ST/ITICUS

Committed to the long-term

28th October 2022



Agenda

- 1. Company intro: Staticus
- 2. <u>Service overview</u>
- 3. <u>DMG 15: from concept design to installation:</u>
 - Concept design
 - Mock-up
 - Design development
 - Production
 - Logistics
 - Installation
- 4. Reference projects

ST/ITICUS

We are one of the largest façade contractors in Northern Europe specialized in unitized curtain wall systems.

We place particular emphasis on our client success and strive to be a reliable long-term partner.

Committed to the long-term.

We deliver and maximize long-term value to our clients, partners and society.

- We deliver sustainability outcomes
- We create benchmark setting projects
- We build long-term partnerships

Committed across Europe.

Offices and Markets

Markets:

Austria Norway

Belgium Sweden

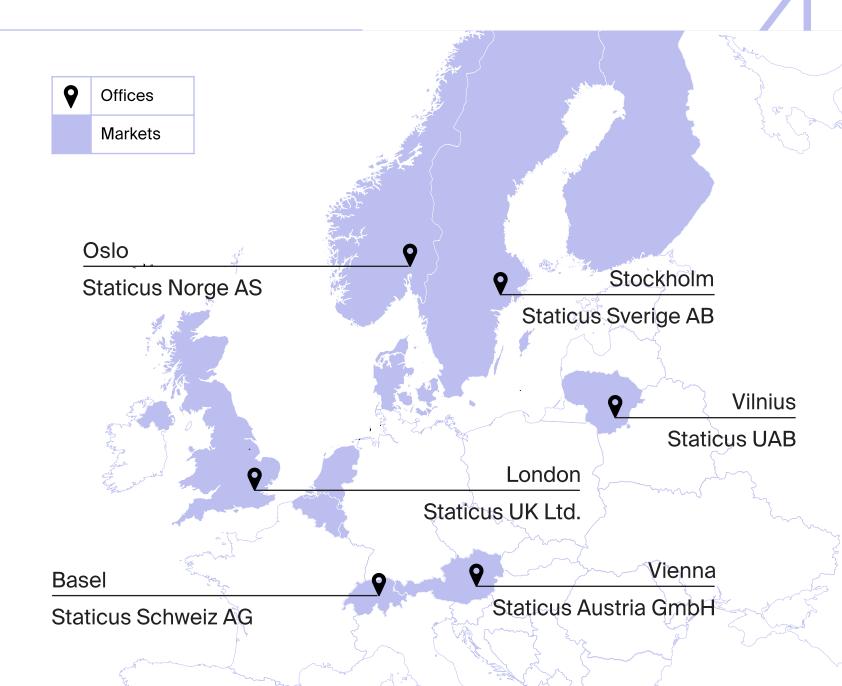
Denmark Switzerland

Finland United Kingdom

Iceland

Luxembourg

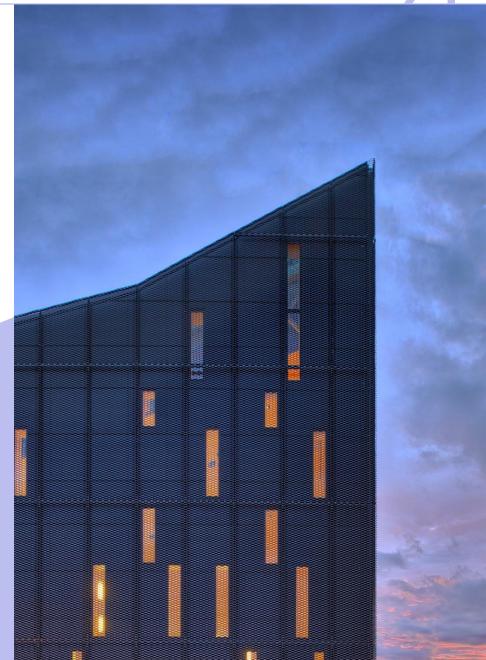
Netherlands



Committed to growth.

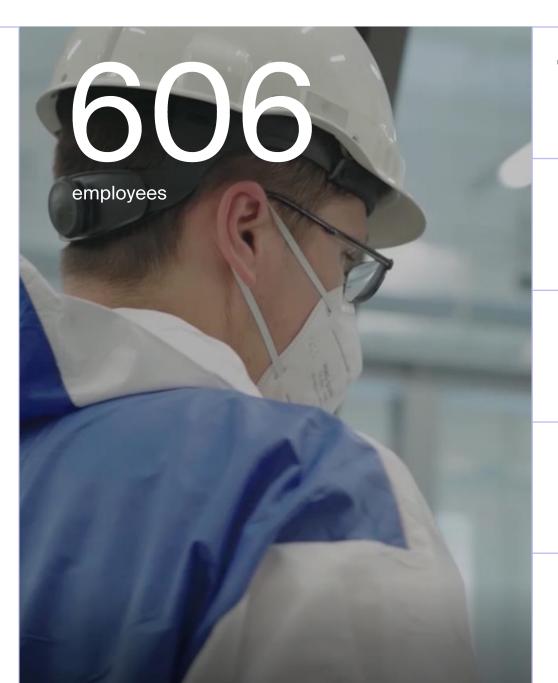
Turnover in mln. eur





Committed experts.

Staticus team structure



111

Design & Engineering

28

PM & Estimation

53

Procurement & Supply Chain Division

66

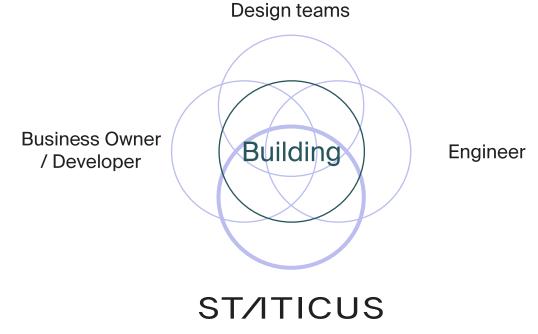
Administration

348

Production & Installation

Company value chain.

The project is our product.





CONCEPT DESIGN AND CONSULTING



MOCK-UPS AND TESTING



DESIGN DEVELOPMENT



PRODUCTION



LOGISTICS

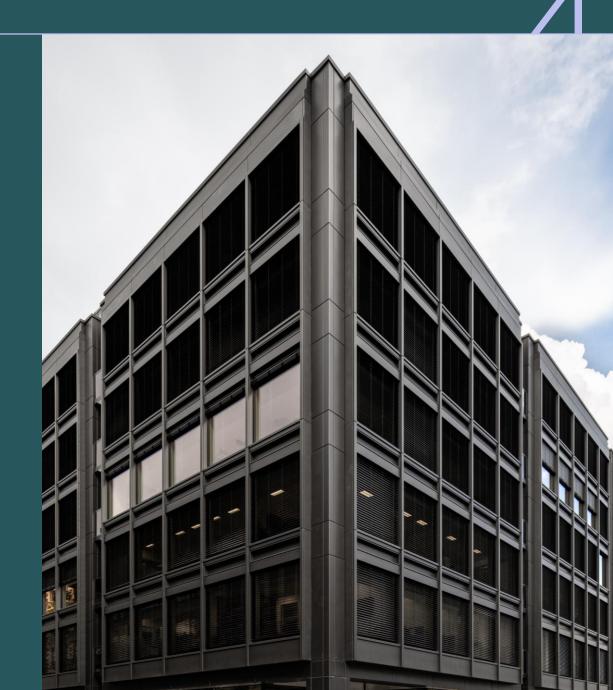


INSTALLATION



WARRANTY AND AFTER-WARRANTY

DMG 15: from concept design to installation



Core team members



Giedrius Kazakauskas Project manager



Linas Bacvinka Design manager



Aurelija Grigaitytė Production manager



Dovilė Navė Procurement manager



Tomas Liubimov Site manager



Andrius Kliukas Supply chain manager

DMG 15

DARK Arkitekter

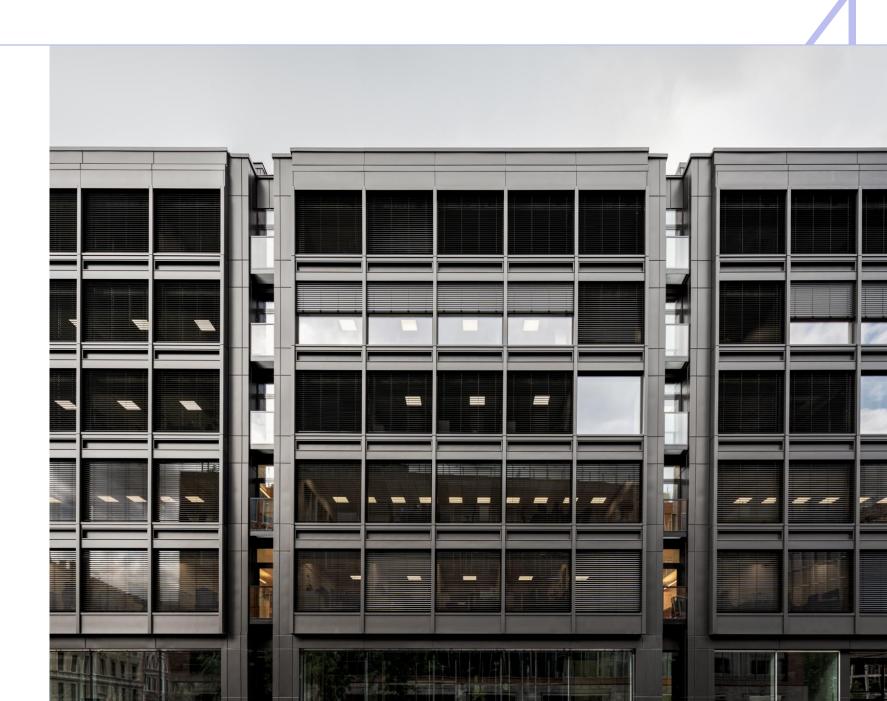
Architects

AF Gruppen AS Client

Nordea Liv Eiendom Investor

Office building Category

Oslo, Norway Place



Project in numbers

205pcs / 1700m2

Unitized façade

752m2

Stick façade

1080m2

Ventilated façades

35pcs

Doors

36pcs

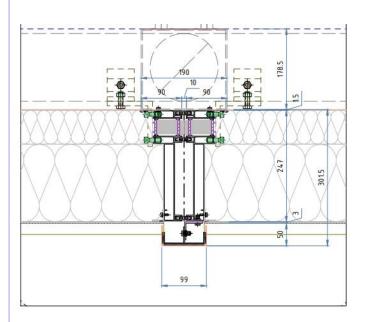
Balustrades



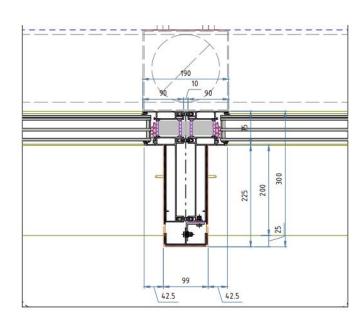
Concept design

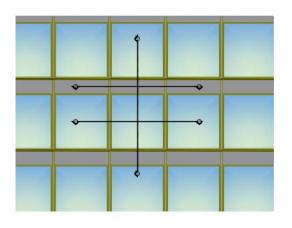
System solution was borrowed from other projects which Staticus already executed (Spikerverket, Oslo).

The main idea was to use unitized aluminium system (curtain wall) since it allows for highest prefabrication level and maximum installation speed.





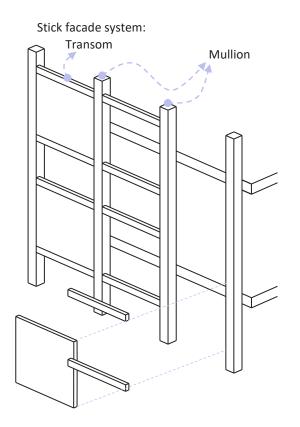


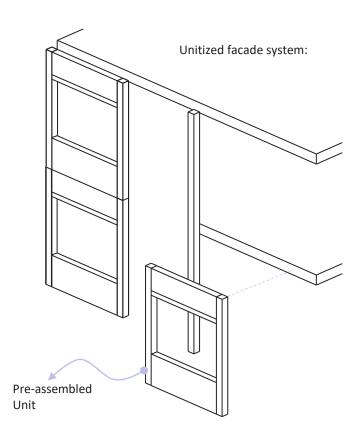


What are unitized façades in general?

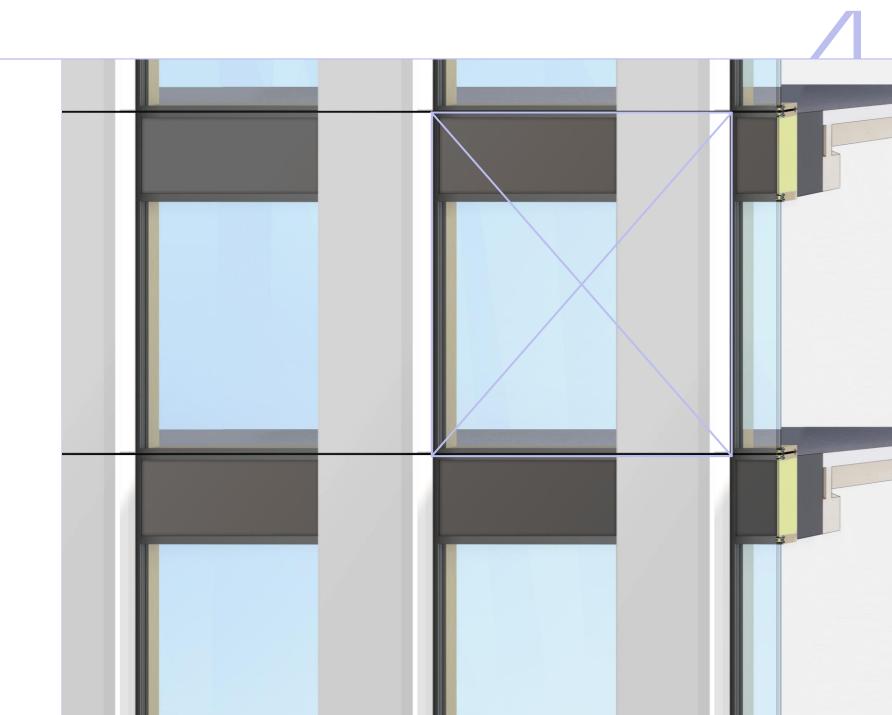
Unitized façades in general

 Unitized façades are façade systems made up of modules that have been completely prefabricated in factory assembly lines. Now the most widespread curtain wall technology in use, unitized façades are a natural evolution from the "mullion and transom" system.





Unitized façades in general



The advantages of unitized façades in general



Aesthetics

Unitized façades offer a wide variety of aesthetic variation. This allows architects to use any combination of finishes, infills, external feature caps and glazing specifications.



Manufacturing precision *or perfection

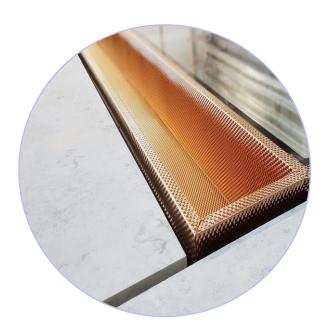
Stone cladding, metal, composite or polycarbonate panels; windows, doors and fixed lighting glazing, brise soleil and/or photovoltaic panels all assembled into or on prefabricated façade units in our factory, with our highly experienced experts, resulting in amazing manufacturing precision (which we at Staticus consider one of our biggest advantages on the market).

Shorter lead times

Unitized façades can achieve impressive reductions in time on site of up to 70%, helping contractors and architects to meet the increasing demand for shorter project times.



The advantages of unitized façades in general



Increased safety on site

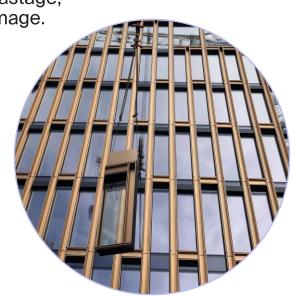
Unitized façade modules can be installed without the need to work at height on scaffolding increasing on-site safety.

Reduced storage space and waste

Unitized façade requires less storage space and handling of materials on-site, a major advantage in city centre sites where space and access are restricted. Waste control measures are more stringent in factory environments, resulting in reduced costs from wastage, loss, and damage.

Higher quality, controlled production in factory environment

Unitized façades can be precision engineered in a controlled production environment, ensuring the quality of the façade system is significantly improved.



Mock-ups and testing

Special cladding solution: reversed cassette.

Mini mock-up was created with purpose:

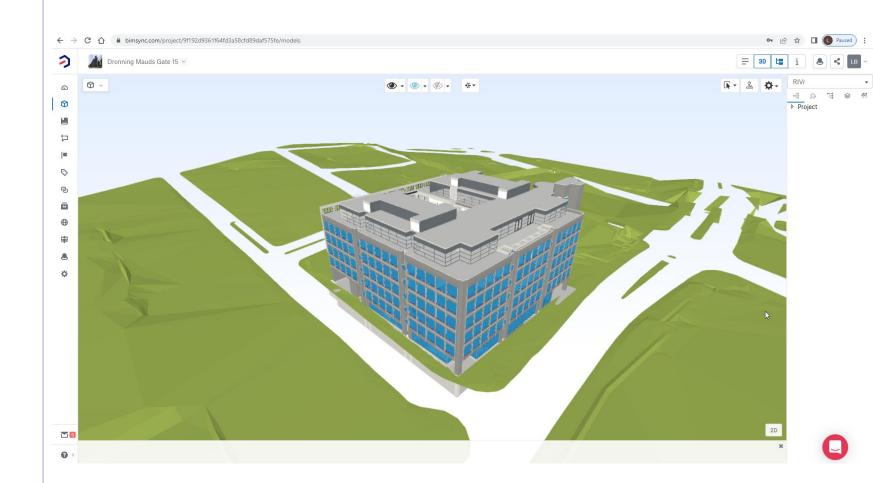
- To visualise the solution for client's acceptance
- To ensure that the manufacturing process is tried and tested.

The system was tested in previous projects, so we did not need to do it in this project which helped us to save time as we had very tight delivery terms: agreement was signed in April 2021, first element on site delivered in September.



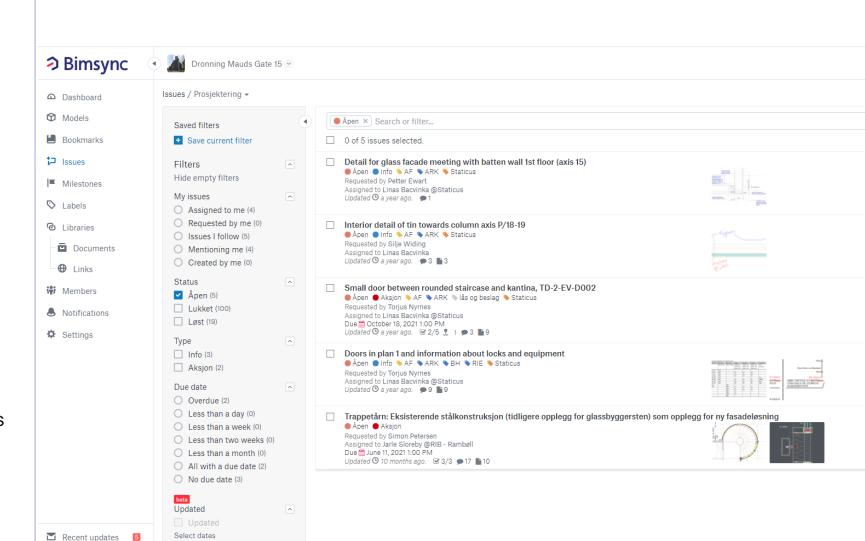
Design development process

- Design coordination between Staticus, AF and architects, and consultants was done through BIMsync program.
- Design process was supported by daily design team meetings.
- Design team varied from 2 to 6 in different design stages.



Design development: BIMsync

- In general, it allowed communication and exchange of data between the project participants without emails
- Platform allows for easy 3D model usage in different communication threads
- Through this platform all involved parts also:
- Solved problems
- Raised questions
- AF granted official approvals
- Handled all documentation needed for the project handover.



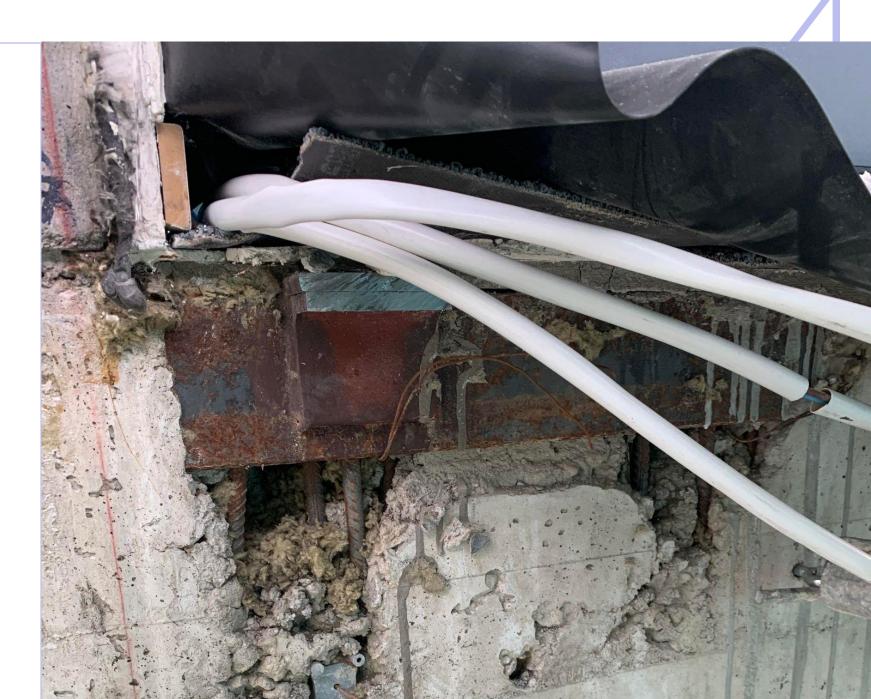
Assigned to

Unassigned (0)

Help

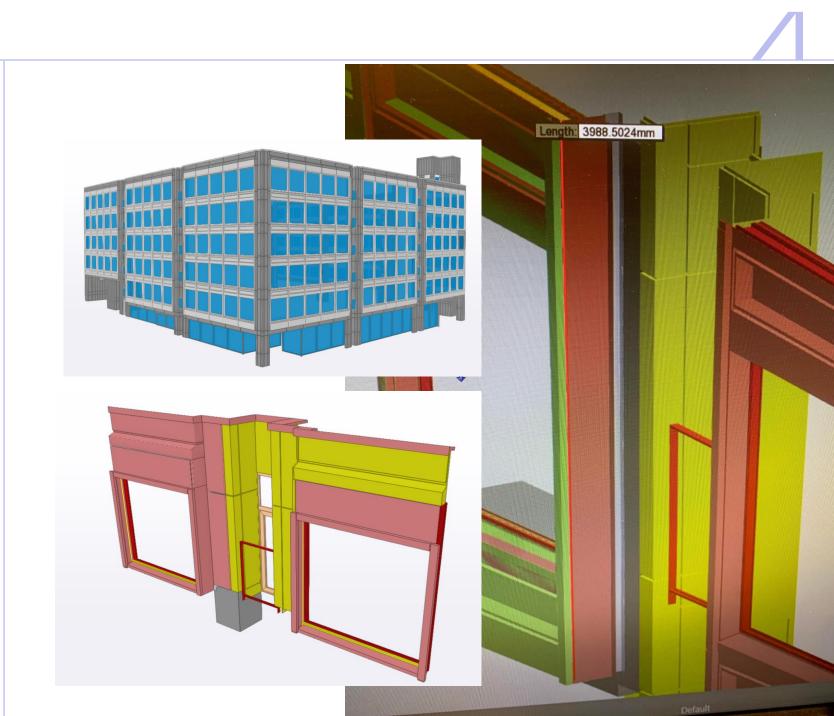
Design development: challenges

- Long delivery terms for profiles (because of COVID-19): solution already used profiles in Spikerverket, Oslo
- Long delivery terms for sunshading (because of chip shortage): solution to use a system with less advanced steering
- Quality of concrete and unforeseen steel inserts: solution - redesigned brackets for element fixation
- Difference in as built drawings compared to real situation on site, solution - adjust fixation methods and custom cut metal sheet connections.



Design development: BIM

 Smoothest way to solve cladding positioning around the building as we had around 1000 pieces of cladding



Business information management

The business information management (BIM) model allows to monitor and analyse the entire value chain.

01

High delivery quality

- Preconstruction project visualization
- Better final builds

02

Smooth collaboration

- Better facility management and building handover
- Improved coordination and clash detection
- Collaboration with teams, partners and clients

03

Efficient project management

- Model-based cost estimation
- Improved scheduling and sequencing

04

Risk mitigation

- Reduced costs and mitigated risks
- Safer construction sites

Production

Extensive production capabilities allowed to deliver high-complexity custom projects in an efficient manner:

Production area: 12 050 m2

Assembly lines: 10-12

Manufacturing process: full-range

Independent production facilities: 2

Profile processing centers: 6

Haas centers: 5

Profile cutting machines: 6

Software centers of AUX equipment: 2

Steel profile cutting machine: 1



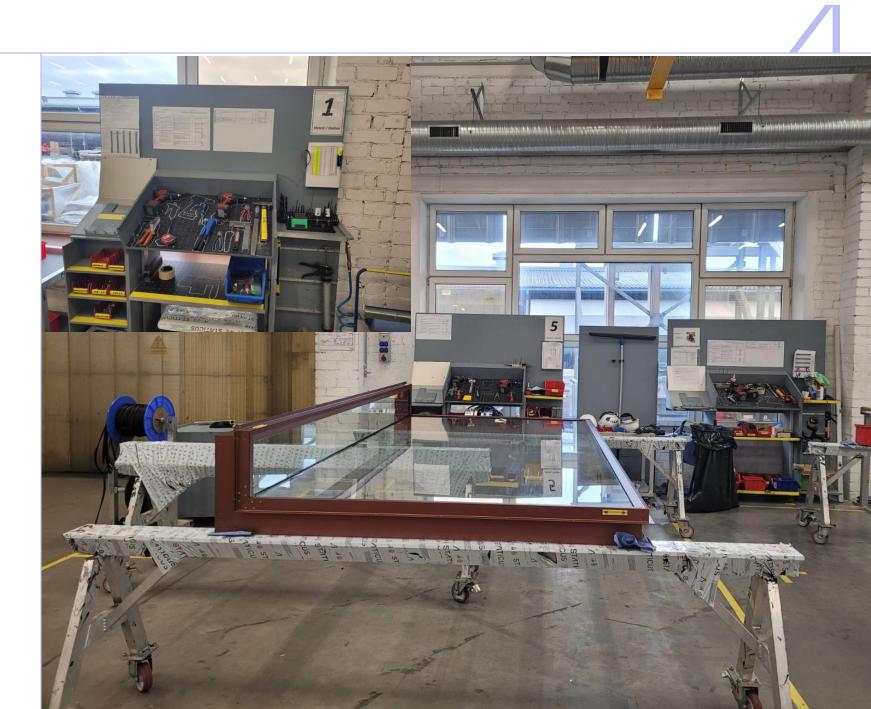
Production: lean philosophy + lean tools in production

5S Rule



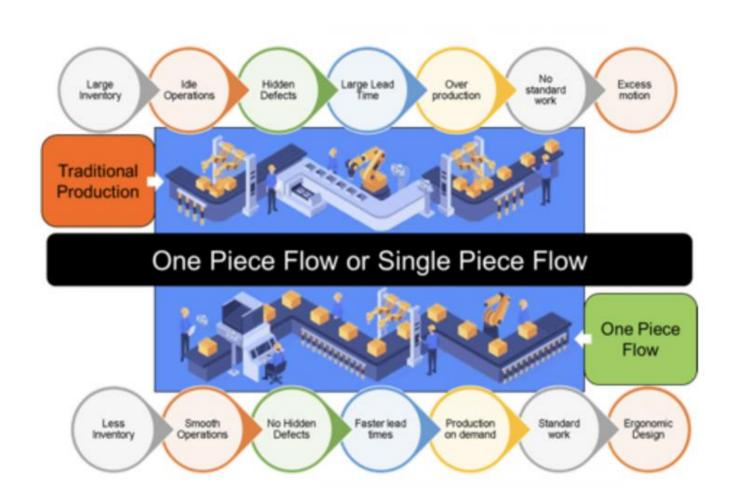
Production: lean philosophy + lean tools in production

5S at Staticus



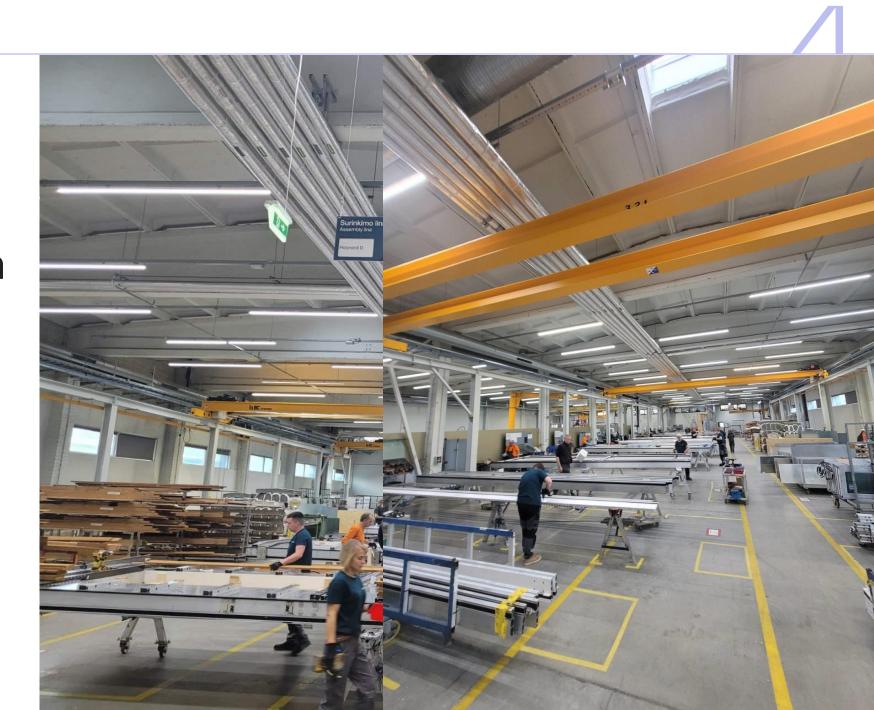
Production: lean philosophy + lean tools in production

One unit flow



Production: lean philosophy + lean tools in production

One unit flow



Logistics challenges: lack of storage space on site

Solution – external storage place



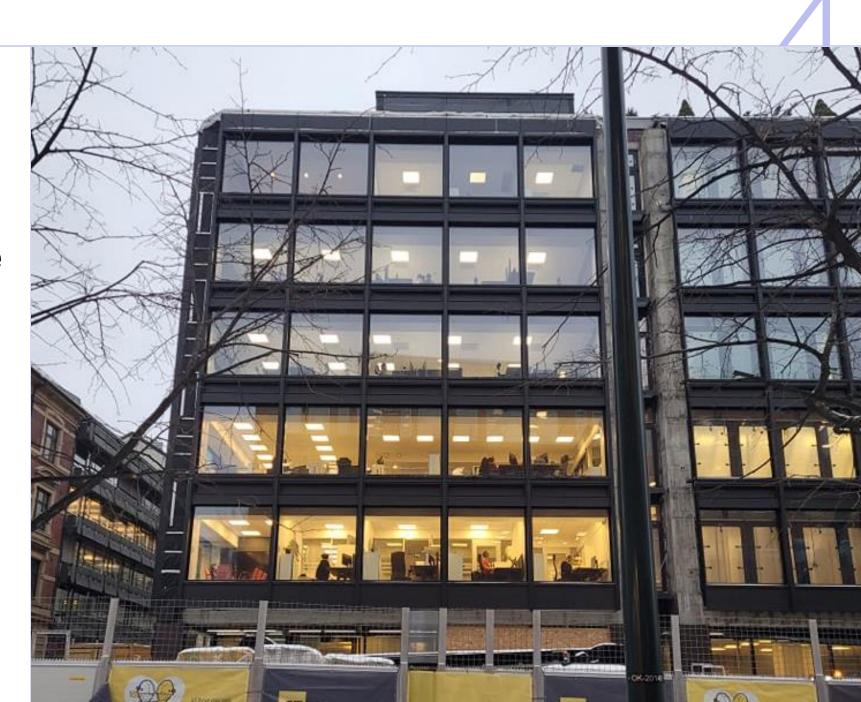
Logistics challenges: lack of storage space on site

Solutions:

- JIT deliveries to construction site
- Labeling of pallets.



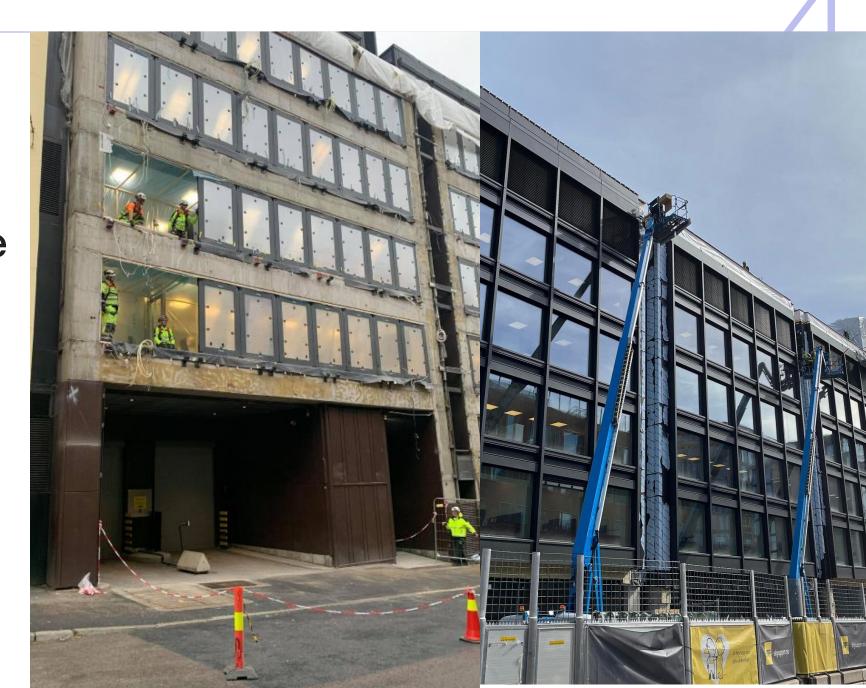
Installation challenge: changing of façade in operating building



Installation challenge: changing of façade in operating building

Solutions:

- Teamwork with the client
- Flexibility on work program
- Detailed planning (daily)
- 5S rule on site.



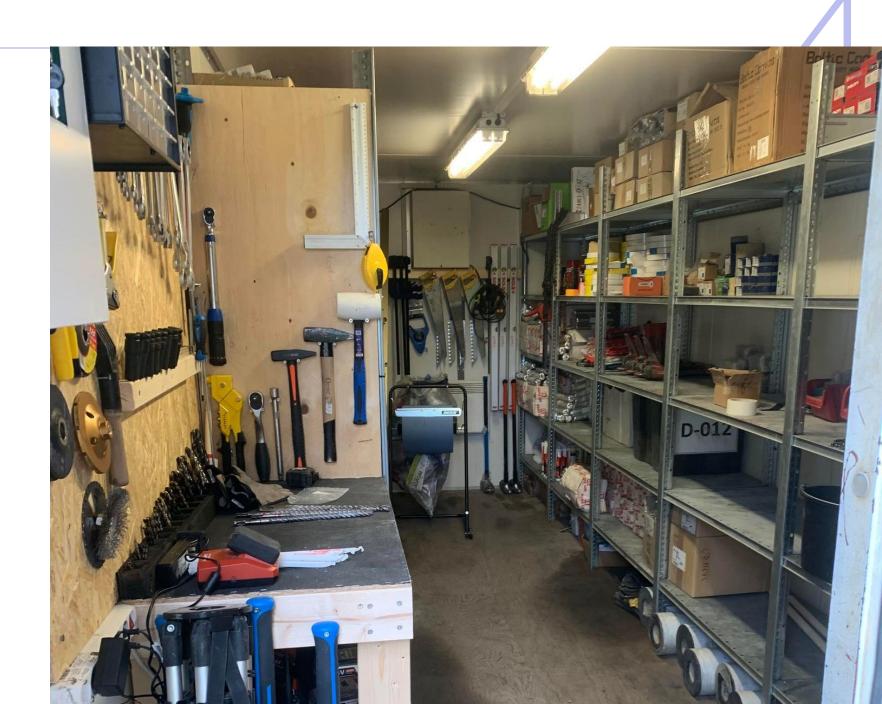
Installation

Daily / Weekly planning

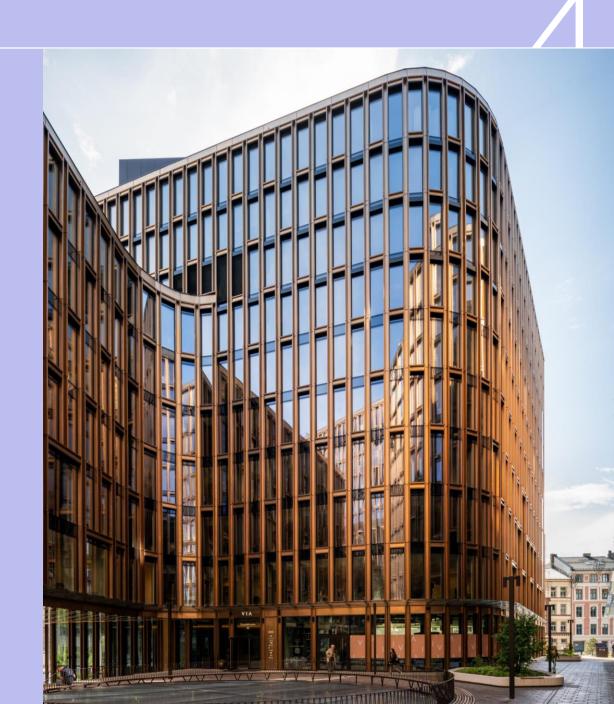


Installation

5S at Staticus construction sites



Reference projects



Skalen

Architects
Studio Stockholm Arkitektur AB

Client

Arcona AB (Veidekke Group)

Investor

Scius Partner/Invesco

Category
Office building

Façade area 6,365 m²

Place

Stockholm, Sweden



Clarion Hotel HUB

Architects
Lund + Slaatto Arkitekter

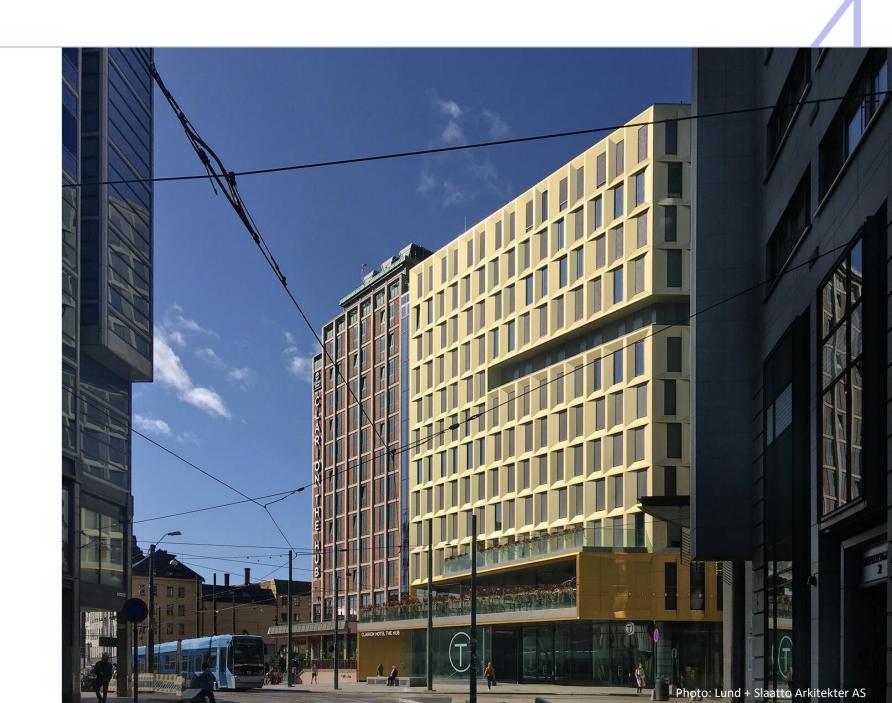
Client Betonmast AS

Investor
Strawberry Brothers

Category
Hotel building

Façade area 11,970 m²

Place Oslo, NO



Sofiensberg skole

Architects
Ola Roald Arkitektur

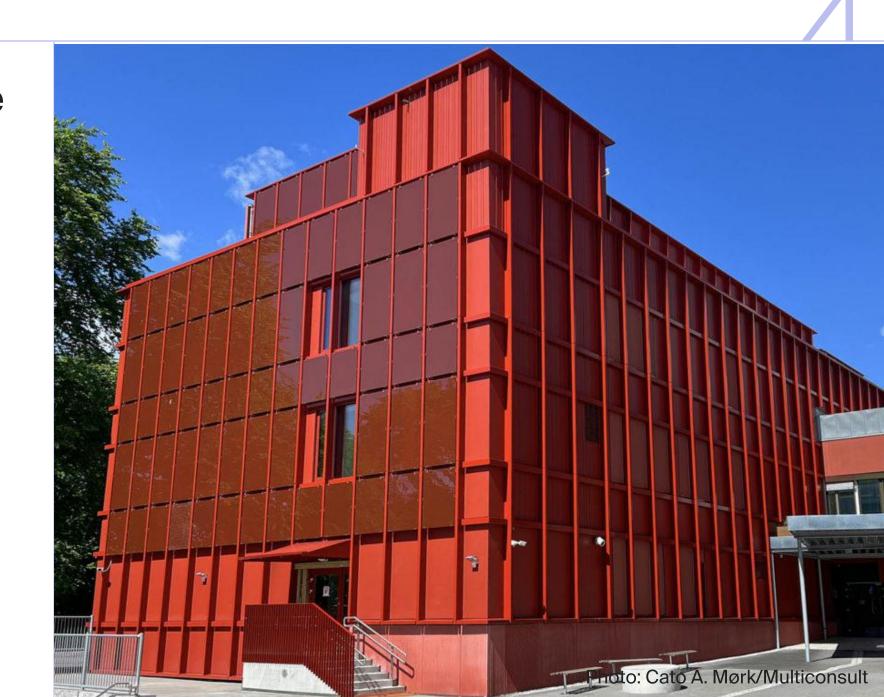
Client KF Entreprenør

Investor
Undervisningsbygg Oslo

Category Educational building

Façade area 3,000 m²

Place Oslo, NO



Filipstad brygge

Architects
Grape Architects

Client Seltor AS

Investor Storebrand

Category
Office building

Façade area 830 m²

Place Oslo, NO

Year 2022-23



Sergelhuset

Architects
Equator Stockholm AB

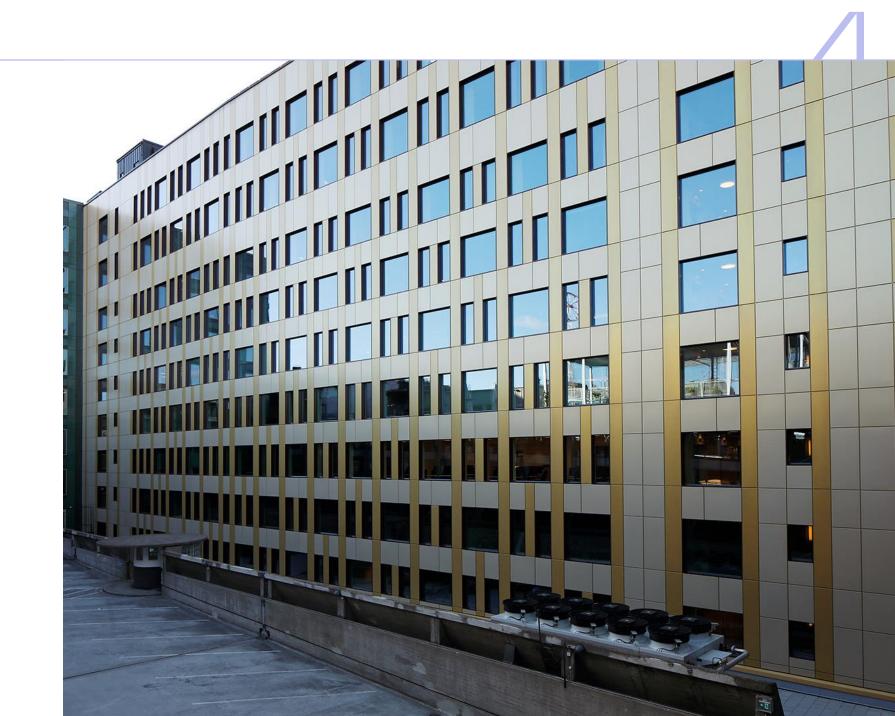
Client NCC Sverige AB

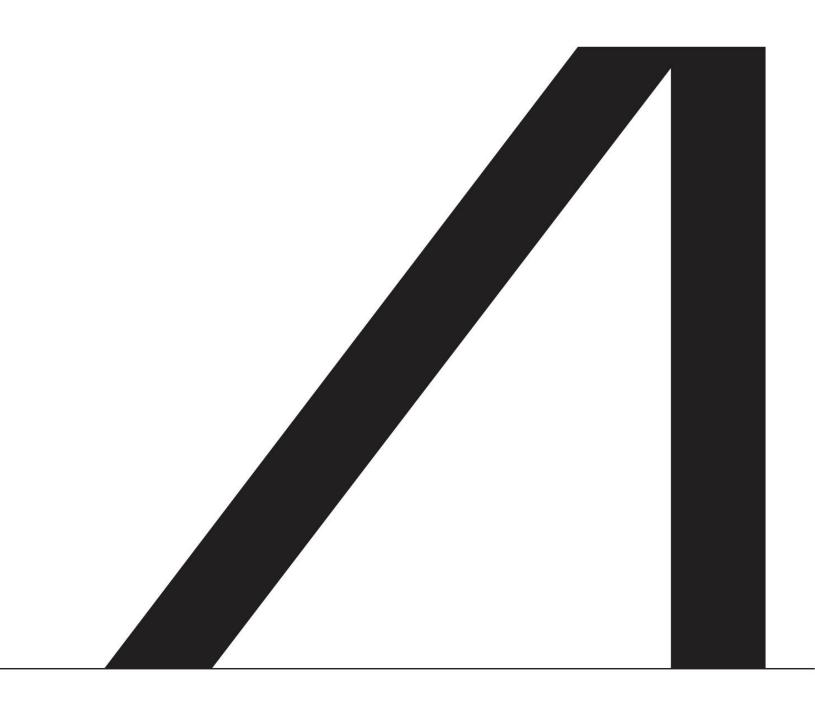
Investor Vasakronan

Category
Office building

Façade area 3,850 m²

Place Stockholm, Sweden





ST/ITICUS

Beyond façades