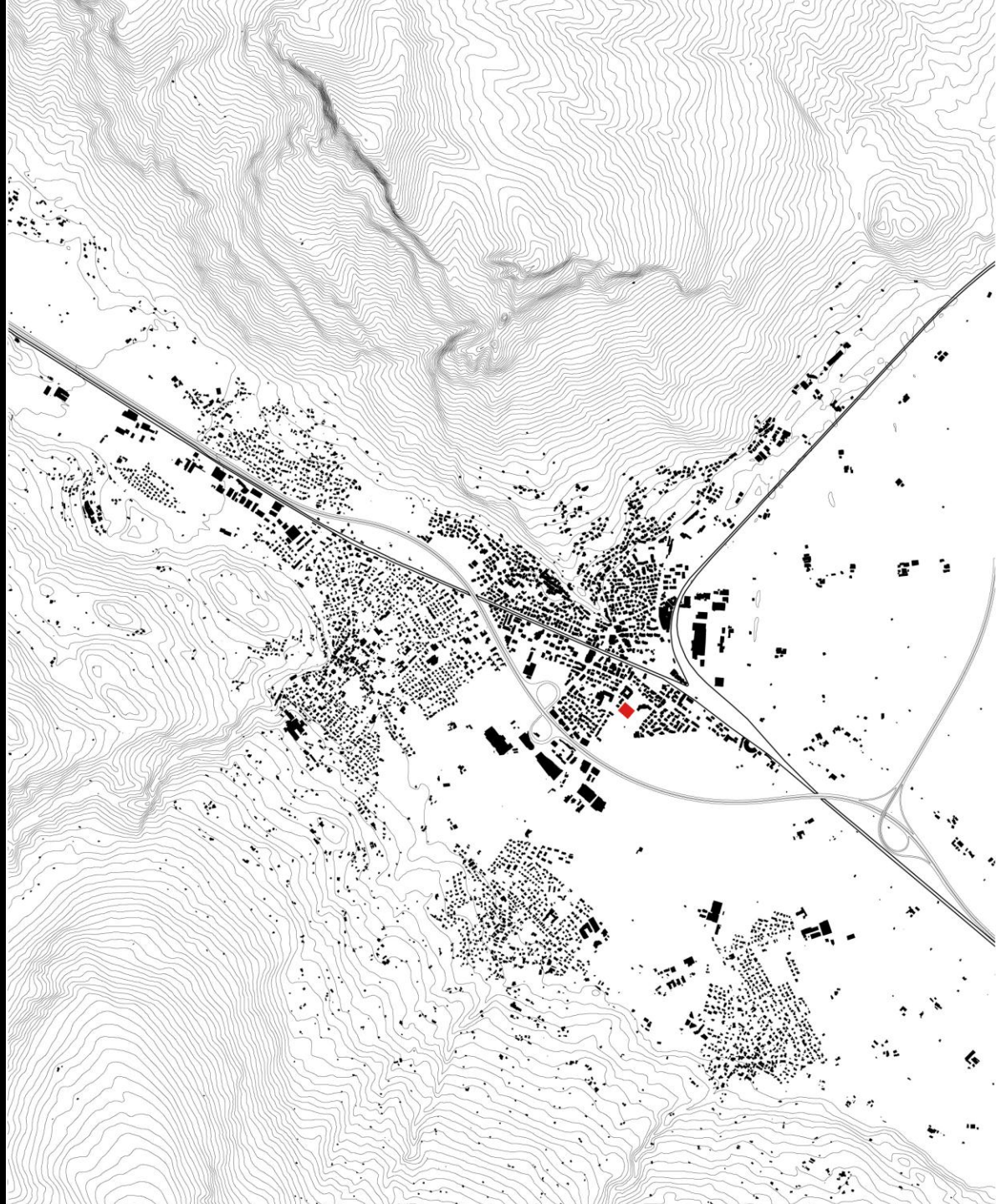


Sargans: Innovative Vierfachhalle in Holz

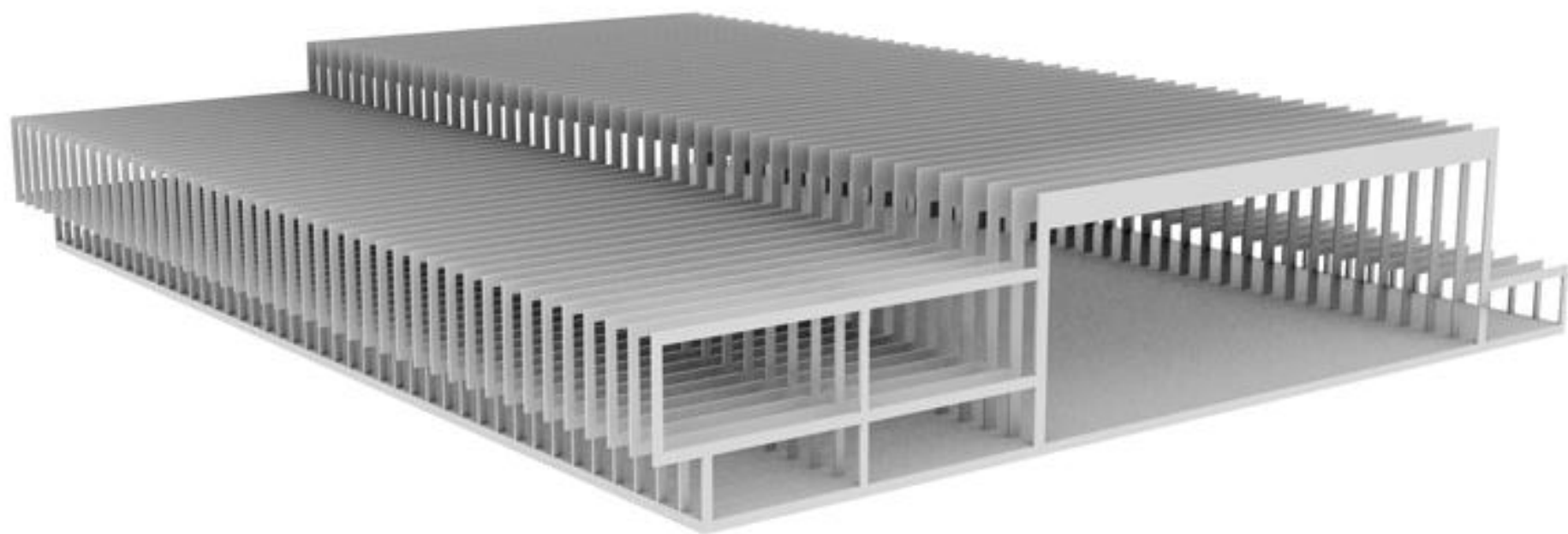
Blue Architects & Ruprecht Architekten

IOC/IAKS Award for Exemplary Sports and Leisure Facilities 2015

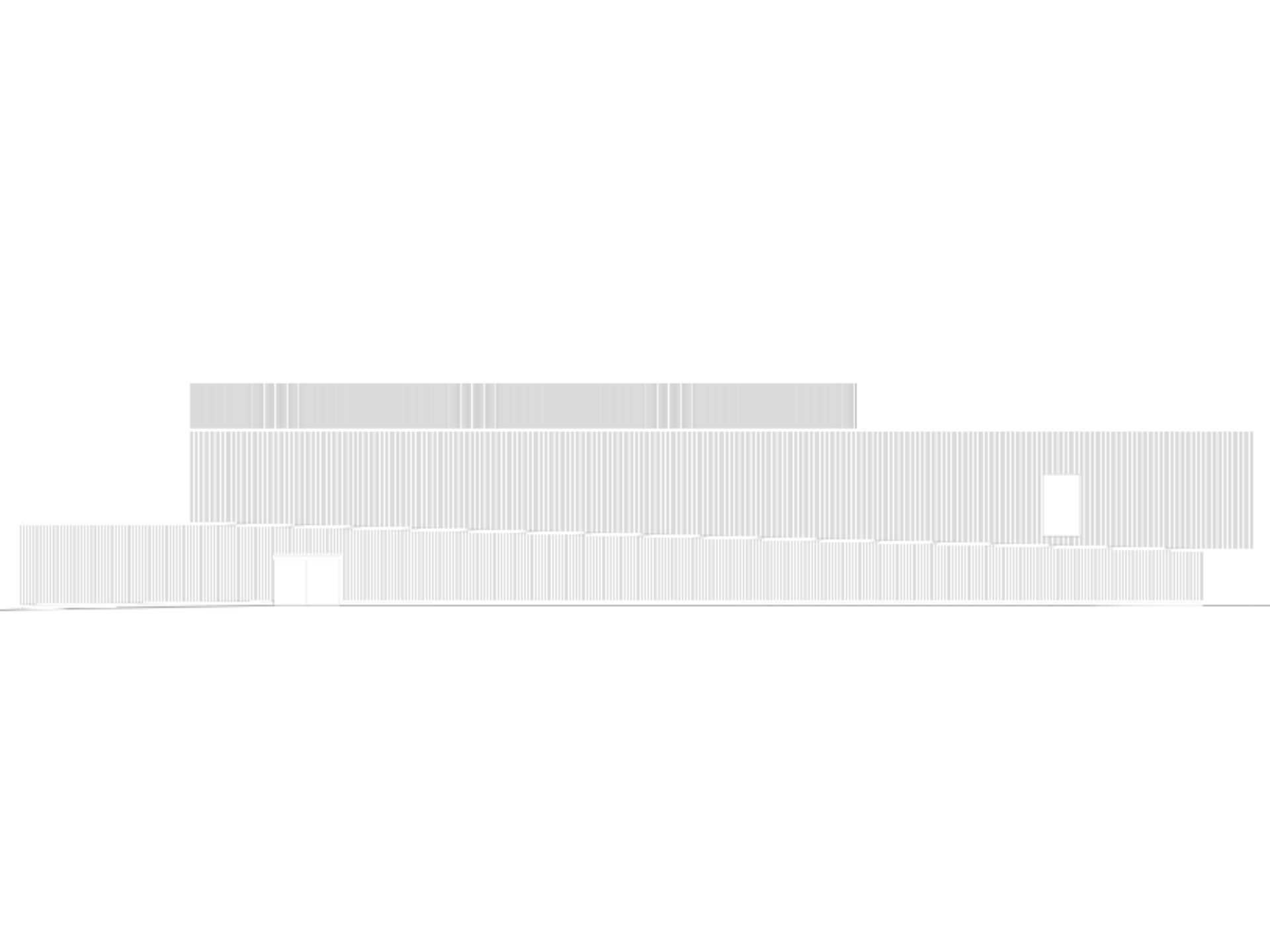


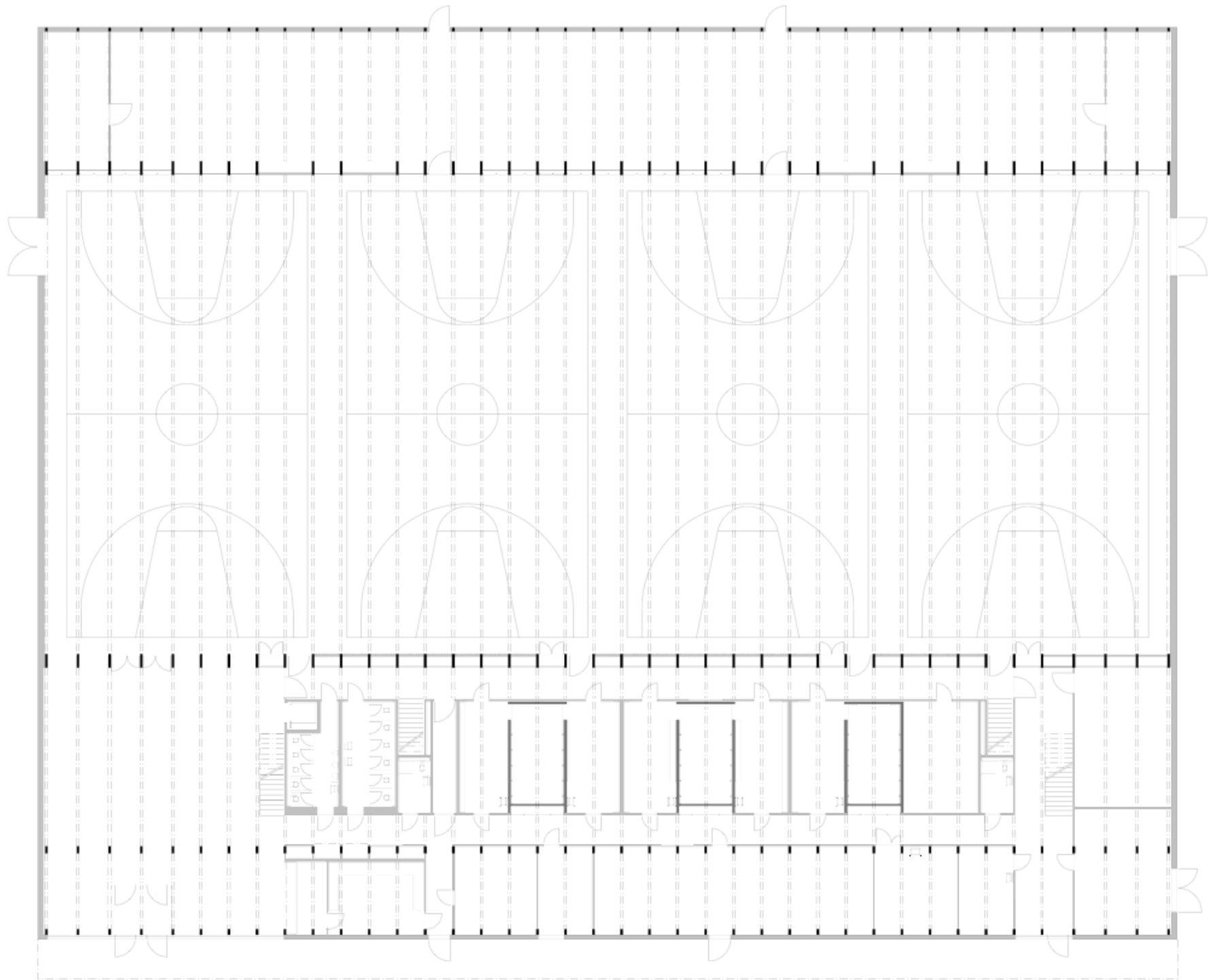


























































2500 m³

...of raw timber was needed for the
construction

1'250m³

...is the amount of the processed wood

2000

...fir trees correspond to the amount of
wood used

3h 21min

... this is the time needed for the
regrowth of the raw timber counting
all forests in Switzerland

63%

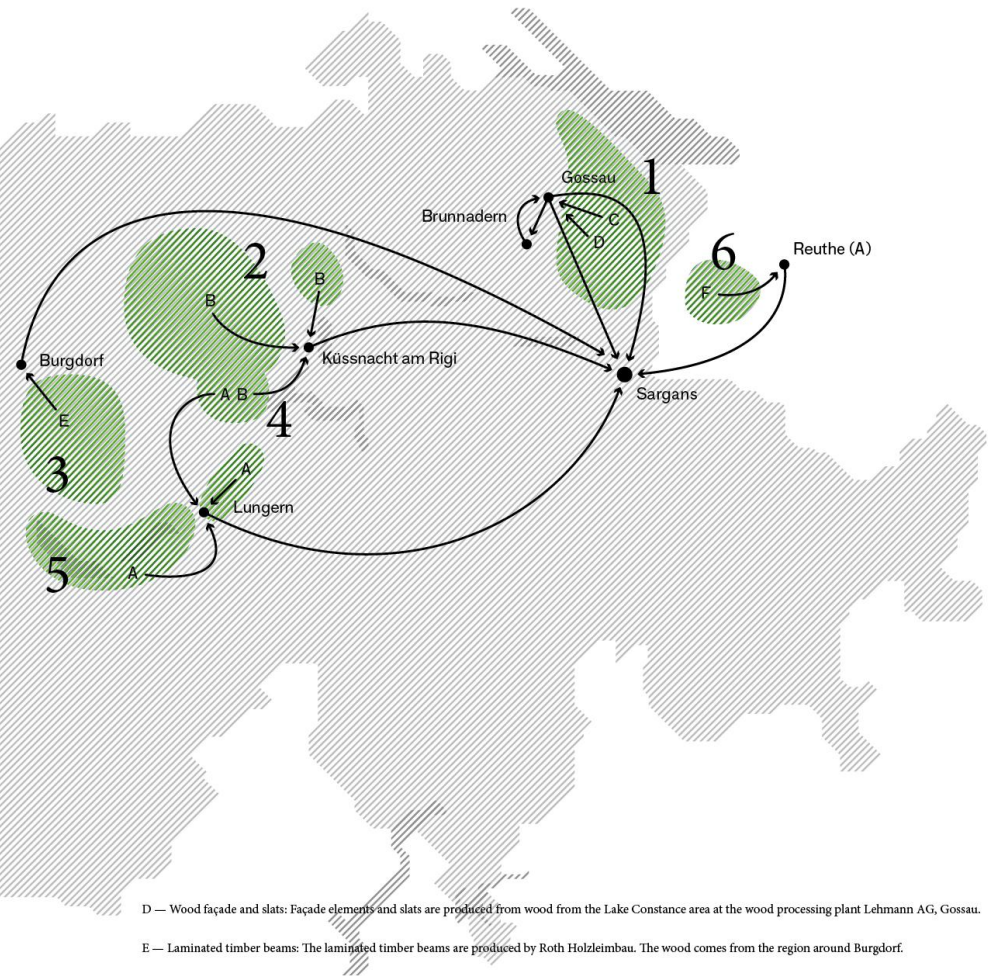
...of the wood is of Swiss origin

94%

...of the wood was processed in
Switzerland

Woodlands

- 1 — Bodensee
- 2 — Zürich / Aarau
- 3 — Burgdorf
- 4 — Luzern
- 5 — Thunersee / Obwalden
(Eschenholz | Ash wood)
- 6 — Bregenzerwald



Transportation routes

A — Laminated timber frames sports center: The Neue Holzbau AG, Lungern, obtains its spruce for the laminated timber frames from the region around Lucerne. The ash wood is from the region Lake Thun / Obwalden.

B — Ceiling elements: The large format panels are produced at Schillinger Holz in Küssnacht. The wood comes from the region Zurich / Aarau. The large format panels are being transferred to the company Bisag in Küssnacht, where the acoustic elements and the substructure for the equipment and the lighting are preinstalled, before the finished elements are transported to the building site.

C — Walls: The wood used for the lamella planks of the wall's laminated timber beams is obtained from the Lake Constance region. They are cut to size at the wood processing plant Lehmann AG in Gossau and then delivered to Necker Holz in Brunnadern for further processing. After receiving the laminated timber beams back, Blumer-Lehmann then uses them to fabricate the interior wall- exterior wall- flooring- and ceiling-elements.

D — Wood façade and slats: Façade elements and slats are produced from wood from the Lake Constance area at the wood processing plant Lehmann AG, Gossau.

E — Laminated timber beams: The laminated timber beams are produced by Roth Holzleimbau. The wood comes from the region around Burgdorf.

F — Construction timber / Double wood constructions: The substructures are from the Bregenzer Forest and are produced by Mayr-Melnhof Kaufmann in Reuthe.

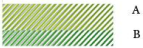
Value chain exemplified by laminated timber frames



Timber Extraction

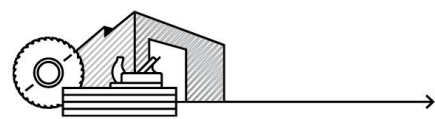
Forest owner	10.- / m³
Harvesting	44.- / m³
Transportation	26.- / m³
Maintenance (Roads, upkeep, pests)	80.- / m³

160.-/m³



Value enhancement Wood	160.- / m³
A — Salaries	63 %
B — Infrastructure	37 %

Value chain exemplified by laminated timber frames



Sawmill and Planing Facility

Purchase logs (high quality)	160.– / m³
Price after sawing / planing	280.– / m³

Value chain diagram

280.–/m³



Value enhancement Wood	280.– / m³
A — Salaries	25%
B — Infrastructure	75%

Value chain exemplified by laminated timber frames



Lamination Facility

Purchase (from Sawmill/Planing Facility) 280.- / m³
Price Laminated Veneer Lumber 750.- / m³

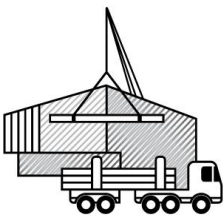
Value added in Lamination Facility

750.-/m³



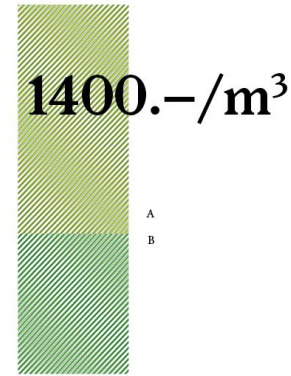
Value enhancement Wood 750.- / m³
A –Salaries 50 %
B –Infrastructure 50 %

Value chain exemplified by laminated timber frames



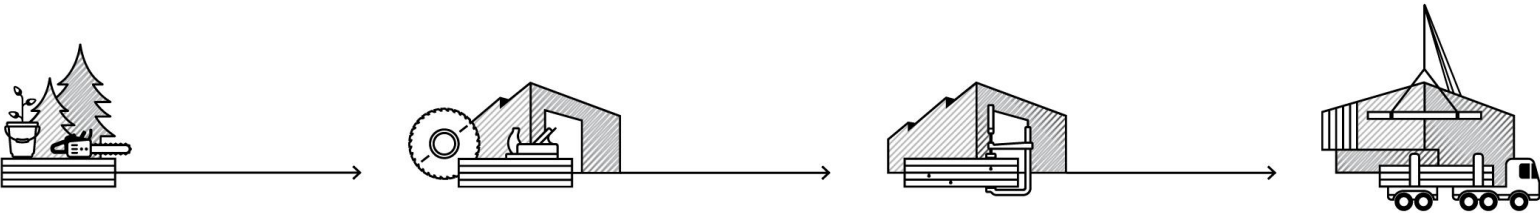
Construction Site

Finished Product 1400.- / m³



Value enhancement Wood	1400.- / m³
A — Salaries	62%
B — Infrastructure	38%

Value chain exemplified by laminated timber frames



Timber Extraction

Forest owner	10.- / m ³
Harvesting	44.- / m ³
Transportation	26.- / m ³
Maintenance (Roads, upkeep, pests)	80.- / m ³

160.- / m³



Value enhancement Wood	160.- / m ³
A — Salaries	63 %
B — Infrastructure	37 %

Sawmill and Planing Facility

Purchase logs (high quality)	160.- / m ³
Price after sawing / planing	280.- / m ³

280.- / m³



Value enhancement Wood	280.- / m ³
A — Salaries	25 %
B — Infrastructure	75 %

Lamination Facility

Purchase (from Sawmill/Planing Facility)	280.- / m ³
Price Laminated Veneer Lumber	750.- / m ³

750.- / m³



Value enhancement Wood	750.- / m ³
A — Salaries	50 %
B — Infrastructure	50 %

Construction Site

Finished Product	1400.- / m ³
------------------	-------------------------

1400.- / m³



Value enhancement Wood	1400.- / m ³
A — Salaries	62 %
B — Infrastructure	38 %









