

Nordic Façade Forum

*Carbon-neutral Facades.
Sustainable construction & circularity*



*Robin Nestenborg
Head of Facade Projects
Northern Europe*

01  5 min

*Our beginning and
our history*

03  5 min

Case studies

02  10 min

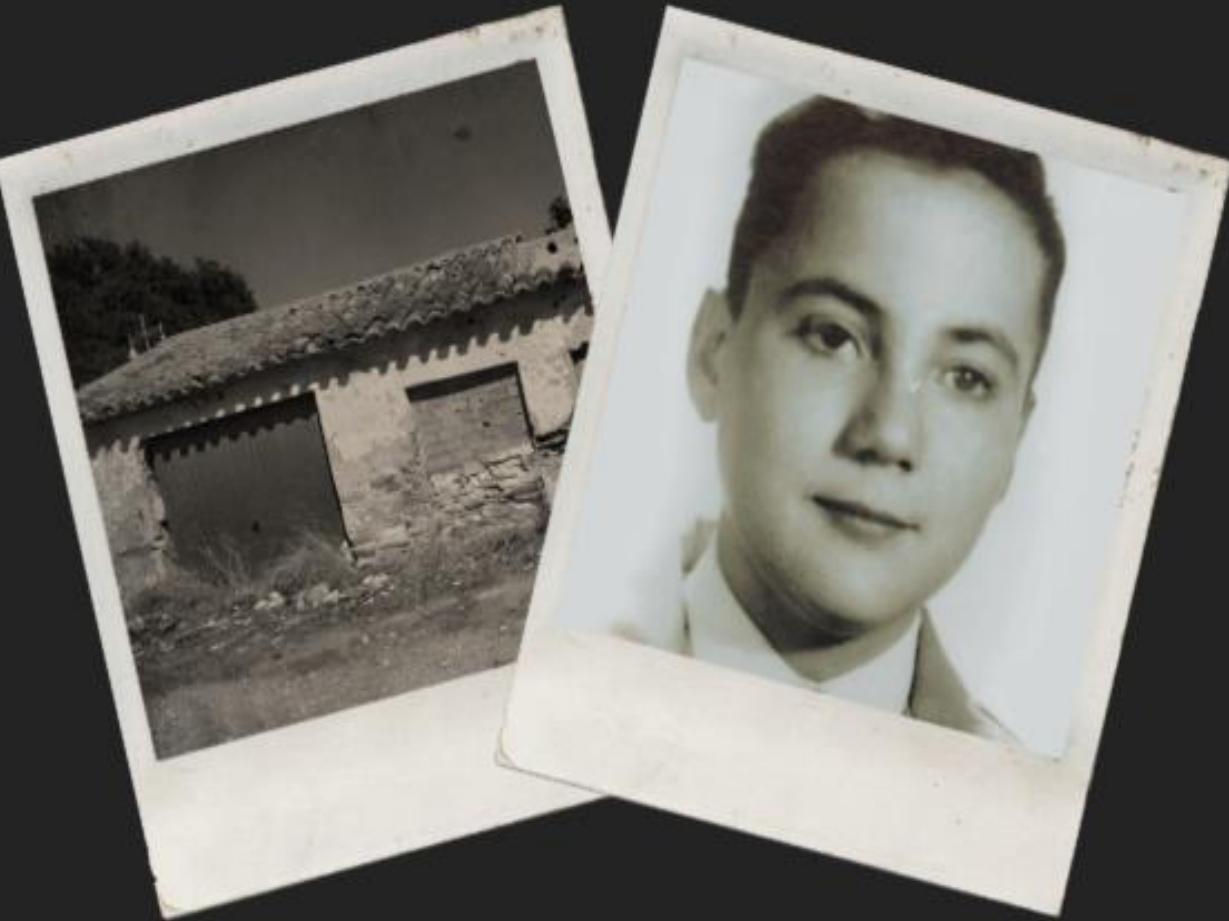
*Dekton and
our sustainable
processes*

04  5 min

Q&A

*Content of
presentation*

FROM **1945** TO **1964**



Eduardo Martínez Cosentino and Eduarda Justo

Cosentino's origins date back to a small town in southern Spain called Macael and a modest family-owned marble manufacturing company founded by Italian immigrants in 1945. The founders of this small workshop were Eduardo Cosentino and Eduarda Justo. Little did they know that this would be the seed of the multinational company we know today.



FROM 1965 TO 1974



Purchase of the first marble quarry in Macael

Thanks to hard work and the expansion of the business, in 1965 the first marble quarry in Macael was purchased, called "Perro Muerto", which, due to the difficulties of the times, led to the first bankruptcy of the business.





• 2010

• 1980

• 2005

HARMOLES COSENTINO

NO 5

HARMOLES COSENTINO

TLF. 441



Welcome

Park Industrial Cosentino

COSENTINO®

Industrial Park
Cosentino HQ (2.293.733 m2).

**12 Elaboration Workshops in
the USA**

**Born 1979 as
Cosentino
Marbles
126
Cosentino
Centers**

6.000 workers

31 Cosentino City

5 brands today

4 Cosentino Hubs

**8 Production factories
(7 Almeria, Spain; 1
Vitoria, Brazil)**

Turn over (2023) 1570 M€



Dekton®

Manufacturing

Igneous rock is naturally formed with pressure from the surface and heat from the Earth's core.

Ultracompact surfacing features sintering, a manufacturing process that employs an accelerated version of the metamorphic process where minerals are exposed to extreme pressure and high temperature causing a profound physical and chemical transformation.

We are essentially speeding up the metamorphic process.

DEKTON®

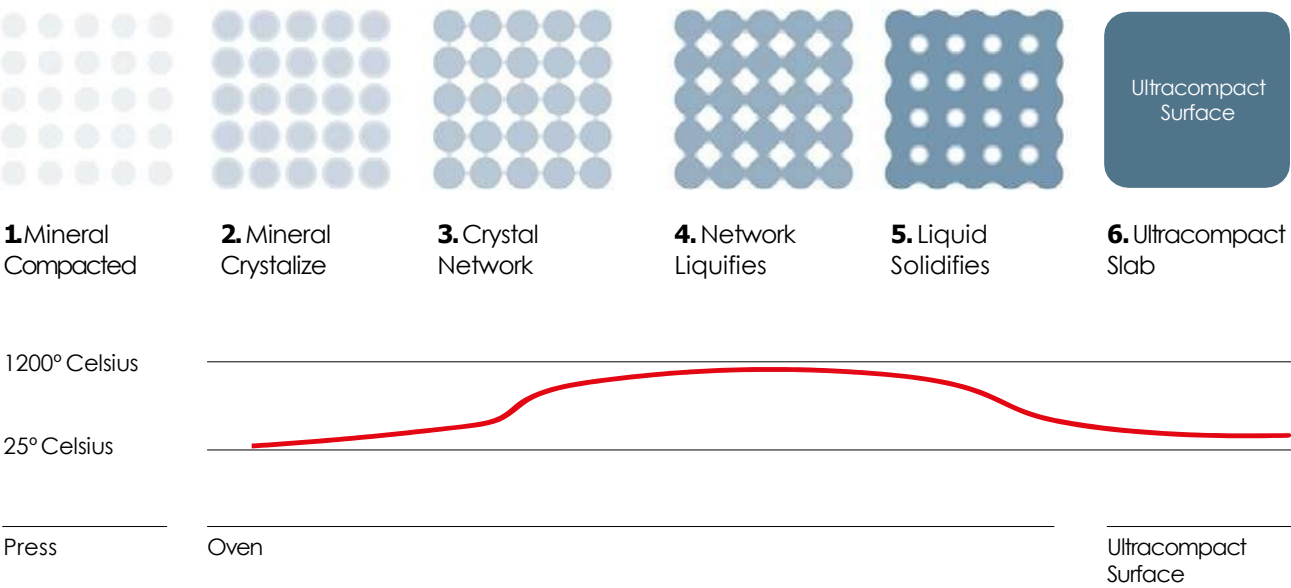


Dekton® Manufacturing

Compaction using a unique press made specifically for the manufacturing of Dekton ultracompact panels.

- Three Production lines.
- 4,000 slabs a day (approx 20,000 sqm)
- Panels are pressed at 25,000 cubic to achieve nearly 0 porosity.
- The kiln is about 200 meters long.
- Temperature reaches approximately 1,250° Celsius (2,300° Fahrenheit).
- Total resonance time depends on the thickness of the slab (around 4 hours).

Sinterisation Process



Technical features that make Dekton unique

Material strengths



Dekton has a series of technical features that make it the perfect material for architectural projects focused on design, durability and sustainability.

DURABILITY - High UV resistance

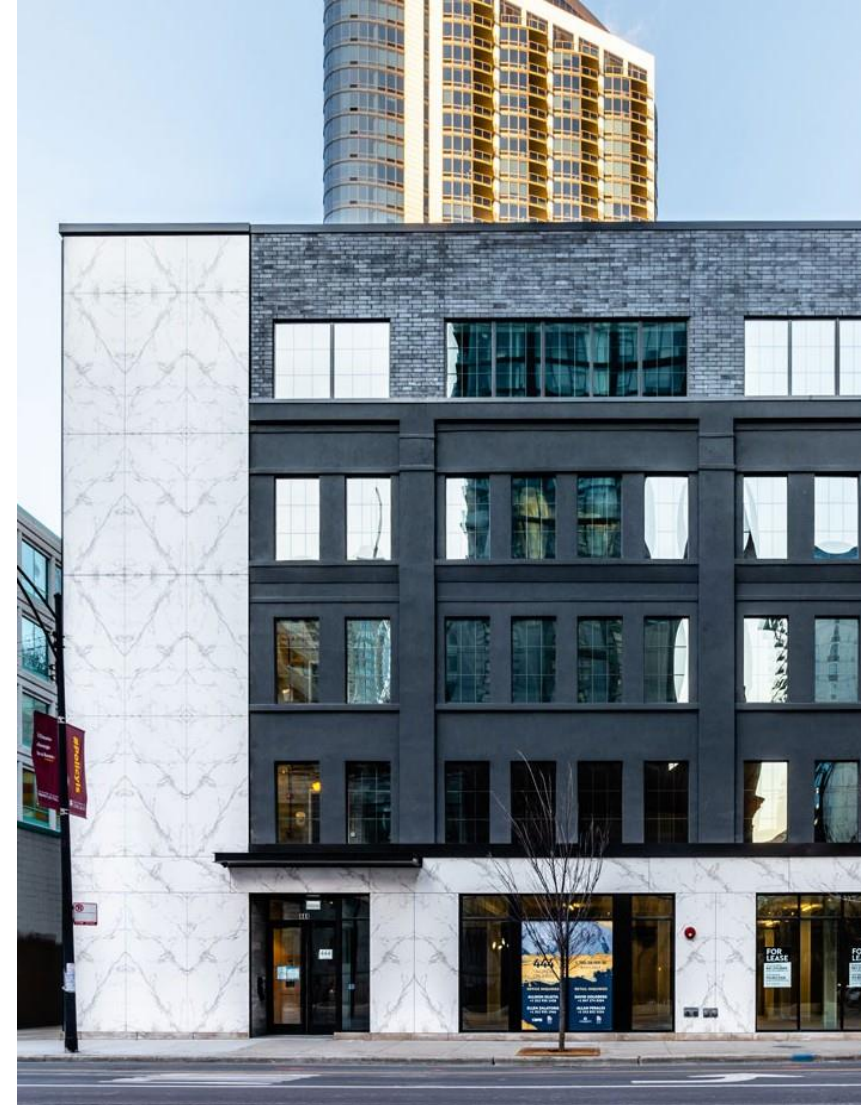
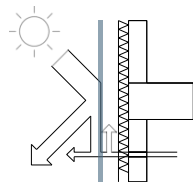
Cosentino's ultra-compact surface is highly resistant to ultraviolet (UV) rays and its colour does not fade over time, making it the perfect choice for both indoor and outdoor applications.

STABILITY - Mechanical resistance

Dekton has a flexural strength of $\geq 45\text{N/m}^2$. Therefore, it is the best choice compared to ceramic materials, such as extruded ceramics (A1b) or dry pressing ceramics (B1a), which have values up to twice as low.

NON – COMBUSTIBILITY A2 s1 d0

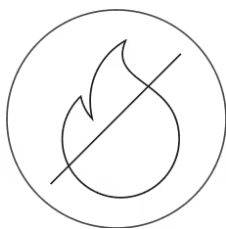
Dekton is a surface with high resistance to scratches. This feature is crucial for high traffic flooring and exposed areas in the lower parts of the façade.



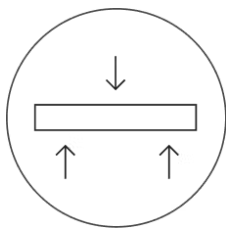
Chicago 444 – United States - 235m² of Dekton Aura
15 Bookmatch cladding

Dekton Protect™

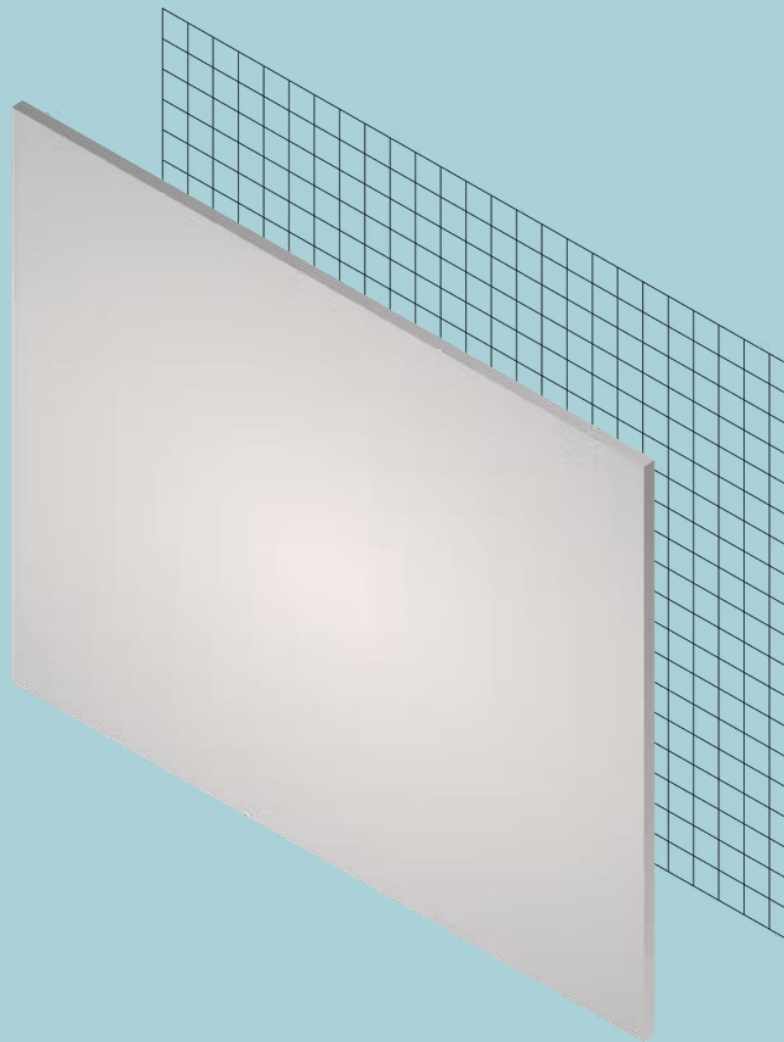
Protek is a reinforcing mesh on the back face of Dekton® developed by Cosentino especially for ventilated façade applications to prevent falls due to breakage.



*A2 s1 d0 reaction
to fire (according
to EN 13501).*

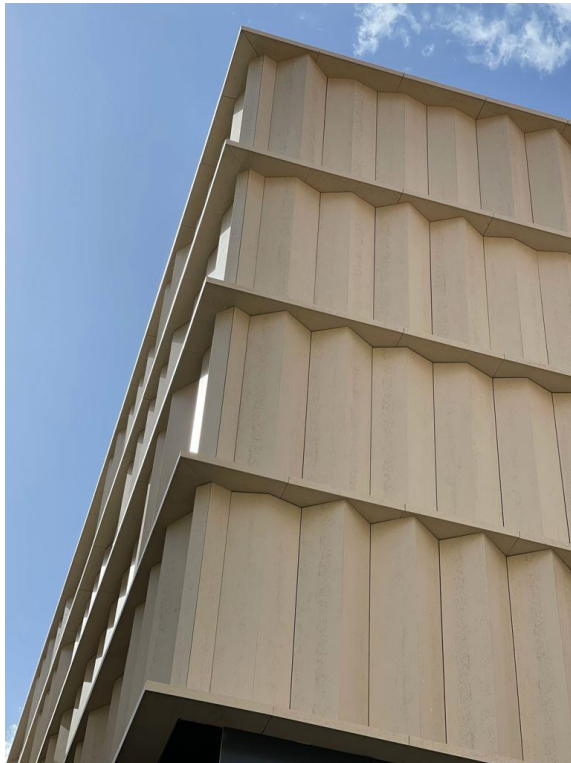


*Greater safety
against impacts,
retaining broken
pieces.*



A versatile architectural surface designed for facades

Design strengths



Dekton Edora 8mm Roquetas Museum (Almeria)

Big slab format

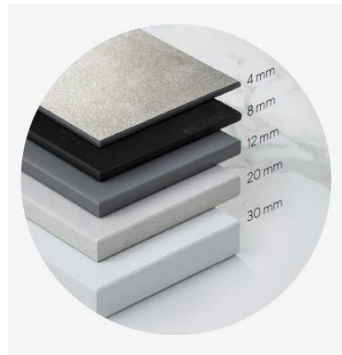
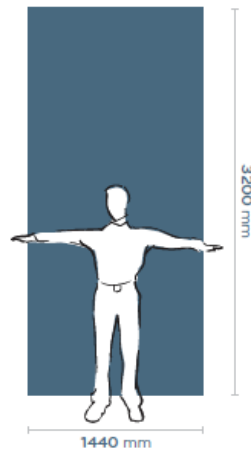
Dekton's manufacturing in standar slab 3.200 x 1.440 mm. and jumbo slab 3300 x 1630 with design freedom for architect to use full slab or an open design layout looking for a good yield of material.

Multiple thickness

Dekton is available in 4,8,12 and 20 mm. To chose best option and system depending on Project features.


Colour and Texture customization

In addition to standard colour chart there is Dekton ID option to customize Dekton panel and look for texture and aesthetic that fits into project .




Housing Aguas Ferreas Lugo – 3.000m2 of Dekton Edora 8 mm.

Cosentino Industrial Park Cantoria, Almería


 Zero Water Discharge into watercourses or the sea. 9 industrial wastewater treatment plants

 Waste Disposal Point


 Self-consumption Photovoltaic Plant

 Automated Logistics Warehouse

 Use of 100% renewable electricity

 Energy efficiency and heat recovery systems in kilns

 Dekton. Waste used as new raw material

 Waste treatment and recovery plant (CoMA)

 Photovoltaic Plant, self-consumption roofs

 ERAR. Wastewater Reclamation Plant

2023

Investment in environmental and health and safety assets

€29,4 million

Cantoria, Spain

163,2K\$

USA and Canada

Brazil

-

Expenditure on environmental control and improvement

€13,5 million

1,82 M\$

125K\$

Investment in R&D&I

€21,7 million

-

-

 Efficient Production

 Circular Economy

 Decarbonisation



Efficiency

Our sources of electrical energy make us proud



In our manufacturing process, 100% of the electrical energy used in Cantoria (Spain) and Brazil comes from certified renewable sources with a Guarantee of Origin (GoO).

But we want to go further than that. For this reason, in 2023 we started up our Solar Plant, one of the largest self-consumption photovoltaic plants in Europe. In addition, we are using the roofs of the production plants to increase our self-consumption capacity.

Most significant energy efficiency projects:

- Solar photovoltaic facilities at locations other than Cantoria
- Heat recovery at Dekton
- Fuel optimisation of Silestone® RTOs (Regenerative Thermal Oxidizers)
- Installation of high-efficiency electric motors.



66,000 solar panels.
Over 20 MW peak power. 36,500 MWh per year.



Over an area of **more than 40 hectares.**



We generate **20% of our current consumption.**



This is equivalent to the **annual electricity consumption of 73,000 households in Spain.**

Self-consumption
Electrical Energy %

2021	2022	2023	2025 goals
0%	2%	20%	29%

Efficiency

We make the most of every drop of water, as if it were the last



Our technological capacity enables us to recycle and recirculate water, over and over again, thus reducing our water footprint.

99% RECYCLED WATER AND ZERO DISCHARGE

Water belongs to everyone. We don't waste a drop. In accordance with our **Zero Discharge policy**, we recover water and reuse it in our production processes or in the irrigation of green areas.

In 2023, we inaugurated the Wastewater Regeneration Plant (ERAR), which has allowed us to achieve water circularity in Cantoria. With a capacity to regenerate 600,000 m³ of water per year.



We treat and recirculate more than **80,000 m³** of water per day.



This is enough to irrigate **1,500 soccer fields every day.**



Or to supply a city of **400,000 people.**

Kallebäcks Terrasser
Gothenburg

COSENTINO

- Dekton ID 12mm
- 12 000 sqm.



Kallebäcks Terrasser
Gothenburg

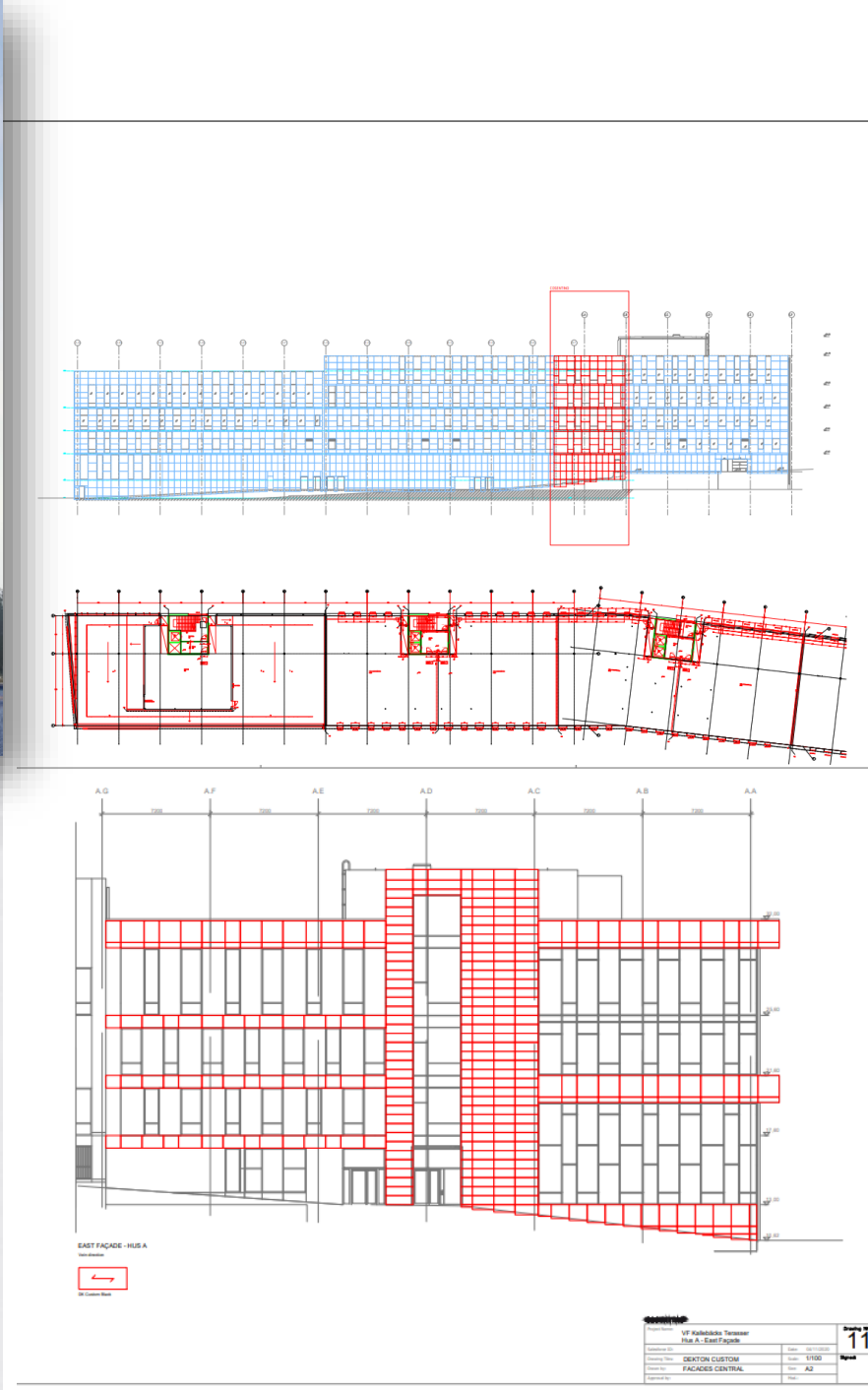
COSENTINO®

- Dekton ID 12mm
- 12 000 sqm.





- Initial drawing / facade layout from Architect had generated 40% waste based on the formats of the raw panels.
- Cosentino optimized the facade layout of the entire house – Reached a new waste factor of 14%
- Saved and re used 100% of the wastage panels from the production of the facade



Façade Study

Please find attached the requested information regarding this façade study:

PROJECT

Project name: Kallebäck's Terrasser - HUS D / EAST FAÇADE

SF ID: 0060X00000jri4JQAQ

Study

Dekton Cladding 1

Application type: Ventilated Façade
 Studied area: 362,48 m²
 Total study

Estimated area:

Considered slab size: 320 x 144 cm

Thickness DK 1: 12 mm Meshed

Colour DK 1: Keon

Direction / Structure: Horizontal

Wastage:

Wastage:

Finish:

Thickness DK 2:

Colour DK 2:

Direction / Structure:

Wastage:

Wastage:

Finish:

Mechanization:

Fixing system: DKT1

Mechanization: KEIL Drills

Production:

1 st	ml
2 nd	ml
3 rd	ml
4 th	ml

Extra production:

1 st	ml
2 nd	ml
3 rd	ml
4 th	ml

Observations:

- The proposal/alternative consider no vein rotation - Horizontal Vein!!

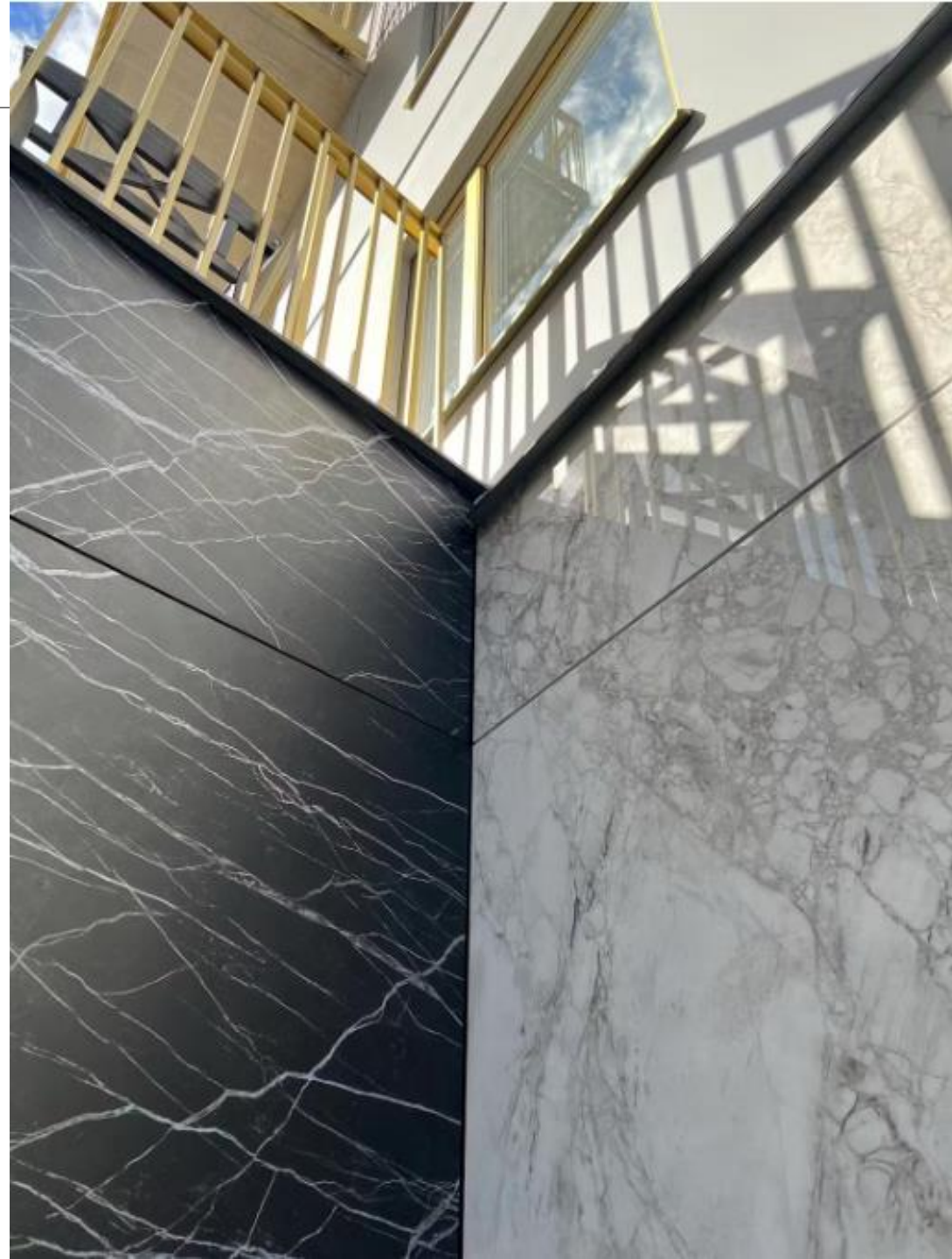
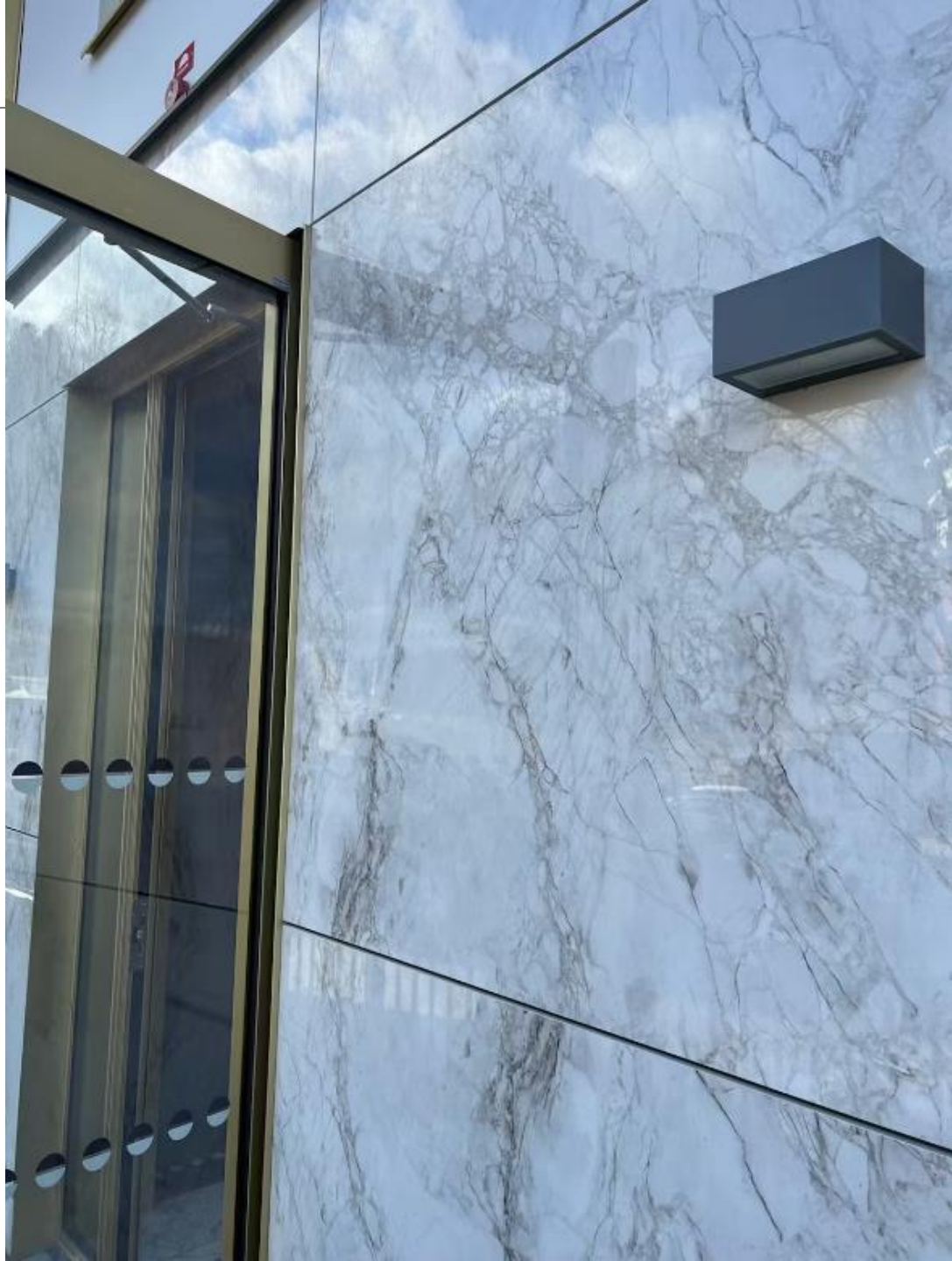
If you need any further info or technical assistance, please do not hesitate to contact facadescentral@cosentino.com











**Kap West Building
Munich**

- Dekton Keon 12 mm
- 13000 m2.

COSENTINO



SILT Casino
Middelkerke

◦ Dekton Aeris 12 mm.

COSENTINO



SILT Casino

Middelkerke

◦ Dekton Aeris 12 mm.



COSENTINO



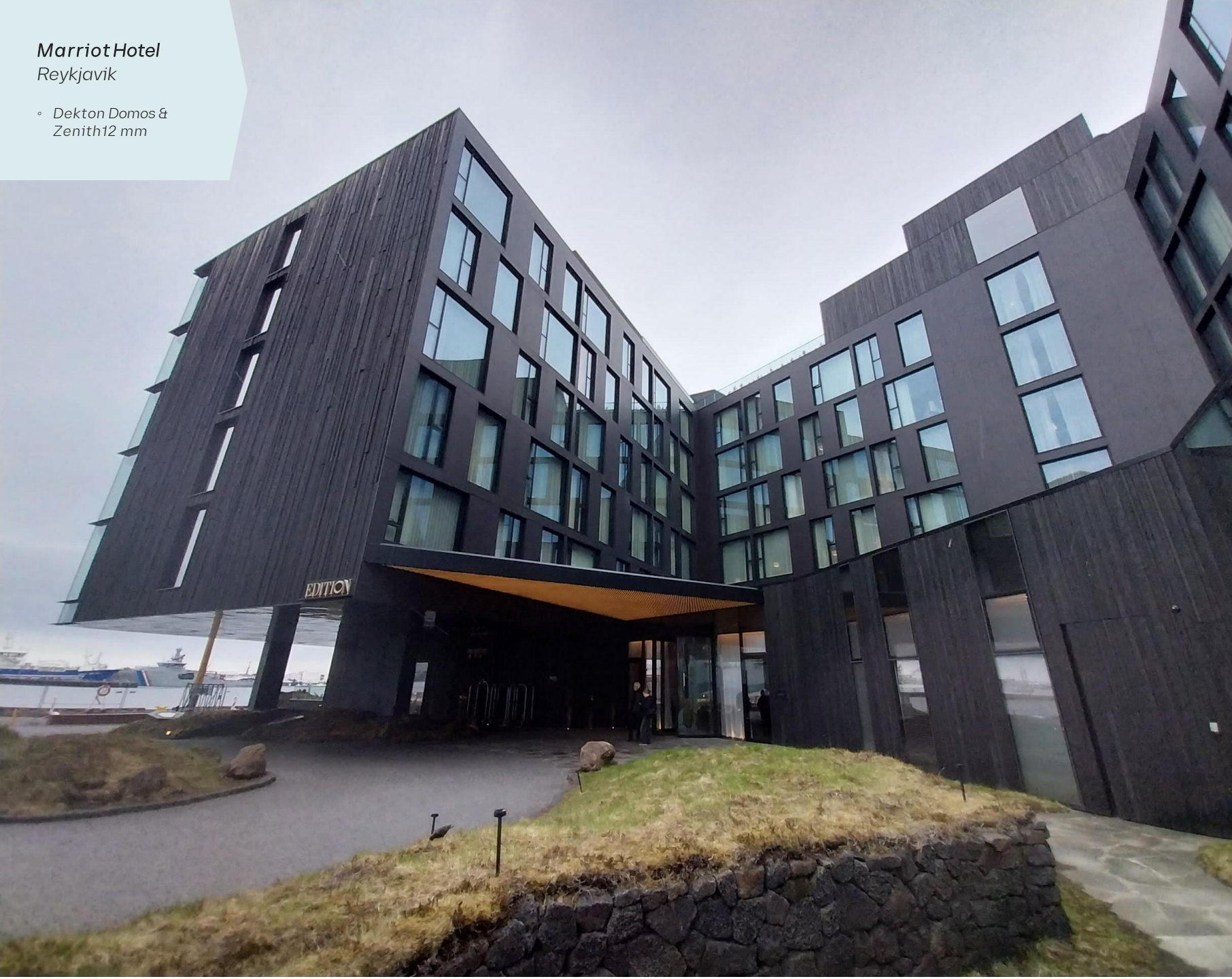
Marriot Hotel
Reykjavik

- Dekton Domos & Zenith 12 mm



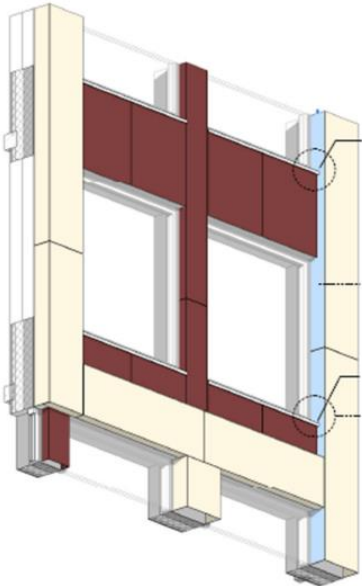
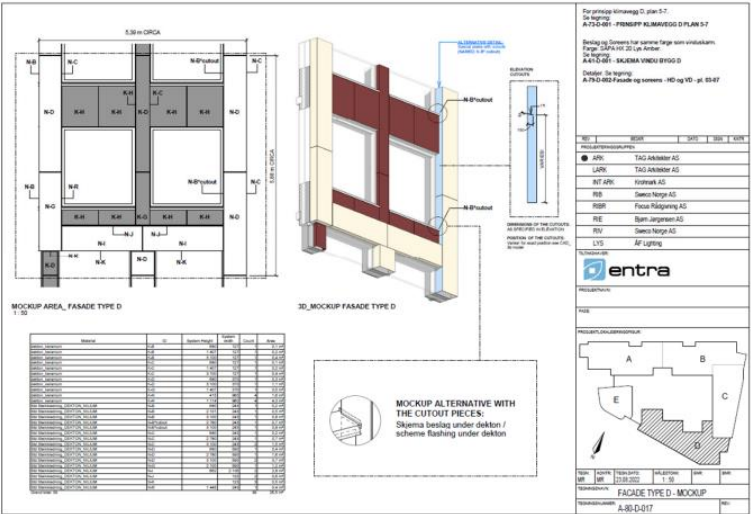
Marriot Hotel
Reykjavik

- Dekton Domos & Zenith 12 mm



Oslo City Shopping Mall

Dekton Keranium
Dekton Lunar.
6000 m2



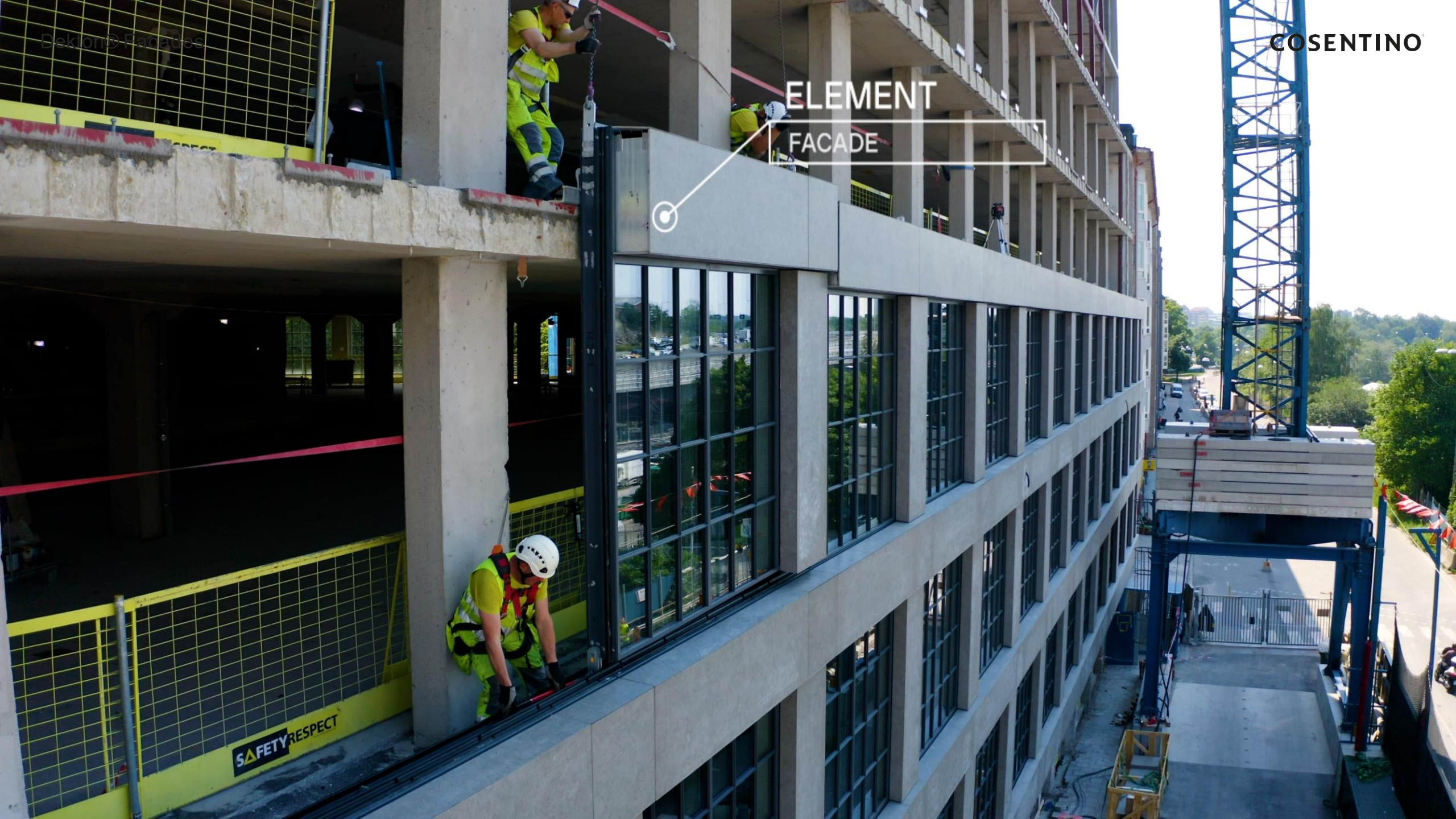
FENIX Building
Stockholm

Dekton ID /
Customized color
4000 m2



ELEMENT
FACADE

SAFETY RESPECT



Brf Regnbågen
Gothenburg

Dekton ID /
Customized color
10 000 m2



COSENTINO

Nyr Landspítali /
Hringbraut

Reykjavík
Dekton Moone
4500 m²



Q & A -

Thank you!