



ZELLER + GMELIN

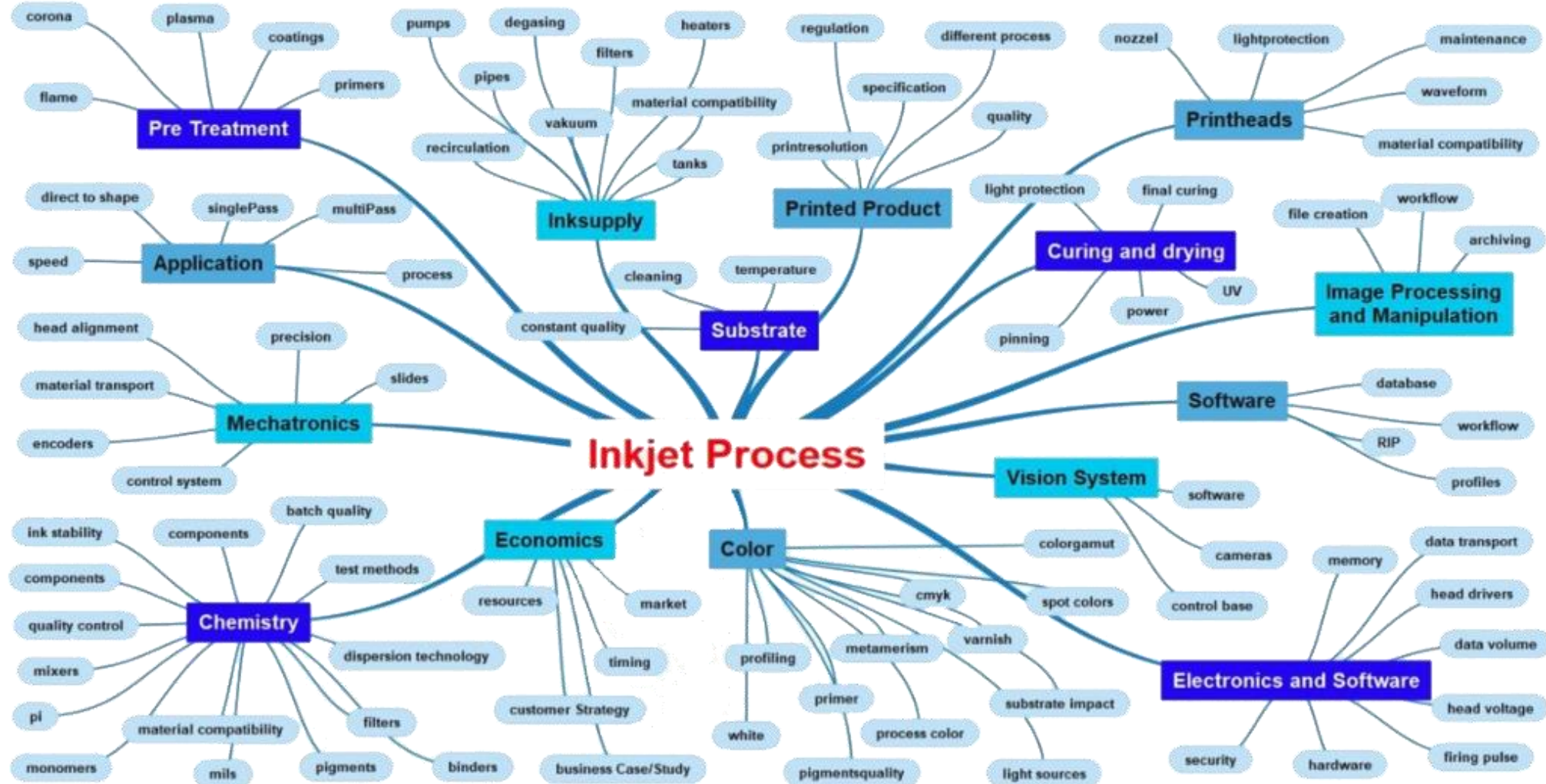


Inkjet Printing

International Sales Conference 2025

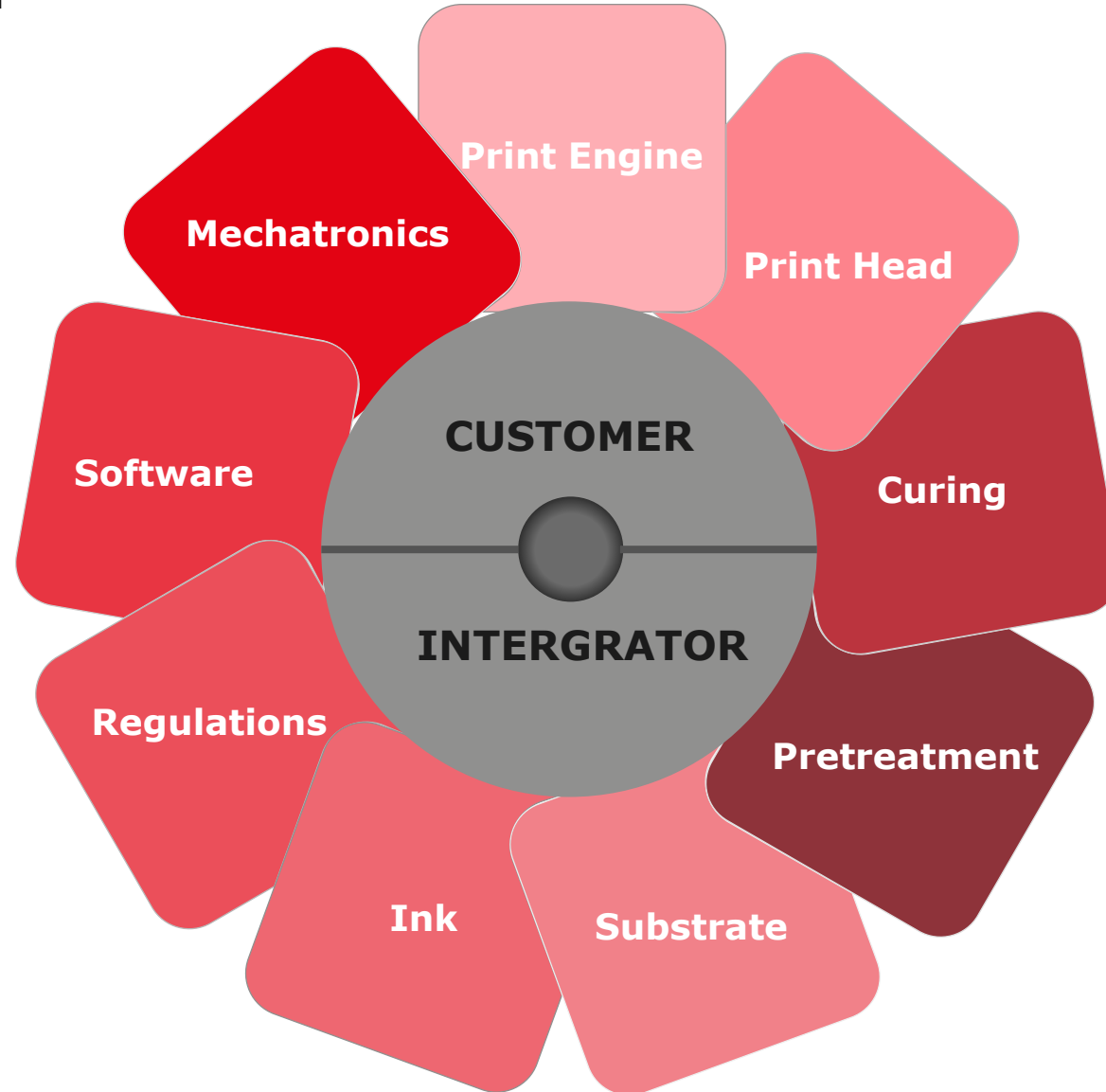
EXPERTLY DONE.

INKJET MINDMAP



STAKEHOLDER MAPPING

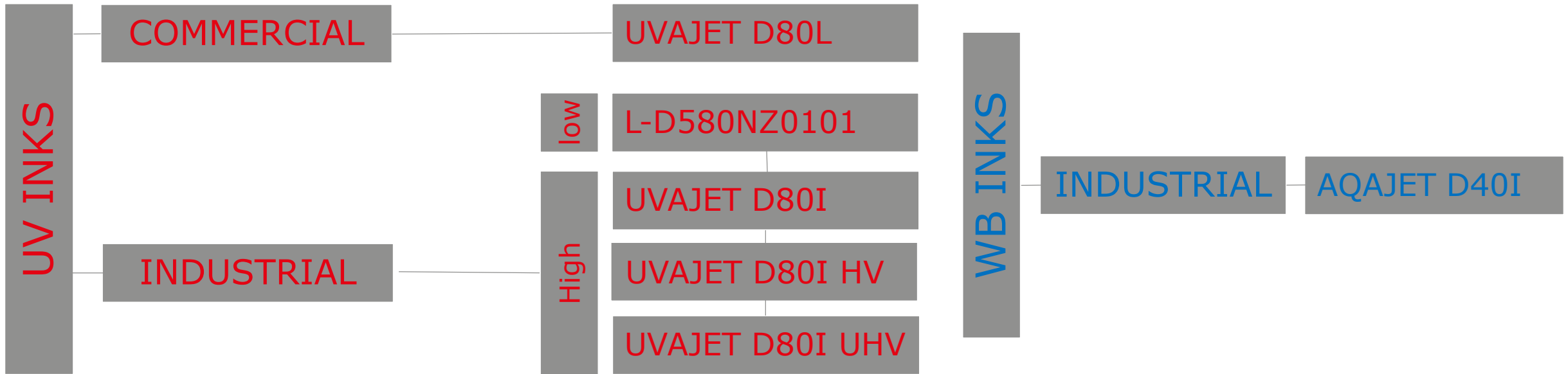
Industrial Inkjet puzzle pieces



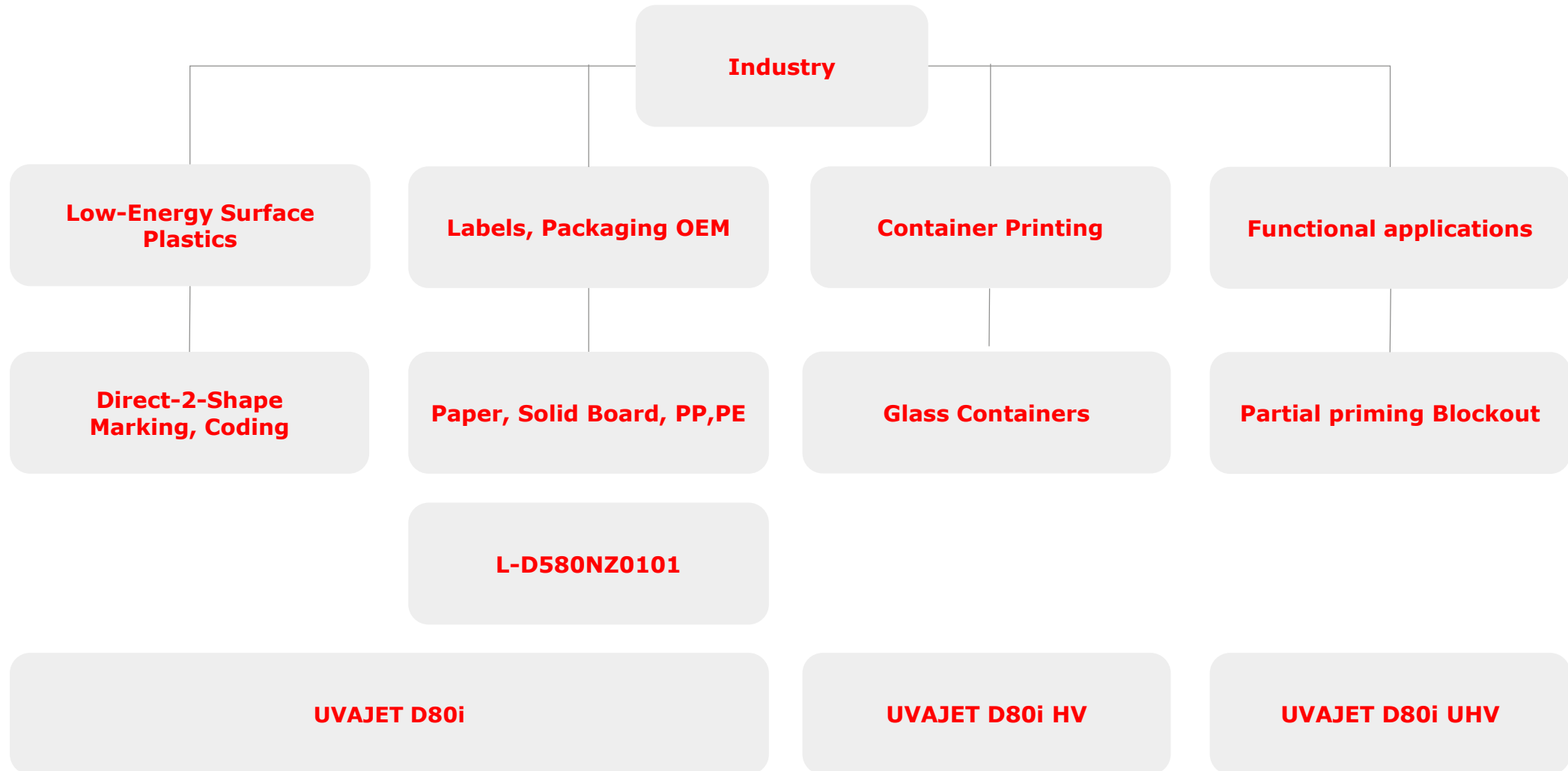
EXPERTLY DONE.

INKJET DEVELOPMENTS

TECHNOLOGY PORTFOLIO OVERVIEW



Strategic Alignment



INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

UVAJET D80I

- **Piezo-electric print heads**

- + XAAR 1000 Series
- + KONICA MINOLTA 1024
- + SEIKO RC1536, 508GS

- **Access to the market**

- + Low-Energy-Surfaces
- + No chemical pre-treatment
- + PP, PET, PE, PC, PVC, Glass, Metals

- **Viscosity:** $\approx 10\text{mPas}/45^\circ\text{C}$
- **Colours:** CMYK, W, V
- **Mercury**
- **LED-Curing**

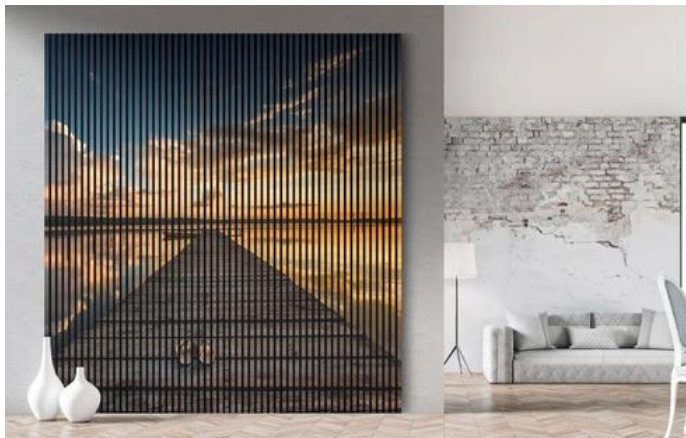
INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

QRES
TECHNOLOGIES



+ Powder Coated Aluminium



- + Printing of 3-dimensional objects
- + Substitution or addition to pad printing

EXPERTLY DONE.

INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

UVAJET D80I HV

- **Piezo-electric print heads**
 - XAAR 1000 Series
- **Viscosity:** $\approx 20\text{mPas}$ / 45°C
- **Colours:** CMYK, W, V
- **Mercury + LED-Curing**
- **Access to the market**
 - Glass
 - Productivity
- **Digital Embossing**

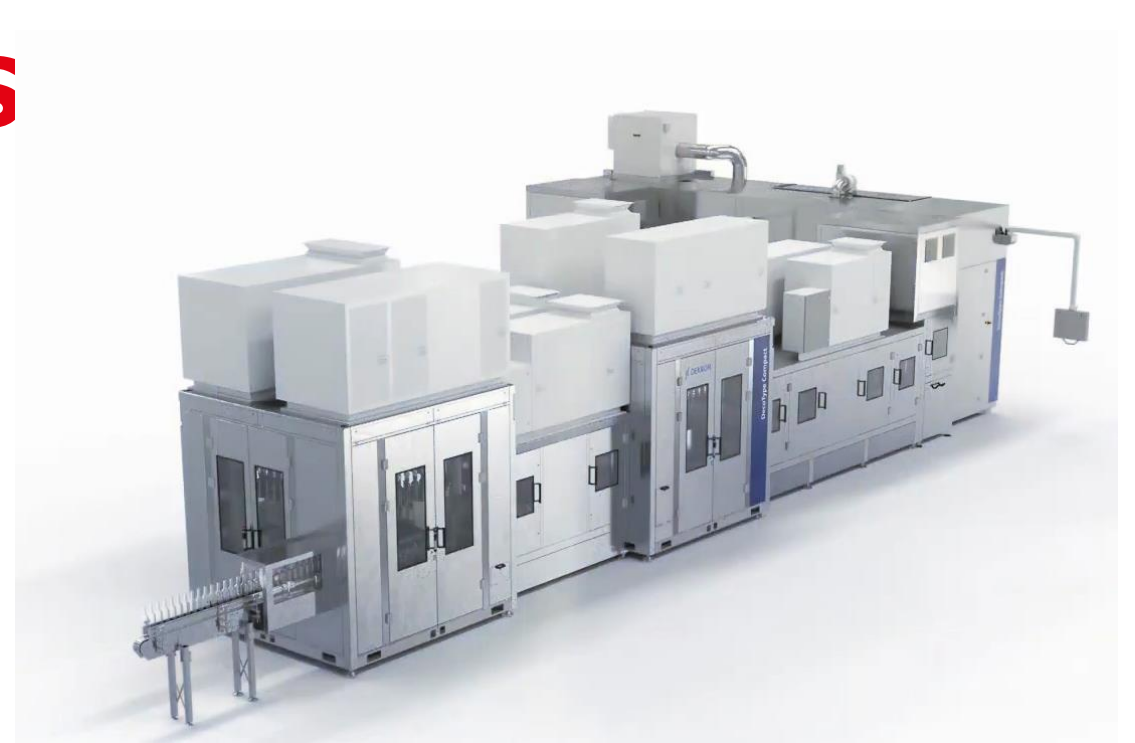


INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

Dekron Deko Typ Compact

- + Linear arranged print modules
- + 10 printing stations
- + XAAR 1003 print heads
- + 70 pieces
- + Up to 5000 bottles/hour
- + UVAJET D80i HV +100% productivity



Production process

- + Flame
- + Primer/Varnish
- + White
- + CMYK
- + Topcoat

INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

Ink Evaluation & Printhead-Certification

- + Printhead
 - XAAR Nitrox1003 GS12U/GS40U
- + XAAR-Lap-Tests
 - + Material Compatibility
 - + Physical Properties (Viscosity Surface Tension, Particle Size)
- + XAAR-Print-Test
 - standard wave form/ adjusted wave form
 - Jetability (Temperature Level, Frequency, Voltage)
 - Rheology (Resilience, Share Rate, Thixotropie)
 - Printing Reliability (Open Time)

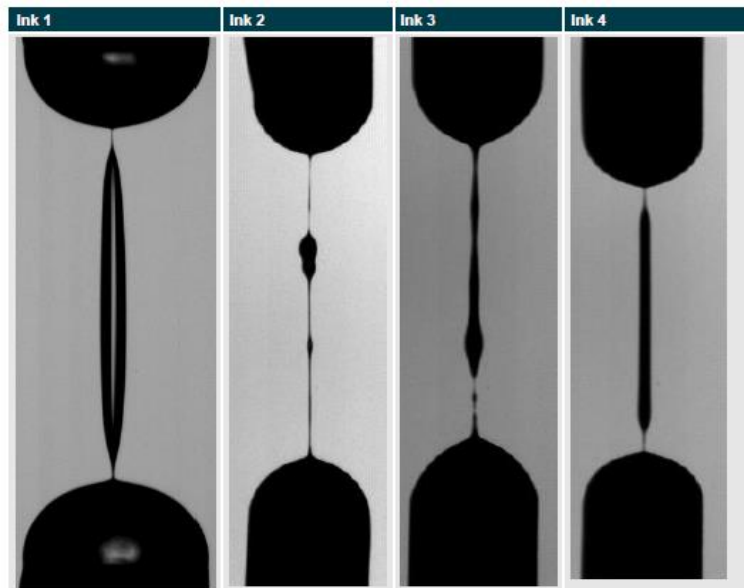


INKJET DEVELOPMENTS

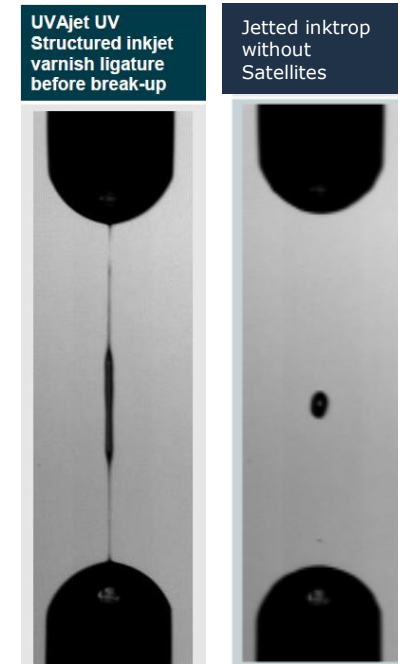
UV-INKS INDUSTRIAL

Ink Evaluation & Printhead-Certification

Jetability– Printing Reliability



- + Ink 1 is Newtonian = in a perfect world
- + Inks 2-3 show ligature profiles likely to produce satellites
- + Ink 4 is "optimum" Viscoelastic = UVAJET D80i HV



INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

Test outcome	Good jetting	May cause Print errors	No drop ejection
Colour code			

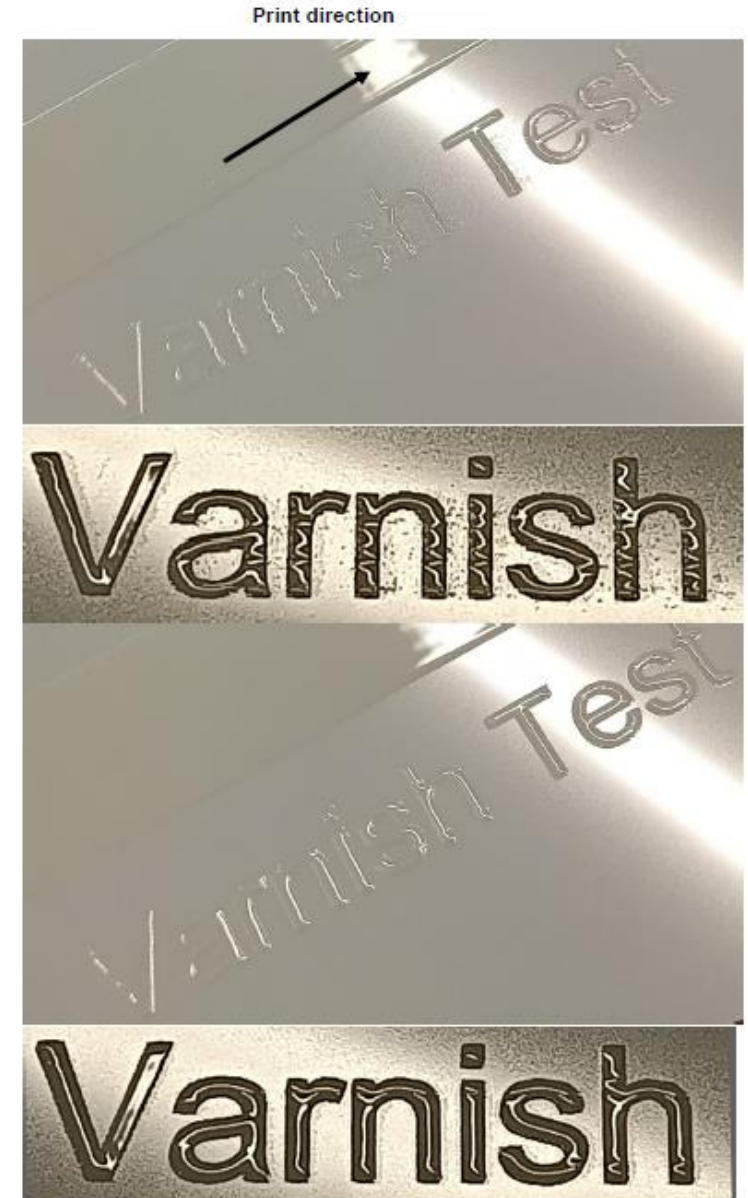
5.1 Xaar Nitrox GS6

Ink	Temperature operating window (Z)	Drop Speed (We)	Newtonian (viscosity index)	Particle Size	Complex rheology elasticity	Trimaster ligature break up	High Viscosity
UVAjet UV Structured inkjet varnish	✓	✓	✓	-	✓	✓	✓



5.2 Xaar Nitrox GS12

Ink	Temperature operating window (Z)	Drop Speed (We)	Newtonian (viscosity index)	Particle Size	Complex rheology elasticity	Trimaster ligature break up	High Viscosity	Z - No Laydown
UVAjet UV Structured inkjet varnish	✓	✓	✓	-	✓	✓	✓	✓



INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

UVAJET L-D580NZ010

Piezo-electric print heads

+ Fuji Dimatix Samba G3L HF

- **Viscosity:** $\approx 5,5\text{mPas}/45^\circ\text{C}$
- **Colours:** CMYK,O,V,W,

- **Access to the market**

- + OEM-Contract Manufacturing
- + OEM-Private-Label
- + High Quantity Business



INKJET DEVELOPMENTS

UV-INKS INDUSTRIAL

UVAJET D80I UHV

- **Piezo-electric print heads**
 - XAAR 1003/12
- **Viscosity:** $\approx 60\text{mPas}/50^\circ\text{C}$
- **Colours:** K, W, V
- **LED + Mercury-Curing**
- **Access to the market**
 - Opacity
 - Productivity
- **White blocking**



Thank you!