

# What Technologies will be most impactful on Supply Chains in the Future?

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Service Robots

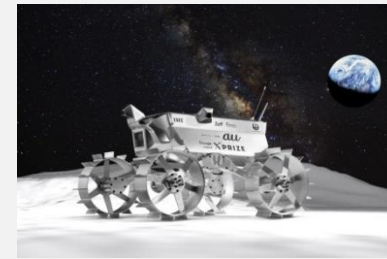


Source: Swisslog

Autonomous Vehicles & Ships



Unmanned Aerial Vehicles (UAVs)



Space Robots

- collaborative robots in warehouses (picking, placing, sorting,...)
- trailer and container loading & unloading
- assistance in local delivery

- transport in intra-logistics
- outdoor logistics (in airports, ports, ...)
- long-distance transport (trucks, ships)
- last-mile delivery

- surveillance of logistic operations
- inspection of infrastructures
- monitoring & transport in intralogistics
- delivery in rural areas & last-mile

- mining and manufacturing in space
- prospecting
- transport in space & to earth

## Advantages:

- novel sensors, hardware, algorithms, 3D printing, ...  
-> new robotic “products” with good price to performance ratio
- offer higher flexibility, efficiency, utilization (24/7), reliability, quality, speed of delivery
- reduction of costs, storage/transport capacities, human workload

## Challenges:

- technical: increasing degree of autonomy, human-robot interaction, AI & machine learning, systems design, integration
- Legal issues, regulations, certification, security, safety, privacy
- Ethical issues