



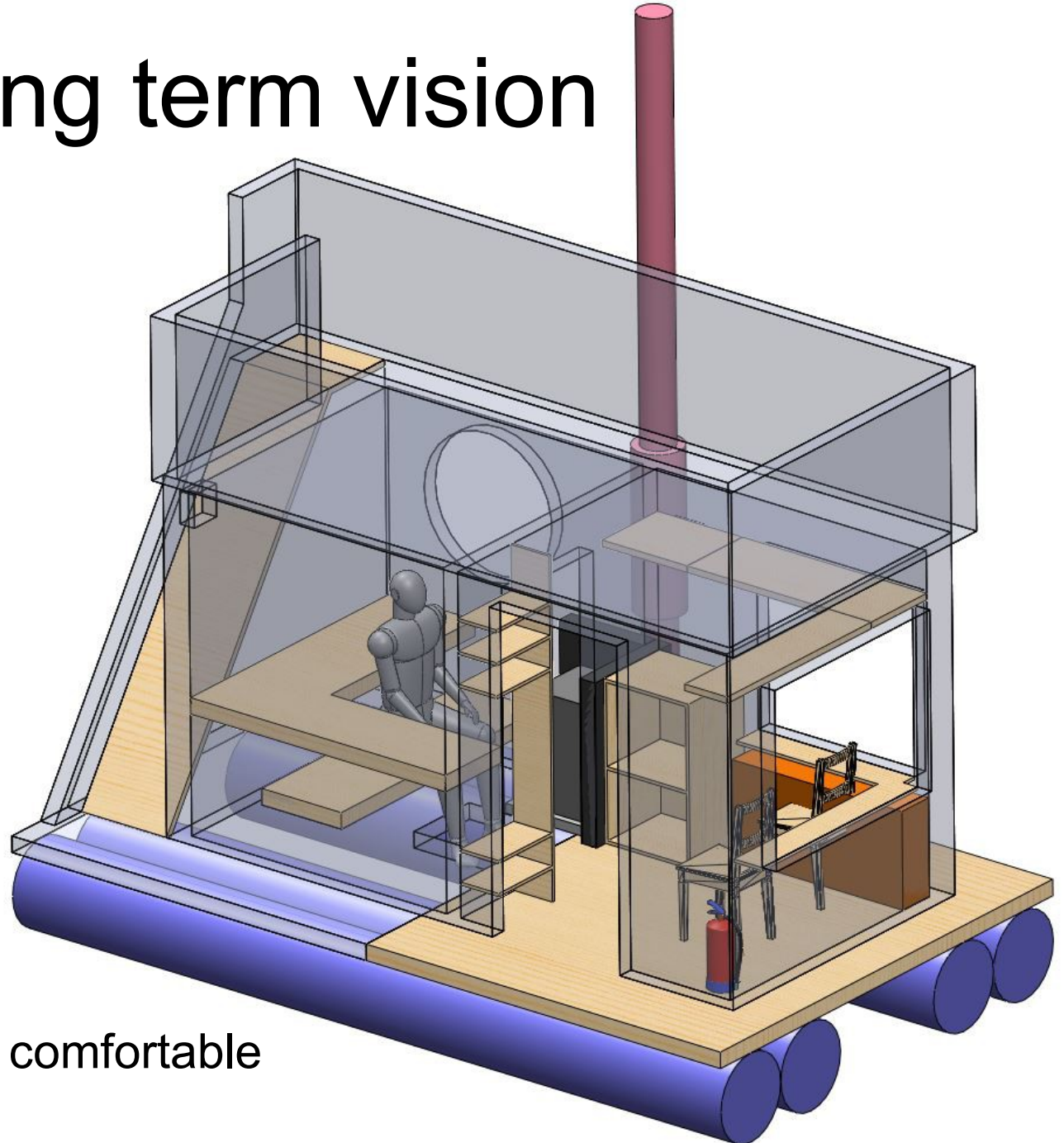
Concept construction plan Oslo Steamsauna

- Breakdown into flat parts, no wider than 2,5 m for easy road transport.
- Construction at Fellesverkstedet
- Component storage at ?
- Assembly and launch at ?
- Harbour at ?



Long term vision

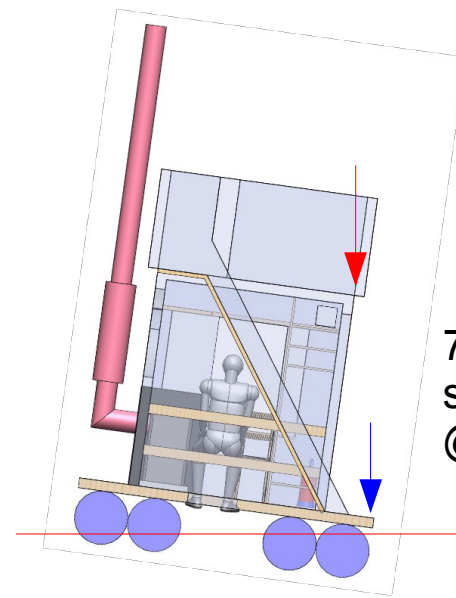
- 3 wide 5 m long raft
- 4 tons buoyancy
- 2*2 m sauna room
- 2*2 m relax
- 4*2 m roof balcony
- Estetic wood finish
- Electric propultion
- Functional kitchen
- Hot water generation
- Steam-electric power
- Wind power?



- Safe, easy, clean and comfortable

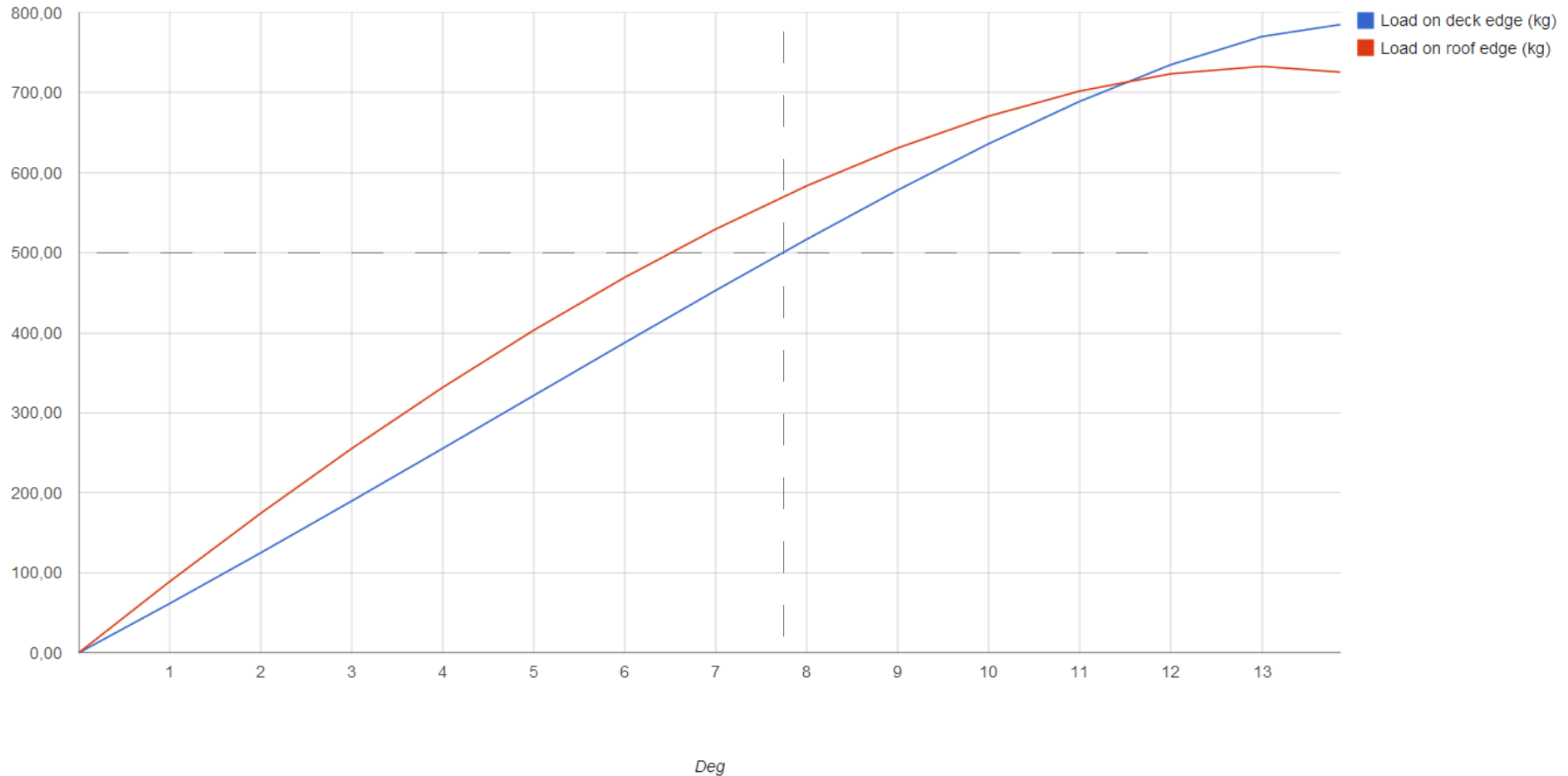
Stability

- Constant 2000 kg total mass
- Static weight is assumed to be centered
- Some simplifications are included
- Can not be flipped with 500 kg mobile load! (~50% margin)



7,8 deg roll
shown = Max
@ 500 kg

Tilt when loaded (2000 kg total mass)

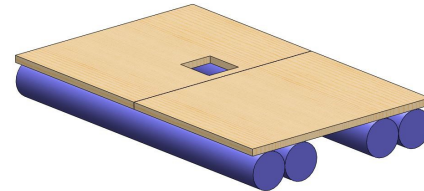


Phase breakdown

Phase

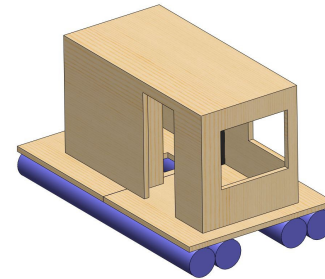
1.Functional Raft

- 6 components



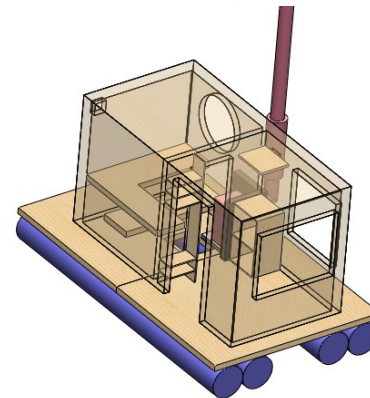
2.Functional House boat

- 10 components



3.Functional Sauna boat

- ~7 components



4.*Functional Monotube coil*

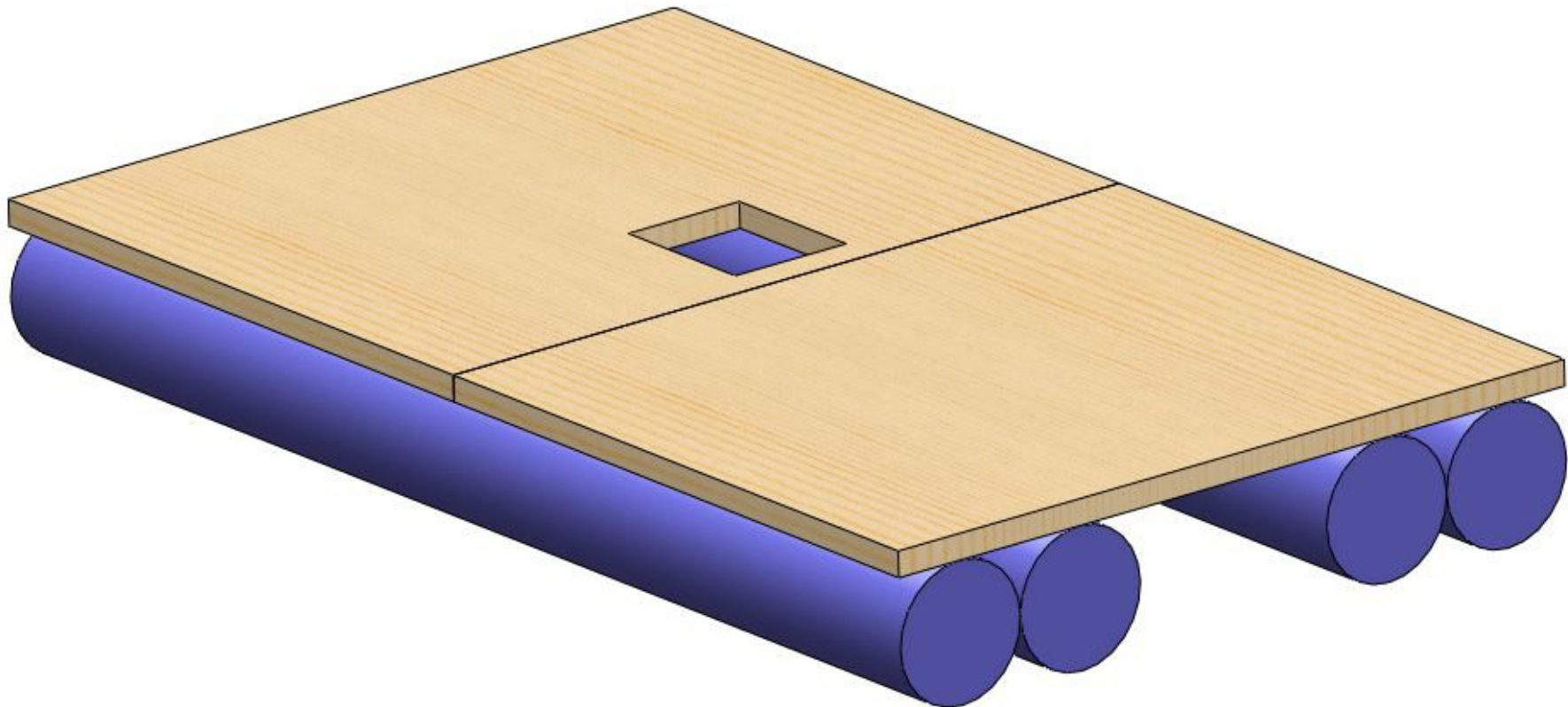
- *2 components*



Phase 1 goal: Functional raft

Components:

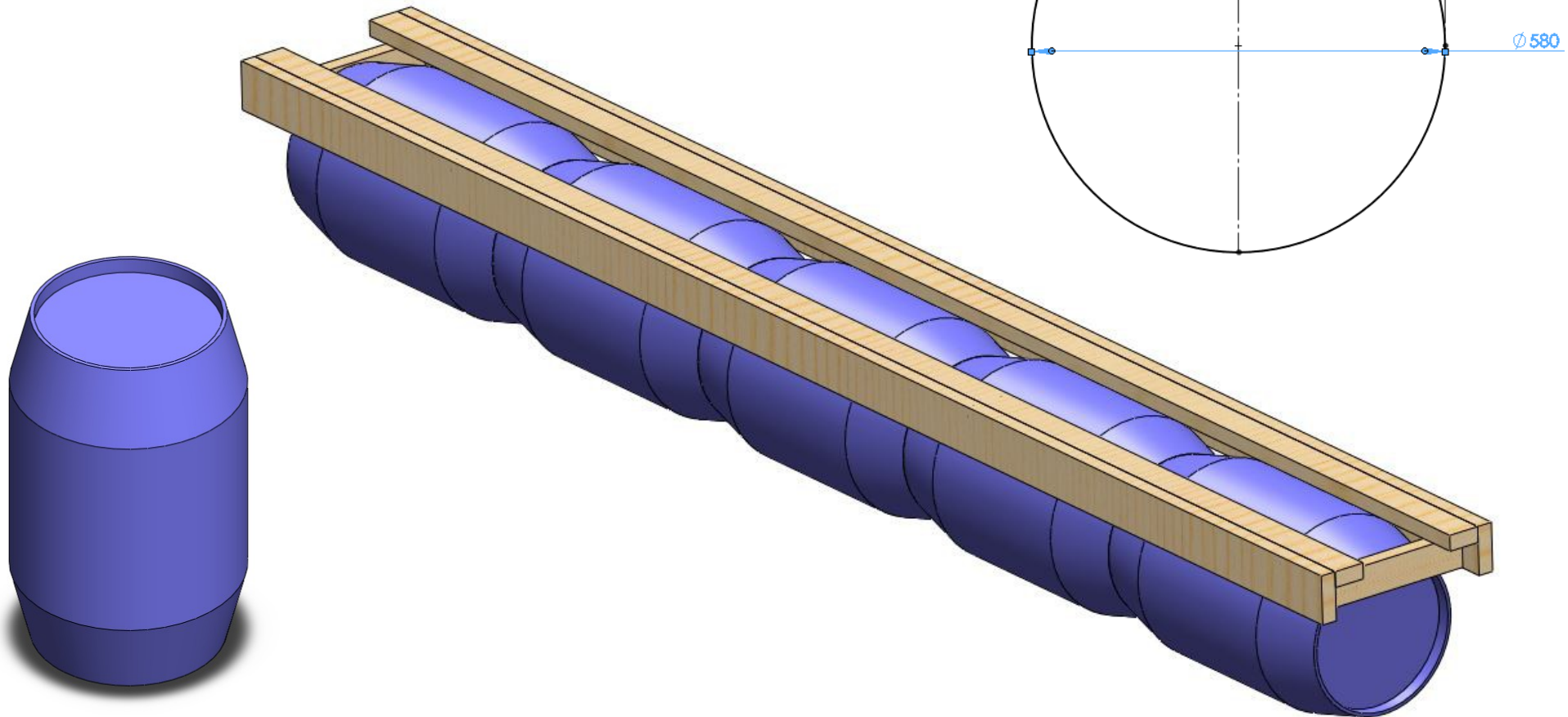
- 4 off Pontoons
- 2 off Deck-sections



Functional raft

Pontoon design

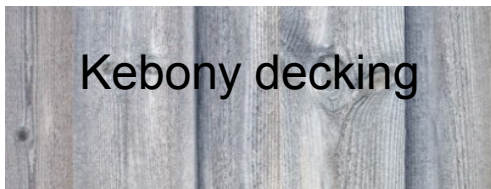
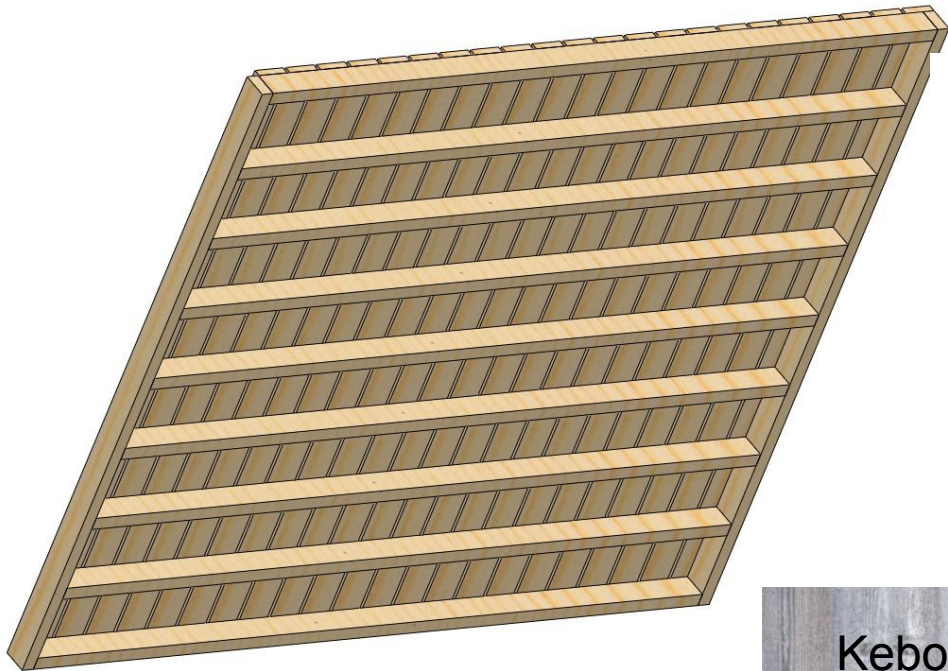
- 2 off 5 m long wooden L-beams. Impregnated wood
- 5 off 200 litre barrels, each Dia 580 mm Height 940 mm
- Wood will not touch the sea
- Barrels will be strapped to beams with baggage straps



Functional raft

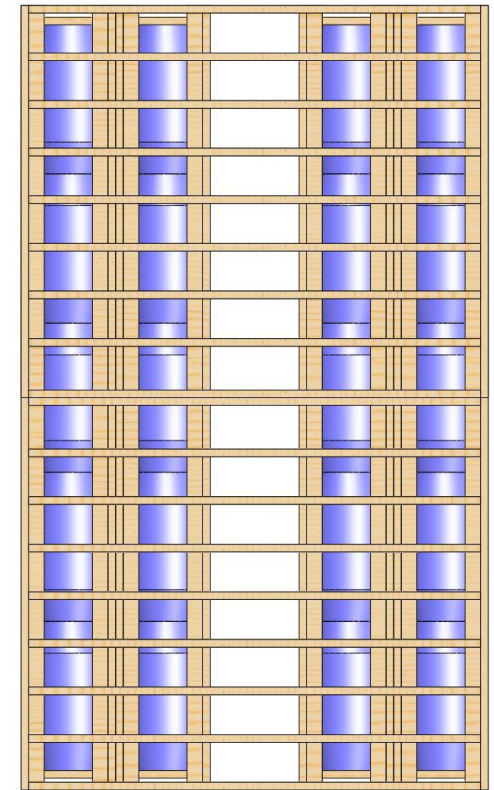
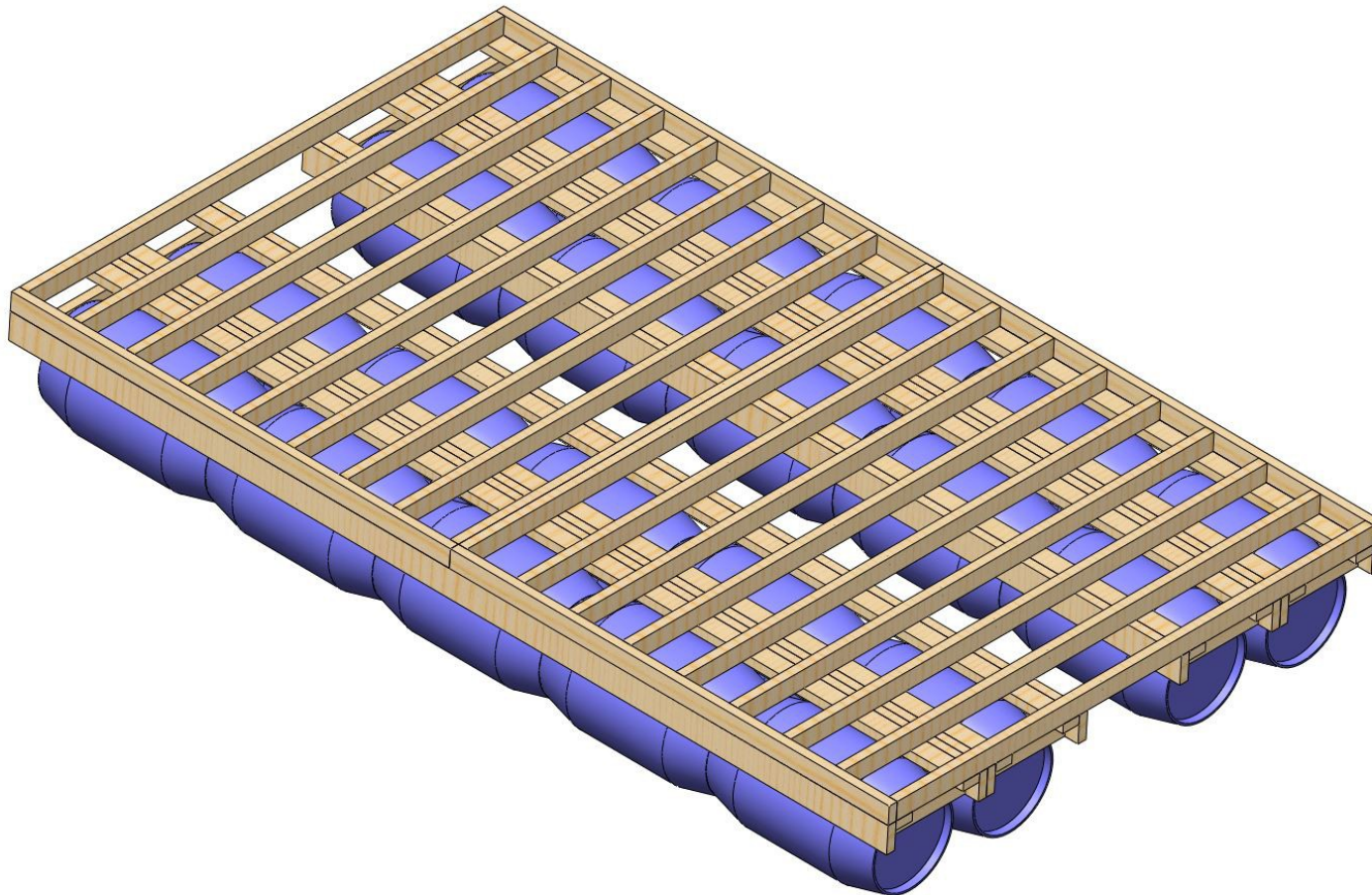
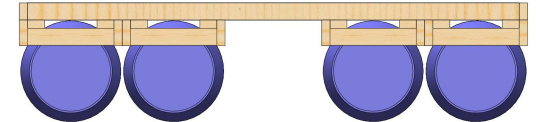
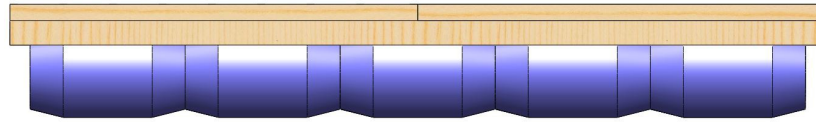
Deck sections

- Impregnated 100*48 mm beams and 120*28mm kebony decking
- Each 3000 mm * 2500 mm * 100 mm
- Joins up to create a 5000 * 3000 mm deck
- Bolted connection and access to it needs to be prepared
- Floor hatch in sauna section
- Sauna section to have ~5 mm spaced decking
- Relax section to have insulated and tight packed decking



Functional raft

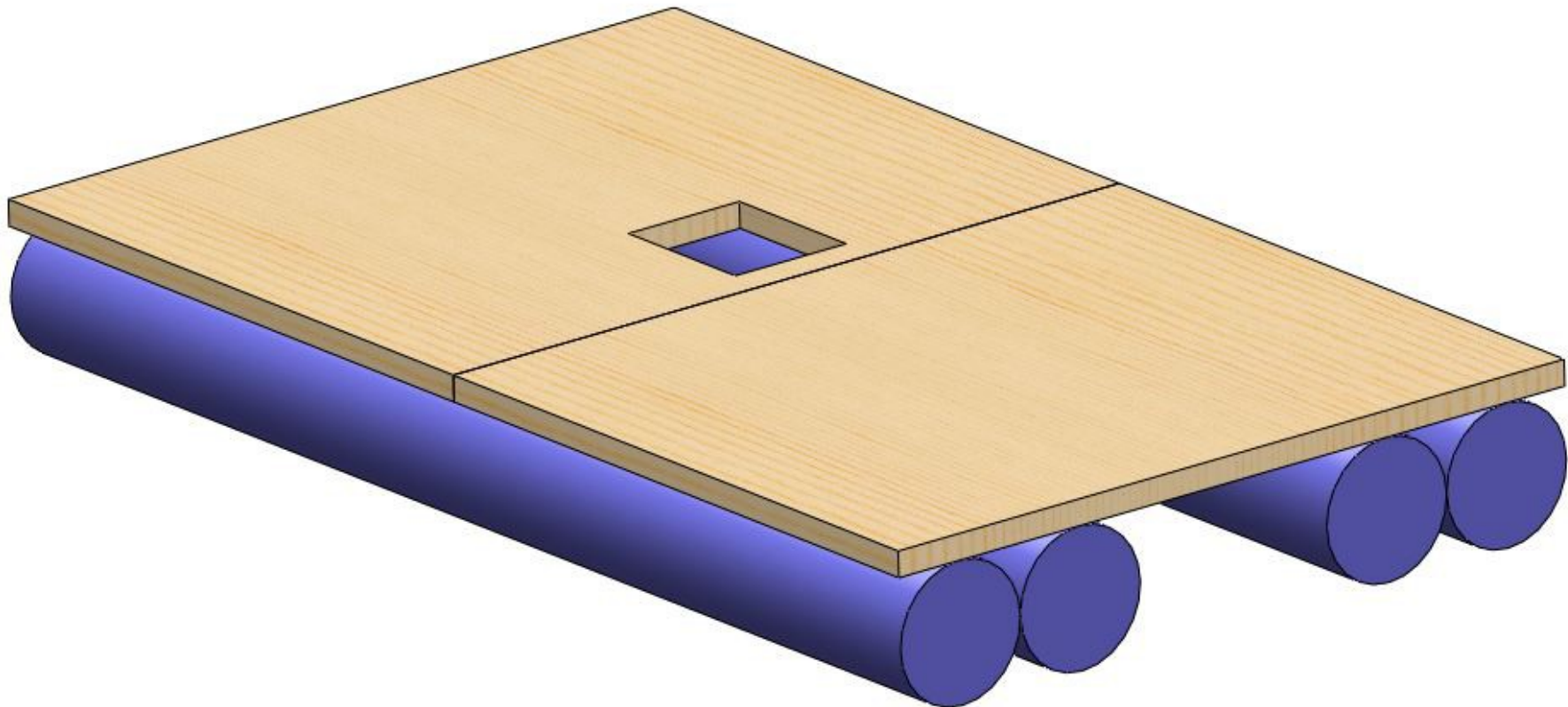
Structural design – decking hidden



Phase 1 goal: Functional raft -COMPLETE!

Components:

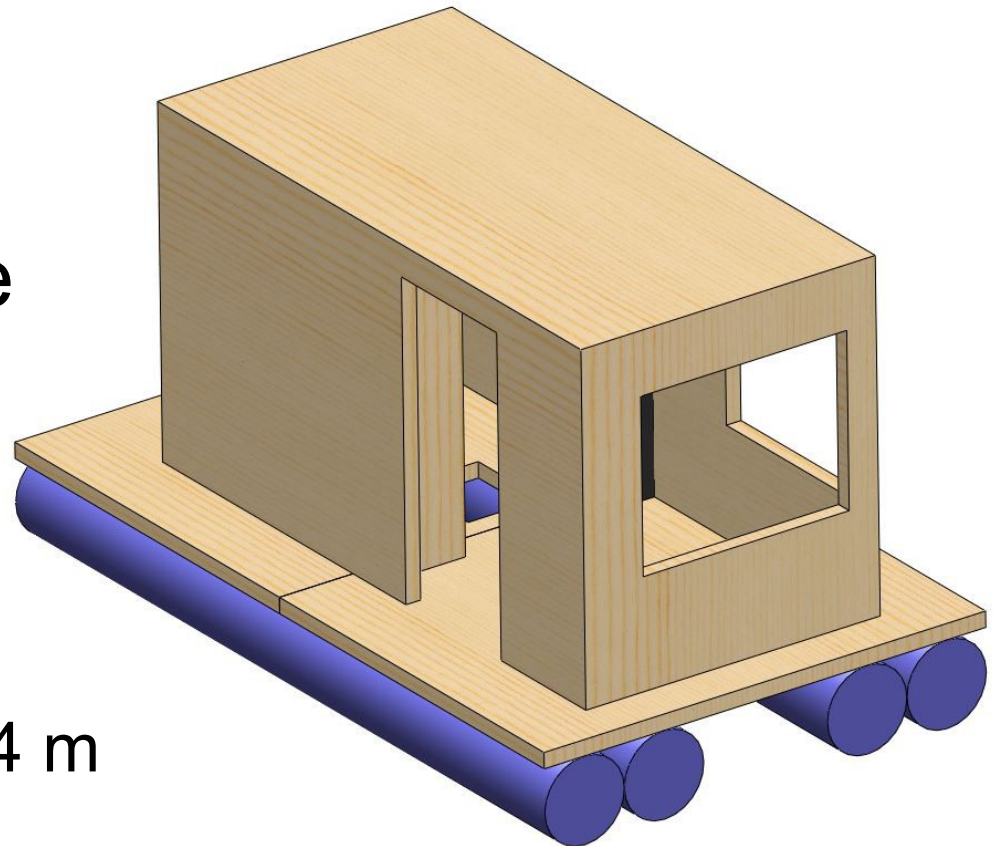
- 4 off Pontoons
- 2 off Deck-sections



Phase 2 goal: Functional house boat

Components:

- 4 off insulated outer walls
- 1 flat weatherproof roof
- 3 off windows
- 1 off outer door
- 1 off outboard engine

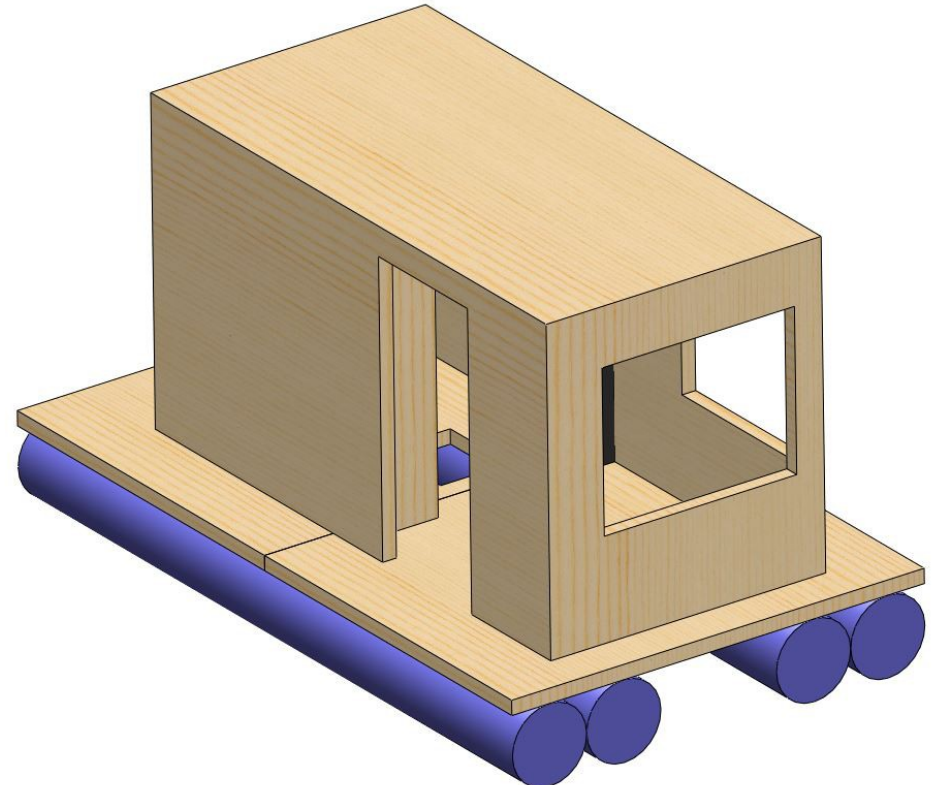
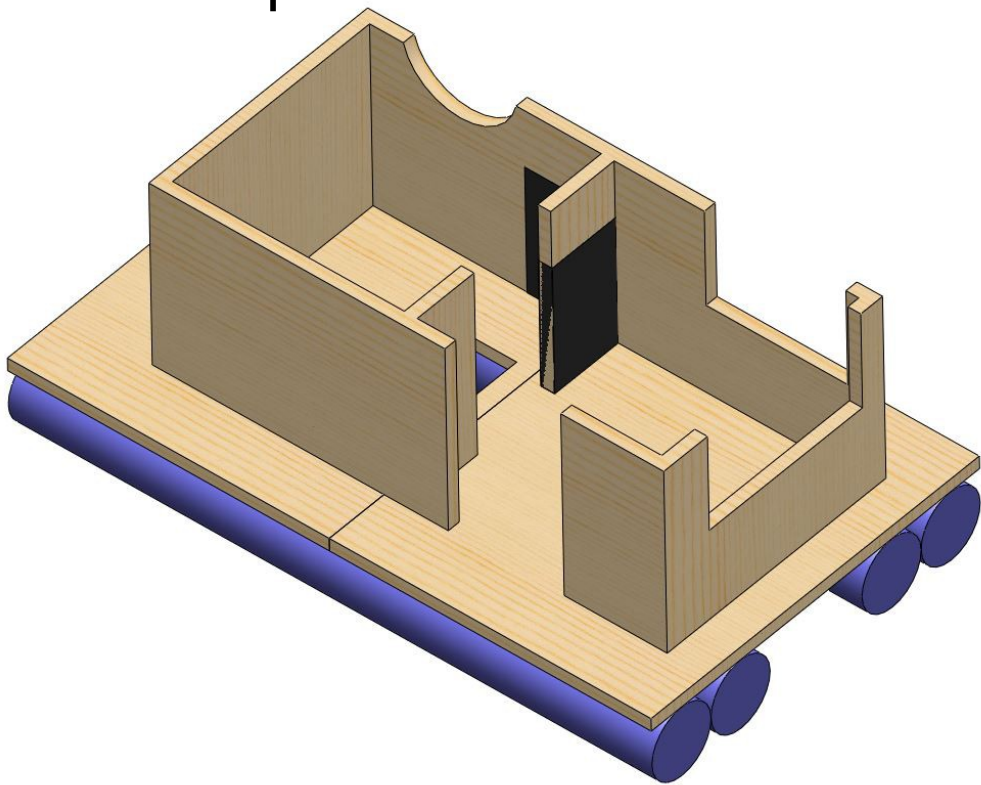


Building outer dimensions 2*4 m
Outer height 2,2 m

Functional house boat

Walls:

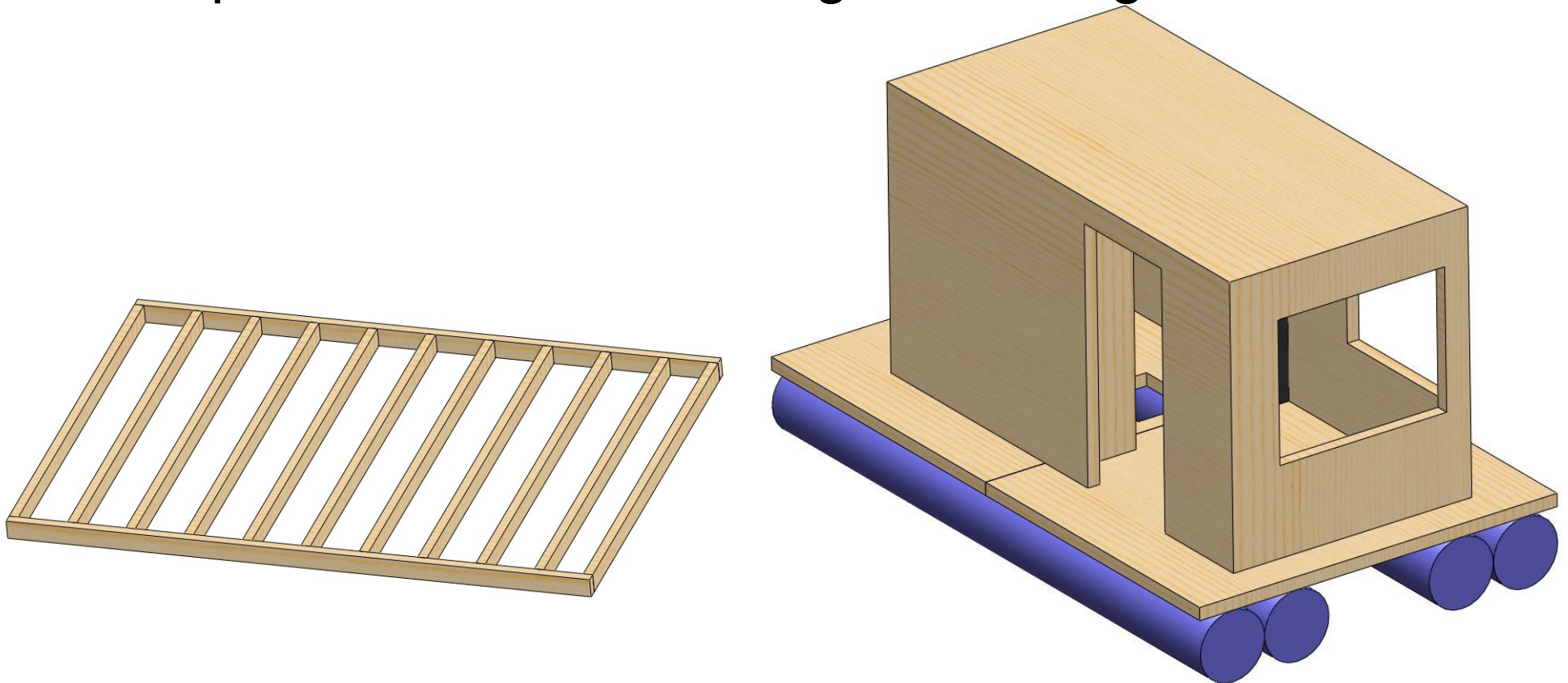
- Insulated walls
- Shall support the roof
- Estetic wood finish on both sides
- Perpare for fireproof wall in sauna corner
- Inner wall sections will be added later
- Prepare electrical channels /cables to corners



Functional house boat

Flat weatherproof roof

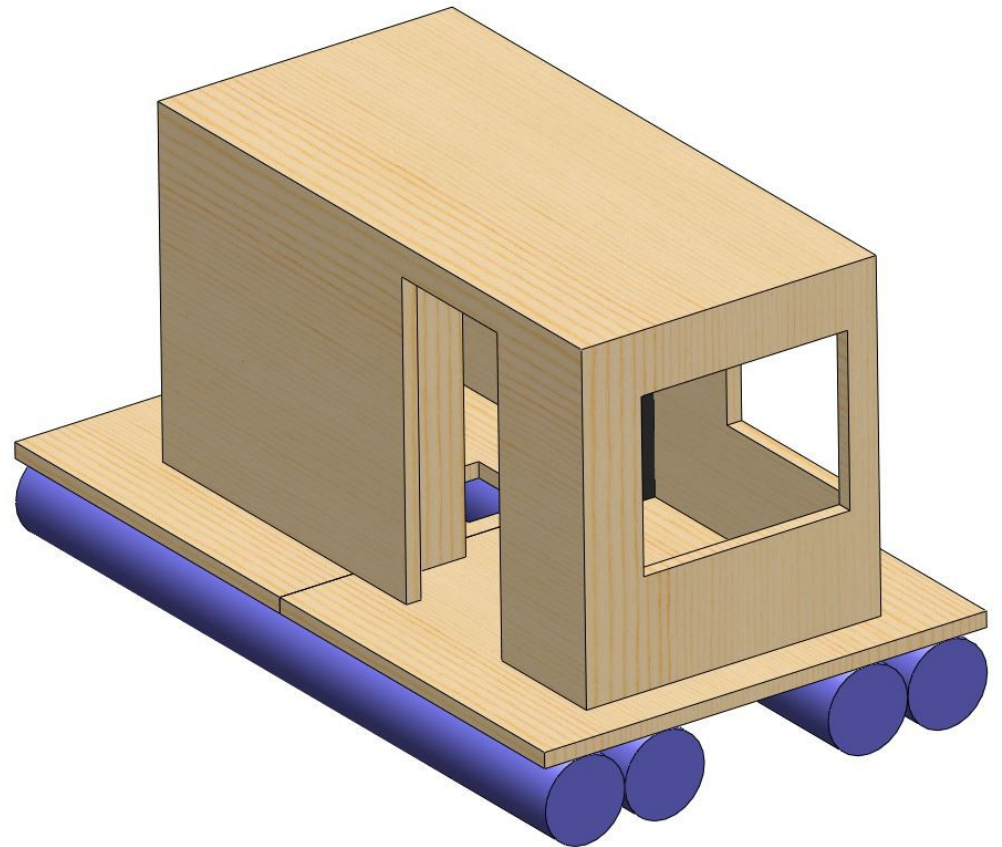
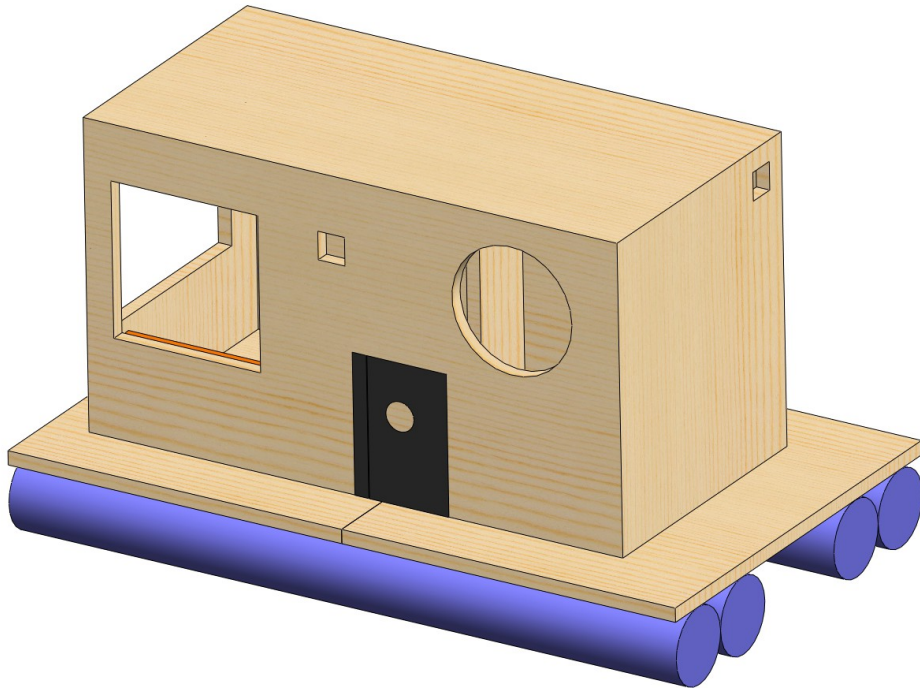
- 4*2 m large
- Beam structure + weather shield sheet
- Sheet can be fiberboard + tar paper or sheet metal
- Prepared for future decking and railing



Functional house boat

Windows

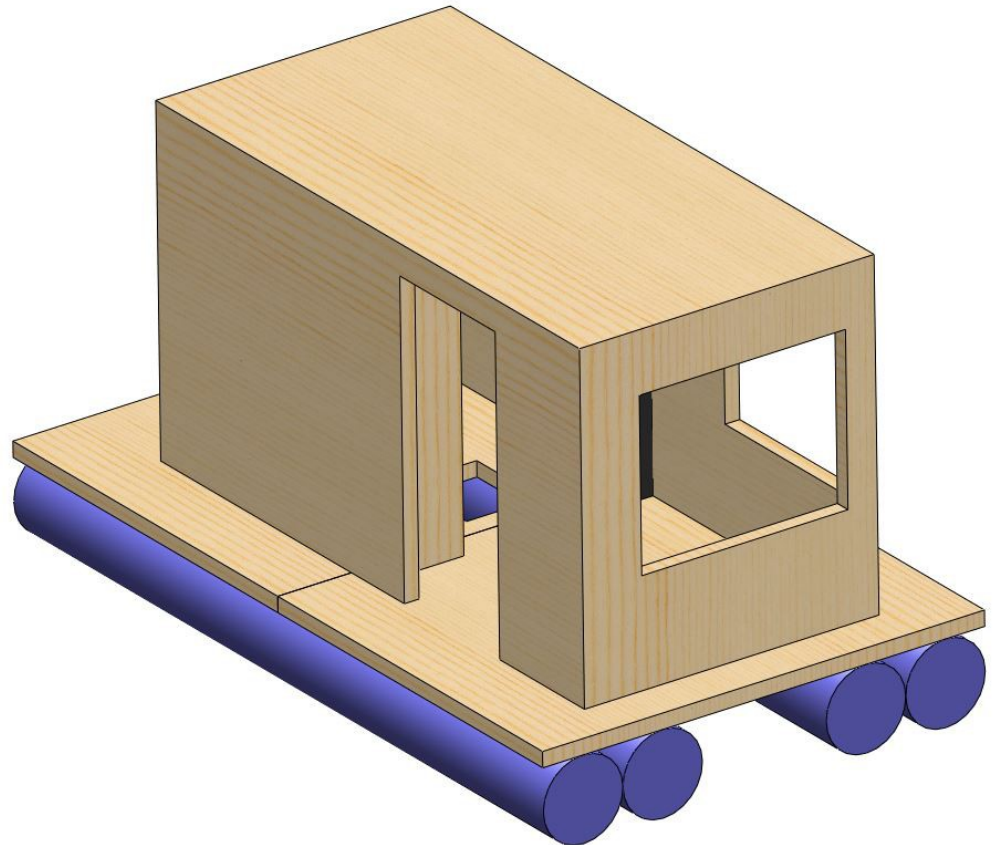
- Round window diameter 900 mm
- 1100*1100 mm side window
- 1100*1400 mm front window
- Homemade simple dual glazing



Functional house boat

Outside door

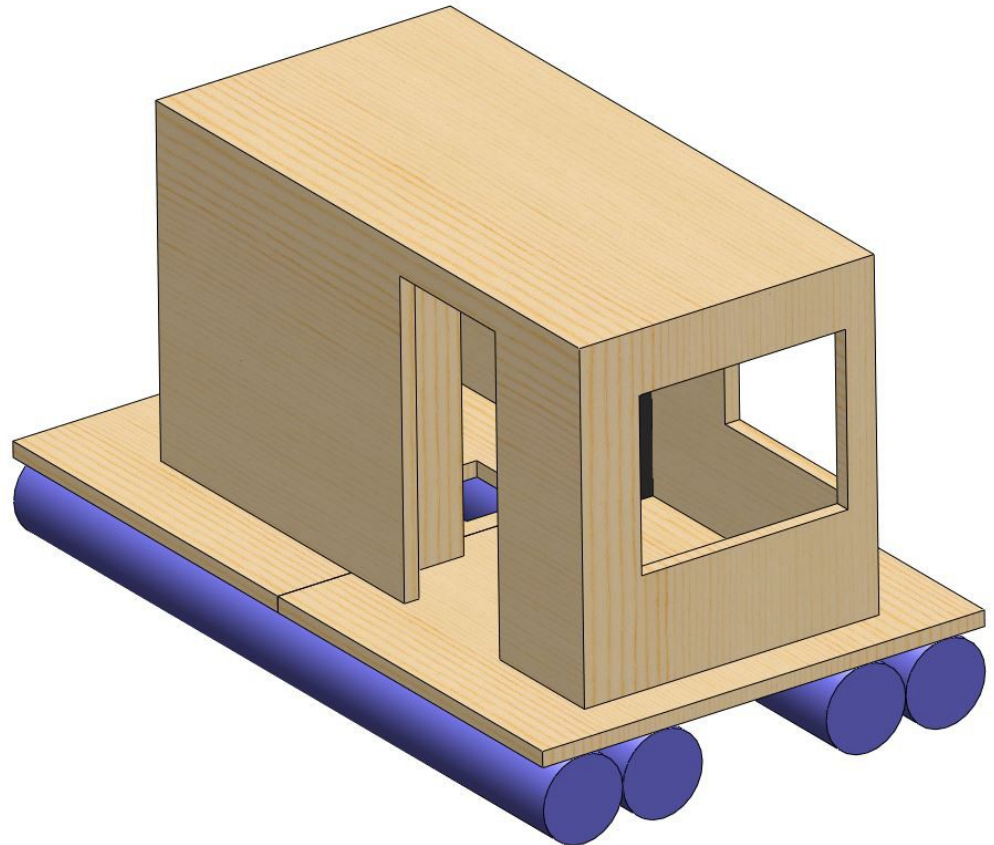
- Buy or make a door, lockable from the outside



Functional house boat

Outboard engine

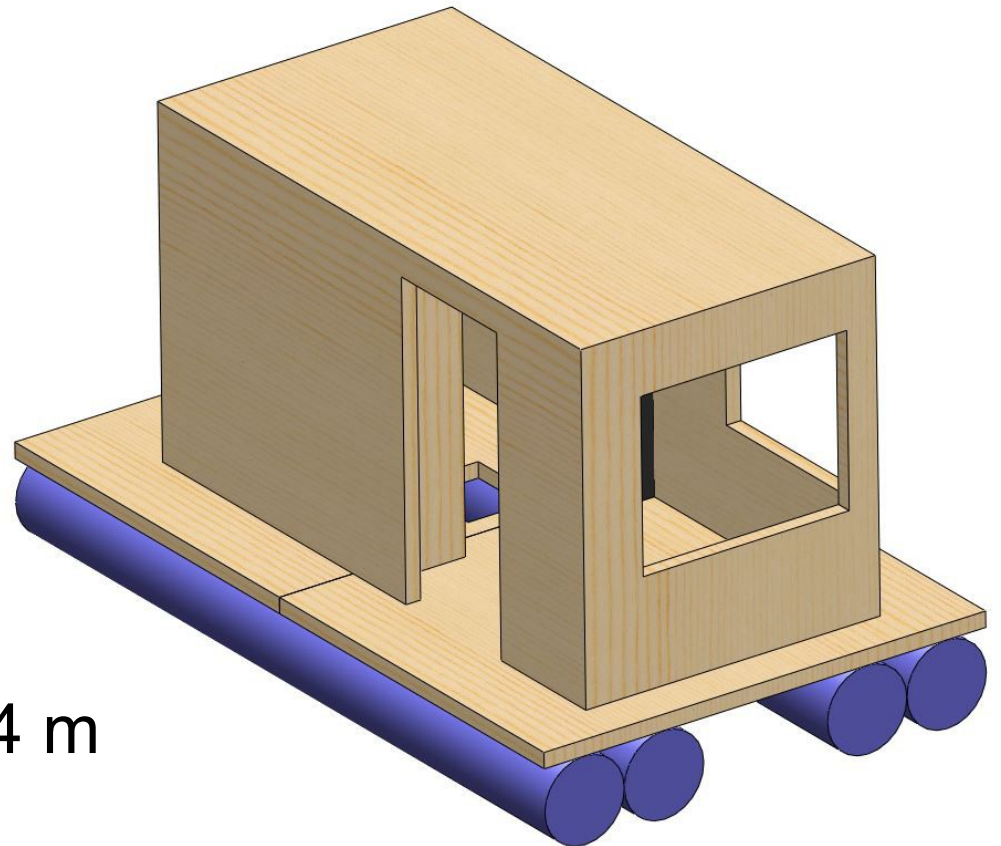
- Buy an electrical outboard engine and batteries
- Engine will be moved inside when unattended
- If it is too weak, buy more engines



Phase 2 goal: Functional house boat – COMPLETE!

Components:

- 4 off insulated outer walls
- 1 flat weatherproof roof
- 3 off windows
- 1 off outer door

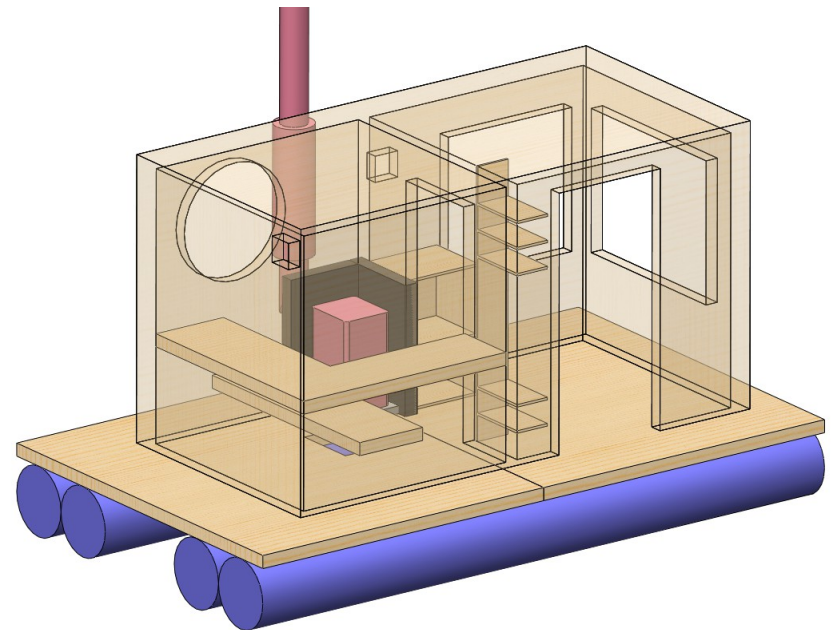
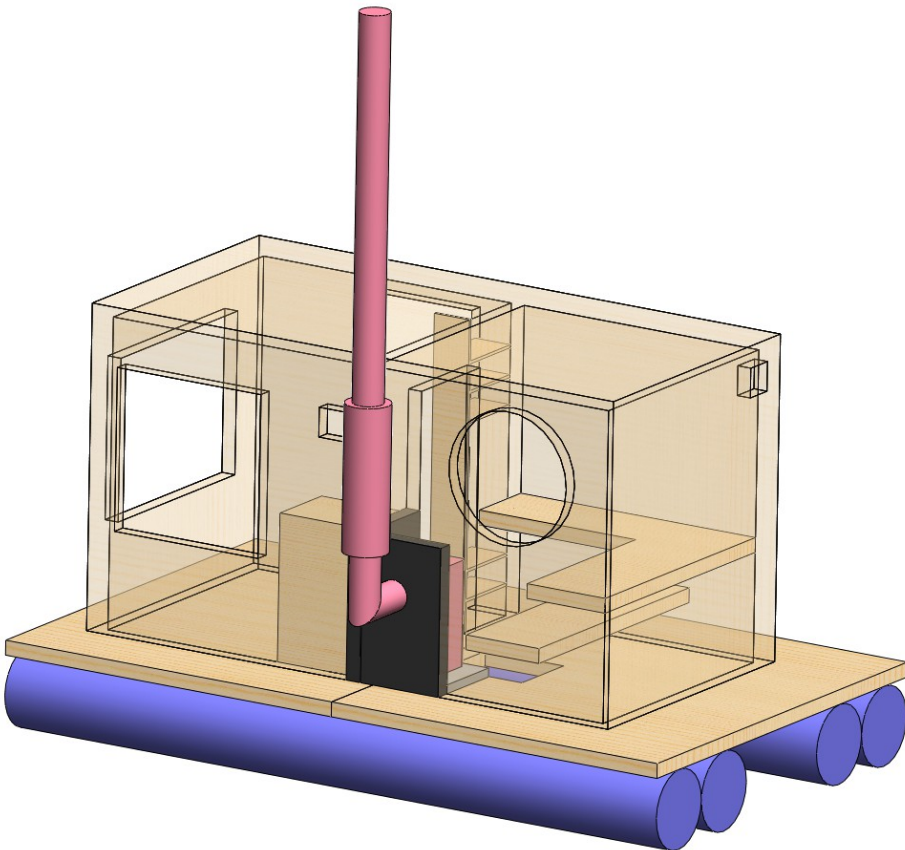
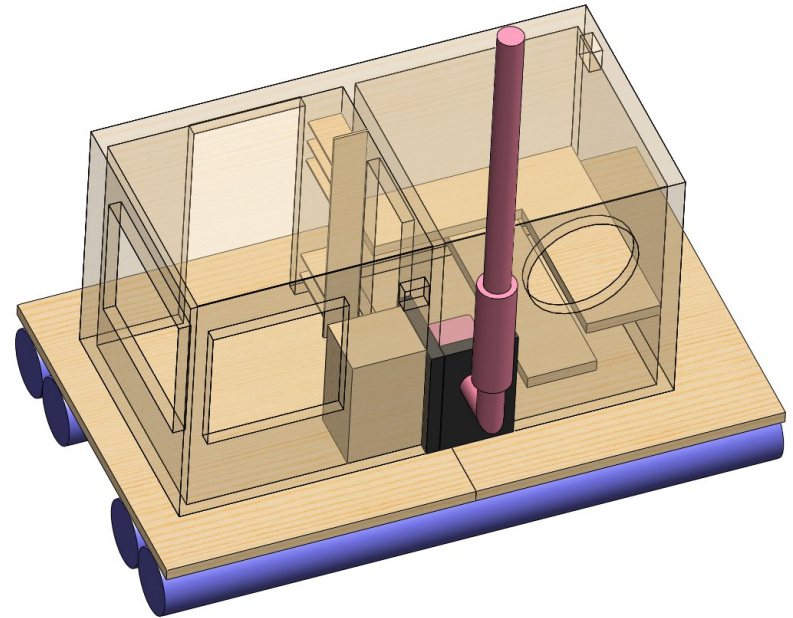


Building outer dimensions 2*4 m
Outer height 2,2 m

Phase 3 goal: Functional sauna

Components:

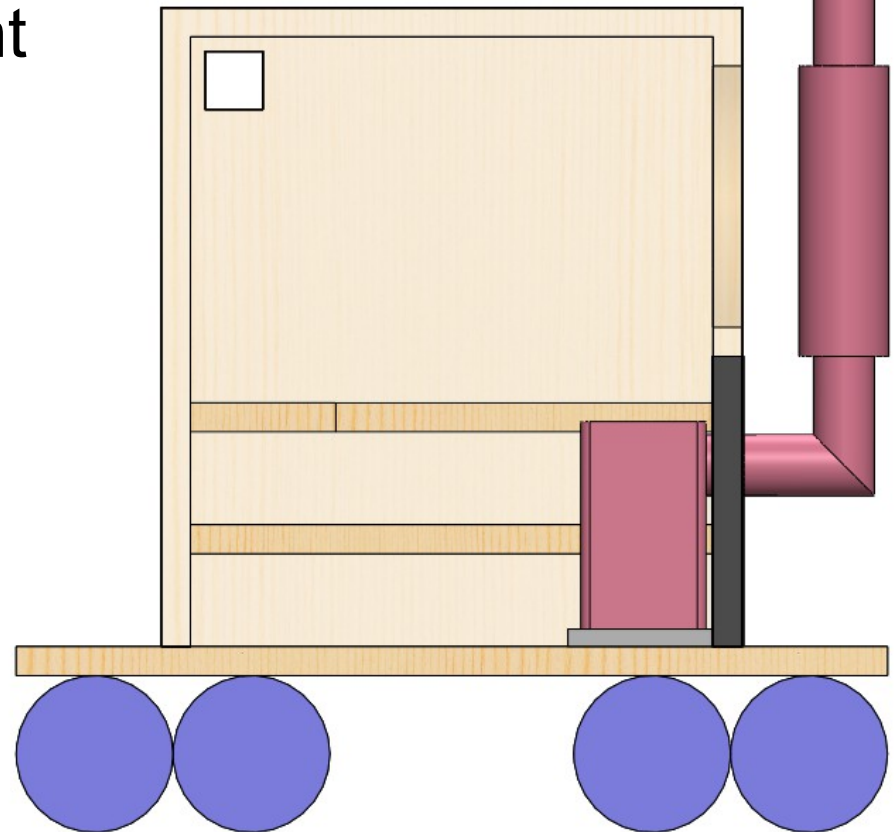
- Sauna fireplace
- 2 off sauna benches
- Inner wall and storage spaces
- 1 off Sauna door



Functional sauna

Sauna fireplace

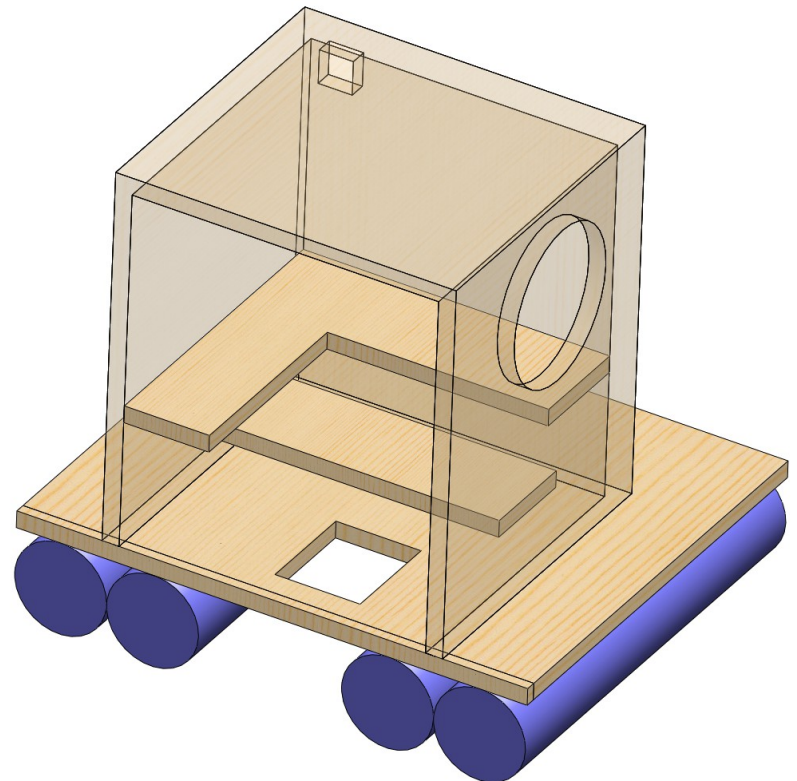
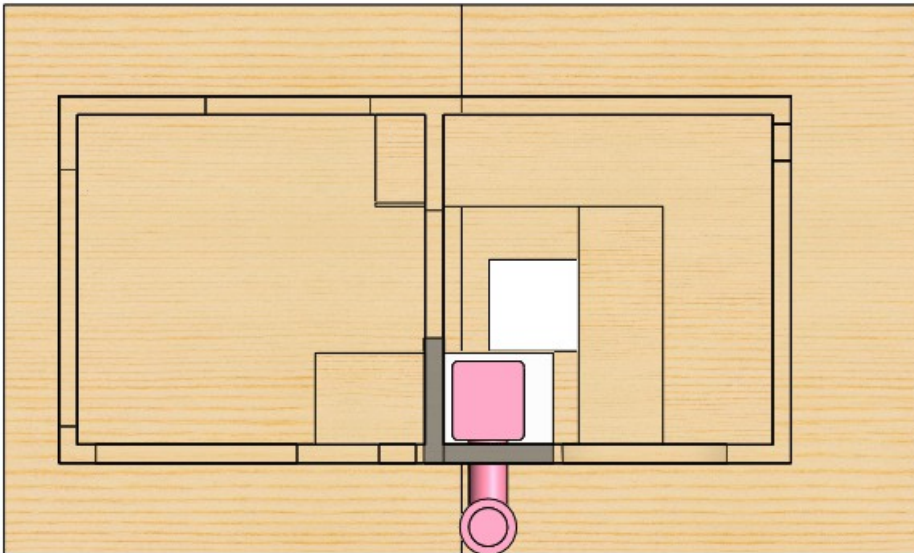
- Stovepipe through wall with modular section outside
- Harvia M3 fireplace 45 kg + 30 kg stones
- 600*1000 mm of outer wall must be made fireproof
- 60 mm floor heat shield
- 50 mm air gap next to walls
- Needs 2100 mm total ceiling height



Functional sauna

Sauna benches

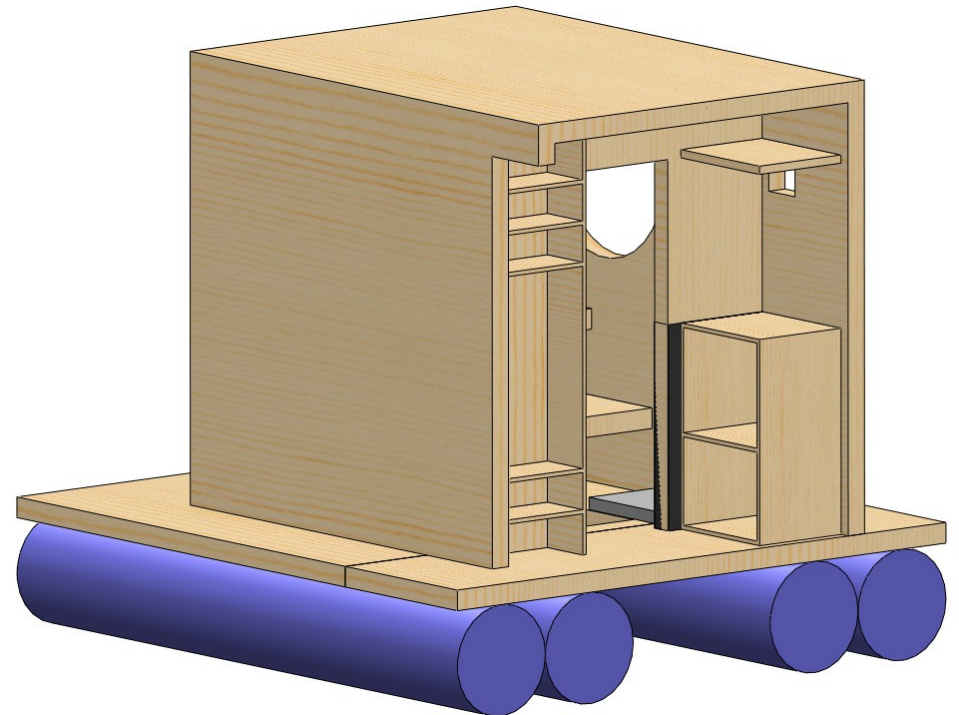
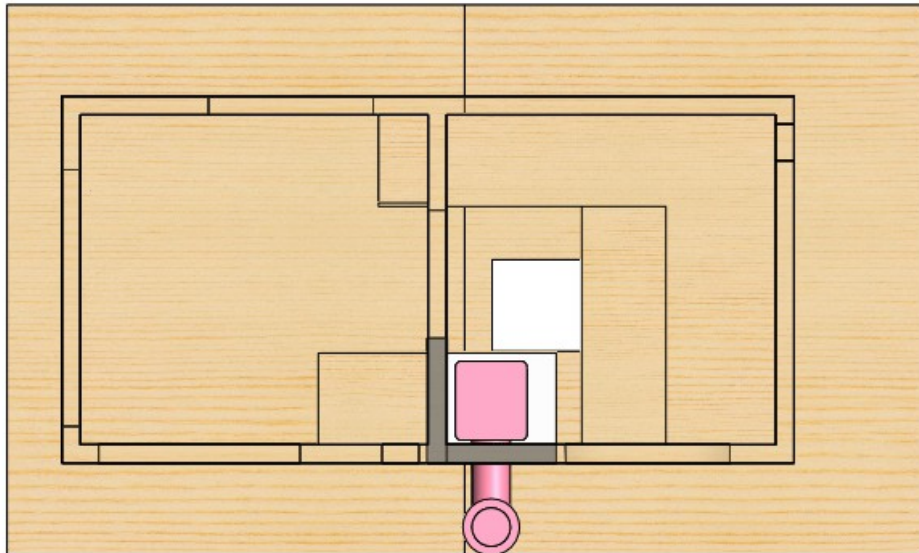
- 1800 mm wide removable benches
- Top bench to be L-shaped 500 & 600 deep
- Bottom bench to be 560 mm deep, 100 mm overlap with top bench gives 300 mm clearance to fireplace



Functional sauna

Inner wall and storage spaces

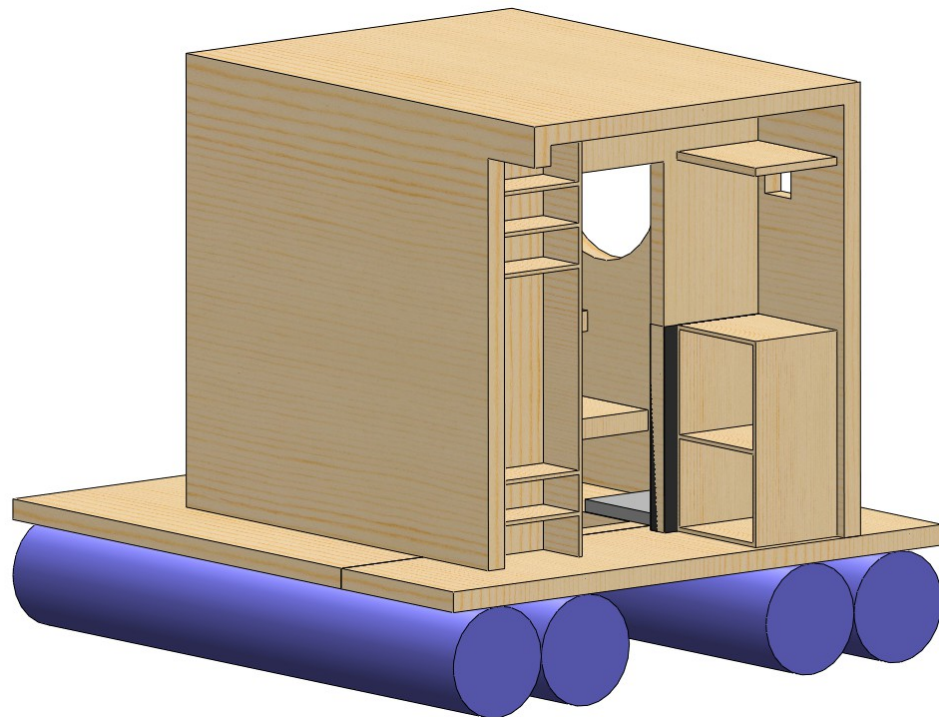
- Two pieces of permanent furniture creates the inner wall
 - Integrated closet = left half of inner wall. Wood.
 - Integrated cupboard = right half of inner wall. Fireproof.
- A doorframe with lintel connects them.



Functional sauna

Sauna door

- Build or buy
- Shall have a viewing window



Phase 3 goal: Functional sauna - COMPLETE!

Components:

- Sauna fireplace
- 2 off sauna benches
- Inner wall and storage spaces
- 1 off Sauna door

