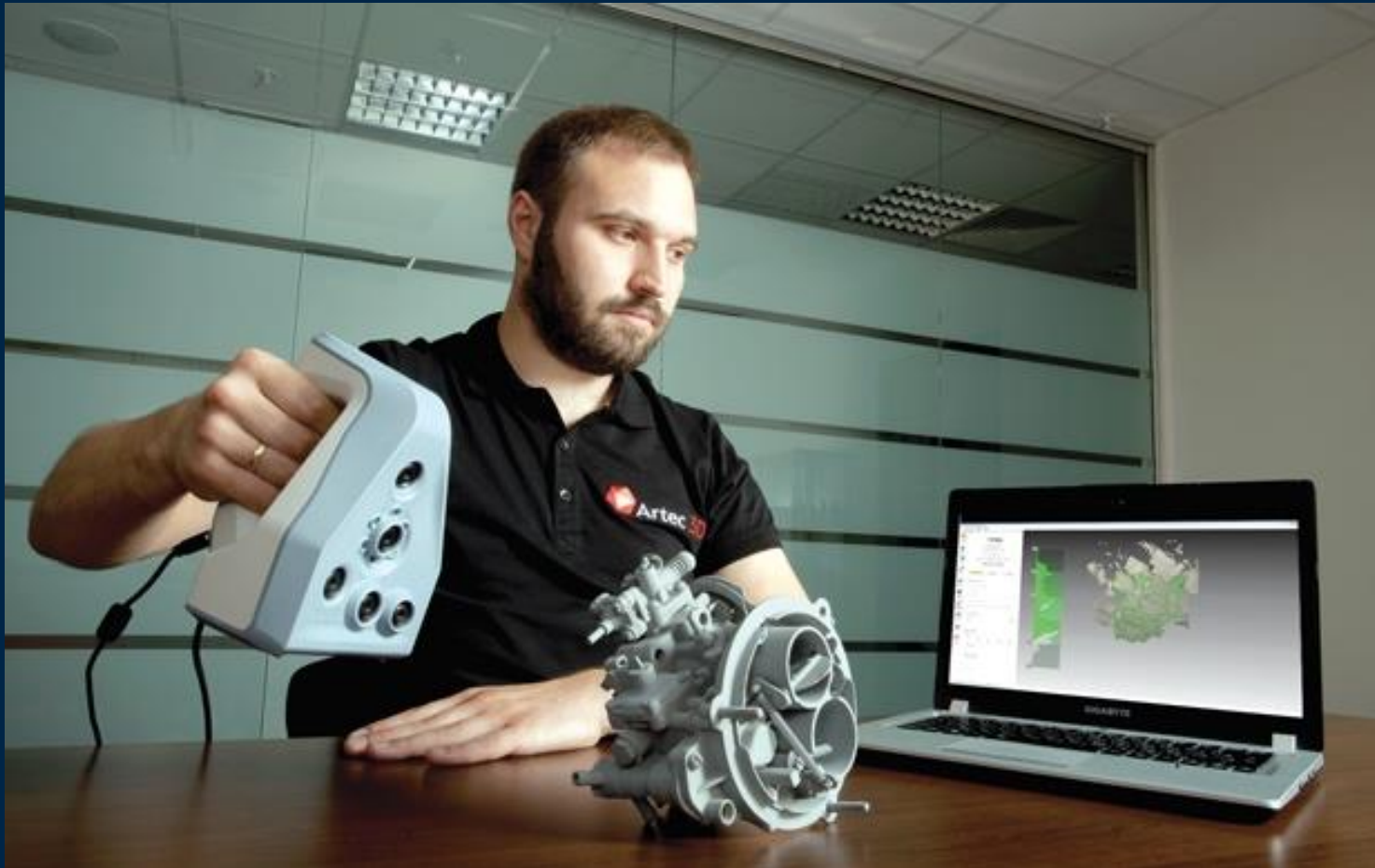
Pre-operative situation



Hvad skal der til?

Cases





HVAD SKAL DER TIL? OVERFLADESKANNING



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7. OKTOBER 2021

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X TechMed 3D

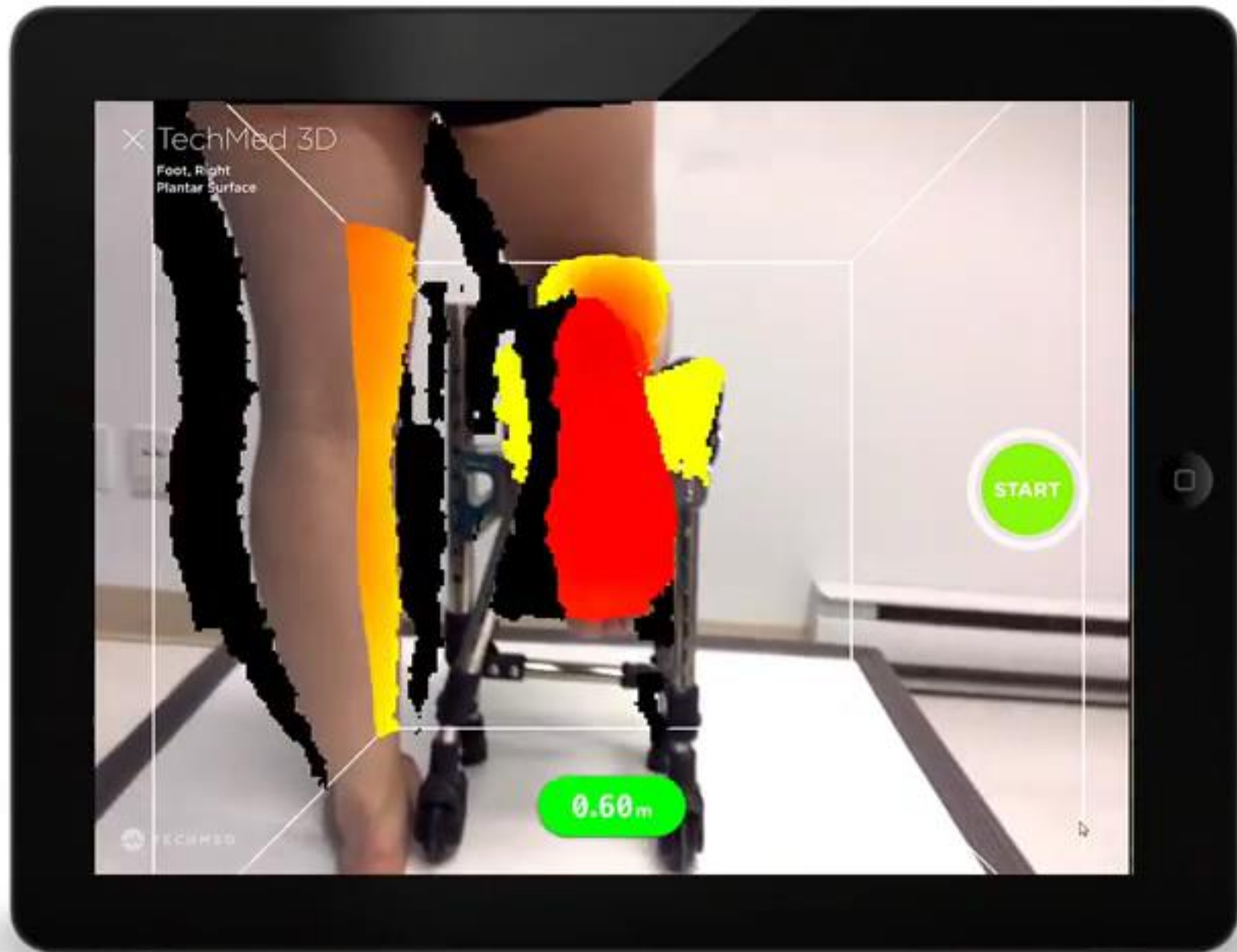
Foot, Right
Plantar Surface

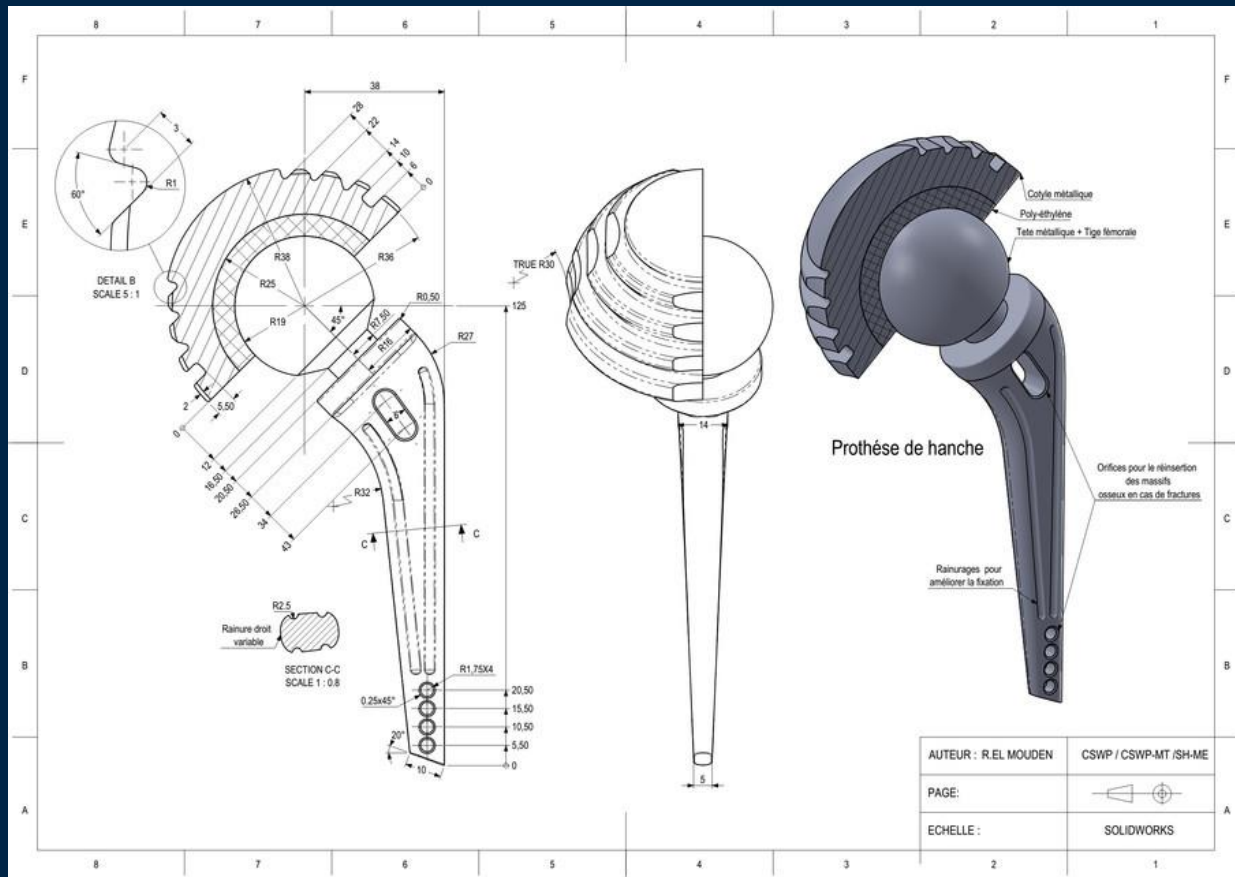
START

0.60m

TECHMED

4



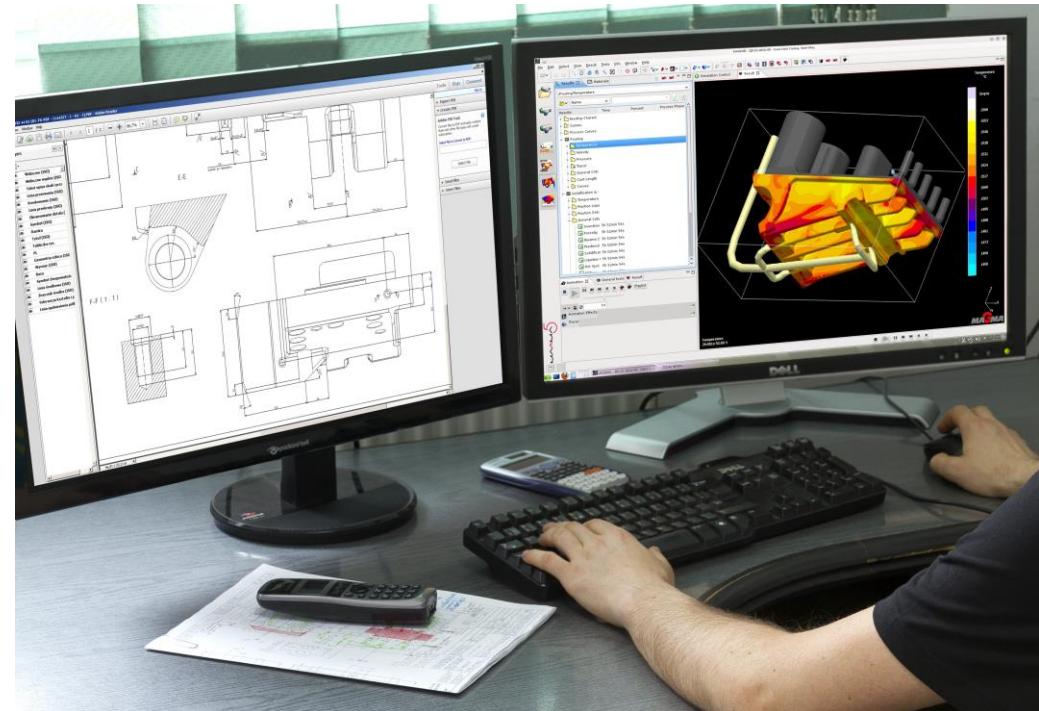


HVAD SKAL DER TIL? COMPUTER AIDED DESIGN (CAD)

COMPUTER AIDED DESIGN (CAD)

Tilføjelse af regulær geometri til skanninger

- Skruehuller
- Gevind
- Bøsninger
- ID koder
- Med mere





HVAD SKAL DER TIL? 3D PRINT



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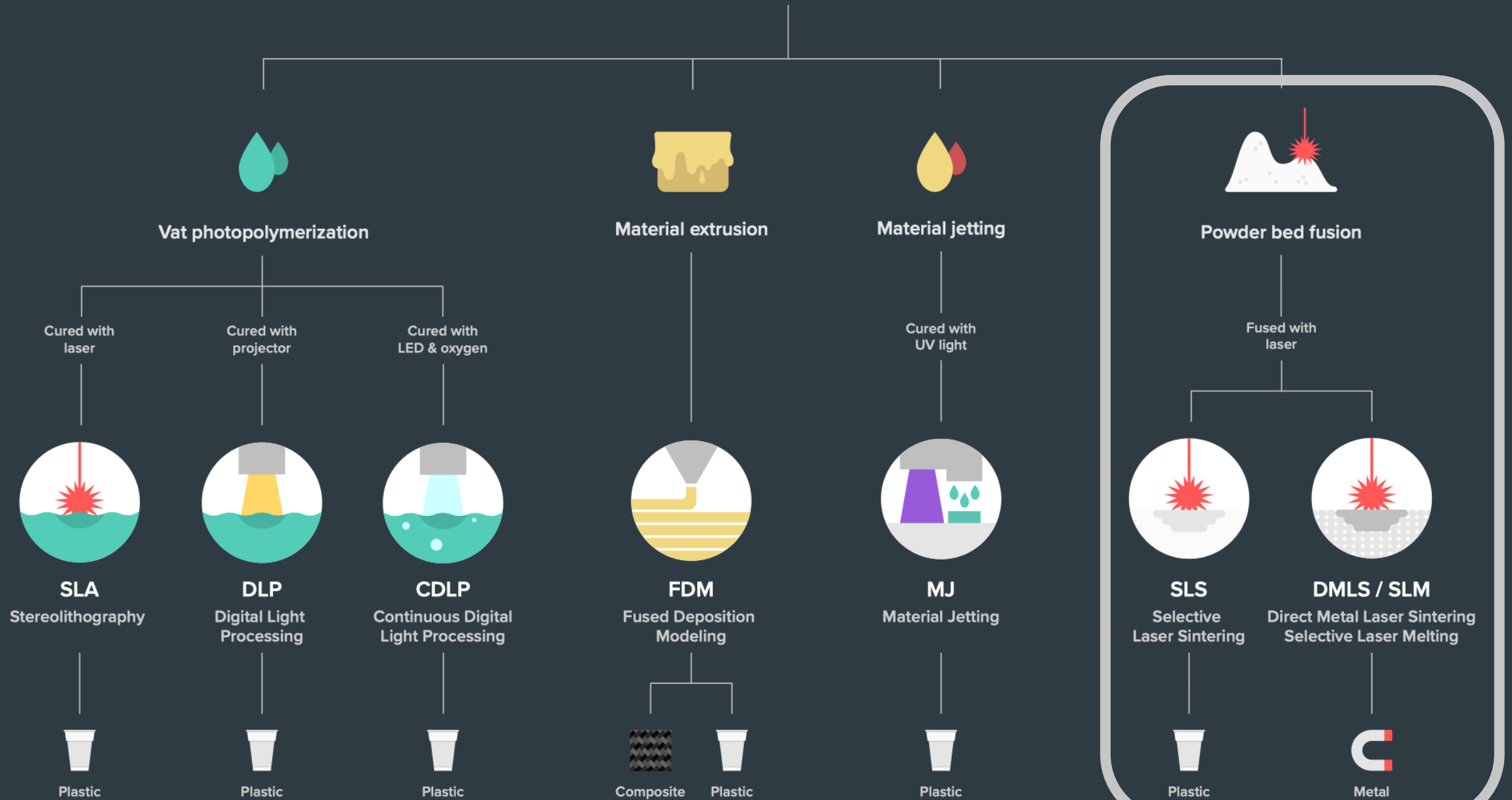
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ADDITIVE MANUFACTURING TECHNOLOGIES



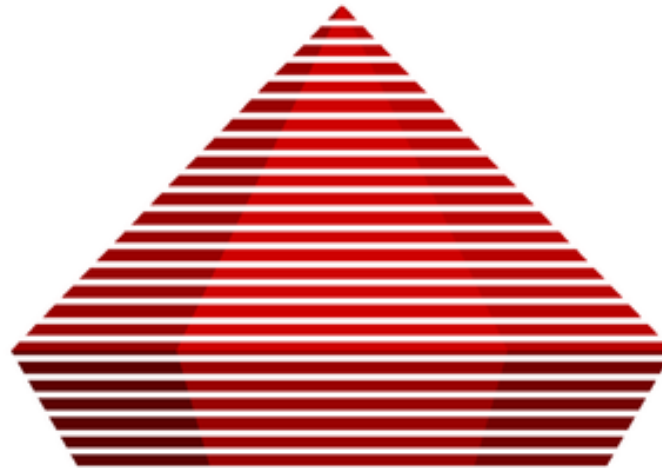
ADDITIVE MANUFACTURING TECHNOLOGIES



3D Geometri



Slicing



Printing

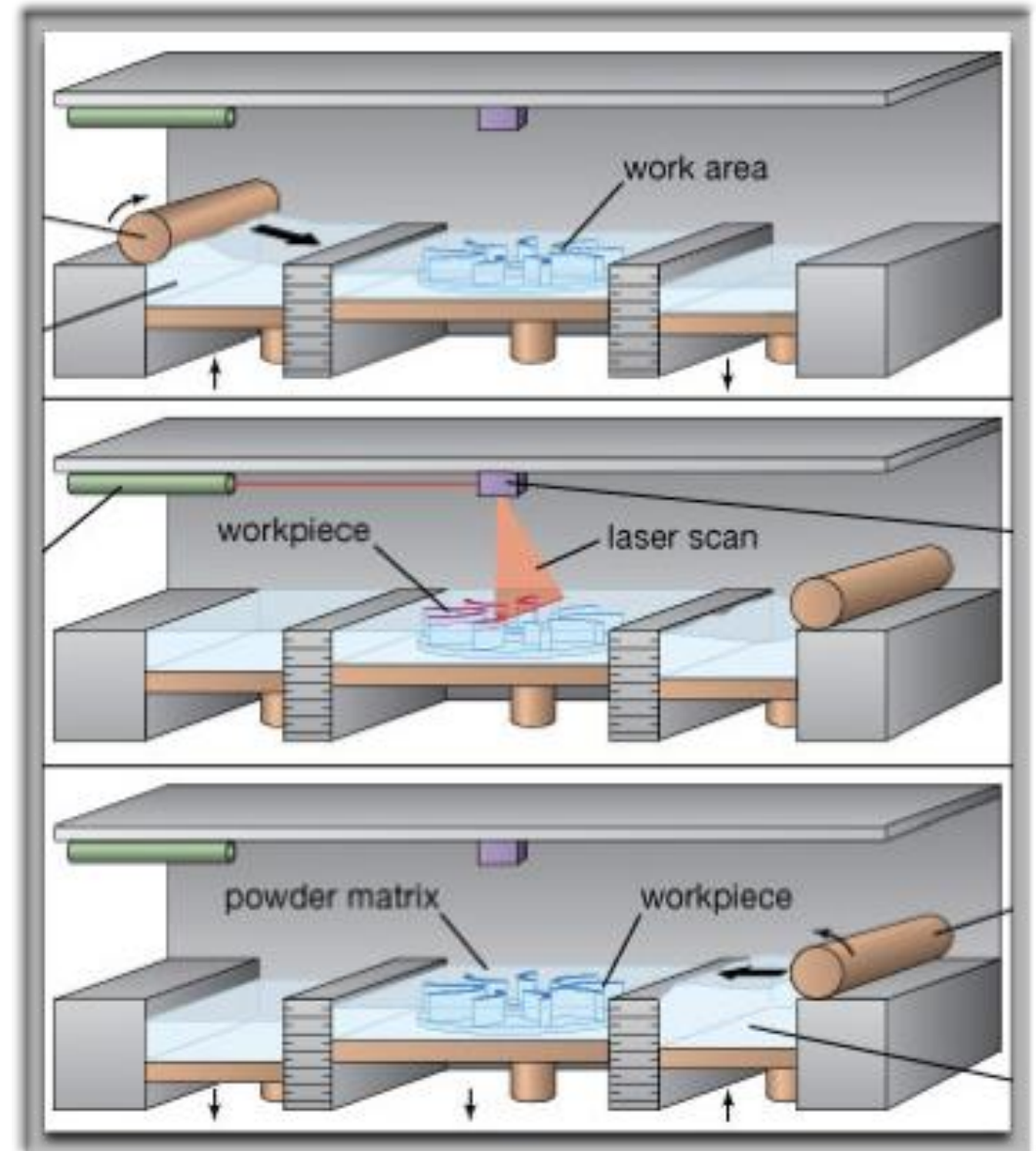


SLS/SLM PRINTING

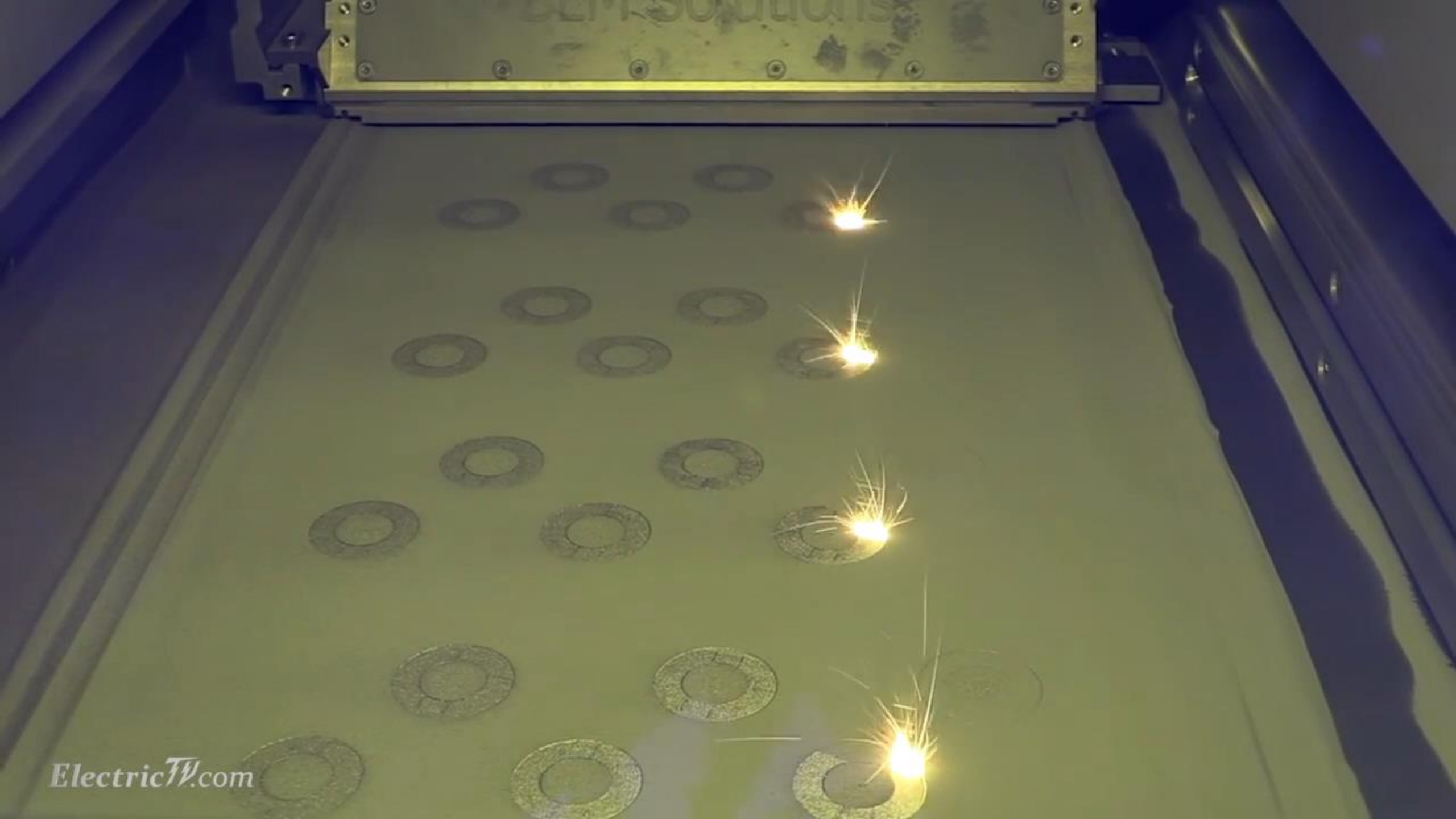
Selective Laser Melting (SLM)

Selective Laser Sintering (SLS)

- Pulver i kammer
- Opvarmes til tæt på smeltepunktet
- Tyndt lag pulver køres ud på platform
- Laser opvarmer sidste stykke
- Nyt lag pulver → lag på lag





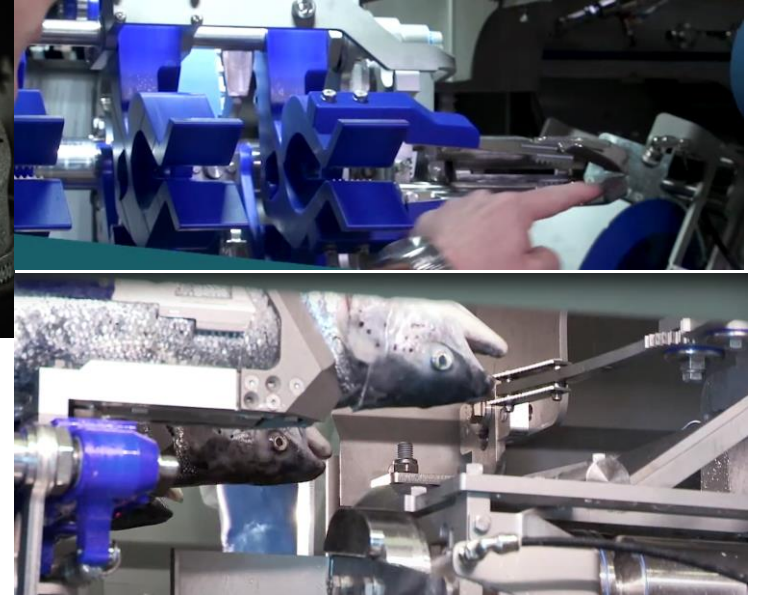
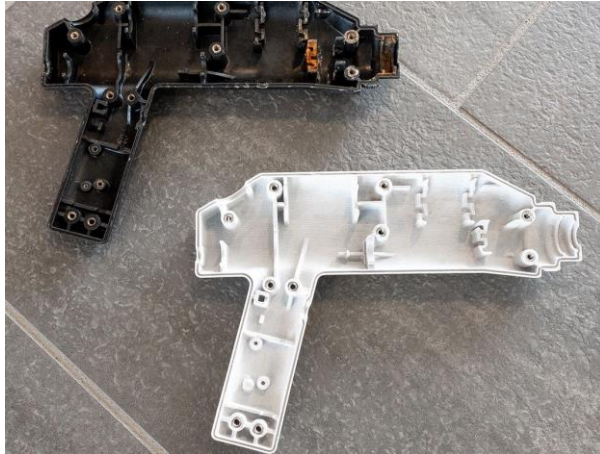


Machines dedicated for each material



MADIT

FØDEVARE GODKENDTE MATERIALER



Selective Laser Sintering (SLS)

- Nylon
- Polyamid (PA)
- Polypropylen (PP)

Selective Laser Melting (SLM)

- Stål og jernlegeringer
- Titanium legeringer
- Aluminiumslegeringer

<https://www.teknologisk.dk/ydelse/kundecases-med-3d-print/40463>

3D PRINT ARBEJDSMILJØ: INNOVATIONSPROJEKTET AM-LINE 4.0

**JOB
LIFE** associeret med **NIRÅS**

Ny vejledning om arbejdsmiljø ved 3D print i metal

Der er stort potentiale i 3D-printproduktion i metal,
men hvordan påvirkes arbejdsmiljøet af denne
proces?

Efterbehandling: Rensning, tilskæring, slibning
Eksplosivt pulver kræver udsugning



Ren proces, kræver brug af værnemidler
Yderligere info: <https://buff.ly/3jRGA0s>



CASES



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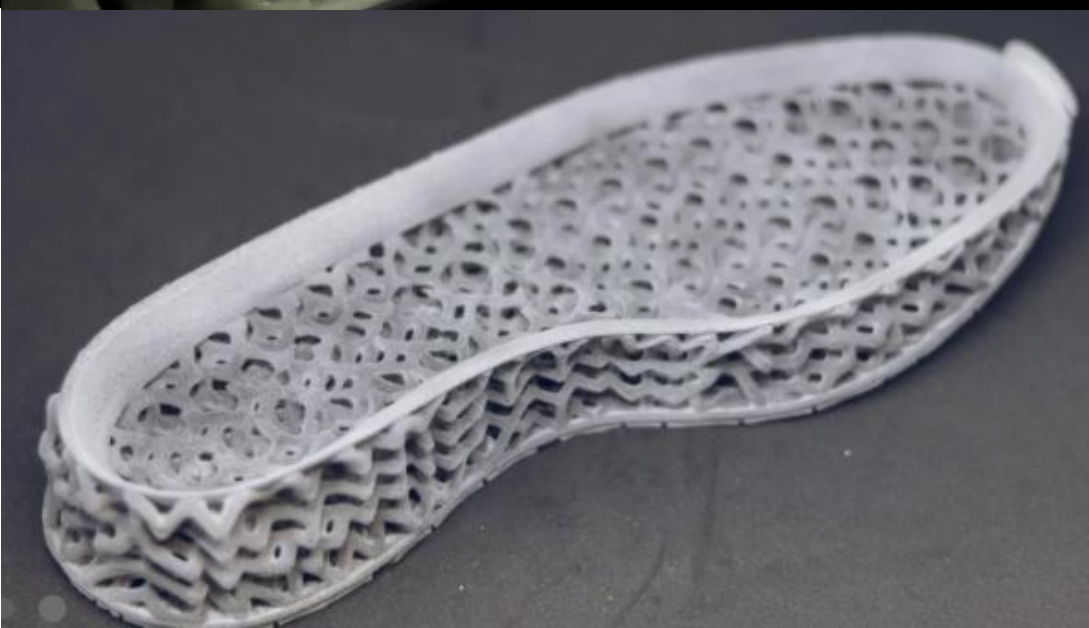
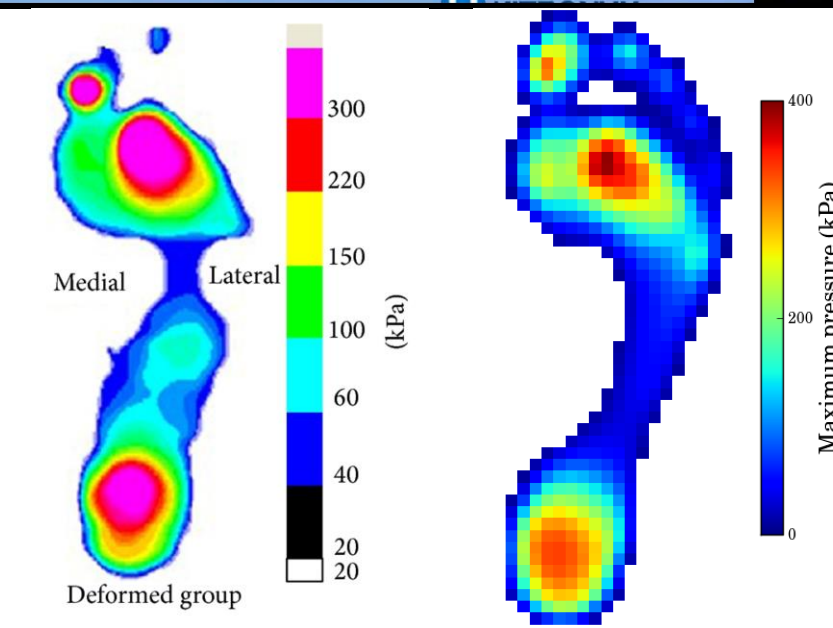
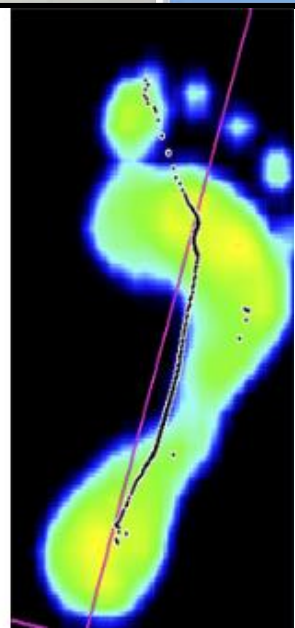
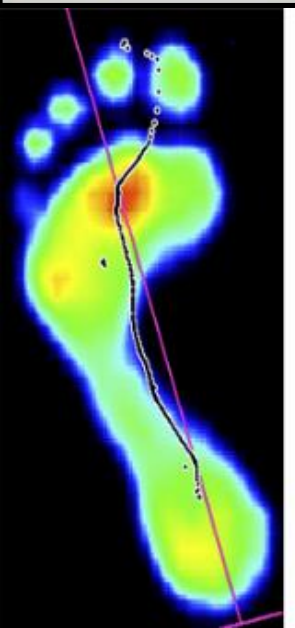
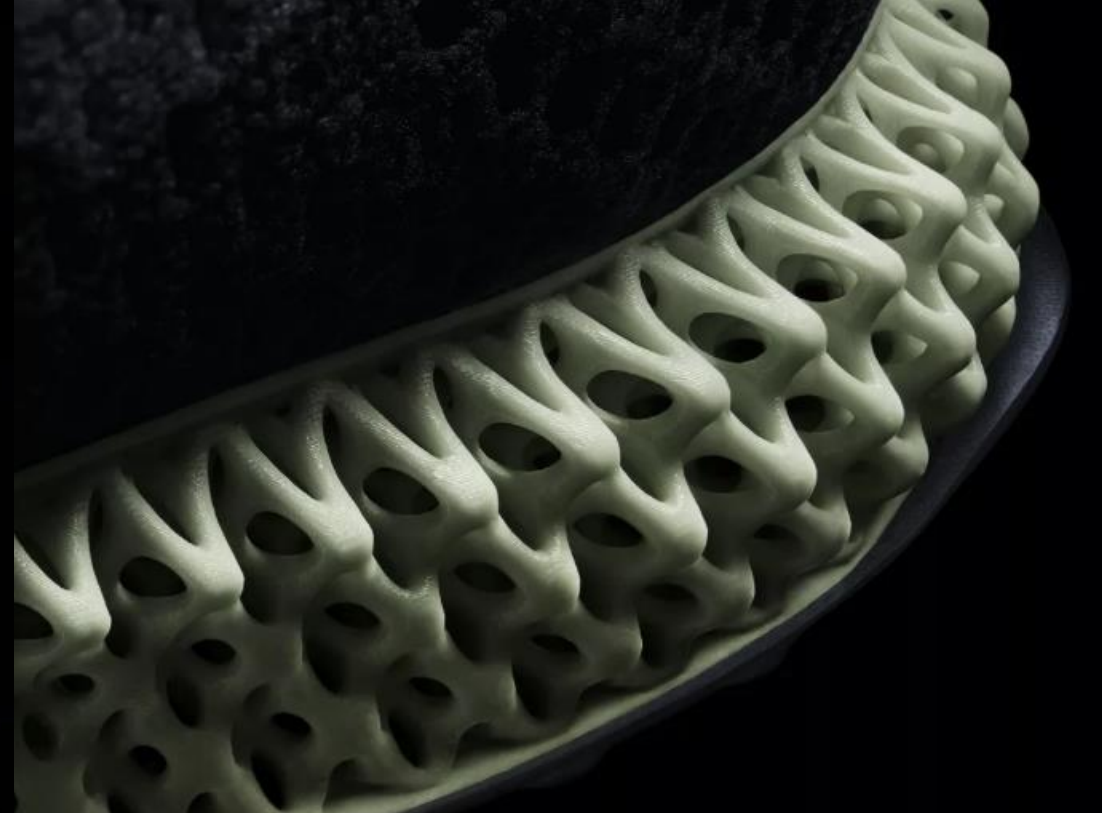
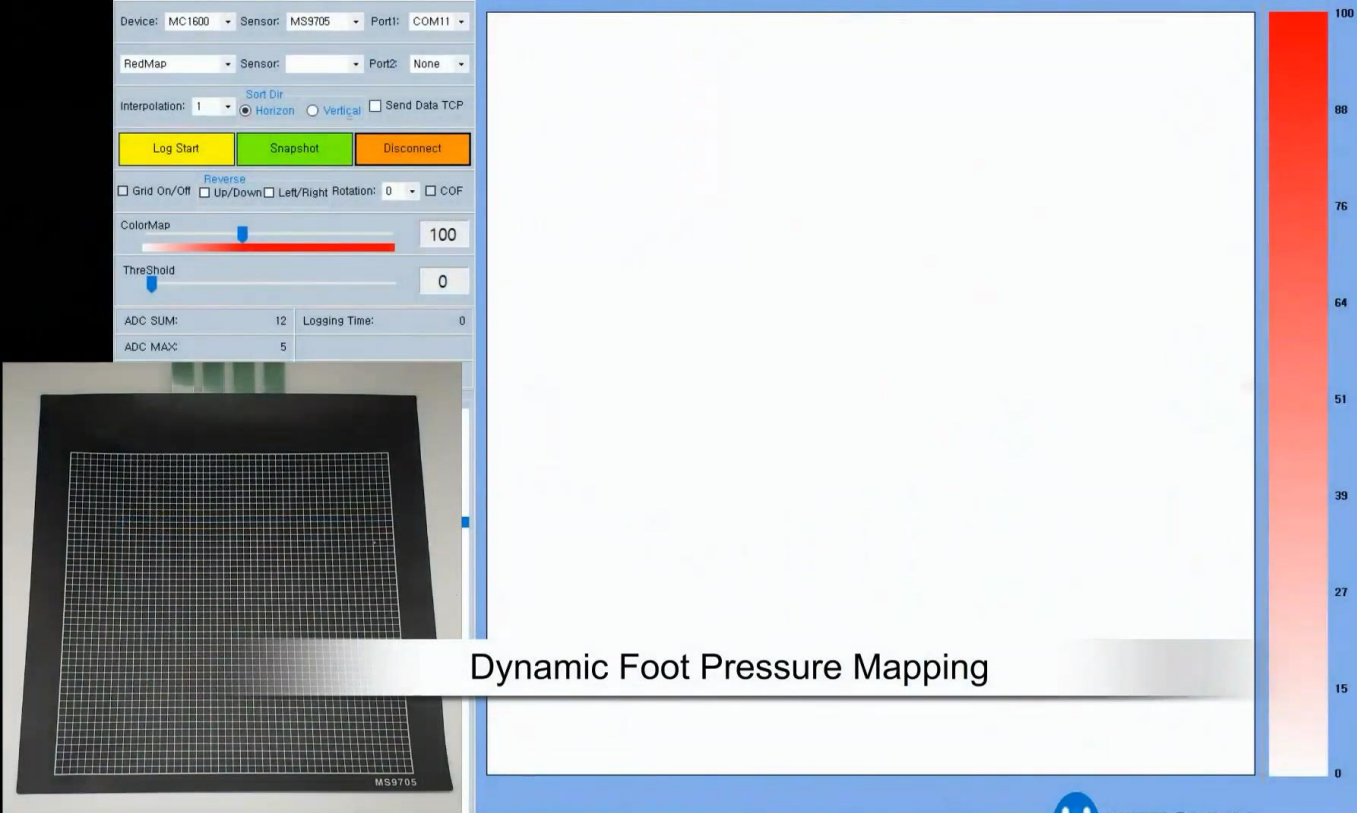
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LEKTOR





3D PRINTEDE SÅLER/SKO







3D PRINTEDE CYKELHJELME

Mulig erstatning af sikkerhedshjelme



STEP 1 BUY

Purchase your HEXR through our webstore and customise it to truly make it your own. We'll then send you a fitting cap to capture your head measurements yourself at home.



STEP 2 FIT

Use our guided smartphone app to perform your helmet fitting anywhere. You'll need your fitting cap and a friend in order to complete this step of the process.



STEP 3 MAKE

Once we've reviewed your data, we'll send it back to you to look at. While you get engrossed in your stats, we'll get to work 3D printing and assembling your HEXR.



STEP 4 SHIP

Once your HEXR has been quality checked by our team, we'll send your helmet to you within 5 weeks. Remember to refer your friends for a £25 voucher each.

H

≡

X

O



VÆGT OPTIMERING

Topology Optimization

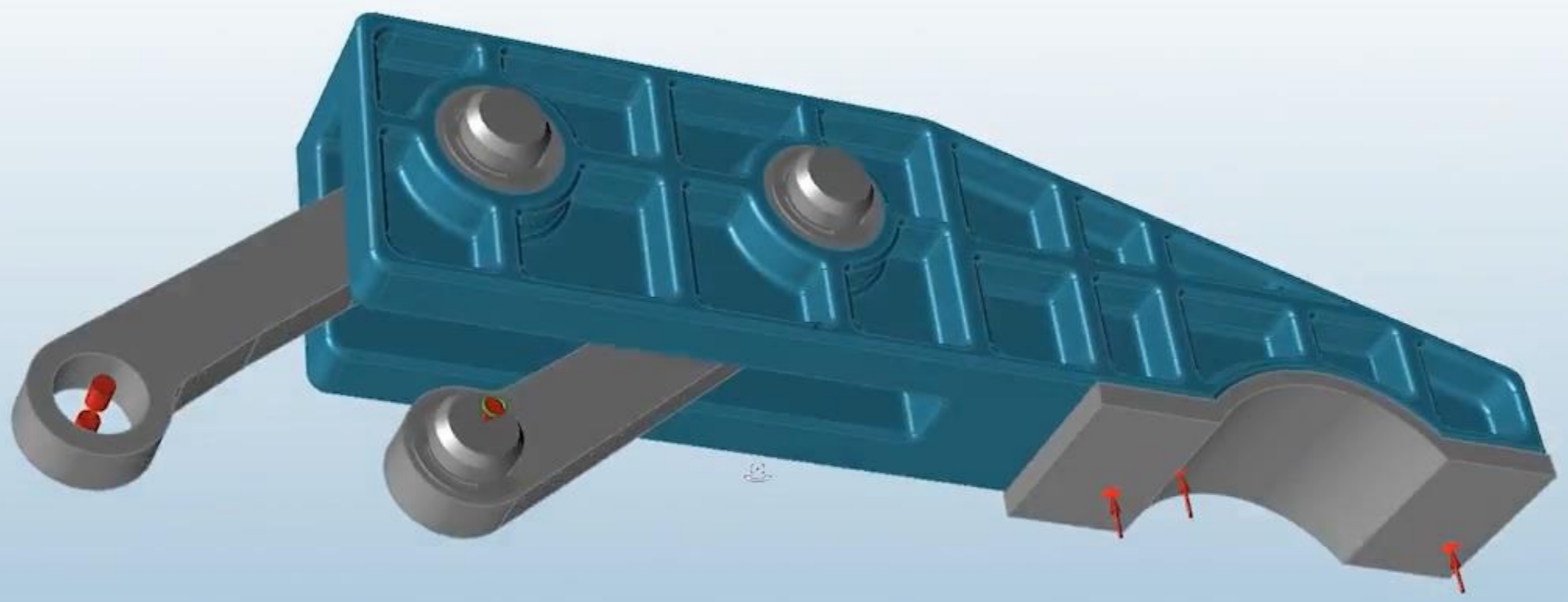


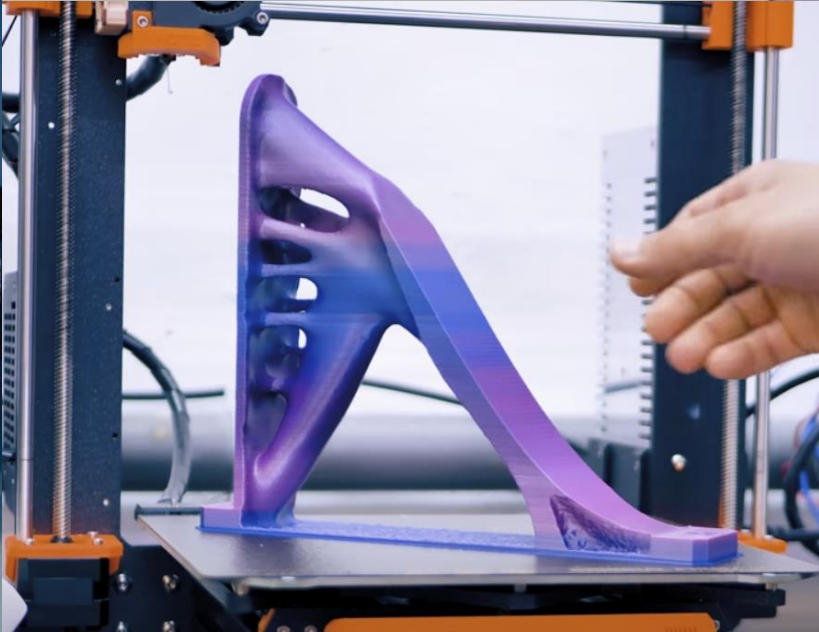
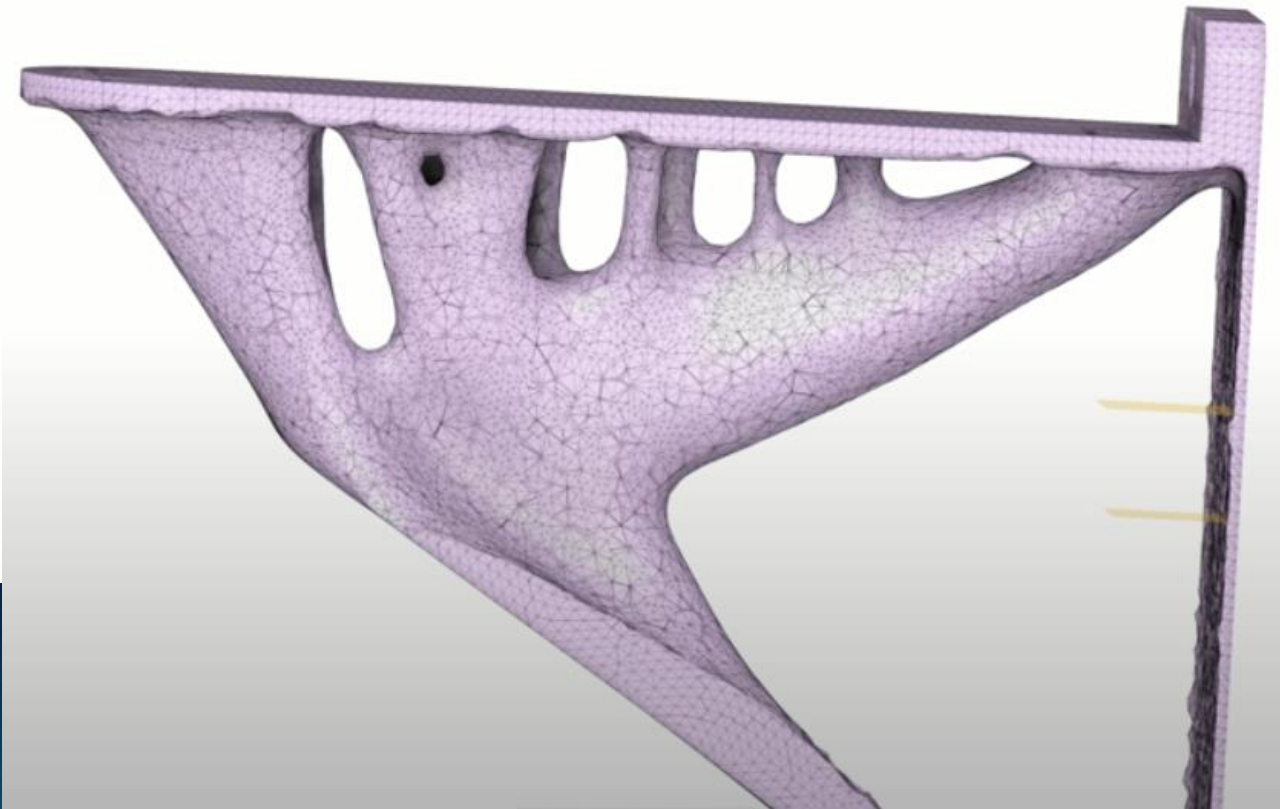
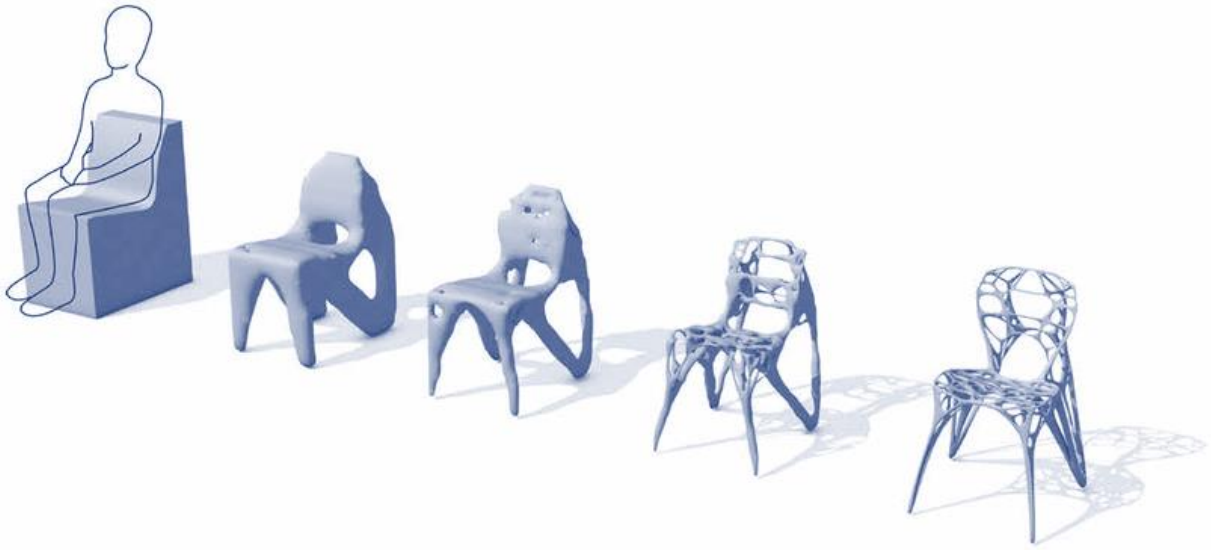
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INDIVIDUALISEREDE GREB

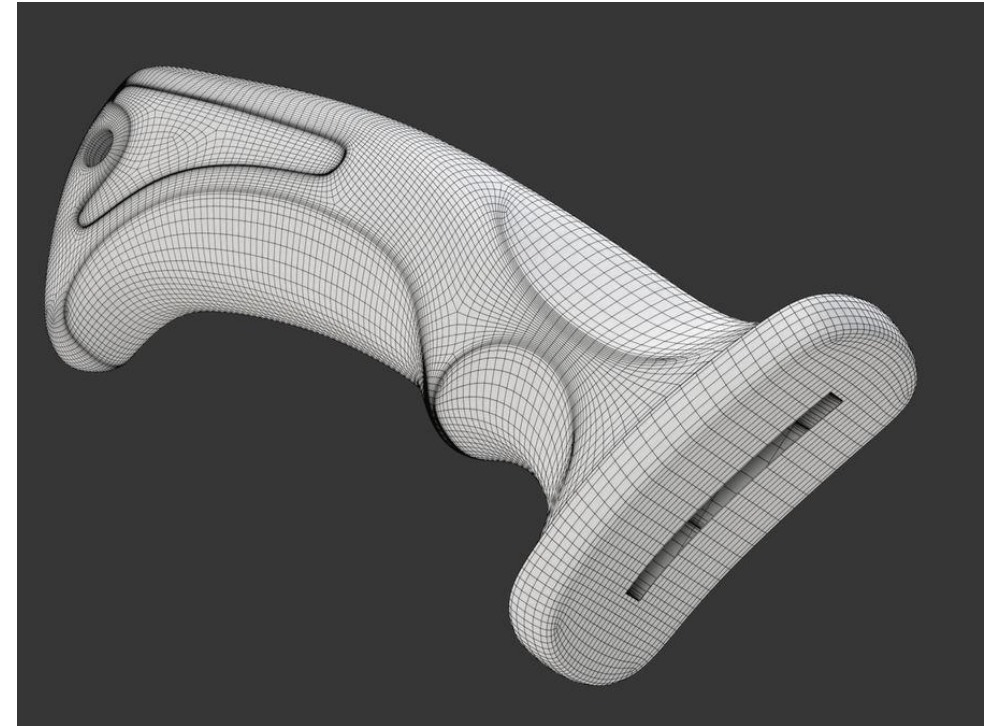
Luftpistoler





<https://3dprintingindustry.com/news/french-athletes-develop-customised-3d-printed-shooting-equipment-144931/>

INDIVIDUALISEREREDE KNIVSKÆFTER?

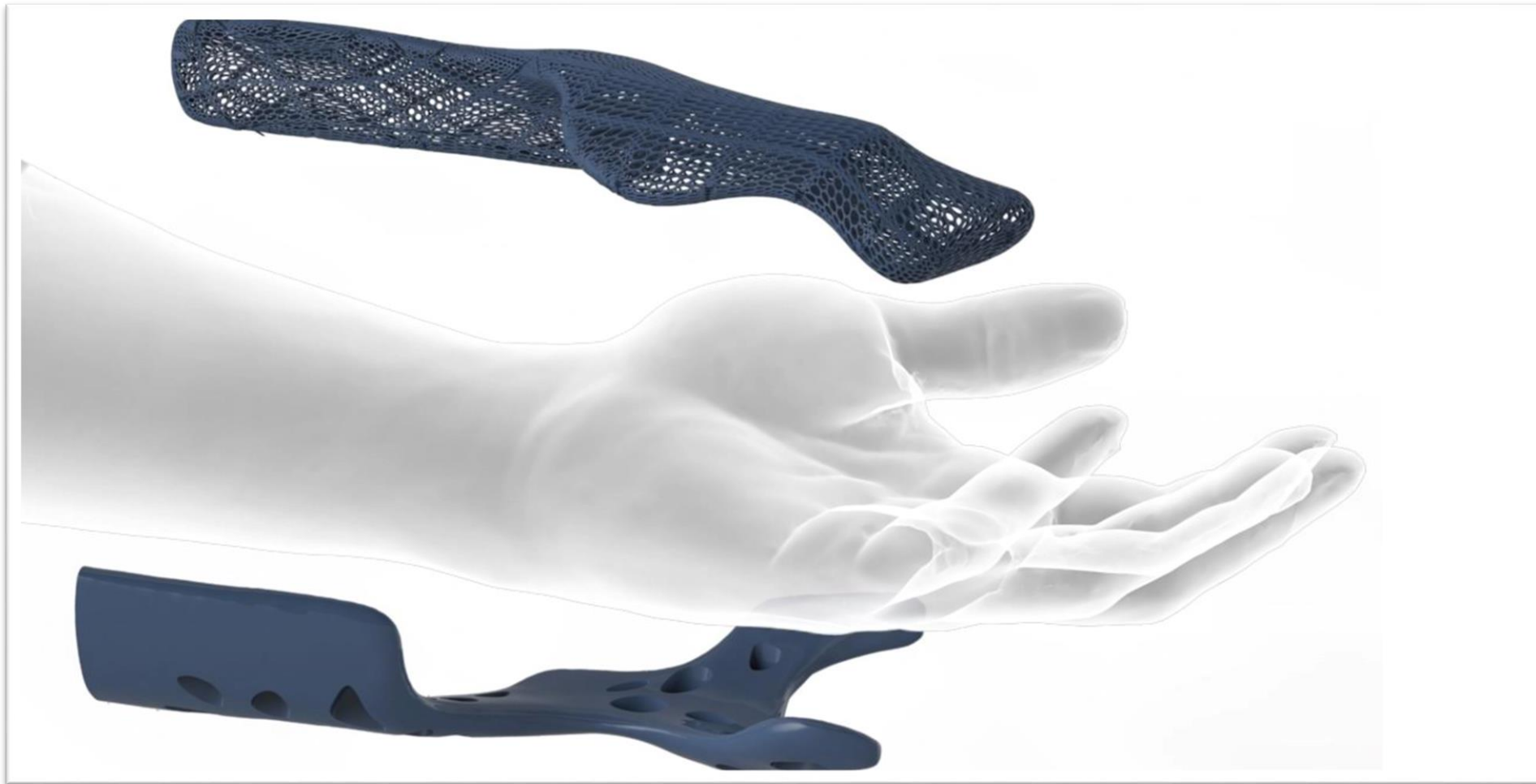


RIBBENSUDTRÆKKER?



MAGIC KNIVSKÆFTER?

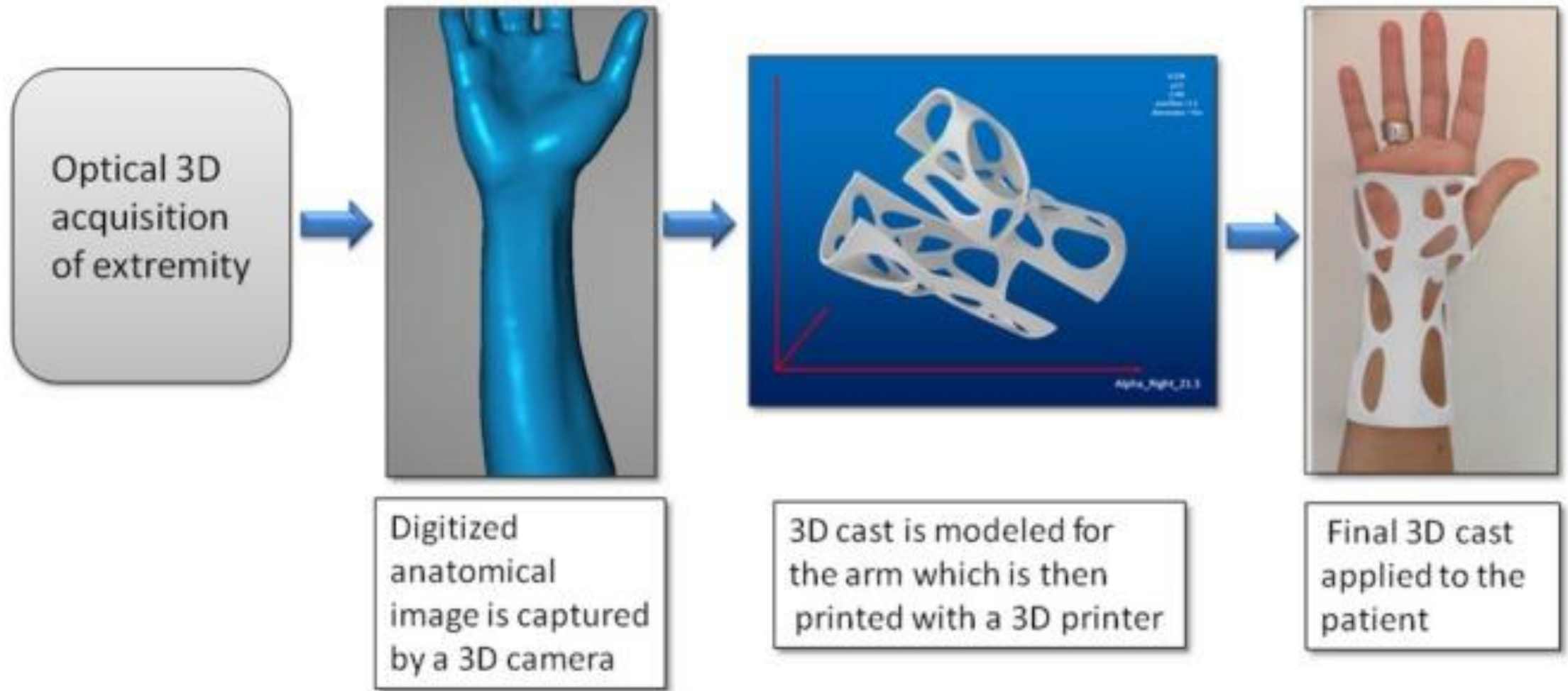




HÅNDEDSSKINNER







<https://pubmed.ncbi.nlm.nih.gov/30146902/>

AFLASTNING AF HÅNDED?





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