



Road Pricing within a Comprehensive Metropolitan Transport Optimization Approach

Topic - Bob McQueen
Presented by – Phil Miller, PE
PBS&J, USA

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Topics

- Introduction
- Worldwide view
- Metropolitan transport optimization
- An “enterprise” approach
- Summary

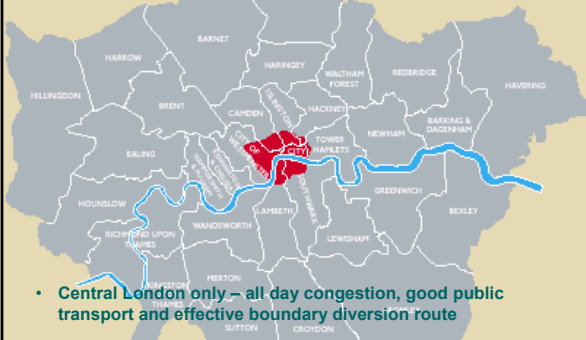
Introduction

- Metropolitan transport is a very important issue and challenge
 - By 2030 more than 60% of the earth’s population will live in a metro area
 - They will contribute more than 50% of the GDP for their countries
 - New technology or new technology applications are being tested
- Necessary to re-focus on optimization metropolitan transport planning, development, design, operations and management

World Highlights

- UK
- Sweden
- Singapore
- Korea
- Holland
- And...?

London – The Congestion Pricing Zone



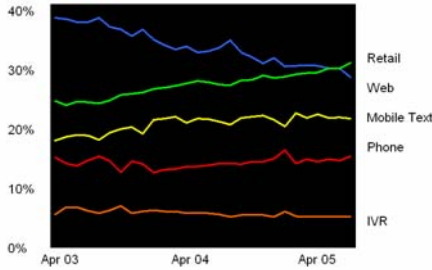
- Central London only – all day congestion, good public transport and effective boundary diversion route

London – The Congestion Pricing Zone



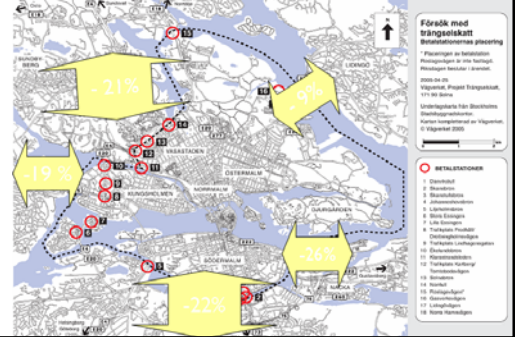
London – The Congestion Pricing Zone

Total payments 106,000 / day
78,000 @ £8
16,000 Residents @ £0.80
12,000 Fleet Accounts @ £7



- Change in Payment Channels from April 2003 to July 2005

Stockholm, Sweden



Singapore

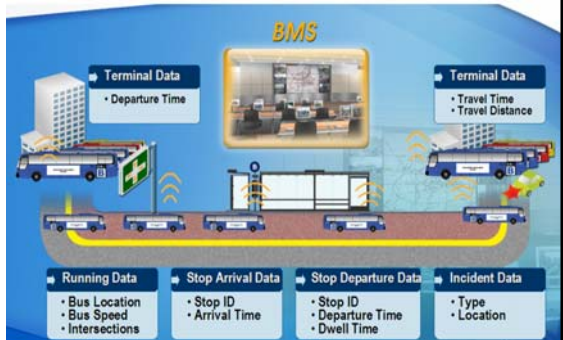
- Implemented first congestion pricing mechanisms in 1975
- Manage demand - ownership control and usage restraint
- Revenue neutral- revenues generated by demand management offset existing taxes
- Moved from paper to electronic
- Dynamic pricing by vehicle class, time of day and entry location



Seoul, Korea – T-Money Initiative



Seoul, Korea – T-Money Initiative



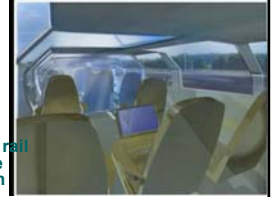
Holland – The “Superbus”

- 155 mph
- Electric power 150 mile range
- Electronic guidance systems
- Obstacle detection
- Road surface memory map and proactive suspension
- Runs on regular road but needs rail horizontal and vertical curvature standards for 155 mph operation
- Transit on demand using information technology for customer relationship management

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Trends

- USA –
 - Increased use of Corridor Congestion Management Pricing
 - Area Charging to be under study.
 - Increased revenue
 - Maximizing use of road space
- Asia – charge and car ownership controls
 - Revenue neutral
 - Modal shift peak spreading
- Europe - mandatory charge
 - Increased revenue
 - Road usage reduction
 - Modal shift
 - Peak spreading
 - Pollution control
 - Money back guarantees on transit performance?

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West Midlands Passenger Charter

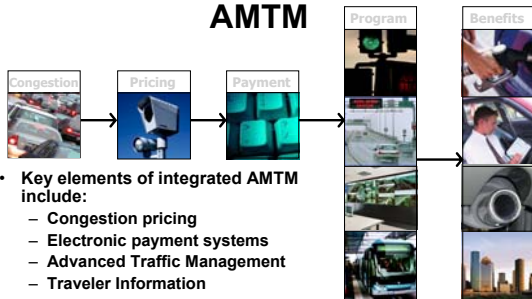
- Money back guarantee

Passenger Charter Discounts

The Passenger Charter target for punctuality is for trains to arrive within three minutes of their scheduled time of arrival. For reliability the target to be reached is 99% of all services to be run. As well as providing statistics on how well local rail services are being operated the figures also trigger refunds to passengers under Centrica's Passenger Charter when unreliability or punctuality fall to set levels. Details of these discounts are displayed at all staffed rail stations in the Centra area.

PERIOD 6									
20 August 2006 to 16 September 2006									
Discounts Paid to Customers (%)									
LAST 4 WEEKS	PUNCTUALITY			RELIABILITY					
	Target %	Actual %	% Discount	Target %	Actual %	% Discount	Target %	Actual %	% Discount
Crewe City North	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Crewe City South	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Southall Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Skirby Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Shepperton Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Widnes Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Consett Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Widnes/Manchester Line	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
New Street Station	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Alton St Bevil	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
North Doncaster	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
Alton Doncaster	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0
South Hill Station	99.0	99.0	0.0	99.0	99.0	0.0	99.0	99.0	0.0

AMTM



- Key elements of integrated AMTM include:
 - Congestion pricing
 - Electronic payment systems
 - Advanced Traffic Management
 - Traveler Information
 - Parking Management
 - Traffic Engineering
 - Land Use / Transportation Planning

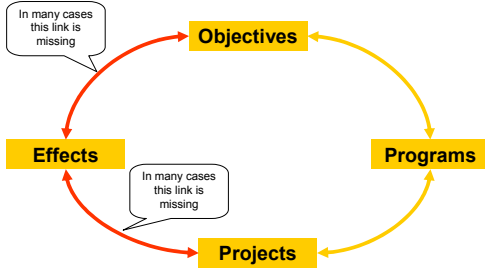
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Trends (continued)

- An optimization sequence?
- Essential elements of metropolitan transport optimization
 - Technology enabled applications
 - Management solutions
 - Business process definition and improvement
 - Business model adaptation and adoption

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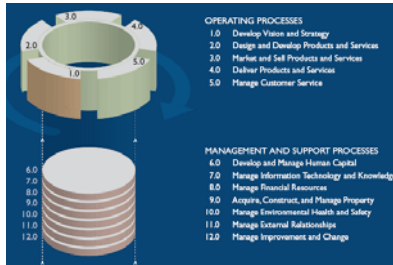
An Optimization Sequence?



An “Enterprise” Approach

- Unified objectives
- Business model and process defined, understood, streamlined
- Business model and framework that engages appropriate public and private sector resources in effective performance-based contracts
 - Responsibilities and work assignments,
 - What contract performance measures,
 - How is oversight implemented with those performance measures?

Process Classification Framework



Summary

- Worldwide view
- Trends
 - Metropolitan transport optimization
 - An “enterprise” approach
- The MeTrO Network