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The  
Global Rail Network  
in the 21st Century

The extension of rail infrastructure in the post-Cold  
War era for the distribution of strategic resources

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## The Global Rail Network in the 21st Century: the extension of rail infrastructure in the post-Cold War era for the distribution of strategic resources.

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HOW WOULD YOU set out to develop a global transport policy for Planet Earth, Inc?

How will the enormous transport flows of the 21st Century be facilitated in a way that is both logistically rational and ecologically sound?

These are big questions that may have a big answer . . . somewhere in the make-up of the emergent, multi-modal global transport system.

Of the modes - air, rail, sea, highway - the regeneration and consolidation of global rail offers massive potential.

This may read like a vision of the future from the pen of Jules Verne or H.G. Wells, but from our own perspective - here at the beginning of the 21st Century - it is a future that has already arrived.

The future appears to have arrived in November 1989, with the fall of the Berlin Wall. The wall also divided East and West, as does the International Date Line passing through the Bering Strait, the inter-continental link between the former Cold War adversaries (and close neighbours), the Russian Federation and the USA.

The unforeseen, sudden-end of the Cold War promises, but does not guarantee, untold opportunities for humankind; and, as we pass the end of the 20th Century, it is the dreams of the 19th Century, and even of antiquity, that now look destined to be realised.

Why now?

The world appears, for now, to have survived the prospect of annihilation by the Mutually Assured Destruction of the Cold War era, and has emerged to confront the challenges of post-detente: the global economy, environmental impact, escalating energy demands, and populations pressure on resources and distribution channels

Once, the division of ideologies between great nations determined the geo-political balance.

Now, it is the geo-economic balance that provides a common ideology (or absence of one), which appears to be dominated by a border-less world of global free trade. This much has been espoused by the UN's GATT (now the much maligned World Trade Organisation). In this way, the WTO reports that the Uruguay Round settlements could boost global trade by US\$510 billion per annum (in constant 1990 dollars) by 2005.

An observation: in the face of global economic growth, the nuclear winter has been "replaced" by another apocalyptic vision - environmental catastrophe.

Global trade, free or not, must be facilitated.

The total world population has exceeded 6 billion . . . By 2050, the global population could reach anywhere between 12-14 billion.

It seems reasonable to suppose, then, that as more nations, strategic regions, and cities join the 'club' of free market economies making up the global society, there will be much higher associated trade volumes. . .

The burgeoning trade flows of the 21st Century must be facilitated in a way that is both: logistically rational, as determined by intense, 24-hour competition in a global "free" trade area; and ecologically sound, since passage through, and despoliation of, the trade-routes will no longer be perceived as "free".

As traffic along the sea-lanes, air-corridors and highways increases to accommodate bulk freight and passenger movements alike, the multi-modal global transport system will expand, with a commensurate diversification of routes and modes. This diversification of traffic will expand - across the inter-continental gateways - to encompass the international rail routes. . . .

The endeavour is as much an ambitious, epoch-making geo-political project as a multi-national engineering challenge.

Projects on this scale are among the greatest terrestrial projects in history.

As such, the overall scheme would never be built: it could only evolve on the catalytic principle; that is, a global rail network would arise through the implementation of four inter-continental links, harnessing, where feasible, hydro-electric power.

Observation by a passing academic: "a global network" is, in itself, neither an objective nor a necessity: it will, rather, emerge as an asymmetric network within the multi-modal global transport system. . .

The inter-continental links\*, which have at some time been proposed or are already under planning, are:

the Bosphorus Strait (Europe-Asia);

the Strait of Gibraltar (Europe-Africa);

the Central American Isthmus (North-South America)

the Bering Strait (North America-Asia)

[Explication: an inter-continental link is defined here as those geological features which might reasonably be crossed by contiguous 'solid' rail links. An additional, inter-modal link will be achieved from South East Asia-Australia via Port Darwin, when the proposed link from Port Darwin to Alice Springs in the interior is undertaken.]

The evolution of a global rail network requires the appropriate political software, consolidated by the numerous associated regional projects\*\*.

It is only now, following the end of the Cold War, that the geo-political and – at least to some extent - the geo-economic framework is in place to advance the scheme on a global scale. [Arguable.]

The technology has become available, important precedents have been set (Seikan Tunnel, Japan, 1988; Channel Tunnel, 1994), and the political software may be sought to create more cross-border links over the next 15-30 years. Observation: as with many great schemes, the seeds of these proposals were planted long ago. . .

\*\* Important mega-projects under way or proposed. These include: an inter-modal link with continental Australia via Port Darwin; the African corridors between Cairo-Casablanca-Cape Town; the UN's "New Silk Rail Routes" in Asia; the Japan-Russia tunnels; the Transalpine, the Hejaz project, among many others. . . ]

THE AGE OF THE RAILWAYS" is an evocative phrase because it now appears to refer both to the past *and* the future.

The boom-years and massive expansion of the railways on an international scale were driven by bridge and tunnelling developments, capable of overcoming previously impassable natural barriers.

The crossing of the Alps, during the 1850s onward, among these achievements, most strikingly with the trans-Alpine connections, including the Semmering (1851), the St. Gotthard Pass (1882), and the Simplon (1906).

The greatest of all endeavours came during the period 1891-1904 when the Trans-Siberian Railroad was constructed, at over 4,600 miles (Chelyabinsk- Vladivostok). A staggering achievement then and now, it appeared there was no barrier of distance or topography that was too great for the railways . . .

At the turn of the last century, the railways seemed poised to overcome the daunting challenges of linking the continents. Then came the advent of road and airline transport, and the relative decline of the railways.

As a consequence, the next great leap in the development of the railways was postponed.

In this sense, the proposals for many of the new mega-projects fall very firmly into the category of 'unfinished business'.

This long-delayed, next step has re-defined the scope of the railways to compete multi-modally, and to co-operate inter-modally, with air, sea and other forms of land-transport, while promoting international relations in the post-Cold War era.

In the face of population pressures, timely DISTRIBUTION is the key to peaceful coexistence.

This goes far beyond the leverage or exploitation of free markets, and will depend on strategic supplies of: food, water, other strategic resources – mostly water.

In turn, these will depend on sustainable infrastructure for delivery, since the enforcement of any long-term environmental protocols will conflict with short-term life- support systems.

. . .If a global balance is not achieved, then the last Cold War could be followed by the next 'Hot War' - which, however, is by no means inevitable.

This brings us almost up to date, but not to the end, for greater endeavours are needed to meet the challenges of the 21st Century.

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