Monitoring scheme for TBM tunnel projects
A call for an overarching guidance from ACEEC

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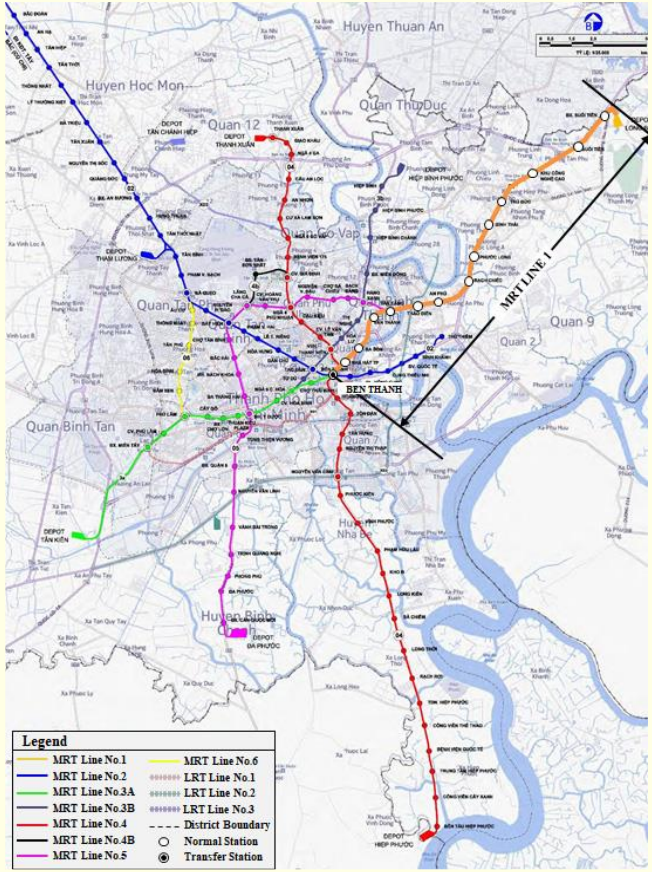
Metro lines in Ho Chi Minh city, Vietnam



2020 Urban Transport Masterplan for Ho Chi Minh City (Decision No.568/QD-TTg 2013)

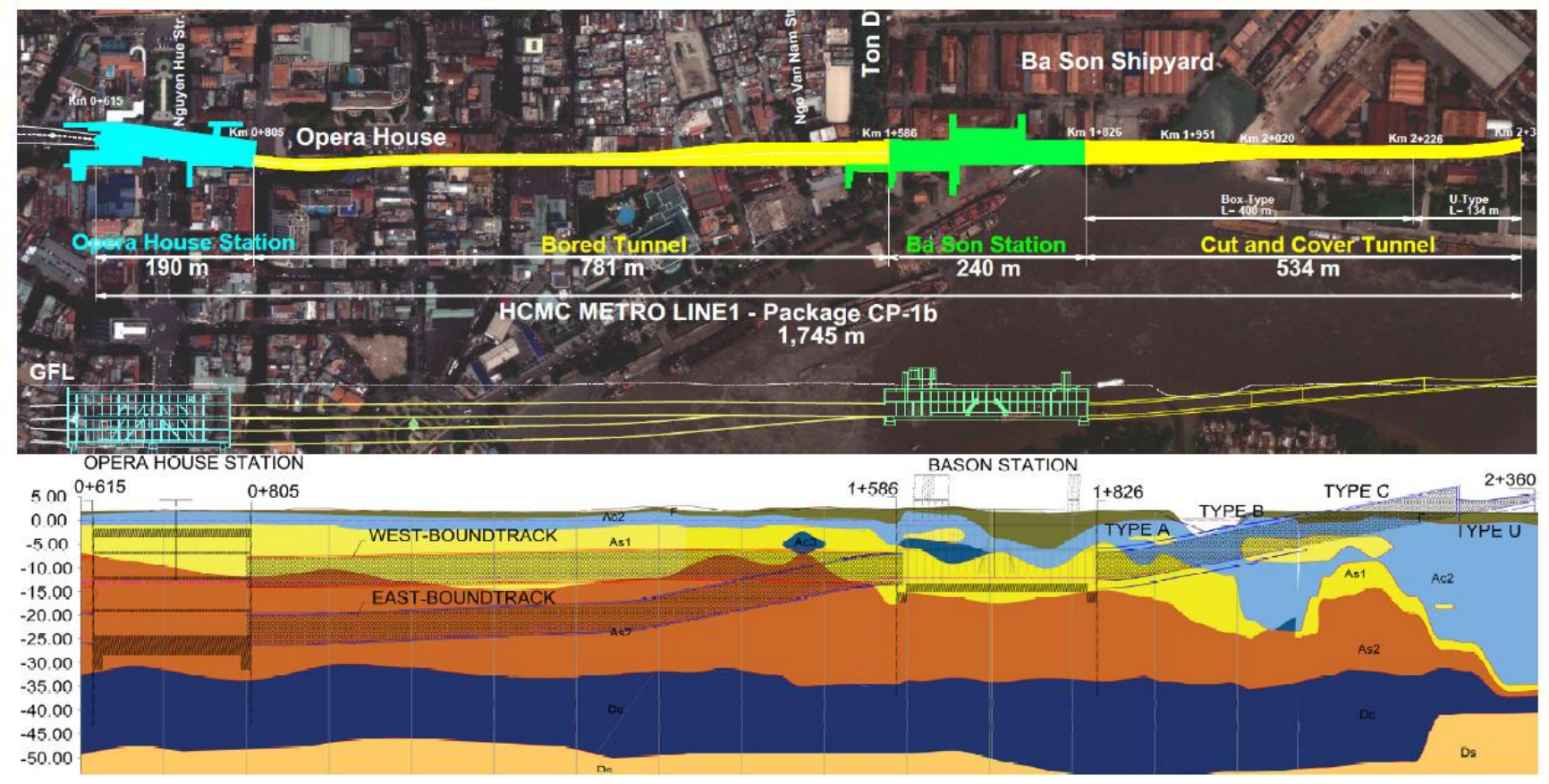
Total: 8 Lines
Total length: 169.34km.
Underground works: 78.34km (46.26% total length).

Completed lines:
Line 1 Ben Thanh – Suoi Tien. Length: 19.7km.

Under tendering/preparation:
Line 2: Ben Thanh – Tham Luong. Length: 11.3km
Line 5: Bay Hien – Sai Gon bridge. Length: 8.89
Bay Hien – New Coach Station in Can Giuoc. Length: 14.5km

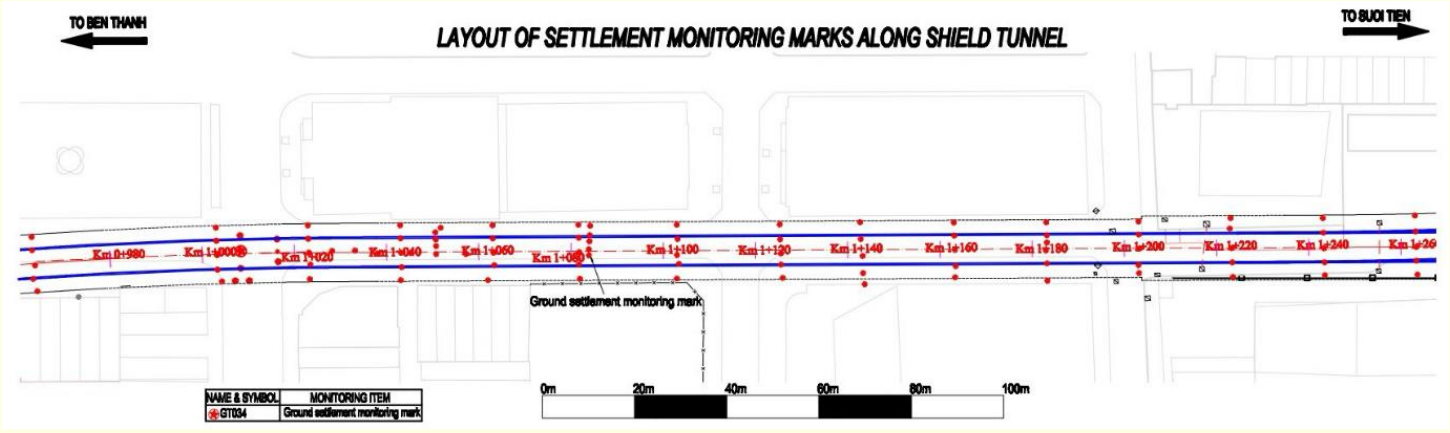
Other lines: plans approved. Fund preparation.

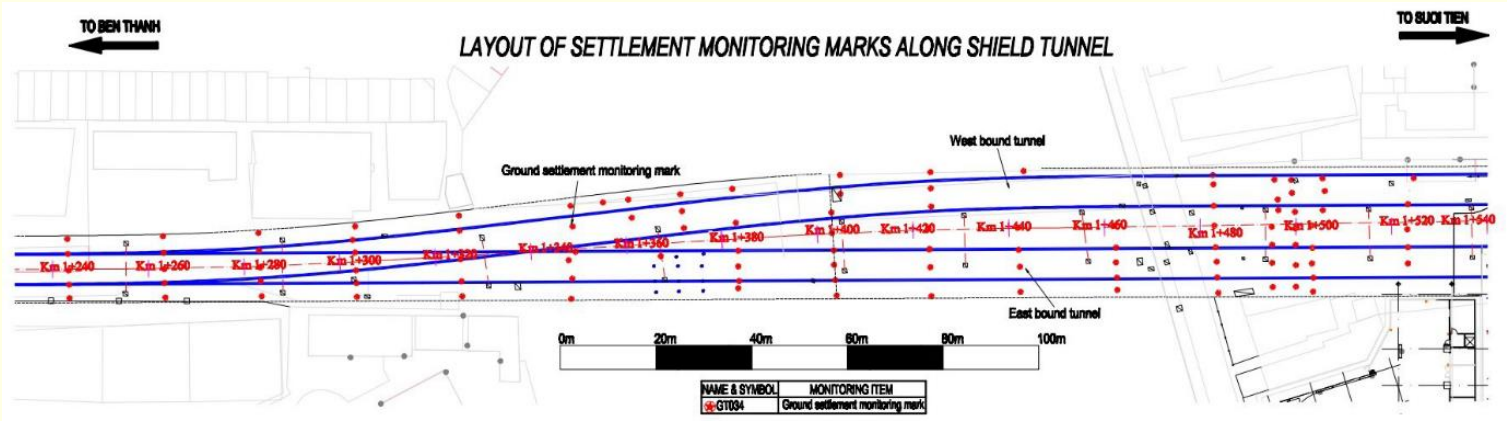
Line 1 Ben Thanh – Suoi Tien Overview



Layout and Geotechnical Profile of CP1b section (Kuriki 2020)

Line 1 Ben Thanh – Suoi Tien Monitoring scheme

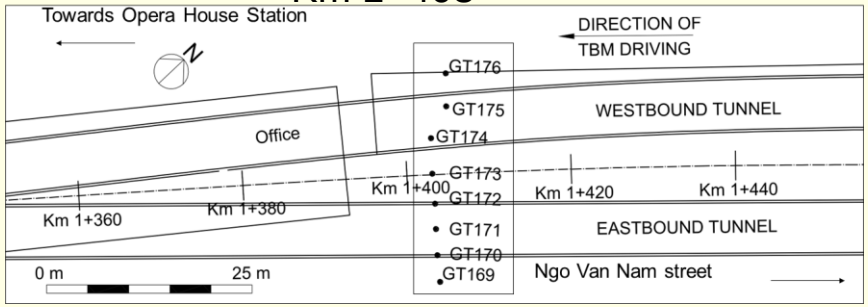




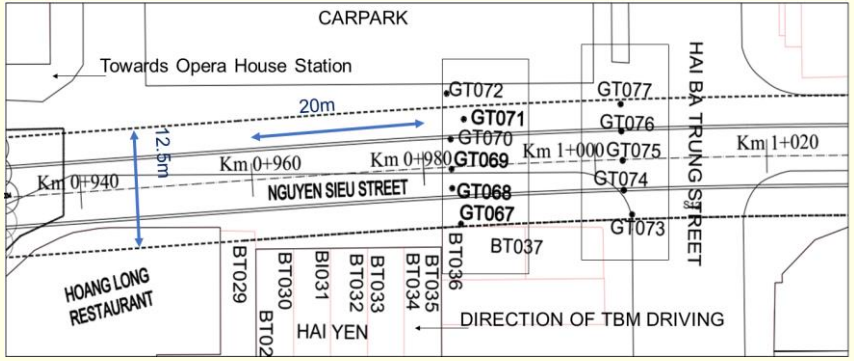
Monitoring layout (Nguyen et al 2024)

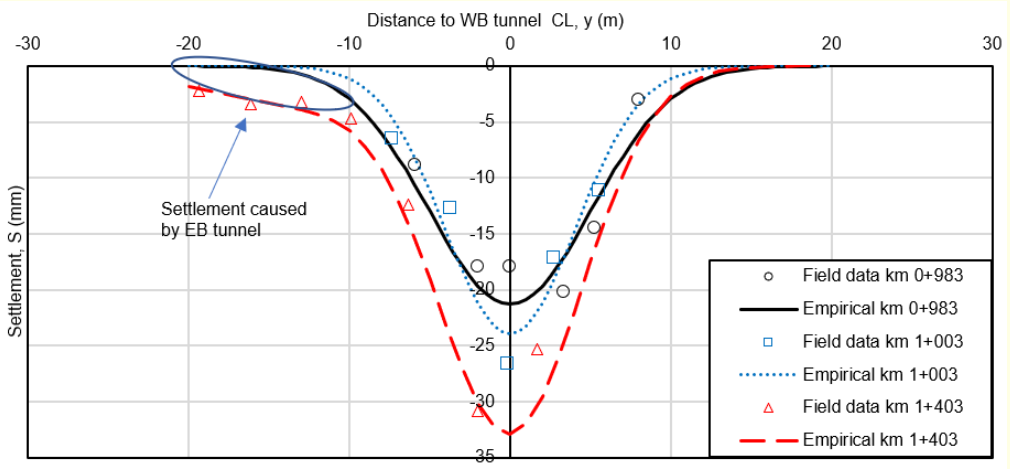
Line 1 Ben Thanh – Suoi Tien
Traverse ground surface settlement

Km 1+403



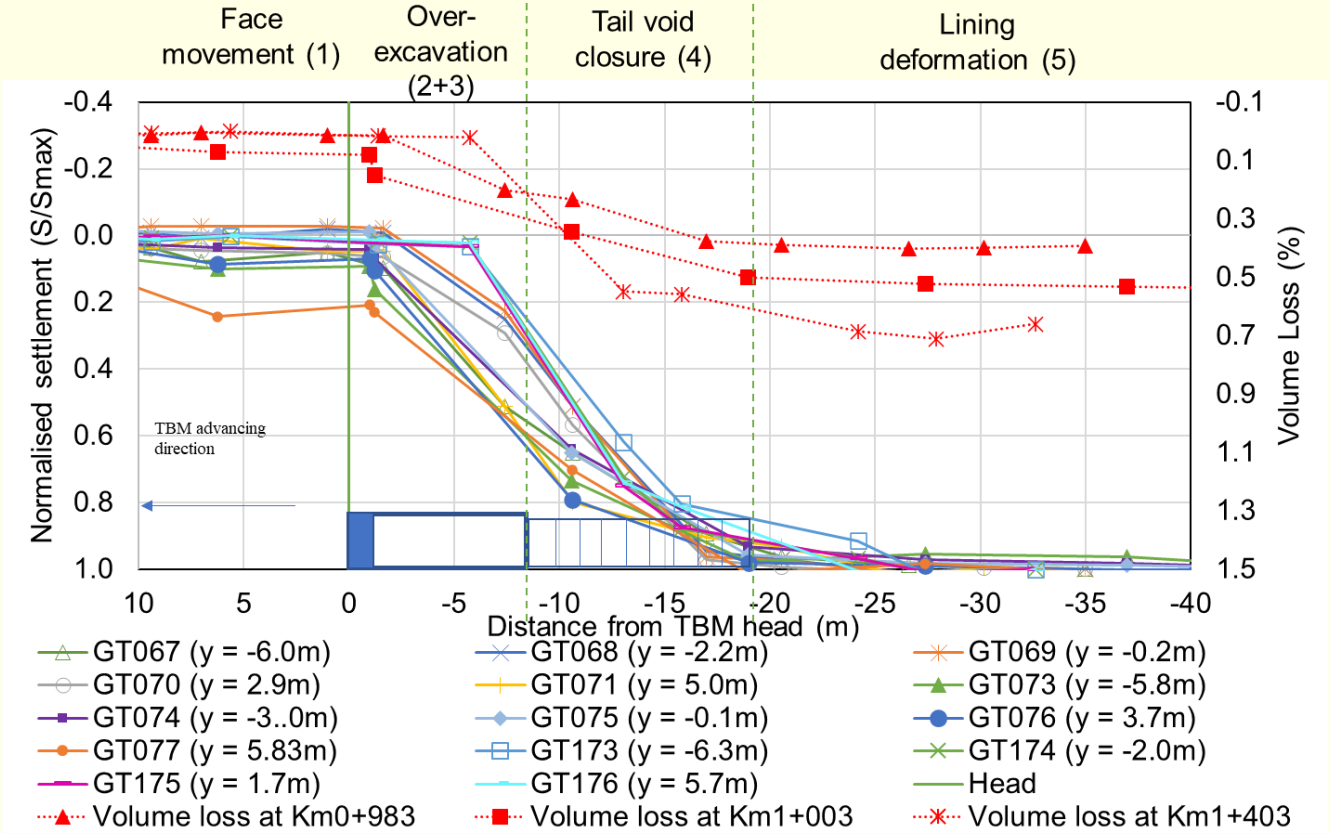
Km 1+003 and km 0+983





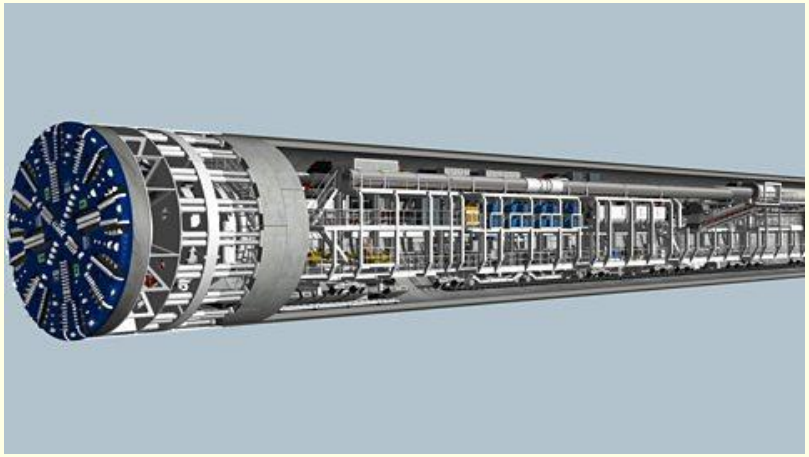
Le et al 2020

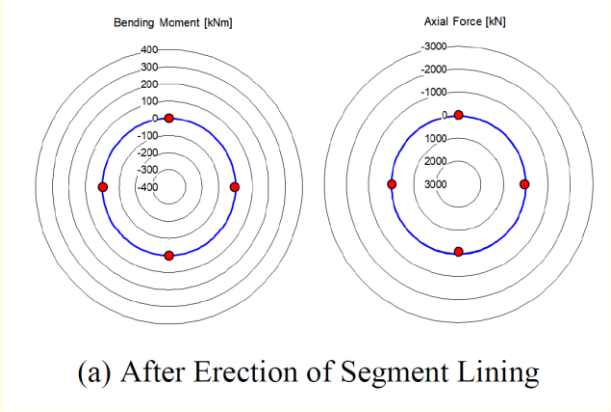
Line 1 Ben Thanh – Suoi Tien
Longitudinal ground surface settlement

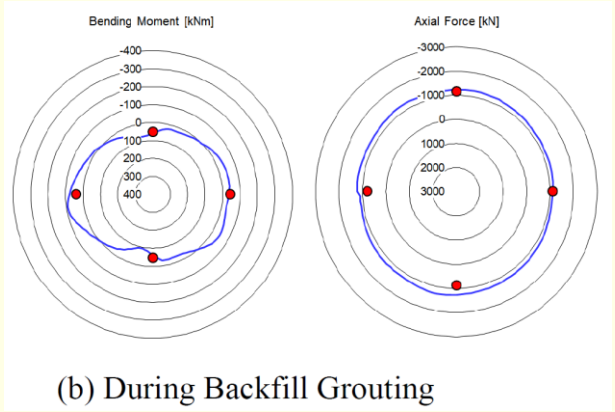


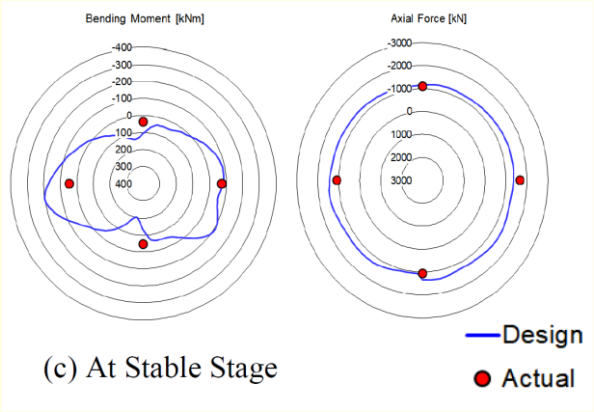
Le et al 2020

Line 1 Ben Thanh – Suoi Tien
Tunnel lining data





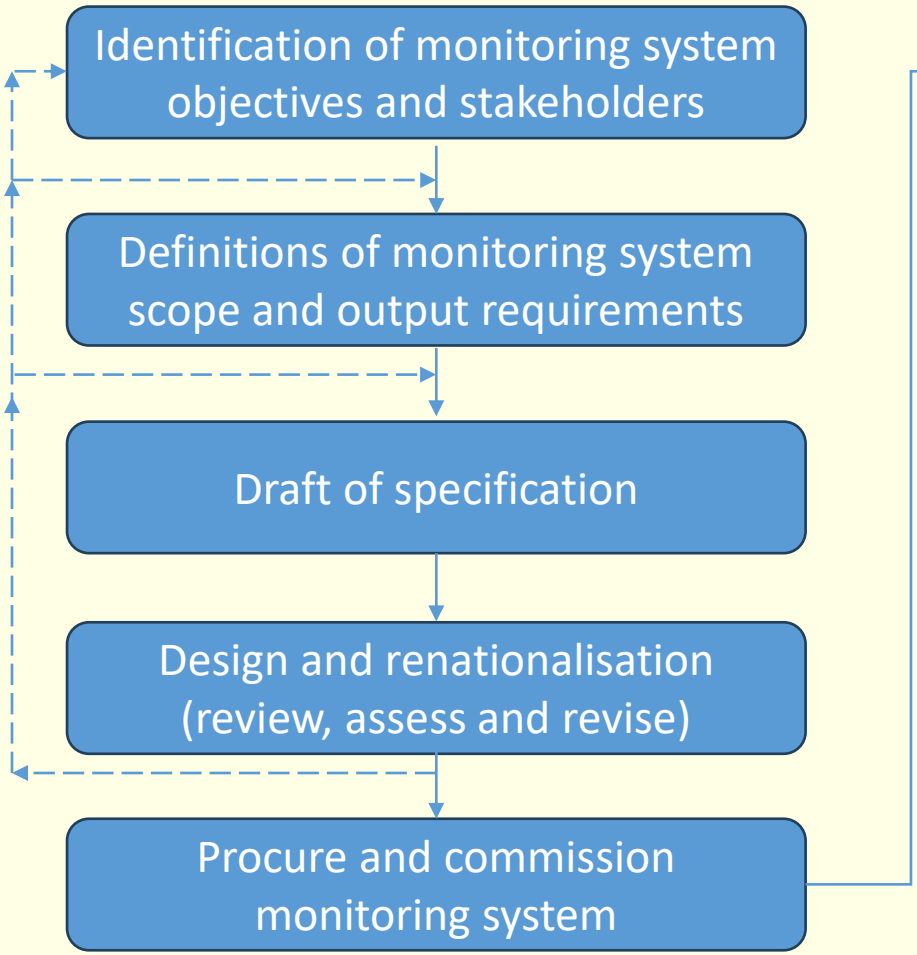


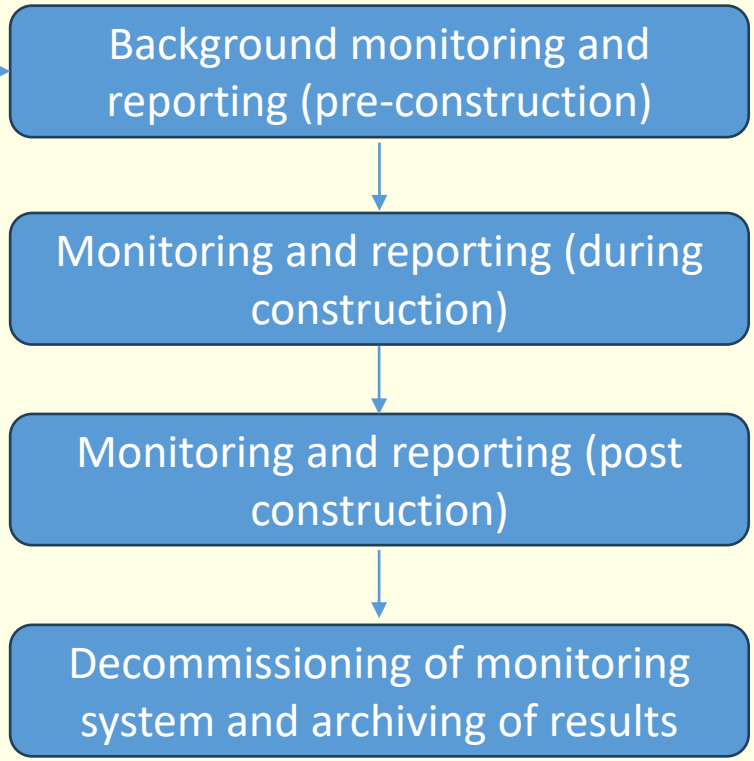


A few thoughts

- Monitoring can be very expensive but does not always provide the best value for the money
- The need to avoid reinventing the wheel, help catalyse the projects, avoid potential caveats
- an overarching guidance is needed to share the best practices, case studies, guidance to ensure the quality, reliability of monitoring, reduce the cost, better on financial aspects
- ACECC lead?

Discussions





Monitoring Underground Construction – A best practice guide – British Tunnelling Society (2011)

Discussions best practice for monitoring in Asia?