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Planning for bus based public transport

The Technology View

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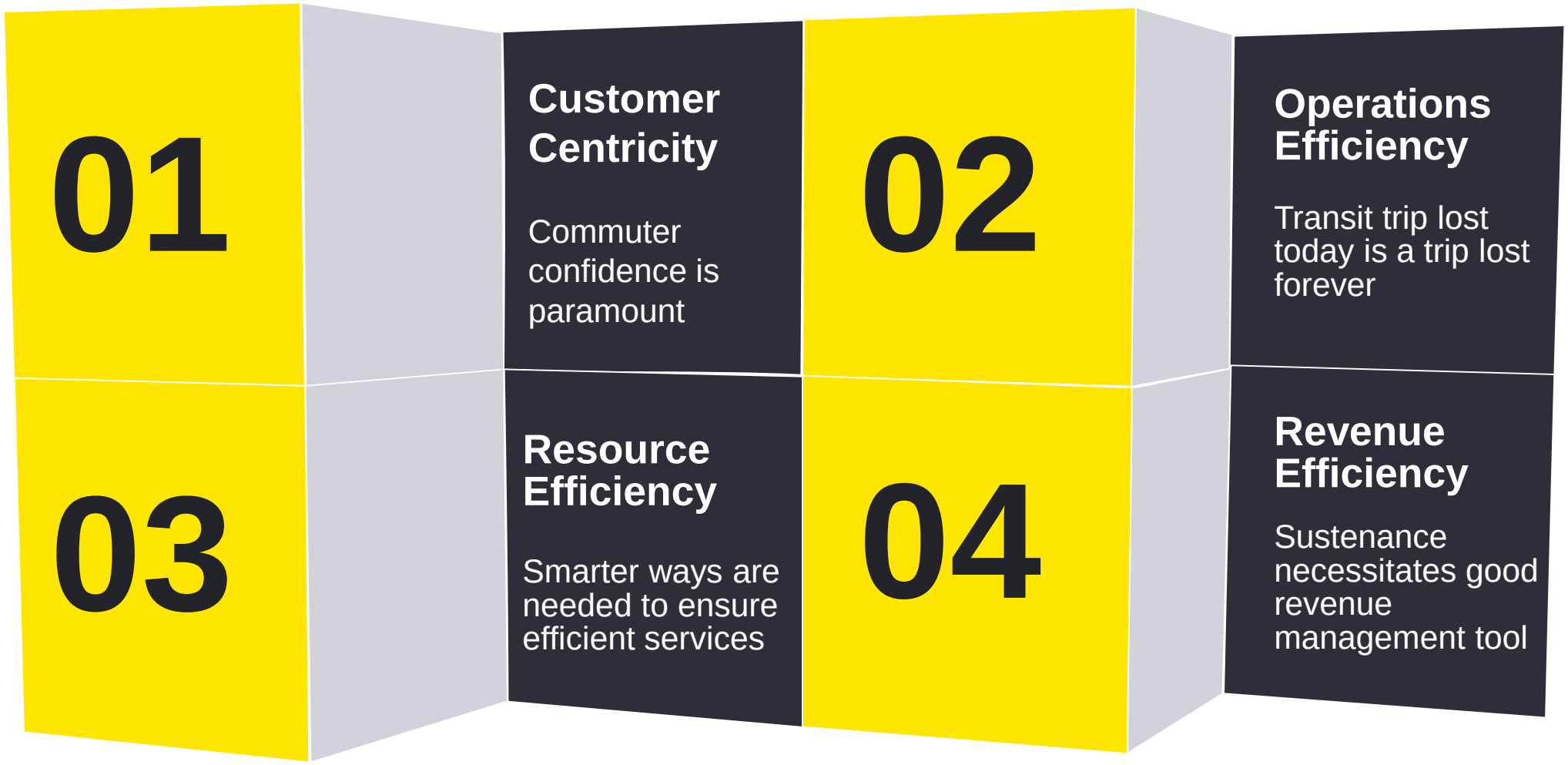
Building a better working world

Potential Strategic Drivers for ITS Planning



Key Questions to ask?

1

Identify Goals

Have we identified the goal(s) for the transport improvement program before examining the appropriateness of an ITS-led approach

2

Process Improvement

Have we retrofitted broken processes?

3

Willingness to Change

Have we committed to change organizational & operational processes

4

Priority Setting

Have we prioritized the change process?

5

ITS Lifecycle Funding

Have we understood the TCO and do we have provisions.

6

User Empathy

Do we understand needs to the users internally and externally?

7

Capacity & Capability

Have we assessed organizational capacity and capability to implement and sustain ITS?

8

Information Needs

Do we understand the data needs and outcomes required?

9

Long Haul

Its is a long-haul process, have we clearly planned for it?

ITS Planning needs Structured Thinking and Process

1

Planning

1. Goal for ITS
2. Approach to take
3. Other ITS the right route?
4. System Outcomes
5. Type of ITS applications

2

Design

1. Technology needs
2. Platform needs
3. Data requirements
4. Resources requirement
5. Outcomes of technology, data and resources
6. Business processes change requirement
7. Total cost

3

Implementation

1. Supply the needed system
2. Install the system in the respective working environment
3. Deploy the system
4. Make good use of the system

4

Evaluation

1. Pre-installation criteria
2. Post-implementation and monitoring
3. Evaluation

Will One Size Fits All Work?

TRANSPORT ITS APPLICATIONS *(partial list)*		
Operations Management	**Driver Aids**	**Fare Collection**
• Automatic Vehicle Monitoring • Route Condition Monitoring • Schedule Adherence Support • Service Contract compliance • Driving-standards compliance • Emergency/incident management • Dynamic rescheduling • Schedule Adherence Support • Collision warning and avoidance • Precision Docking • Economic driving assistance • Vehicle condition monitoring • Passenger surveillance	• Schedule Adherence Support • Collision warning and avoidance • Precision Docking • Economic driving assistance • Vehicle condition monitoring • Passenger surveillance	• Travel sales and payment • Fare calculation and charging • Travel authorisation and evidence • Interchange / transfer authority • Interchange / transfer rebate • Revenue accounting and distribution
Traveller Information	**Security**	**Central Control and Analytics**
• Traveller information on PC/Internet • Traveller information on phones/PDAs • Real-time information at stations/terminals • Real-time information at bus-stops • Real-time information in vehicles • Vehicle-stop announcement • Dynamic journey planners • Alert services • Emergency/incident advice	• In-vehicle surveillance • At-station surveillance • Running-way surveillance • Infrastructure/facility surveillance	• Business Intelligence • What if? • Insights to action • Evidence based decisions

We need to choose wisely

Is This Enough?

Services offered /Utilization

- Average Daily Ridership
- Average Trip Length
- Fleet operated in Peak Hours
- Fleet Utilization/Day (Total Run Kms)

Economics

- Passengers/Revenue Km
- Fare collected /Revenue Km
- Fleet Operating expenses/ revenue Km
- Operation Ratio (Cost per bus/earning per bus)
- Average Staff Utilized/bus/shift

Availability

- Service Coverage (Per Corridor, suburban
- Head way/Frequency (Peak, Medium peak , off peak)
- Average waiting time per station
- Schedule Vs Missed Trips

Convenience

- Passengers/Trip (During peak hours/off peak hours)
- Average Dwell time
- Load Factor
- Fatality rate /Km
- Schedule Adherence by bus contractor

Vehicular Capacity

- Occupancy Ratio (Design Capacity/Occupancy)
- Average Schedule adherence/Bus
- Bus Lane Capacity (Passengers in Peak hour peak direction)

Speed/Delay

- Average Speed
- Top Driver performance operator wise (Overspeed, schedule adherence , Harsh Breaking etc.
- Average junction delay in peak hours/nonpeak hours

HAVE YOU PLANNED FOR EVIDENCE BASED DECISIONS?

Insights to Action Framework

Key Takeaways

1

ITS Implementation is not just a technology project, it helps you deliver organizational goals

2

Deployment can have significant impacts, plan carefully

3

ITS should respond to clearly stated needs of the Authority, commuters, suppliers and others

4

Involvement of the key stakeholders is the KEY