Replacement & Rehabilitation Programme (R&R) of Water Mains in Hong Kong
Water Supplies Department

- To provide reliable and adequate supplies of quality water to a population of over 7.3 million.
- 17 impounding reservoirs
- 21 water treatment plants
- 5MCM fresh water production
- 2MCM sea water for flushing
Problem Identification

- About 7,800 km of water mains (fresh water and salt water).
- A substantial portion of them was laid more than 30 years ago.
- Progressively approaching the end of their service life.
- Increasing number of main burst and leakage cases causing inconvenience to the public and loss of precious water.
Project Goal

- To improve the condition of the water supply network so as to maintain a reasonable level of services to consumers.
- To replace or rehabilitate about 3,000 km of aged water mains in 15 years.
Project Implementation - Key Issues

- To avoid unnecessary water supply disruption to consumers as a result of excessive amount of works,

- To avoid unnecessary traffic disruption during construction as a result of excessive road opening works, and

- Having cost effectiveness of the works with priority given to water mains more susceptible to leakage and bursting.

- To tackle the problems arising from the ageing of water mains in a cost effective manner whilst minimizing the effects on the general public, the aged water mains are required to replace and rehabilitate in Stages in a systematic manner.
Project Implementation - Key Issues

- Traffic/Restricted working hours
- Environmental concerns esp. in urban areas
- Unforeseen site conditions / complicated interfaces with other utilities
- Maintain water supply to suit different consumers and business undertakings
Project Implementation - Key Strategies

1) Replacement method

Open Cut Method

Pipe Jacking

Directional drilling
Project Implementation - Key Strategies

2. Rehabilitation Method

Non-Structural Linining by Glass Fiber Coating Works

Fully Structural Compact Pipe
Benefits of the Project

What's next... Water Intelligent Network (WIN)
THANK YOU!