



Convention GCL - Nancy

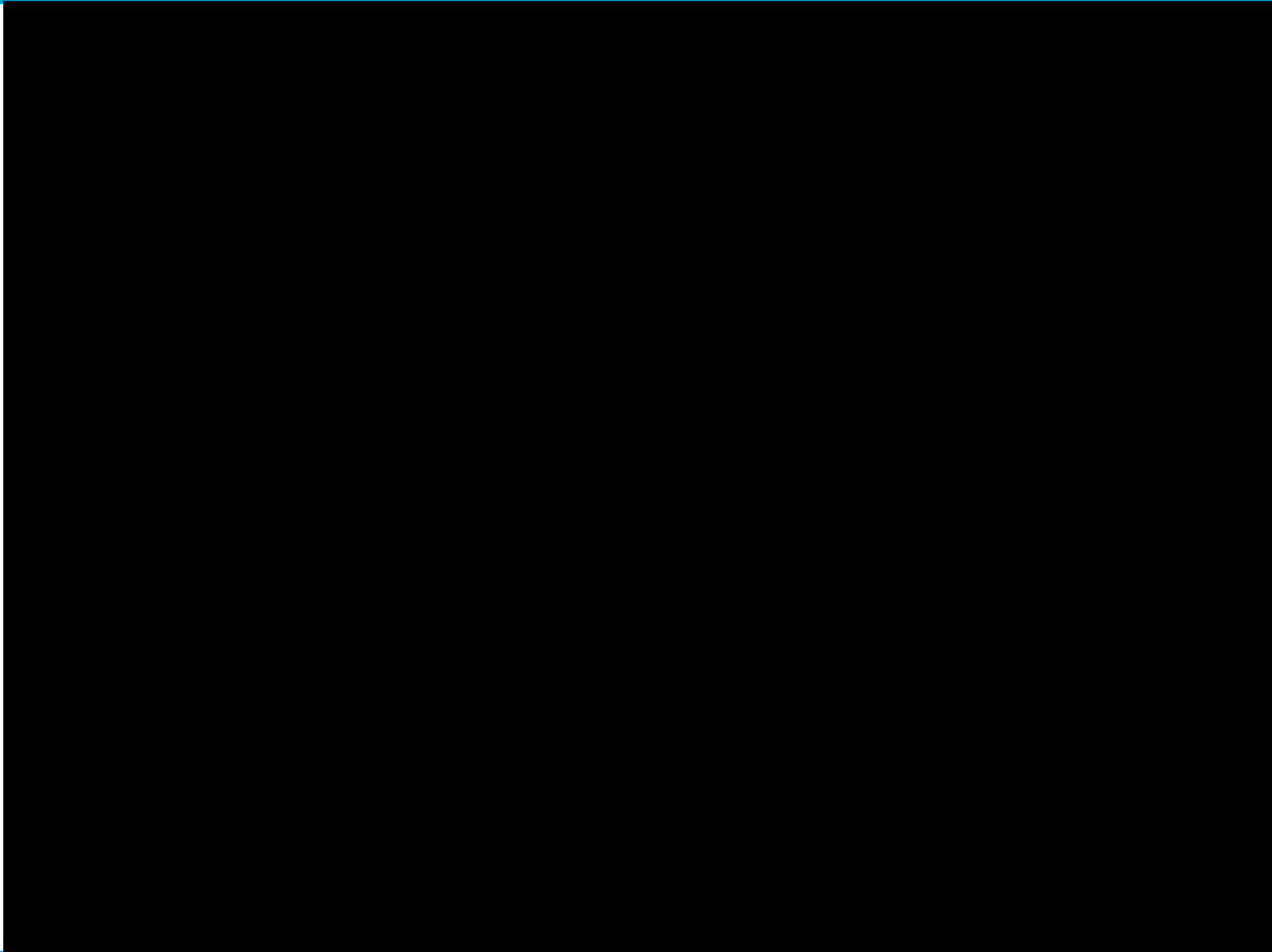
Marco Giovannini
Chairman Guala Closures Group

June 2015

1. COMPANY OVERVIEW
2. GENERAL INTRO ON RIGID PACKAGING INDUSTRY
3. SUSTAINABILITY GCL ROAD MAP
4. SUSTAINABLE PRODUCT
5. SUSTAINABLE PROCESS
6. DOWN TO THE ROAD



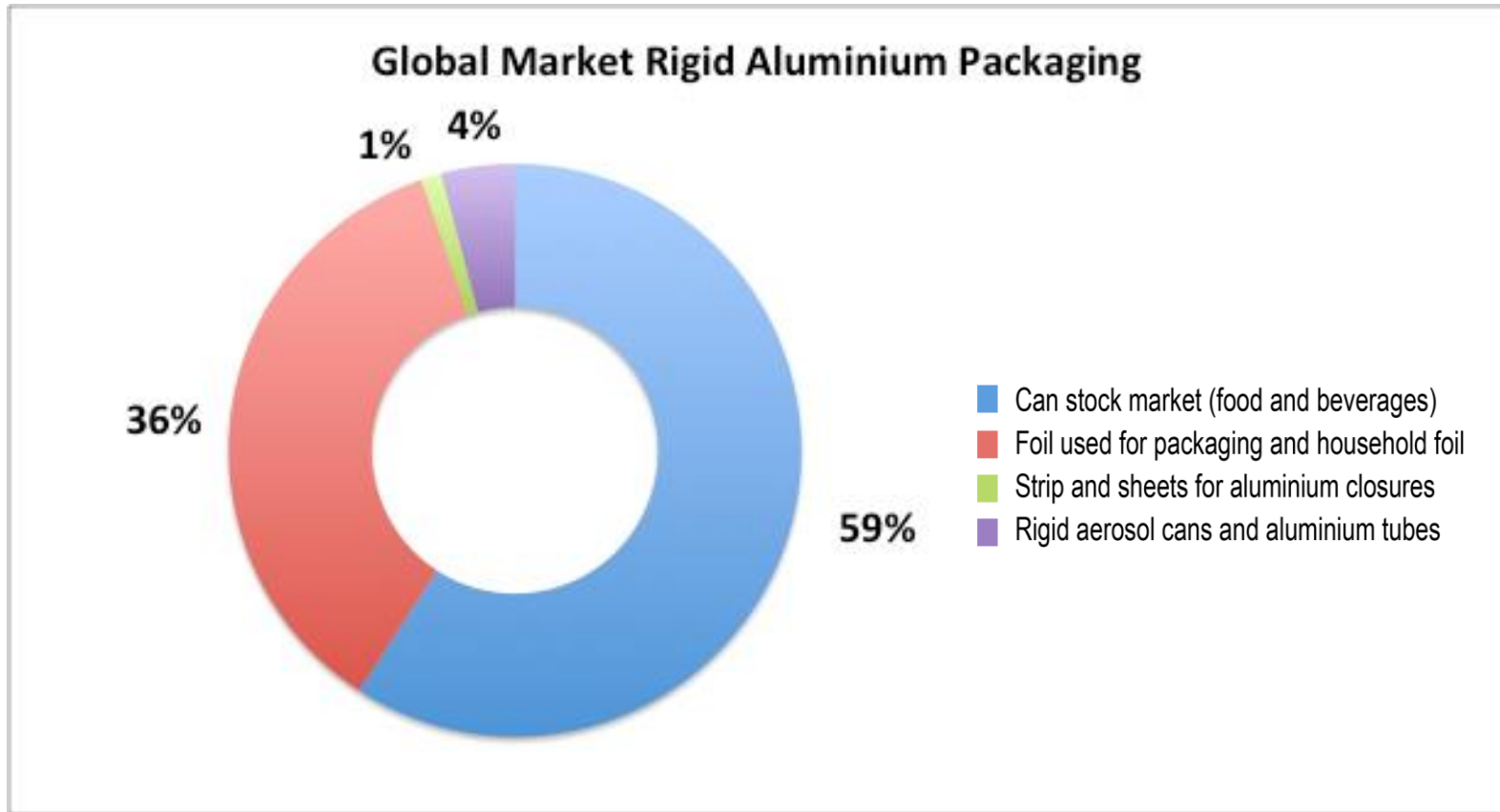
1. Company Overview



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2. General Intro on rigid Packaging Industry

Overview on rigid packaging industry market



% On a total volume of 8.450 Kton

Sources CRU, EAFA and EAA

2. General Intro on rigid Packaging Industry

↻ Main issues for rigid packaging industry

Carbon footprint: working on

- *Raw Material*
- *Internal/External decoration*
- *Process*
- *Transport*



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2. General Intro on rigid Packaging Industry

4 reasons for being Sustainable – GCL guidelines

- *Philosophical approach*
- *Competitiveness*
- *Anticipate UE rules*
- *Client expectations*



3. Sustainability Guala Closures Road Map

🔄 2011-2015 Sustainability Strategy

- *Management commitment*
- *Italy kick-off Country*



3. Sustainability Guala Closures Road Map

2011-2015 Sustainability Strategy

- *Annual Sustainability Report*
- *Sustainability Best Practices*



3. Sustainability Guala Closures Road Map

Sustainability KPIs

- Inside

Energy Consumption, Raw materials,
Water consumption, Waste, Transport

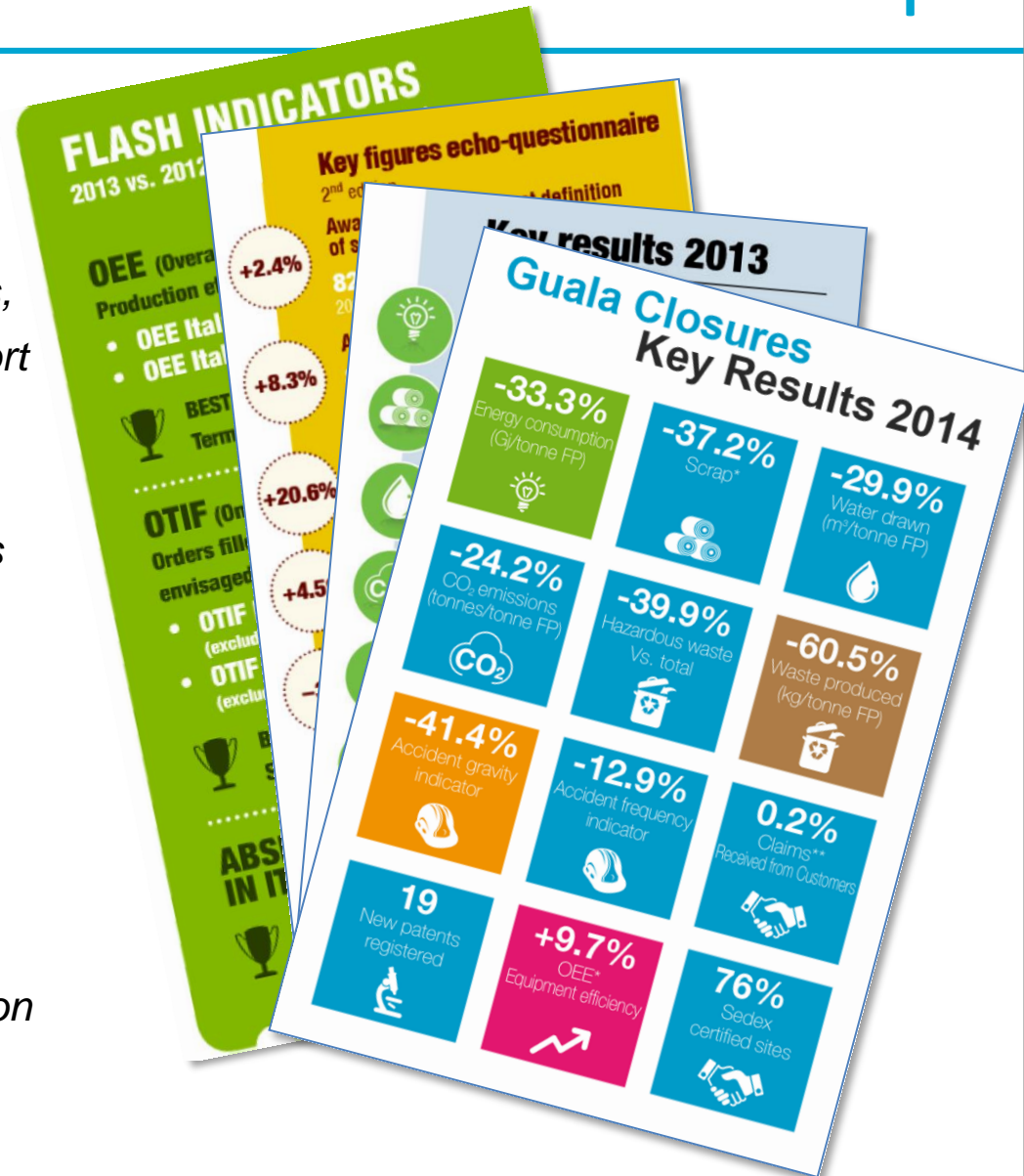


Health&Safety, Training&Continuous
Improvement, Diversity, Production
Efficiency, Innovation



- Outside

GHG Emission, Customer Satisfaction



3. Sustainability Guala Closures Road Map

Eco-Innovation on:

- *Products*
- *Process*



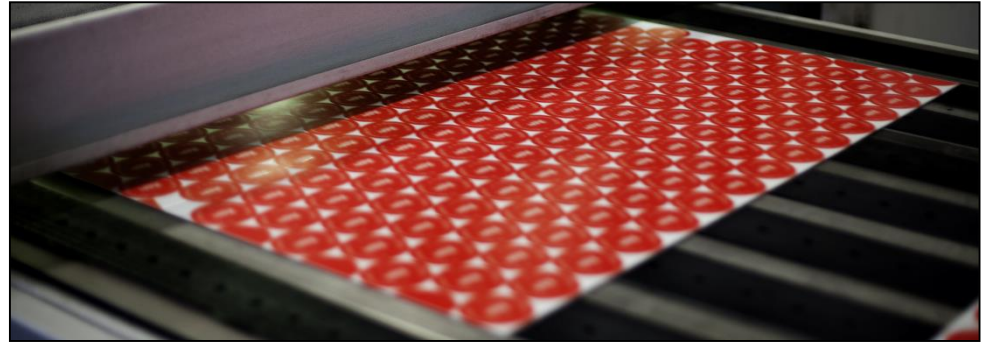
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4. Sustainable Product

Aluminium

Downgauging&Scraps

*Decoration: No Varnish
UV Printing*



Plastic

Weight reduction

Injection Cycle time improvement

Decoration: Bi-material



Recycle

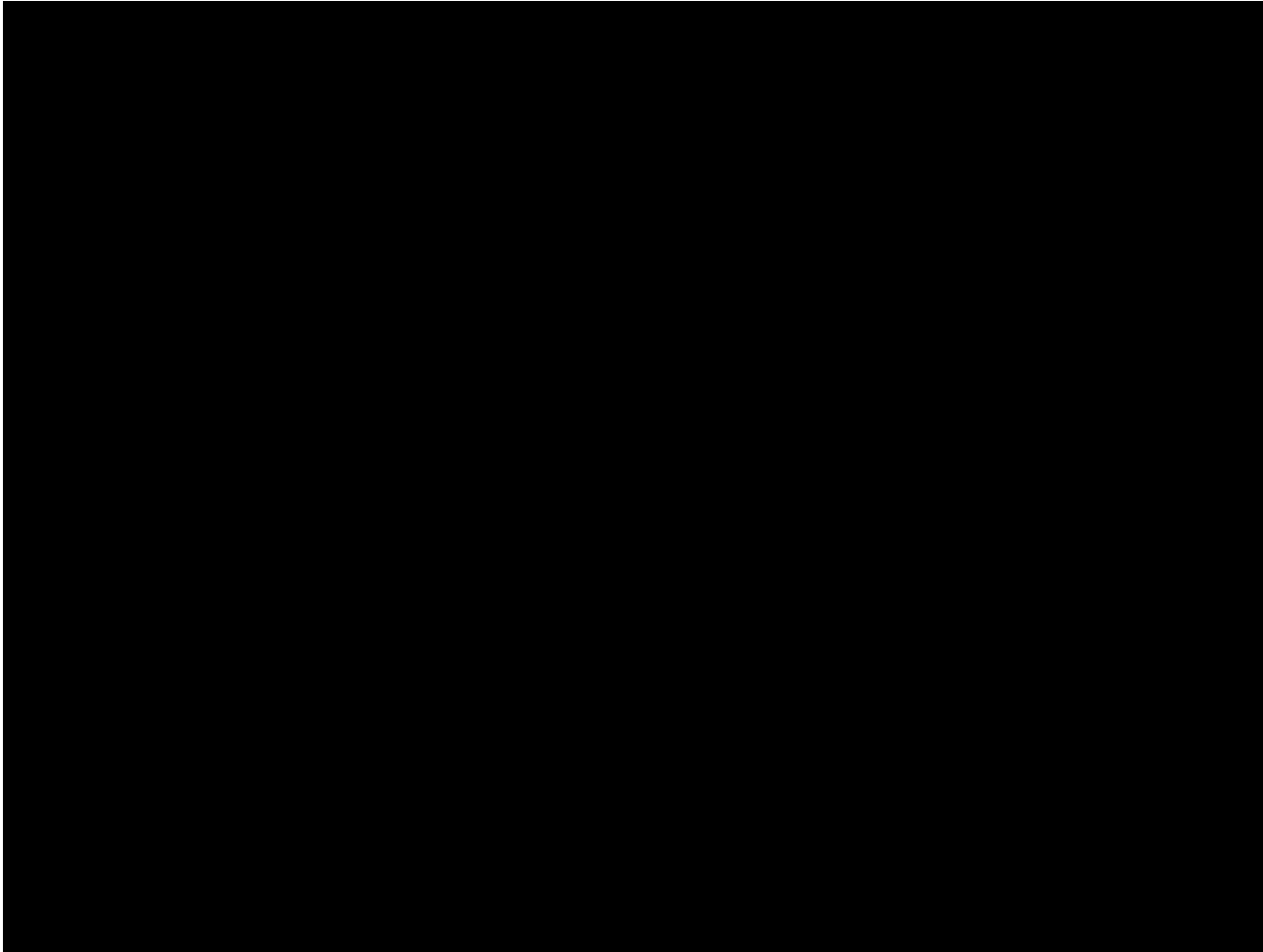
Monomaterial plastic product

Aluminium Green Cap



5. Sustainable Process

➤ From traditional Metallization Process...

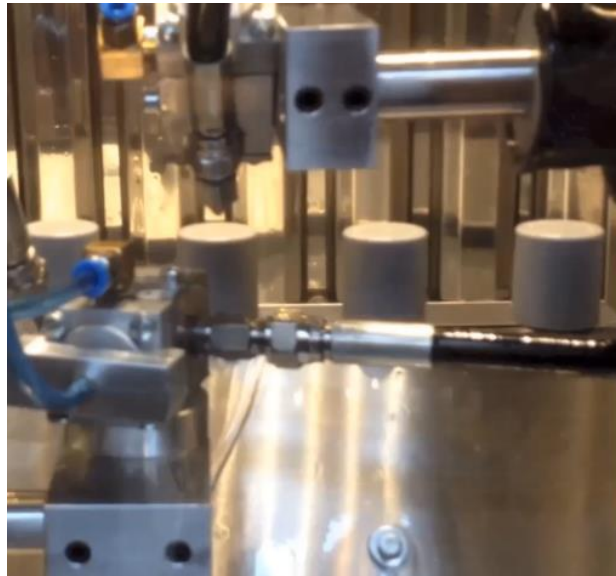


5. Sustainable Process

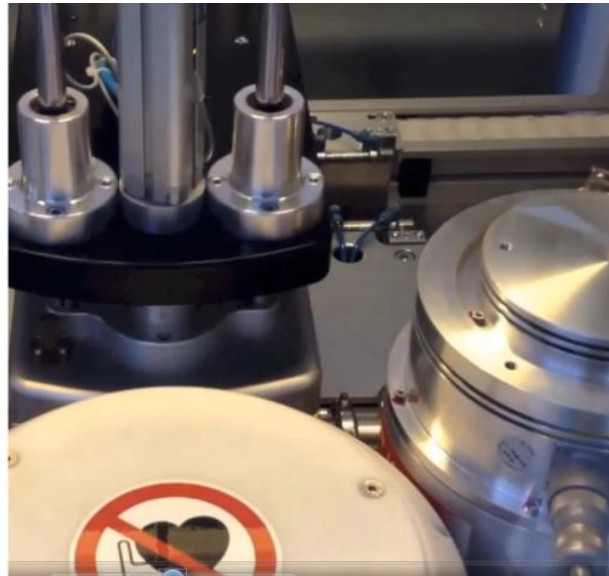


➤ ... to alternative Metallization Process

PHISICAL VAPOUR DEPOSITION => SPUTTERING



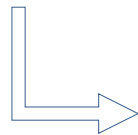
UV SPRAY COATING



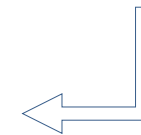
METALLIZATION



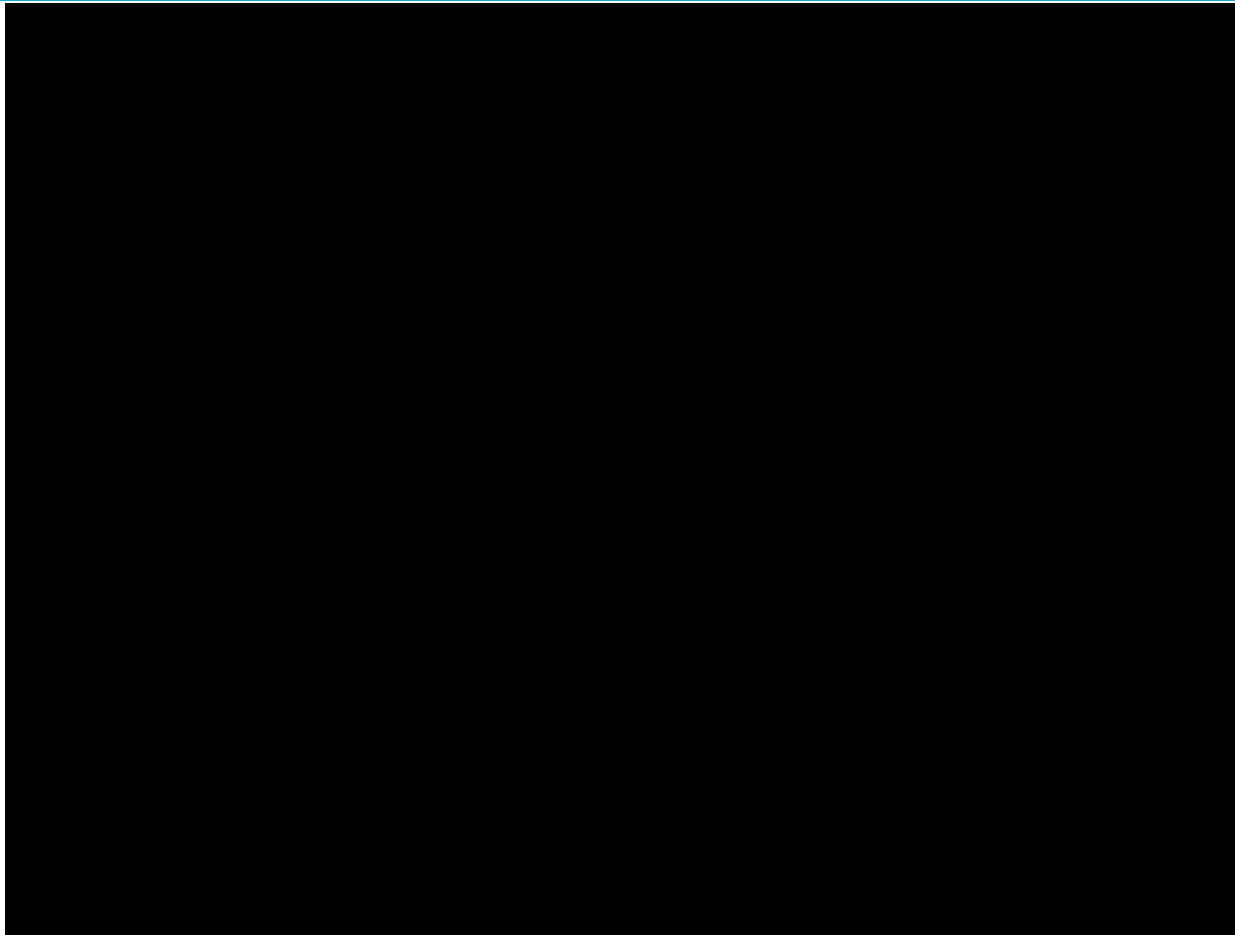
UV TOP COATING



- *Volatile Organic Component reduction*
- *Energy use reduction*



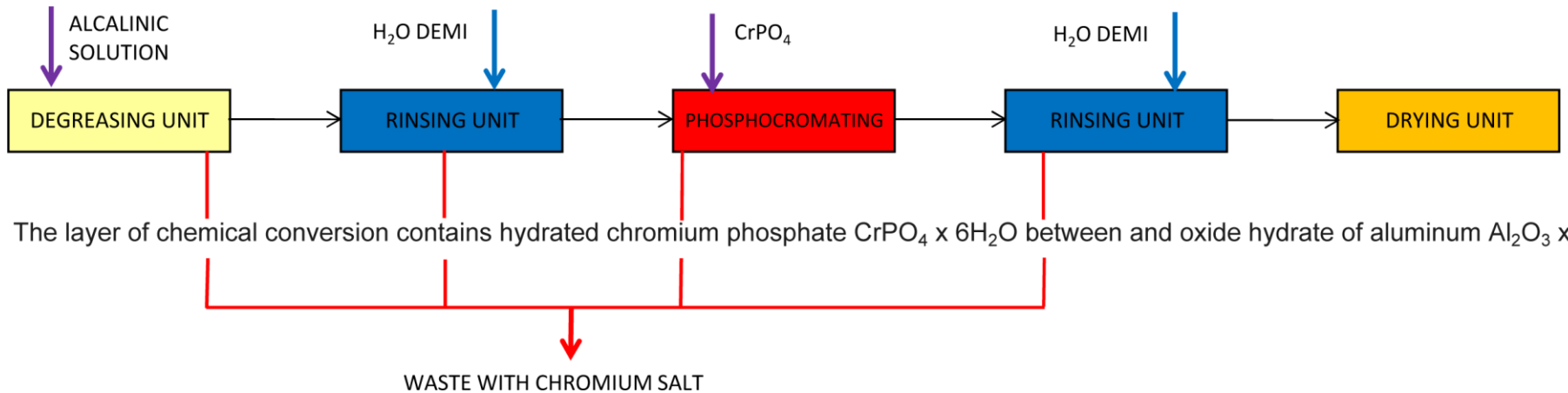
5. Sustainable Process



Impact on hazardous waste, data comparison versus traditional metallization process: **- 34%**

5. Sustainable Process

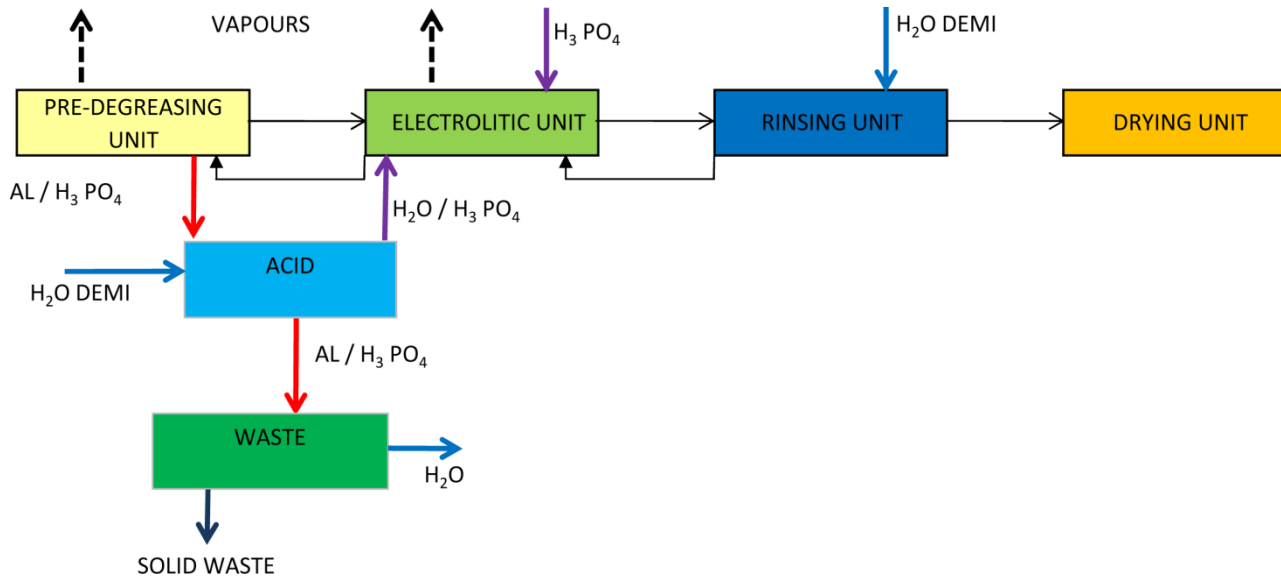
From standard degreasing process for aluminum...



The layer of chemical conversion contains hydrated chromium phosphate $\text{CrPO}_4 \times 6\text{H}_2\text{O}$ between and oxide hydrate of aluminum $\text{Al}_2\text{O}_3 \times 3\text{H}_2\text{O}$.

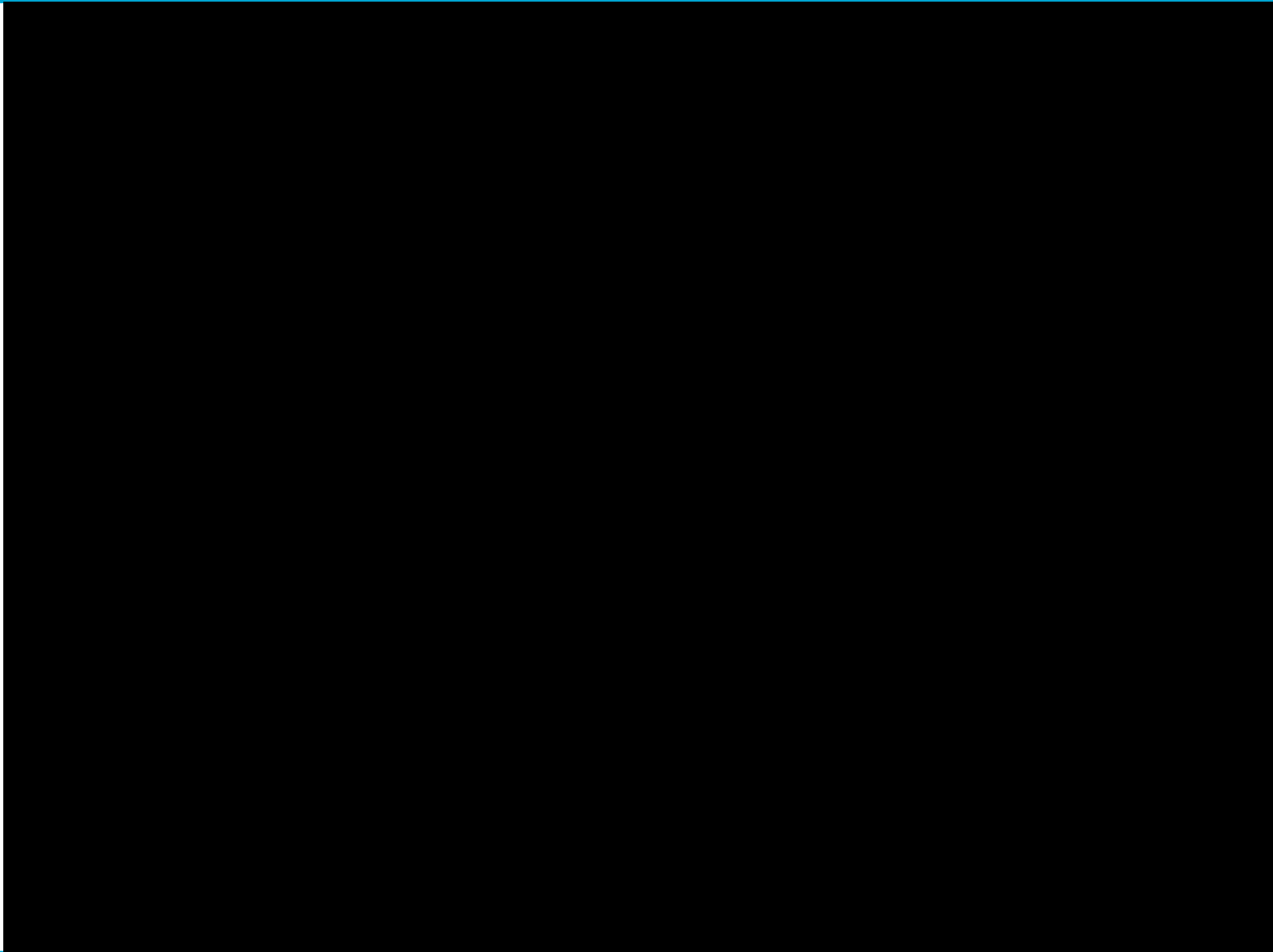
5. Sustainable Process

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5. Sustainable Process



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5. Sustainable Process



Impact on

- *energy consumption,*
- *water consumption,*
- *hazardous waste*



DATA COMPARISON	STD DEGREASING PROCESS	MAGENTA LINE	REDUCTION %
Electricity [kWh/ton of total production]	173	54	-69%
Water consumption [m ³ /ton of total production]	0.92	0.42	-55%
Waste [kg/ton of total production]	530	98	-81%
Hazardous Waste [kg/ton of total production]	477	14	-97%

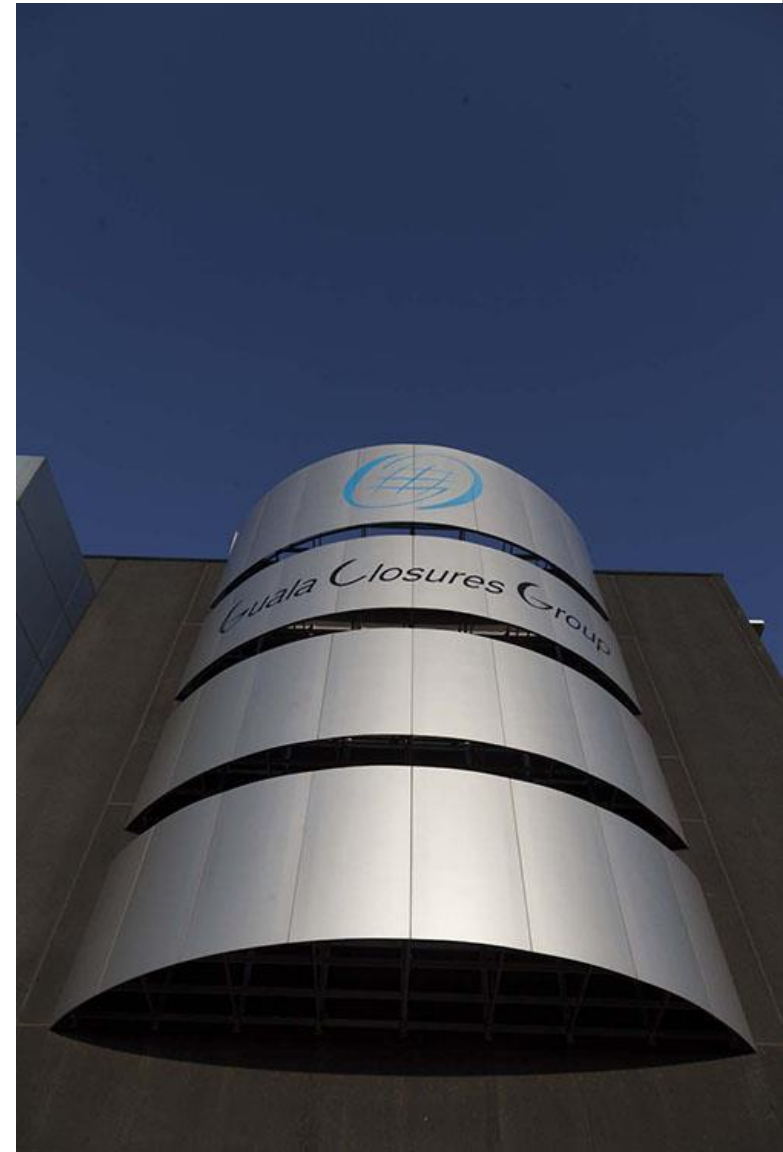
6. Down to the Road

2016 -2020 (GCL)

 Target:

How to deploy the Italian Road Map
to worldwide GCL

- *Worldwide Carbon Footprint*
- *Worldwide Sustainability Indicators and Objectives*



6. Down to the Road

↻ Next Steps: 2 main Key issues (Packaging Industry)

- *How to apply Sustainability regulations outside UE?*
- *How to stimulate/award “Virtuous” producers vs others?*



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Thanks!