

TRUE HIGH SPEED RAIL:




THE BEST IS YET TO COME!

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Philadelphia, USA

# KEY ANNIVERSARIES 2013

- 80 YEARS SINCE BECK TUBE MAP 
- 50 YEARS SINCE BEECHING REPORT
- 33 YEARS SINCE US STAGGERS ACT 
- 49/50 YEARS SINCE ADVENT OF THE SHINKANSEN BULLET TRAIN JAPAN 

# Red Arrow Italy (max 300/320kph)



# HSR DEFINITIONS

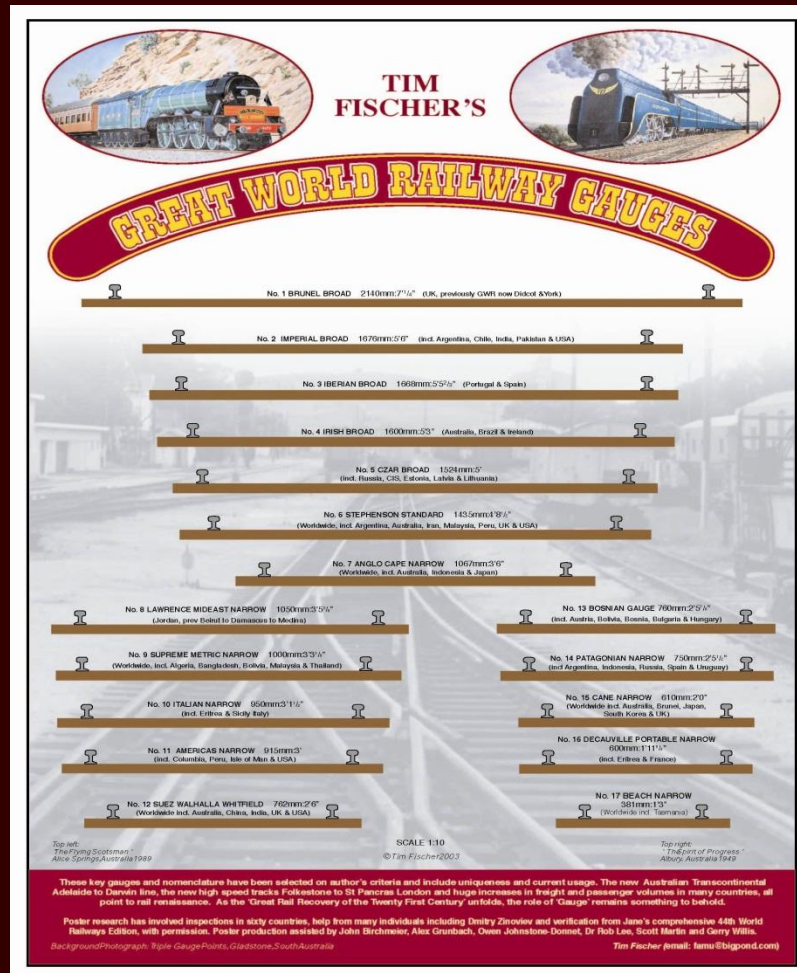
- Maglev - plus 480 kph/300 mph
- THSR - plus 240 kph/150 mph
- BHSR - plus 200 kph/125 mph
- FCR - fast classic + 160 kph/100 mph
- CLASSIC - The rest !



# Australian HSR attempts

- 1984 CSIRO Report – Dr Paul Wild
- 1986 VFT syndicate Sydney- Melbourne
- 1993 Speed Rail Sydney – Canberra
  
- 2010 Federal Government
  - AECOM Report (current)

# The World – 17 key gauges!

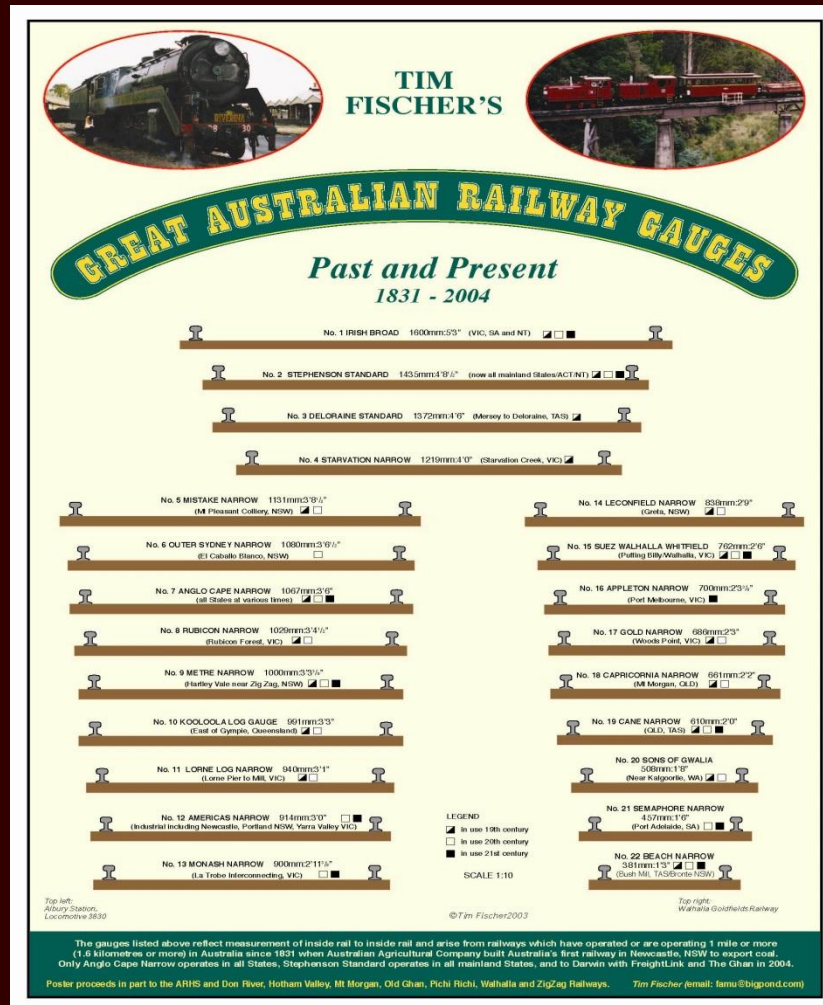


# Gauge?

- All HSR: Stephenson Standard Gauge
- 1435mm or 4'8 1/2"
- NB Russia – work in progress!



# Australia – 22 rail gauges!





# Corridor Concepts

- Corridor mega city anchors
- Corridor directness
- Corridor political connect
  
- Cost Benefit ratio of THSR project

# Environmentally Friendly – Energy

## Comparison of Energy Consumption per Passenger Seat



Series N700  
"Nozomi"

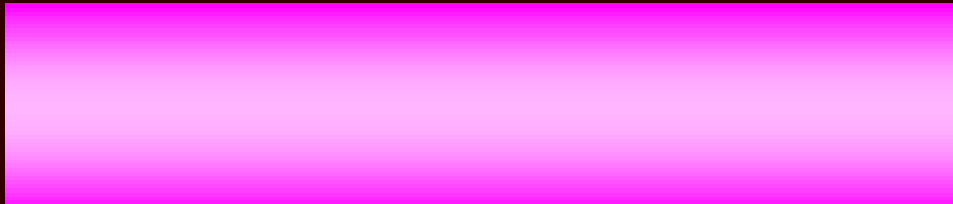


**Basis**

(90MJ/seat)



Airplane  
(B777-200)



**8 times**

(730MJ/seat)

# Environmentally Friendly – CO<sub>2</sub>

## Comparison of CO<sub>2</sub> emissions per Passenger Seat



Series N700  
"Nozomi"

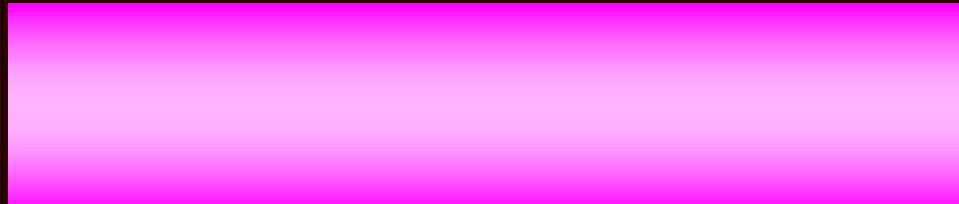


**Basis**

(4.4kg-CO<sub>2</sub>/seat)



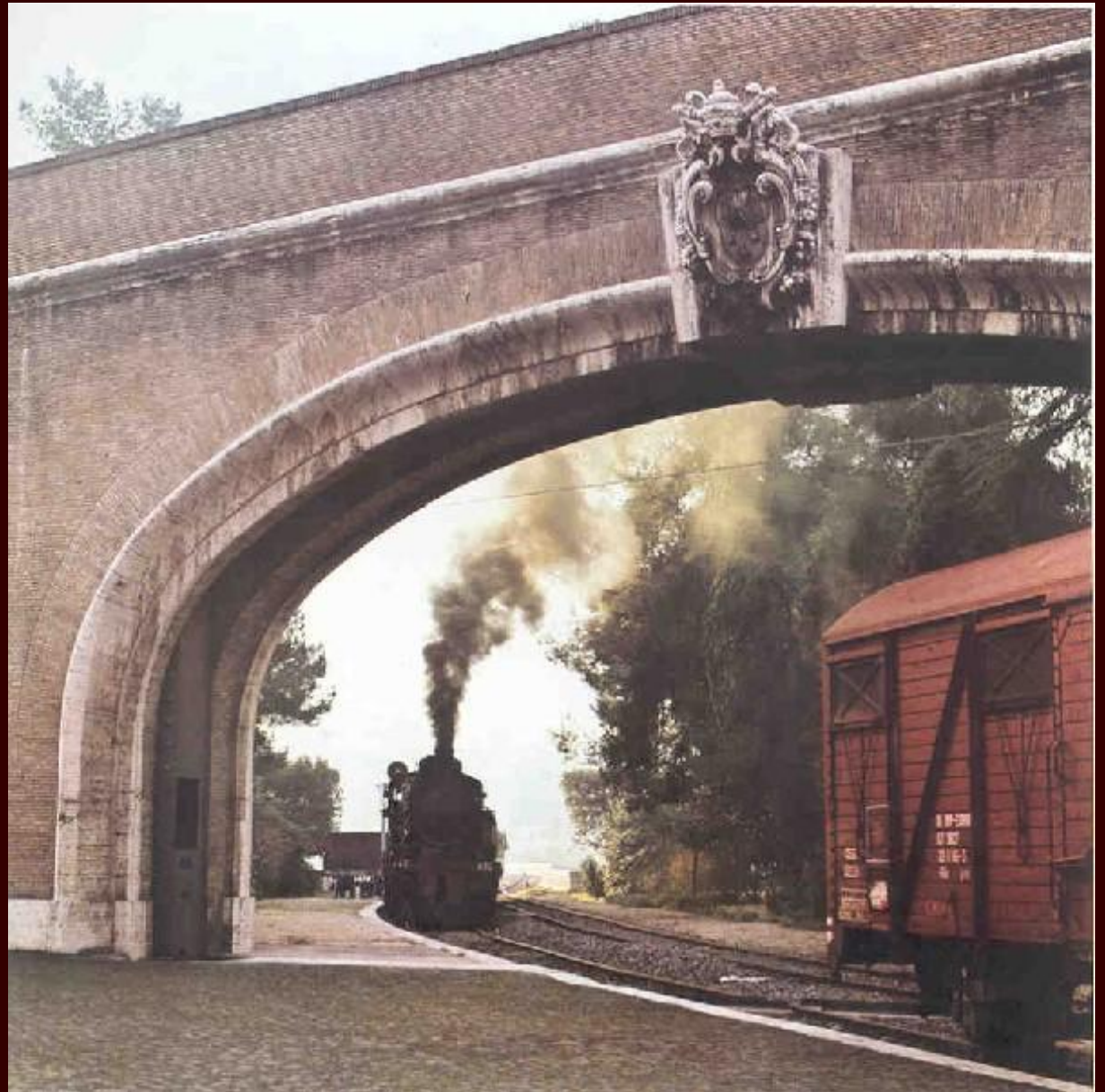
Airplane  
(B777-200)



(52kg-CO<sub>2</sub>/seat)

**12 times**

From  
this.....



To this..... *Many thanks !*

