



IRM – Offering Deck



Agenda



1

Trends in Interconnect Settlement

2

Impact of such Trends On Telecom Operators

3

Challenges in combating the Interconnect Settlement

4

Need for Change!

5

How Mobileum can help Operators



Trends – Interconnect Revenue Management



TRUST

MNO increasingly using Interconnect carrier's Invoices and their CDRs for reliable billing



REVENUE SQUEEZE

- Reducing termination charges e.g Increasing regulation impacts (EU roaming, etc.)
- Unlimited plans - More pressure



NEW PARTNERSHIP SERVICES

Data & content M2M operations IoT growth & development And complex plans



ADVANCE ANALYTICS

- Multi dimensional reporting & Invoices
- Predictive Analytics to reduce cost, ensure profitability



DELIBERATE ABUSE

Targeted manipulation of Interconnect Arbitrage, bypass and traffic refiling



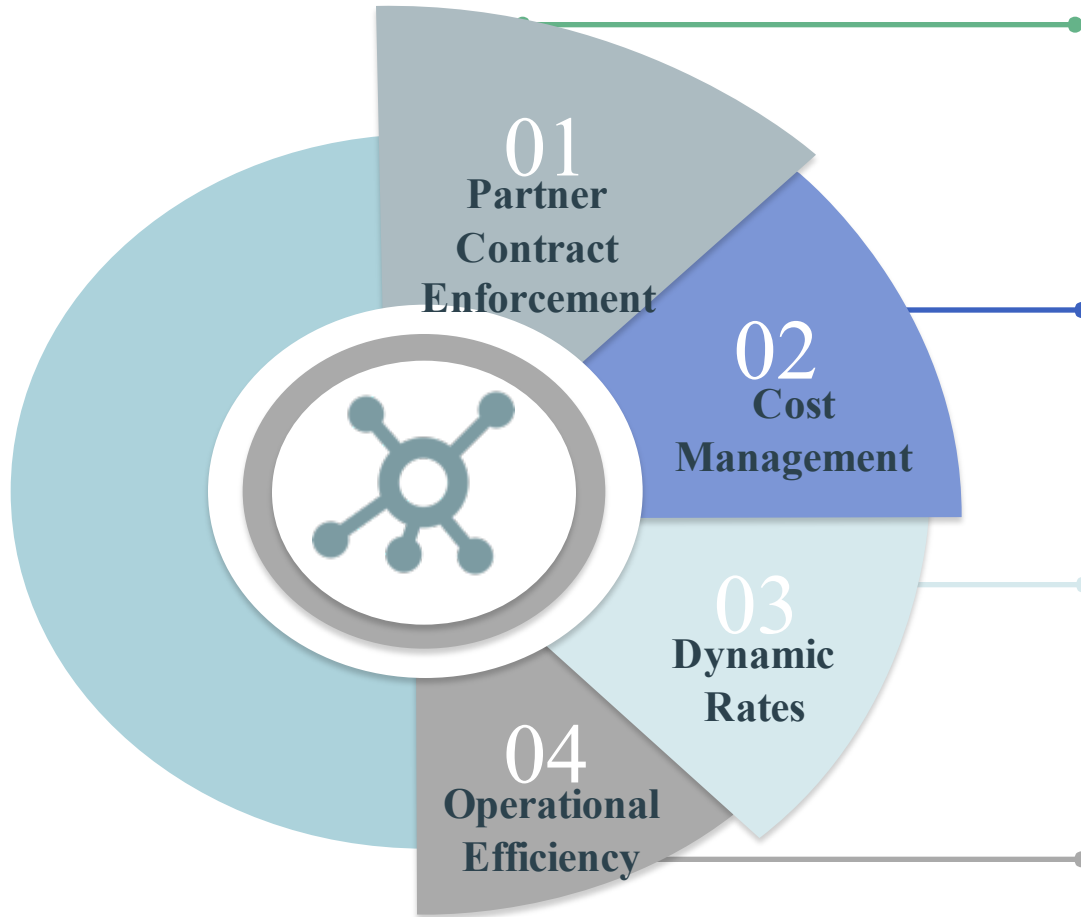
QUICK SETTLEMENT

Increased pressure to reduced the settlement cycle to realise value early



Impact Of New Trends: Interconnect Revenue Management

Re-Imagine critical existing functions

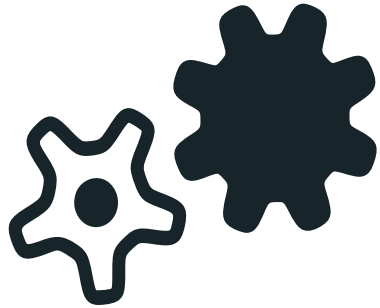


A Continuous strain on the topline
Increasing pressures on costs
Overall reduced Margins

- Automated Rate trend analysis and profitability estimation
 - Monitoring Volume commitment and Profitability.
 - Margin analysis
- Identify anomalies in invoices and providing evidence
 - Rating inaccuracies and misclassification of traffic
 - Automated processes for dispute identification and settlement
- Dynamic partner rates
 - High volume of partner data makes Cost/Revenue analysis
 - Reduce Delays and errors in manual configuration of rates.
- Integrated approach to overcome complex and silo processes/systems.
 - Routing decisions without data driven intelligence



Challenges in Coping to New Trends



INTERCONNECT AND PARTNER TEAMS HAVE LIMITED RESOURCES

Reliance on other internal teams or vendor systems to provide oversight

3rd party teams have different responsibilities and targets



REVENUE IMPACTS THROUGH ABUSE AND MISCONFIGURATION

Revenue loss from incorrect charging, pricing and billing

Impacts of abuse and misuse of services

Targeted arbitrage impacts from CLI-refiling, Bypass, etc.

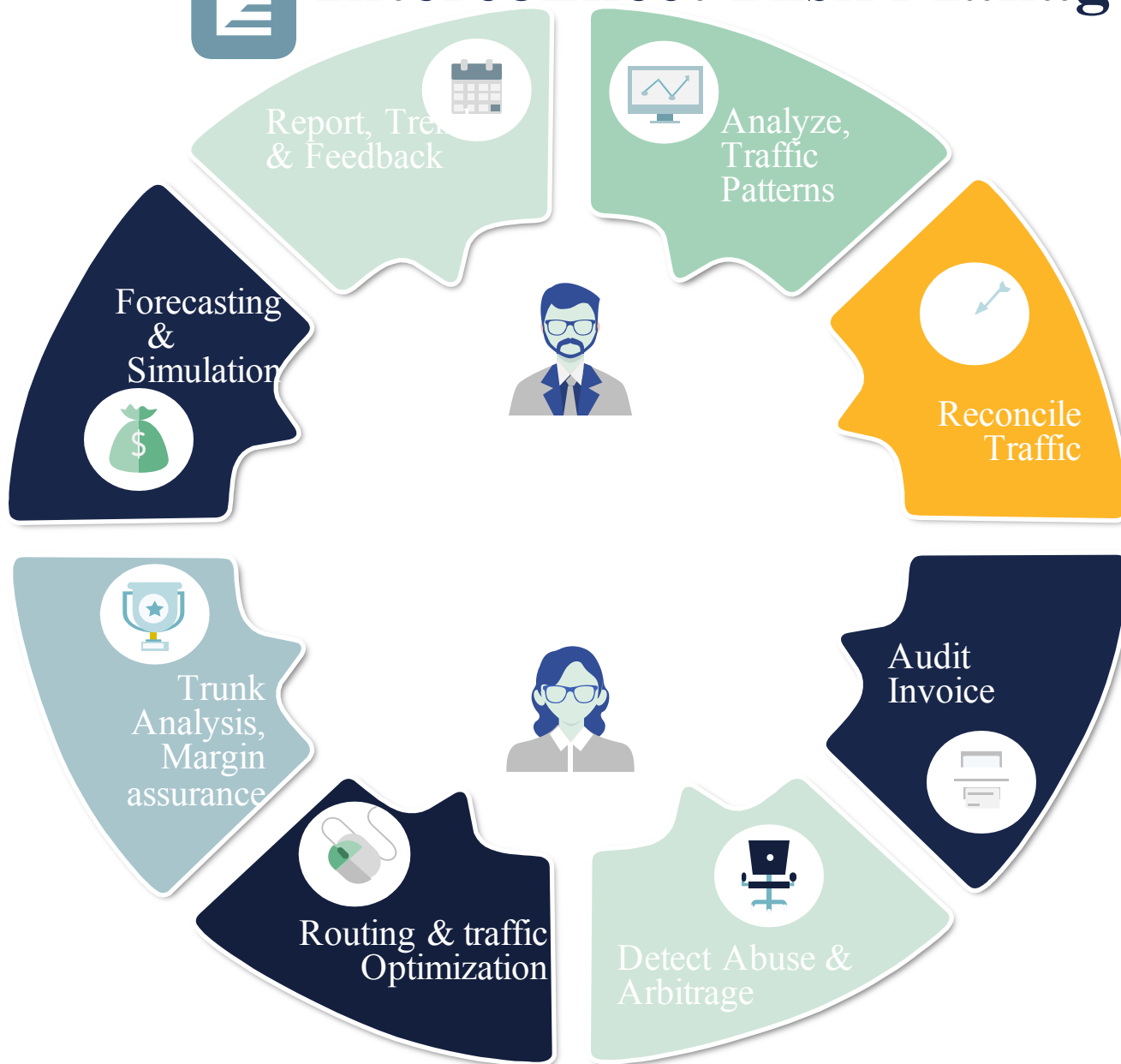


DATA AVAILABILITY & ANALYSIS CHALLENGES

Information from generic data warehouses. Manipulated mediated and edited (delayed loading)

No Real time analytics and predictive capabilities to adapt to changing business environment

Interconnect Risk Manager (IRM) – Value Deliverables



Analyses records from across the CSP in order to detect revenue leakage or margin issues, as well as detect and manage deliberate acts of arbitrage or threats to revenue

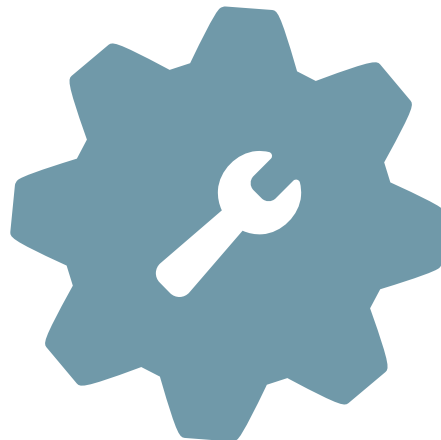
Advanced Analytics driven technology enables quick reconciliation - multi dimensional reporting & Invoices, forecast and simulation to understand traffic trends.

Automated actions, margin assessment, forecasting and simulations help take better informed decisions

Delivers value to all stakeholders, network operations team, wholesale and settlement team with a microscopic view of route and traffic data and highlighting any invoicing discrepancies.



IRM – Capability And Functions



ANOMALY
DETECTION

ABUSE AND
ARBITRAGE

ROUTING AND RESOURCE
OPTIMIZATION

ANALYSIS AND
REPORTING

AUDIT

TIME AND DURATION

BYPASS

CoS BASED ROUTING

CONFIGURABLE KPIs

INVOICE VERIFICATION

EXTRA RECORDS

SIM BOXES

ROUTING DEFECTS

NEW OPPORTUNITIES

RECONCILIATION AND
SETTLEMENT

RATING ANOMALY

CLI REFILING

KPIs - TRUNK
UTILIZATION

SIMULATION AND
FORECASTING

VERIFICATION TO CDR
LEVEL

ABNORMAL TRAFFIC

PERFORMANCE METRICS

RETAIL PROFITABILITY

QUALITY ANOMALY

CUSTOMIZABLE
DASHBOARD



Examples

Domestic and International Long Distance Usage Summary

Terminating Countries and Providers

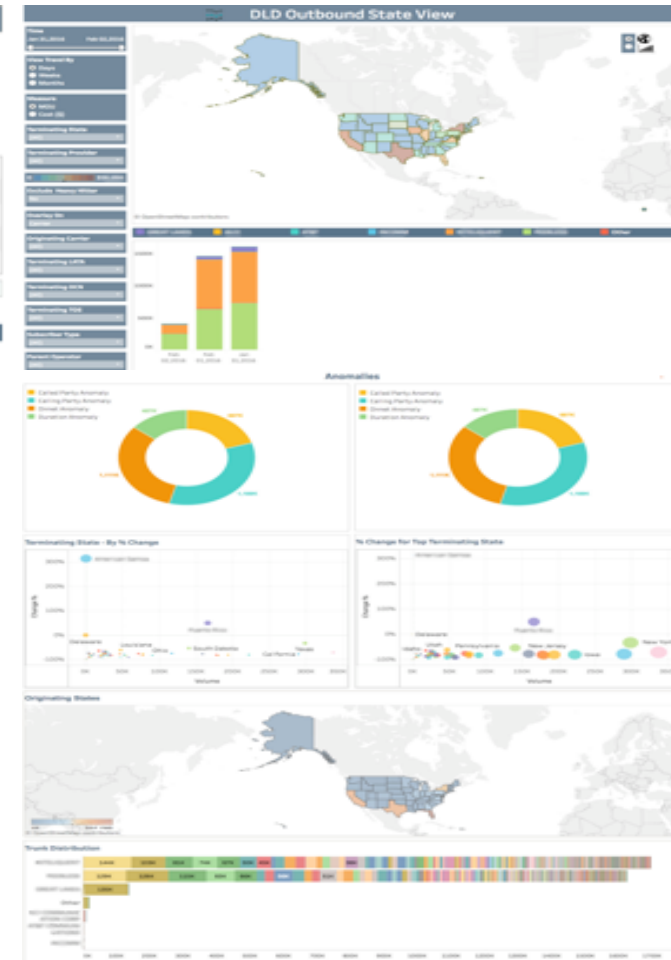
Retail Charges vs Carrier Cost

Mismatched records by billing type

Anomaly Count and Distribution

Spurious number report

Margin Analysis





Margin Analysis



Executive Dashboard

Year Till Date



NET MARGIN

\$90 M

12% ↓ from target of \$102 K

REVENUE

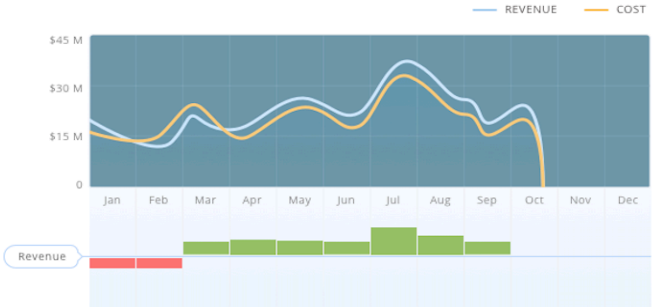
\$5.43 M

1% ↓ from target of \$5.32 K

COST

\$5.43 M

3% ↑ from target of \$5.32 K



NOTIFICATIONS (125) [View All](#)

DIAL CODE

001-205

MARGIN

\$25 K (14%)

065-334

\$22 K (3%)

044-764

\$18 K (6%)

015-464

\$18 K (1%)

065-112

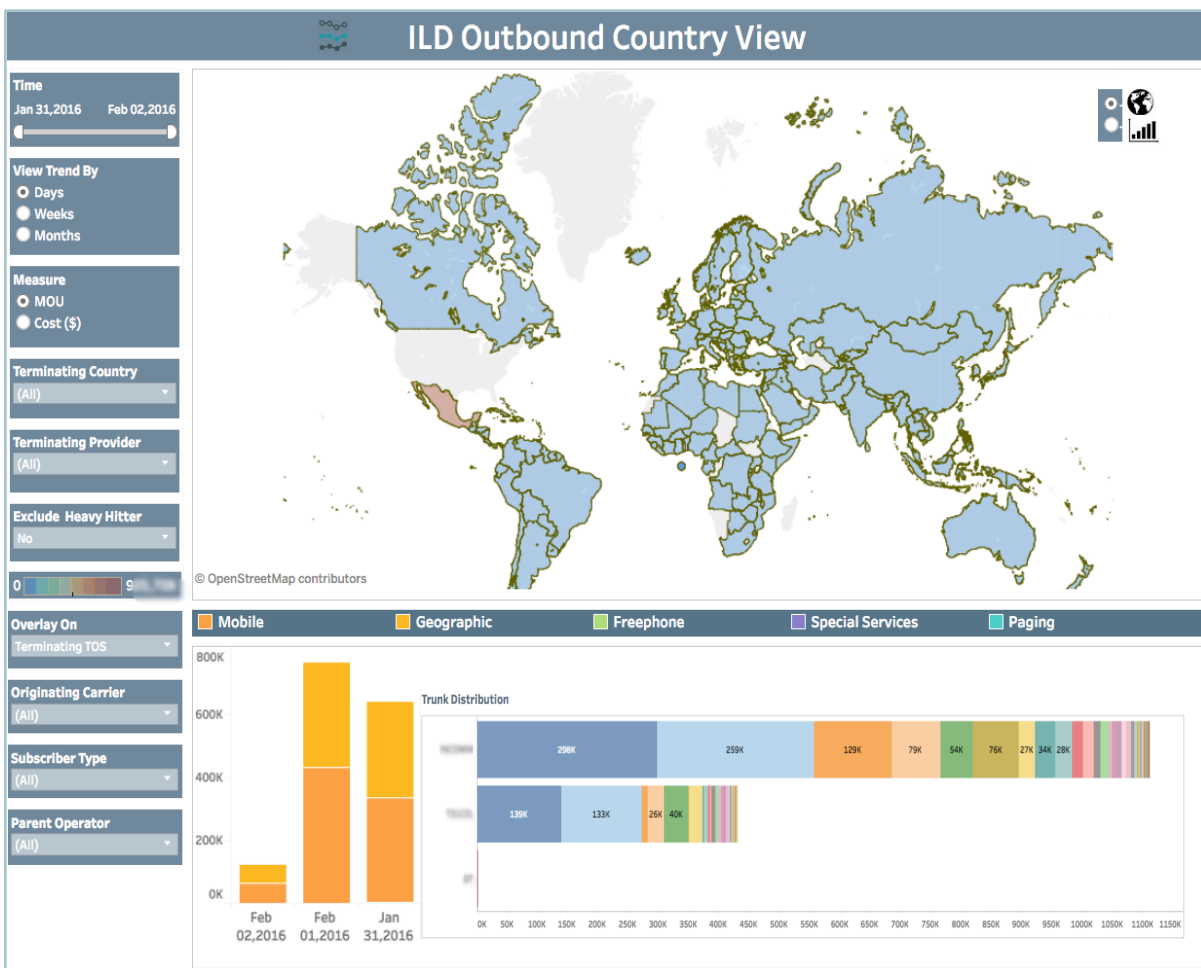
\$17 K (12%)

CUSTOMERS (25)

CUSTOMER	REVENUE ↕	COST ↕	MARGIN ↕	MOU	MO	MT
West	\$21 M	\$32 M	\$25 K (14%)	89,034		
Tracfone	\$21 M	\$32 M	\$35 K (14%)	89,034		
BTS	\$21 M	\$32 M	\$25 K (14%)	89,034		
GCI	\$21 M	\$32 M	\$25 K (14%)	89,034		
Talktel	\$21 M	\$32 M	\$25 K (14%)	89,034		
West	\$21 M	\$32 M	\$25 K (14%)	89,034		
Telcel	\$21 M	\$32 M	\$25 K (14%)	89,034		
ETECSA	\$21 M	\$32 M	\$25 K (14%)	89,034		



Multi-level Drill-Down



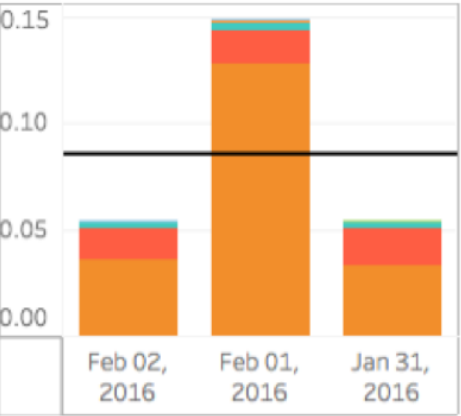
International Long Distance Drill-Down



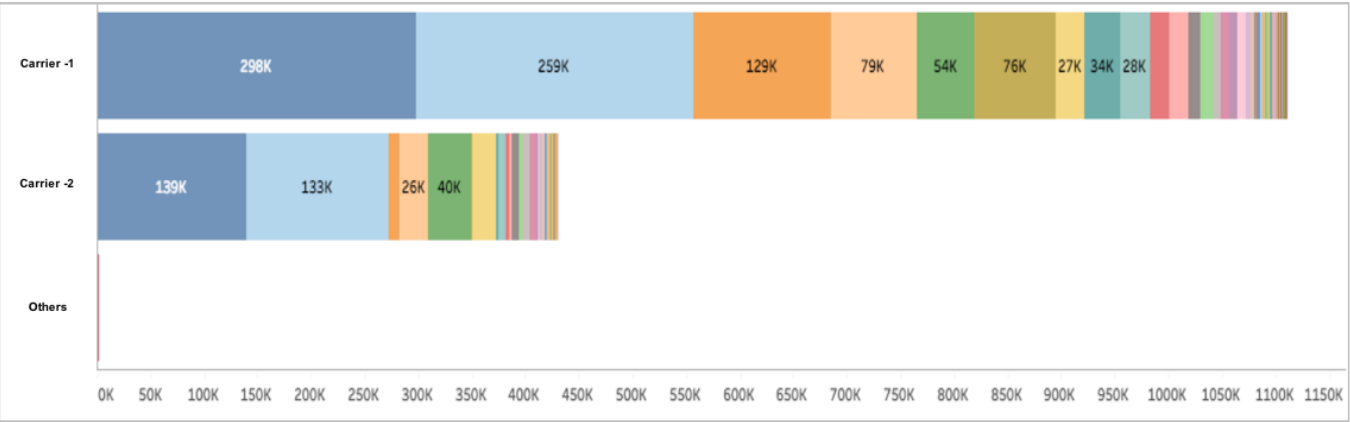
Carrier Overview

	ACPM	MOU	COST
Carrier -1	<div><div></div>\$0.0163</div>	<div><div></div>1,074,130</div>	<div><div></div>\$17,490</div>
Carrier -2	<div><div></div>\$0.0034</div>	<div><div></div>399,548</div>	<div><div></div>\$1,358</div>
Carrier -3	<div><div></div>\$0.0685</div>	188	\$13
Carrier -4	\$0.0005	1,287	\$1
Carrier -5		0	\$0
Carrier -6		0	\$0
Total	\$0.0128	1,475,153	\$18,862

ACPM – Day wise



Trunk Distribution





CASE STUDY



Case Study



OPERATOR CHALLENGES

Pressure to reduce wholesale costs
Audit and Reconciliation crippled by Manual Processes
Revenue leakages due to anomalies and frauds
Lack of relevant and timely insights for future planning

KEY RESULT AREAS

Analytics and Reporting supported by Big Data and Machine Learning
Invoice , Audit, Verification and Reconciliation
Anomaly and Fraud detection
Traffic forecasting, Retail Profitability and Recommendation

VALUE ADDED

Detected and proactively curbed revenue leakages
Streamlined the Wholesale Interconnect RA process
Automated the Reconciliation
Maximised Margin
Complete View of the business
Identified New Opportunities

7000+ Trunk
Traffic
Processed

1TB+ Data
Processed /
Day

25+ Partner
Reconciliation



MOBILEUM
THANK YOU