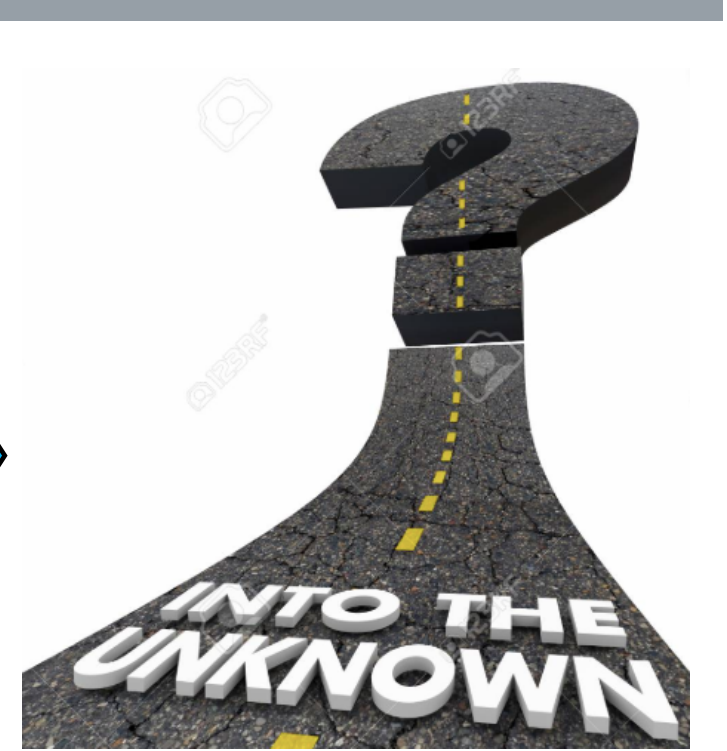

A VIEW ON FUTURE MOBILITY





WHAT ARE WE WORKING ON?



depreciation



10 YEARS



KEY CHALLENGES = MOTIVATION?

Health

- Pollution
- Stress
- Safety

Money

- Depreciation – private ownership
- Losses – public transportation

Comfort

- Parking
- Accessibility

Time

- Availability
- Traffic congestion

THE DESIRE TO MOVE AND MOVE FAST...

Past

- Different countries- different modes of transport
- Less communication facilities
- Major dependence on human control

Current

- Internet – global connectivity and knowledge sharing
- Modern computing power - More cross functional systems
- Human control assisted by computers
- Drive towards autonomous systems – to increase speed, safety and efficiency

Future trends

- Improving efficiency and reducing environmental impact
- Reduce congestion, travel time and costs
- Environmental and economical sustainability
- Connectivity – V2V and V2I
- Alternate energy sources and propulsion systems



FIRST MILE / LAST MILE

- Increase accessibility of public transport and reduce traffic congestion
- To minimize energy consumption and increase spatial efficiency per person
- To reduce carbon footprint in short distance travels



U.K. town to deploy driverless pods to replace busses

by Bob Yirka, Phys.org



(Phys.org) —Milton Keynes, a town north of London, has announced that it will be deploying 100 driverless pods (officially known as ULTra PRT transport pods) as a public transportation system. A similar system has been running for two years at Heathrow airport. The plan is to have the system up and running by 2015, with a full rollout by 2017. The move marks the first

Source: <https://www.pesmedia.com/aurrigo-autonomous-vehicles-canada-invest-ottawa-l5-marches-golf-club/>

CONSTRUCTION
NEWS
TRENDS

Coventry firm completes its first ever public autonomous pod trial in Canada

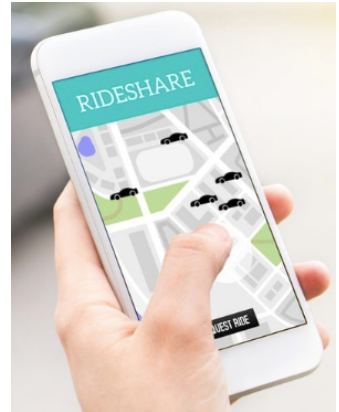
3 SEPTEMBER 2019 • In News



Source: <https://phys.org/news/2019-11-uk-town-deploy-driverless-pods.html>

INTRA-CITY

- Public transport vs Private Mobility
- Mobility renting and sharing
- Dedicated lane for public transports and electrifications of these routes also having a possibility of implementing batterie swapping
- Future of Intra city transportation solutions could also involve flying pods and quad copters for passenger and freight delivery systems.
- At a small size, quadcopters are cheaper and more durable than conventional helicopters due to their mechanical simplicity.
- Electric quadcopters have shorter endurance when compared to similarly sized electric helicopters because of the smaller "disk area" of the rotor blades



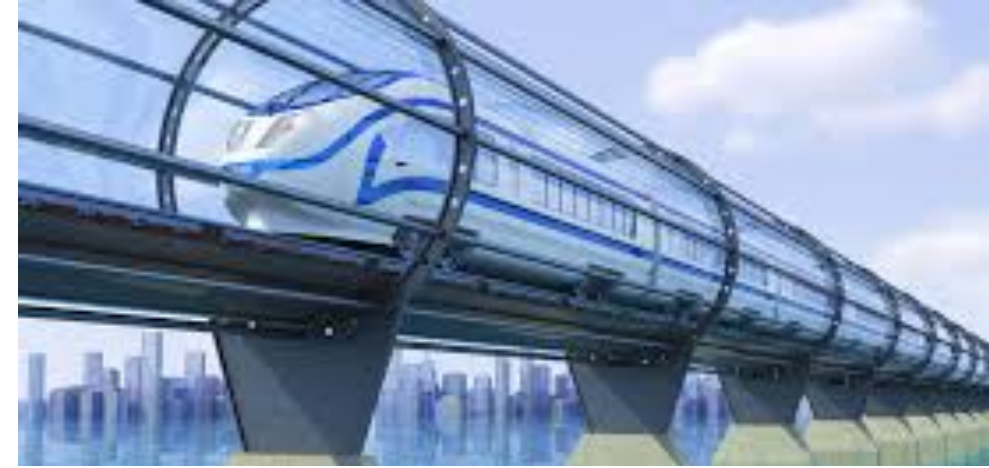
This new drone lets people fly without a pilot

THE PLAID ZEBRA - JANUARY 16, 2016



INTERCITY - PEOPLE

- The main inter city passenger traffic can be managed by electrified highways with separate heavy vehicle lanes and passenger corridors.
- A gondola lift is a means of cable transport and type of aerial lift which is supported and propelled by cables from above. It consists of a loop of steel cable that is strung between two stations, sometimes over intermediate supporting towers. The cable is driven by a wheel in a terminal, which is typically connected to an engine or electric motor. They are often considered continuous systems since they feature a haul rope which continuously moves and circulates around two terminal stations



INTERCITY - FREIGHT

- Urban freight transport is defined as all movements of goods (as distinct from people) into, out from, through or within the urban area by light or heavy vehicles
- The Heavy vehicle lanes and dedicated freight corridors could increase the overall efficiency of the logistics greatly.
- By using advanced systems like fleet platooning, the efficiencies could be even expanded during fleet movements.
- Government regulations to unify logistic planning of different service providers – improving logistic efficiency and reducing emissions per capita



INTER STATE (LONG DISTANCE)

- The Hyperloop – high speed "capsules" or "pods" travelling through a steel tube maintained at a partial vacuum.
- Hydrail vehicles - hybrid vehicles using fuel cells and equipped with renewable energy storage, such as batteries or super capacitors, have higher efficiency and lowering carbon footprint

Two trains built by the French train maker Alstom are now operating on a 62 mile stretch of line in northern Germany



JUL 31 2019

India Advances World's First Passenger Hyperloop System

- The Government of Maharashtra Cabinet Approves Virgin Hyperloop One - DP World Consortium as Original Project Proponent (OPP) for the Pune-Mumbai Hyperloop Project



AND MANY MORE...

WHAT CAN WE DO?



AND FINALLY...

SUSTAINABLE DEVELOPMENT GOALS



DON'T LIMIT YOUR CHALLENGES. CHALLENGE YOUR LIMITS.

THANK YOU

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