

# Raumwandler

## Space transformer



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 723375





# Raumwandler

## Space transformer



Idee



Bau



Einsatz



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Früher war Straße ein Raum,  
zugänglich für jede\*n !



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MIV (Fahrer & Beifahrer)

41,6%



Öffentliche Verkehrsmittel

19,8%



Zu Fuß

19,3%



Fahrrad

19,3%

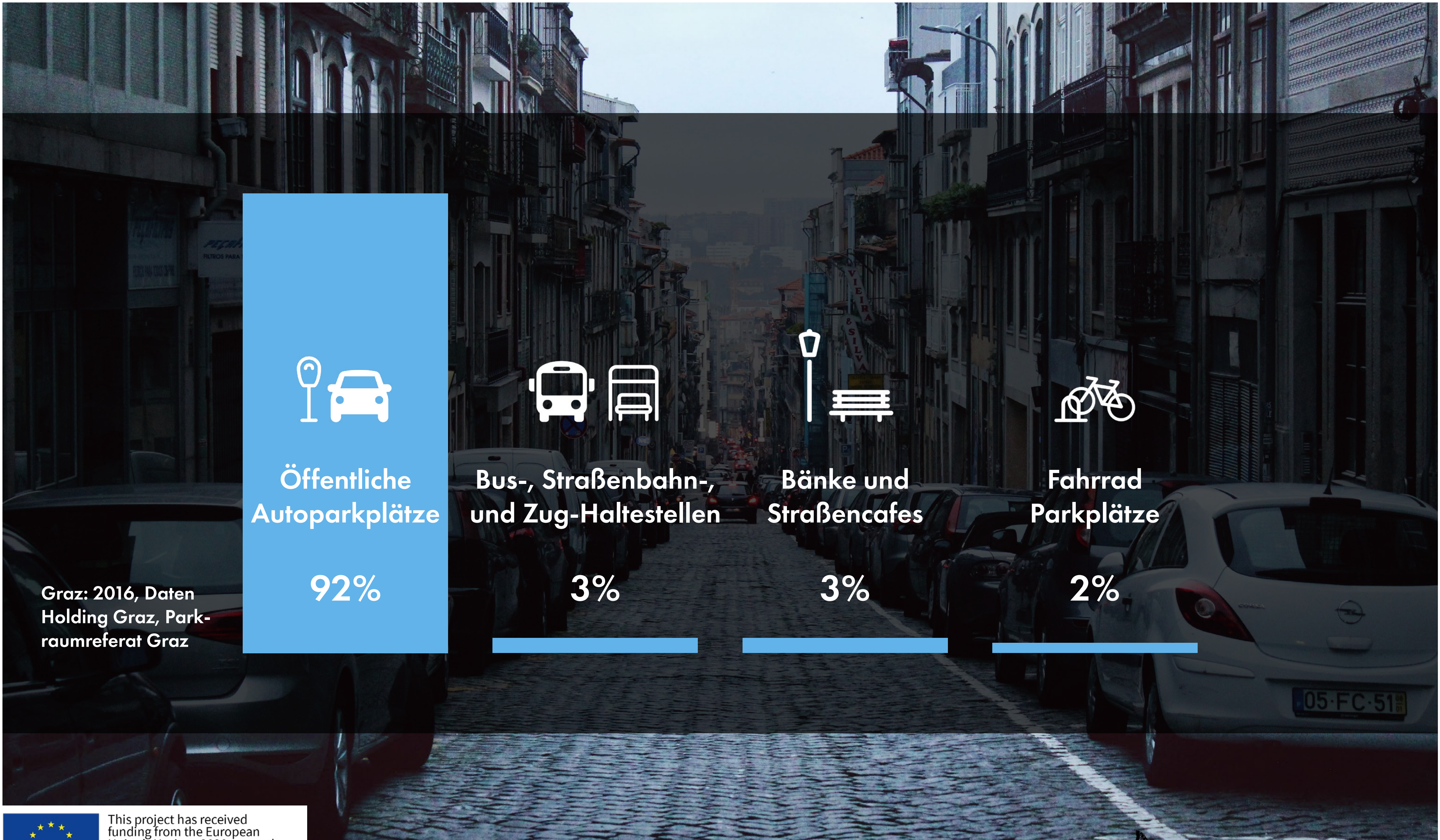
Graz, ModalSplit:  
2018, Daten ZIS +P



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Graz: 2016, Daten  
Holding Graz, Park-  
raumreferat Graz



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# Ist Parkraum für Autos wirklich ein Raum für jede\*n?



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# Ist Parkraum für Autos wirklich öffentlicher Raum?



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# Parklet



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# Parklet

- Transformiert Parkplätze in Sitzgelegenheiten
- Schafft mehr ‚wirklich‘ öffentlichen Raum
- Meistens benötigt es eine Bewilligung



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# Das kleine Parkraumwunder

## Gerhard Wollnitz - Stuttgart



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# Parkraumwunder

## Lendwirbel 2018



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# Raumwandler

## Space transformer



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# Raumwandler

## Space transformer



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# Rechtliche Voraussetzungen eines Raumwandlers



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# Rechtliche Voraussetzungen eines Raumwandlers



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# Rechtliche Voraussetzungen eines Raumwandlers



Erfüllt alle  
StVO-Gesetze



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# Rechtliche Voraussetzungen eines Raumwandlers



Erfüllt alle  
StVO-Gesetze



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# Rechtliche Voraussetzungen eines Raumwandlers



Erfüllt alle  
StVO-Gesetze



ohne TICKET!  
(Österreich,  
Deutschland,...)



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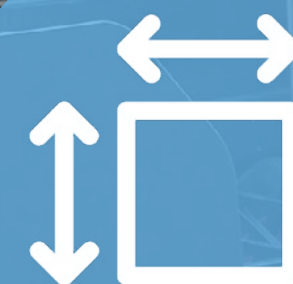
# Rechtliche Voraussetzungen eines Raumwandlers



Erfüllt alle  
StVO-Gesetze



ohne TICKET!  
(Österreich,  
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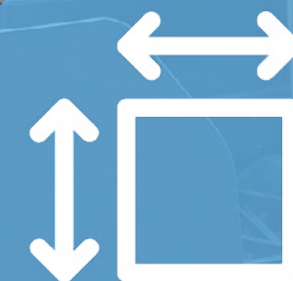
# Rechtliche Voraussetzungen eines Raumwandlers



Erfüllt alle  
StVO-Gesetze



ohne TICKET!  
(Österreich,  
Deutschland,...)



Größenbegrenzung  
(Österreich -  
2.55m Breite)



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# Bau dir deinen eigenen Raumwandler



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# Lastenrad Dreirad - Base



BLACK  
IRON  
HORSE

- Hinterrad-Lenkung
- Kleine Reifen
- Schwerelast möglich

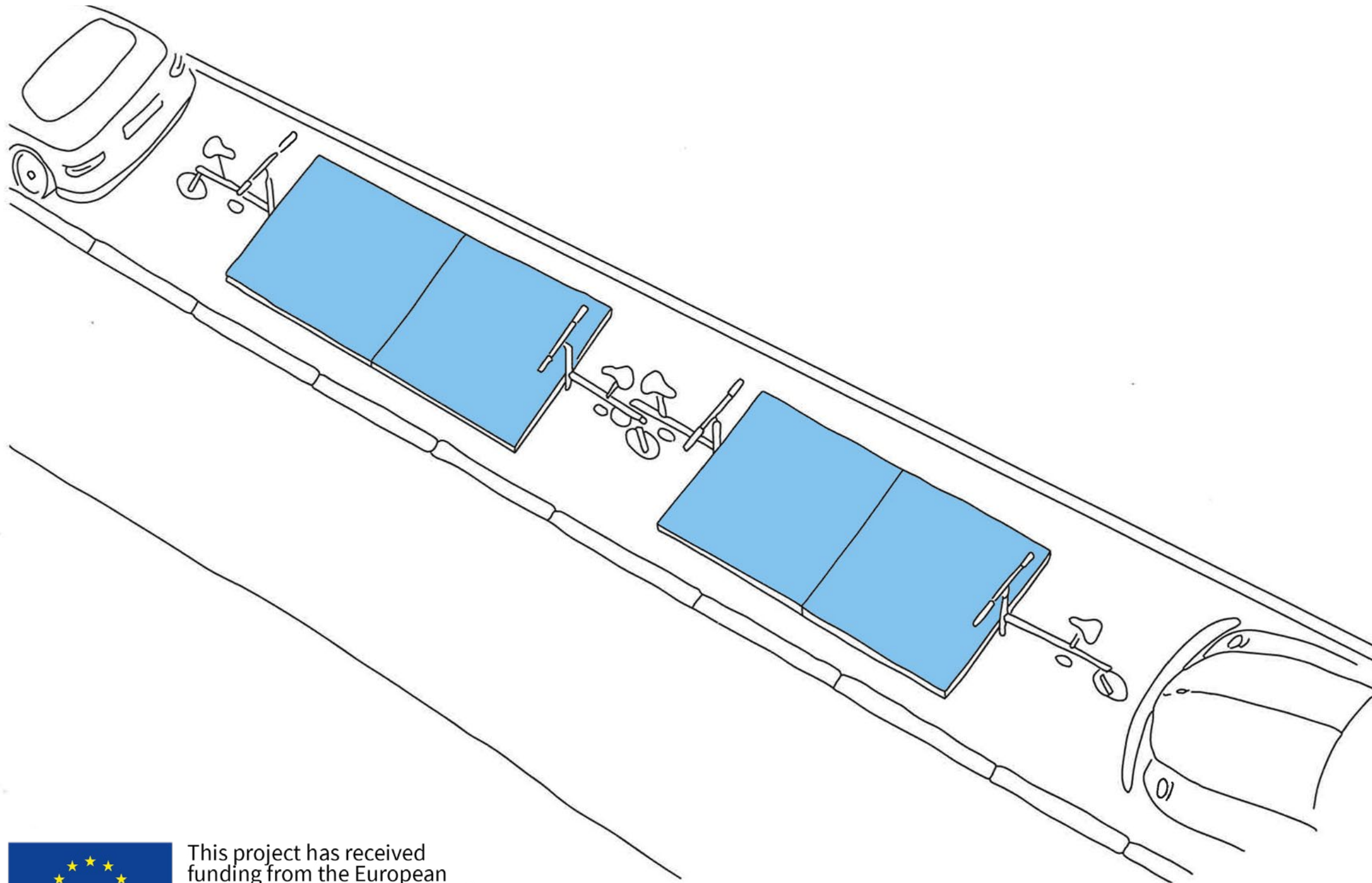


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# Design Prozess Raumwandler

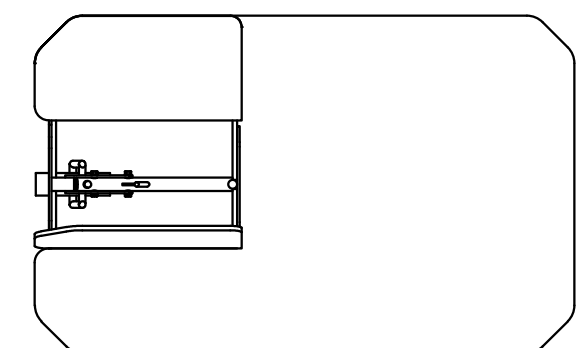
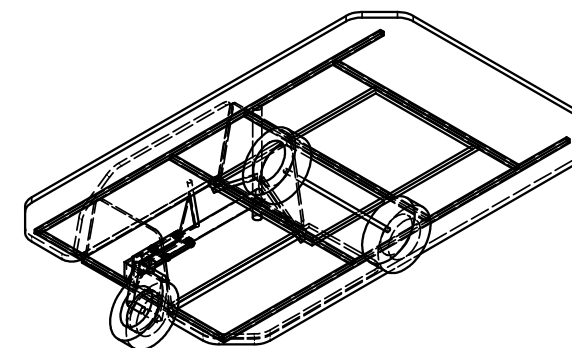
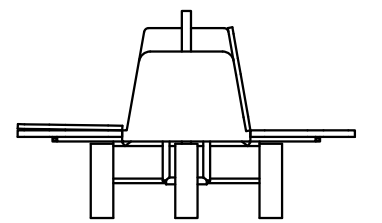
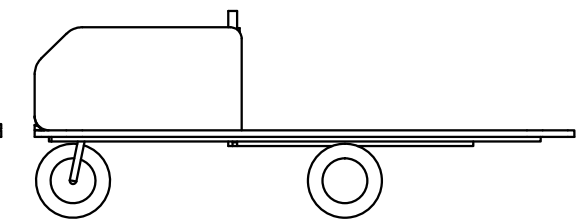
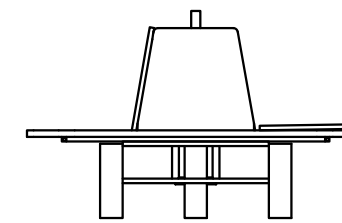
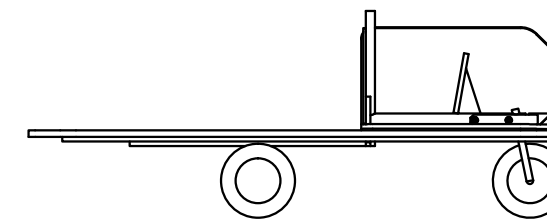
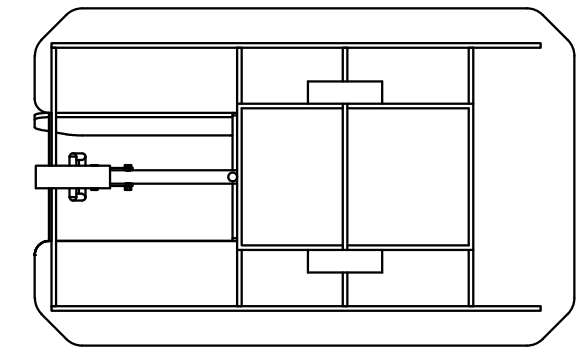
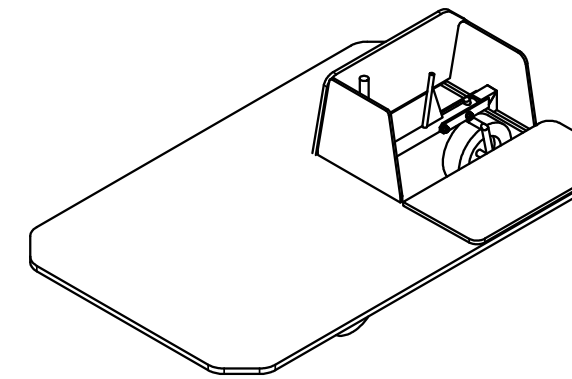
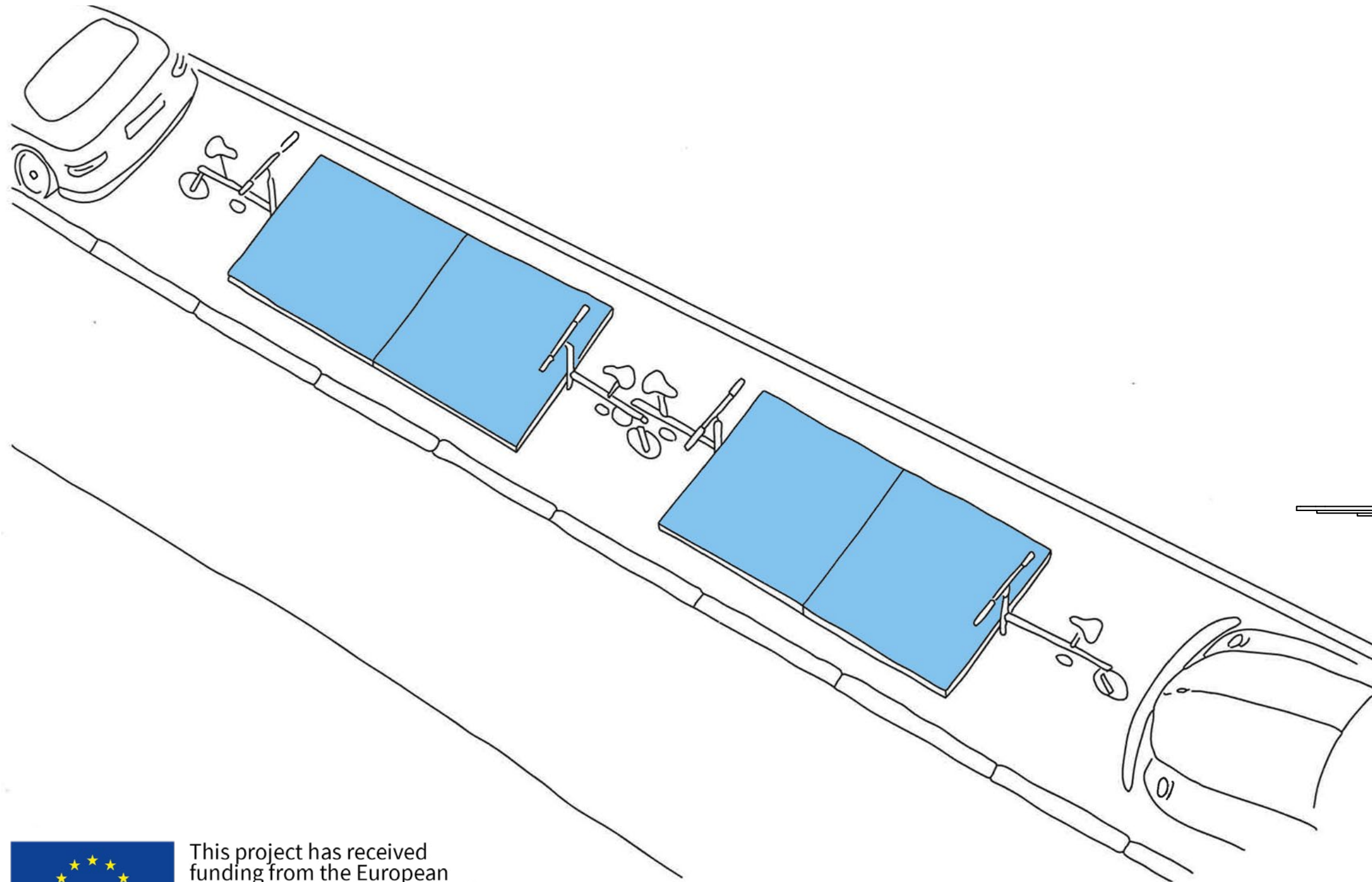
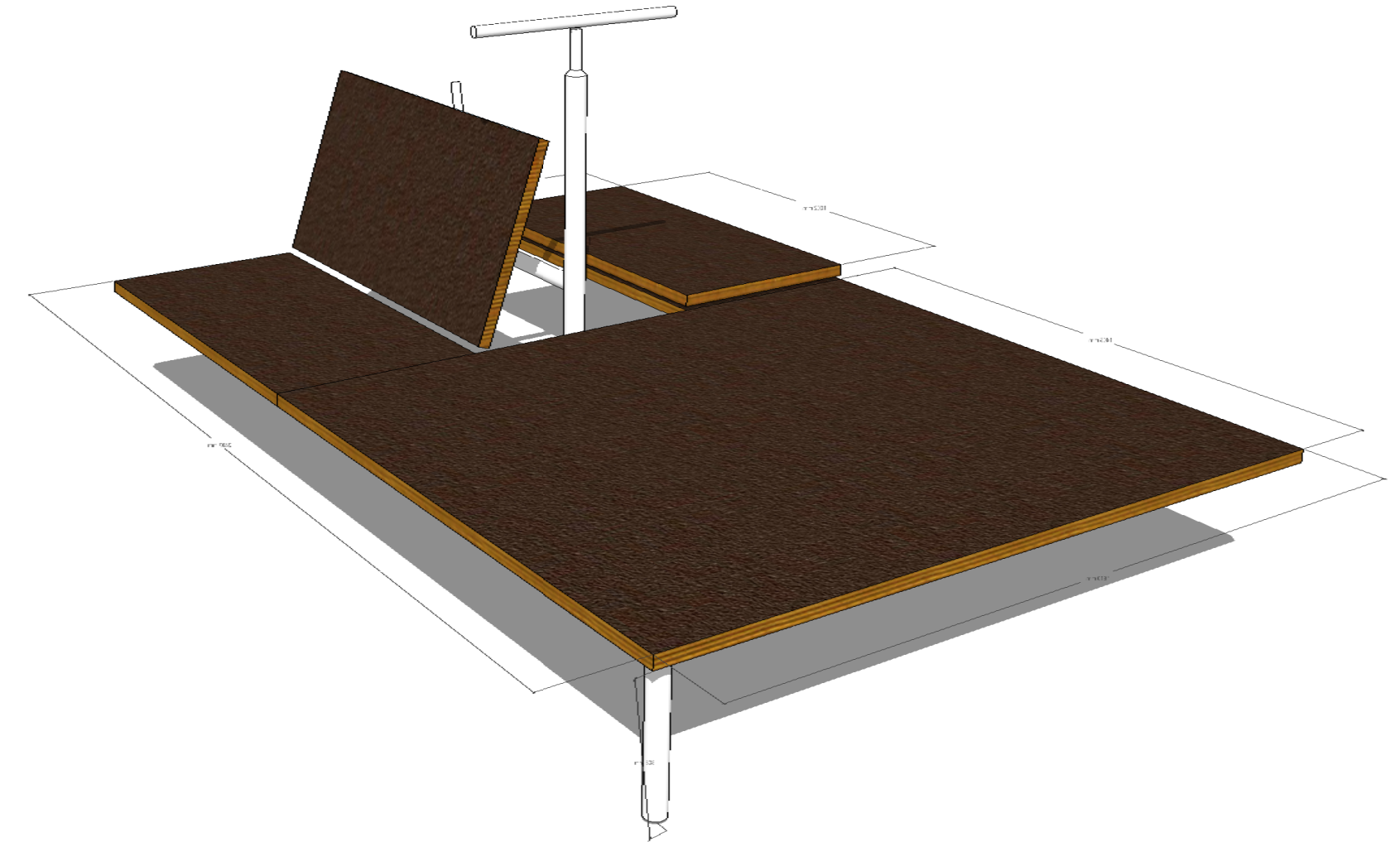


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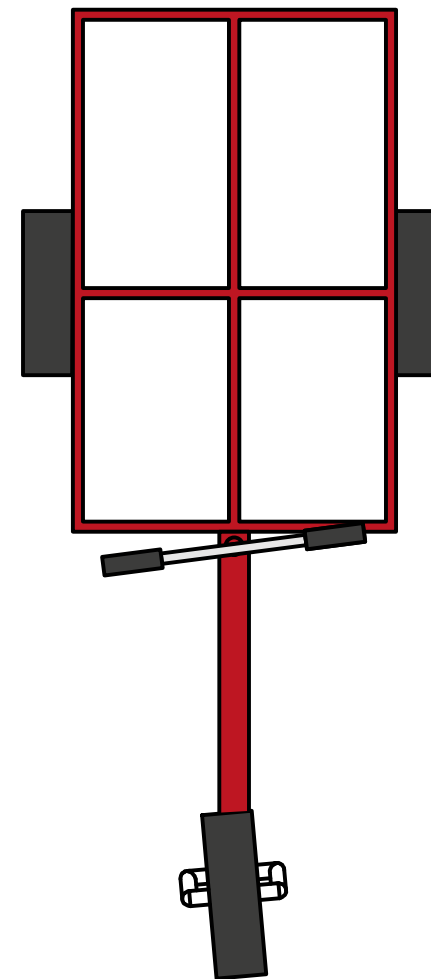




# Konstruktion

## 3 Haupt-Elemente

### Lastenrad



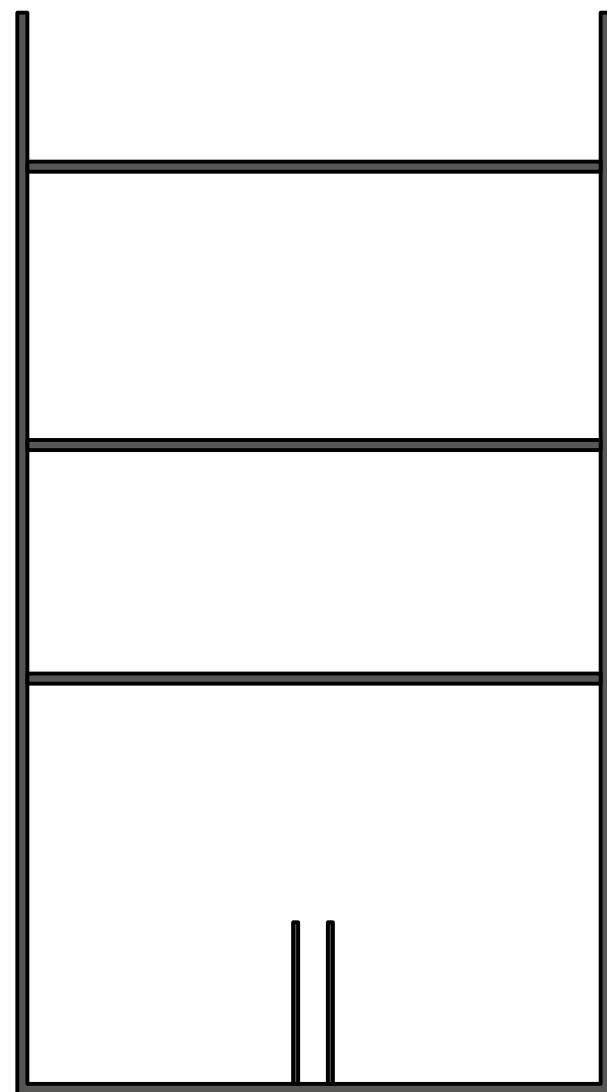
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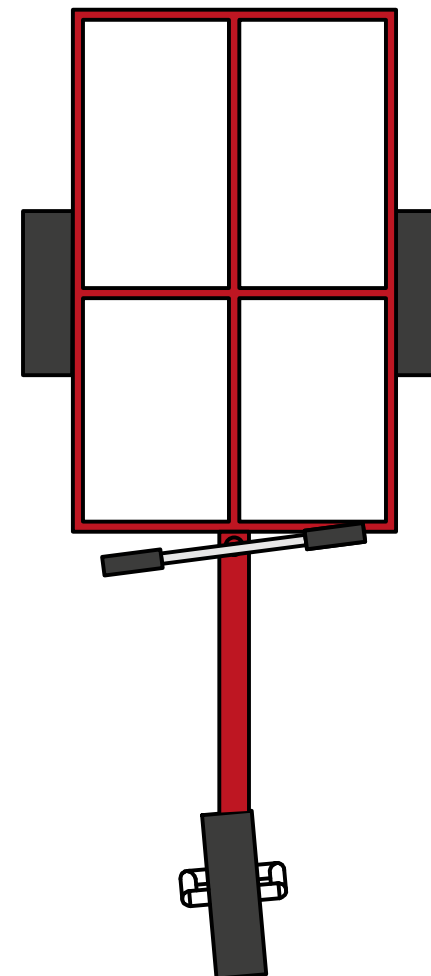
# Konstruktion

## 3 Haupt-Elemente

**Metallrahmen**



**Lastenrad**



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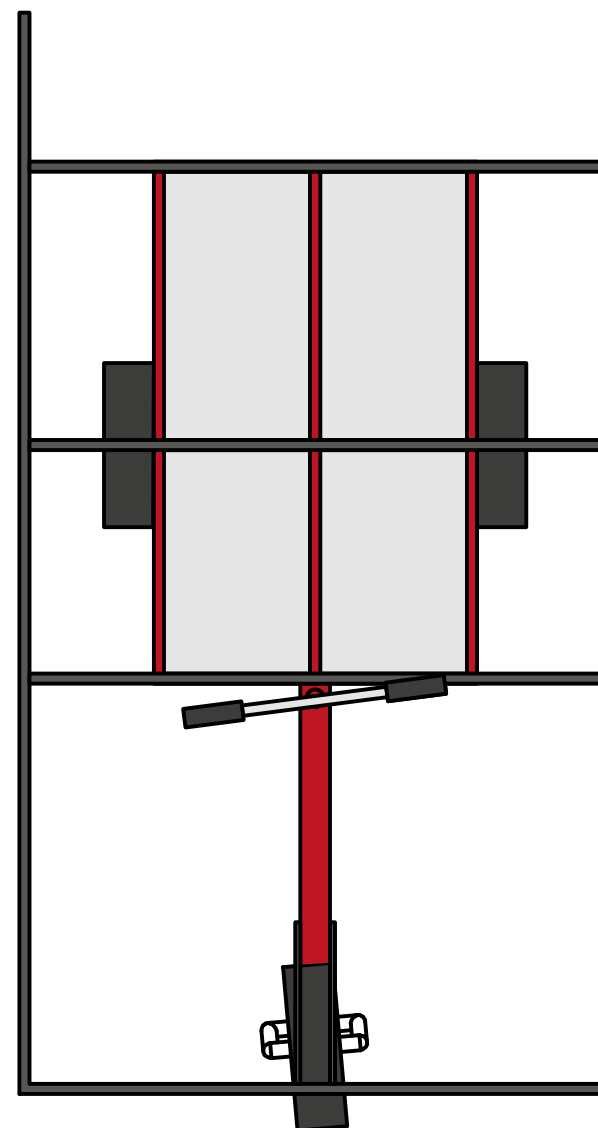


# Konstruktion

## 3 Haupt-Elemente

**Metallrahmen**

**Lastenrad**



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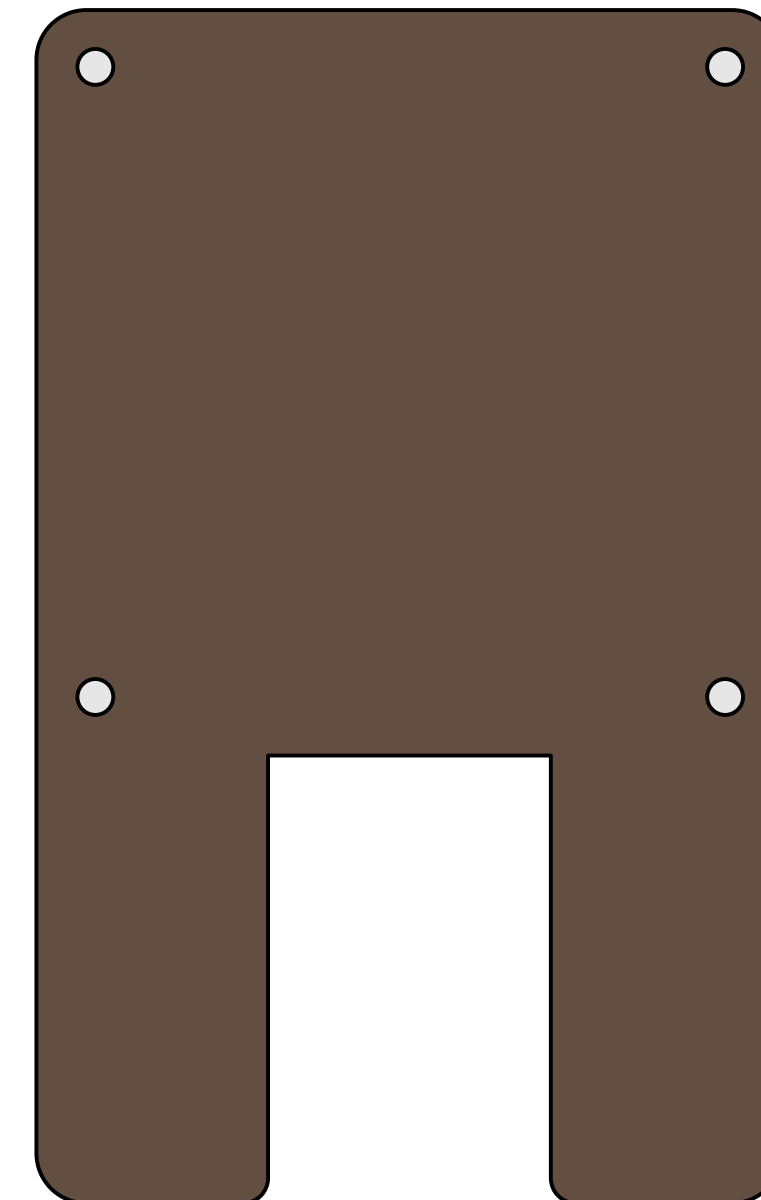
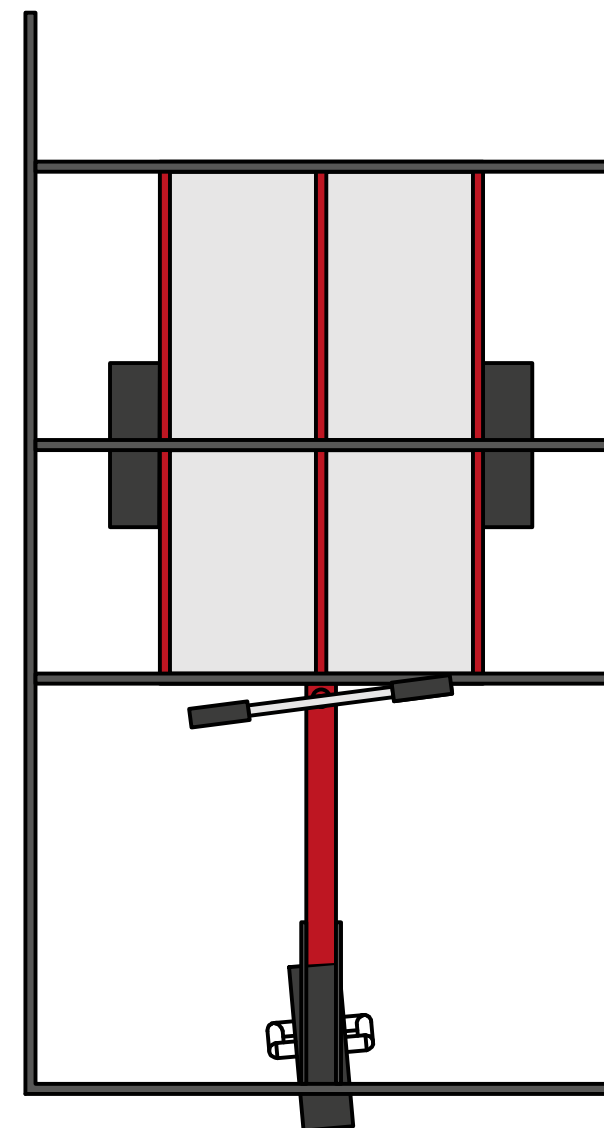
# Konstruktion

## 3 Haupt-Elemente

**Metalrahmen**

**Lastenrad**

**Holzplatte**



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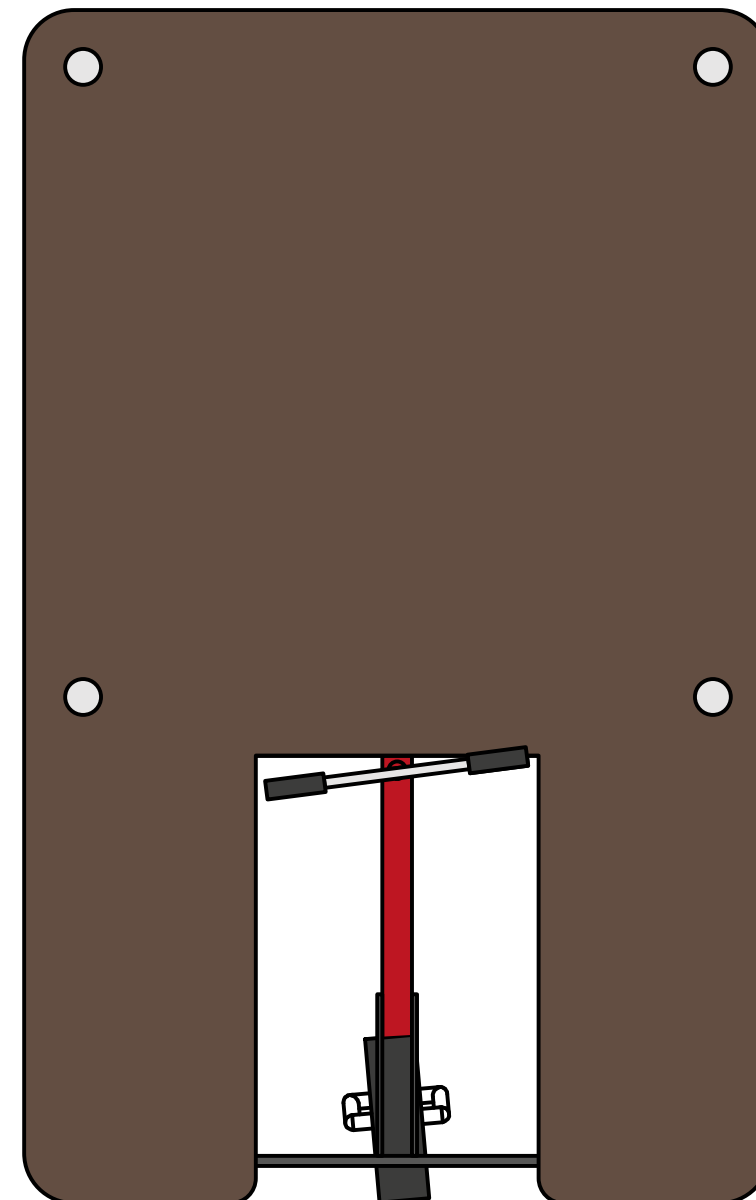
# Konstruktion

## 3 Haupt-Elemente

**Metallrahmen**

**Lastenrad**

**Holzplatte**



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# Rückenlehne (klappbar)



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# Rückenlehne (klappbar)



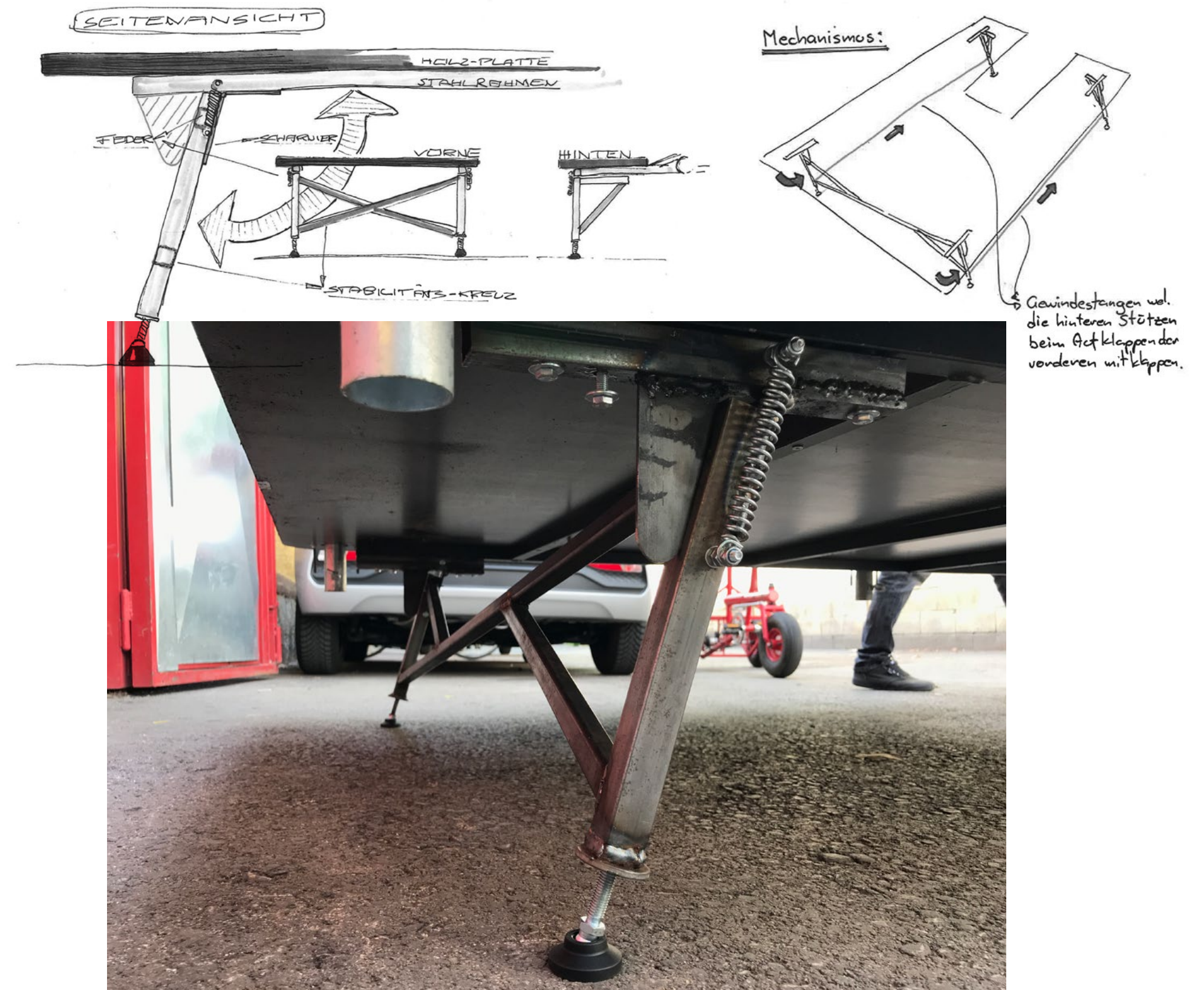
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# Rückenlehne (klappbar)



# Fahrradständer

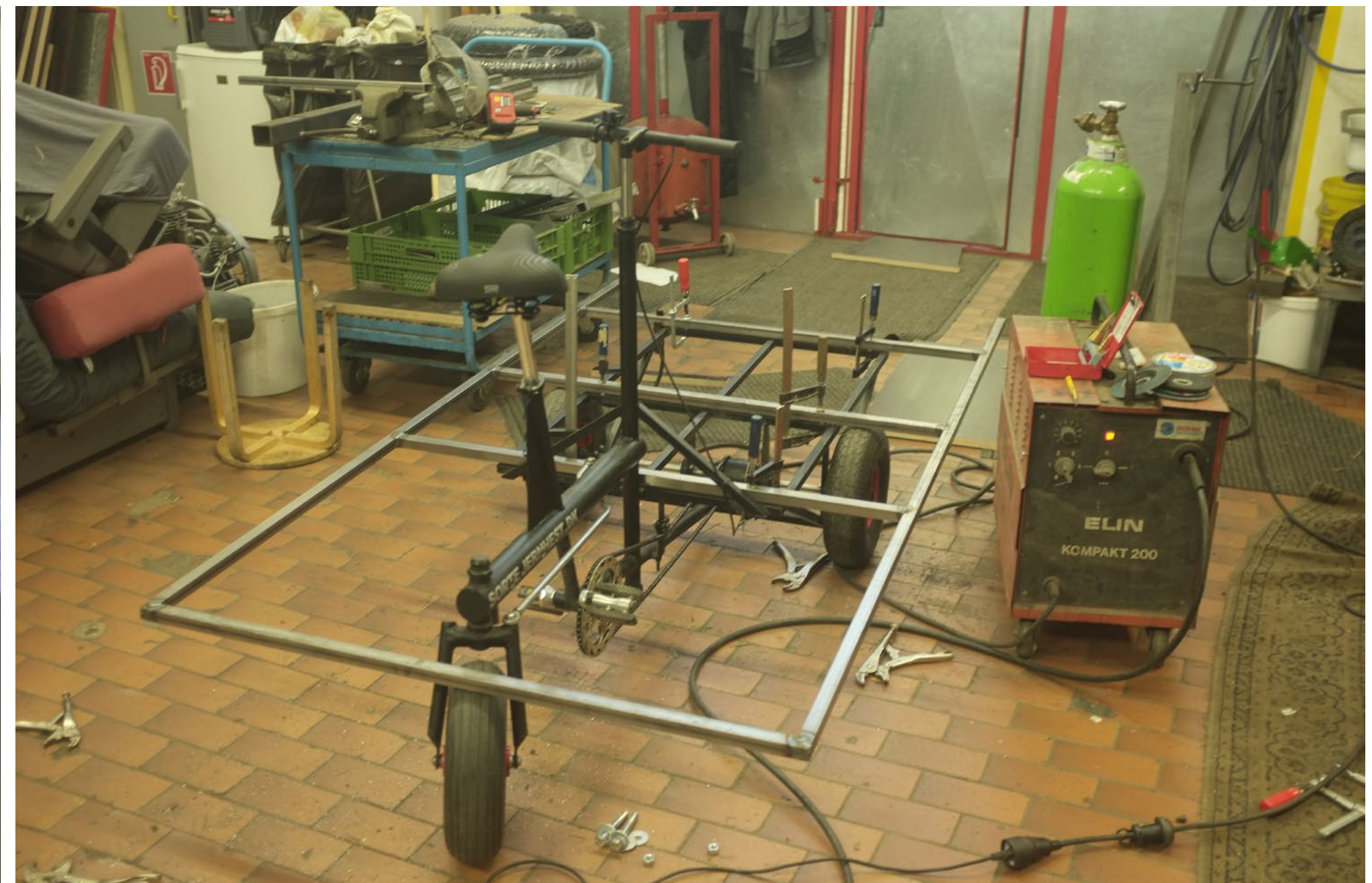


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## Metallrahmen



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# Material Liste

Holz	Stahl	Teile	Schrauben	Wartung
<div>1x   2500x1500x27mm</div> <div>1x   1000x1500x21mm</div>	<div>4x   3000x25x25mm (1,5mm; square tube)</div> <div>1x   3500x20x20mm (1,5mm; square tube)</div> <div>1x   800x60x10mm</div> <div>1x   3000x30x3mm</div> <div>1x   1500; Ø50mm (2mm; round tube)</div>	<div>4x   heavy duty hinge (for welding)</div> <div>4x   threaded foot (M12)</div> <div>4x   stand (umbrella)</div> <div>4x   small hinge</div> <div>2x   lock snapper</div> <div>4x   steel spring</div> <div>1x   billboard</div>	<div>8x   countersunk bolt (M6; 60mm)</div> <div>8x   allen srew (M6; 80mm)</div> <div>14x   carriage bolt (M10; 80mm)</div> <div>4x   nut (M12; extra long; for welding)</div> <div>wood srews (various lenghts)</div> <div>secure nut (various sizes)</div>	<div>wood paint (weatherproof)</div> <div>metal paint</div> <div>10x   brush</div> <div>5x   reflector</div>



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# Material Liste

## Holz

1x	2500x1500x27mm
1x	1000x1500x21mm

200,-

## Stahl

4x	3000x25x25mm (1,5mm; square tube)
1x	3500x20x20mm (1,5mm; square tube)
1x	800x60x10mm
1x	3000x30x3mm
1x	1500; Ø50mm (2mm; round tube)

95,-

## Teile

4x	heavy duty hinge (for welding)
4x	threaded foot (M12)
4x	stand (umbrella)
4x	small hinge
2x	lock snapper
4x	steel spring
1x	billboard

200,-

## Schrauben

8x	countersunk bolt (M6; 60mm)
8x	allen srew (M6; 80mm)
14x	carriage bolt (M10; 80mm)
4x	nut (M12; extra long; for welding)
	wood srews (various lenghts)
	secure nut (various sizes)

130,-

## Wartung

	wood paint (weatherproof)
	metal paint
10x	brush
5x	reflector

55,-



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# Material Liste

## Holz

1x	2500x1500x27mm
1x	1000x1500x21mm

## Stahl

4x	3000x25x25mm (1,5mm; square tube)
1x	3500x20x20mm (1,5mm; square tube)
1x	800x60x10mm
1x	3000x30x3mm
1x	1500; Ø50mm (2mm; round tube)

## Teile

4x	heavy duty hinge (for welding)
4x	threaded foot (M12)
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1x	billboard

## Schrauben

8x	countersunk bolt (M6; 60mm)
8x	allen srew (M6; 80mm)
14x	carriage bolt (M10; 80mm)
4x	nut (M12; extra long; for welding)
	wood srews (various lenghts)
	secure nut (various sizes)

## Wartung

	wood paint (weatherproof)
	metal paint
10x	brush
5x	reflector

**gesamt:**

**200,-**

**95,-**

**200,-**

**130,-**

**55,-**

**680,-**



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# Gesamtkosten



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# Gesamtkosten

## Base

2000,- Black Iron Horse -  
Trike

170,- Shipping costs

**2170,-**



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# Gesamtkosten

## Base

---

**2000,-** Black Iron Horse -  
Trike

**170,-** Shipping costs

---

**- 1000,-** FÖRDERUNG  
(Stadt)

**1170,-**



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# Gesamtkosten

## Base

---

**2000,-** Black Iron Horse -  
Trike

**170,-** Shipping costs

---

**- 1000,-** FÖRDERUNG  
(Stadt)

**- 400,-** FÖRDERUNG  
(Land)

**770,-**



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# Gesamtkosten

## Base

2000,- Black Iron Horse - Trike

170,- Shipping costs

- 1000,- FÖRDERUNG (Stadt)

- 400,- FÖRDERUNG (Land)

**770,-**

## Material

200,- Wood

95,- Steel

200,- Parts

130,- Srews

55,- Service

**680,-**




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# Gesamtkosten

Base	Material	Miete
<div>2000,- Black Iron Horse - Trike</div> <div>170,- Shipping costs</div> <div>- 1000,- FÖRDERUNG (Stadt)</div> <div>- 400,- FÖRDERUNG (Land)</div>	<div>200,- Wood</div> <div>95,- Steel</div> <div>200,- Parts</div> <div>130,- Srews</div> <div>55,- Service</div>	<div>200,- Workshop (including all the equipment)</div> <div></div>
770,-	680,-	200,-



# Gesamtkosten

# Base

**2000,-** Black Iron Horse - Trike

**170,-**      Shipping costs

**- 1000,- FÖRDERUNG  
(Stadt)**

**- 400,- FÖRDERUNG (Land)**

**770,-**

# Material

**200,-**    **Wood**

**95,- Steel**

**200,-**    **Parts**

**130,- Srews**

**55,- Service**

**680,-**

# Miete

**200,-** Workshop  
(including all the  
equipment)



**200,-**

# Wartung

**Jährliche Kosten:**

- wood paint for protection
- spare parts
- pads
- ...

approx. **100,-**



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# Gesamtkosten

## Base

2000,- Black Iron Horse - Trike

170,- Shipping costs

- 1000,- FÖRDERUNG (Stadt)

- 400,- FÖRDERUNG (Land)

**770,-**

## Material

200,- Wood

95,- Steel

200,- Parts

130,- Srews

55,- Service

**680,-**

## Miete

200,- Workshop (including all the equipment)



**200,-**

## Wartung

Jährliche Kosten:

- wood paint for protection
- spare parts
- pads
- ...

approx. **100,-**

**gesamt:**

**1.750,-**



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# Gesamtkosten

## Base

2000,- Black Iron Horse - Trike

170,- Shipping costs

- 1000,- FÖRDERUNG (Stadt)

- 400,- FÖRDERUNG (Land)

**770,-**

## Material

200,- Wood

95,- Steel

200,- Parts

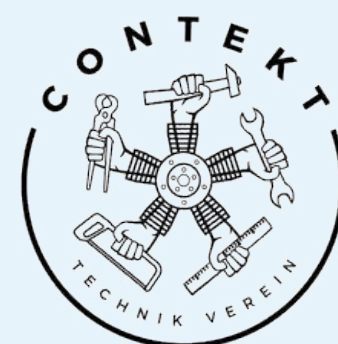
130,- Srews

55,- Service

**680,-**

## Miete

200,- Workshop (including all the equipment)



**200,-**

## Wartung

Jährliche Kosten:

- wood paint for protection
- spare parts
- pads
- ...

approx. **100,-**

**gesamt:**

**1.750,-**

## Arbeit

**3-5 Tage**

**+**



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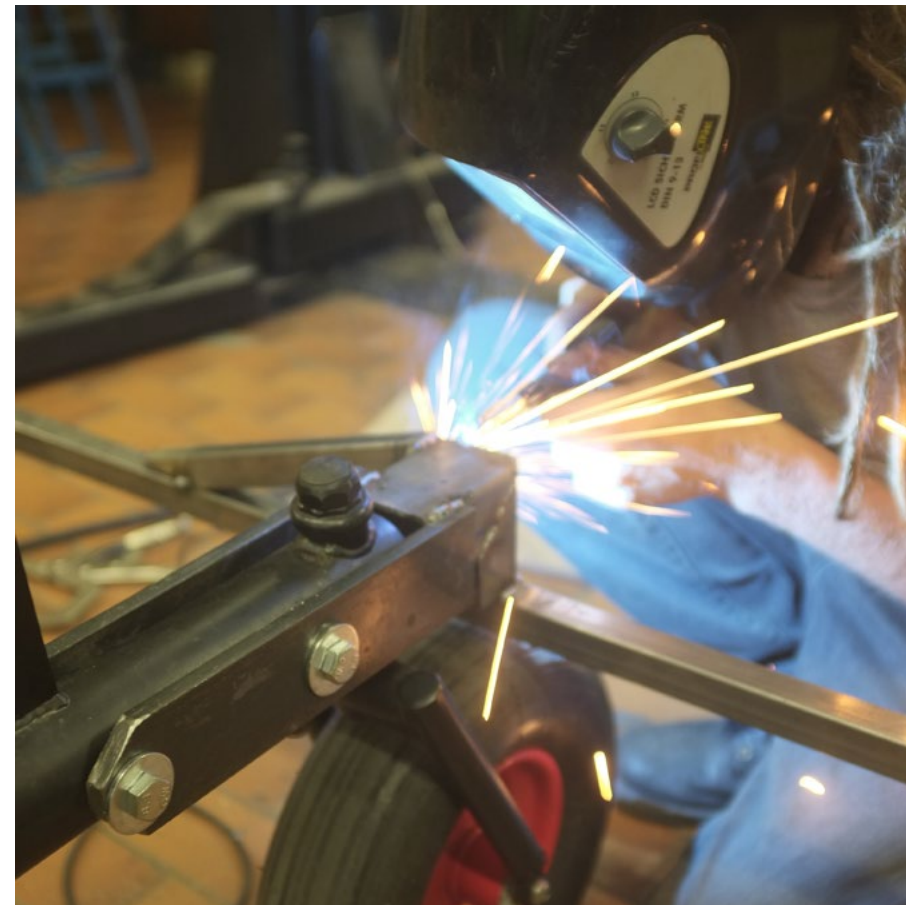




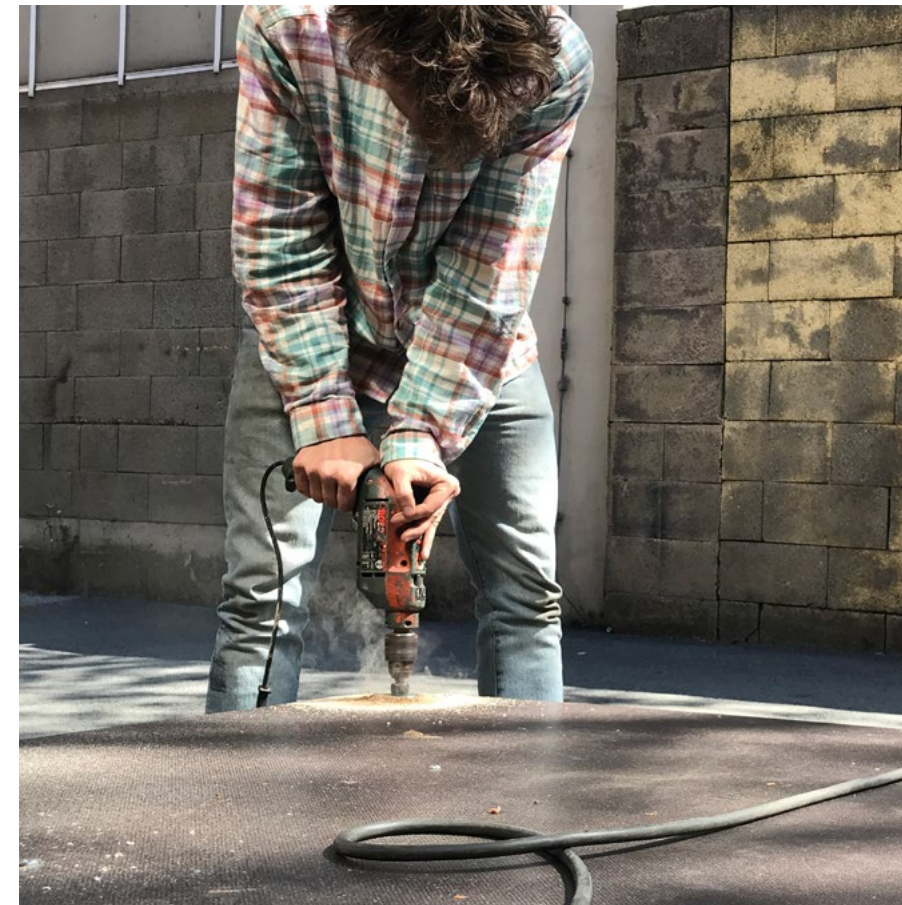
# Kompetenz Handwerk



**METALLARBEITEN**  
mittel



**SCHWEISSEN**  
mittel



**HOLZARBEITEN**  
einfach



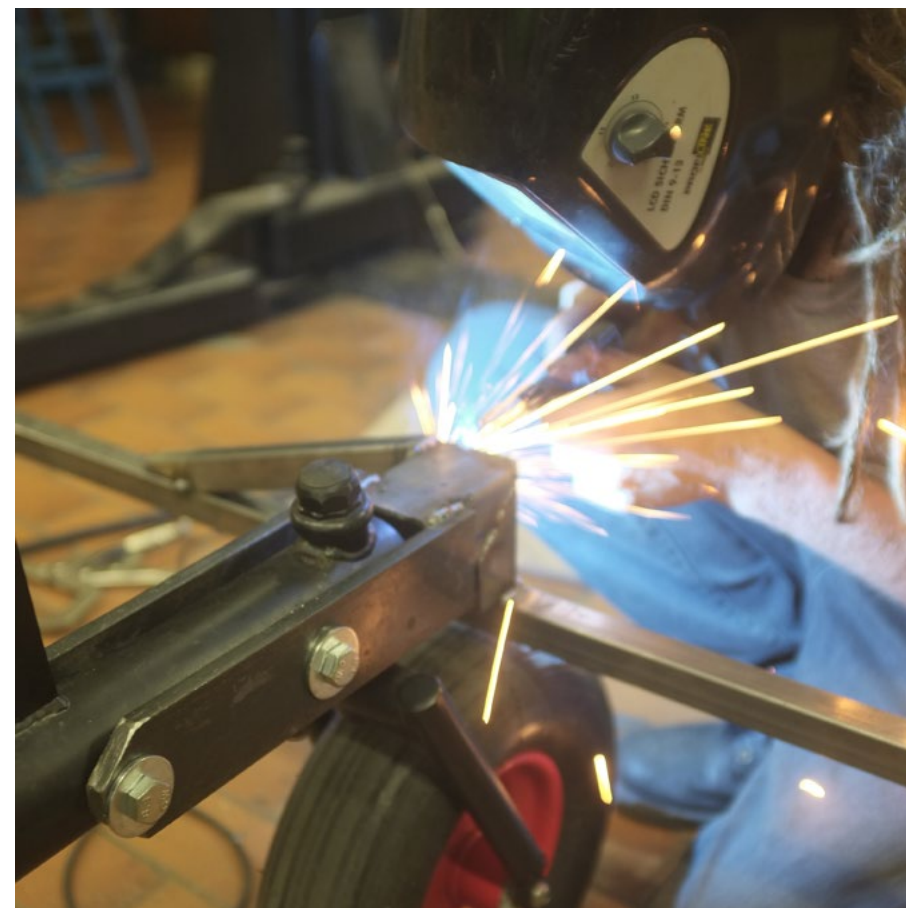
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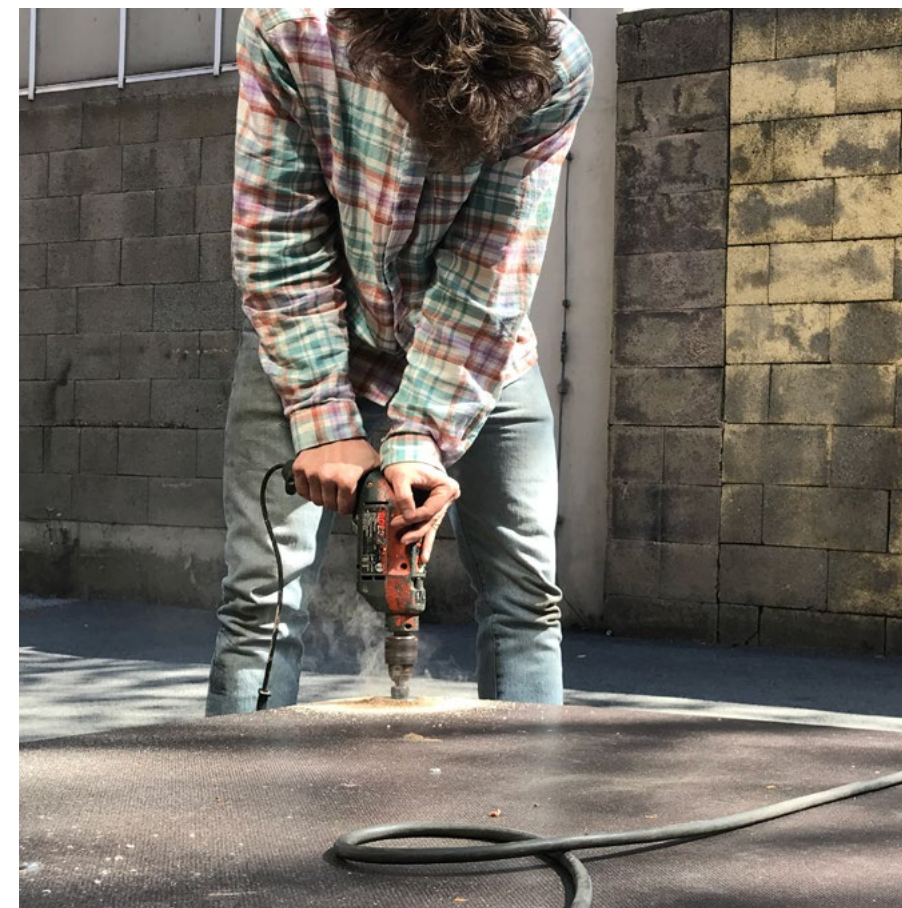
# Kompetenz Handwerk



**METALLARBEITEN**  
mittel

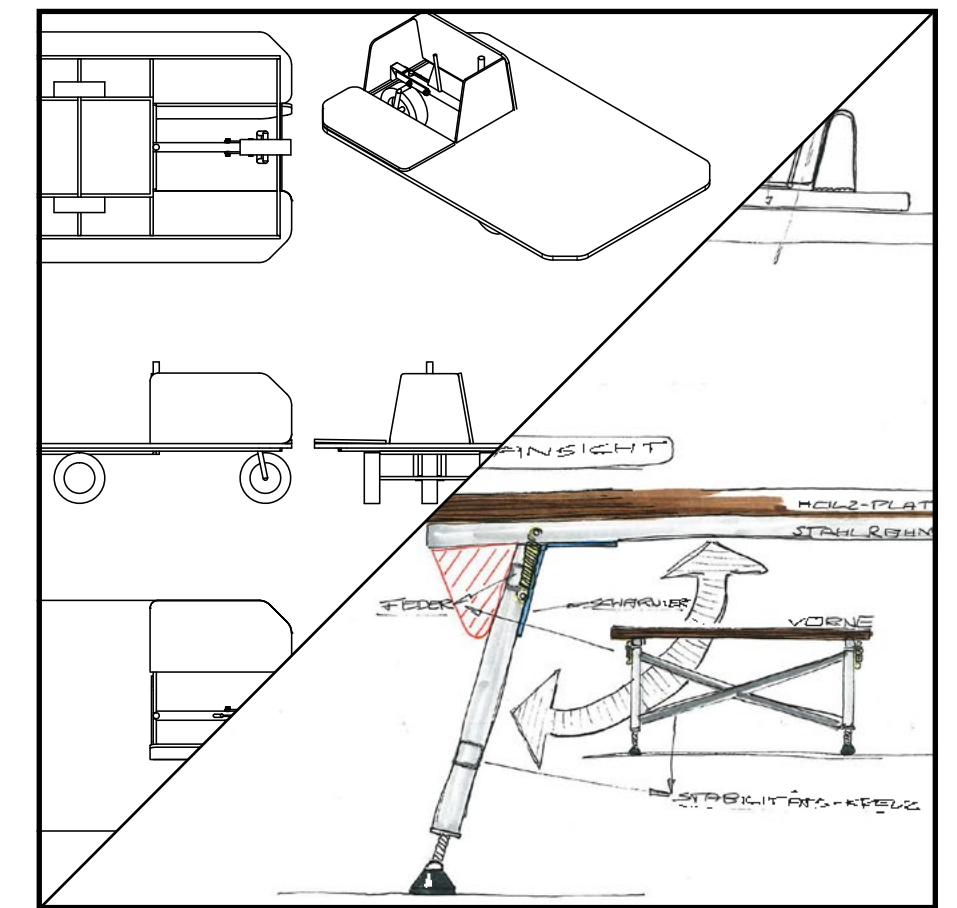


**SCHWEISSEN**  
mittel



**HOLZARBEITEN**  
einfach

+



**CAD/Zeichnen &  
PLANUNGS  
KENNTNISSE**



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# Kompetenz Handwerk



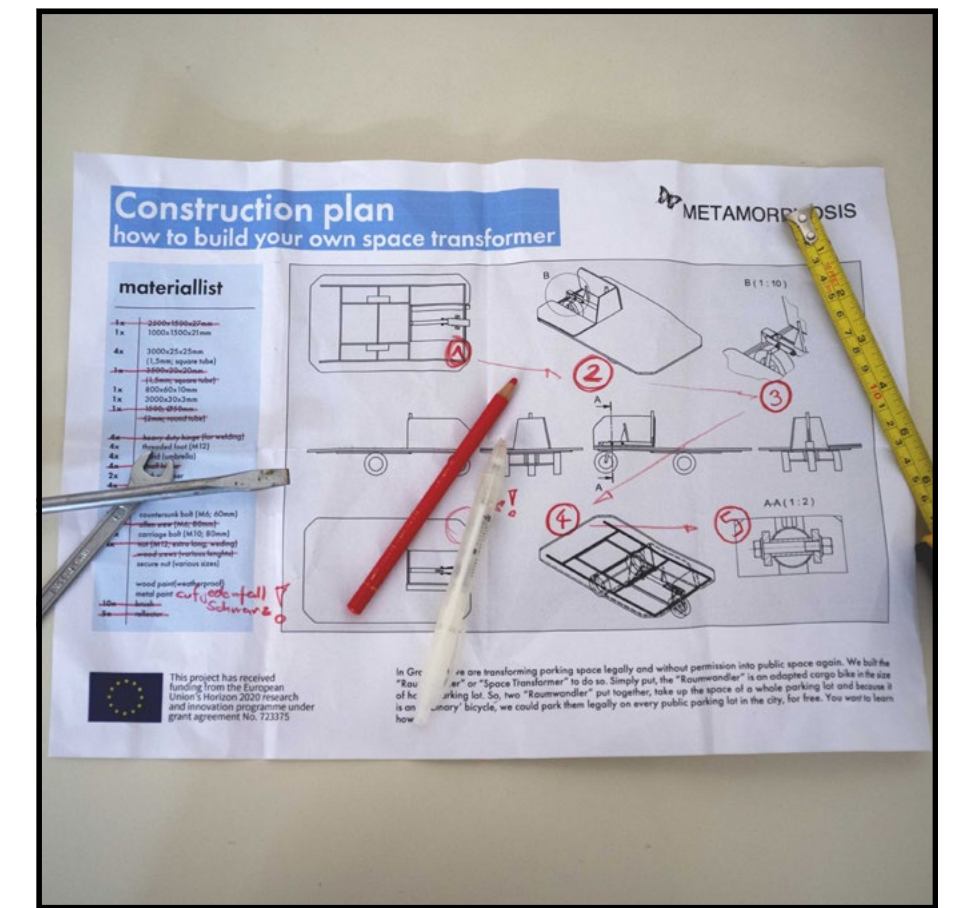
**METALLARBEITEN**  
mittel



**SCHWEISSEN**  
mittel



**HOLZARBEITEN**  
einfach



**BAUPLAN**

**Download  
(Frühjahr 2020)**

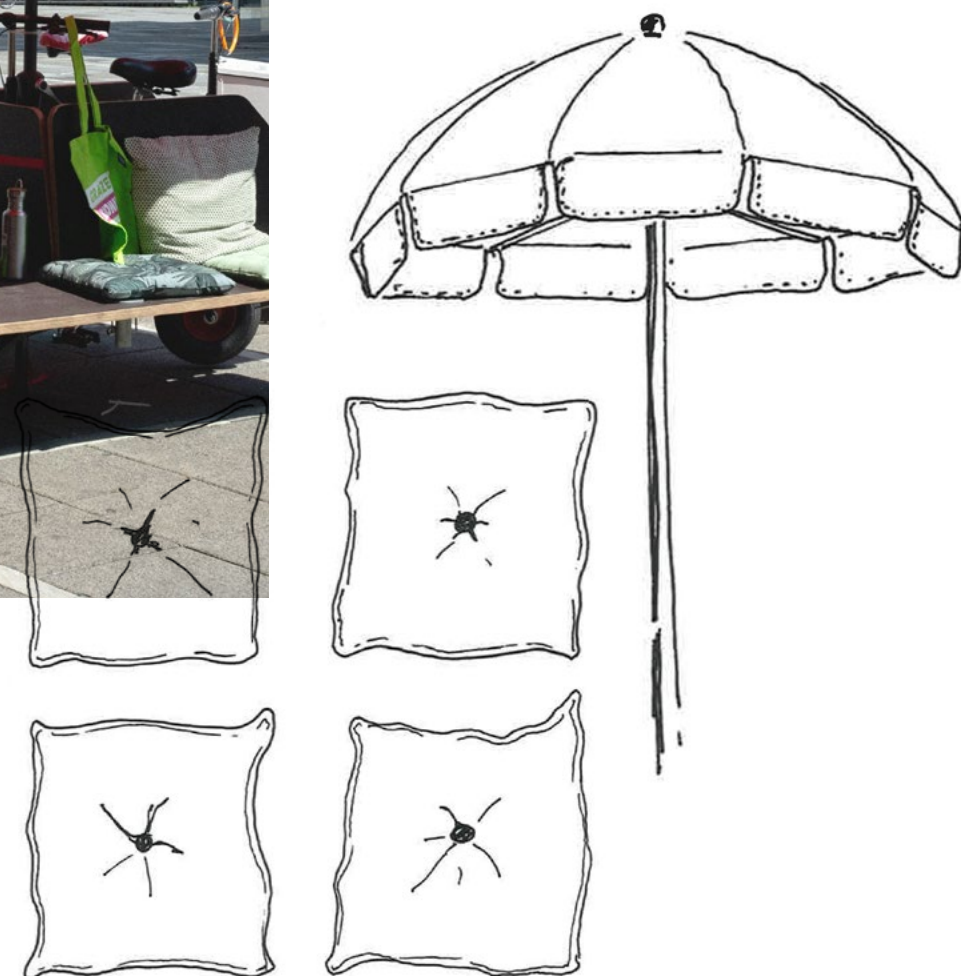


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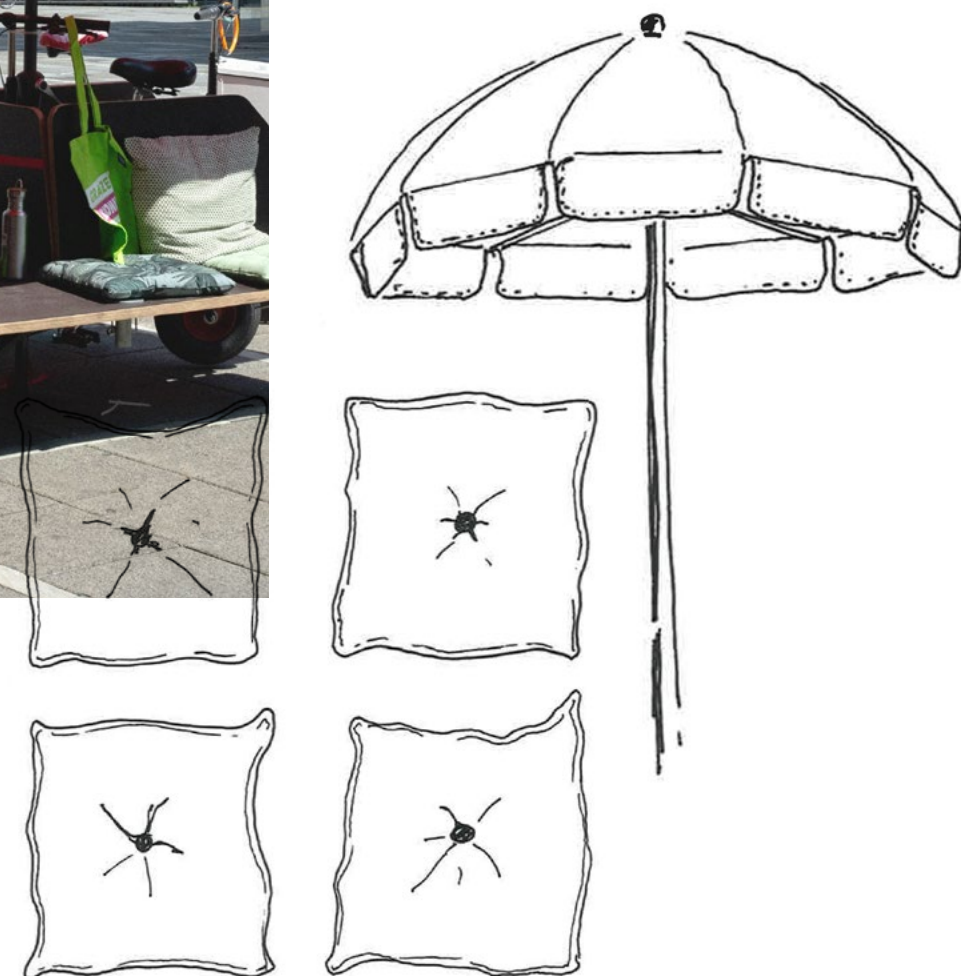
# Hosts



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# Hosts



# Social gardening



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# Lendwirbel 2019



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# Lendwirbel 2019



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# Car-free-day 2019



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# Car-free-day 2019



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**DANKE FÜRS  
ZUHÖREN/ZUSEHEN!**



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