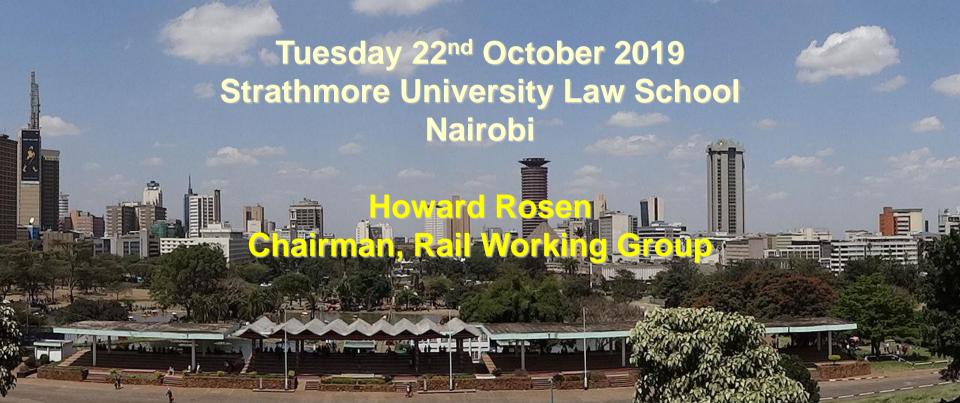
The Luxembourg Rail Protocol: Legal operation and expected benefits



THE 2001 CAPE TOWN CONVENTION ON INTERNATIONAL INTERESTS IN MOBILE EQUIPMENT



- Formed in 1996 at the request of UNIDROIT
- Not-for-profit global industry group based in Switzerland
- All officers and members work for free
- Over 90 direct members and hundreds via industry associations
- Linking up various industry stakeholders
- Dedicated to the adoption of the Rail Protocol to the Cape Town Convention
- In Africa we work closely with the UN Economic Commission for Africa



SUSTAINABLE GALS DEVELOPMENT GALS



Sustainable transport

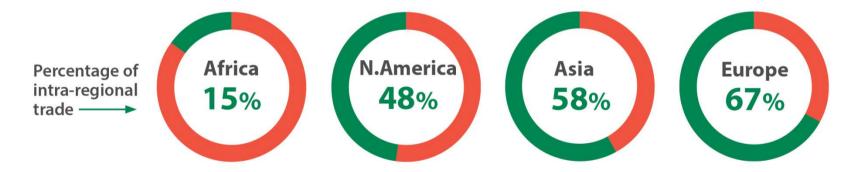
"The provision of services and infrastructure for the mobility of people and goods - advancing economic and social development to benefit today's and future generations - in a manner that is safe, affordable, accessible, efficient, and resilient, while minimizing carbon and other emissions and environmental impacts."

Mobilizing Sustainable Transport for Development, Analysis and Policy Recommendations from the United Nations Secretary-General's High-Level Advisory Group on Sustainable Transport, 2016



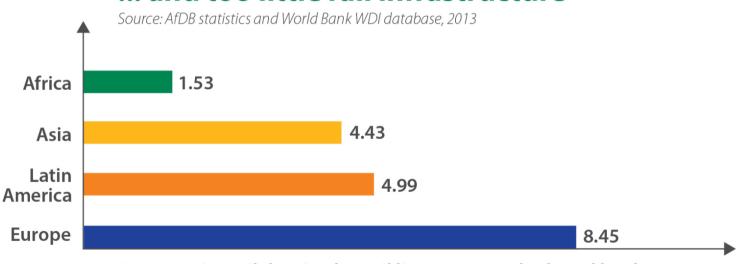
Africa has a low level of intra-regional trade ...

Source: UN Economic Commission for Africa





... and too little rail infrastructure



Comparative rail density: km rail lines per 1000 km² total land area



- Railways are essential for sustainable development and a key part of the flight against climate change
- The lack of integrated African rail networks is holding back growth and intra-continental trade including the AfCFTA
- Moving passengers and freight onto rail is vital for environmental, social and economic reasons (1 train can transport the freight carried by 40 trucks)
- · Roads cannot take the strain from increased trucking
- Cities are strangled by congestion and pollution
- Communities are paying a heavy price



Road fatalities

According to the World Health Organization's Global Status Report on Road Safety

OVER

1.35

million

people died in road accidents in 2016



DPTO

50
million
people were injured
worldwide



Road fatalities

According to the World Health Organization's Global Status Report on Road Safety



More people die

as a result of road traffic injuries than from HIV/AIDS, tuberculosis or diarrhoeal diseases

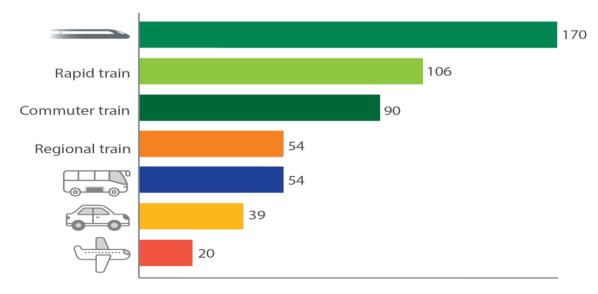
Road traffic injuries are currently the leading cause of death

for children and young adults aged 5-29 years



Energy Efficiency

Passenger-kilometres carried per unit of energy (1kwh = 0.086kep) Source: EEA (2018)





The current funding models

- Governments cannot shoulder the financial burden alone
- Public finance
 - ☐ Equity, state loans and grants, aid
- Public Export Finance
 - ☐ ECA, state or para-statal loans or guarantees
- Private investment
 - ☐ Equity and debt for private companies
 - Secured debt
 - □ Leasing
 - □ BOT/PPP



The Problems for private investors

- No common rules on debtor insolvency
- No national title or security registries
- Identifiers unstable (from a creditor's perspective) and inconsistent across the sector
- Limited legal infrastructure domestically and internationally
- Repossession issues for creditors on debtor default/ insolvency
- Public Policy and Public Interest
- Banks' capital requirements and Basel II and III
- Limited commercial tracking of location and status of assets
- Additional security issues and conflict of laws when financed assets cross borders



Cape Town Convention on International Interests in Mobile Equipment (2001)

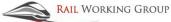
- New global system of international legal rights and priorities for secured creditors
- Common system for enforcing creditor rights upon debtor default or insolvency
- Public registry of security interests, accessible 24/7 online
- Already adopted by 79 States



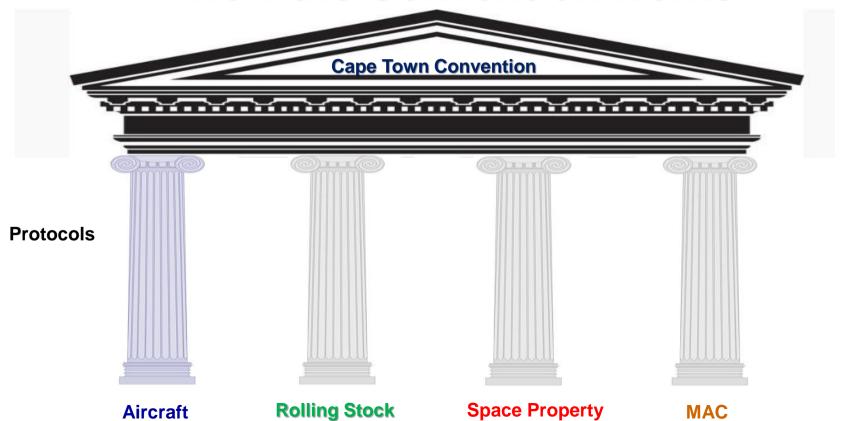


The Convention Creates

- A new type of global security interest (the "International Interest") for designated movable equipment
- Internationally recognised with established priorities
- Secures the:
 - □ Lessor under a lease
 - ☐ Creditor under a secured loan
 - □ Vendor's rights under a conditional sale (where title is retained)
- Applies based on seat or domicile of debtor/lessee



How the Convention works





How the Convention works

- Convention is applied to an asset class by a protocol
- Declarations may be made in relation to both the Convention itself and adopted protocols
- All declarations are voluntary (except for a mandatory declaration under Article 54 (2) of the Convention)



Aircraft Protocol

- Adopted at the 2001 Cape Town diplomatic conference
- Applies the Convention to airframes, engines and helicopters subject to some *de minimis* rules
- Applies the Convention also when the Airframe is registered in a contracting state at the time the security interest is created
- Extends the Convention to aircraft sales
- Operating since 2006 now in force in 76 states plus 1 REIO (European Union)



Aircraft Protocol

The Convention and the Aircraft Protocol is in force in 24 African States

- Angola Burkina Faso Cameroon Cape Verde Congo
- Côte d'Ivoire Democratic Republic of the Congo Egypt
- Eswatini Ethiopia Gabon Ghana Kenya Malawi
- Madagascar Mozambique Namibia Nigeria Rwanda
- Senegal
 Sierra Leone
 South Africa
 Togo
- United Republic of Tanzania



Aircraft Protocol

- International registry based in Dublin, Ireland: registrar Aviareto, a special purpose company established by SITA,
- Supervisory Authority: ICAO in Montreal
- Under the Aircraft Sector understanding ECAs reduce their risk premiums by 10% as long as the Protocol is adopted with the recommended declarations
- Over 1 million registrations to date on aircraft with an estimated value of over \$ 650 Billion
- Aviation Working Group: the Aircraft Protocol will save the air transport industry \$161 bn 2009 - 2030



Rail Protocol

- Diplomatic Conference in Luxembourg in 2007:
- Attended by 42 states and 11 international organisations including 7 African States and SADC
- Sponsoring intergovernmental organisations UNIDROIT and OTIF – both with African members





Rail Protocol

- Applies the Cape Town Convention to rolling stock when debtor is located in a contracting state
- International registry in Luxembourg
- Registrar responsible to contracting states
- Will introduce global unique identification system for railway equipment





The Rail Protocol Applies to ALL Rolling Stock

- Wherever manufactured, whatever gauge and operability standards
- Broadly defined: "..vehicles movable on a fixed railway track or directly on, above or below a guideway." This covers:
 - ☐ Inter-urban and urban rolling stock
 - ☐ Specialist boring and other rail mounted equipment
 - Metro trains and trams
 - Monorail trains and cable cars
 - ☐ People movers/shuttles at airports
 - ☐ Cranes and gantries at ports
 - ☐ Hyperloop pods



Unique Vehicle Identification

- Rolling stock must be uniquely identifiable to register interest
- Unique Vehicle Rail Identification System (URVIS) will be established by registry regulations
- First global unique and permanent identification system for rolling stock
- 16-digit number allocated by the Registrar in Luxembourg that will never be re-used
- Affixed permanently to each piece of rolling stock by the manufacturer, maintainer or keeper



The Protocol's Status

- Adopted in 2007 (4 ratifications and active registry required to enter into force – expected during 2020)
- Appointment of Regulis SA (SITA subsidiary) as Registrar in December 2014
- Ratified by Gabon, Luxembourg and Sweden (and the EU) and Kenya (hopefully) about to ratify
- Signed by Italy, Germany, France, Mozambique, Switzerland and UK - all moving towards ratification
- Also under review in Africa by the states of South Africa, Burkina Faso, Ghana, Mauritius, Morocco, Nigeria, Uganda, Senegal, Egypt and Ethiopia.



- Removes a significant financial burden from the government
- Liberates public and private operators to obtain private sector finance for rolling stock when needed: no government budgetary constraints nor tied funding
- Opens up non-recourse private financing of existing fleets
- Important part of a PPP strategy (e.g. Gautrain expansion)
- Key driver for a modal shift from road to rail
- By introducing a common system of rules in contracting states, it protects operators and financiers where rolling stock operates across jurisdictional borders - so directly supports efficient free trade of goods within Africa



- URVIS
 - ☐ One system applicable worldwide on all rail assets
 - ☐ Real-time tracking of condition and location of assets domestically and in other jurisdictions (and tracks)
 - ☐ Facilitates more efficient asset management
 - ☐ Underwrites customised predictive maintenance
 - ☐ Makes lifetime asset management and costs much easier for operators, manufacturers and financiers



- URVIS
 - ☐ Important for immatriculation admission to rail system
 - Will support regional regulatory co-operation and interoperability systems
 - □ Defence against fraud on purchasers and creditors of rolling stock
 - ☐ Supports new technology



Some state of the art examples:

Regenerative braking

Supercapacitor trams

Low-noise rolling stock

Automated train operation

High-speed trains

Automatic coupling systems

Artificial intelligence and platooning

Real-time rolling stock location and diagnostic systems

Variable-gauge rolling stock

Positive train control

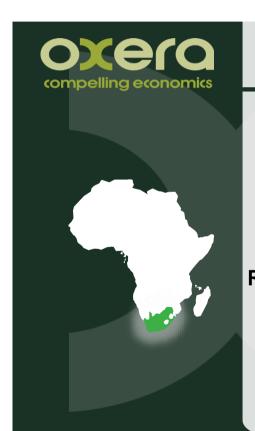
Hybrid, clean
diesel &
hydrogen/fuel cell
locomotives



- Cheaper finance reduces bank capital costs/margin and debt financing costs as risks decrease
- Lower Export Credit Agency (ECA) premiums (min. -10%)
- Eliminates complex documentation and structures
- Recent Oxera studies on direct micro-economic savings of the Rail Protocol:
 - **▶ € 13.9 bn** for 9 "1520" states
 - > € 1.3 bn for South Africa
 - > € 19.4 bn for 20 European states
- Macro economic benefits come on top

South Africa





FINANCIAL BENEFITS

€1.3bn total benefits equivalent to

R20.0bn total benefits

R358 per inhabitant



New deliveries 72%

Passenger 56%



- Supports
 - more manufacturing of rolling stock locally as demand increases
 - ☐ the local financial services and maintenance industry and therefore more jobs and skills' development
- Encourages foreign investment in the railways
- Lowers the barriers to entry for new industry participants
- Makes railways more commercial and competitive
- Underwrites operating leases a key win for the rail sector



- Operating Leasing
 - ☐ Finance and Operating Leasing are critical ways to provide secured finance independent of government
 - ☐ Financier owns the financed equipment
 - ☐ Operating leasing is a key component in the success of the aviation sector in the last 40 years
 - ✓ Lessee can be lightly capitalised
 - ✓ Flexible instrument: lessor can carry maintenance, insurance and other liabilities
 - ✓ Promotes a secondary market

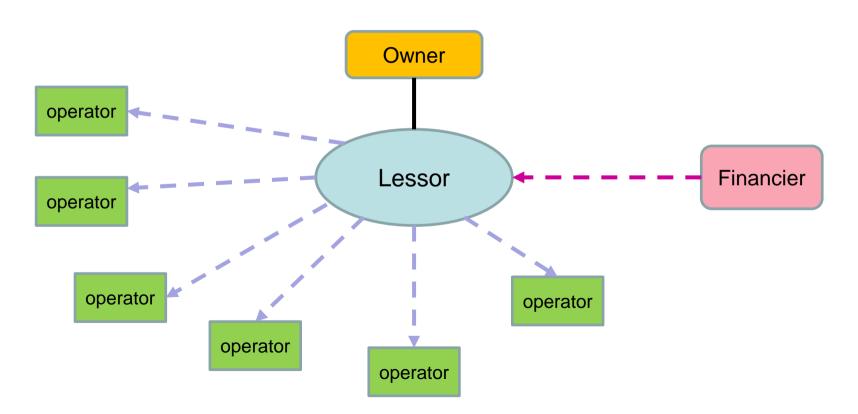


- Operating Leasing
 - □ Allocates practical and technological obsolescence and other risks where they can be most easily borne
 - □ Unburdens balance sheet and operator is no longer an asset manager
 - ☐ Transparency on daily costs
 - Matches availability to operator needs
 - Driver towards standardisation because this enhances residual values



- Operating Leasing
 - Only possible if the lessor can be sure of recovering the leased asset on default or insolvency of the lessee
 - ☐ Or at the end of the lease, to recover the residual value invested
 - Even more a consideration if leased rolling stock is crossing borders
 - □ No Luxembourg Protocol, no leasing to moderate credits without (good) state guarantees – it's a binary decision







- The Protocol
 - ☐ Creates a **common** system, operating in various different countries, protecting the interest of secured creditors, owners and operators
 - ☐ Creates a new legal framework protecting creditors and operators for financings of railway equipment operating in one state
 - ☐ Encourages cross border operation within the same gauge system or beyond where variable gauge rolling stock is used



Conclusion

- Railways are now the sunrise industry for good economic, social, environmental and political reasons
- More cross border traffic, new technology and market liberalisation will mean significant additional need for passenger and freight rolling stock as demand increases
- Africa urgently needs to invest in new rail infrastructure and rolling stock but governments do not have the resources
- More private finance needed for both public and private operators through loans and leases, where security of the collateral will be critical



Conclusion

- The Luxembourg Protocol creates a new common global legal regime for securing creditors and an international registry
- Facilitating more and cheaper finance asset based financing of railway equipment operating domestically or cross border without state support
- Introduces a new unique identification system for rolling stock
- Underwriting operating leasing and leading to a larger, more dynamic, transparent and competitive rail sector across Africa
- Supporting sustainable African development and the AfCFTA

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