



* **Megaprojects**

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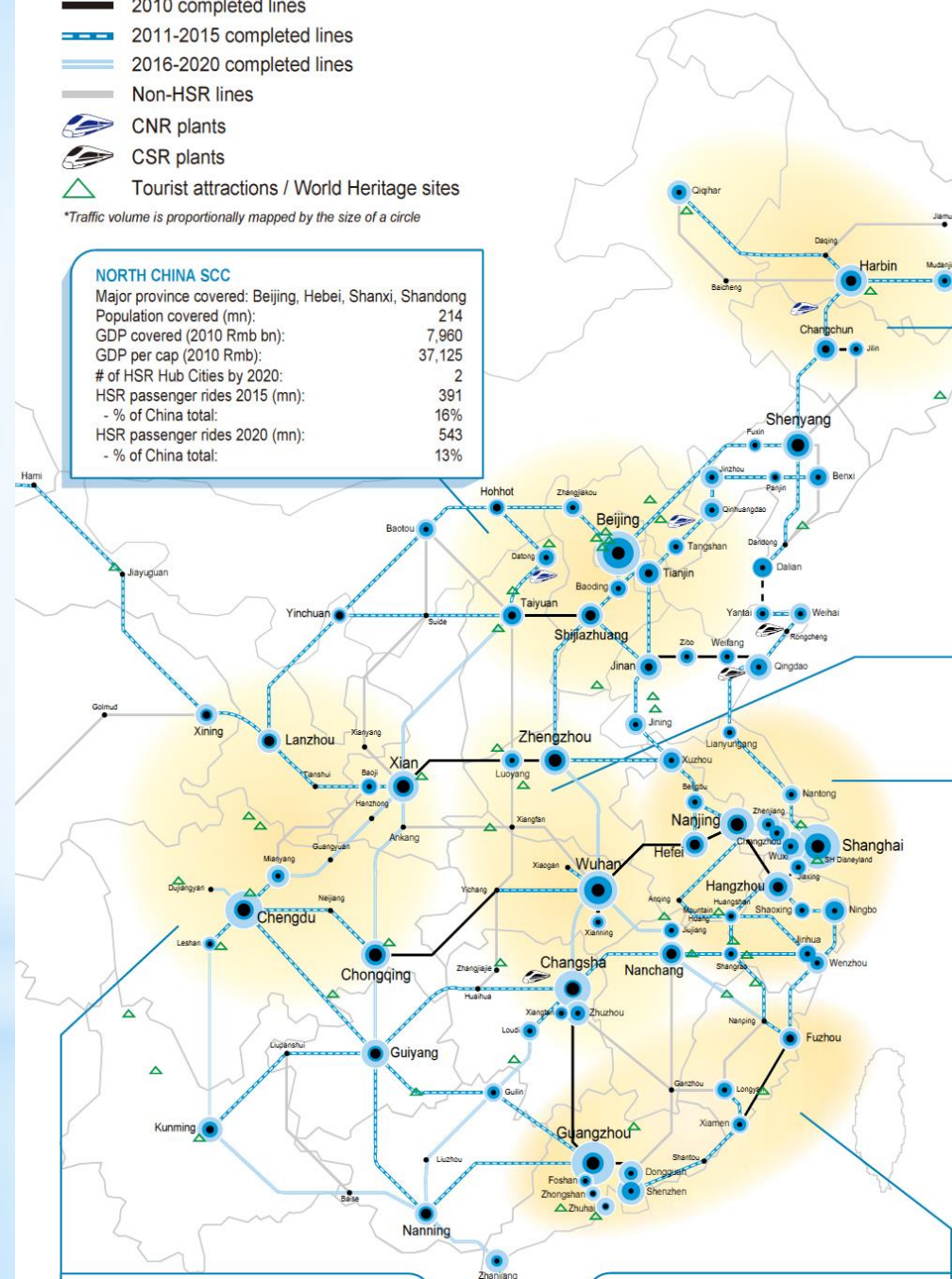
*High Speed Rail



- High Speed 1 (2007)
- High Speed 2 (phase 1)
- High Speed 2 (phase 2)
- Channel Tunnel
- LGV Nord

-  2010 completed lines
-  2011-2015 completed lines
-  2016-2020 completed lines
-  Non-HSR lines
-  CNR plants
-  CSR plants
-  Tourist attractions / World Heritage sites

*Traffic volume is proportionally mapped by the size of a circle



NORTH CHINA SCC

Major province covered: Beijing, Hebei, Shanxi, Shandong

Population covered (mn):	214
GDP covered (2010 Rmb bn):	7,960
GDP per cap (2010 Rmb):	37,125
# of HSR Hub Cities by 2020:	2
HSR passenger rides 2015 (mn):	391
- % of China total:	16%
HSR passenger rides 2020 (mn):	543
- % of China total:	13%

NORTHEAST SCC

Major province covered: Heilongjiang, Jilin, Liaoning

Population covered (mn):	67
GDP covered (2010 Rmb bn):	1,604
GDP per cap (2010 Rmb):	24,100
# of HSR Hub Cities by 2020:	1
HSR passenger rides 2015 (mn):	112
- % of China total:	5%
HSR passenger rides 2020 (mn):	202
- % of China total:	5%

CENTRAL CHINA SCC

Major province covered: Henan, Hubei, Jiangxi, Hunan

Population covered (mn):	146
GDP covered (2010 Rmb bn):	3,224
GDP per cap (2010 Rmb):	22,140
# of HSR Hub Cities by 2020:	4
HSR passenger rides 2015 (mn):	238
- % of China total:	10%
HSR passenger rides 2020 (mn):	437
- % of China total:	11%

EAST CHINA SCC

Major province covered: Shanghai, Zhejiang, Jiangsu

Population covered (mn):	220
GDP covered (2010 Rmb bn):	8,358
GDP per cap (2010 Rmb):	38,050
# of HSR Hub Cities by 2020:	4
HSR passenger rides 2015 (mn):	493
- % of China total:	20%
HSR passenger rides 2020 (mn):	690
- % of China total:	17%

WEST CHINA SCC

Major province covered: Sichuan, Qinghai, Shaanxi

Population covered (mn):	161
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SOUTH CHINA SCC

Major province covered: Guangdong, Fujian

Population covered (mn):	134
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- * 30,000 km
- * 250 cities spanning a population of 700m
- * 4 billion trips/year
- * 1,600 bn passenger-km/year by 2020
- * Super-city clusters 4 new (North, West, North-east, Centre), 2 expanded (South, East) in 10 years (travel radii of 3 hours)
- * Benefits for economically challenged cities in west and central China

* Scope



23 July 2011 Wenzhou

* But ...

*Ecocities



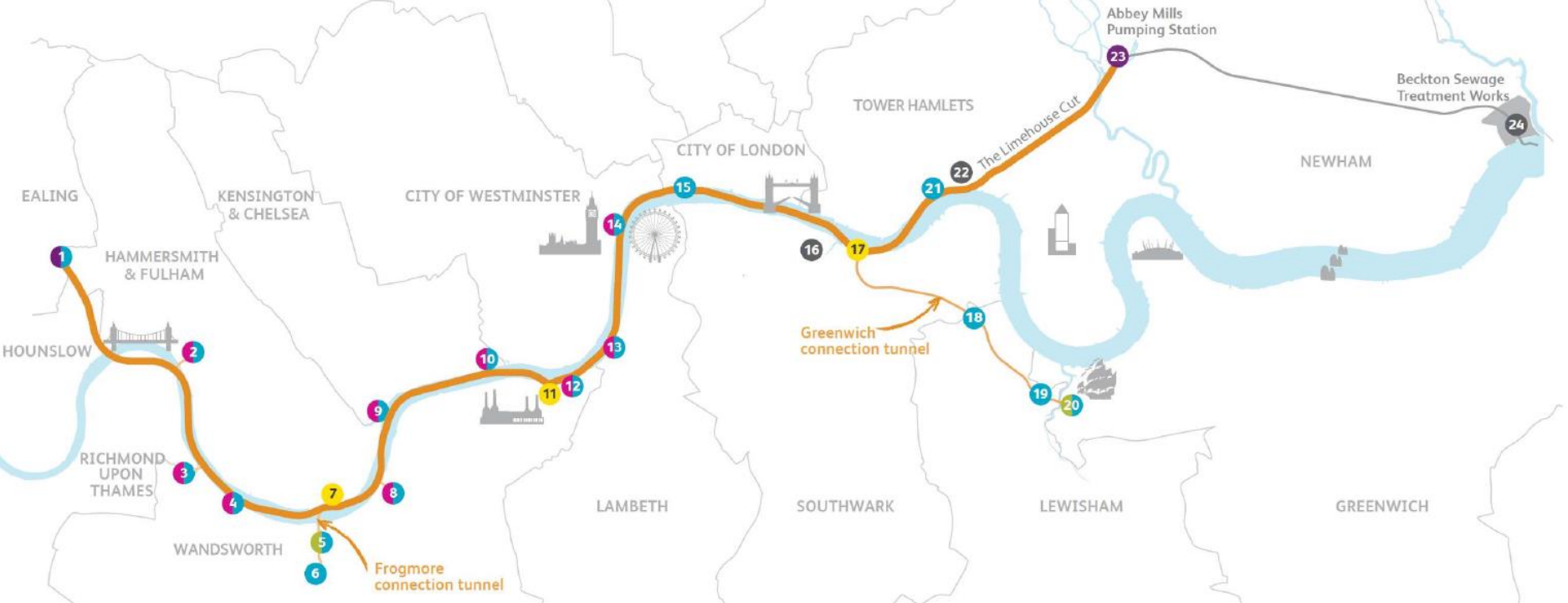
- * 8,400 ha
- * 500,000 residents
- * Renewable energy
- * Water treatment
- * Waste recycled
- * Low noise
- * Light pollution
- * Zero-emission transport

* Dongtan

- * The promoter is in jail
- * Site is a world heritage scientific site
- * Project stalled ...
- * ... although there are now some indications that something might happen elsewhere on the island

* **But ...**

*Other projects



*Thames Tunnel

- * 25km
- * 15m diameter
- * <67m below ground
- * Connects to the 34 most polluting sewers

*Thames Tunnel

- *Very expensive
- *Technical opposition
- *Public consultation still underway

*But...

- *Everybody loves them

 - *Engineers

 - *Planners

 - *Politicians

 - *Financiers

- *Do people?

- *What problem are they trying to solve?

***So, what is it about
megaprojects?**

***Transoceánica**



CV Eje-12		EJE PERU-BRASIL (ACRE-RONDONIA)	
Carretera pavimentada		Capital de país	
Carretera sin pavimentar		Capital de provincia	
Carretera proyecto		Ciudad o pueblo	
Eje priorizado		Límite de país	
		Ferrocarril existente	
		Ferrocarril proyecto	
		Ríos	
		Area de influencia	

- * Misses western ports
- * Problem crossing the Andes cordillera
- * Journey time - is it really competitive?

- * Is there an economic/business case?

- * Is there a political/geographical case?

* **But...**

MAPA 1.10

INICIATIVA PARA LA INTEGRACION REGIONAL SUDAMERICANA (IIRSA)



LEYENDA

- AMAZONAS
- INTEROCEANICO CENTRAL
- PERU - BRASIL - BOLIVIA
- ANDINO
- ANDINO DEL SUR
- CAPRICORNIO
- ESCUDO GUAYANES
- MESOCORRIENTE - CHILE
- SUR
- HIROVIA PARAGUAY - PARANA

Signos Convencionales

Poblados:	Hidrografía:	Red Vial:
Capital	Rios	Asfaltado
Puerto	Laguna	En Construcción
Infraestructura Vial:	Límites:	En Proyecto
U Puerto	Internacional	

0 100 200 300 400 500

Elaboración: Oficina de Estadística - OGP

Fecha: Año 2009



- * Equitable access to
 - * Markets within Latin America
 - * Markets beyond Latin America
- * Interdependencies - risk reduction - redundancy
- * Resources
 - * Energy
 - * Minerals
 - * People
 - * Employment
- * Social development

- * Global political/financial influence

*** What is the megaproblem?**



- * Europe is one quarter the size of South America with 1.3x the population
- * South America High Growth; Europe pretty stagnant
- * How does engineering help to resolve the needs of future generations?
- * Where do megaprojects fit into this strategy?
- * How do we define the megaprojects that will help?

* **Some thoughts**