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DEGLI STUDI
DI MILANO



**Incontro con gli
studenti del corso di
Laurea "Artificial
Intelligence"**



Business areas

Vision inspection systems



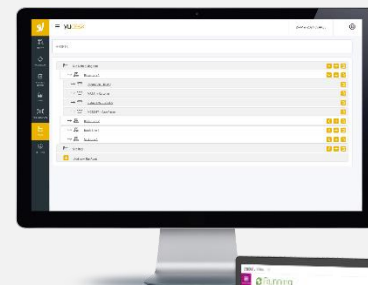
harleblister_
harletray_

Serialization and Aggregation solutions



tracker_

4.0 Pharma Software Suite



yudoo_

Software points of strength and



Over 25 years of experience
100% Life Science focused



Full in-house software development -
Proprietary Algorithms



In-house electronic and
mechanical design



Full stack solution for Track&Trace
and Brand Protection



Wide Experience and Consultancy for
digitalization processes

+ 2000

Lines Managed in the
world

+ 7000

Vision systems
installed worldwide
(+18000 cameras)





Some of our
Best Pharma
Customers

University and High School Co-operations



POLITECNICO
MILANO 1863



**UNIVERSITÀ
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**Politecnico
di Torino**



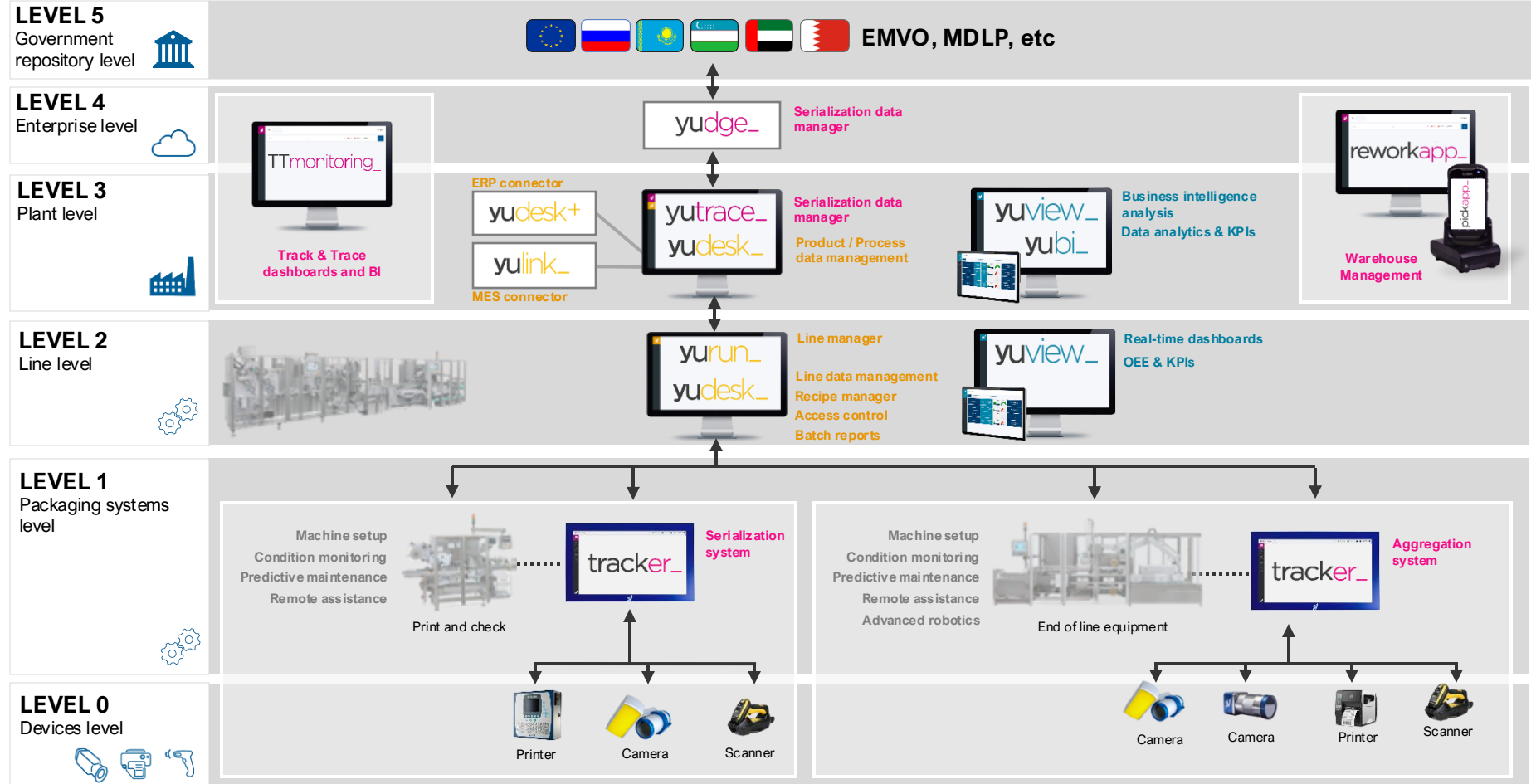
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DI PAVIA**



Serialization and aggregation hierarchy model

(according to ISA 95)

rev.4 2024



Visual inspection on tablets, capsules and blisters



Size



Shape



Color



Integrity

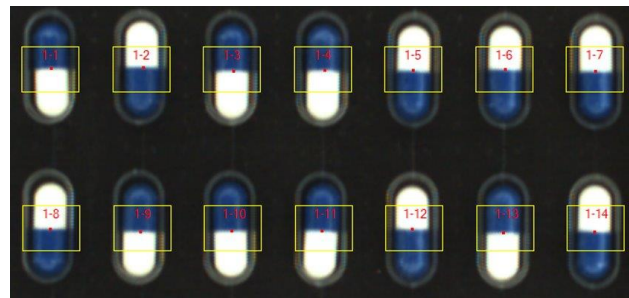
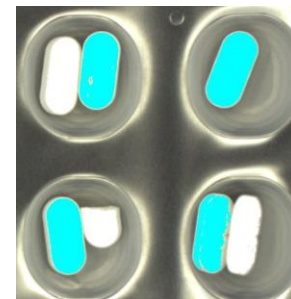
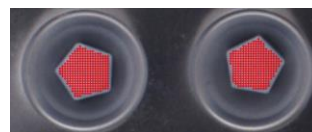
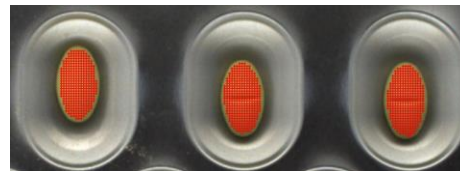


Chipped

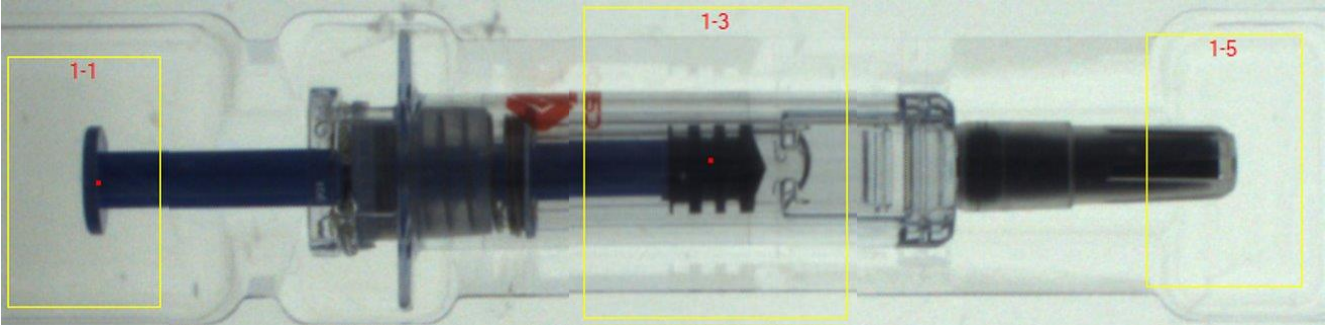


Coating

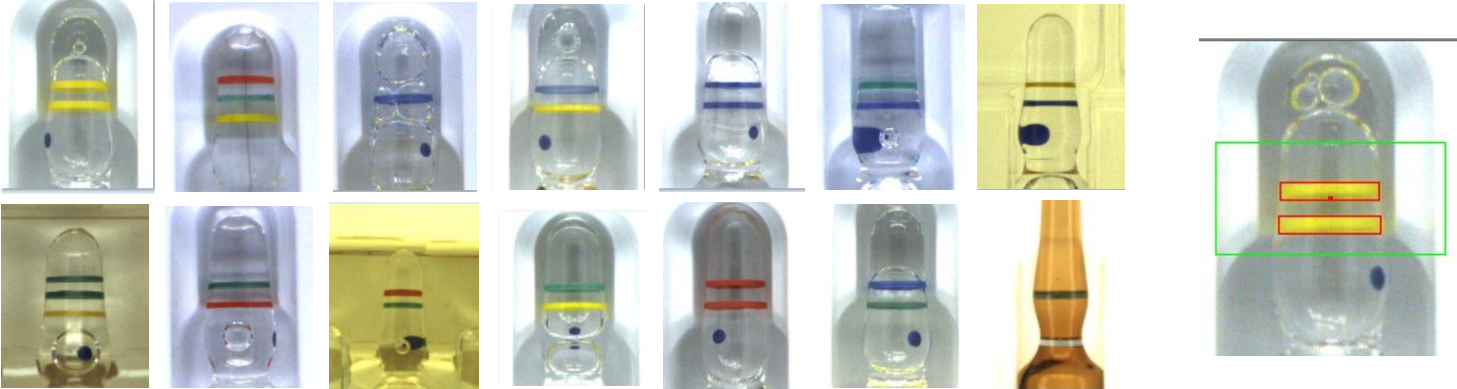
Blister inspection



Multi-part inspection

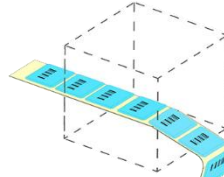


Colored ring inspection

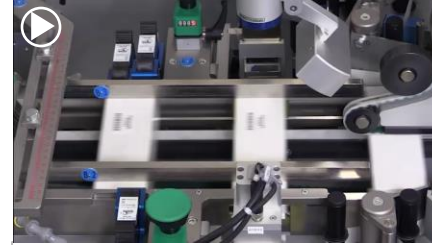


Tracker | Serialization possible configuration on print and labelling machine

Maximum installable cameras configuration is related to OEM machine features



Camera 3
Check of serialized code and data on carton flap (opposite to the operator side)



Camera 4
Check of vignette on carton top

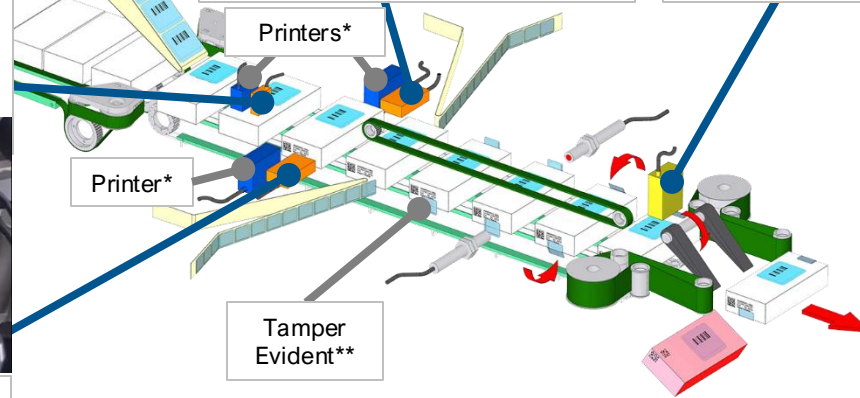
*Tracker manages serialized code and data printing

**Tracker manage automatically decommission of cartons with wrong tamper evident application

Camera 2
Check of serialized code and data on carton top



Camera 1
Check of serialized code and data on carton flap (operator side)



Click on the videos to play



We See The Future | No Magic



ARGO Vision empowers companies with AI.

We develop innovative and high-customizable AI-based solutions to boost your business up. We are expert in [Machine Learning](#) and [Computer Vision](#).

Our AI engine is boosting companies for [Quality Control / Inspection](#) : [AR/VR](#) : [Smart Parking](#) : [Video-Analysis](#) : [Bio-metrics](#) : [Industry](#) & [Big Data](#) solutions.



Numbers matter

15,000+

Sensors using technology we developed

600+

Sensors using our CV engine

20+

Successful projects since 2016

30+

Scientific publications

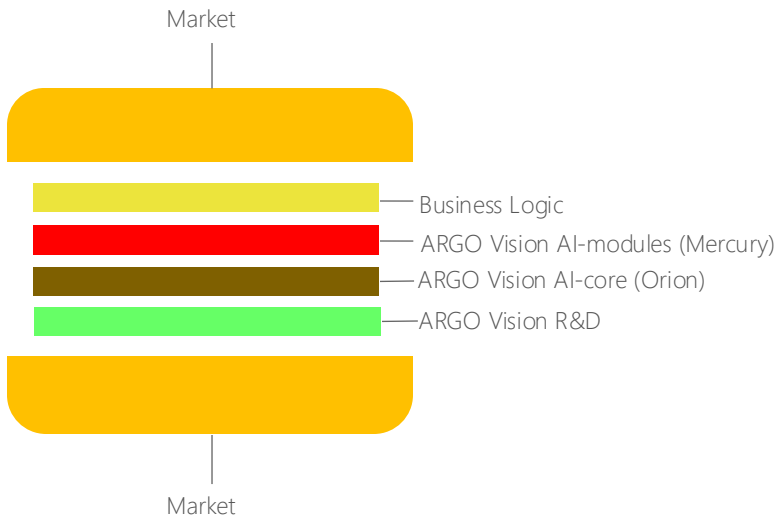
8

People in the R&D team

20+

Training courses

The ARGO «burger»



2016 – 2020:
AR/VR, video
surveillance, automotive,
machine vision, apps, etc.



Pharma via SEA Vision (2021+)



Business Logic: the combination of **one or more algorithms** from the ARGO Vision AI-modules in the application domain. Examples: detecting faces and trigger an alarm, tracking people in a parking, create a 3D of the pills, etc.



ARGO Vision AI-modules: the **combination** of the lower-level primitives lead us to more sophisticated algorithms. These algorithms resolve specific tasks such as detecting stuff, rectify images, classify images, track objects, etc.



ARGO Vision AI-core: the “**distillate**” of the research and prototyping of algorithms makes the AI-core. This distillate is arranged by “**atomic**” primitives aim at creating the upper-level of multiple, and more sophisticated, algorithms.

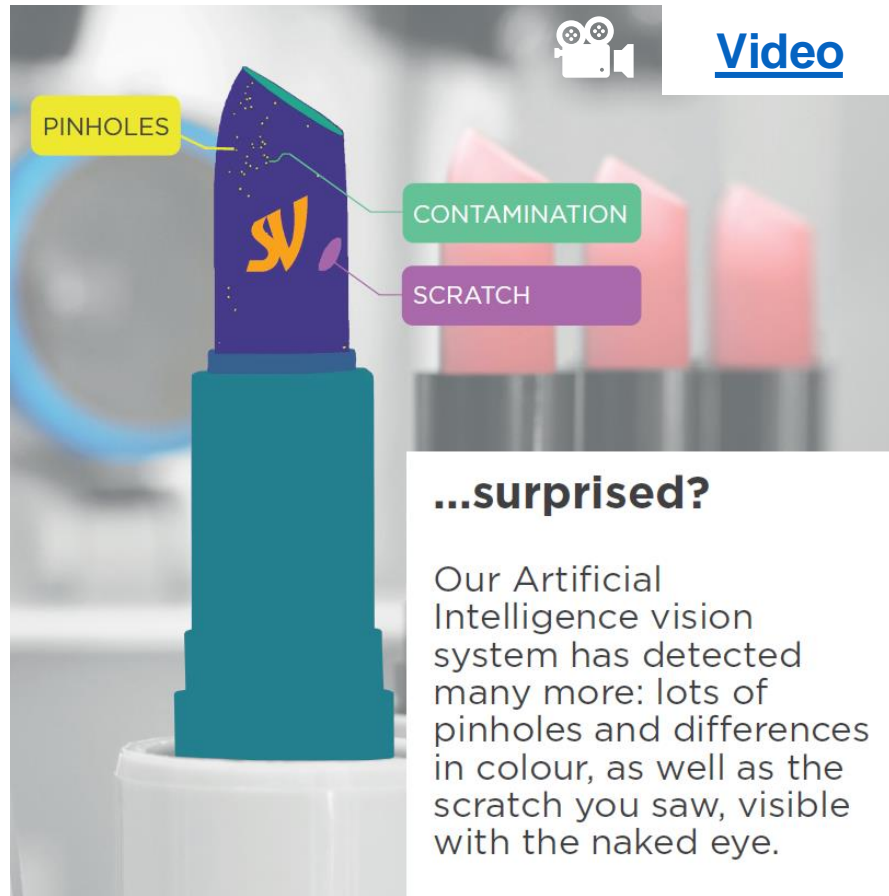


ARGO Vision R&D: a wide framework of research and prototyping of algorithms. **Topics:** Vision, ML, Math, Geometry, Algebra, etc. **Frameworks:** OpenCV, Pytorch, TF, other libs. **Research:** books implementations, papers, blog.



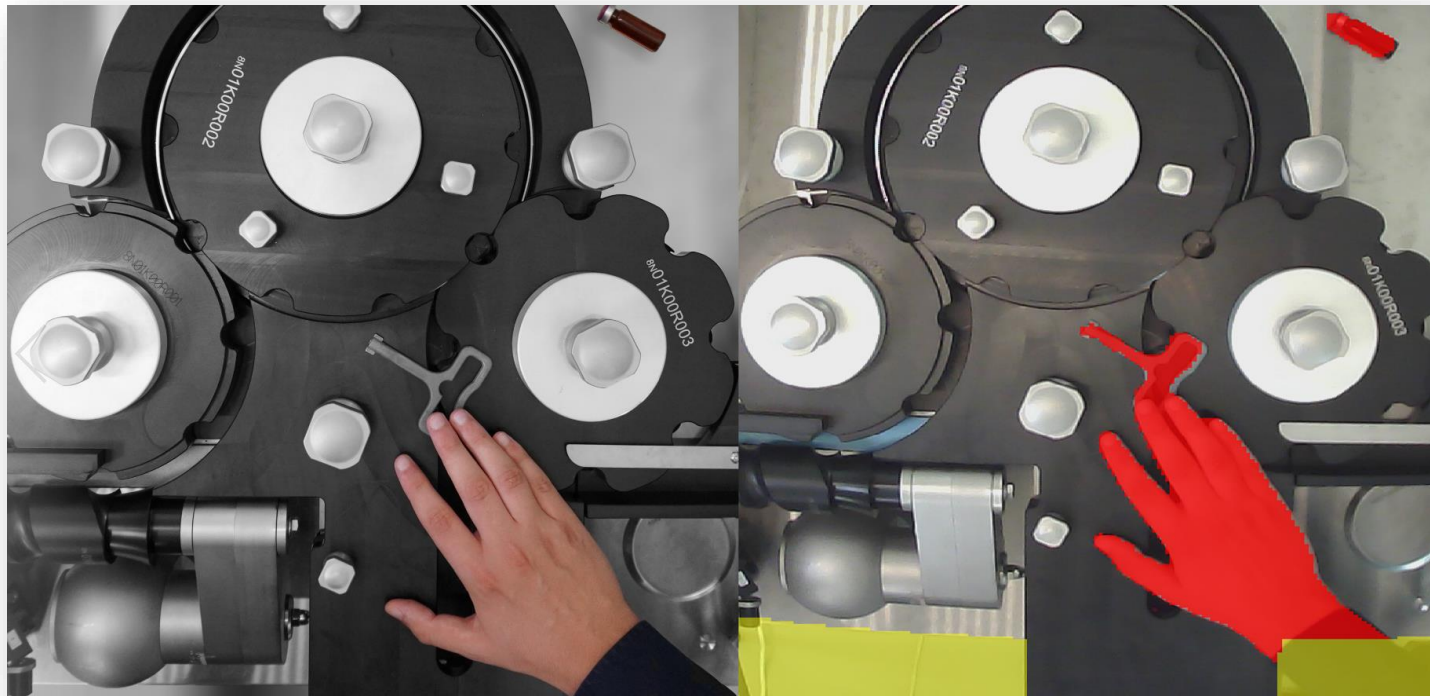


[Video](#)

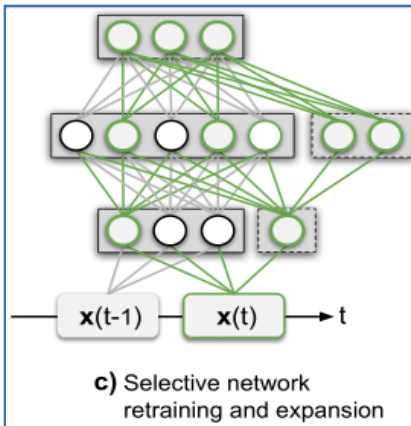


Line Clearance

OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES
OPEN YOUR A-EYES



R&D



Continual Learning

- Challenges:
 - “Training” a deep neural network in secs.
 - Avoiding the catastrophic learning
 - Shorting the time to market



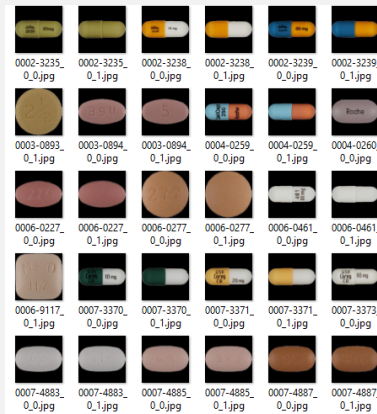
Synthetic, Text-Driven and Generative Dataset

- Challenges:
 - Lack of datasets and variability in defects
 - Anticipating the analysis for new “items” (do not waiting for the real ones)
 - Shorting the time to market



Event Cameras + neural HW

- Challenges:
 - Pushing the analysis to “Kframes”
 - Facing new commercial opportunities
 - Developing the “new” AI on events



Multi Class. / Segmentation

- Challenges:
 - Segmentation and classification mostly unsupervised.
 - Handling “never seen before” pills
 - Handling never seen defects

Contact

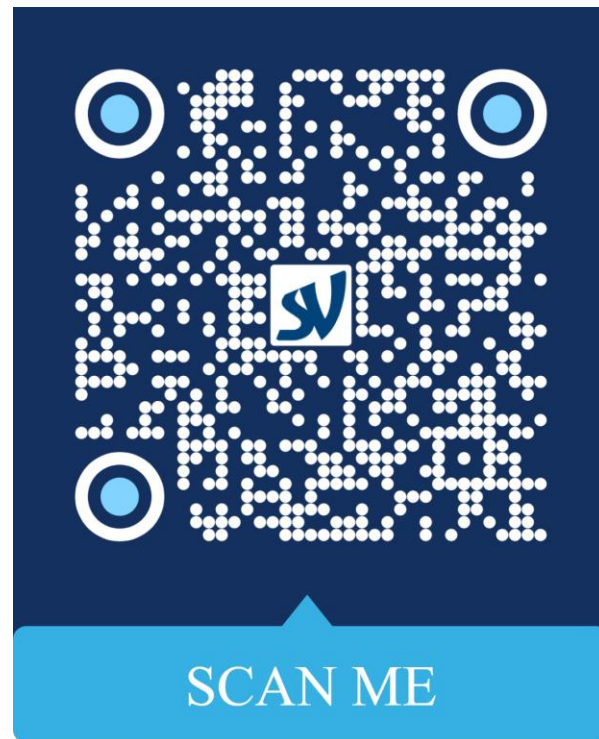
Applications:

<https://seavision-group.com/careers/>

For further info:

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Talent Vision 24

Laura Formenti

Comica & Attrice



Filippo Capobianco

Performer & Poeta



Modera **Filippo Poletti** giornalista e LinkedIn Top Voice Italia

12 novembre 2024 · H 18

SEA Vision

 **Via Claudio Treves 9/E, Pavia**

