

between Lai King and Olympic stations, as well as the new Nam Cheong Station for the Tung Chung Line. The four-tracking project allows AEL and Tung Chung Line trains to operate on separate tracks for 4.5 kilometres, leading to the successful opening in December of the interchanges with the KCRC West Rail at Nam Cheong and Mei Foo stations.

The four-tracking installation was a complex undertaking involving multiple stages of route diversion works covering new track installation and alteration, overhead line equipment installation and alteration, as well as trackside signalling modification. In addition, Tung Chung Line trains were converted from 7-car to 8-car formation, increasing the carrying

capacity by about 14%. This in turn required general modifications to platform layouts and signalling design. All work in connection with the West Rail interchange was completed on time for the original opening schedule.

The West Rail interchange is part of a longer-term strategy to promote ridership on MTR through more convenient linkage with other transport services. To this end, 2003 saw the extension of inter-modal fare discounts for travellers transferring to MTR from feeder buses for four New Lantau Bus routes in Tung Chung and nine Green Minibus routes in Tseung Kwan O, Kwun Tong and Causeway Bay.

The station renovation programme has brought a fresh look to Central Station



To increase the catchment area, fare saver machines offering discounts to Octopus card holders at locations some distance from MTR stations were extended to ten locations in 2003.

Projects to enhance the customer experience of the network also continued. The scheme to modify stations to create a more modern appearance saw a new underground walkway and new escalators completed at Mong Kok Station and a new entrance at Kowloon Tong Station, as well as improvements to Tsim Sha Tsui and Mei Foo stations. In addition, escalators were refurbished at a further eight stations, to ensure reliability and lower maintenance costs.

Installation of platform screen doors was completed at 36 platforms on 14 stations – Sheung Wan, Central, Admiralty, Wan Chai, Tsim Sha Tsui, Jordan, Yau Ma Tei, Mong Kok, Prince Edward, Sham Shui Po platform 1, Cheung Sha Wan platform 1, Shek Kip Mei platform 1, Kowloon Tong and Choi Hung platforms 2 and 3. Throughout the installation process, we continued our efforts to ensure not only timely completion but also continued reliability of the train service.

To optimise energy efficiency, in May 2003 we began a service trial of optimising the air circulation between the platform and tunnel at stations with retrofitted platform screen doors, by re-setting the tunnel cooling supply temperature. The project, at Tsim Sha Tsui, Jordan, Yau Ma Tei, Mong Kok and Prince Edward stations, resulted in considerable savings in energy costs.

Productivity increases

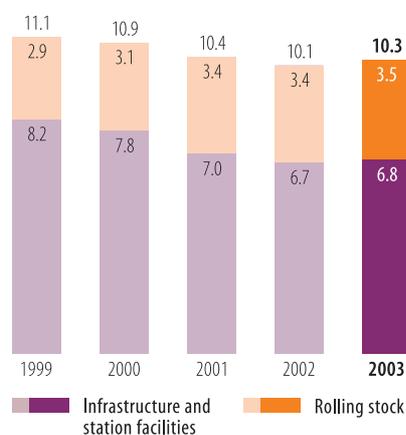
The use of new designs, new technologies and new operational processes again supported increases in productivity. This approach was combined with the continuing hiring freeze and more outsourcing.

Automatic turnaround of trains is in operation at Tsuen Wan, Sheung Wan, North Point and Tiu Keng Leng stations, allowing us to shorten the turnaround time and minimise the manpower requirement. We worked on the development of fully automated operation and a group station control concept, which will allow the Penny's Bay Rail Link to be operated more efficiently. A new design of lift without the

Railway maintenance costs per revenue car km (in constant \$)

Additional costs relating to SARS caused the maintenance cost ratio to rise slightly in 2003.

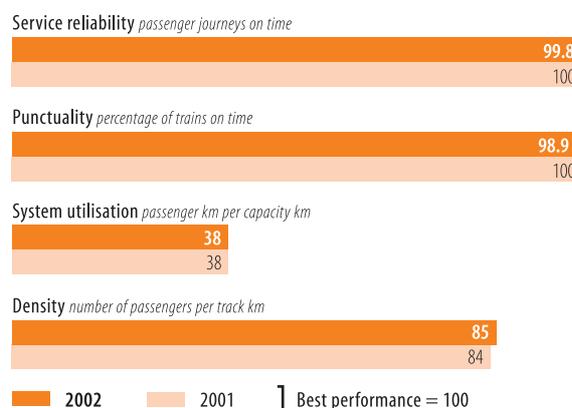
HK\$ at 1999 prices



Benchmarking comparisons

High levels of punctuality and reliability continue to be the hallmark of the MTR rail service.

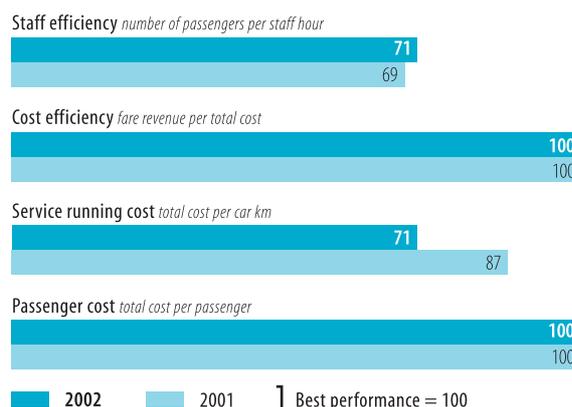
MTR performance vs. best performance



Staff efficiency and financial performance

The Company has continued to improve efficiency whilst delivering a high service level.

MTR performance vs. best performance



need for a motor room was installed at Tsuen Wan Station, enabling us to raise service levels while reducing cost and preserving space.

The policy of partnering with contractors and outsourcing maintenance and operations activities where cost savings can be made without compromising quality or safety saw the full outsourcing of infrastructure maintenance of the Tseung Kwan O Line, including signalling, trackwork and power distribution, as well as trackside auxiliary equipment.

We also continued to minimise the life-cycle-cost of our assets by developing optimal programmes to extend the useful life, to enhance, replace or eliminate systems and facilities. Apart from the conversion of Tung Chung Line trains to 8-car trains, conversion of Urban Line trains for use on the Penny's Bay Rail Link is progressing, removing the need to order new trains for that extension.

System and market information

Railway operation data	2003		2002	
Total route length <i>in km</i>	87.7		87.7	
Number of rail cars	1,050		1,050	
Number of "e-Instant Bonus" machines in stations	18		18	
Number of station kiosks and mini-banks in stations	490		466	
Number of poster advertising media in stations	14,328		15,827	
Number of advertising media in trains	13,072		9,984	
Daily hours of operation	19		19	
Minimum train headway <i>in seconds</i>	Morning peak	Evening peak	Morning peak	Evening peak
– Tsuen Wan Line	128	144	120	144
– Kwun Tong Line	128	144	128	144
– Island Line	128	156	128	156
– Tseung Kwan O Line	160	180	160	180
– Tung Chung Line				
Hong Kong – Tung Chung	480	600	480	600
Hong Kong – Tsing Yi	240	300	240	300
– Airport Express Line	900	900	600	600

International performance comparisons: The 10-member Community of Metros (CoMET)

Metro system network data (2002)	MTR* Lines	Metro A	Metro B	Metro C	Metro D	Metro E	Metro F	Metro G	Metro H	Metro I
Passenger journeys <i>in million</i>	777	399	942	1,396	1,413	1,283	410	517	2,041	3,200
Car kilometres <i>in million</i>	103	136	477	344	554	219	93	82	245	622
Route length <i>in km</i>	80.4	153	408	201	471	211	115	52	183	267
Number of stations	48	170	275	147	423	297	66	52	138	149

* The Airport Express Line is excluded from metro benchmarking

Note: The other metros in the comparison are Berliner Verkehrs – Betriebe, London Underground Limited, New York City Transport Authority, Sistema de Transporte Colectivo, Regie Autonome de Transports Parisiens Metro, Regie Autonome de Transports Parisiens Regional Express Railway, Metropolitano de Sao Paulo, Teito Rapid Transit Authority and Moscow Metro. The benchmarking agreement prohibits specifically identifying the data by metro system.



New customer service booths are creating a more open, friendly environment

Operations performance in 2003

Service performance item	Performance Requirement	Custom Service Pledge target	Actual performance in 2003
Train service delivery	98.5%	99.5%	99.9%
Passenger journeys on time			
– MTR Lines	98.5%	99.5%	99.9%
– Airport Express Line	98.0%	99.0%	99.9%
Train punctuality			
– MTR Lines	98.0%	99.0%	99.6%
– Airport Express Line	98.0%	99.0%	99.9%
Train reliability: train car-km per train failure causing delays \geq 5 minutes	N/A	500,000	1,213,247
Ticket reliability: magnetic ticket transactions per ticket failure	N/A	7,000	14,437
Add value machine reliability	95.5%	97.5%	99.2%
Ticket issuing machine reliability	93.0%	97.5%	99.4%
Ticket gate reliability	97.0%	99.0%	99.7%
Escalator reliability	98.0%	99.0%	99.9%
Passenger lift reliability	98.5%	99.0%	99.8%
Temperature and ventilation			
– Trains: to maintain a cool, pleasant and comfortable train environment generally at a temperature at or below 26°C	N/A	97.0%	99.9%
– Stations: to maintain a cool, pleasant and comfortable environment generally at or below 27°C for platforms and 29°C for stations concourses, except on very hot days	N/A	90.0%	99.5%
Cleanliness			
– Train compartment: cleaned daily	N/A	98.0%	99.9%
– Train body: washed every 2 days	N/A	98.0%	99.9%