ASECAP DAYS
ISTANBUL 2023

Celebrating 50 YEARS
OF Successful TOLL ROAD PROJECTS

IMPROVING TOLLING PERFORMANCE WITH ANALYTICS

Jorge Lopes

BRISA

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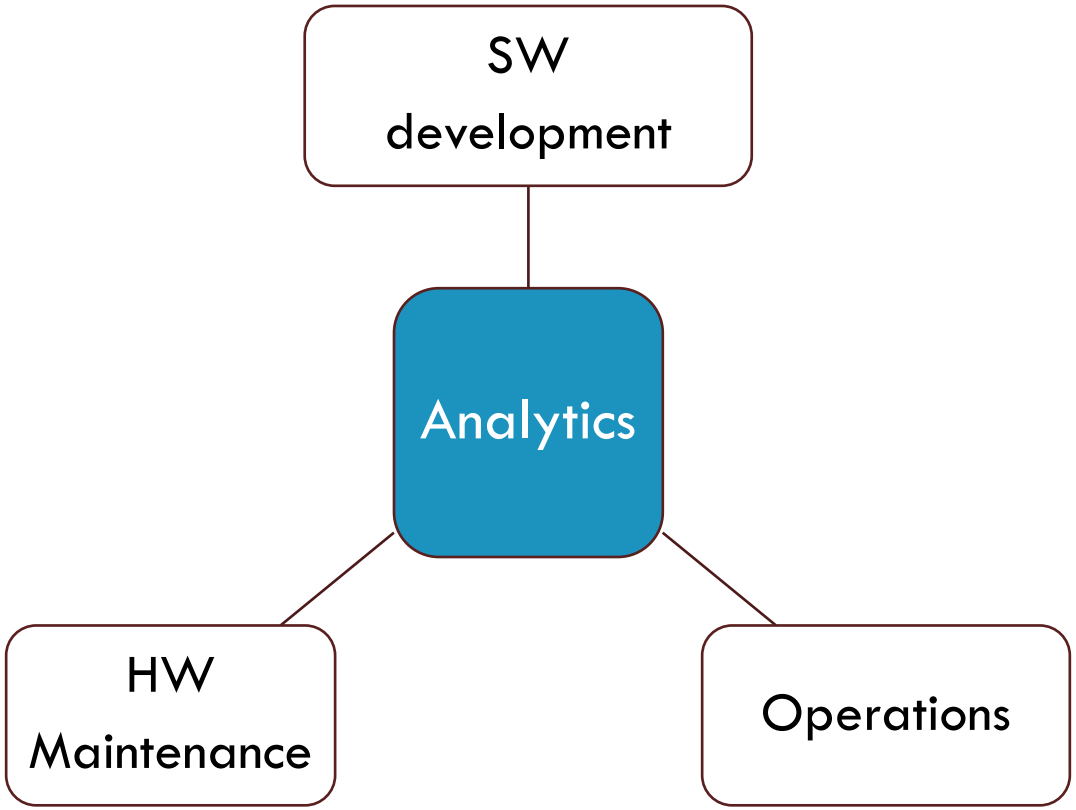
ICA
YAVUZ SULTAN SELIM BRIDGE AND NORTHERN RING MOTORWAY

Setting the goal

Increasing the performance and efficiency of toll collection, while improving the quality of customer service



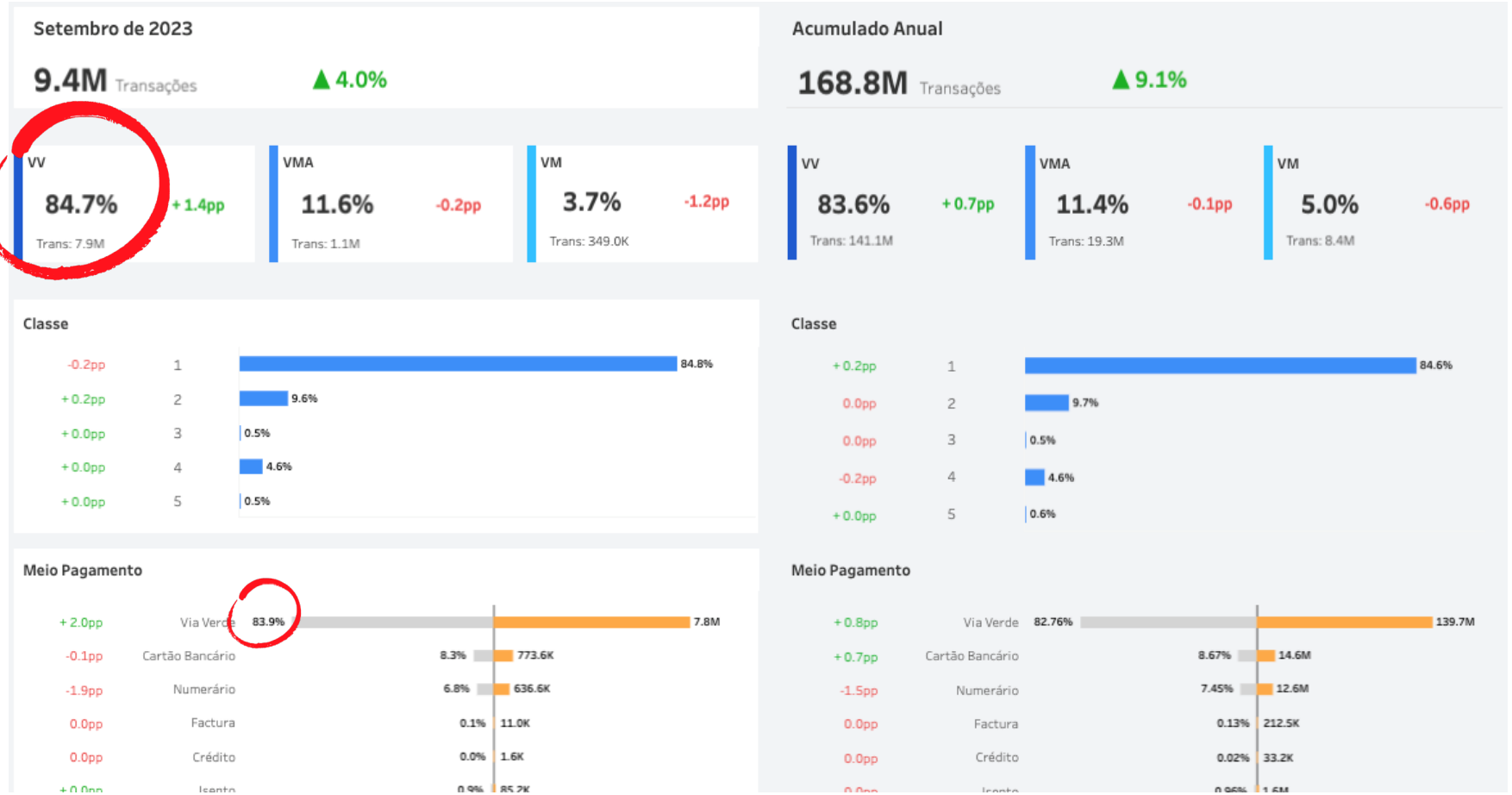
Key performance indicators

ETC	AUTOMATIC	MANUAL
DSCR performance	Automation level	Throughput
LPR performance	Availability	Resources
Availability	Throughput	
	Resources	

Effective charging | Efficient operations | Quality of service

Tolling profile

Toll transactions by September 14, 2023 in comparison with September 2022



84.7% ETC transactions

Key performance indicators

ETC

DSCR performance

LPR performance

Availability

AUTOMATIC

Automation level

Availability

Throughput

Resources

MANUAL

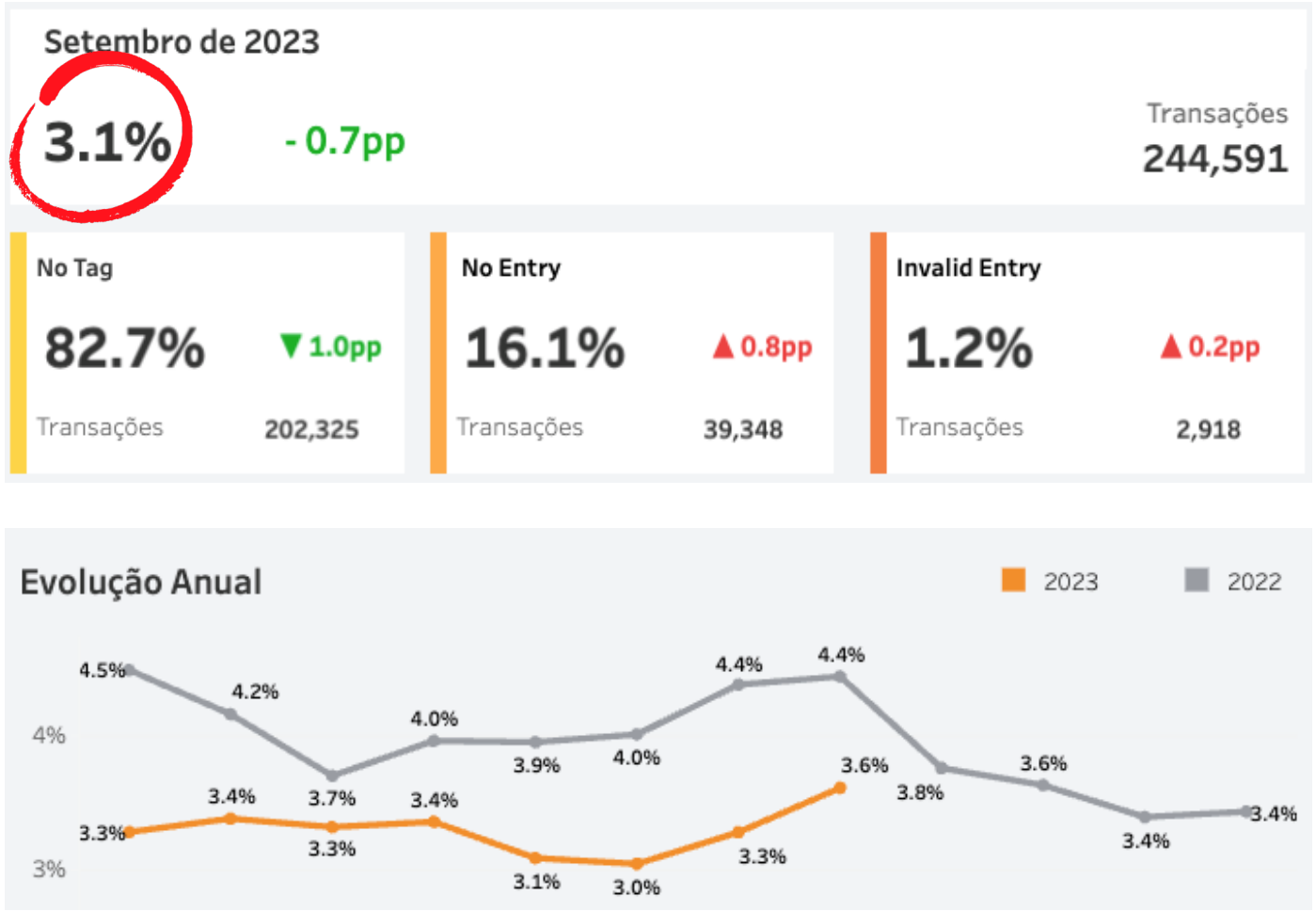
Throughput

Resources

Effective charging | Efficient operations | Quality of service

DSCR performance

Incomplete ETC transactions (free-flow schema)



3.1% of ETC transactions are incomplete

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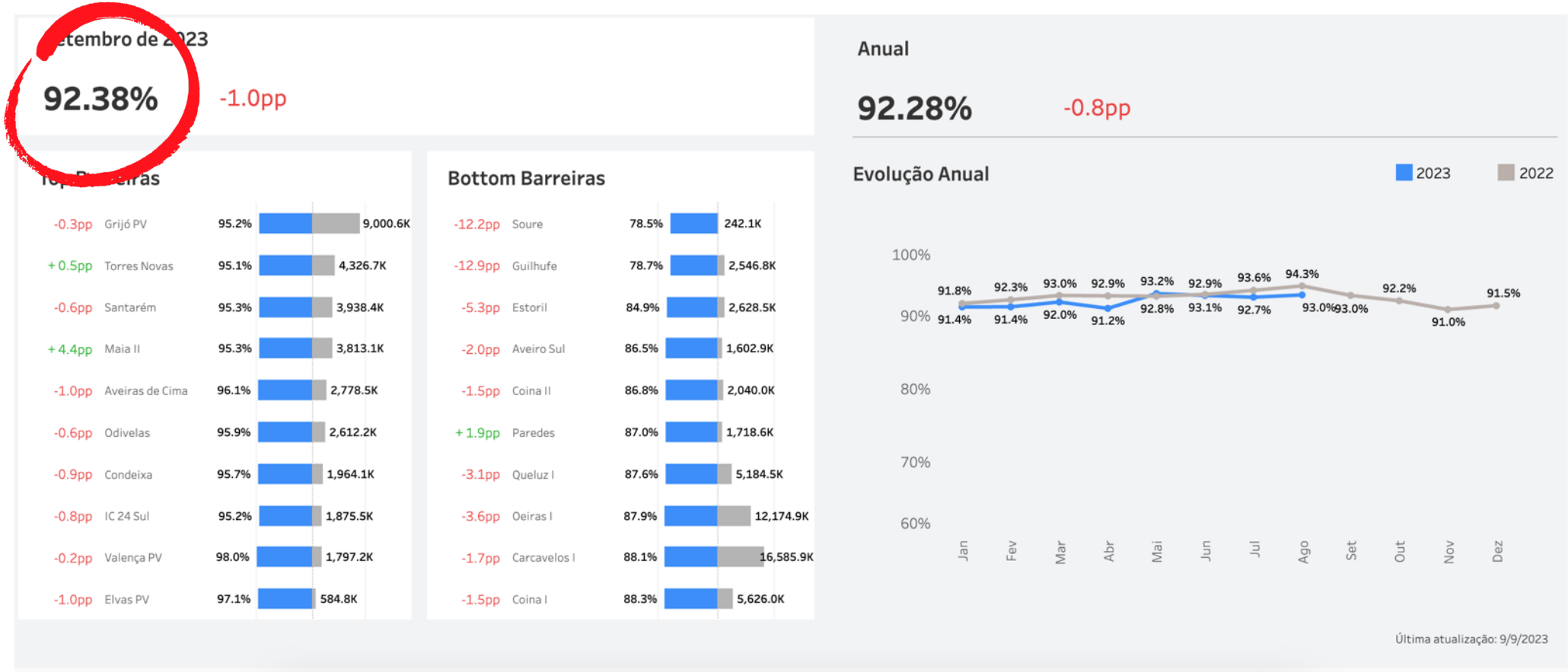
LPR performance

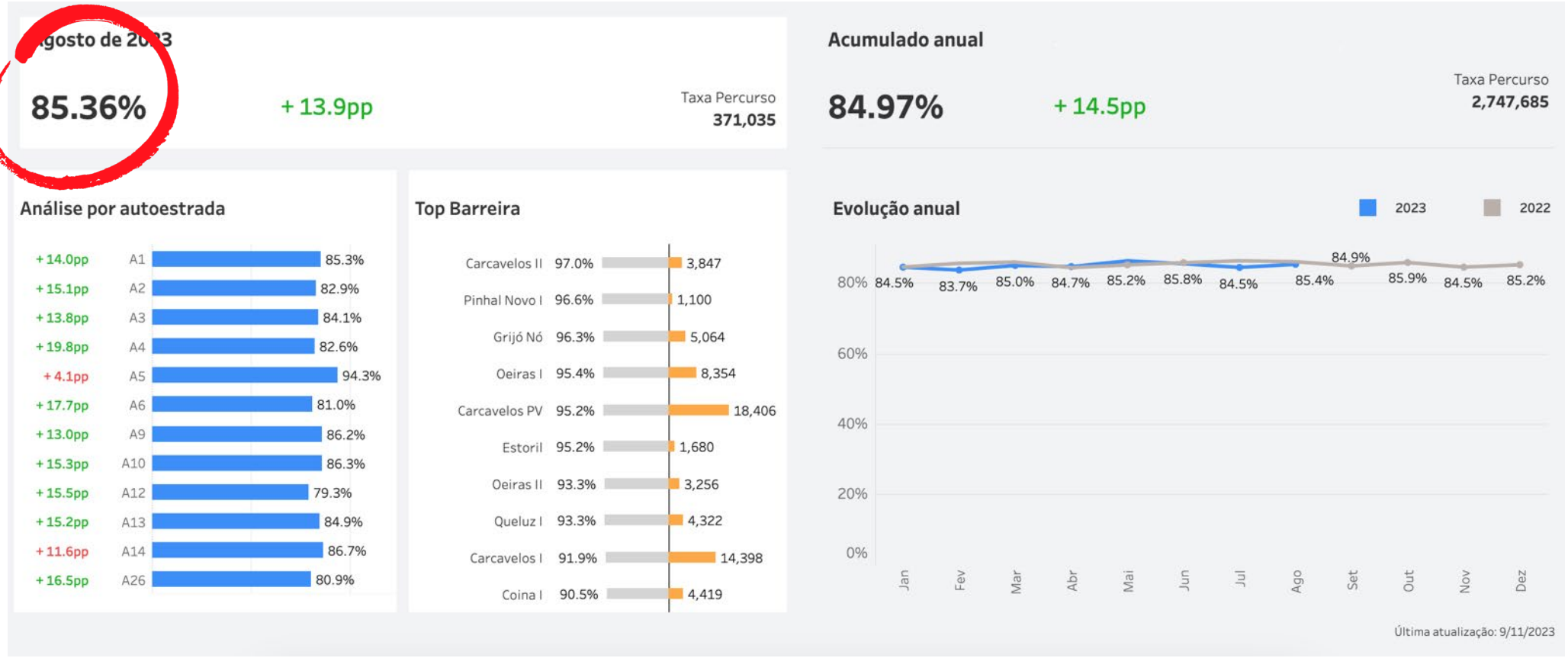
Enforcement LPR (for incomplete transactions)



92.4% of ETC incomplete transactions with automatic LPR

ETC performance

Recovery rate (for incomplete transactions)



85.4% of ETC incomplete transactions are completed with the route

Effective charging

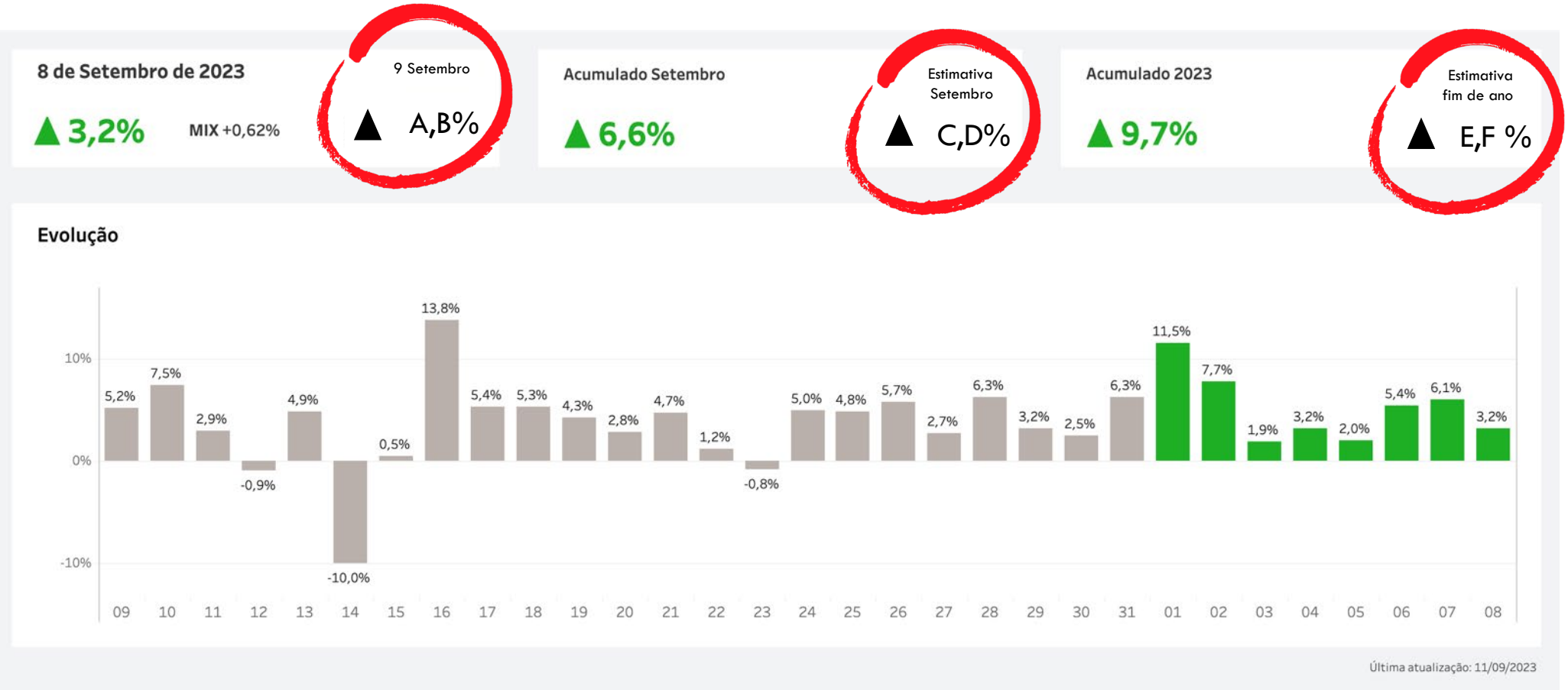
Rate of revenue loss

Less than 0.4% of revenue loss in ETC

Future works

Advanced analytics

Demand forecasting

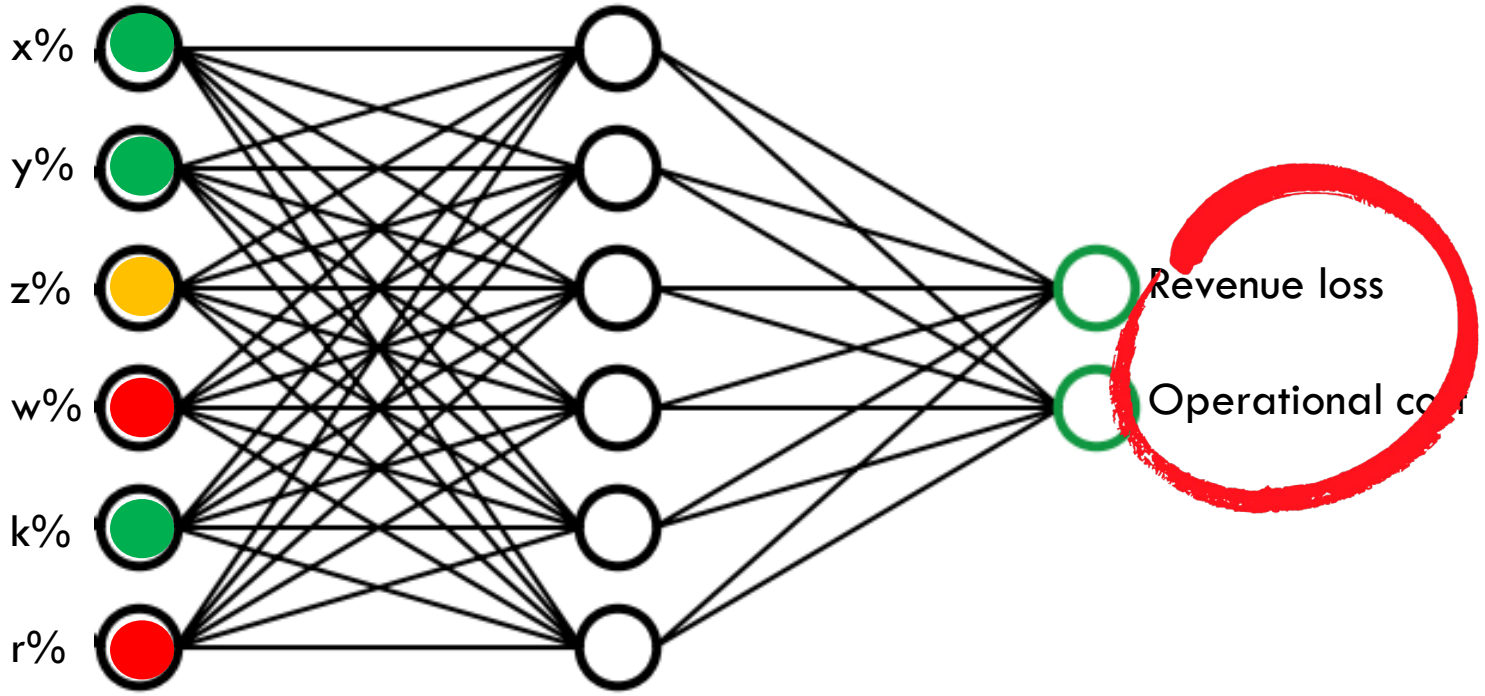


What will happen?

Advanced analytics

Prescriptive analytics

1. DSRC performance (exit lanes)
2. DSCR performance (entry lanes)
3. LPR performance (exit lanes)
4. LPR performance (entry lanes)
5. Recovery rate
6. …



What happened? ➔ What will happen? ➔ What to do to avoid it?

Conclusions

Recursive analytics can drive the innovation in tolling.

Advanced analytics can go further, anticipating and changing the future.

THANK YOU

Improving tolling performance with analytics

Jorge Lopes

Brisa

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