



Delivering Value and Excellent Service with IT Applications at MTR

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23 Nov 2011

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Agenda

1. Introduction of MTR
2. MTR Challenges – The Path to 2020
3. How IT Better Align to Business Objectives
4. IS/IT Applications for Supporting Business Objectives



Introduction to MTR

Major Milestones

1979



Started operation

2000



Listed on HK Stock Exchange
(No. 00066)

2007



Merged with Kowloon-
Canton Railway Corporation

MTR Core Business

- Railway Business in HK, China & Overseas
- Property Development and Management Services
- Inter-city Train Passenger Services
- Station Commercial and Railway Related Services (Advertising, Shops)
- Telecommunication Services
- Consultancy Services



Railway Operations in HK



Urban Lines

- East Rail Line
- West Rail Line
- Ma On Shan Line
- Kwun Tong Line
- Tseung Kwan O Line
- Tsuen Wan Line
- Tung Chung Line
- Island Line

Other Lines

- Airport Express Line
- Light Rail Line
- Disneyland Resort Line

Inter-city Passenger Service

- Hong Kong–Beijing
- Hong Kong–Shanghai
- Hong Kong–Guangzhou

Cable Car Service

- Ngong Ping 360

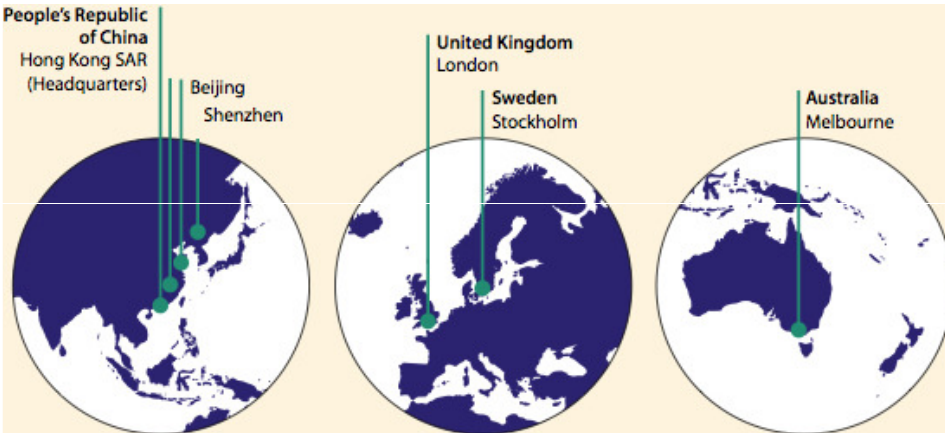
China and International Business

Mainland China

- Beijing Metro Line 4
- Shenzhen Metro Line 4

Overseas

- London Overground
- Stockholm Metro
- Melbourne Metro Train

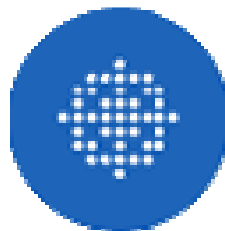


HK Passenger Services (2010)



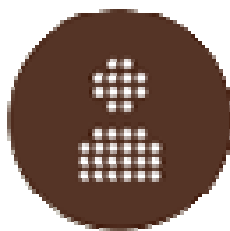
Share of Franchised
Public Transport Market

44.3%



Passenger Journeys on Time

99.9%



Total Patronage

1,608 M



Total Route Length

218 km

Projects in Progress / Future Projects

5 New Local Rail Projects

- West Island Line
- South Island Line
- Kwun Tong Line Extension
- Express Rail Link
- Shatin Central Link



Key Business Drivers

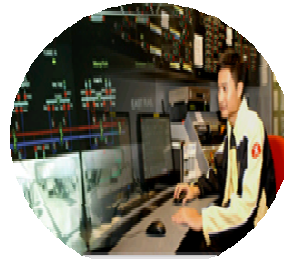
**New Lines
Expansion**



**China & International
Business Growth**



**Brand Consistency
Across Existing & New
Lines**



**Stakeholders
Requirements**



**Challenge on Generation
Continuity**



**Value Assessment &
Value Engineering**



Business Operations Strategy



Major Strategic Focus and IT Value Delivery



“A Smile on Every Customer’s Face”



Asset Assurance & Productivity

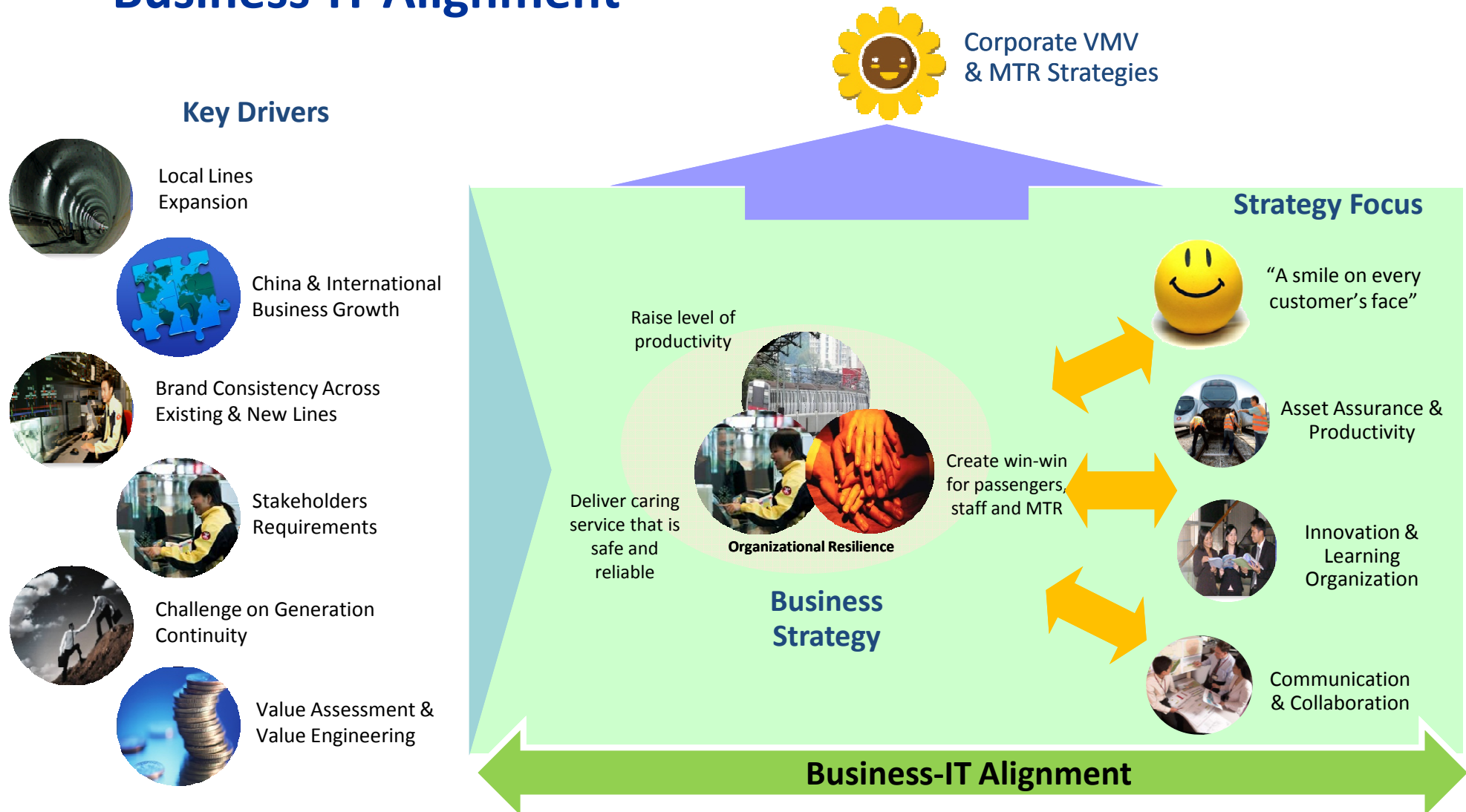


Innovation & Learning Organization



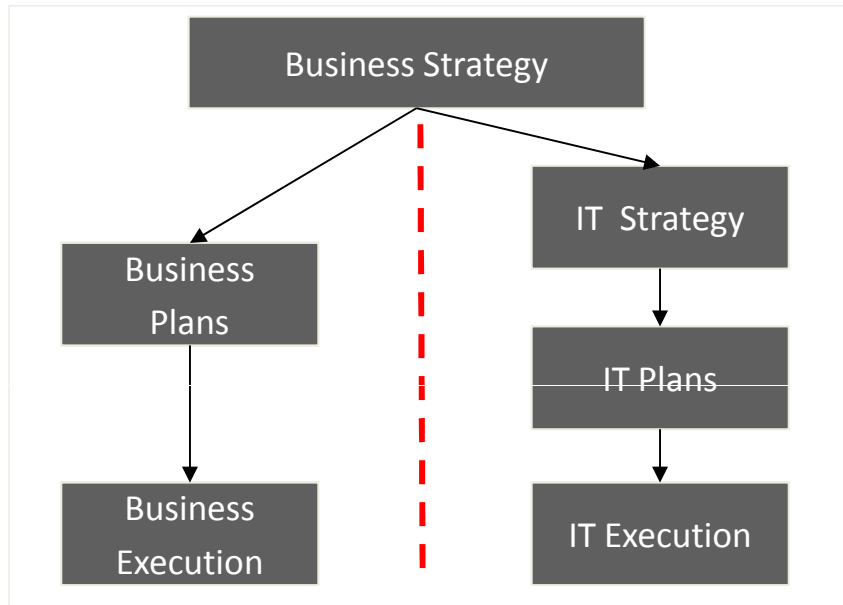
Communication & Collaboration

Business-IT Alignment



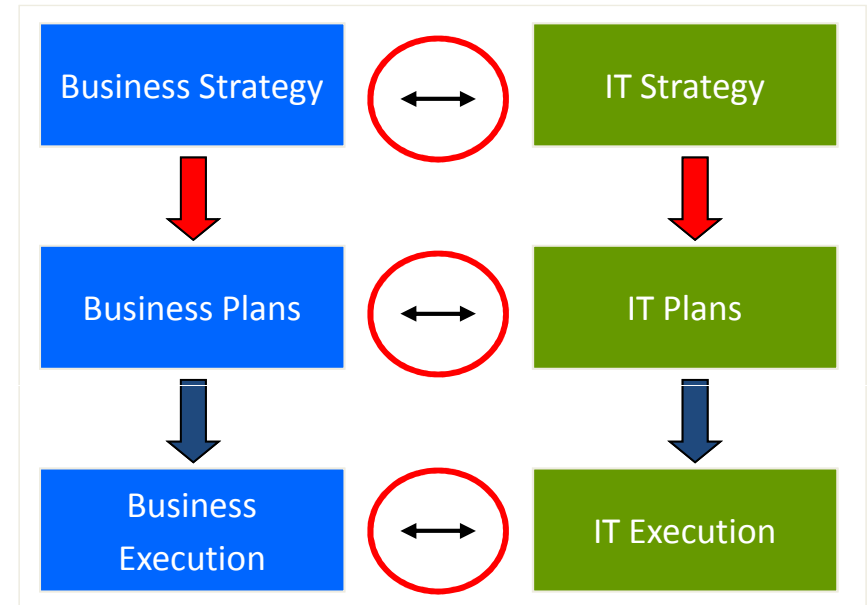
Strategic & Objective Alignment

Traditional Approach



Business and IT strategies considered separately – IT is positioned as a supporting enabler rather than a partnering facilitator / driver of business strategy

Leading Practice and ITEA Approach

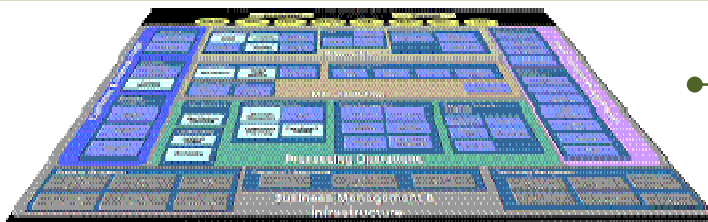


Business and IT strategies considered jointly – IT is positioned as a way to drive innovation and enrich the shaping of business strategy

IT Enterprise Architecture (ITEA)

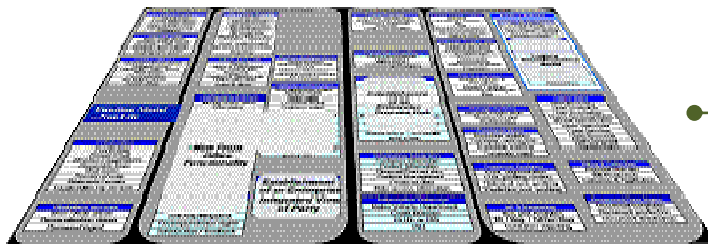


Business Architecture



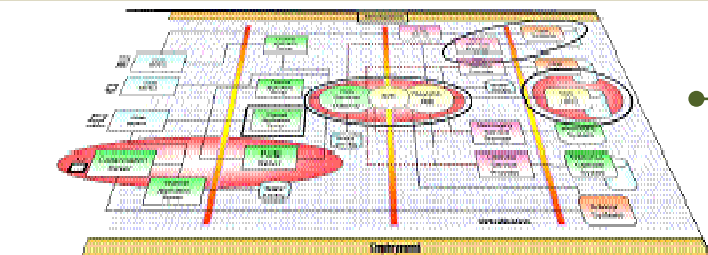
How the business capabilities are organized to meet the VMV and objectives

Application Architecture



How the IS/IT applications support the objectives of the business

Technology Architecture



How the technology fits together

MTR Core Applications (ERP Centric Diagram)



Examples of Business Applications



“A Smile on Every Customer’s Face”

- 1. MTR Mobile**
- 2. E-instant Bonus (EIB)**
- 3. MTR Club**

MTR Mobile



iPhone version



iPad version



Android version



Journey Planner

MTR

Journey Search: Destination

Kowloon Tong

- Attraction Recommendation
- Location Map
- Time Table
- MTR Shops Information
- Disabled Facilities

MTR Shenzhen

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MTR

Journey Search: Hung Hom Kowloon Bay

Journey Info

From Hung Hom To Kowloon Bay

Journey time for MTR: **22 minutes**

Attraction and Dining Download Timetable

Fare Info

MTR		Concessionary		Student ³
Adult	Octopus ⁴ Single ticket ¹	Octopus ⁴ Single ticket ¹	Octopus ⁴	Octopus ⁴
	6.3 7.0 ²	3.2 3.0 ²	3.2	3.2

First Class Fare More

MTR Shenzhen

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MTR Mobile

External Recognitions - 2011:

Asia Pacific Information and Communication Technology Awards (APICTA) 2011

- Merit Award under the category of Tourism and Hospitality

Hong Kong Information and Communications Technology (HKICT) Awards 2011

- The Best Lifestyle Grand Award
- The Best Lifestyle (Green, Healthy & Creative Living) Gold Award
- The Best Ubiquitous Networking (Mobile Infotainment Application) Gold Award

External Recognition – 2010:

2010 Mobile Marketing Association Global Award

- Receiving the "Best Use of Mobile Marketing Award" in the Relationship Building category

2010 Digital Media Award

- The Leisure/Travel sector Bronze Award

PC Market - Best of IT Award 2010

- The Best of IT Award 2010 in the My Favourite IT Products and Services category

E-Instant Bonus (EIB) – 46 Devices installed



- Plays commercials and issues coupons of sponsors that leads to increased revenue generation
- Provides travel concessions to passengers
- Provides interface for promotions (e.g. MTR Club, Happy Index)
- Provides direct sales (e.g. Souvenirs, phone cards and passwords for on-line games)

MTR Club

MTR Club homepage layout showing navigation, journey planner, login, and various member benefits and community links.

MTR Club 'Hong Kong Sports Arena' (紅磡站) page layout, featuring location details, ratings, and a photo album.

Examples of Business Applications



Asset Assurance & Productivity

1. RailASSURE[®]
2. Engineering Works & Traffic Management System
3. Inspection Registry System

RailASSURE® - MTR ERP for Asset Management

RailASSURE™

What is RailASSURE™?
RailASSURE™ is a software application system for asset management, specifically for railway environment, including the following modules:

- Equipment management
- Maintenance planning
- Work management
- Maintenance budgeting
- Analysis and management reporting

How will it help your business?
RailASSURE™ is designed and developed by Hong Kong MTR Corporation, one of the world's leading railway companies.

Together with proven railway asset management processes and practices, RailASSURE™ helps your company to:

- Increase asset availability
- Extend the life of assets
- Manage asset-based expenses
- Meet regulatory and safety requirements
- Improve staff productivity and satisfaction
- Make informed decisions

Why choose RailASSURE™?
RailASSURE™ allows your railway business to:

- Fast track to achieve globally recognized asset management practices specifically for railways adopted by MTR
- Improve business efficiency by the suite of powerful railway specific features which are essential to asset management but unavailable from general ERP software
- Implement a world-class system with low project cost and risk avoiding high-costs of customisation and consistency across various railway systems
- Achieve lowest Total Cost of Ownership with proven open technology platform with easy-to-use and intuitive features designed by experienced maintenance engineers

RailASSURE™ is arguably the unique and most user-oriented railway specific asset management software system.

RailASSURE™

End-to-end solution for railway asset management

Functional Overview
RailASSURE™ is an end-to-end solution for railway asset management. It consists of five modules which are integrated to automate critical maintenance management processes for railway assets:

Equipment Management (EM)

- Equipment Class
- Equipment Inventory
- Equipment Location
- Equipment Status

Maintenance Planning (MP)

- Maintenance Plan
- Maintenance Schedule
- Maintenance Resource
- Maintenance Cost

Work Management (WM)

- Work Order
- Work Request
- Work Order History
- Work Order Summary

Optional Modules

- Maintenance Based Budgeting Module
- Engineering Analysis and Management Reporting Module
- Maintenance Planning Integration Module
- Mobile Work Order Integration

Equipment Management

- Definition, registration, tracking, inventory and definition of railway equipment
- Special features for railway stock, station and linear assets (track, signal, tunnel etc.)
- Universal work for equipment interactions
- Linkage with Store system for parts catalogue and bill of material application
- Maintenance contracts and warranty
- Multi-organization and business units

Maintenance Planning

- Definition of standard jobs, material and planning requirements
- Time, measurement and pattern maintenance job scheduling opportunities
- Dynamic planning parameters
- Optimal maintenance functions
- Linear assets maintenance by area

Work Management

- Work Request and Work Order
- Faults, incidents and delays management
- Condition-based work monitoring
- Outsourcing and contractor management
- Linear assets maintenance by area

Integration

- Integration with ERP, including Chain and Human Resource Systems
- Data download / upload facility XML and Excel

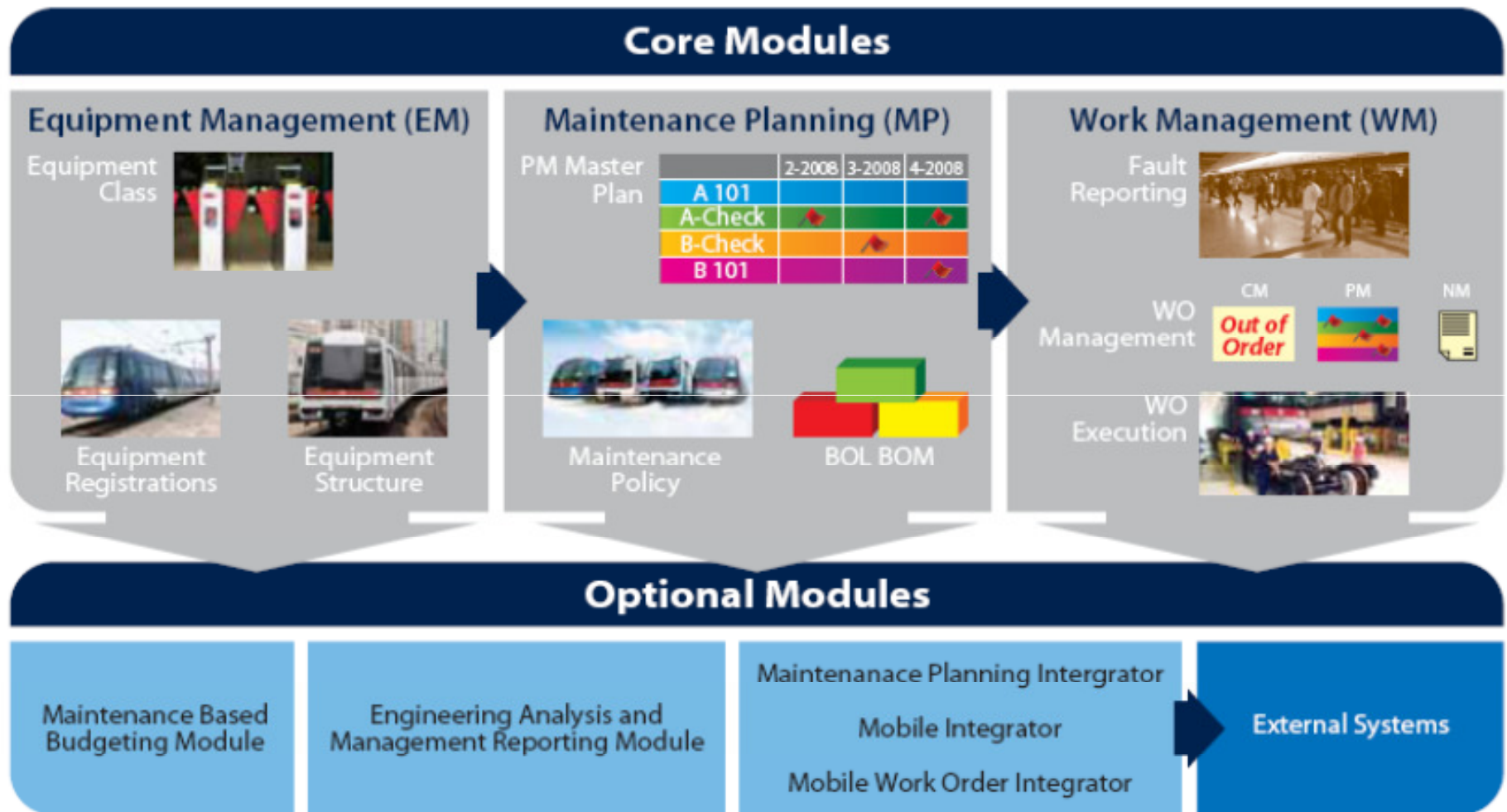
RailASSURE™

For specific Railway Business needs

Design for Railway Equipments
RailASSURE™ is designed for railway-specific equipment such as rolling stock, station and linear assets such as tracks and tunnels. Equipment can be individually registered and attached to its parent in a hierarchical structure. Linear assets can be described in segments. For example a rail track can be divided into several curve tracks or plain tracks.

Operating data, including car-M, run, gate transactions, equipment measurement,

RailASSURE® - MTR ERP for Asset Management



External Recognition: Enterprise Innovation Award 2009 from the International Data Corporation

Engineering Works & Traffic Management System Using Artificial Intelligence

Input Possession Request in Depots - Mozilla Firefox

file:///D:/jrm/2011/_Cycle2_R2.html x Input Possession Request in Depots x

Welcome admin [Preferences](#) [Settings](#)

Engineering Work & Traffic Information Management System

Start Here Settings

Planning->Depot Booking->Possession

List Possession Request

New Copy Save Trans. No. Date

Main Info Work Location Affected Area OHL Power Supply Track Clear Area Possession Area Depot Power Supply Resources Requirement Safety Notes

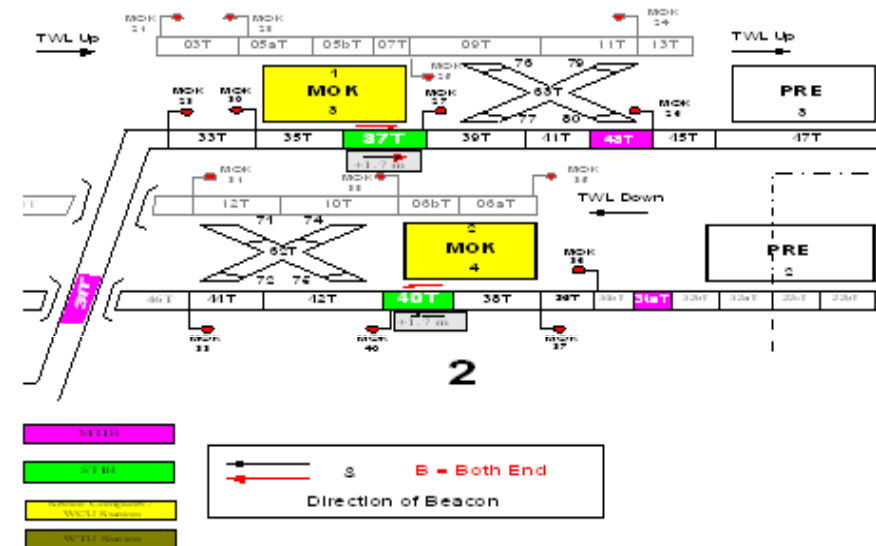
Depot	From Location To Location	From Sub-Location To Sub-Location	From Specific Location To Specific Location	Location String
TK14	N Fan Area			
TK22	N Fan Area			
TK34	Under Podium			
TK44	Under Podium			

Add Row Insert Row Delete Selected Row Copy from Trans Copy from Template Save as Template To Graphic Mode

Line	Depot	Location String	Specific Location
TKL	KBD	From TK14/N Fan Area to TK22/N Fan Area	N30T, N43T, N31T, N35T, N39T, N41
TKL	KBD	From TK14/Under Podium to TK22/Under Podium	N14T, N15T, N16T, N17T, N18T, N19T, N20T, N21T, N22T
TKL	KBD	From TK4/Under Podium to TK7/Under Podium	

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Done



Engineering Works & Traffic Management System

External Recognition – 2006

- **WINNER** in the Industrial Applications Category of Asia Pacific ICT Award (APICTA)
- **Project of the Year** awarded by ZDNet Asia

External Recognition – 2005

- **Certificate of Merit (Application)** in the 7th IT Excellence Awards
- **Innovative Application of AI Award** issued by American Association for Artificial Intelligence (AAAI)

Inspection Registry System (IRS)

Search Photo

Structure: (ALL)
 Batch No: (ALL)
 Struct Level: (ALL)
 Struct element: (ALL)
 Defect ID: (ALL)

View View View
 ID1753.jpg 100-0317.jpg 100-0316.jpg
 View View View
 ID1583.jpg 100-0313.jpg 100-0319.jpg
 View View View
 100-0323.jpg 100-0326.jpg P15.jpg Page 1 of 1

Structure	Batch No	Level	Element	ID No.	Photo	Create Date	Photo Description
TIH	160	PAA_C ADIT_1_2	1753	ID1753.jpg		2003-07-12	Loosen ceiling concrete spall 2000X1000mm have been removed during inspection.
TIH	160	TUN_D OVD_0533_05	1371	100-0317.jpg		2003-08-01	SGL lining leaks with efflorescence
TIH	160	TUN_D OVD_0533_05	1372	100-0316.jpg		2003-07-30	Surface drainage channel blocked with efflorescence and caused ponding
TIH	160	TUN_D TL_0519_0524	1583	ID1583.jpg		2003-07-11	Ceiling concrete spalled 3000x1000mm at lower platform

Total Record(s): 9



Examples of Business Applications



Innovation & Learning Organization

1. Operation Knowledge Mall
2. MTR Creators
3. M-Tube
4. raiLOvation® Jam

Operations Knowledge Mall

The screenshot displays the MTR Operations Knowledge Mall website. At the top, a purple header bar contains the MTR logo, the text "MTR Operations Division", and a welcome message for LAM William Wai Hung (林偉雄) with a "Site Actions" dropdown menu. Below the header, a yellow navigation bar includes links for "OK Mall", "Search", "Classification", "K-Map", "Workflow", "Personal Space", and "Contact Us".

The main content area is divided into several sections:

- Left Column:**
 - IMS Documentation:** Features an icon of books and the text "Manuals, procedures and instructions".
 - Operations Engineering Standards:** Features an icon of a blue folder and the text "Operations Engineering Standards".
 - Traffic Notice (TN):** Features an icon of a green book and the text "Maintenance and engineering works in the coming week".
 - Engineering Documents (EDOC):** Features an icon of a blue folder and the text "Engineering Documents (EDOC)".
 - Ordinances and:** Partially visible at the bottom.
- Center Column:**
 - MTR Creators:** A large banner announcing that the site has accumulated over 18,000 posts and is approaching 20,000 discussion posts. It includes the text "To be the 20,000th Discussion Post" and "Let's discuss and contribute more, and you could win the prize!".
 - What's NEW:** A section with a green tree background listing updates:
 - A new web "Asset Management Corner" is launched.
 - Please click here to access the new Operations Engineering Departments Web Page.
 - Presentation files for Operations Management Forum - 7 Sep (S40 & above only).
 - Internal Links:** A horizontal bar with a dropdown arrow.
 - Links:** A grid of icons and text for various resources:
 - CoMET Reports
 - UITP Reports
 - New Railway Technology
 - ISDP (Operations Division)
 - MIS Manuals
 - OKMail4U
 - MBay
- Right Column:**
 - Install OK Mall Desktop Icon:** A button with a small icon.
 - ASSET MANAGEMENT CORNER:** A banner with the text "ASSET MANAGEMENT CORNER" and "OPERATIONS DIVISION".
 - Learning Organisation:** A banner with a green leaf icon and the text "Learning Organisation".
 - MTR Creators:** A banner with the text "MTR Creators".
 - Blog:** A banner with two speech bubble icons and the text "Blog".

At the bottom right of the main content area, there is a small banner for "Enterprise competition is increasing daily, lifelong learning is the key to success" (企業競爭日日增, 終身學習擺滿分).

MTR Creators

MTR Operations Division Welcome LAM William Wai Hung (林偉雄) | My Links |

Learning Organisation 創學群 - 持續學習無間・創意空間無限

MTR Creators | Communities | Learning Organisation | OK Mall | Administration | Quality Assessment | People Profile | Search All Communities | Include OKM

Accident Investigator
 Civil & Railway Protection
 Jam with ZTTT
 Permanent Way
 Productivity 提升生產力

Automatic Fare Collection
 Integrated Facility Engineering
 Operating Community 車務新知
 Power Distribution
 Risk Management

M-Tube

路軌復收比賽 2011
Customer Service Initiative at CUC
Handling low main air pressure (SP1950 Stock)
EEDR and IEDR
天使與魔鬼

[More](#)

MTR Creators has now accumulated over 18,000 posts!

Let's discuss and contribute more, and you could win the prize!

Task Force Event Calendar

Showcases / Key Learnings

Filter | Sort by: Created | Group by: None

Source	Showcases / Key Learnings	Created
Rolling Stock	Material Selection	26/03/2010 09:59
Rolling Stock	如何把 MTR Creator 融入日常工作中?	26/03/2010 09:58
Permanent Way	Rerailing Strategy either on PM Base or CM Base	23/02/2010 11:33
Permanent Way	Welding robot for crossing repair	23/02/2010 11:32
Permanent Way	Intervention Limit for Voided Sleepers	23/02/2010 11:31
Power Distribution	Auto-Redclose Scheme in DC Traction System	28/01/2010 14:29
Power Distribution	HV Safety Document _ Application Overview	28/01/2010 14:26
Power Distribution	Applications of Renewable Energies	28/01/2010 14:17
Power Distribution	Effect of Pilot Adnormality	27/01/2010 17:57

About M-Tube

- Know more about M-Tube
- Map drive for RAPIDS (Tool for M-Tube)
- Content and Technical Standard
- M-Tube Uploading Procedures
- Guide on M-Tube Toolkit Reservation
- M-Tube Toolkit Locations & Custodians

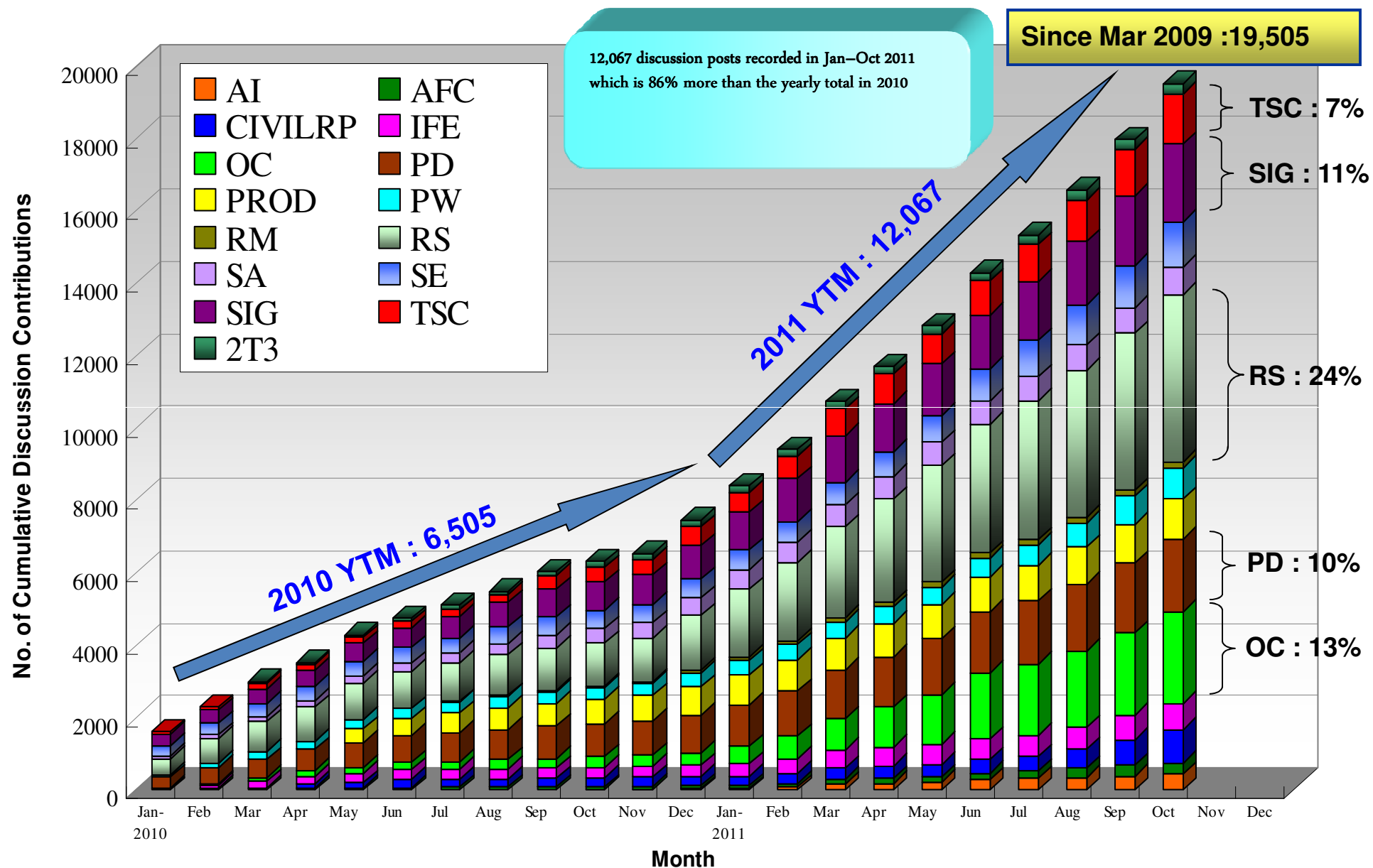
Other Discussion Forum

- Safety Professionals Community







Must Read

- For Members
- For Agent
- For SMA Panel

MTR Creators – Cumulative Discussion Contributions



M-Tube (Self-produced Learning Videos)

Thumbnail	Title	Description	Video link	Category	Sub-Category	Lang				
	SP1900/1950 VCB Isolation	SP1900/1950 VCB Isolation	View here	Rollins Stock - Miscellaneous	Miscellaneous	Cant				
	SP1900/1950 Pantograph Isolation	SP1900/1950 Pantograph Isolation	View here	Rollins Stock - Miscellaneous	Miscellaneous	Cant				
	SP1900/1950 Release Parking Brake	SP1900/1950 Release Parking Brake	View here	Rollins Stock - Miscellaneous	Miscellaneous	Cant				
	SP1900/1950 CI Ground Fault	SP1900/1950 CI Ground Fault	View here	Rollins Stock - Miscellaneous	Miscellaneous	Cantonese	00:01:38	Lau, KW Kwok Wing	Kung, Albert Koon Hung	25/07/2010 16:46
	Best Appearance Competition	形象儀表升呢大行動	View Here							
	Use of Protective gloves	Use protective gloves in smart way	View here	Safety and Health	Safety and Health	Cant				



raiLOvation® Jam

Site Actions
YAU Stanley Hing Chiu (游廣超)
Search this site...

raiLOvation 2012

Home
Hot Ideas
Polling
About the Jam
My Jam

Welcome to the Jam!

For the next several hours, you will have the opportunity to engage with colleagues from different divisions, departments and different locations to surface pragmatic ideas and solutions to some very real issues and problems.

Select a forum below and dive right in!

People Strategy

The primary aim of the strategy is to develop an integrated approach...

New Line Integration

There will be 6 new lines in the coming future, to integrate those new lines effectively is ...

Corporate Responsibility

We aim to be a globally recognized leader that connects and grows communities with caring service.

Application of New Technology

Let's suggest and discuss the new technologies to be used to improve the work efficiency, solve a problem, ...

Jam Time Remaining
68 hrs. 32 mins.

Global Activity
Since the start of the Jam
of total posts: 26
of total replies: 200
of total logins: 254

Airport Express
Bus Service
Corporate Image
Customer Care
Green
Innovation
Jam
Knowledge Management
LegCo
Lighting
Maintenance
Mobile
Motivation
Property Development
Role Model
Safety
Self
Service
Sharing Culture
Signage
Staff
Station
Strategy
Sustainability
Toilet
Tourist
乘車優惠
物業管理
直達車
綠化
車箱
輕鐵

railOvation® Jam

Site Actions
YAU Stanley Hing Chiu (游慶超)
Search this site...

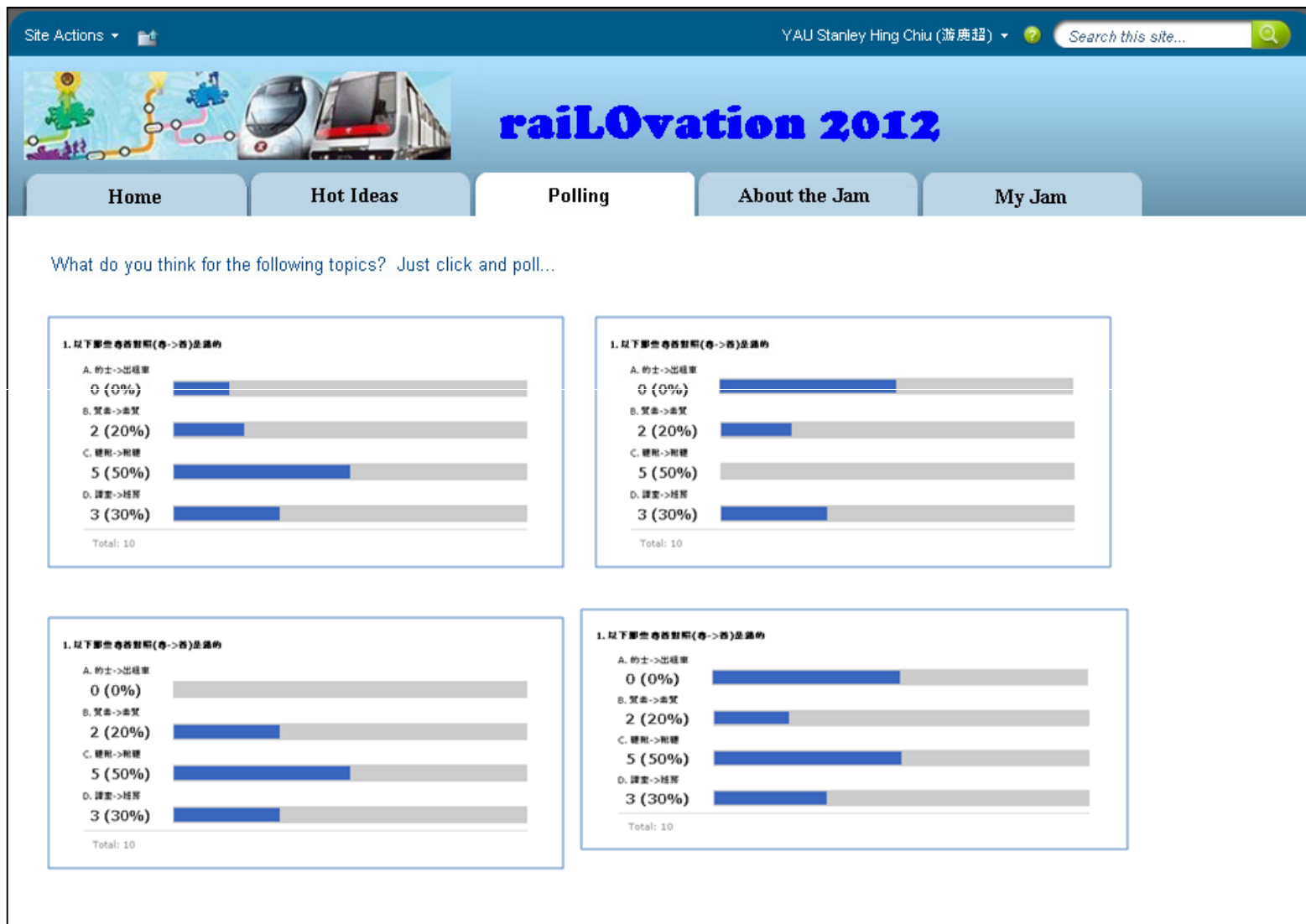
railOvation 2012

Home
Hot Ideas
Polling
About the Jam
My Jam

People Strategy

Subject	Posted By	Replies	Rating (0-5)		Reply
Hotel, Hostel & Hospitality Our network is so big now, it maybe attractive to travelers to stay near the railway. To merge our property ...	 LEUNG Pandora Wai Ling (梁慧玲)	0	☆☆☆☆☆	10/25/2011 4:30 PM	 Reply
HSR in Taiwan In addition to HSR in China, one of the newly developed HSR in Asia Pacific region was the one in Taiwan, ...	 SO Kelvin Tak Kwong (蘇德光)	0	☆☆☆☆☆	10/25/2011 1:52 PM	 Reply
多推行環保意念, 節省能源 提議利用piezoelectric 產生電能供車站使用。Piezoelectric是一可將動能轉化成電能的裝置, 透過壓力...	 YAU Stanley Hing Chiu (游慶超)	3	☆☆☆☆☆	10/24/2011 1:50 PM	 Reply
Need change in biz model to sustain leadership? With the change in political and business environment, the current rail + property model may not ...	 YEUNG Elizabeth Hang Yin (楊幸演)	0	☆☆☆☆☆	10/25/2011 9:54 AM	 Reply

raiLOvation® Jam



raiLOvation® Jam 2009

- **raiLOvation** is an 72-hour long idea jamming initiative **to build on the current successes and explore new ways of generating ideas for the Corporation**
- **Brought up** 1,300 MTR staff “jamming”, **creating close to 2,000 posts**
- About 80 innovative ideas were identified for implementation



CEO Mr. C K Chow participating in the raiLOvation
Jam

Makes strategic communications

two \longleftrightarrow way

Awards for Knowledge Management (KM) / Learning Organisation (LO)

External Awards

- Winner of “Hong Kong Most Admired Knowledge Enterprise (MAKE) Award” for **3 years (2009- 2011)**, and **one of the Top Prizes** in 2011
- Certificate of Merit in the Best Knowledge Management Category of MIS Asia IT Excellence Award 2011

Internal Award

- Team Award of MTR Grand Awards for Outstanding Contribution 2010

Examples of Business Applications



Communication & Collaboration

1. **Unified Communications & Collaboration**
2. **Mobile Device Management System**
3. **Information Security**

Unified Communication & Collaboration

Building a more efficient communication infrastructure...

Unified Messaging (Outlook / SharePoint)

Instant Messaging

Telephony / Mobile Phone

Conferencing

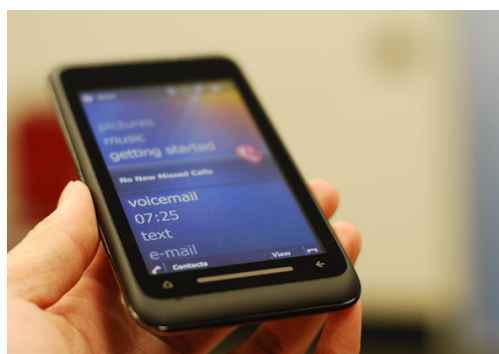
Identity & Presence

Internal Recognition: Team Award of MTR Grand Awards for Outstanding Contribution 2011

Mobile Device Management System

(as at Sep 2011)

Mobile Devices	Total
iPhone	1036
iPad	210
Blackberry	176
Windows Mobile	307
	1729



Information Security

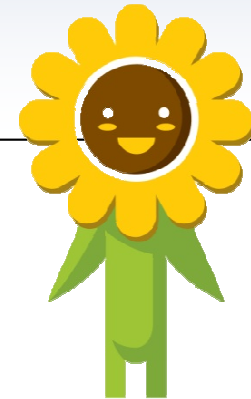
- Information Rights Management System (IRS)
- USB Mobile Storage Control (e.g. encrypted USB thumb drive)
- Security Token for VPN access

External Recognition: MIS Asia IT Excellence Award 2011 (Best in Security Strategy)

Conclusion

**ITSD enables and supports MTR's company vision,
by working in partnership with customers,
to provide the most effective IT solutions and services**

(ITSD Articulation of MTR Company Vision)





心繫生活每一程

caring for life's journeys