

# Cargo drones in the next normal

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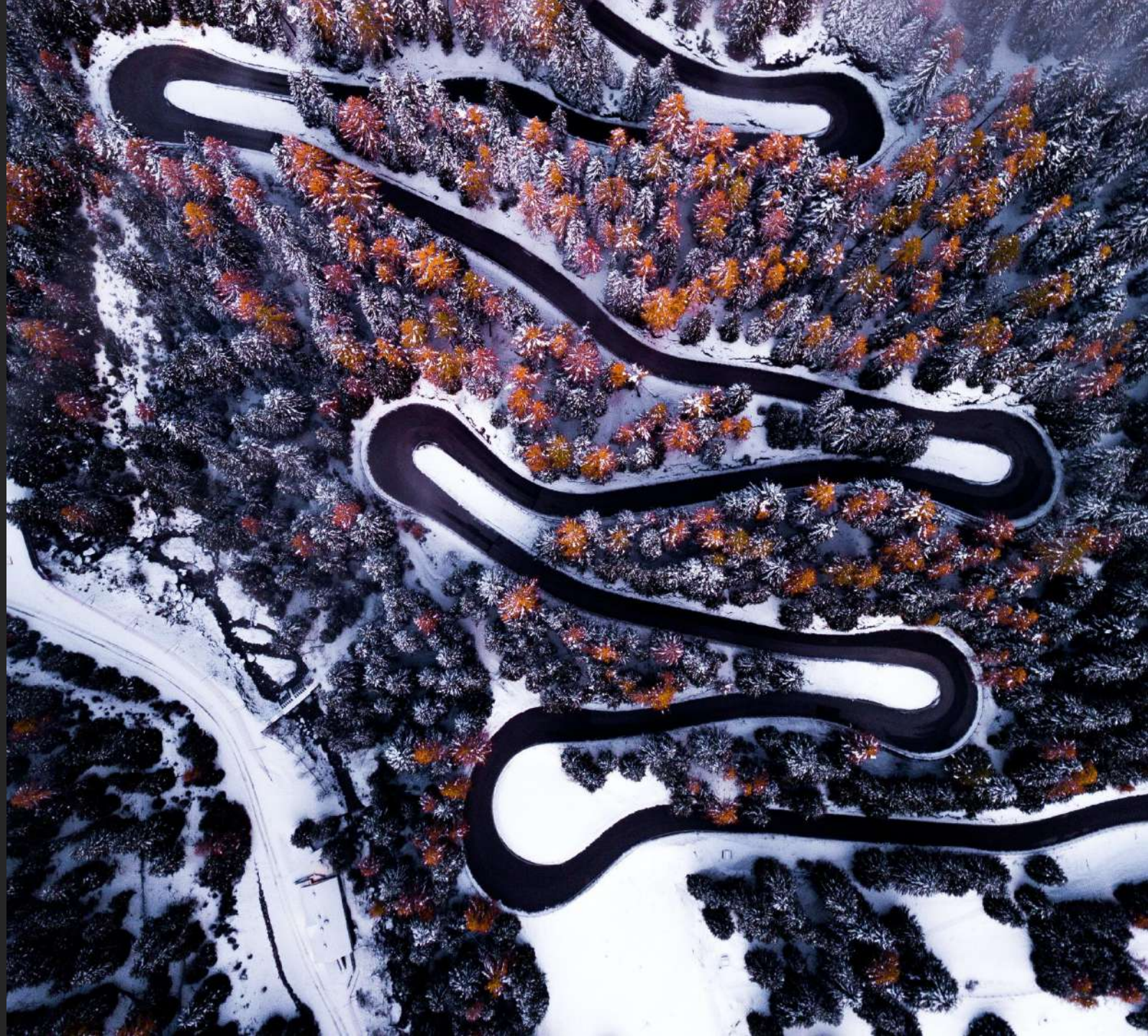
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# Aviation: a conduit for world trade

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\$6.4 trillion  
of goods transported by air

35% of world trade by value

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# Air cargo: critical for aviation

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**9-12%** of airlines' average  
revenues

More than **twice** the revenues of the first  
class in passenger travel

**10%** of airports' average revenues

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# Commodities transported by air

- Pharmaceuticals
- Perishables
- Live animals
- Live organs
- Human remains
- Humanitarian supplies
- E-commerce
- Mail
- Express
- Valuables
- Dangerous goods
- Oversized & heavyweight cargo

# Air cargo as a premium service



Speed



Flexible



Reliable



Safe



Secure

# Air cargo traditional options

- Belly cargo services
  - Wide body aircrafts
  - Narrow body aircrafts

- Full freighter services

*Important note: full freighters are usually not doing point to point to maximize use and filling*

- RFS: road feeder services
- Charter services



# Drones & aviation

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- **Threats** to safety and security
- **Challenges** to airspace integration / air traffic management
- **Opportunities** for new routes, customers and revenues
- **Opportunities** for societies and economies: hard-to-reach communities, urban air mobility, humanitarian relief, emergency response to pandemic



# Cargo drones – potential use cases

- Last mile delivery – e-commerce, postal
- Specialized delivery – emergency
- Specialized delivery – hard-to-reach (topography, natural disaster, conflict zones)
- Secondary transport legs – thin routes
- Drone feeder service, replacing road feeder service
- Unmanned and cheaper option than traditional manned vehicles
- Zero emission vehicles options
- New point-to-point routes, using small airports





# UAVs will support aviation's profitability

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- Opening new routes
- Serving new customers
- Developing business
- Expanding expertise
- Diversifying activity for small airports
- Competing with road transport
- Helping to achieve CO2 reduction targets



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# Companies to watch!

## Drone manufacturers and operators

- Dronamics
- Drone Delivery Canada
- Elroy Air
- Matternet
- Natilus
- Pipistrel
- Reliable Robotics
- Rigi Technologies
- Sabrewing
- Singular Aircraft Flyox
- Wing
- Wings for Aid
- Zipline

## Traditional aircraft manufacturers

- Airbus
- Boeing

## Traditional cargo airlines

- Air Canada Cargo
- Astral Aviation

## NGOs and humanitarian agencies

- WFP
- ICRC
- UNICEF
- GAVI

## Online retailers and their logistics branch

- Alibaba & Cainiao
- Amazon
- Walmart

## Parcels and postal operators

- UPS
- DHL
- FedEx
- SF Express
- Posts

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