



Enjoystitch™

self assessment
tutorial

INNOVATION

PHYSICAL EXPERIENCE
SIMILAR TO THE REAL
MODEL

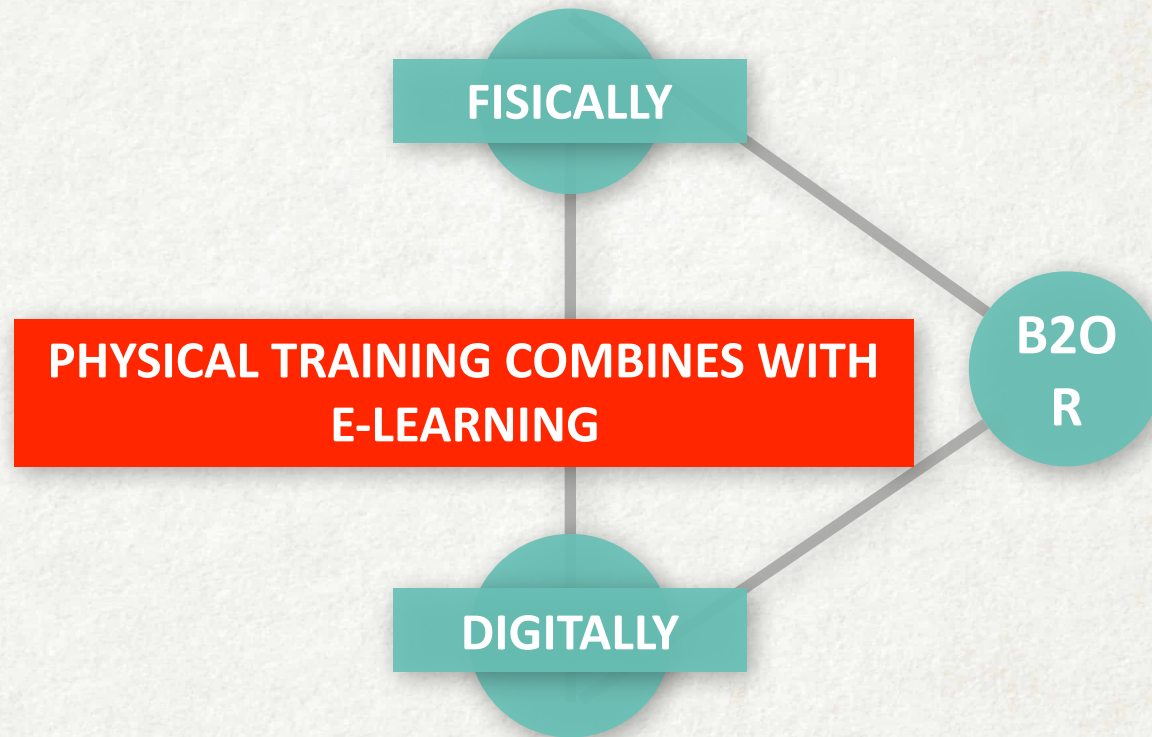
HIGH PORTABILITY

WEB SHARING

FEEDBACK
EVALUATION

TECHNOLOGY

A SIMPLE PRODUCT, RESULT OF A COMPLEX DESIGN PROCESS AIMED AT
THE SUSTAINABLE AND EFFECTIVE USE OF AVAILABLE TECHNOLOGICAL
RESOURCES



TO TRAIN SURGEONS
QUICKLY AND MAKE THEM
READY FOR THE
OPERATING ROOM



The current 9 Pain Points in the Laparoscopic Training... ...and our solutions to them

PROBLEM

Still a significant part of the offer is about non portable simulators over 10KUSD

Very few are portable and foldable... and also so light

Most of the portables require time be properly assembled

Limited access, in Hospitals and University, to all of those who want to practice. Post-Covid it will be even worse!

Most simulators offer limited exercise combinations

No portable simulators is designed with the real OR ergonomy.

Most of the simulators have their own screen and cables are not connectable to any other screens.

None of the portable simulators have a training feedback system

The majority of the Resident getting into the OR for the first time do not know what to do

Affordability

Portability Foldability

Assembly

Accessibility

Versatility

Real Ergonomics

Connectivity

Feedback

The Gap into OR

Ours is portable and cost about 1600USD with hi-fi needle holder and initial set of exercises included

Ours is both portable and foldable and weighs less than 2 Kilos

Ours can be assembled in less than 3 minute

Ours can be used everywhere as your PS (Personal Simulator)

Ours allows infinite combinations of exercises

Ours has got the right numbers and position of accesses, the right feeling and volume

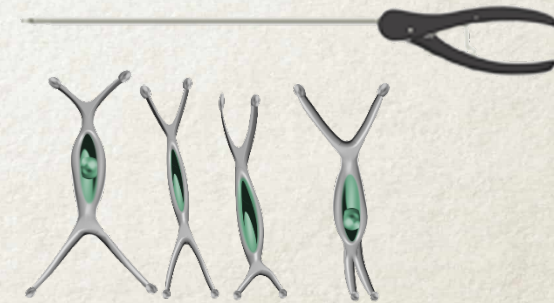
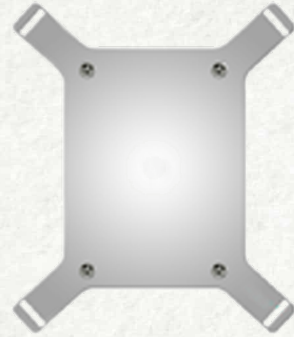
Ours is completely screen agnostic and **completely wireless**

Our Vanish System (allow the trainee to understand if the exercise has been completed properly and on time)

Our simulator and set of exercises + the content of our e-learning platform, will teach all the practical tips to be ready for the OR

SOLUTION

Our S.a.a.P*™ KIT



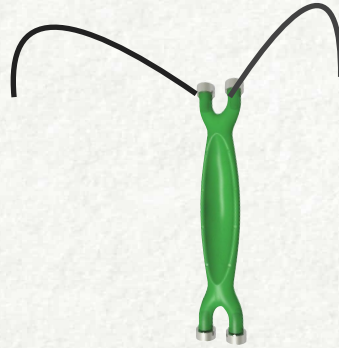
*Simulator as a Peripheral

05



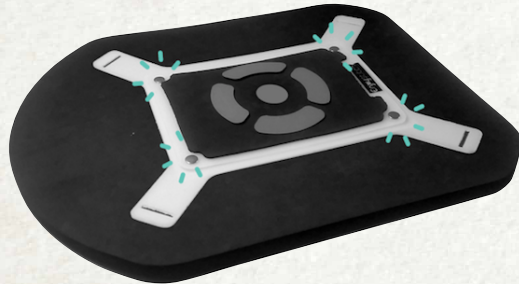
CUP (LOW DENSITY OPALESCENT POLYETHYLENE + POLYCARBONATE + SILICONE GROMETS / **elasticity, stability, correct internal diffusion of light, ergonomics and the possibility of integration with the exercise pad**

04



STITCHY MODULE (SPECIAL SILICONE AND SPECIFIC MAGNETS) / **3D TENSION GRIP SYSTEM™ integration, stitchable module, support for other exercise module**

03



INTERCHANGEABLE EXERCISE PAD (HIGH DENSITY POLYETHYLENE + EPDM + PRESS STUDS +ADHESIVE METAL SHEETS)/ **easy change of exercise PAD and integration of the base with the cup**

02



FRAME SUPPORT (HIGH DENSITY POLYETHYLENE) / **support and stability**

01



BASE (EPDM) / **lightness and grip**



SMART PHONE

Enjoystitch SHELL STRUCTURE ASSEMBLY©

SET THE BOX FROM BIDIMENSIONAL PARTS TO A 3D STRUCTURE IN **1 MINUTE**



Enjoystitch

Enjoystitch SHELL STRUCTURE ASSEMBLY©

SET THE BOX FROM BIDIMENSIONAL PARTS TO A 3D STRUCTURE IN **1 MINUTE**

- 1) Position Frame Support on Foam Pad using corresponding cuts as reference.

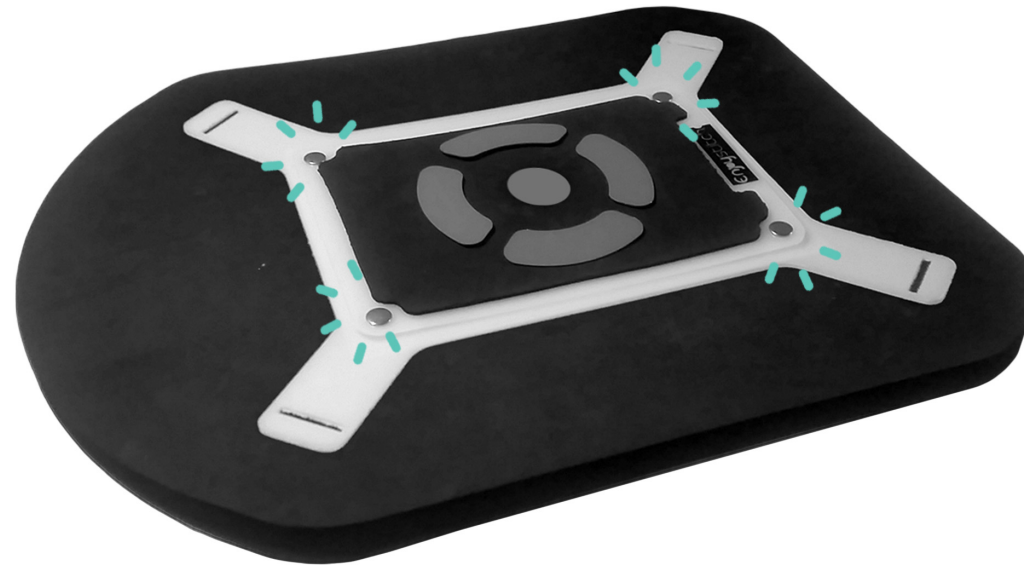


Enjoystitch

Enjoystitch SHELL STRUCTURE ASSEMBLY©

SET THE BOX FROM BIDIMENSIONAL PARTS TO A 3D STRUCTURE IN **1 MINUTE**

- 1) Position Frame Support on Foam Pad using corresponding cuts as reference.
- 2) Choose one from ENJOYSTITCH® Exercises and fix it on Support using special press studs.



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- 3) Fix the Opal Polyethylene 3D CUP on the Frame using corresponding cuts.



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SET THE BOX FROM BIDIMENSIONAL PARTS TO A 3D STRUCTURE IN **1 MINUTE**

- 1) Position Frame Support on Foam Pad using corresponding cuts as reference.
- 2) Choose one from ENJOYSTITCH® Exercises and fix it on Support using special press studs.
- 3) Fix the Opal Polyethylene 3D CUP on the Frame using corresponding cuts.
- 4) Fix press studs around the cup to obtain an elastic 3D shell structure volume.



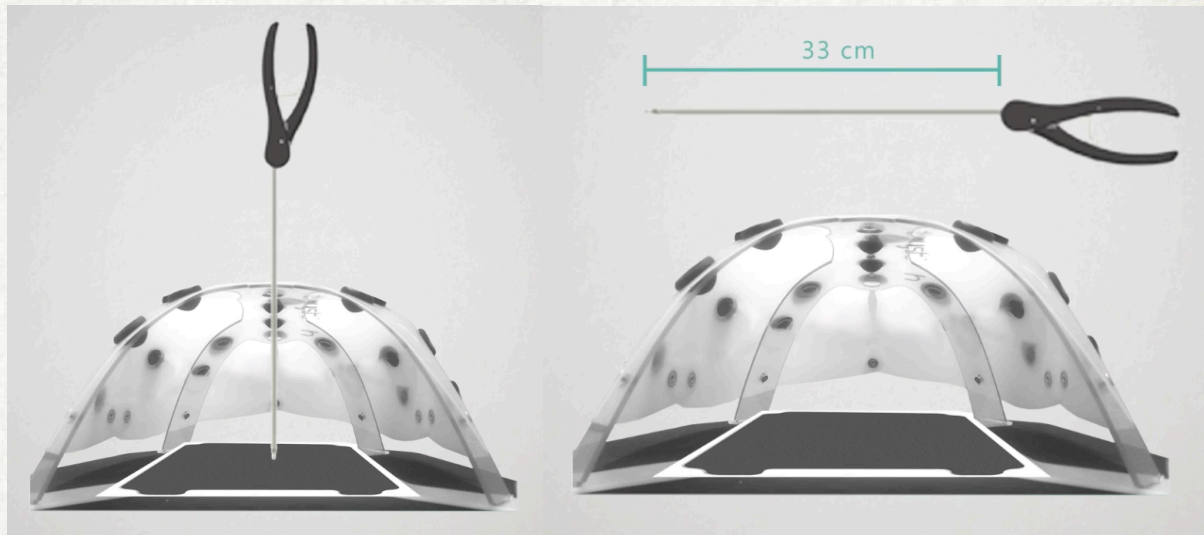
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THE SPACE

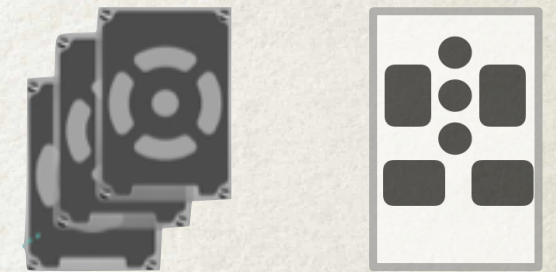
Optimal use of the space inside the console

The internal space is optimized for the use of laparoscopic instruments

- fulcrum effect
- movement control
- wide range of movement
- the real surgical ergonomics have been carefully reproduced



Enjoystitch



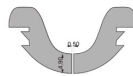
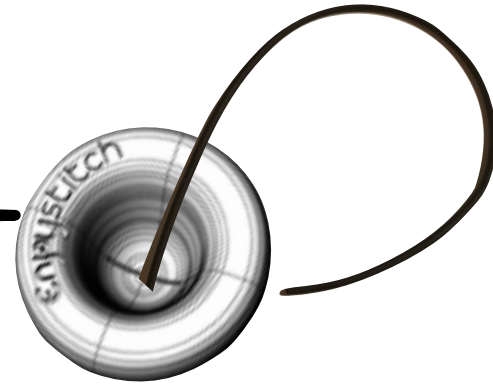
Inside our shell structure the **Soft and elastic steachable parts (1)** can be fixed in 4 points (on the flat velcro base carpet and on the shell) through our **special in/out bushings silicon parts (2)**. This allows the user to fix the sewable parts in multiple three-dimensional positions inside the available space. It is also possible to fix the steachable parts only on the shell in 4 different point to operate in **lateral or twisted surgical case simulation (3)**.

(1) Soft and elastic steachable parts

(2) special in/out bushings silicon parts.

connection with grip

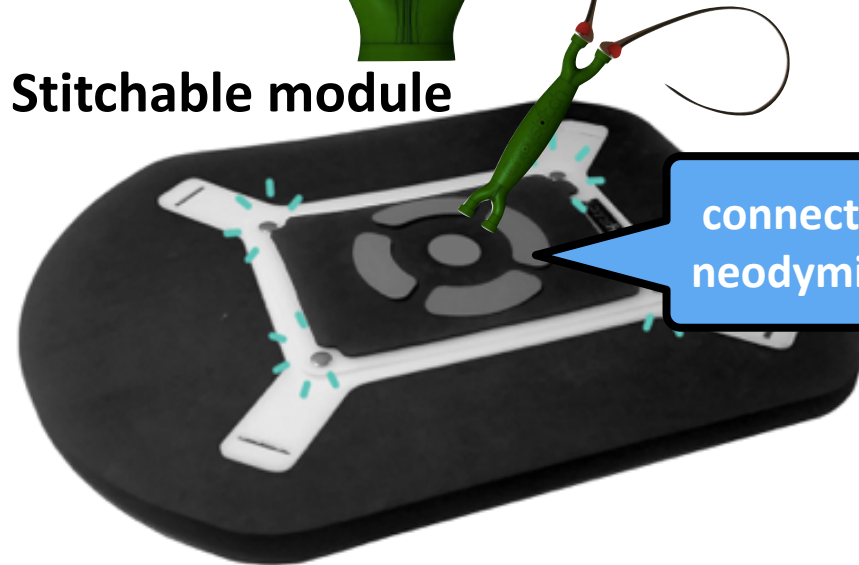
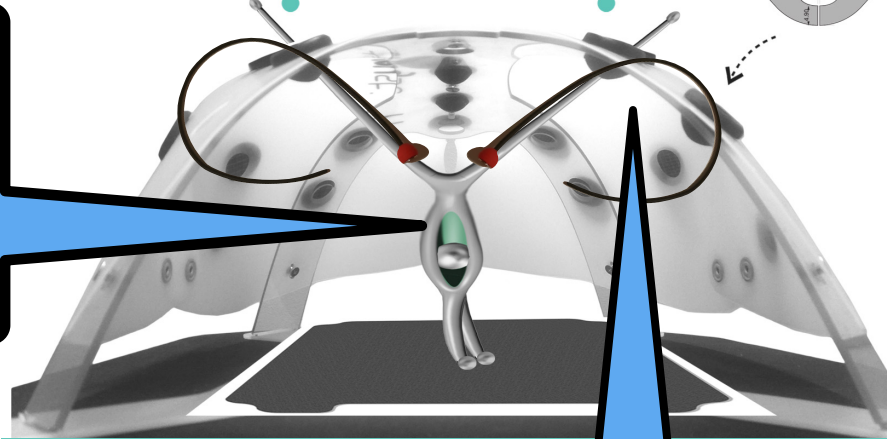
integration of the shell base system



Stitchable module

connection with neodymium magnet

connection with neodymium magnet

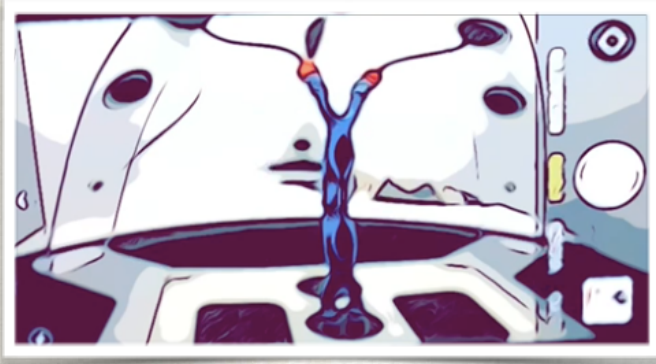


The shell has 18 different gromets, 2 of which are used for the insertion of surgical instruments and the other 16 can be used to hook stitchy to the structure thanks to elastic threads able to connect with the ends of stitchy

THE EXERCISES

Stitchable module

My shape allows to put myself wherever I want to inside My Enjoystitch



The neodymium magnets inserted at my ends allow me to connect with both the base and the shell of Enjoystitch



The Interchangeable Base allows me multiple integrations with the Enjoystitch Shell

THE EXERCISES



01

Position n1: horizontal placement: Integration only with the interchangeable base



02

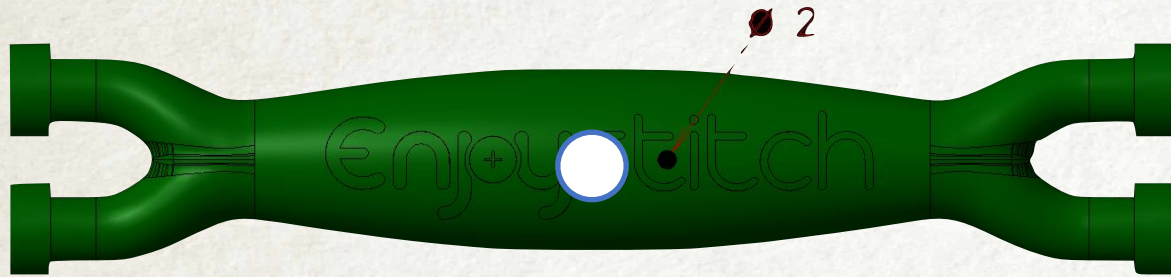
Position 2: horizontal placement: Integration with the interchangeable base + shell



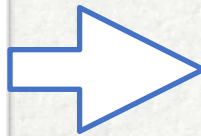
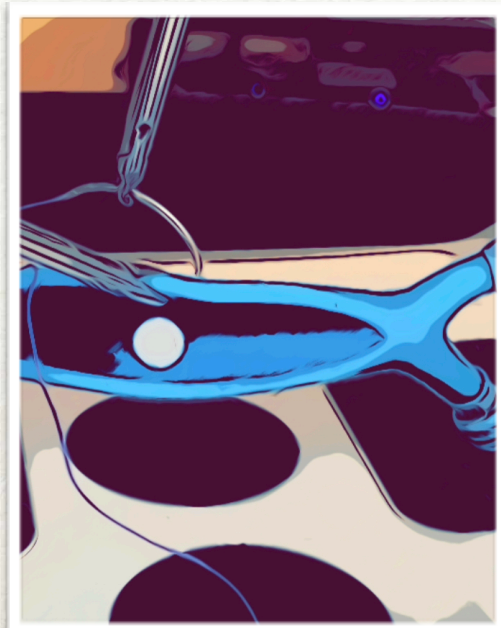
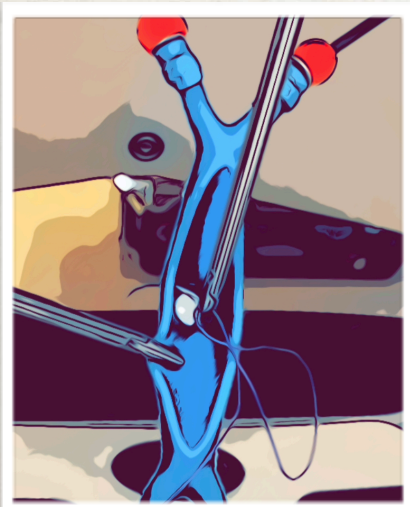
03

Position 3: vertical placement: Integration with the interchangeable base + shell

THE EXERCISES



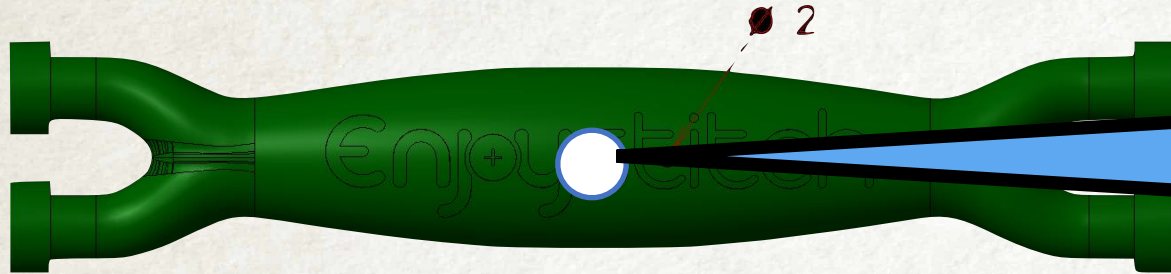
My silicone structure makes me particularly suitable to be sutured



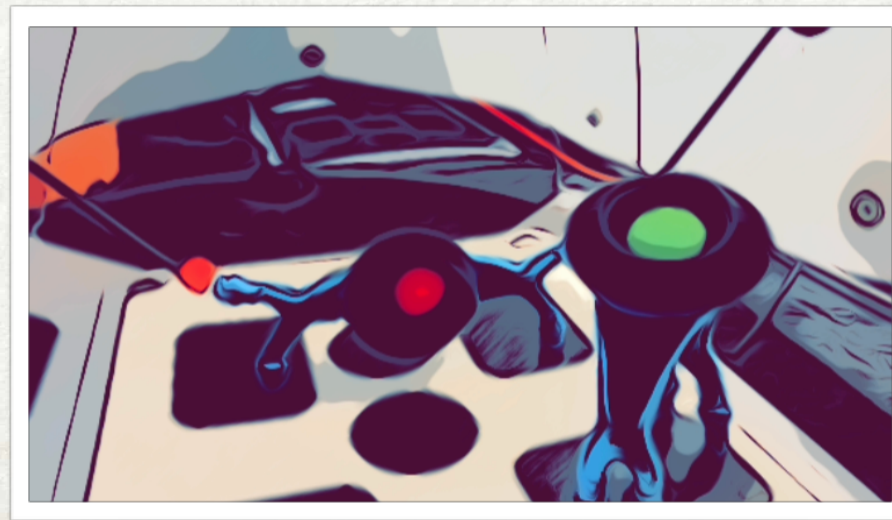
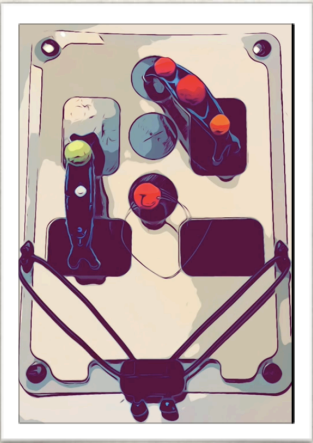
Sutures in the 3D of space (also vertical and horizontal) with realistic tactile feedback

PARTICULARLY SUITABLE FOR ADVANCED LEVEL SUTURE EXERCISES

THE EXERCISES

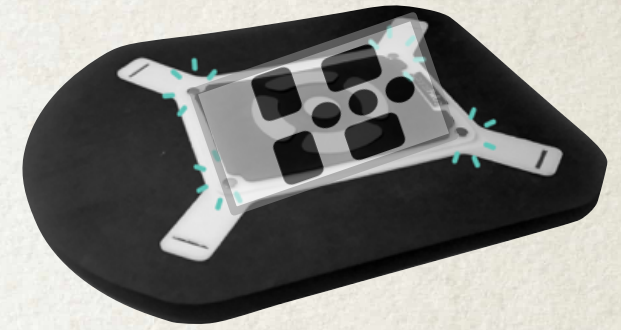
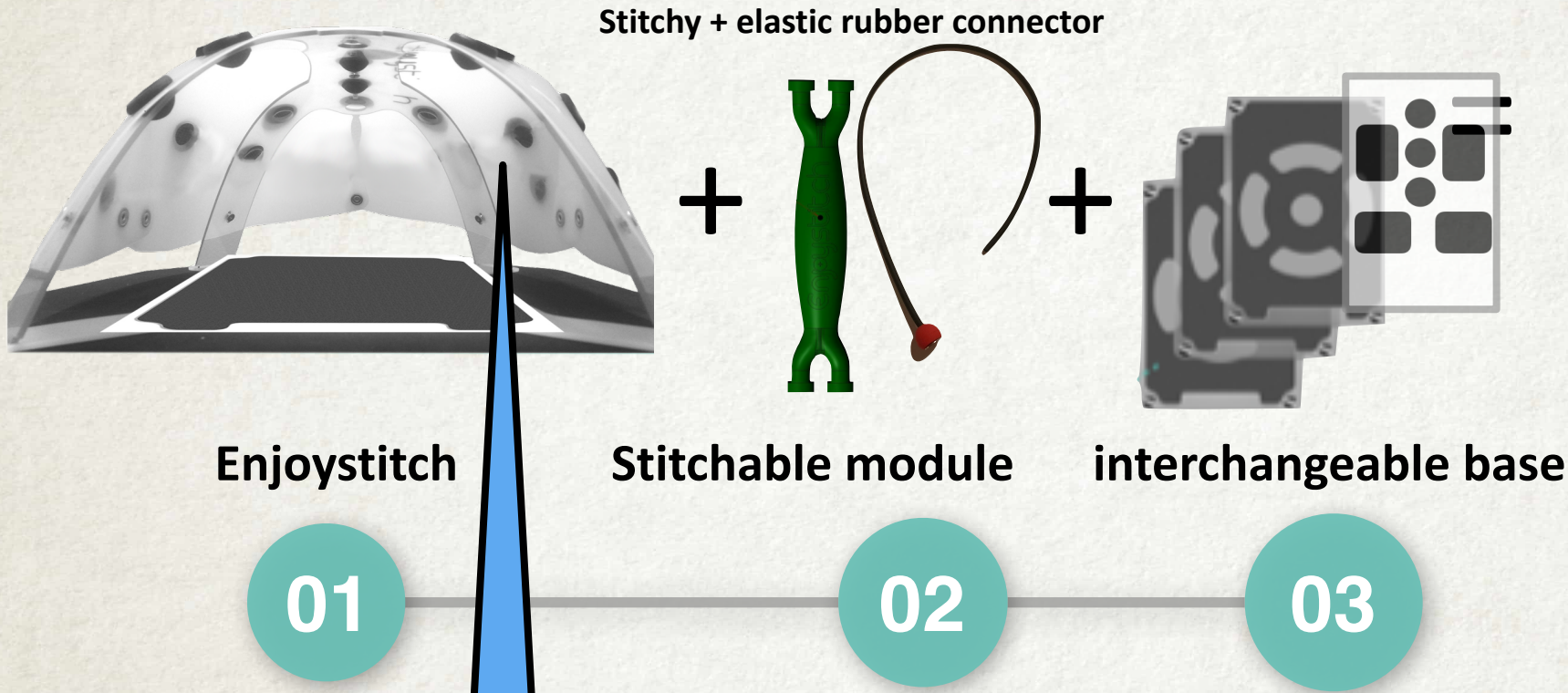


The 1 mm hole placed in the center of my body allows to position further exercises for dissection and suture through the grip system



PARTICULARLY SUITABLE
FOR LOW-MEDIUM LEVEL
SUTURE EXERCISES

THE EXERCISES

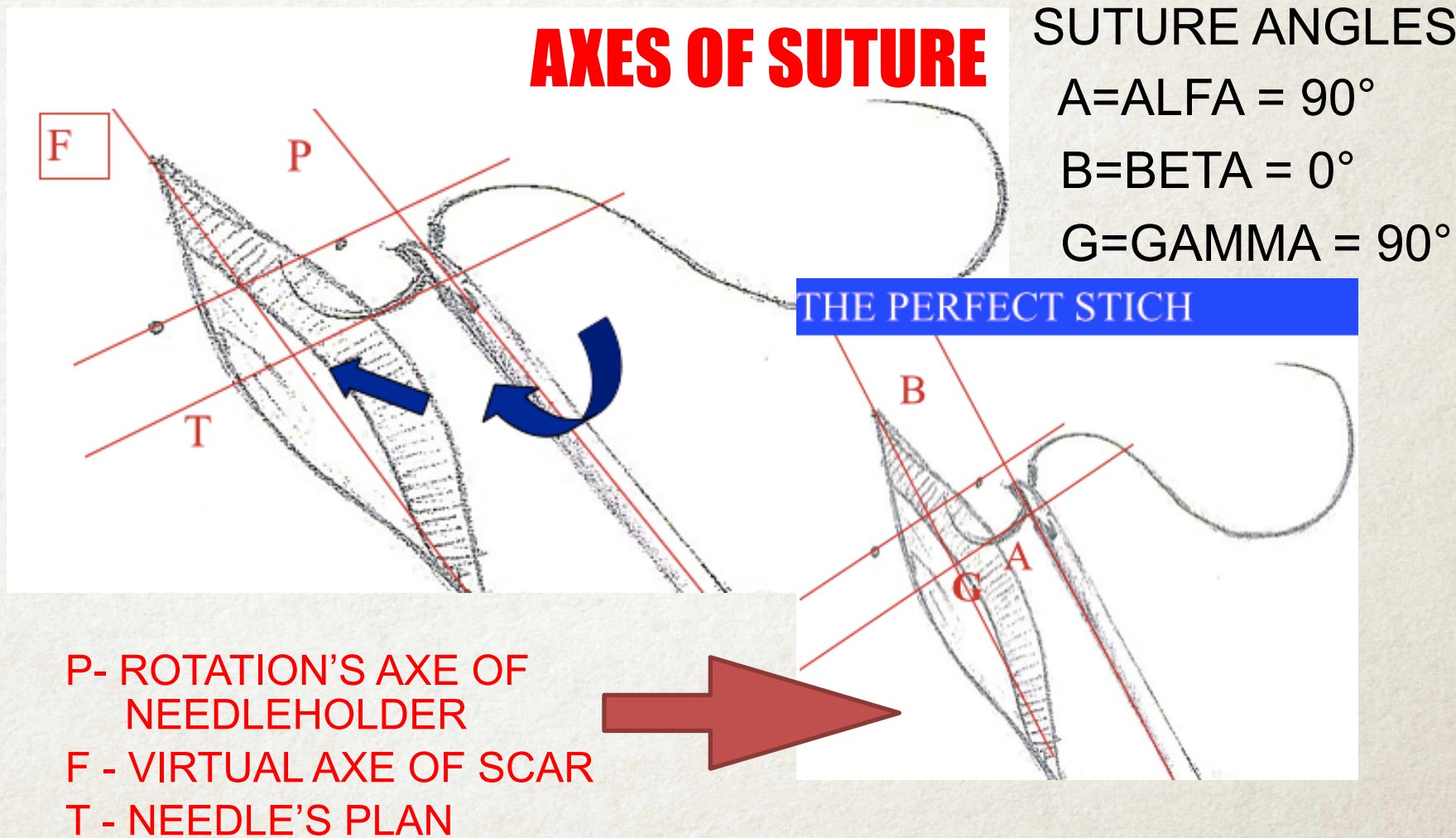


18 gromets, 2 for surgical instruments - 16 to connect stitchy to shell

- different Stitchy placement options within enjoystitch
- multiple combinations for different exercises

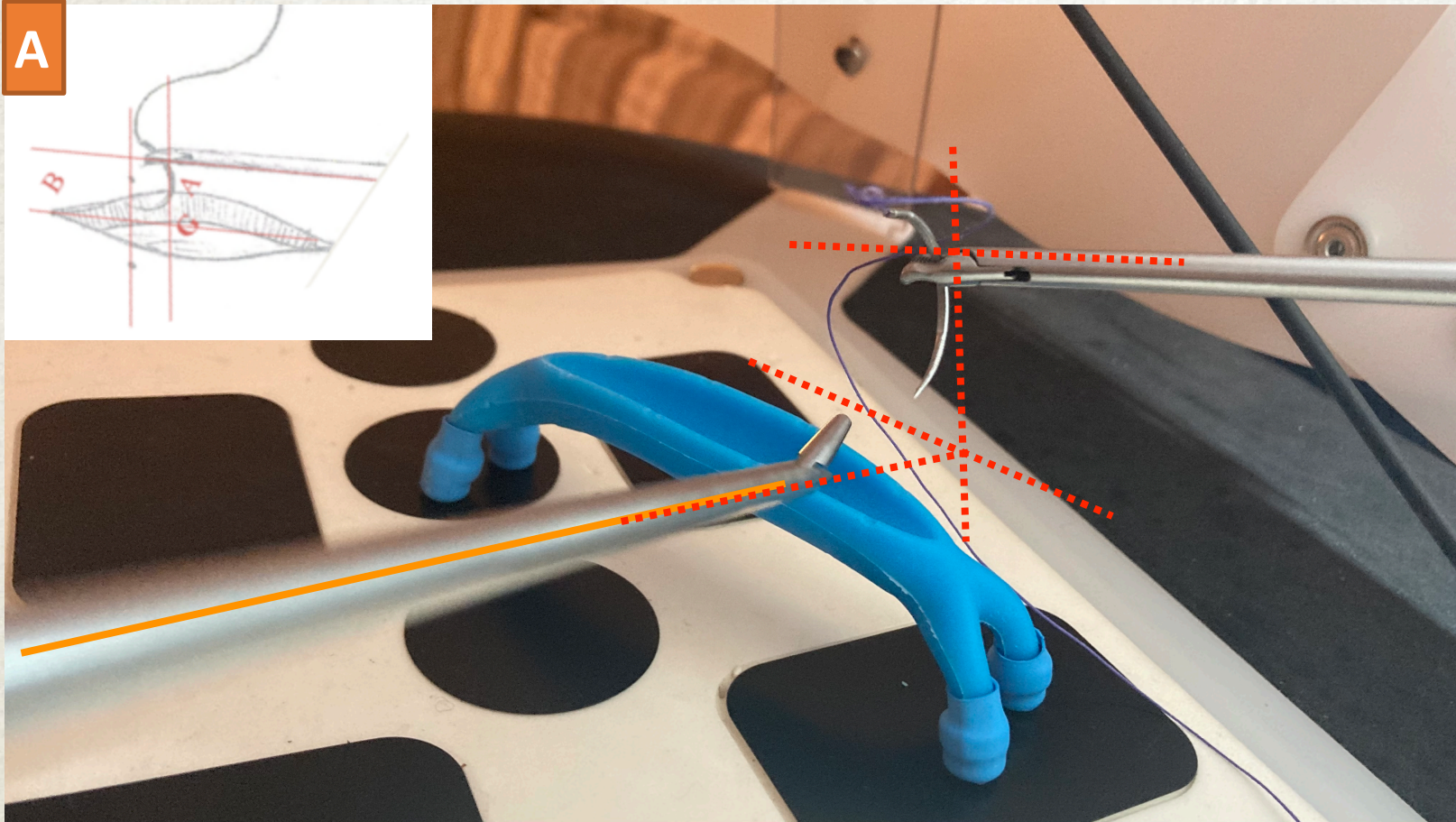
THE INTRODUCTION TO THE STITCHES

first step:
identification of
correct loading of
the needle on the
needle holder 90
degrees and correct
angle of impact of
the needle with the
target to be hit 90
degrees

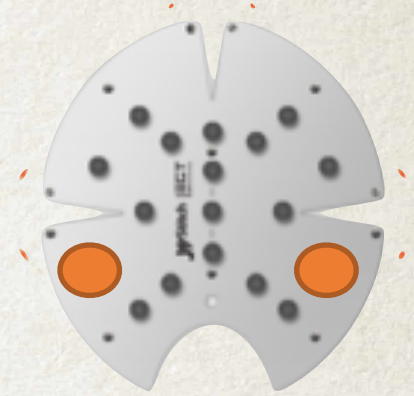


01

Surgical technique with **contralateral access** right hand

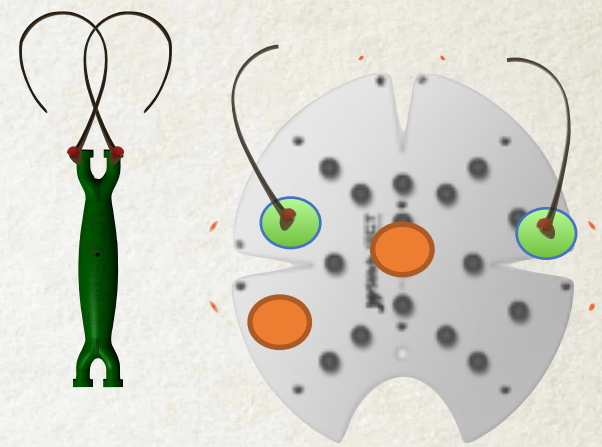
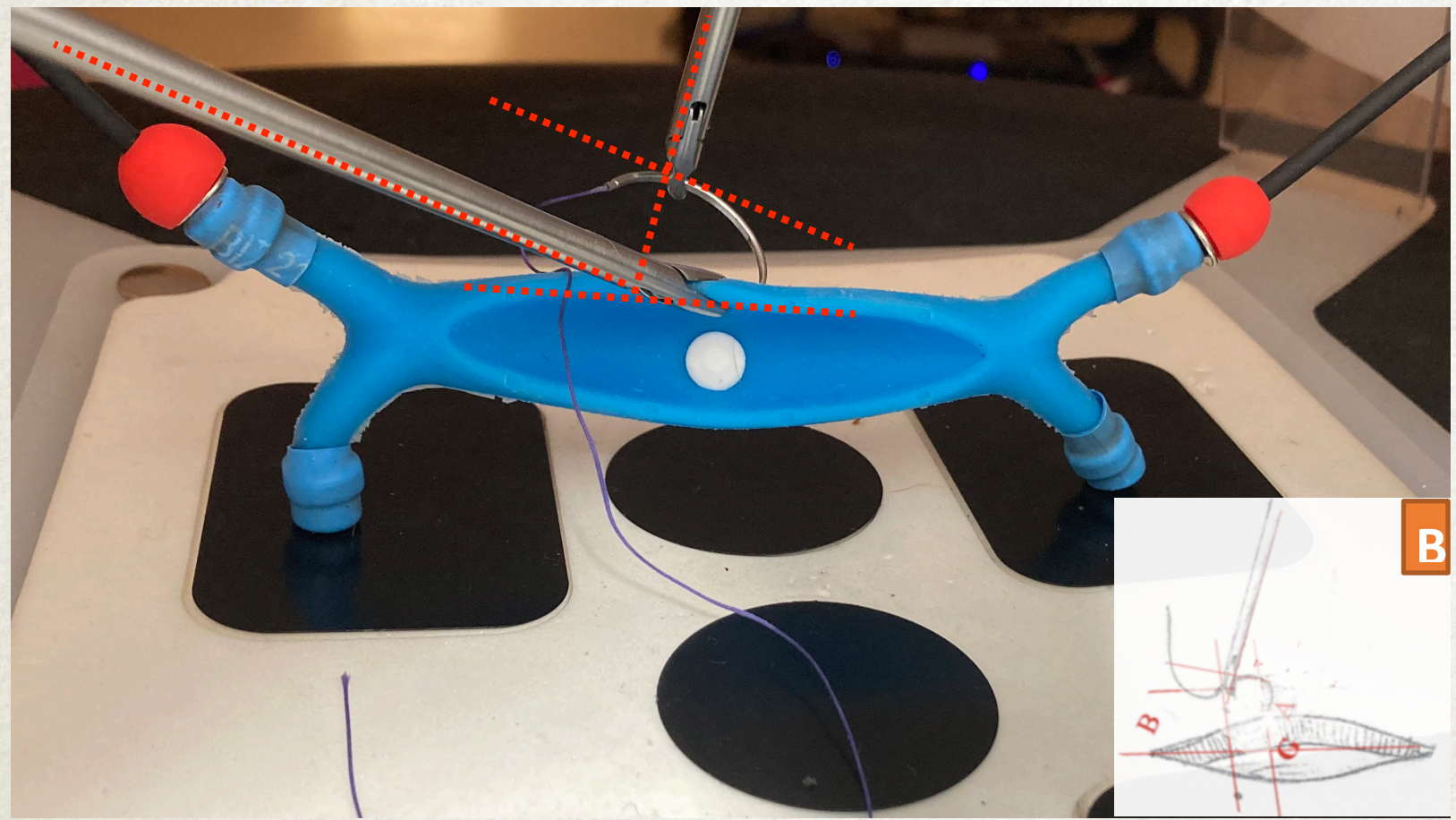


step 1: correct impact angle recognition AS IN FIGURE A



02

Surgical technique with **suprapubic access** - right hand - **horizontal suture**



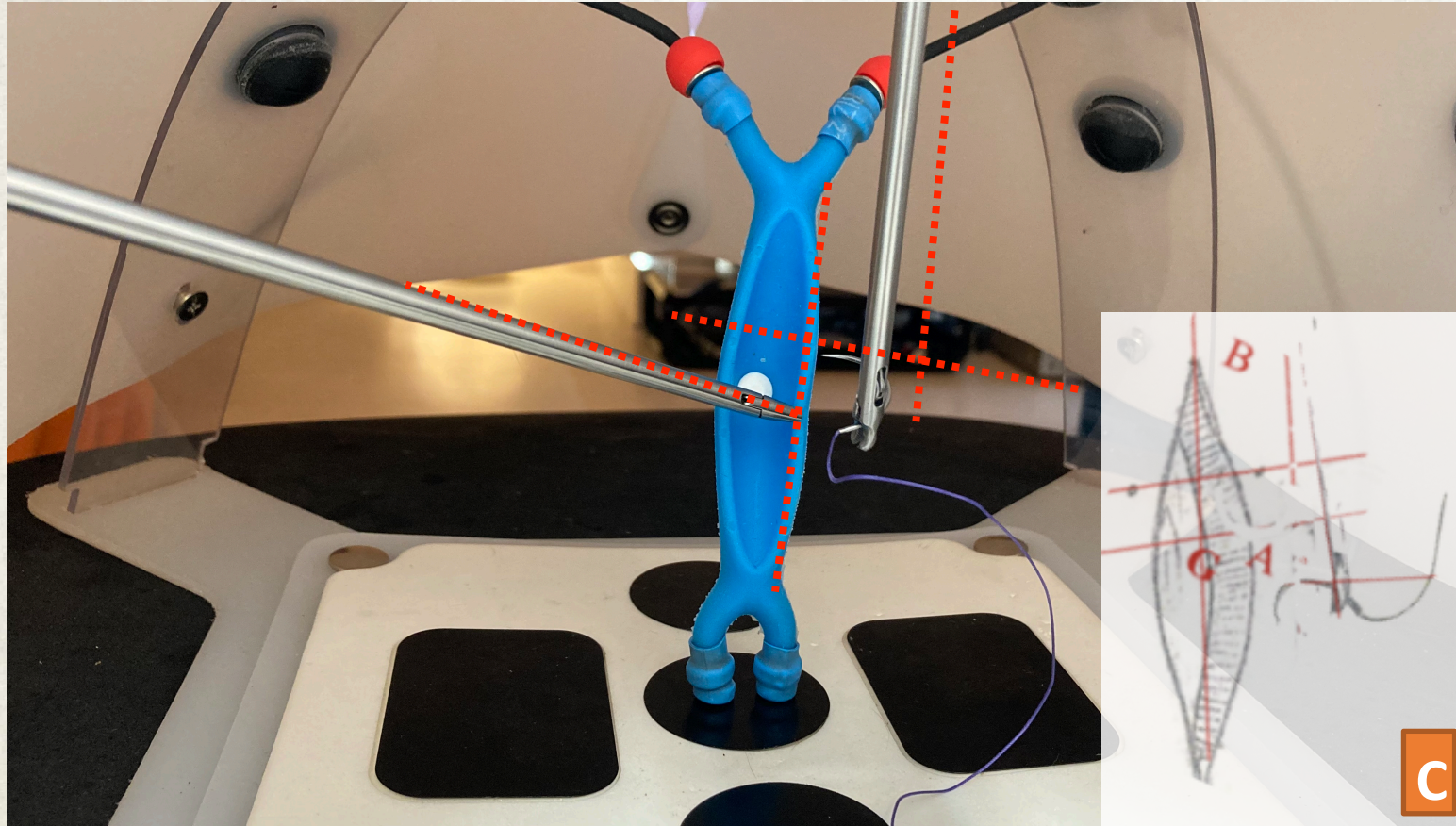
Position 2: horizontal placement: Integration with the interchangeable base + shell



step 1: correct impact angle recognition AS IN FIGURE B

03

Surgical technique with **suprapubic access** - right hand - **vertical suture**



step 1: correct impact angle recognition AS IN FIGURE C

Enjoystitch

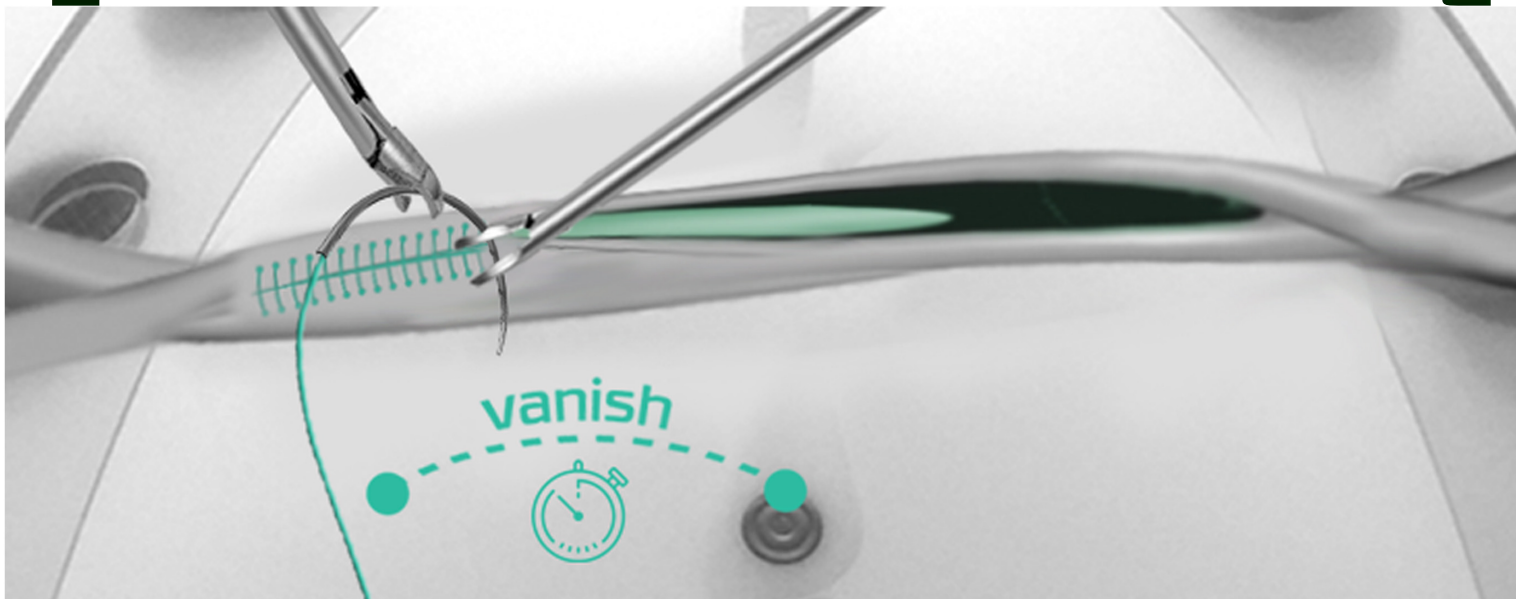
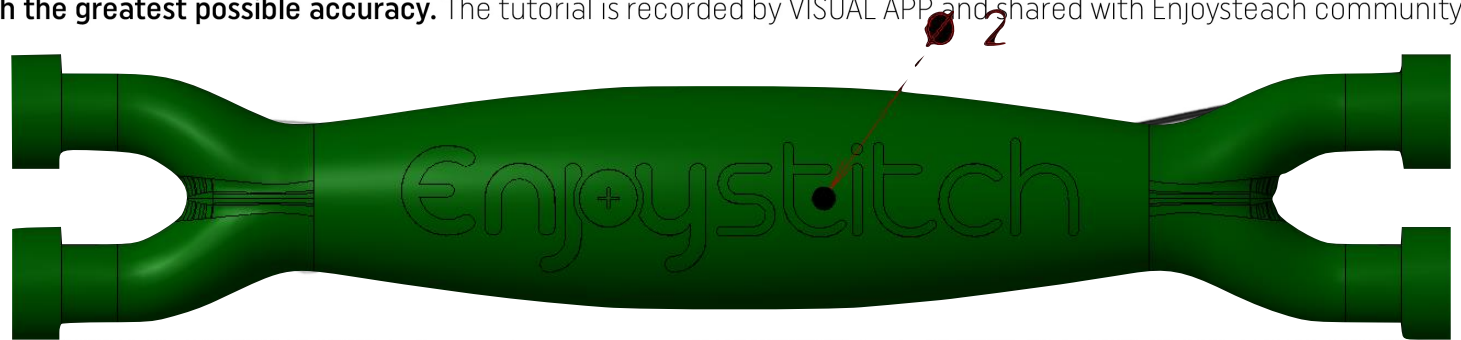


Position 3: vertical placement: Integration with the interchangeable base + shell

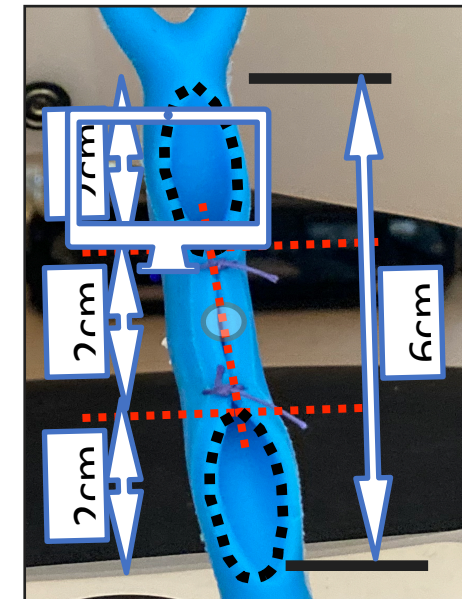


Enjoystitch VANISH SYSTEM©

The sewable components have an internal color contrasting color part. **The exercise is to make the colored part disappear in the shortest time and with the greatest possible accuracy.** The tutorial is recorded by VISUAL APP and shared with Enjoystitch community.



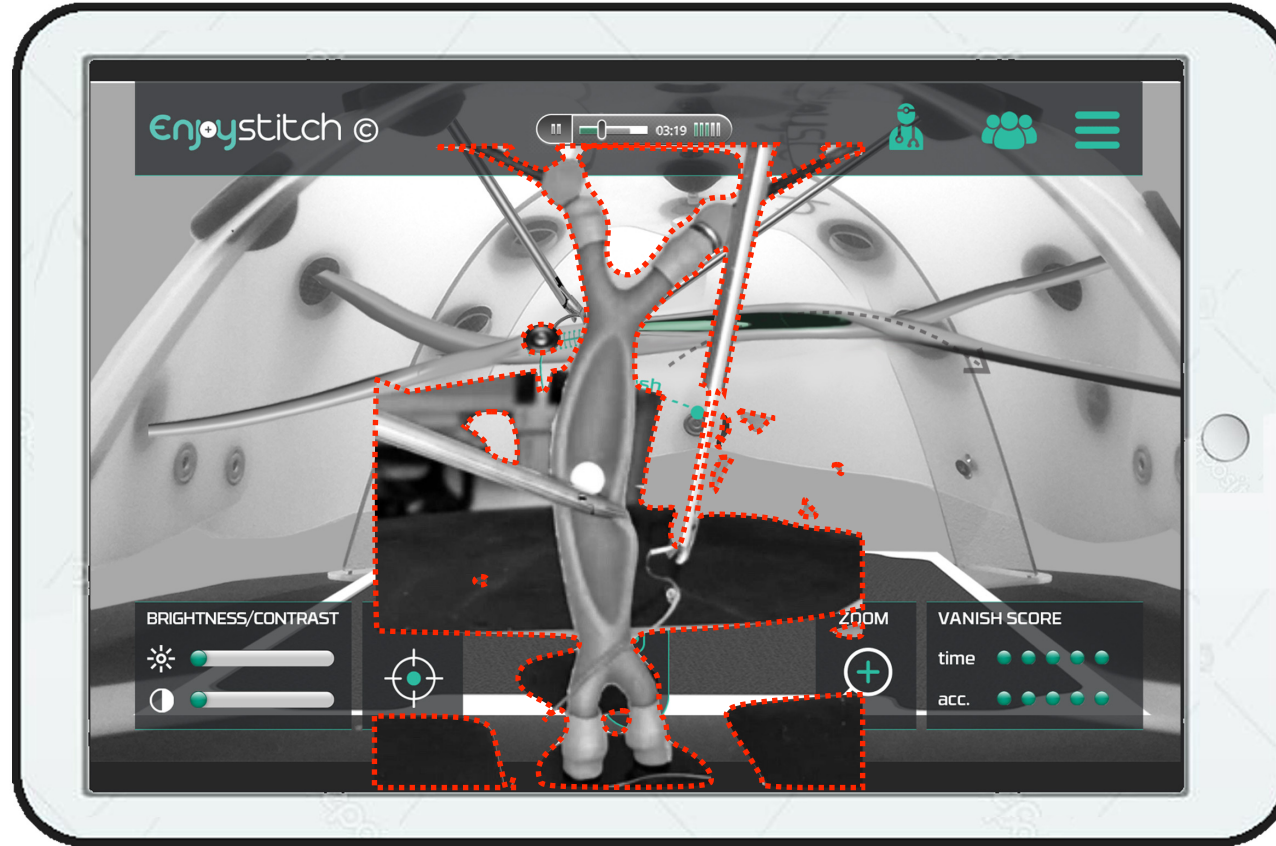
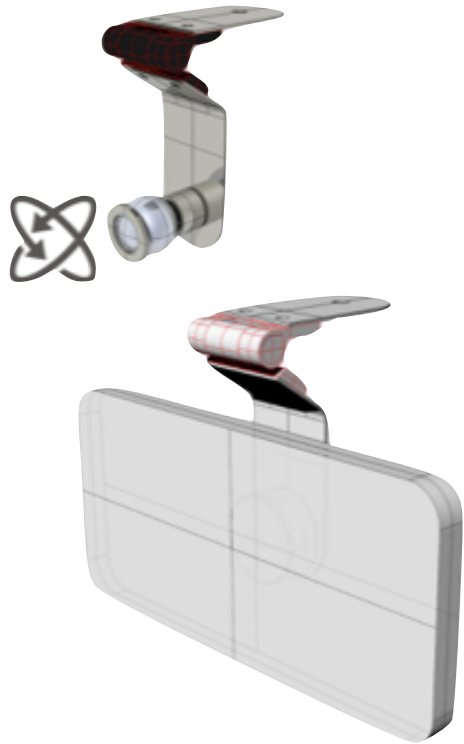
Enjoystitch VISUAL APP©



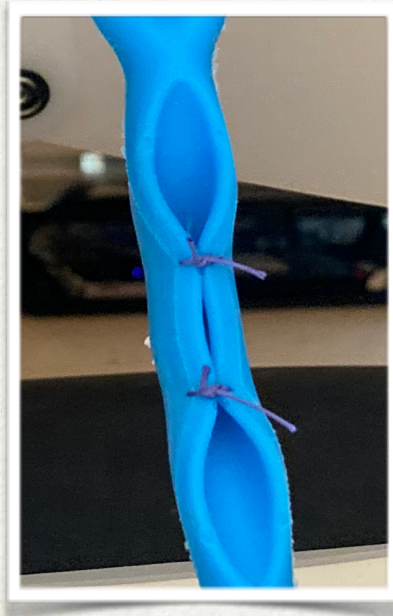
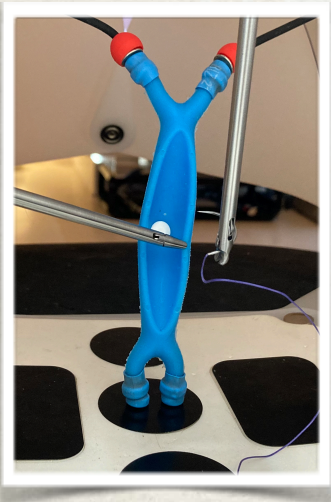
Enjoystitch

Enjoystitch VISUAL APP©

Our visual application allows you to optimize the user's point of view. We want to create a community of users who can measure themselves and share their results. **As a long-term goal we want to create a Big Data of users that with their contributions allow to set new standards in laparoscopic surgery learning curve.**



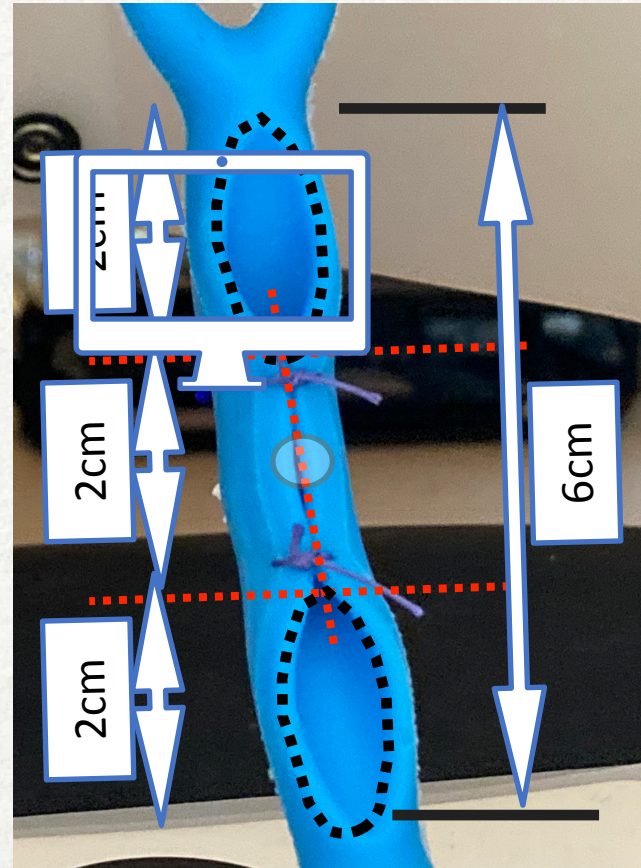
Enjoystitch



Enjoystitch VANISH SYSTEM©

dedicated training room

Enjoystitch VISUAL APP©



Final result

Visual Recognition -Self Assessment Score System

Validation: the surgical knot must hold and the white dot has to disappear

Accuracy:

- the 2 surgical knots have to be parallel
- positioned 2 cm apart
- the two areas identified above and below must be the same

Timing: the time to perform the exercise

Enjoystitch™



the end