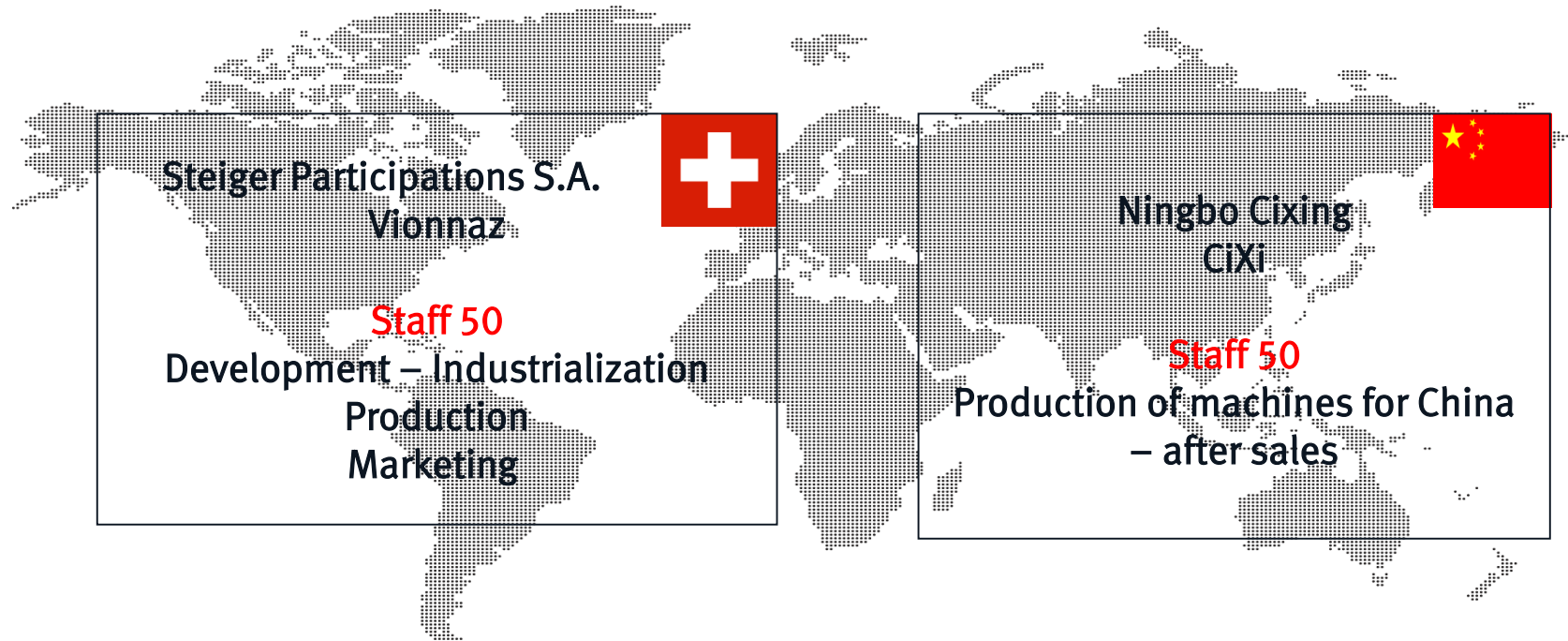


STEIGER PARTICIPATIONS SA

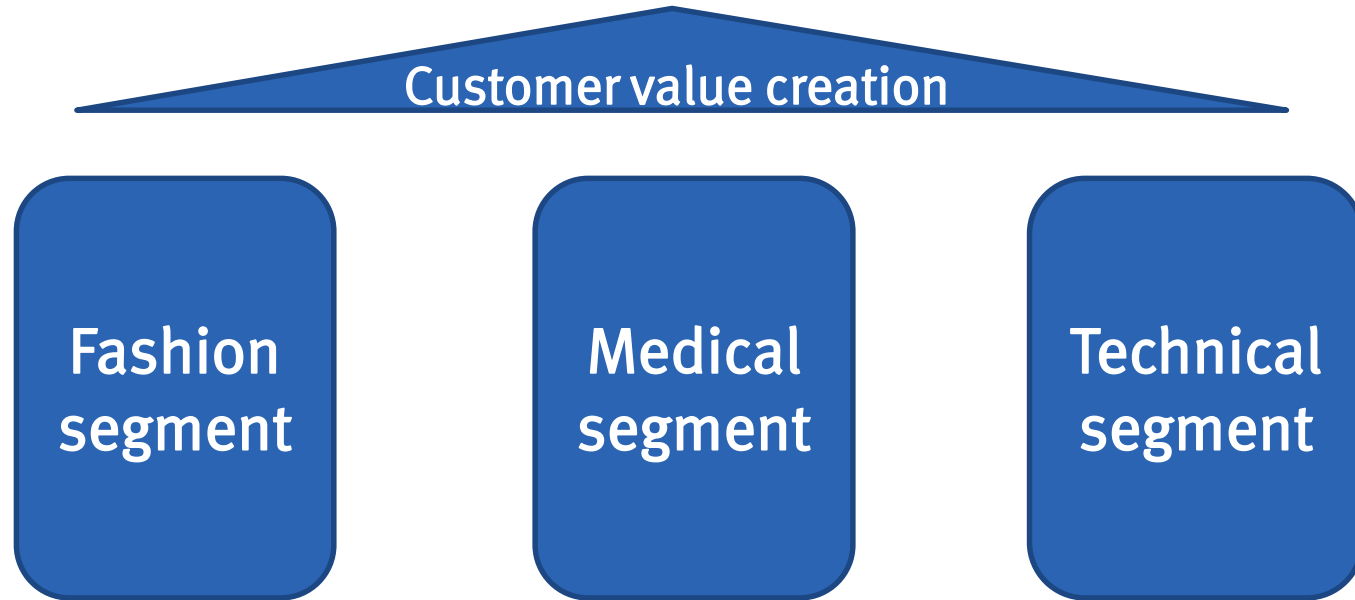


70 YEARS OF INNOVATION IN THE KNITTING

Steiger Participations SA - Member of Cixing Group

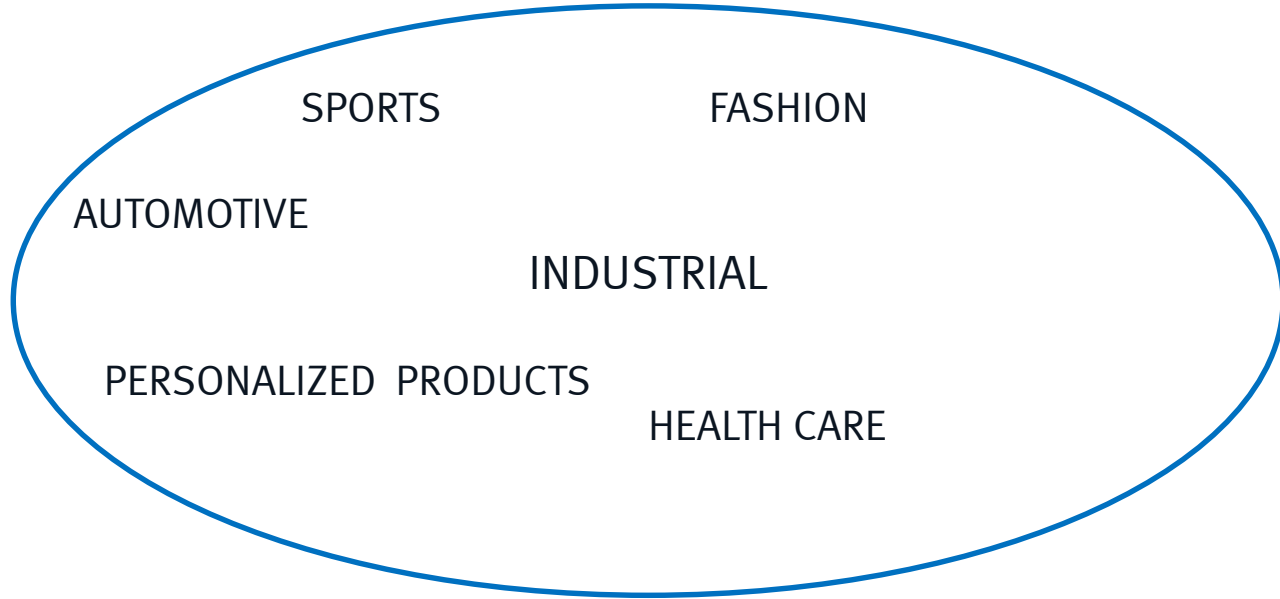


Innovation culture



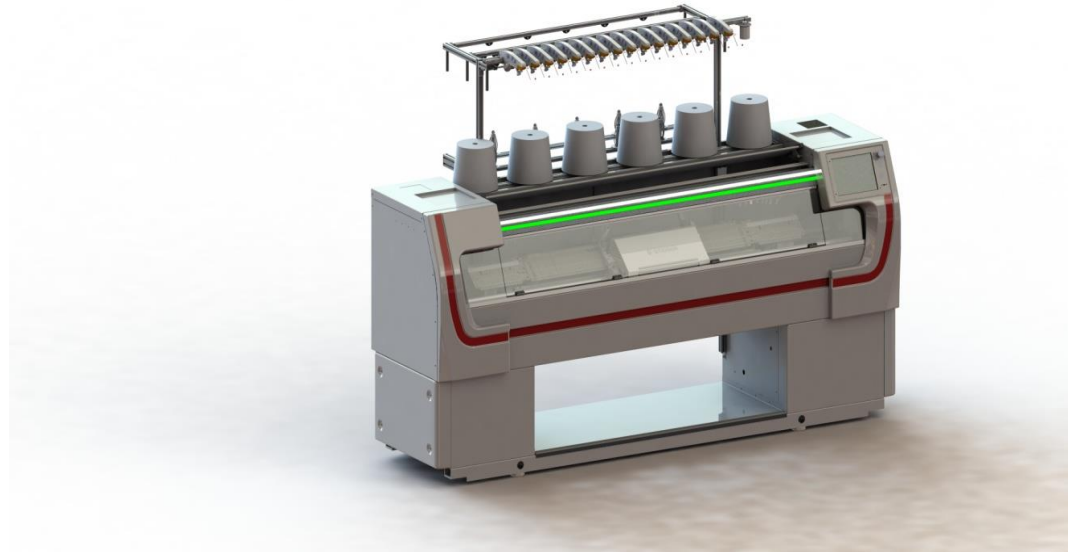
3D Flat Knitting – is the 3D printer in textiles

Seamless knitting with high a potential for innovative products



VEGA 3.130 - NEW AT ITMA 2019

- Weft and warp insertion capability
- 3 systems
- 16 yarn-guides
- 2 in-lay controlled yarn guides



VEGA 3.130 specifications

Dedicated for the production of technical knitting

Specific cam-box for semi-rigid yarns

Adapted sinker kinetics

Customized distance between needle-bed

Take-down for 3D products

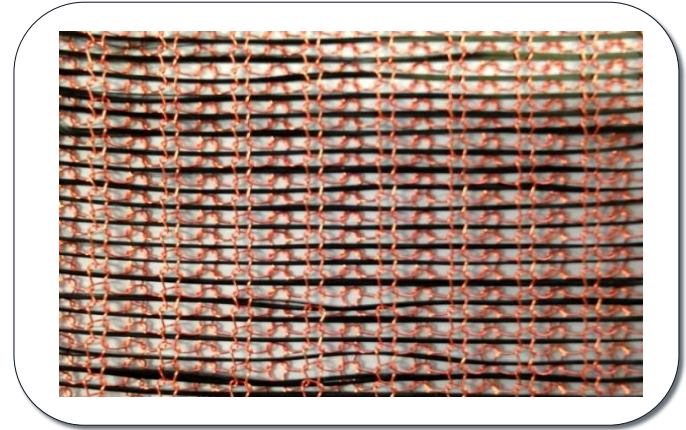
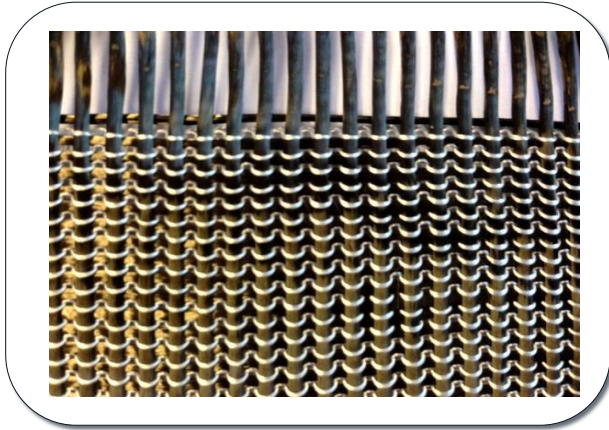
New system of clamp and scissors for the

Optimized production

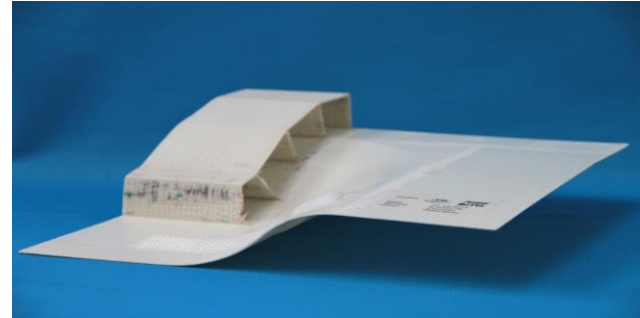
FCI function : selectable carriage inversion ramp

Technical Options on VEGA

weft and warp – inlay applications



Technical Segment



Knitted process

3D knitted preform at final dimension



Final part



Inductive thermosolidification

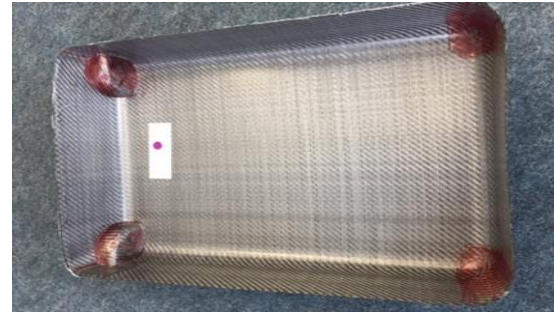


AND: New market segments:

Application example in luggage industry:



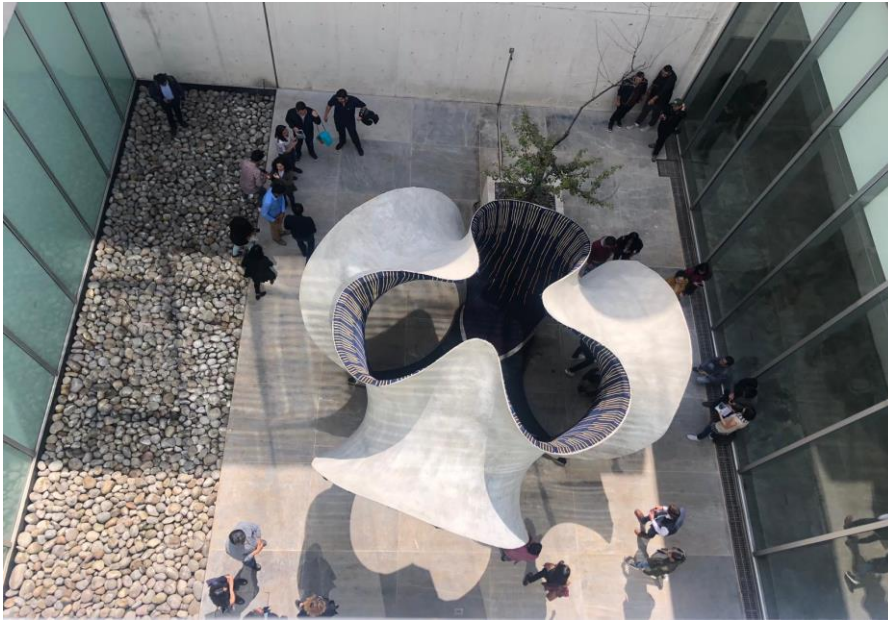
Knitted preform in PPS



solidification phase

NEW ART OF ARCHITECTURE BY KNITTING

Project of the technical University ETH Zurich



Above concrete – below knitwear!

3D printing out of flat knitting machine

Shaping giving structures - easily done

Cost effective – saving material



Pavilion – by ETH Zurich:

« Design as second nature » – Zaha Hadid architects

Visible at the « Museo de Arte Contemporáneo »
In Mexico City

Applications of 3D knitted technology for aeronautic industry



Boeing 787
50% Composite material
- 20% weight



SolarStratos is the first commercial two-seater solar plane in history it will also be the first manned solar plane penetrating the stratosphere

Possible application of composite knitted structure

Cockpit

Aerodynamic

Wheel cover

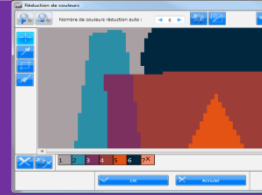
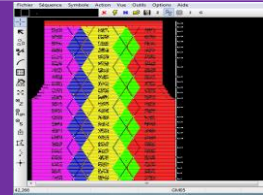
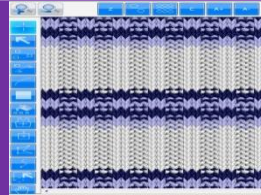
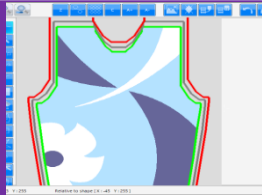


STEIGER THE SERVICE CENTER =

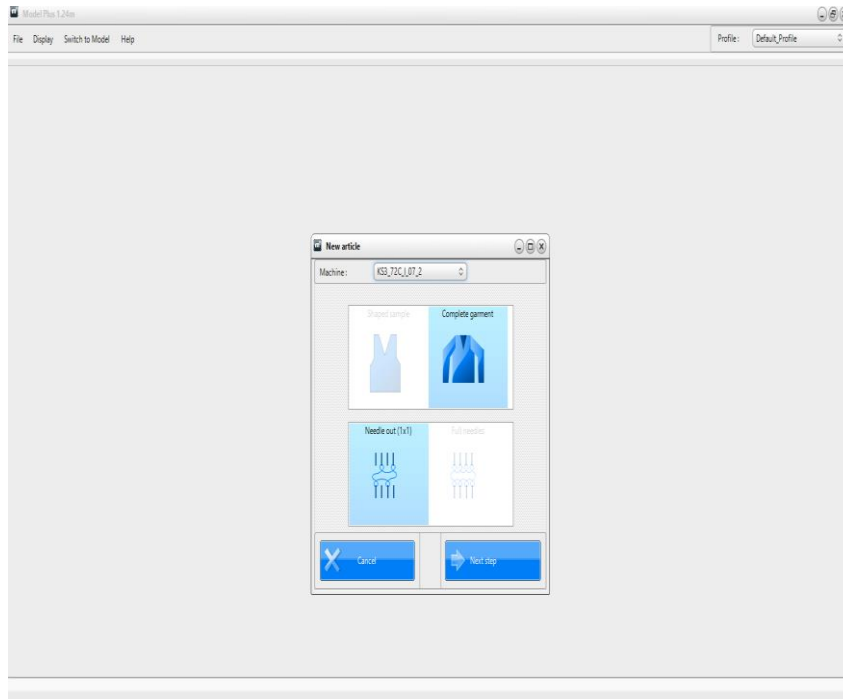


- Steiger offers to their clients an individual and personalized consultancy
- Our support team brings customers ideas to reality
- Machine programming – sampling – ready to production
- Strictly confidential agreements for each projects

New Features at ITMA 2019: Machine Programming MODEL +



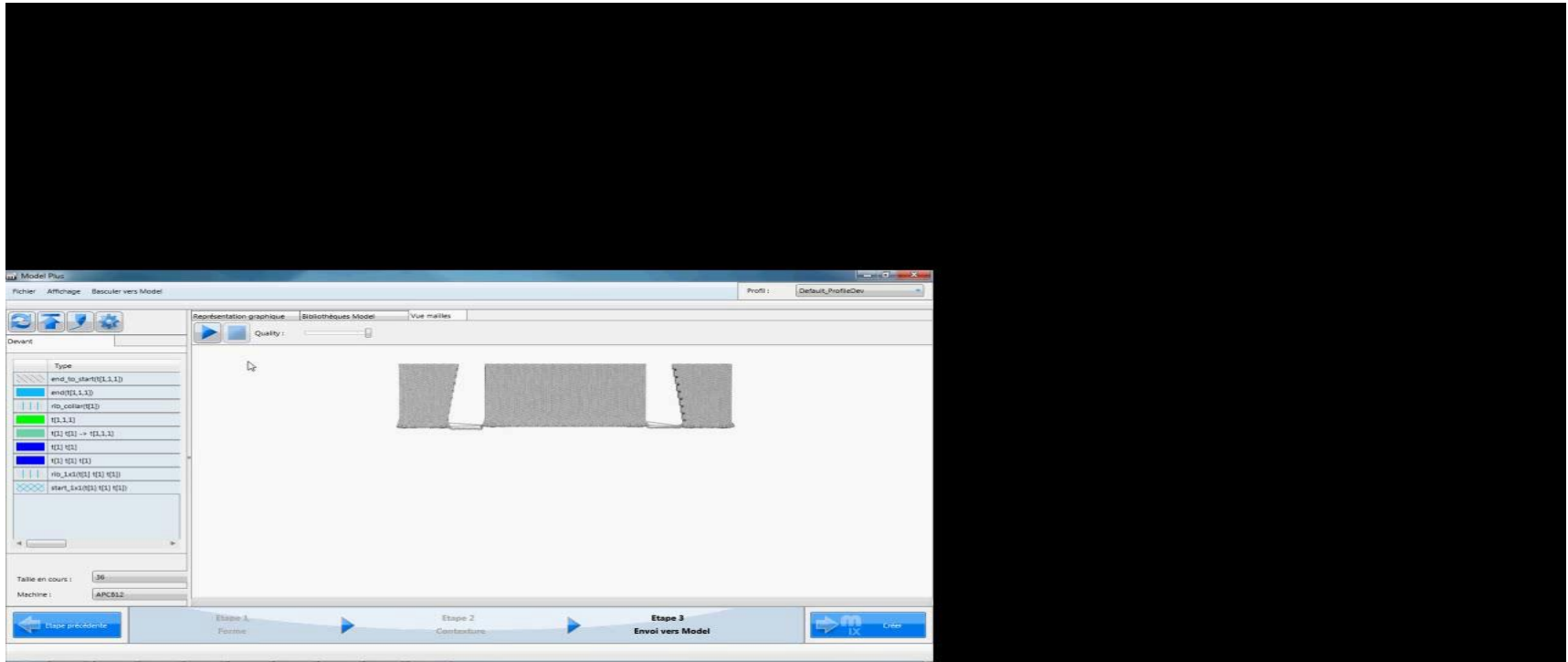
STATE OF THE ART – MACHINE PROGRAMMING



STEIGER – has reinvented it's machine Programming software system.

- Highest grade of automatisaton
- Easiest possible system for user
- Avoiding sampling by simulation
- Huge Library ready for use

STATE OF THE ART – MACHINE PROGRAMMING



Steiger
build the future of the knitting

Thank you