SwissConcreteView

Build with confidence and in good faith

We can’t live without infrastructure… but is it green?

A rough estimation gives us an idea that 1 tonne of cement is equal to…

one tonne of Co2.

And how many tonnes do you need to build anything?

A LOT.

Cement is driving Co2 but its amount can be different

Raw Material	SI Value	SI Unit	US Value	US Unit
Portland Cement	1.04	kg CO2e/kg	0.47173568	kg CO2e/lb
Fly Ash	0	kg CO2e/kg	0	kg CO2e/lb
Slag	0.15	kg CO2e/kg	0.0680388	kg CO2e/lb
Water	0.002	kg CO2e/kg	0	kg CO2e/lb
Coarse Aggregate	0.01	kg CO2e/kg	0.00453592	kg CO2e/lb
Fine Aggregate	0.01	kg CO2e/kg	0.00453592	kg CO2e/lb
Air Entraining Admixture	0.53	kg CO2e/kg	0.24040376	kg CO2e/lb
Water Reducer Admixture	1.88	kg CO2e/kg	0.85275296	kg CO2e/lb
Other Admixture	2.22	kg CO2e/kg	1.00697424	kg CO2e/lb
Retarder	2.711686	kg CO2e/kg	1.229999076	kg CO2e/lb
Set Accelerator	2.954194	kg CO2e/kg	1.339998765	kg CO2e/lb

Concrete mix to the left has more cement and more Co2

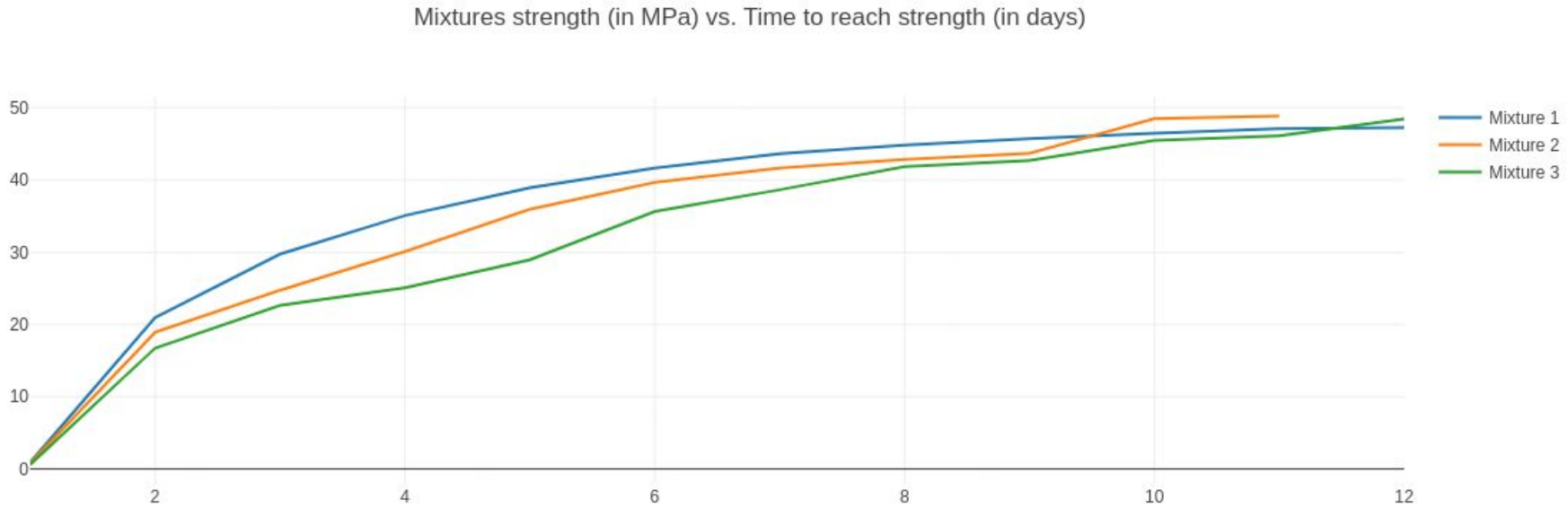
	material_description	quantity
1	CEM I (52,5N)	411
2	4/20mm Limestone (EN 12620)	1123
3	0/4mm Limestone (EN 12620)	411
4	0/4mm Sand MP (EN 12620)	260
5	Chrysoplast RMD	2.47
6	Water	185

Embodied carbon estimate: 361.24 kg/m3

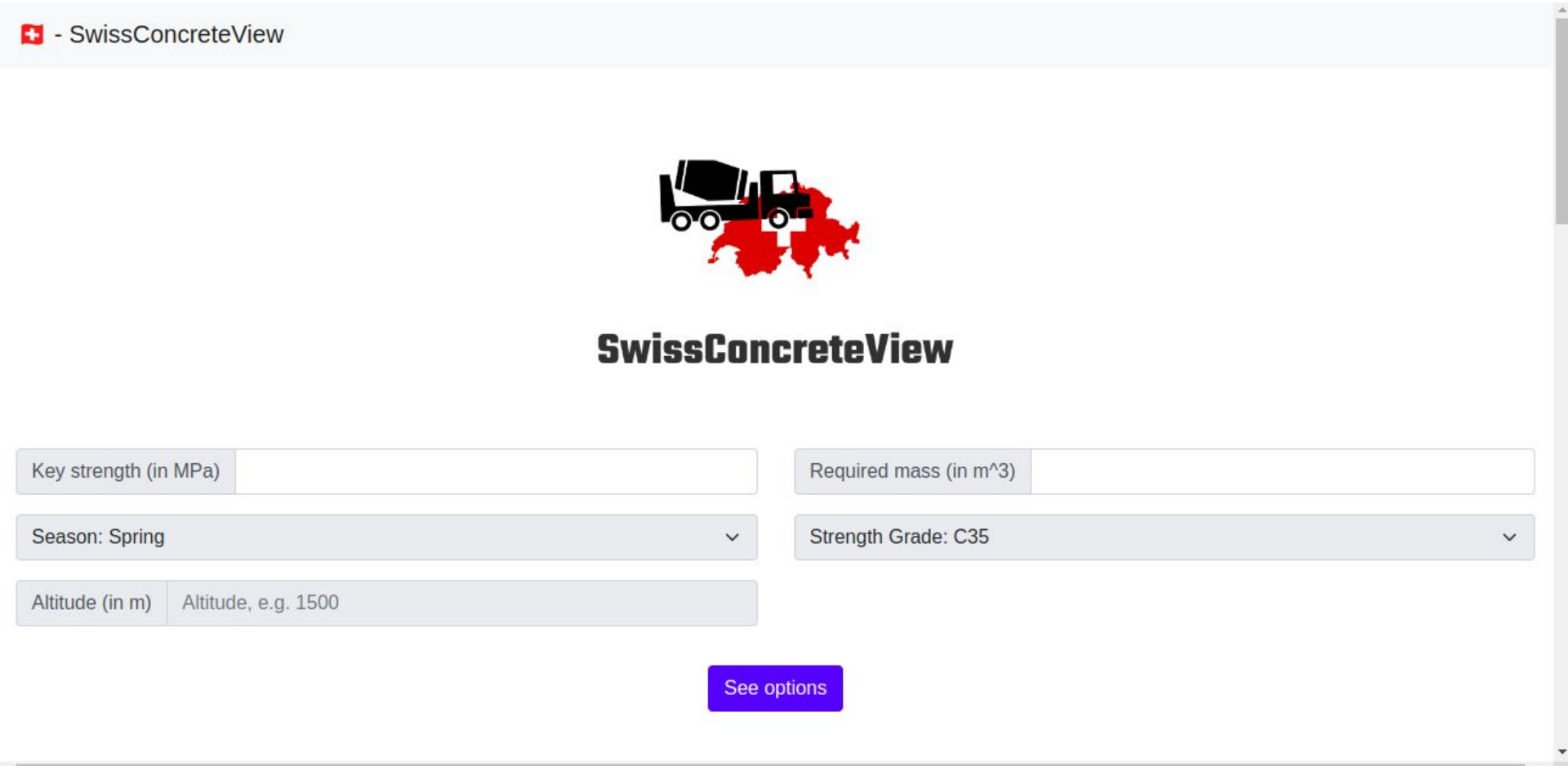
	material_description	quantity
1	CEM1 (Santander)	220
2	GGBS	220
3	Sand 0/4	803.86
4	4/20 limestone	1017.96
5	Water	152.56
6	Masterglenium 1966	1.98

Embodied carbon estimate: 215 kg/m3

A more informed approach to concrete mixture ordering could've helped reduce C02 emissions…



…so we've built a quick PoC for that



You can try yourself the first (and rough) version of it :)

SwissConcreteView.linusl.de

Thank you!