

Innovation in Toll Revenue and Optimization in Technologies

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Presented by

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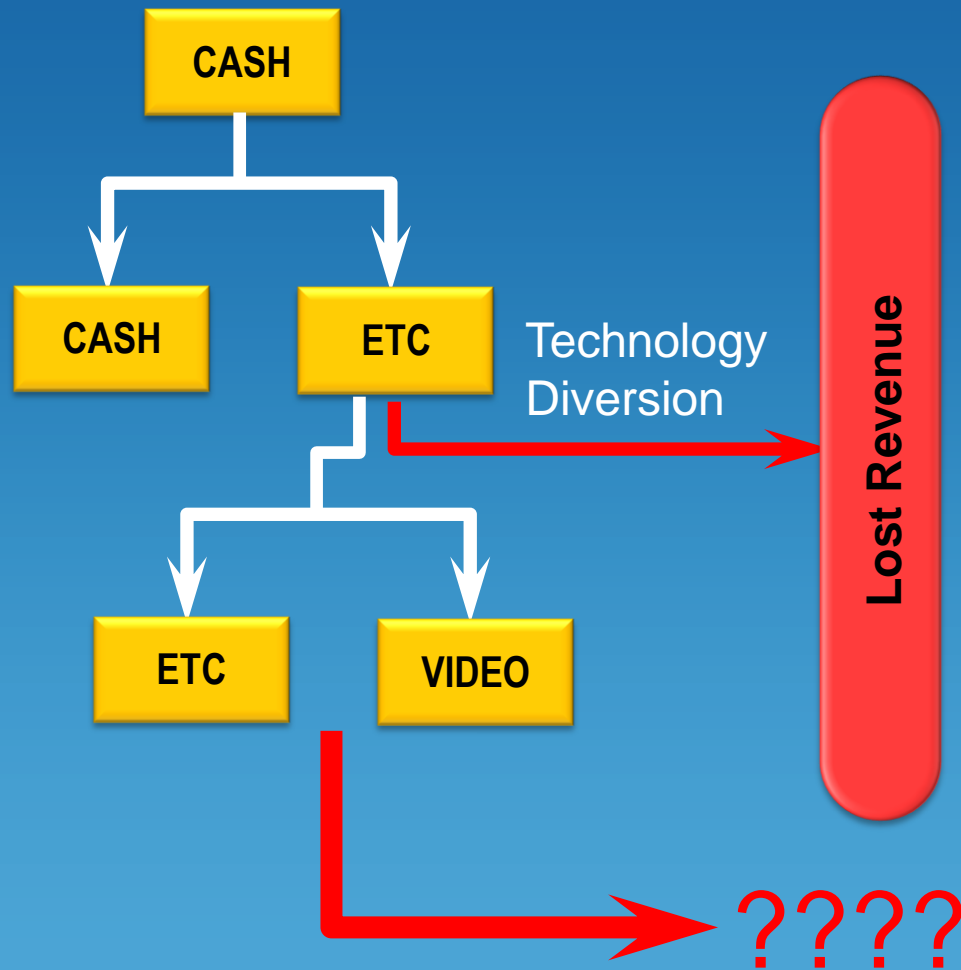
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Introduction

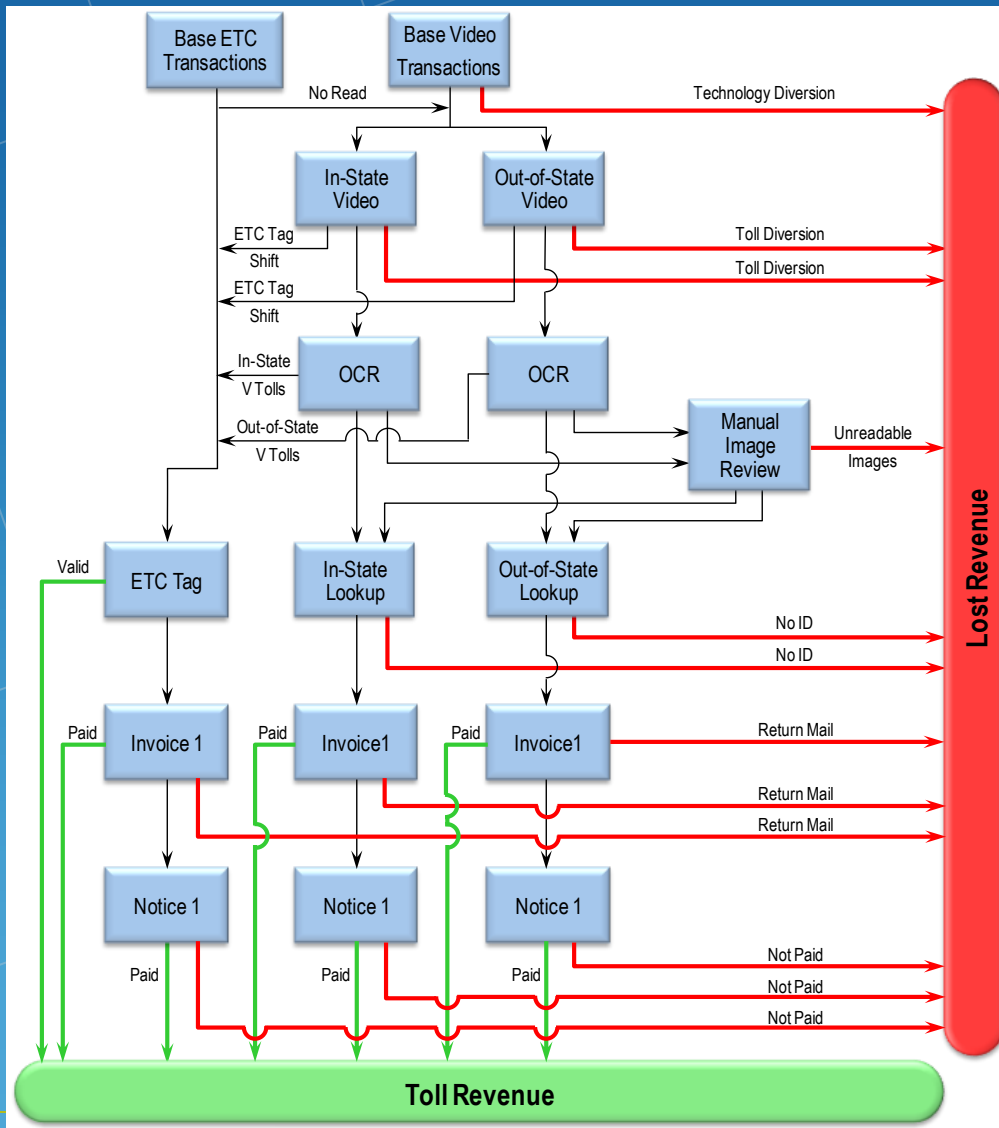
- Evolution of Revenue Capture Forecasting
- New and Complex Approaches
- Challenges with Current/New Technologies
- Implementation Approaches and Impacts

Tolling Forecasting Evolution



Tolling Forecasting Evolution

For Every
Classification
Group and/or
Market
Segment!!



Evolution in Thought

Historically

- Easily Communicated Pricing System
- Immediate and Full Revenue Ownership
- Controlled Enforcement/Violation Rules

Future

- Complex Pricing Structures
- Lagged Revenue with multiple and phased ownership
- Optimizing Revenue leakage through Enforcement and Violations Rules across multiple Agencies

Near Term Tolling Application Trends

- Managed/ HOT Lanes
 - Single versus System
 - Toll within a toll
- Cordon Pricing
- VMT Based Pricing

Near Term Other Application Trends

- Vehicle Registration
- Parking
- Transit
- Commercial Vehicle/Freight
- Border Crossing Management
- Driver Information Systems/ITS
- Privately Issued Payment Accounts

Challenges Looking Forward

- Understanding the sub-markets trends
 - Size/Magnitude and Growth Profile
 - Market Elasticities
 - Willingness-to-pay
 - Duration of Payment,
- Traditionally – T&R Aggregate market based
- New – T & Then...R Much more detailed disaggregation

Challenges Looking Forward

- Business Rules, Laws, and Protocols
 - Ease of transition from ETC
 - Agency versus systematic
 - Accounting /Financial Tracking
 - Rejection code definitions and phasing
 - Reconciliation with actual transactions
 - Recovered Revenue Classifications

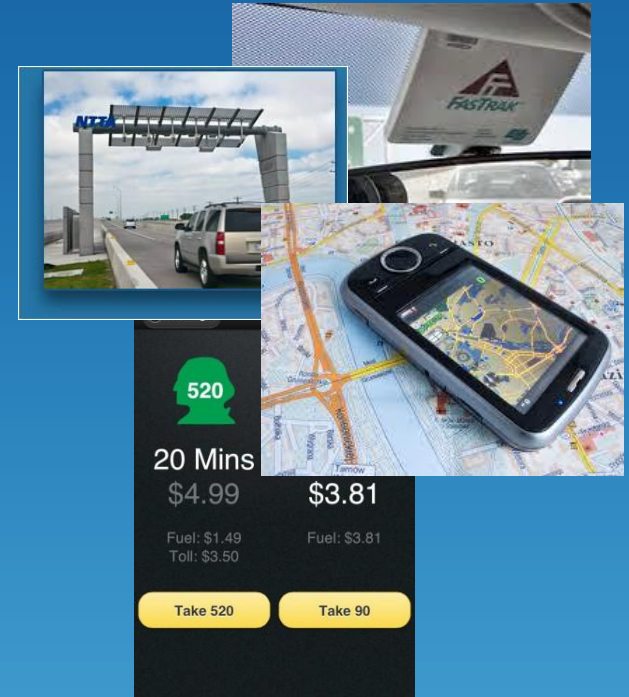
Challenges Looking Forward

- Emerging Technologies

- Transponders
- Video
- GPS
- Contactless cards
- Smart Devices

- Payment Landscape

- Cash/Checks
- Magnetic Stripes
- Contactless Chips
- Over the Airwaves



Conclusion

- Challenges in determining the technologies best suited to meet operational capacities and objectives
- Several factors play significant roles
 - Costs (capital & operational)
 - Transaction reconciliation
 - Enforcement/Violation
 - Existing Market Penetration and Readiness

Conclusion

- Degree of importance varies upon the environment
- Complex Risk Profiling
 - For cooperation between toll roads, license plate registration bodies and enforcement agencies
 - For Types of violations
 - For MOU, Roaming agreement, Toll services agreements
 - UNKNOWN.....

Conclusion

- Initial Concerns must be identified and addressed prior to any implementation
 - Risks = revenue loss
 - Political blowback/Loss of confidence
- Initial Responses
 - Detailed Waterfall Forecasting
 - Risk profiling of Key Waterfall Variables
 - It is paramount to have disaggregate TRACKING embedded in initial agreements

Questions and More Information

- THANKS

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