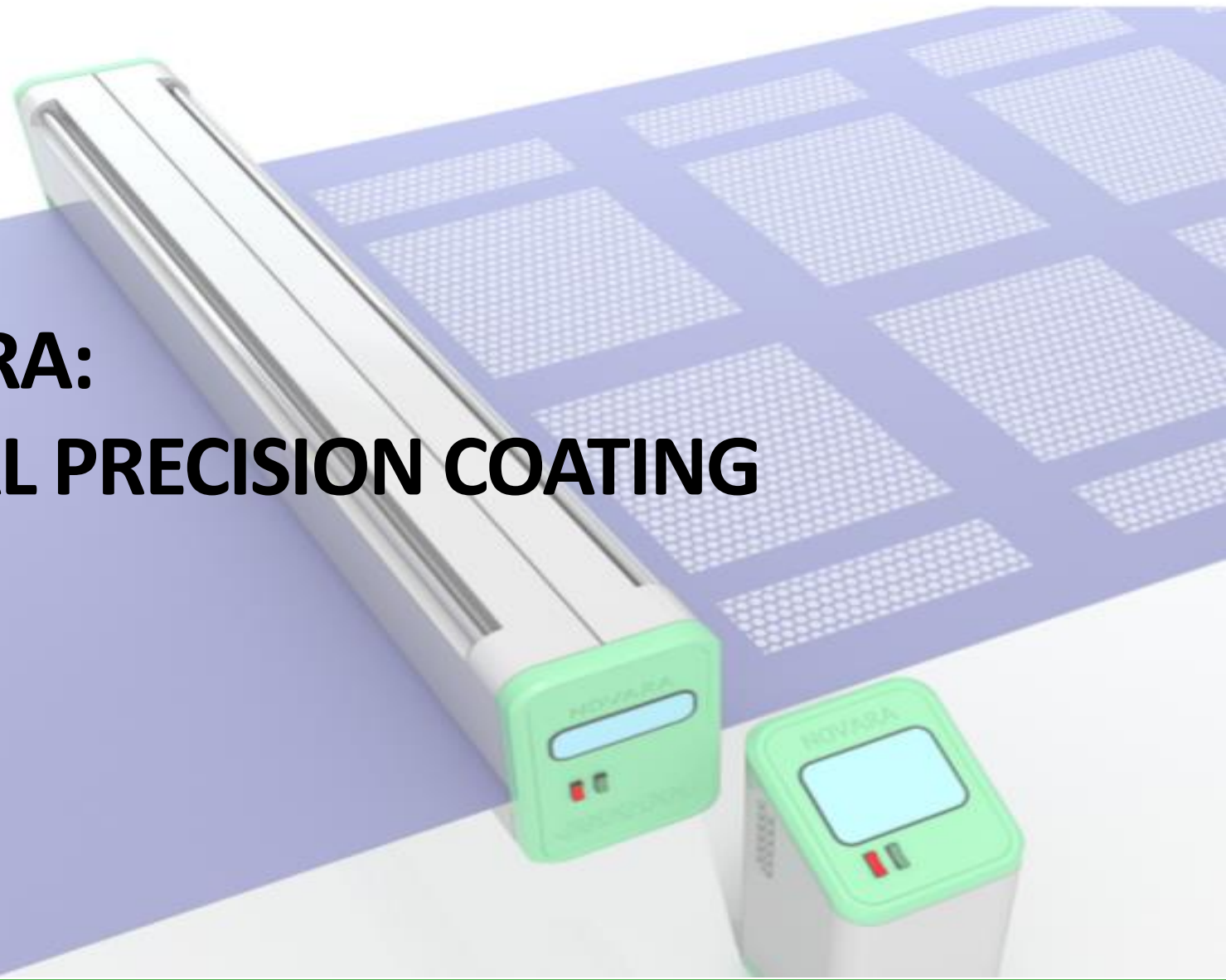


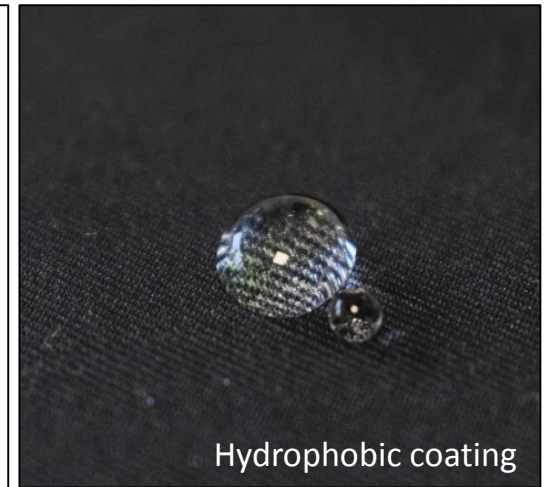
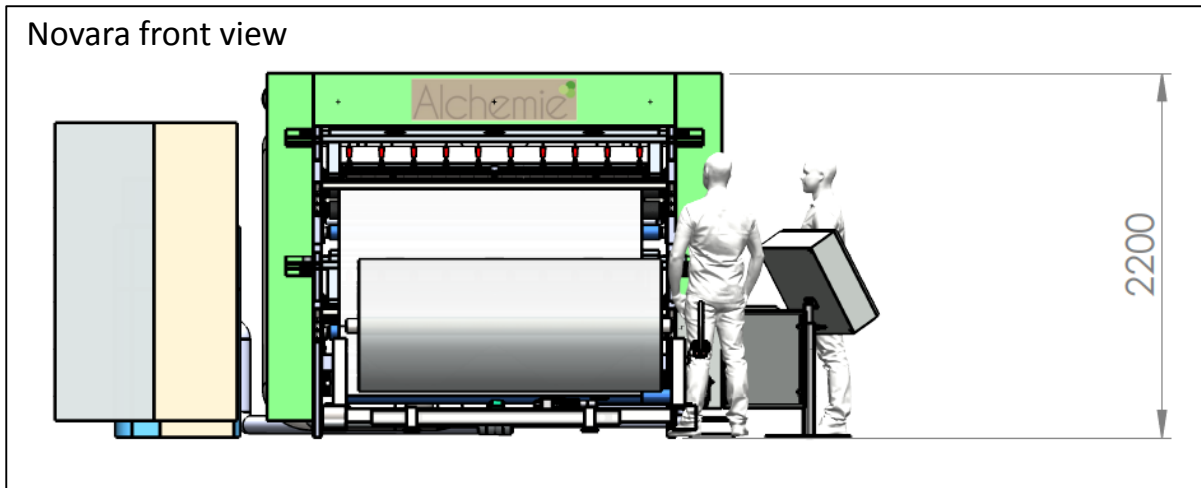
Alchemie

The Digital Materials Science Company

NOVARA: DIGITAL PRECISION COATING



Novara: Digital precision coating technology



- Novara is a digital textile coating applicator that enables:
 - On-demand digital control – enabling the factory of the future
 - More sustainable finishing – only deposit coating where its needed.
 - Innovation:
 - 2D patterning (20DPI) – multifunctional coatings;
 - Two-sided application – different chemistries e.g: anti-viral and fluoropolymer

Novara – Key Benefits



DIGITAL ON-
DEMAND
PRODUCTION

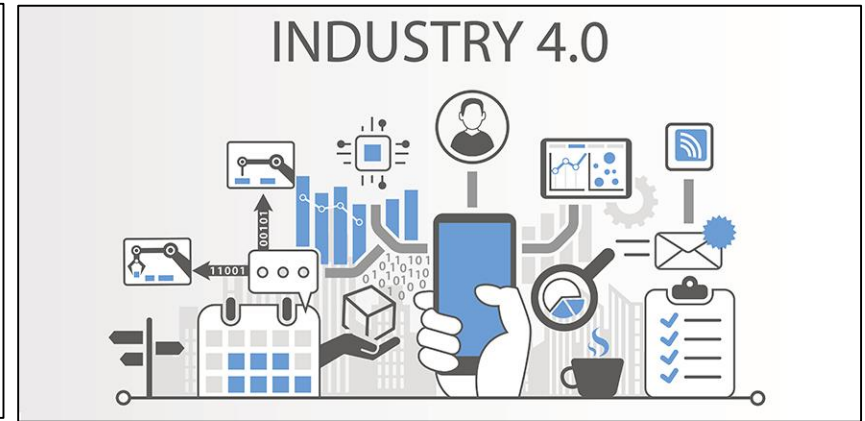
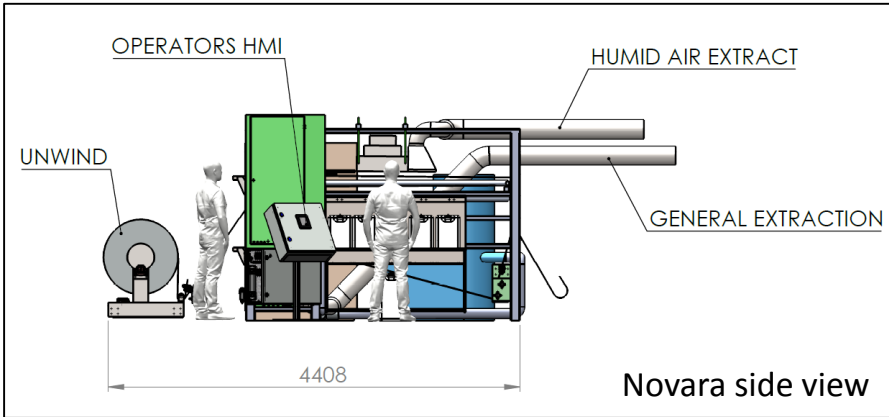


SUSTAINABLE
FINISHING
PROCESSES



NEW PRODUCT
INNOVATION

Digital on-demand production

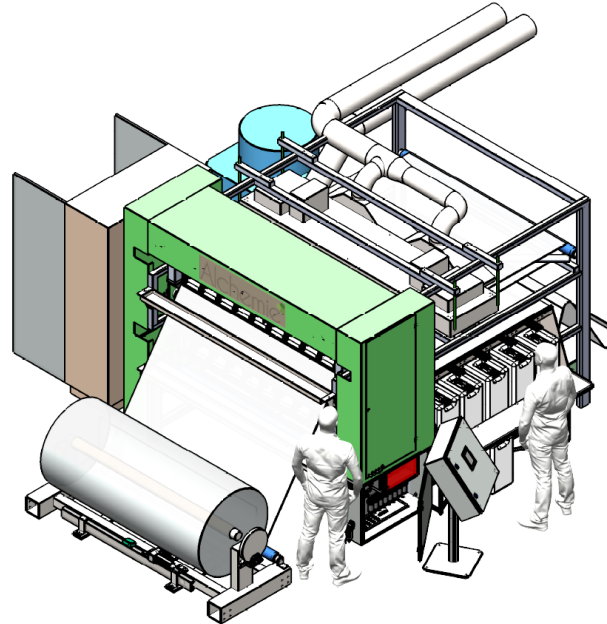


- Software-defined patterning textile finishing application under full digital control
 - Instant pattern changes
 - Near-instant chemistry changeovers in < 5 mins
- Finish on-demand:
 - Reduced inventory | make to order | economic short runs
- Ready for integration with enterprise resource planning (ERP) / Industry 4.0 solutions
 - “Factory of the Future” integration

More sustainable textile finishing processes

- Reduced materials consumption – only apply coating where needed:
 - Reduced waste
 - Lower energy for drying/curing
- More convenient recycling of uncoated materials

- High throughput: up to 25 m/min with 100 gsm wet add-on
- One or two-sided application;
- Efficient in-line infra-red drying
- Low waste – only apply coating where its needed

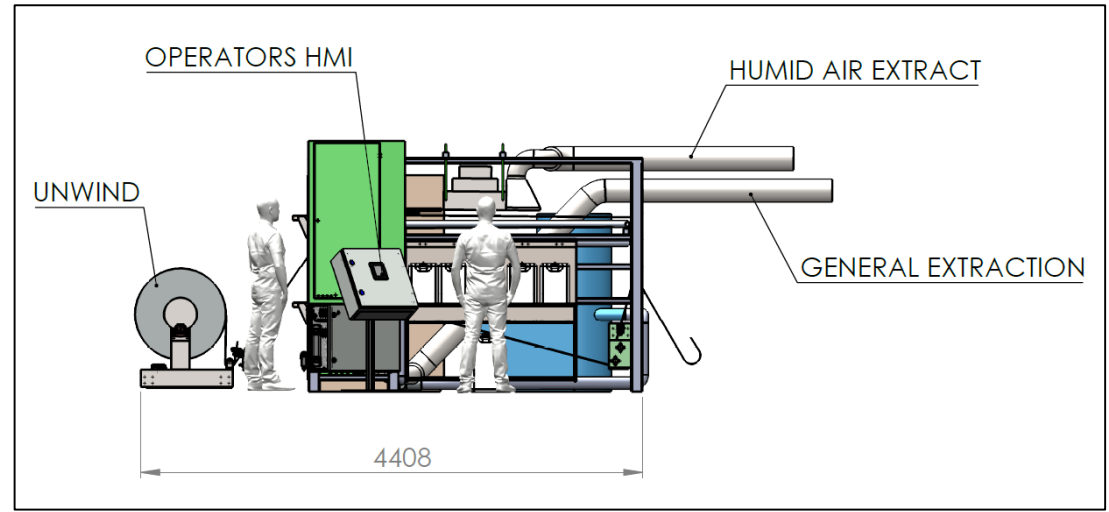
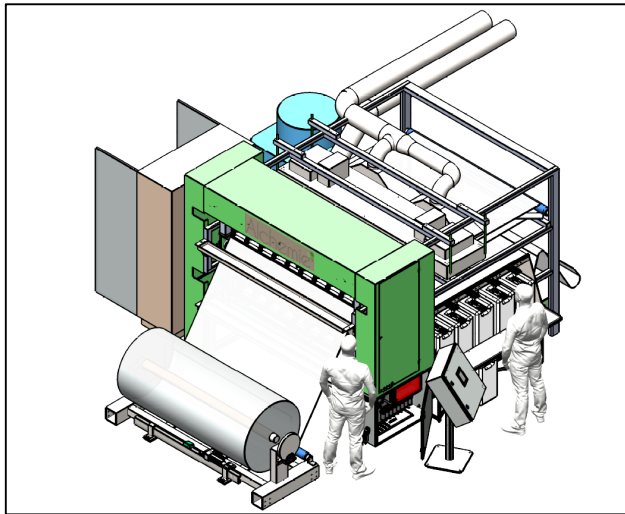


New product innovation

- Deliver high-value coatings for unique applications:
 - Medical
 - Outdoor wear
 - Premium sportswear
- We have demonstrated:
 - Waterproof
 - Stain resistant
 - Self-cooling
 - Fire-retardant
 - Metallics / visual effects
 - Anti-viral
- Combine incompatible chemistries on the same substrate – 2D patterns, two-sided application



Production equipment – available for delivery in 2020



- Novara – breakthrough digital precision coating equipment for textiles:
 - Roll-to-roll direct to fabric digital coating solution
 - 25 m min-1 / 1.8m wide
 - Up to 100 gsm wet-add on (50 gsm/side)
 - Two-sided coating
 - More sustainable – lower energy, materials and water