# Managing safety risk in a period of change

*Presentation to IRSC 2009*

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# Outline of Presentation

- Overview of Operations

- Managing of risks arising from merger

- First Year Achievements

# Overview of Operations

# Overview of Operations Division

■ The merged rail business is a ~8,600 staff organisation formed by combining MTR's Operations Division and KCR's Transport Division
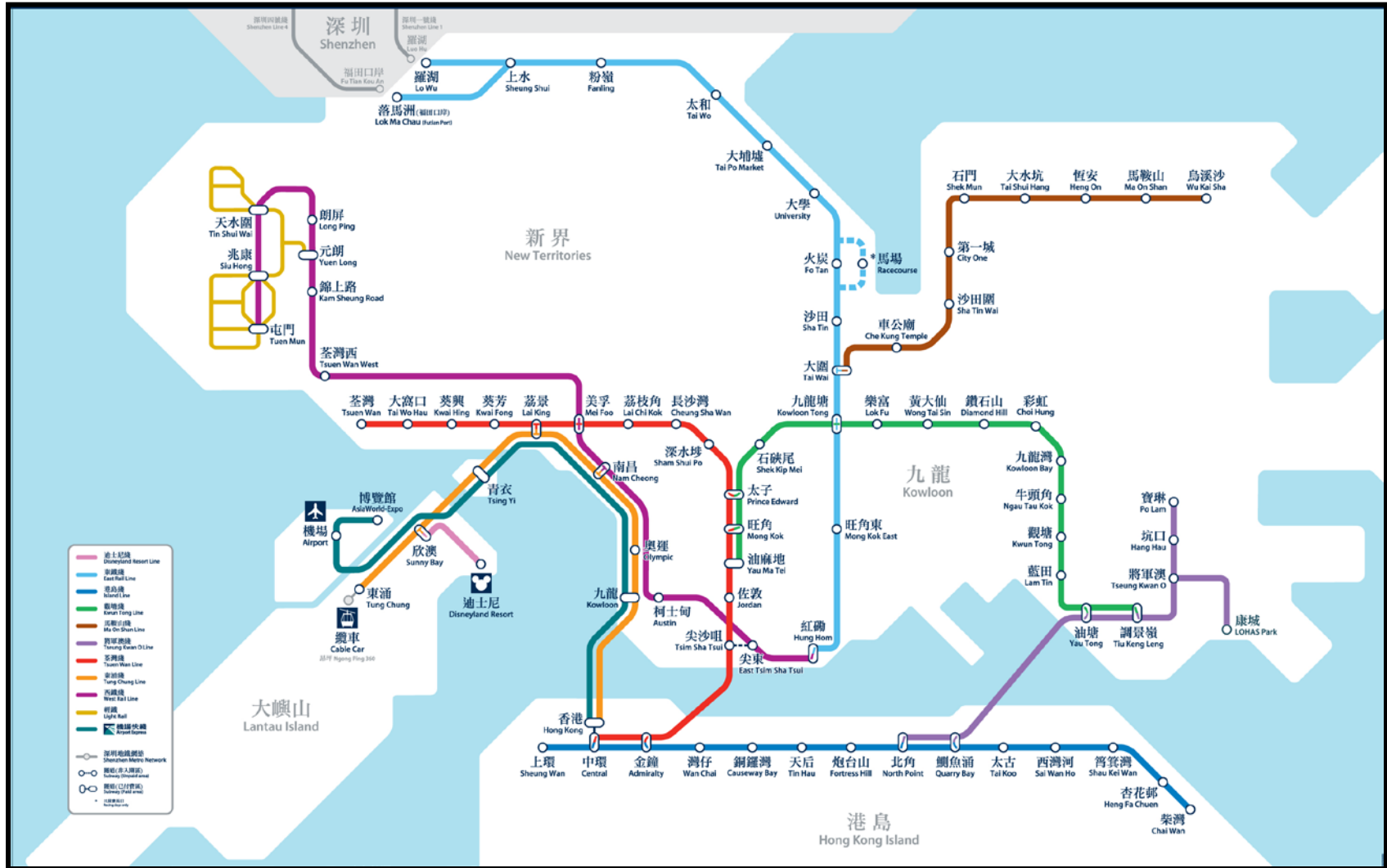
## Scale of the MergeCo operation

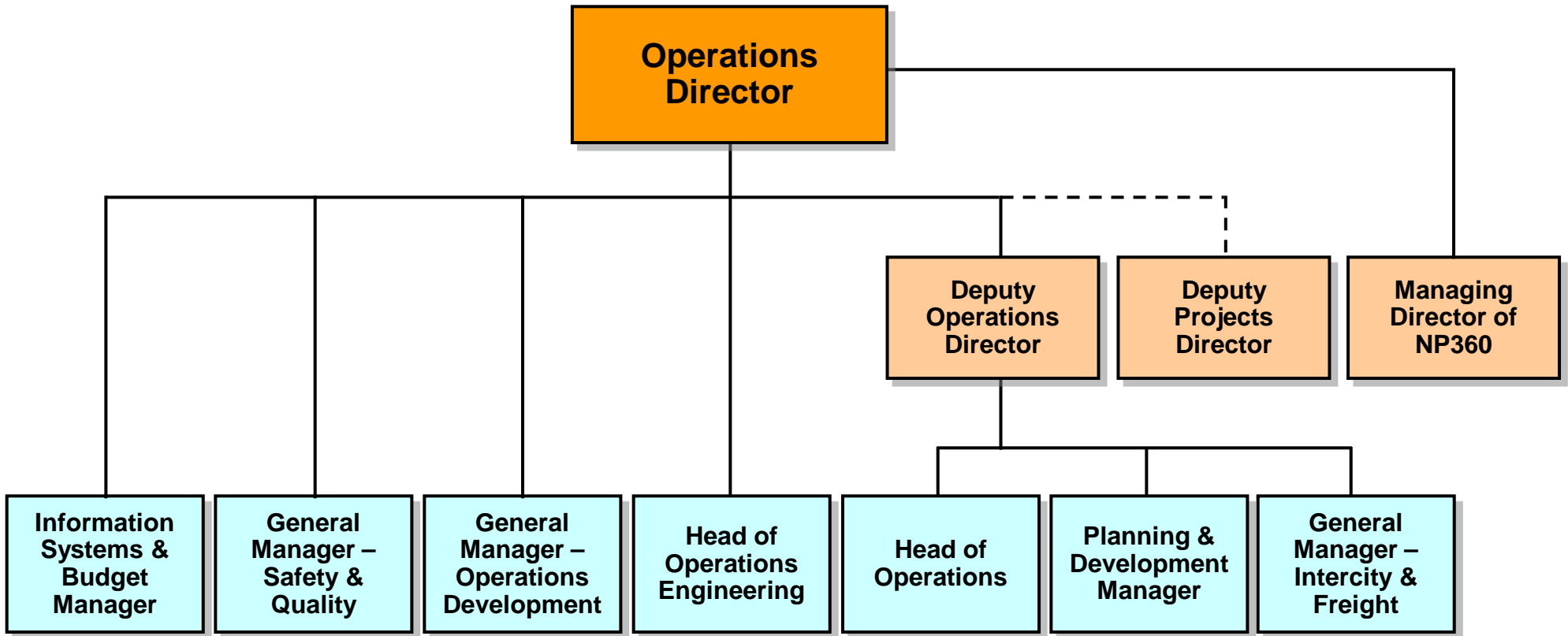| | MTR (2007) * | KCRC (2007) * | MergeCo # |
|---|---|---|---|
| Number of staff | ■ 4,309 | ■ 4,339 | ■ 8,576 |
| Average daily patronage | ■ 2.5 Million | ■ 1.6 Million | ■ 4.1 Million |
| Route length | ■ 91 km | ■ 77 km | ■ 168 km |
| Number of lines | ■ 7 | ■ 3 | ■ 10 (plus 11 LR lines) |
| Number of stations | ■ 53 | ■ 32 | ■ 82 (plus 68 LR stops) |
| Number of cars (Fleet size) | ■ 1,074 | ■ 670 | ■ 1,744 (plus 119 LR cars) |
| Asset under management | ■ US$13 Billion | ■ US$10 Billion | ■ US$23 Billion |

**\* as at Nov 2007**　　　　**# as at May 2008**

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# System Map

# High Level Organisation Structure for Operations Division



**Operations Director**

- Information Systems & Budget Manager
- General Manager – Safety & Quality
- General Manager – Operations Development
- Head of Operations Engineering

**Deputy Operations Director**
- Head of Operations
- Planning & Development Manager
- General Manager – Intercity & Freight

**Deputy Projects Director**

**Managing Director of NP360**

# Managing of risks arising from merger

# Merger Brings About Opportunities As Well As Threats to the Operations

## Opportunities

- **Combined & bigger network, greater market share**
- **Comprehensive coverage in all railway business**
- **Further improvement on operating efficiency with greater business scale**
- **Knowledge accumulation through new systems and project works**
- **Additional talent and expertise to take on growth opportunities**
- **Staff career advancement**

**VS.**

## Threats

- **Risks (safety and performance) arise from changes required to capture synergy, in particular during the transition period**
- **Added challenges on industrial relations with the larger work force**
- **Increased compliance / reporting requirements**
- **Heightened public / media attention**
  - **Expectations on fare reduction**
  - **Noises on any operational hiccups**
- **Changes in the political environment (i.e. upcoming LegCO elections)**

# Year 1 Strategy

**1 Safety management**
- Adopt **single** Safety Management System
- **Manage transition** to new Safety Management System
- Employ third party **assurance on the management of change**
- **Safety first culture**

**2 Business continuity**
- **Integration** of procedures and practices
- Customer service **alignment**
- **Efficient** station operations and management
- Community railway and **partnerships**

**3 Operations development**
- **Deliver synergy** plan
- Prepare the next stage productivity improvement programme
- Review fare and promotion strategy
- **Sustain community development**
- **Opinion formers engagement**

**4 Asset management**
- Roll-out **risk based asset management** approach to all assets
- Reconcile MTR CAPEX programme
- Follow-up on due diligence activities
- **Develop 2020 vision**

**5 Specific business review**

Review business strategy of :
- LR and bus
- Freight
- **Intercity**

**6 Supporting systems enhancement**
- IT systems enhancement
- Performance management / KPIs

**7 Culture and people integration**
- Cultural **integration**
- Proactive **change management**
- People development
- Succession planning
- Become a **learning organisation**
- **Industrial relations** excellence

# ① Safety Management

**Year-1 priorities**                                                      **Timing**

| Strategy | | | |
|----------|--|--|--|

**Strategy**

- **Align safety management systems**

- **Building full safety system for MergeCo**

- **3rd party assurance on the management of changes**

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**Safety structure and capability**

- ■ **Align safety governance structure**
  - – Identify and provide training & familiarization for members of safety committees
- ■ **Enhance people capability**
  - – Align railway safety qualifications, train & re-qualify qualification holders

- ■ Complete before A-day

- ■ end of Aug 2008

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**Standardise system safety practices**

- ■ Roll out of **Railway Safety Rules (RSR)** / **Standing Operations Procedures Manual (SOPM)**
- ■ Extend Safety Critical Items (SCI) Control Process to cover all systems
- ■ Extend Safety Critical Operations (SCO) Control Process to cover all systems
- ■ Align incident management procedures
- ■ Progressively review and transfer hazards to a single Hazard Registration System (HRS)

- ■ End of Aug 2008

- ■ Complete before A-day

- ■ end of Aug 2008

- ■ end of 2008

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**Safety Assurance**

- ■ **Manage safety risks** arisen from combining safety management systems
- ■ **SMR I** issued before A-day
- ■ **SMR II** will be updated every 6 months to report progress of safety changes
- ■ Independent validation audits on planned merger-related safety activities
- ■ **Conduct 3-yearly External Safety Review** by American Public Transport Association (APTA)

- ■ 12-month programme after A-Day

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# ② Business Continuity

## Year-1 priorities

| | | | Timing |
|---|---|---|---|

**Strategy**

- **Focus on management of transition and alignment of customer facing operations**

- **Continue existing improvement initiatives**

- **Review IOA, By-laws and Intercity business**

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**Transition management**

- **Work with HR to carefully manage transitions involving organisation complexities, in particular**
  – Clear Roles and Responsibilities demarcation in areas such as RRU, 1st and 2nd line maintenance, SBM
  – Smooth transfer of staff between departments with adequate training for staff to take on new roles
  – Careful communications on aligned roster patterns

**Timing**

- RRU - to be completed by Nov 2008
- 1st & 2nd line maintenance implemented on Mar 2008
- Incident Handling by RSMD on Aug 2008
- Communication on aligned roster – completed by Sep 2008

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**Customer facing operations**

- Review customer facing operations with understanding on passengers' feedback and expectations
- Align procedures, as well as standards in service delivered to customers

- 1 year programme

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**IOA and By-laws**

- Review and overhaul the **Integrated OA and new By-laws** to ensure their operation and business soundness

- The integrated OA Compliance Manual and new By-laws issued before A-day

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**On-going cost service enhancement**

- Implement progressively headway improvement programme
- Staff motivational programme
- Formulate Business Supervisors Programme to Operations

- 1 year programme

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# 7 Culture Integration and People Development

## Year-1 priorities | Timing

**Strategy**

- **Ensure teams have the right people and mindset with focus on industrial relations**

**Culture integration**

- Implementation of all eleven Integration Ambassador projects was successfully completed in March through which all IAs had the opportunities to collaborate together under actual work environment to deliver their projects effectively
  - Complete before A-day

- All IAs are encouraged to provide continuous support to various integration initiatives in the Corporation
  - On-going

- Upon the development of Corporate Vision Mission Values (VMV) in February, the MTR VMV was introduced to all managers in the Management Communications Meeting on 14 March
- CEO and Executives approved the VMV roll-out plans submitted by Operations Division on 23 May 2008
  - Complete before A-day

- Divisional Champions have implemented the plans and rolled out VMV communications progressively to all Operations staff until July 2009
  - July 2009

**People development**

- Work with HR to extend people development and succession planning with the expanded talent pool
  - 1 year programme

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 1. **Establish an Integrated Change Programme to facilitate systematic management of merger related changes** | **Dec 09** |

**Preparation**

```
DHs to prepare Change
Programmes (CP) based
on merger Integration
Plans
        ↓
SPE-MIO to compile
Integrated Change
Programme (ICP)
        ↓
DHs to present finalised
CPs to OD for
endorsement
```

**Implementation**

```
DHs to action according
to the endorsed Change
Programmes          ←→   Change Management /
        ↕                 Assurance
SPE-MIO to update ICP ←→  Reporting
```

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 2. Promote and enhance safety vigilance of every staff; and integrate Human Factors into normal business processes as part of safety culture enhancement  | Jun 08 to start |

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 3. Enhance the robustness and adequacy of existing risk control system for managing hazards of the extended and more complex railway system<br><br> | Dec 08 |

# The Delivery Plan – Year 1 milestones

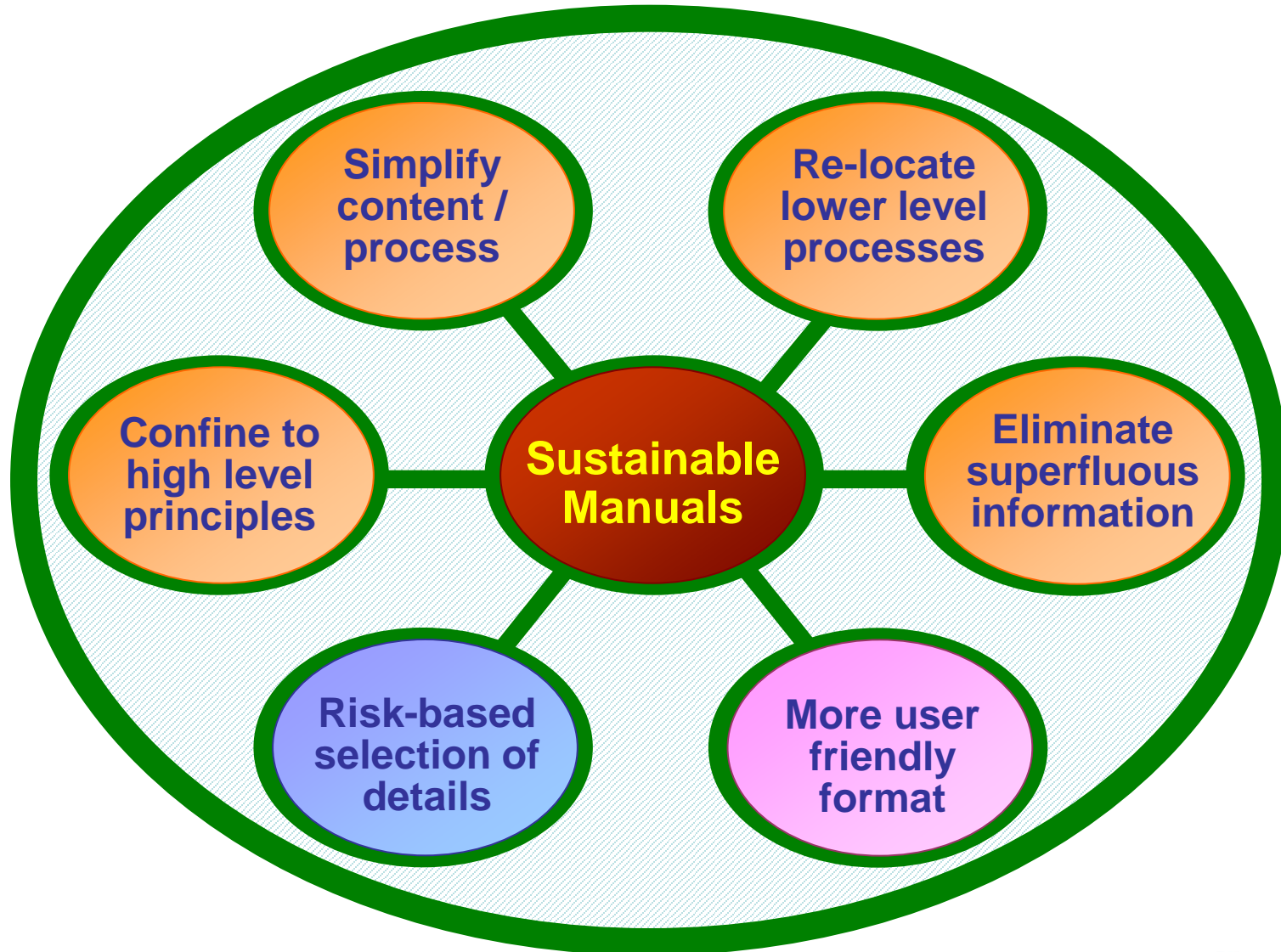| Key Integration Focus & Areas | Timescale |
|---|---|
| 4. Develop procedures to facilitate front line to implement rigorous maintenance and operation control measures to ensure proper functioning of safety critical equipment and proper execution of safety critical operation  | May 08 |

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 5. Achieve a paradigm shift from scenario base to principle base operational safety working approach  | Jul 08 |

# Rationalization of Railway Safety Rules

**A New Vision** for Safety Command & Control

- **Safety to be managed by principles**
  - rule book captures all high level safety principles
  - allow flexibility to cope with changing situation
    - demand for judgment
    - rule book is for the trained individuals
  - greater reliance on staff competence

- **Risk-based approach : tells hazards and "Why"**

- **Provide a robust & sustainable framework for operational safety**

- **Rule book reduced from 440 pages to 327 pages**

# Rationalization means



Sustainable Manuals

- Simplify content / process
- Re-locate lower level processes
- Confine to high level principles
- Eliminate superfluous information
- Risk-based selection of details
- More user friendly format

# Rationalization Approach

- Selection of contents and level of details will be risk based

- Detailed working procedures will be moved to lower level manuals, if they are currently not there

- Skill-related and nice-to-know information to be covered by training manuals and reference manuals

- Writing style will be concise and succinct

- Simplified format for user-friendliness
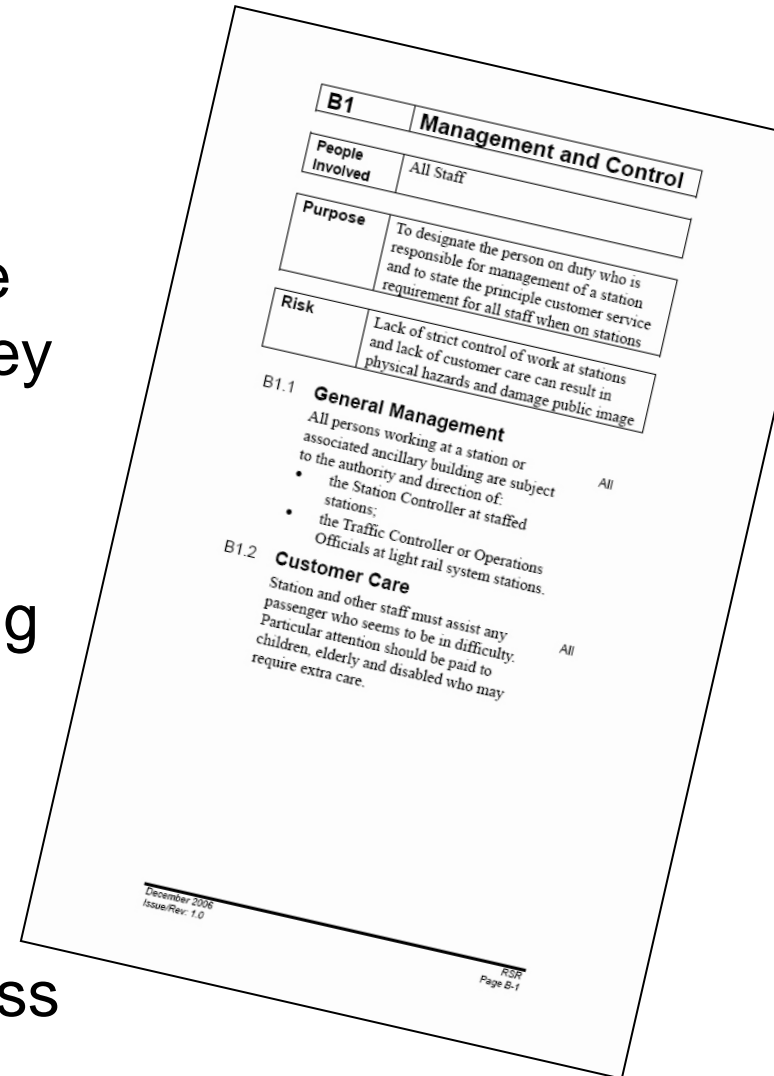
# Rationalization Plan spans over 3 years

## Phase 1 Project
### ( Mar 06 – Mar 07 )

- **Rationalize R&P manual, the top operational safety "Bible", to become**

**Railway Safety Rules (RSR)**

- **Simplify key multi-party safety processes from :**
  - Accident, Incident & Emergency Procedures
  - Adverse Weather
  - Communication System

manuals into one

**Standing Operations Procedure Manual (SOP)**

## Phase 2 Project
### ( Apr – Dec 07 )

- **Continue rationalization to lower level manuals covering sectional arrangements and tasks:**
  - Operations Control Centre manuals ( 7 Volumes )
  - Station Operations manuals ( 4 volumes )

**( OCC )  ( SO )**

## Phase 3 Project
### ( Jan 08 – Sep 09 )

- **Continue rationalization to all Mergers Operations documents**

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 6. Rationalise Occupational Safety & Health Practices to consistently manage the Occupational Safety & Health issues | Jun 08 |

# The Delivery Plan – Year 1 milestones

| Key Integration Focus & Areas | Timescale |
|---|---|
| 7. **Harmonizing Influenza Pandemic Business Continuity Plan for post merger MTR** | **Jun 08** |

# Specialist supports

## Specialist consultancy support were appointed for:
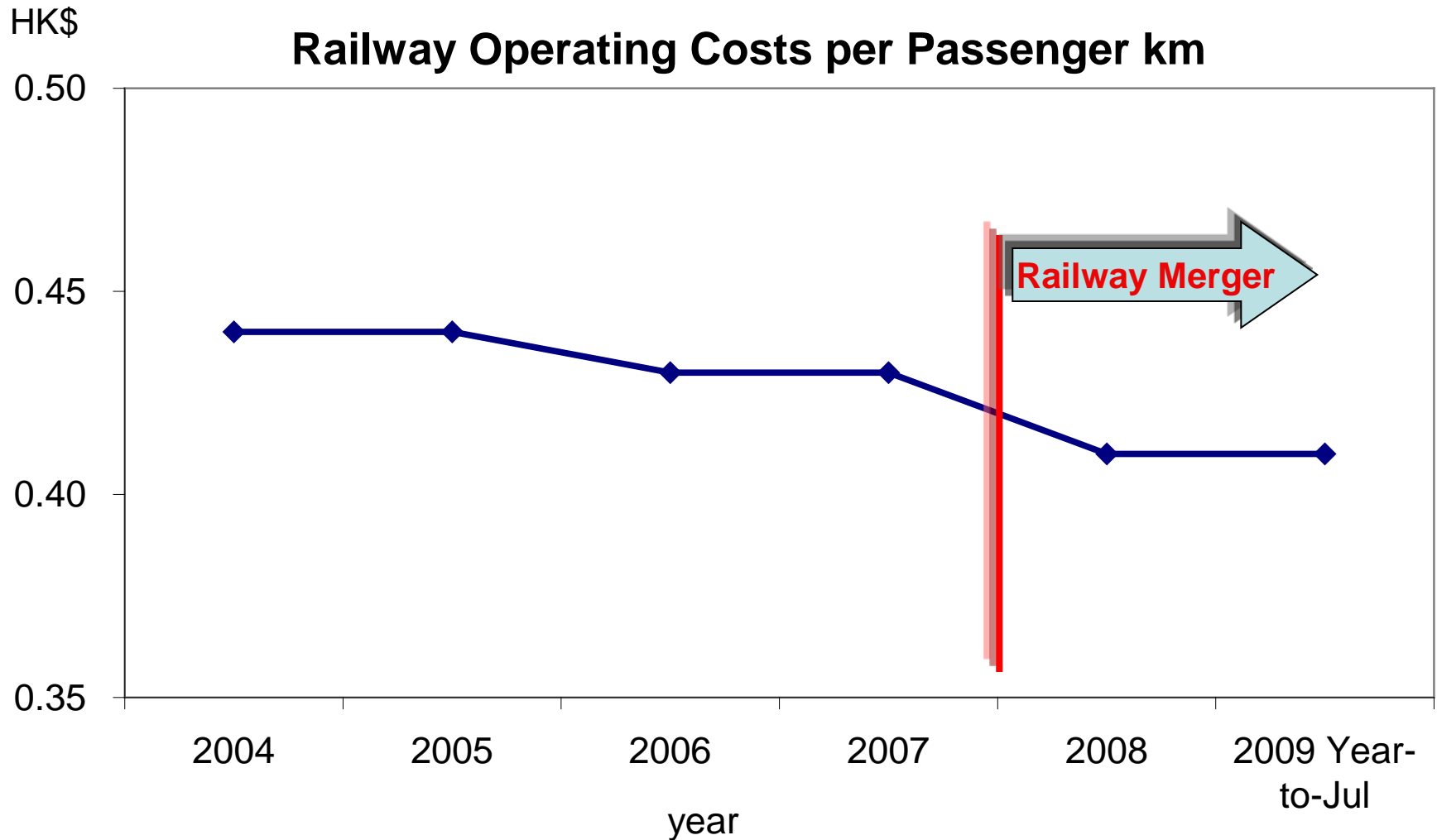
- Reviewing Influenza Pandemic Business Continuity Plan

- Conducting specific risks assessments

- Reviewing HRS and enhancing risk control system

- Supporting railway safety qualifications alignment programme

- Conducting safety culture review, and

- Training in-house human factors professionals

# Challenges / Constraints

- Obtain buy-in and support from line departments

- Accept changes in working practices

- Develop pragmatic implementation plans

- Deploy resources within relatively short time frame

- Raise competence of merged team to professional level to cope with the extended network and more complex system
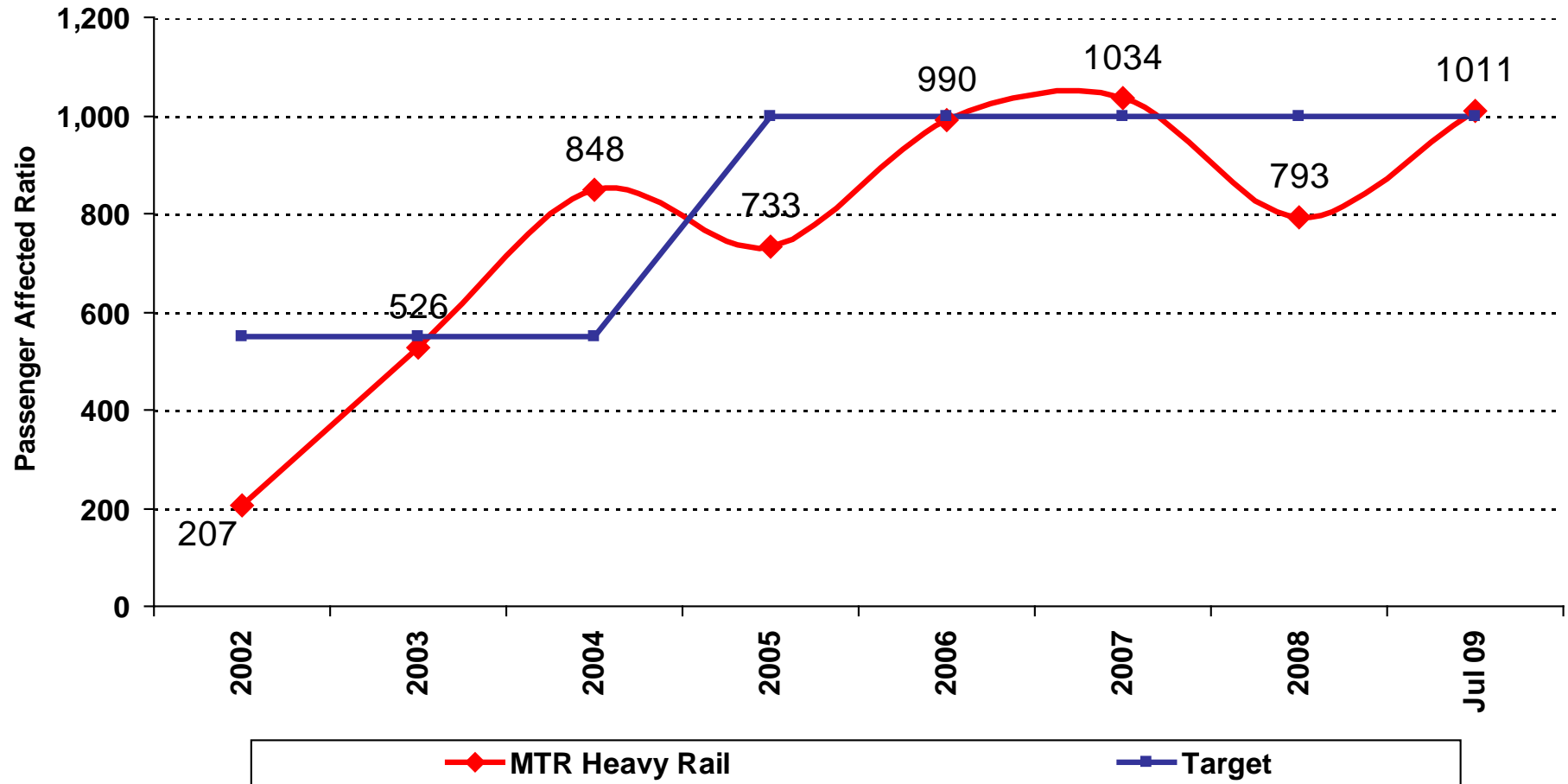
# First year achievements

# Competitive service delivery costs are maintained and even improved after Rail Merger

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## Railway Operating Costs per Passenger km

**Railway Merger**

year

| | | | | | |
|---|---|---|---|---|---|
| 2004 | 2005 | 2006 | 2007 | 2008 | 2009 Year-to-Jul |

0.50
0.45
0.40
0.35

# Sustaining high level of Customer Service Quality at 1,000 to 1 Passenger Affected Ratio



**Passenger Affected Ratio**

# Safety Performance – Passenger and Public

| Key Performance Indicators | | | Target | 2008 | 2009 (June) |
|---|---|---|---|---|---|
| Number of injuries requiring hospitalisation per 100 million passenger journeys | Hong Kong Operations | Heavy Rail | 7.7 | 8.4* | 7.02 |
| | | Light Rail | 11 | 12.3* | 18.44* |
| | | Bus | 9.5 | 7.5 | 6.55 |
| Number of injuries per million passenger journeys | Hong Kong Operations | Heavy Rail | 0.98 | 0.98 | 0.98 |
| | | Light Rail | 0.18 | 0.47* | 0.62* |
| | | Bus | 0.13 | 0.08 | 0.09 |

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# Safety Performance – Workforce

| Key Performance Indicators | | Target | 2008 | 2009 (June) |
|---|---|---|---|---|
| Staff (Lost time injuries per 100,000 man-hours) | Operations Division | 0.54 | 0.44 | 0.43 |
| Contractor (Reportable accidents per 100,000 man-hours) | Operating Railway | 0.21 | 0.14 | 0.21 |

# Thank you