



Questions asked about the 2006 Sydney Integrated Transport Strategy.

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What is SITS?

SITS is a suite of transport projects, integrated and scheduled to balance road and rail networks over the next 35 years plus as Sydney expands from 4 to 6 million.

It was prepared over a two year period, presented to government official and at public meetings and adopted by FROGS a Sydney based group.

It was based on the Government population forecast distributed to reflect accessibility and business decisions.

It was costed and the historic expenditure of \$1.2b/annum was projected forward to suggest an implementation program.

The strategy includes:

1. **Light Rail** – radiating 8km from City and Parramatta.
2. **Metro Line** - from St James, City; to Rozelle – Olympic Park (Accommodating Barangaroo)
3. **Converted** Main lines to Metro - North Shore, NW Rail, Bankstown and Suburban West.
4. **Converted** Main lines to Light Rail - Airport line to East Hills with extension to UNSW/Maroubra.
5. **Freight Line** - from St Mary's to Enfield; shared ROW for BRT, plus Southern and Botany Lines.
6. **Express Rail** - from Central to Macquarie Park and Gosford (Updated location V2 - 2008)
7. **"Restraining"** Western Line into Central - 90 Express services per hr to the CBD +main line.
8. **Road** - Network within 5km of 90% of Sydney including new diagonal crossing the harbour.
9. **Bus** - High Frequency network within 400m of 90% of Sydney.
10. **Bus Rapid Transit Corridors** – 10 throughout Sydney with potential to convert to Light Rail.
11. **Commercial expansion** on the northwestern arc of the CBD (Pre Barangaroo) including upgrading of east west access to Cross City Tunnel replacing Cahill Expressway and second harbour tunnel.
12. **Service Tunnels** in the CBD to facilitate Light Rail and Pedestrians (unlikely)

The 2014 Government Strategy includes Projects 1, 3, 5, 7, 8, 10 and 6 albeit with Express Rail under the Harbour and Metro on Harbour Bridge.

Where is it published?

A shortened version was published by the 10,000 Friends of Sydney (FROGS) in 2007. For further information I prefer to make presentations addressing aspects of the strategy.

How were the priorities established?

Existing congestion and projected congestion tended to dictate where and when action was required. (Western Line, Wynyard Station, North Shore Line, most tollways (M2, M3, M4, M5 requiring generally competitive public transport)). Development in Green Square, Parramatta Corridor, SW/NW Sector indicated future congestion in regional and city demand.

There were some 'city building' decisions and a priority towards 'Global Amenity' e.g. Express Rail to encourage growth in the Central Coast; connecting regional trains on the western line to Bondi Junction, that's a long story; and the decision that the coastal corridors will develop quickly. (The Government Light Rail project and the BRT project will support this).

There was no spare budget to jump ahead of demand, e.g. to build a railway that was not going to be fully utilised.

The absence of political interjection allowed for projects to be optimised e.g. the need to improve one mode in a corridor might be combined with another viable project to reduce cost in the future, in particular a shared rail/road tunnels under the Harbour and south to Sutherland. This allowed the program to widen and keep up with demand.

The program was separated into 0 – 10 yrs , 10 – 25 yrs and 25 -40 yrs and 40yr plus, a total cost of ~ \$50b, 2006 prices,

Is SITS still valid?

- SITS is alive and changes have been made in 2009 and 2014; in particular, the alignment of the Express line north, and connections for metro lines (loops).
- Costs have risen substantially putting further pressure on rationalising capacity and demand. E.g. Every new facility must resolve contemporary areas of congestion.
- The NW Rail Line and a Light Rail line from Central to Moore Park require revision of demands from Castle Hill and Maroubra.
- Development has been faster in Green Square and Macquarie Park and this will set new trends
- Western Sydney has new political strength (Parramatta and Liverpool).and the Second Airport, the Central Coast is not high on the agenda.

How was the Strategy justified?

The strategy was designed using demand estimates and capacities of transport systems, hence it received high support by transportation planners.

Between 5000 and 6000 hours of work went into the preparation of SITS.

I now have the capability to draw a line through a suburban area, indicate "stations", populate them and produce a trip demand from which a suitable transport mode can be determined. This simple analysis tested the strength of any corridor and led the decision between BRT, Light Rail, Metro and Express Heavy Rail. Many options were eliminated through this process.

The demand estimates were conducted in four parts.

1 **Population and Employment:**

Population forecasts were distributed to the SW/NW Sector, the Parramatta Corridor with the continued strengthening of railway corridors that were not on the Planners horizon e.g. Arncliffe - Hurstville, Liverpool – Grandville, and Macquarie Park; and high amenity corridors from Manly and Maroubra.

Employment was distributed more on historical data than by planning goals with growth concentrated in two Centres and more evenly spread to existing smaller Regional Centres and existing employment areas plus new employment in the SW and NW Sector.

2 Railways Demand.

Demand along the railway lines was based on existing passenger demands (Surveyed) at each station being allocated to CBD and the local regional. This was calibrated by the proportional distribution of demand by distance from CBD and "closed" first time and calibrated with regional 'exits'. Increased demand could therefore be calculated by increased attractions in the CBD and centres and increased generations through population change. Very clear!

3 Bus Demands

Demand for bus routes was also based on existing (BST) statistics of mode choice by distance to stop by frequency of service and distance to the CBD (because of its strength). An estimate of patronage could be based on the number of workplaces reached and the population served. 133 Routes were defined 90% of them looking to be viable.

4 Road Demand

Demand for the "Free Flow Roads" was not based on demand but rather the capacity of the links and balancing the number of lanes such as to avoid pinch points (congestion). Demand would be regulated by Congestion tolls (not an easy policy but one that could be applied to new, uncongested, roads without fear).

Who checked it?

A number of colleagues helped in the preparation of SITS, now we have something to show for it I'll check if they wish to be named.

The team consisted

- Two rail operations and strategy expert who verified the proposals and in particular operational assumptions and the "restringing" of lines into Central.
- A costing expert (Tunnels, railways and Roads) who worked on world practice, some projects were verified by Treasury.
- I also consulted bus operators including the Unions who provided huge assistance.
- The FROGS team included verification on roads and some engineering details.

The entire strategy was under scrutiny in public meetings and government briefings, with changes made as they became apparent. SITS was reviewed by the CILTA prior to it being awarded the "Achievement of the Year".