

An architectural rendering of a modern, multi-story building with a unique, stepped facade and numerous balconies. The scene is set in a winter environment with snow-covered trees and ground. Two people are walking away from the viewer on a path in the foreground. The building is illuminated from within, and the sky is a pale, overcast blue.

NYVY

Nydalen Vy – FutureBuilt / TripleZero

12.02.18 Naturligvis erfaringsseminar - Snøhetta v. Tine Hegli

Illustrasjon: Snøhetta / MIR

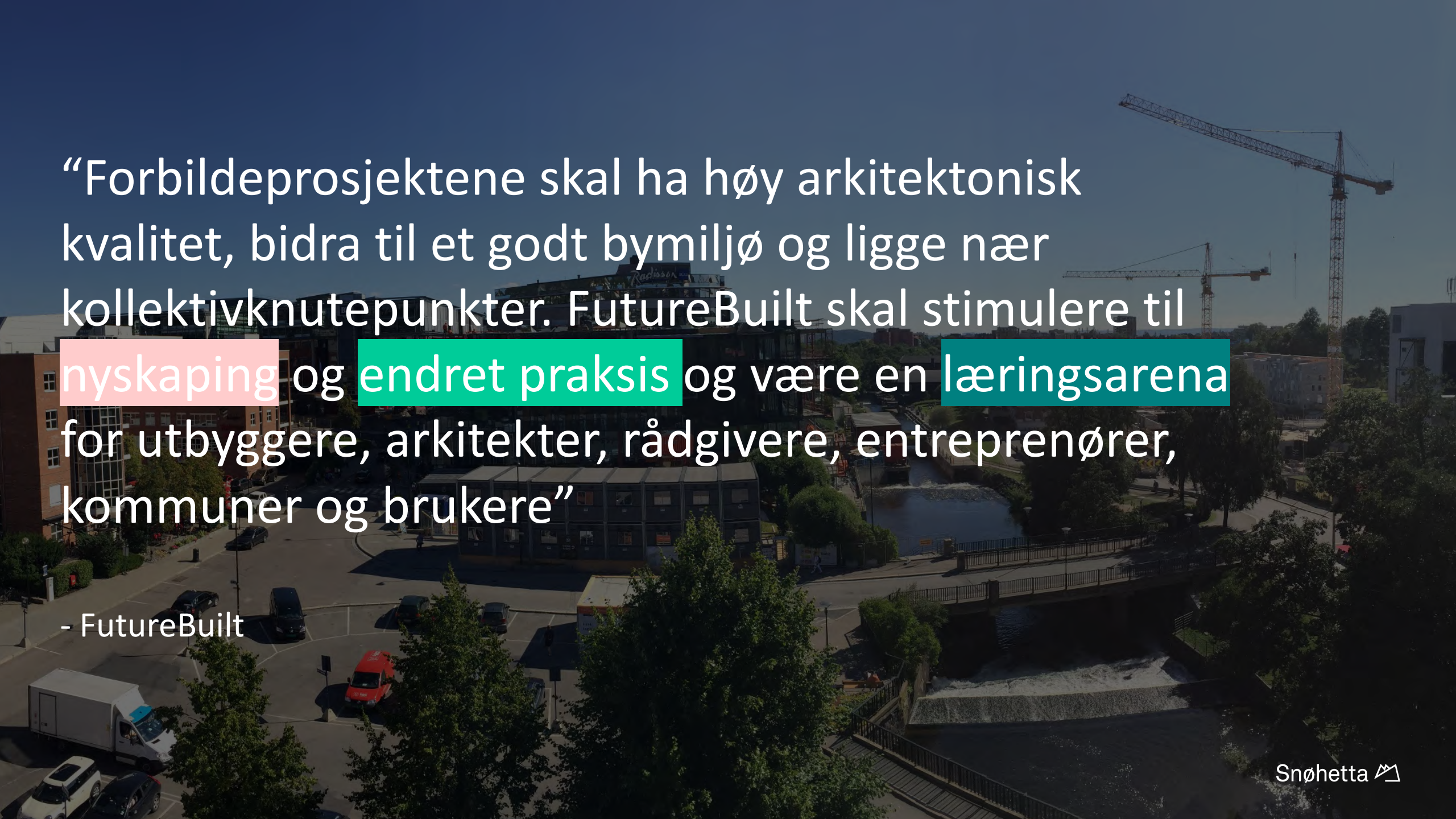
Snøhetta 

A photograph of two young girls with blonde hair in pigtails, looking over a white ledge. The girl in the foreground is wearing a pink shirt and has a purple bow in her hair. The girl in the background is wearing a white shirt and has a blue bow in her hair. They are both looking towards the camera with expressions of curiosity and interest.

“Oslo skal være et bærekraftig bysamfunn der alle har rett til ren luft, rent vann og tilgang på gode friområder. ”

- Oslo kommune, Byøkologisk program 2011-2026

**FUTURE
BUILT**

An aerial photograph of a city development project. In the background, two large construction cranes are visible against a clear blue sky. The middle ground features modern, multi-story buildings, some with glass facades and others with more industrial-looking structures. A river or canal flows through the scene, with a bridge crossing it. The foreground shows a parking lot with several cars, including a red van, and some green trees. The overall scene depicts an active urban development area.

“Forbildeprosjektene skal ha høy arkitektonisk kvalitet, bidra til et godt bymiljø og ligge nær kollektivknutepunkter. FutureBuilt skal stimulere til nyskaping og endret praksis og være en læringsarena for utbyggere, arkitekter, rådgivere, entreprenører, kommuner og brukere”

- FutureBuilt

An architectural rendering of a modern building with a glass facade and a public plaza. The building has a distinctive design with a mix of glass and solid panels. In the foreground, there is a paved plaza where several people are walking. To the left, there is a green area with trees and some people sitting on a bench. The overall scene is bright and sunny.

“FutureBuilt forbildeprosjekt skal ha 50% samlet reduksjon av CO2-utslipp fra materialer, transport og energi, sammenlignet med referansebygg.»

«Totalt energiforbruk på nær-nullenergi nivå»
(FutureBuilt definisjon 2016)

- FutureBuilt

Triple Zero

2226 Lustenau / Arkitekt: Baumschlager Eberle

Snøhetta 

2226 Østerrike

“Atmosphere without machines”

- Baumschlager Eberle

2226 Østerrike

- rene overflater
- god takhøyde
- fasader med automatiserte lufteluker
- ingen bakgrunnsstøy
- gode dagslysforhold
- kun passiv solavskjerming i dype vindusnisjer
- tunge materialer
- møblering tilpasset trekkproblematikk
- god akustikk?
- mulig lyset står på ...
- 0,6 m2 teknisk rom

TripleZero

Naturlig klimatisering

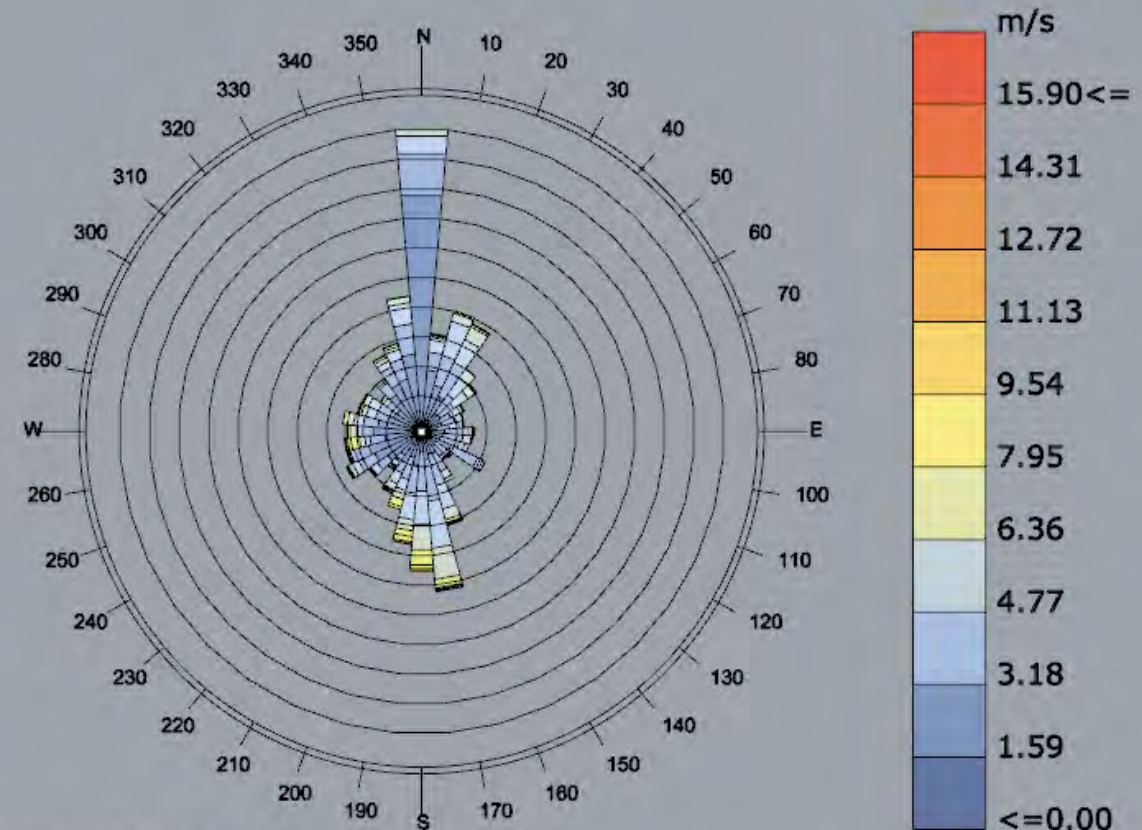
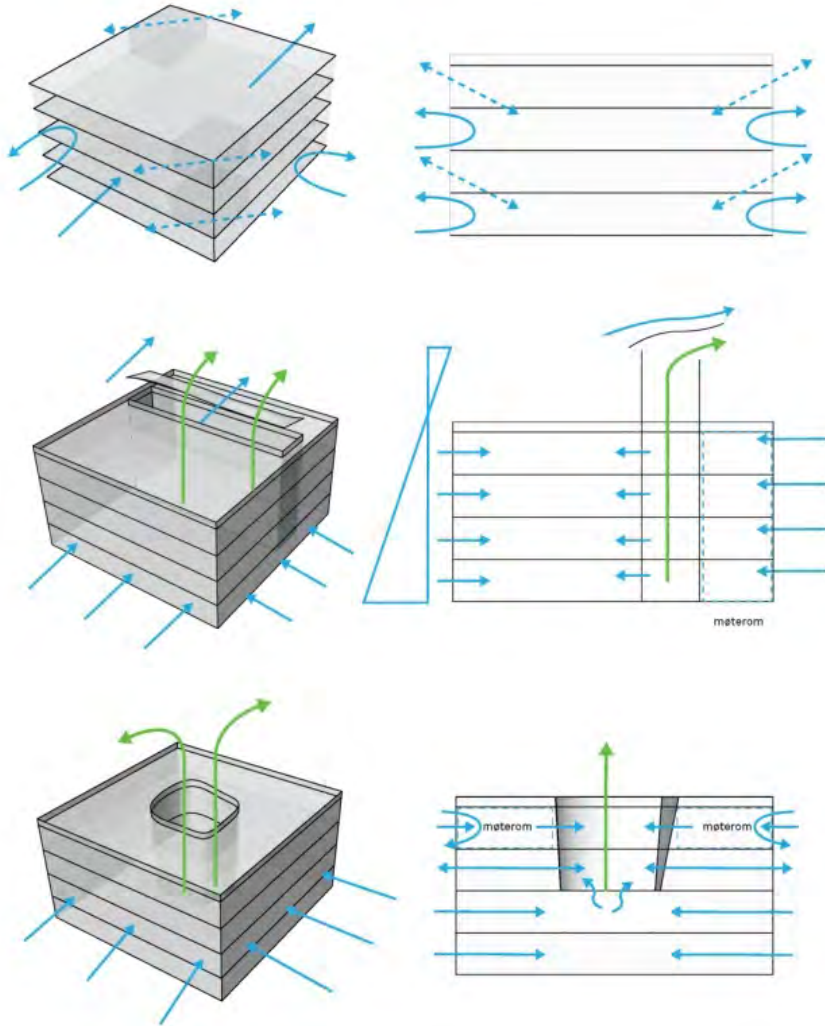
< 0 kWh kjøpt energi til:

- Ventilasjon
- Oppvarming
- Kjøling

Bærekraftig arkitektur og systemdesign

- Enklere drift
- Lavere vedlikeholdsbehov
- Lavere behov for utskiftninger/leietakertilpasninger
- Lengre levetid
- Bedre totalopplevelse for brukeren

Læringsarena!

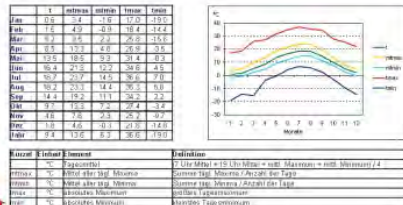


Wind-Rose
OSLO/FORNEBU_NOR
1 JAN 1:00 - 31 DEC 24:00
Hourly Data: Wind Speed (m/s)
Calm for 6.91% of the time = 605 hours.
Each closed polyline shows frequency of 1.0%. = 86 hours.

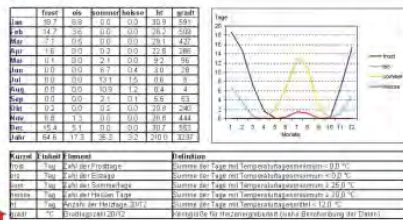


1329 Østlandet ...

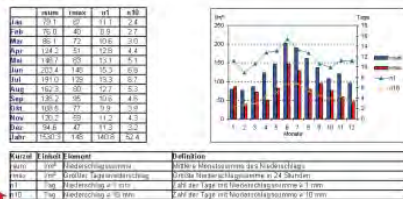
LUFTTEMPERATUR



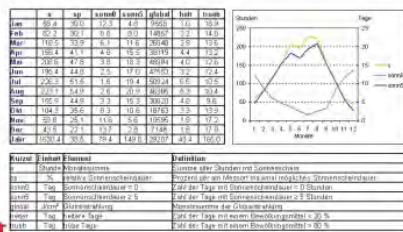
BESONDERE TAGE



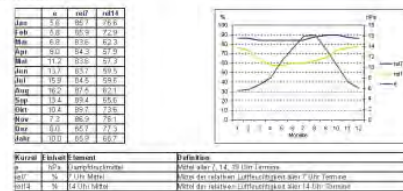
NIEDERSCHLAG



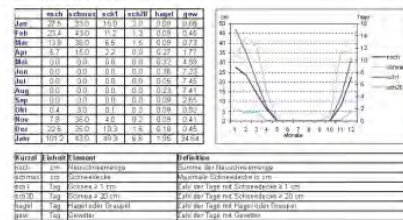
SOLNE



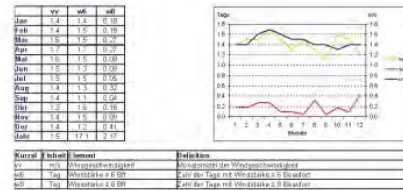
LUFTFUCHTIGKEIT



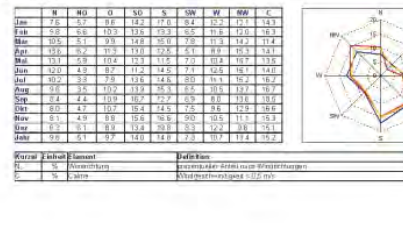
SCHNEE, HÖL, GEWITTER



WIND

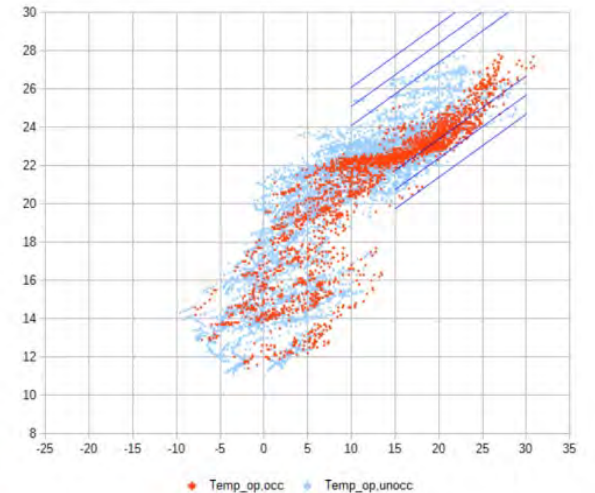
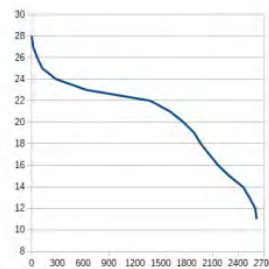


WINDRICHTUNG



Lustenau

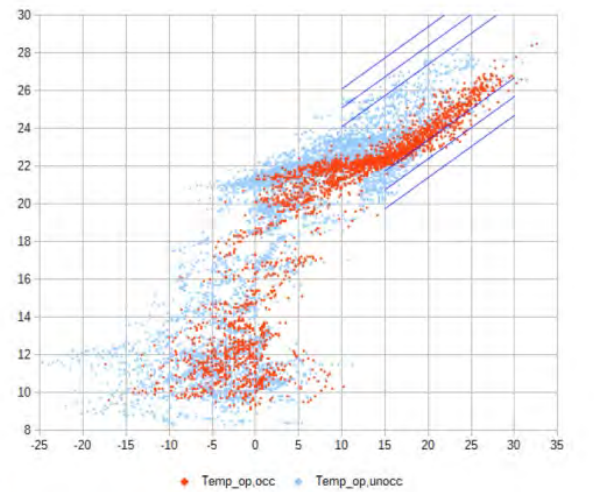
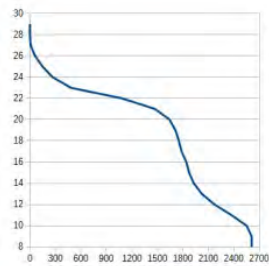
Operativ temperatur



→ 1314 timer dvs. 50.3 % av driftstiden mellom 22 og 30 °C

Oslo

Operativ temperatur



→ 1023 timer dvs. 39.2 % av driftstiden mellom 22 og 30 °C

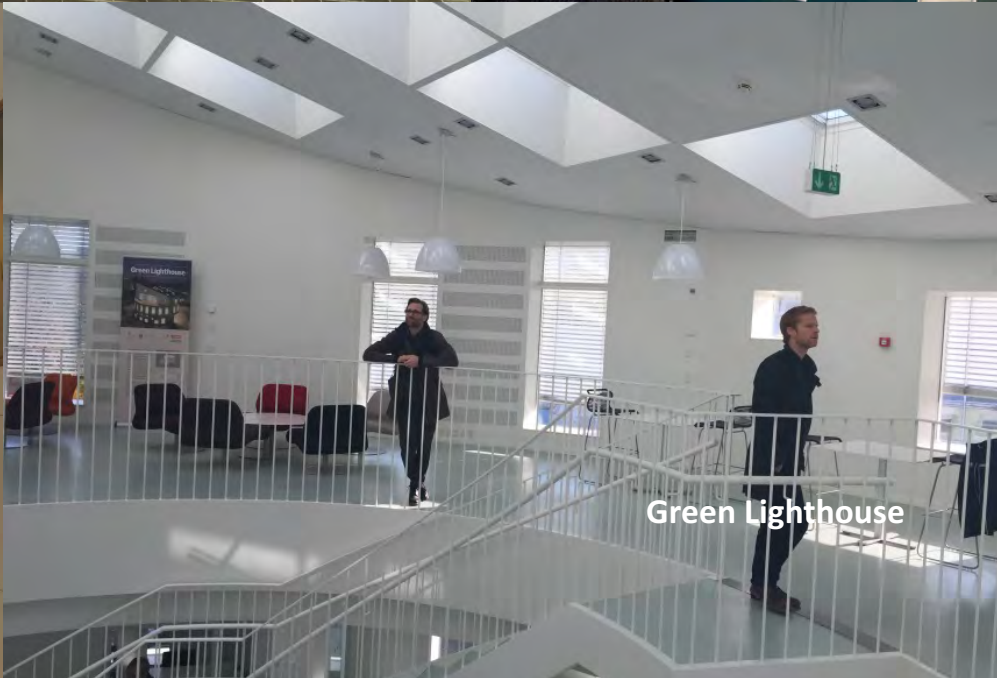


Mesterfjellet skole, Arkitekt: Cebra / SPIN / Various Architects





Retten i Fredriksberg

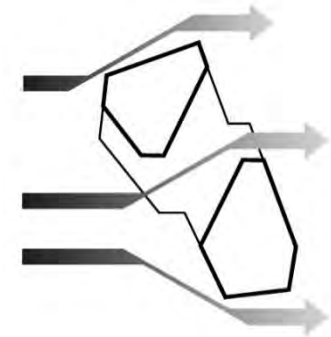
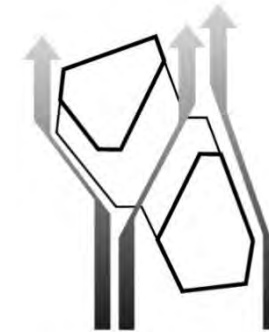
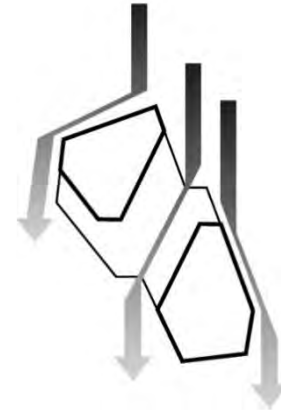
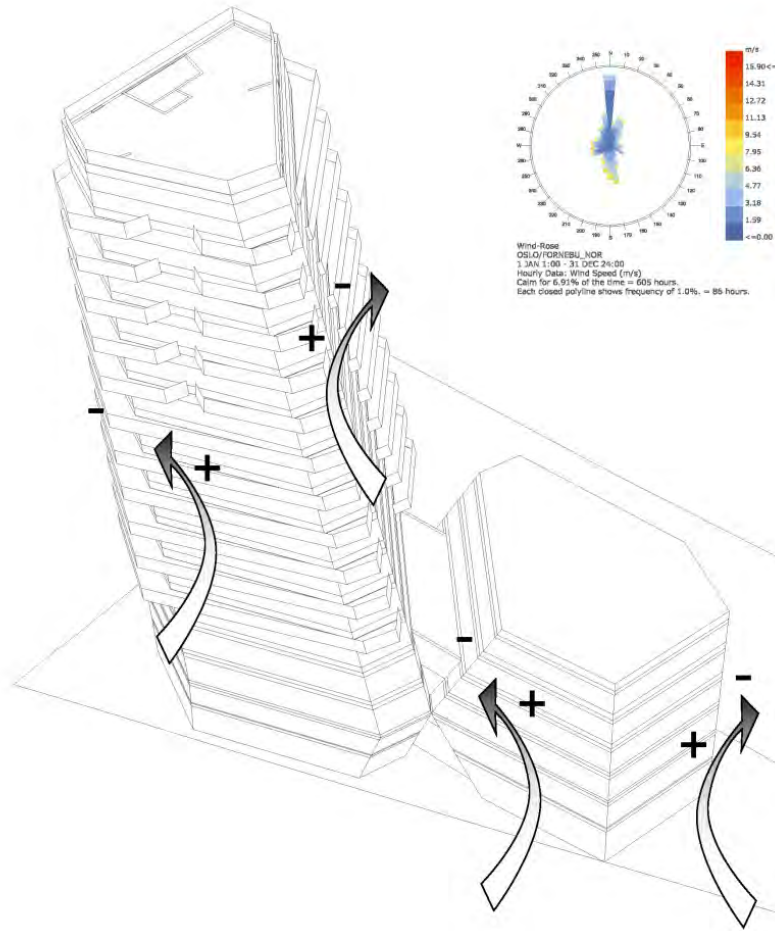


Green Lighthouse

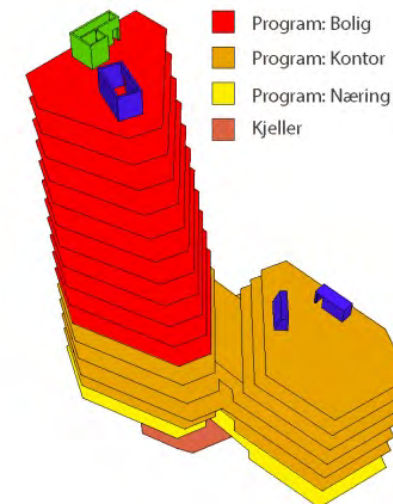
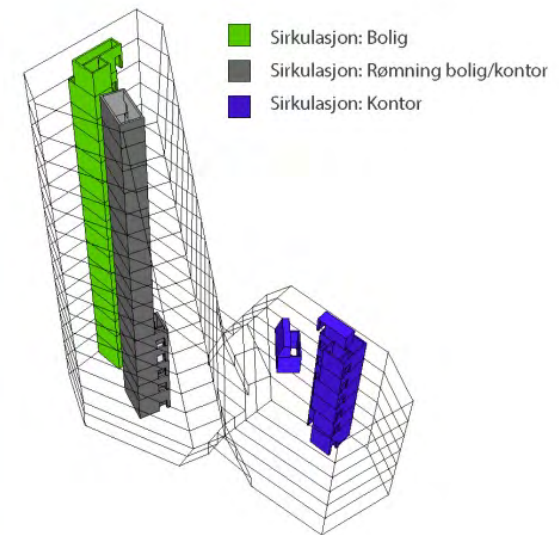


DTU

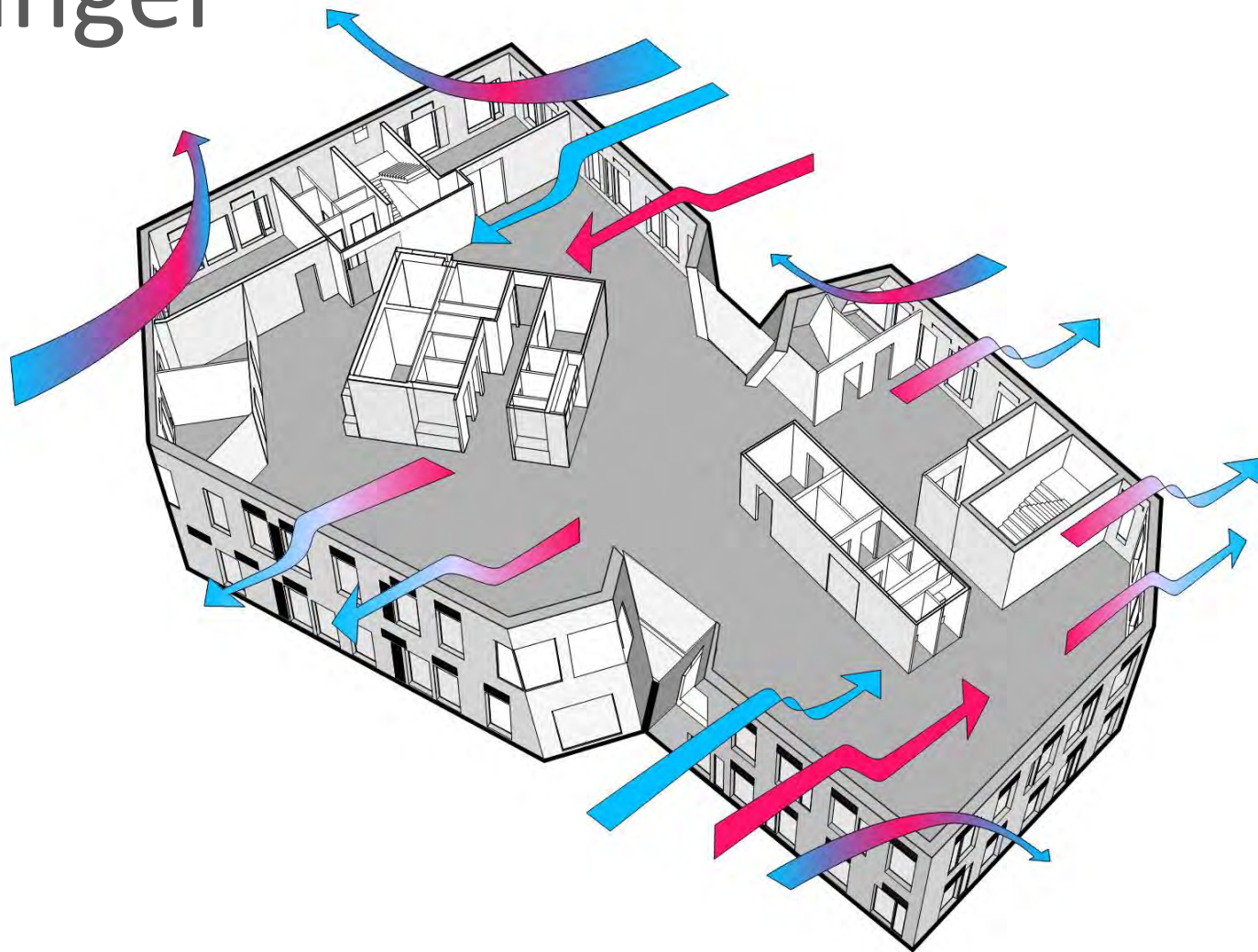
Volumstudier



Funksjoner

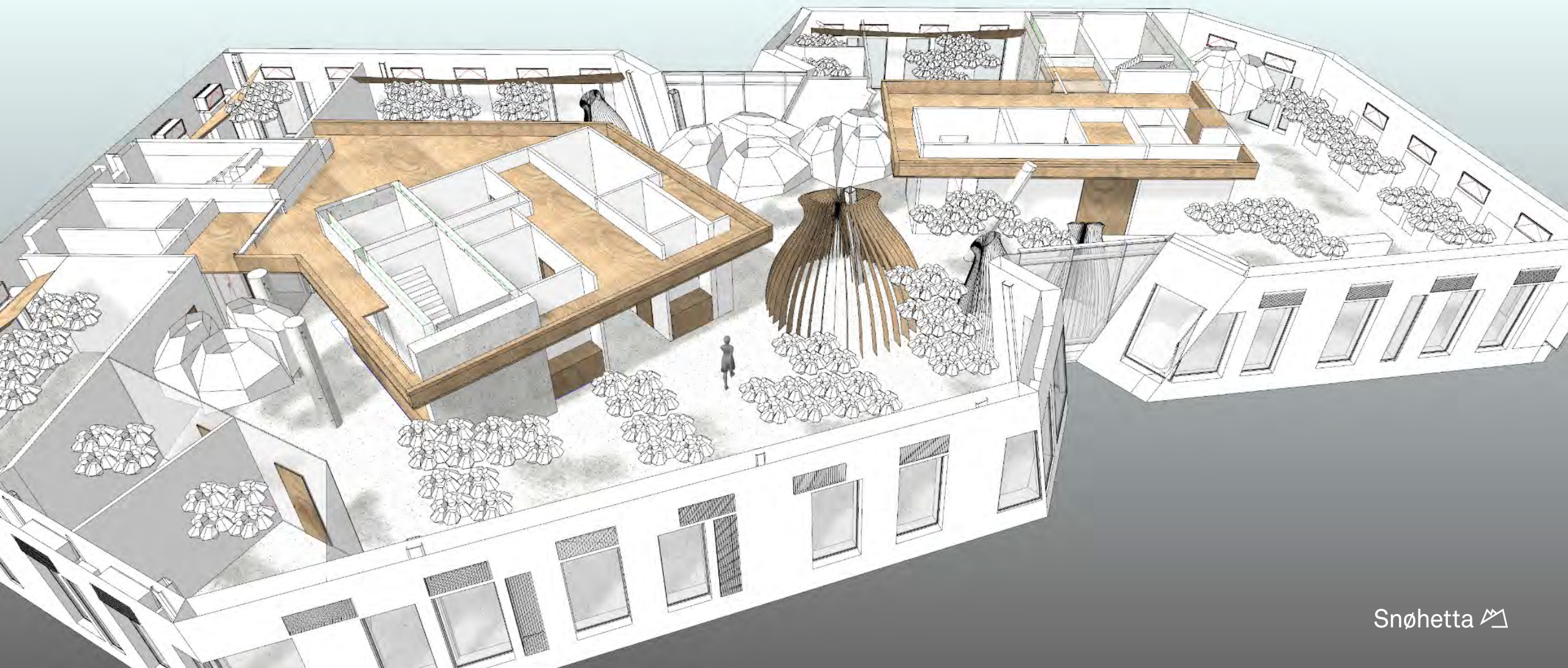


Romløsninger





Nyskaping!



Produktutvikling I



Navn: Akustisk absorbent A
Produkt: LYDAC P og OSB
Materiale: Lydac P = Polyurethane skum (uten CFC) og plast membran. OSB = spon og PF (fenol formaldehyd), MUPF (melamin-urea fenol formaldehyd) og MDI (isocyanat)

Leverandør: hjemmelaget
Produseres: Lydac P = Danmark
Vekt: Ca 8kg totalt, 1,3kg pr lamell

Technical Data	
Colour	foam: anthracite, surface: black, medical grey
Fire behaviour DIN 75200 FMVSS 302	B<100 mm/min SE/NBR (13 mm)
Temperature stability	-40°C to +100°C, temporarily higher
Environmental aspect	contains no fibres, foamed without use of CFC, physiologically safe
Storage	cool and dry, 6 months

Lydac P produktdata

Tabell 33
Lydabsorpsjonskoeffisienten for OSB-plater iht. NS-EN 13986

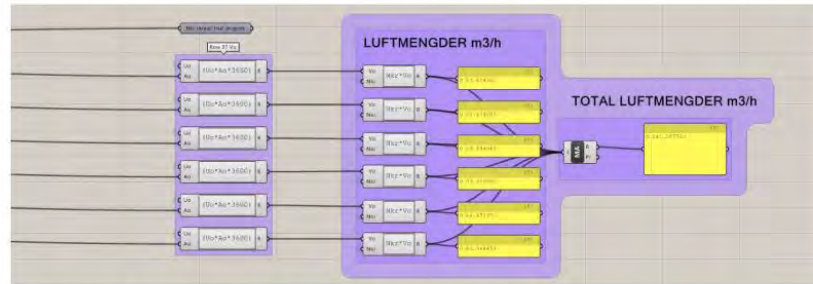
Lydabsorpsjonsfaktor	
Frekvensområde 250 og 500 Hz	Frekvensområde 1 000 og 2 000 Hz
0,10	0,25



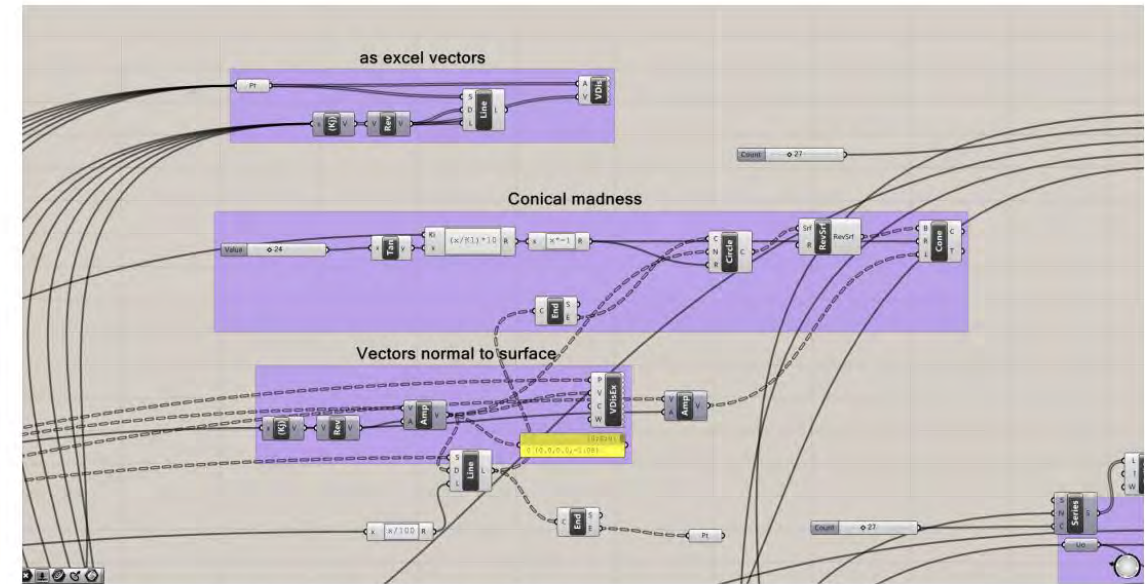
Lydac P frekvensmålinger

Snøhetta

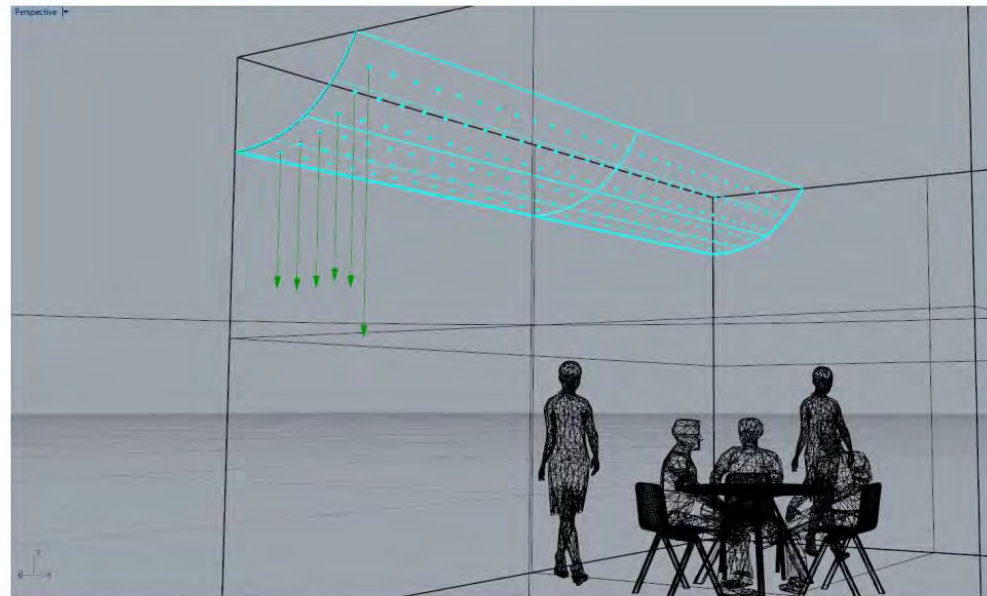
Produktutvikling II



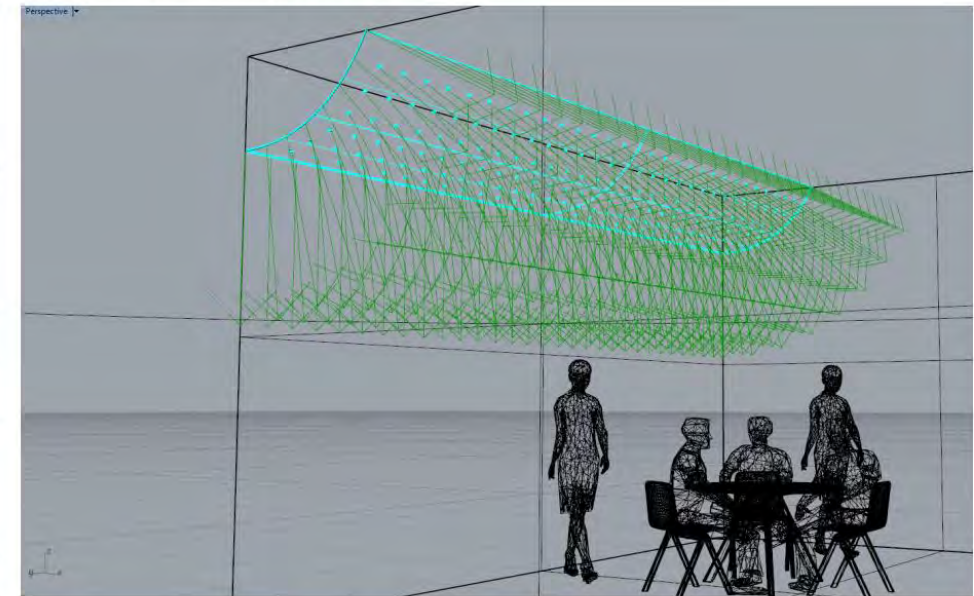
Air volume as result of calculations (version 1.0)



Physical generation interface in Rhino model (version 1.2)

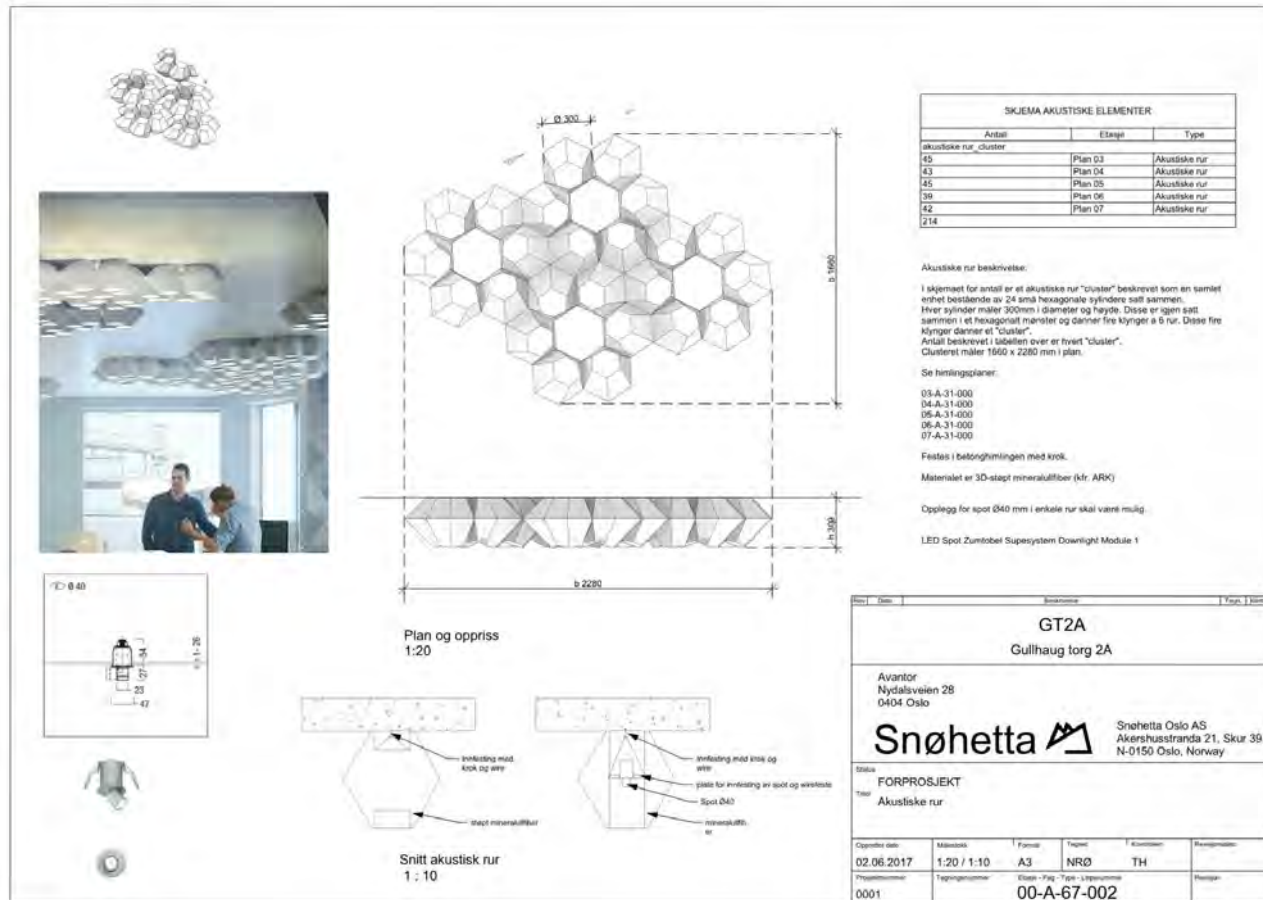


Vectors - as excel version (1.0)



Vectors - normal to surface as version (1.1)

Produktutvikling III



Endret praksis!



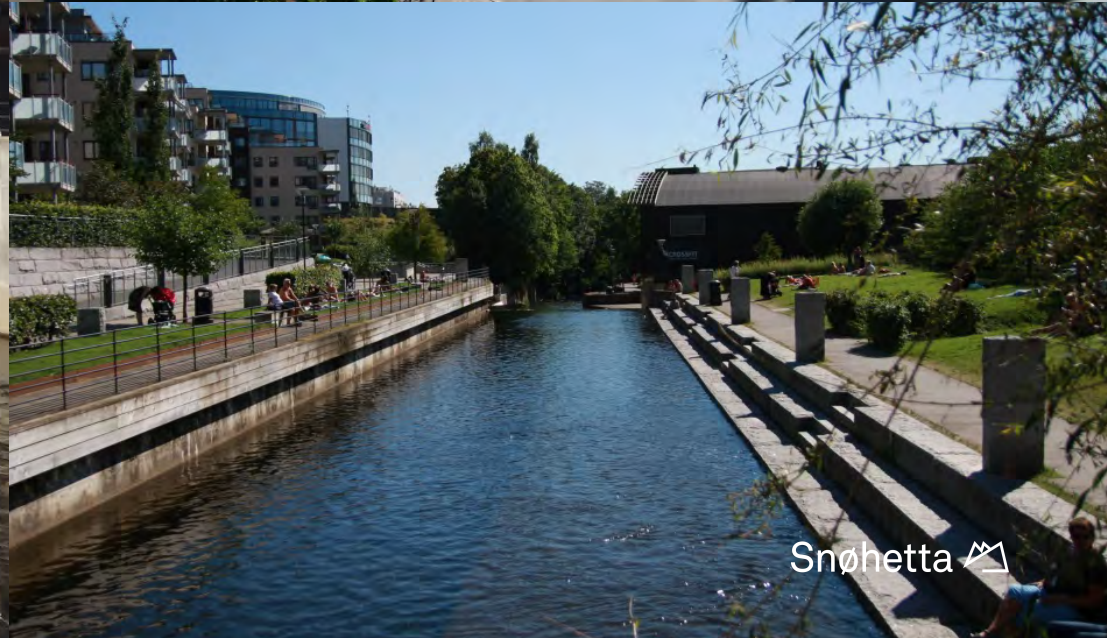
Byutvikling



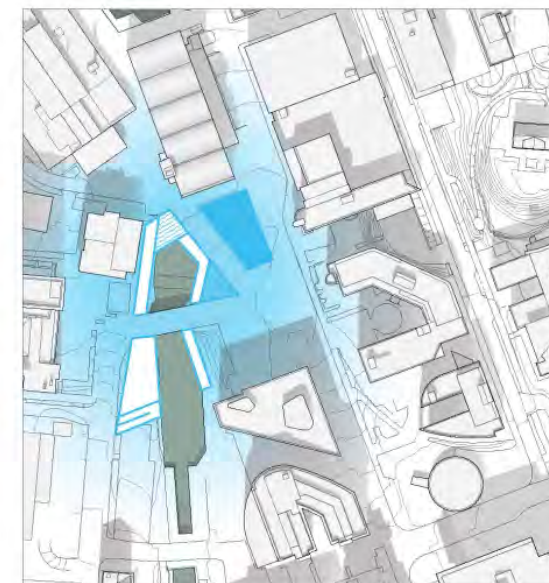
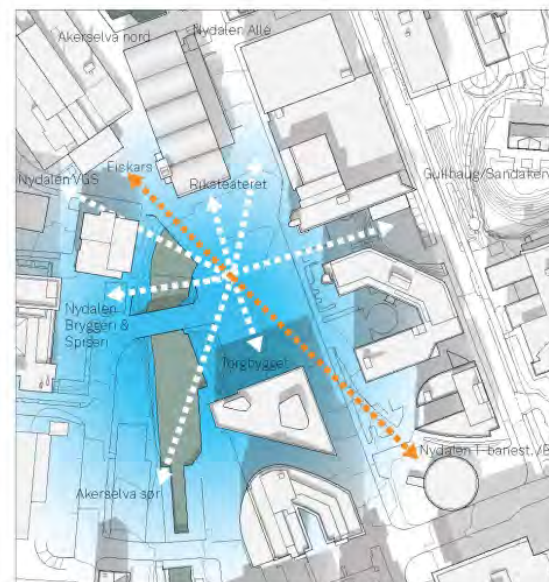
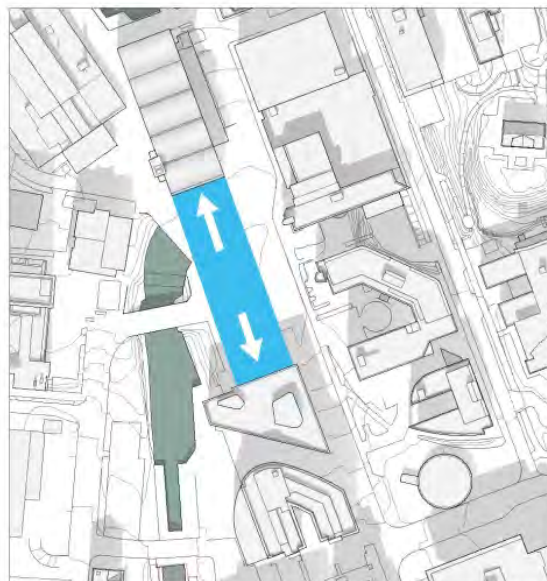
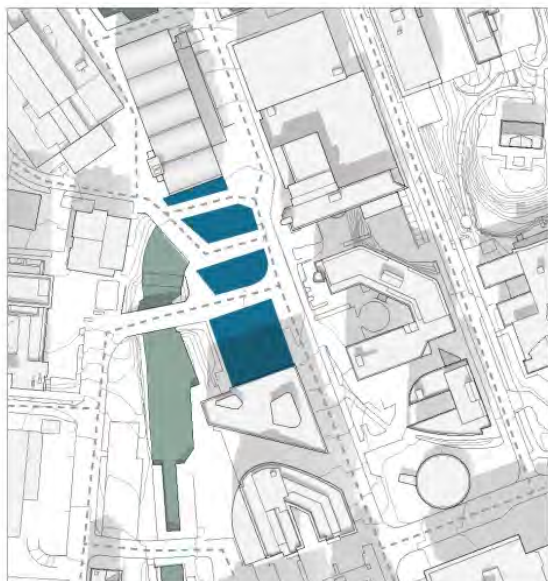


Akerselva

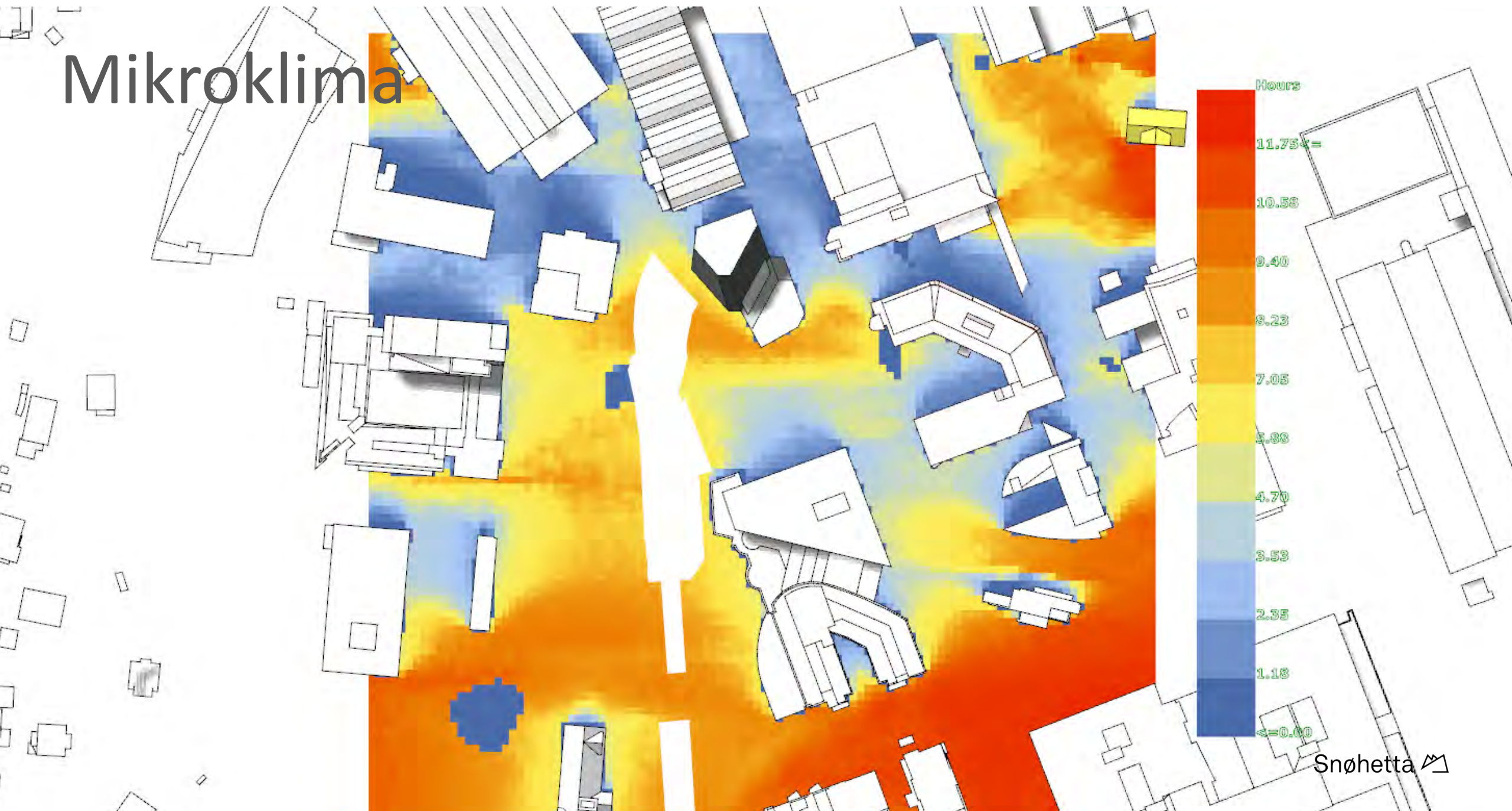
Gullhaug Torg



Byrom



Mikroklima









NYVY

Illustrasjon: Snøhetta / MIR

Snøhetta 