INFRASTRUCTURE AND SUPPLY CHAIN

INFRASTRUCTURAL, LOGISTICS AND SUPPLY CHAIN CHALLENGES IN AFRICA EXAMPLES

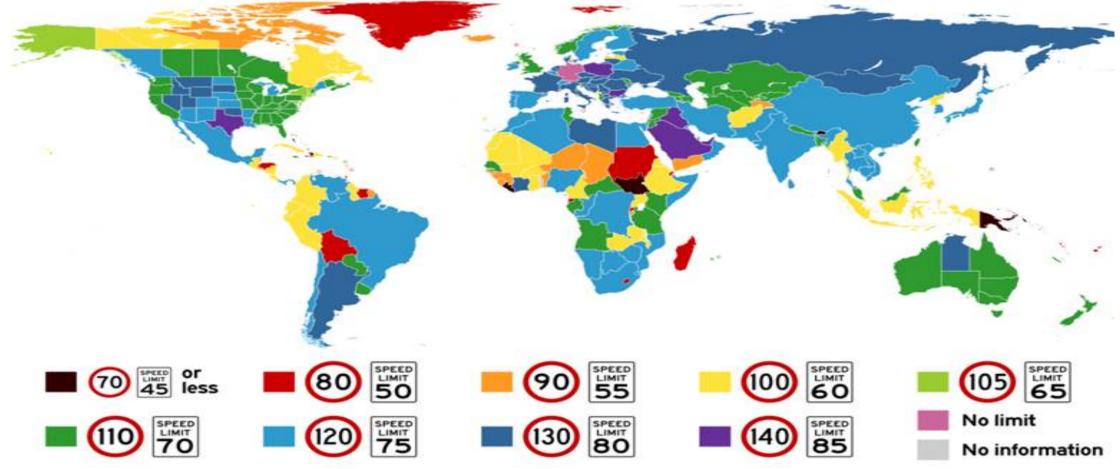
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In theory, Africa is on par (at least re speed) with the RoW ...

Speed limits by country, globally



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... but reality on the ground is quite different Challenges w/ infrastructure and supply chain in Africa (examples)

▶ Efficiency

► Long processing times at ports, border crossings, etc.

▶ Bureaucracy

► A lot of paperwork, often changing without lead times, not harmonised across African countries.

Speed

▶ Speed limits are ok but with waiting times at the border, road quality, traffic jams, average speed is < 40km/h!

► (Productivity-adjusted) cost

- ► Training and turnover of staff often wanting, leading to often very significant instances of wrong pickings at warehouses, stock deviations, etc.
- ▶ Poor infrastructure leads to inefficiencies, slow speed, and high costs.



Physical / digital infrastructure in dire need for improvement Potential solutions (selection)

1. Physical infrastructure

- > Border Crossings: Most borders facilities (gates and truck waiting areas) not big enough: Need for extension.
- Roads: Conditions often very poor slowing vehicles down; cities should have bypass roads. In some countries, foreign drivers forbidden: Goods to be offloaded at border for change of truck with risk for lead-time, damage, hijacking etc.
- > Railway: The currently extremely poor / hardly existing railway infrastructure has to be improved across the continent as good alternative for sea and road freight.
- ➤ Ports: (Unpredictable) time to release container often weeks / months (impact on warehouse inventory management; safety stock increase; higher cost for the customer/user/consumer): Need to improve processes and equipment.

2. Digital infrastructure

- ➤ Increase productivity at border crossings, e. g., via digitalisation harmonisation of customs systems in AF to avoid massive paper work at the border. Also, there should be a "green" light approach at the border: Truck and shipment already pre-checked at departure facility and data uploaded to the customs system; truck drives through the border gate, gets scanned, weighed, seal reading etc. with data compared with the customs system data.
- > Strong 4G/5G Telecom network for at least the important roads in AF to track shipments and increase security.

