

The Wishing Table Project



Introducing a novel infrastructure
for efficient door-to-door delivery
service



Inefficient Delivery

Take-aways deliveries & Courier, Express, and Parcel (CEP) services

PAIN:

Cost, time and the environmental impact of the last-mile delivery

Personal delivery

PAIN:

Inconvenience and the environmental impact of the last-mile delivery

ASPIRATION:

To extend the reach and scope of future services beyond B2C ----> C2C, C2B



Inefficient Last-Mile Delivery

The existing systems using delivery trucks are slow, expensive and inconvenient.

Redundant mileage of parcels due to batch transport → delays

Usage of roads, streets, elevators → congestions

They heavily depend on human labour → cost



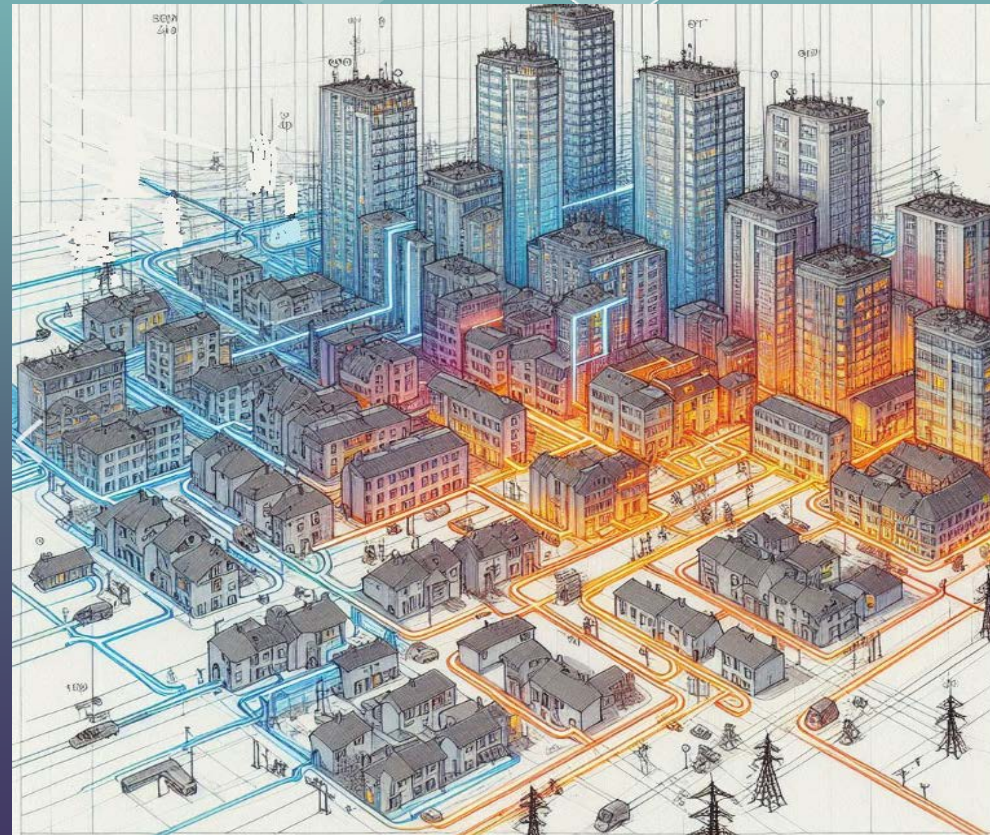
Solution: Internet of for Things

TWT

A true 3D door-to-door goods transport system. An infrastructure consisting of robotic vehicles, a passive 3D guideway system and automatized mailboxes.

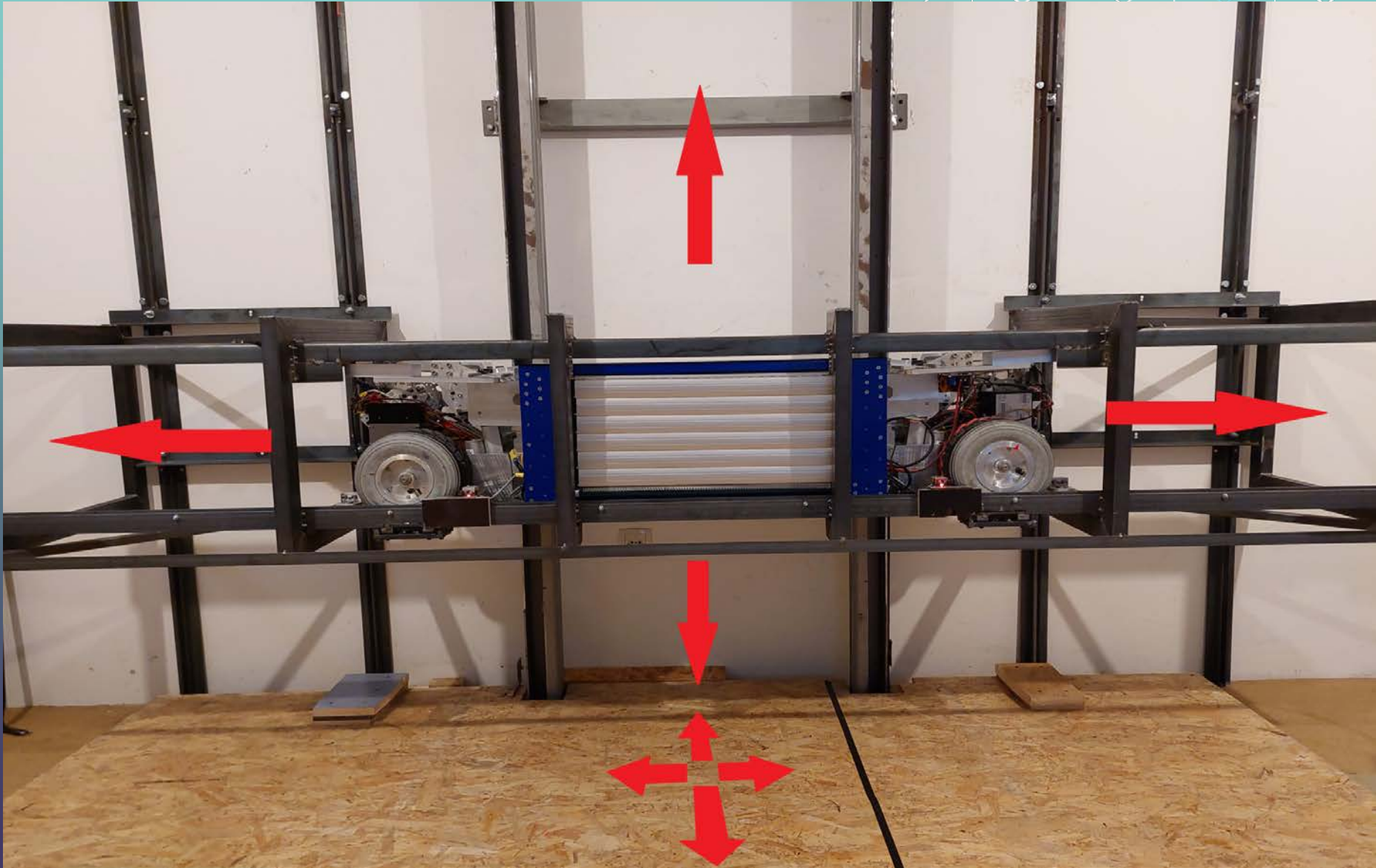
The 3D guideway system is designed with various guideway sections:

- Horizontal straight and curved guided sections
- Flat surface
- Vertical guideway sections
- Horizontal intersections
- Horizontal to vertical intersections



Robotic vehicle and the 3D guideway

TWT



Robotic vehicle 3D

Horizontal velocity	km/h	30
Vertical ascend	m/s	0,42
Payload capacity	kg	35
Weight of empty vehicle	kg	115
Length	cm	142
Width	cm	40
Height	cm	34
Battery capacity	Ah	20
Motor power	kW	4x1

The inovative central gravity generated normal force linkage mechanism



Patent pending:

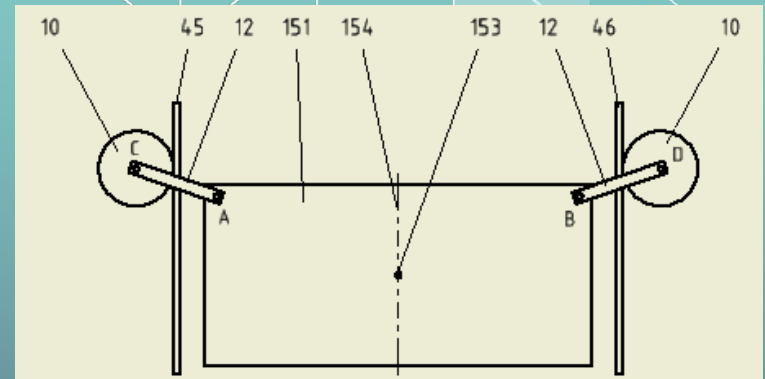


FIG. 6a

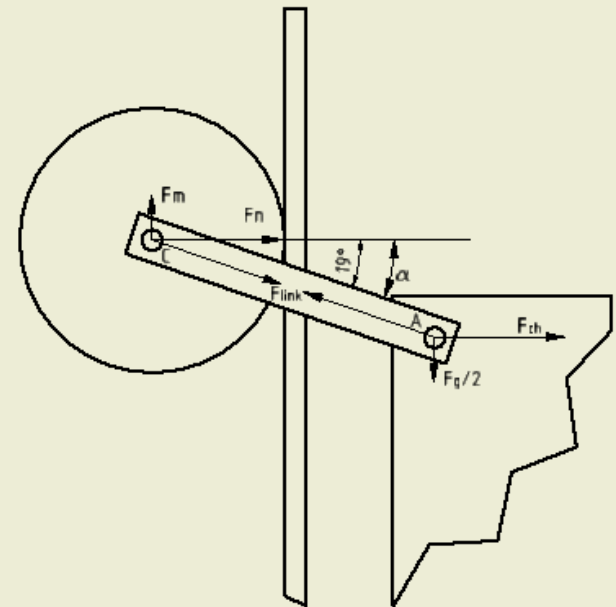


FIG. 6b

The Initial Target Market: New multi family residential buildings



Top 3 markets:

	Unit	USA	China	EU	Total
population	million	335	1411	448	2194
new apartments estimate 2023	million	0,44	1,82	0,54	2,80

Competition and/or Complementary

- Compared with Drones
 - TWT Delivers within buildings
 - TWT is energy efficient in lifting and descending
 - TWT has high load capacity compared to its dimensions
 - TWT is designed for the return traffic (C2B,C2C) as well

- Compared with 2D street robots
 - TWT Delivers within buildings
 - TWT is designed to use its guideway system to bypass the existing traffic





Further Developement Roadmap

Phase II (seed):

- Review of the prototype and introduction of potential improvements
- Redesign from a prototype to a small batch series production for robotic vehicles
- Infrastructure system design
- Software design of admin and user interface
- HW and SW design of the traffic control
- First installation - blueprint design
- First installation - construction

Phase III (growth):



Revenue and Costs Potential

Top 3 markets:

	Unit	USA	China	EU	Total
population	million	335	1411	448	2194
new appartments estimate 2023	million	0,44	1,82	0,54	2,80
Cost of the new infrastructure/apartment	EUR	5636	5636	5636	
Yearly market potential of installations	billion EUR	2,5	10,2	3,1	16
Yearly market potential of new vehicles	piece	3817	15769	4699	24285
Yearly market potential of new vehicles	million EUR	145	599	179	923
Number of parcels per household (2022)		162			
Last mile average cost	EUR	9,5			
Labour value of last mile	%	50			
Potential yearly saving per household	EUR	770			
Infrastructure cost per apartment		5636			
ROI	%	14			



The inventor: Samo Kavčič

- Education: uni.dipl.ing.mechanical engineering
- Experience:
 - Mechanical Design
 - Programming microcontrollers
 - CAD/CAM implementation
 - ERP SW development
 - IT management
 - Financial management
 - IT consulting BI for various industries

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