Classification: Internal

vivo

What if we could stop fraud before it became a loss?

The journey from batch detection to real-time prevention

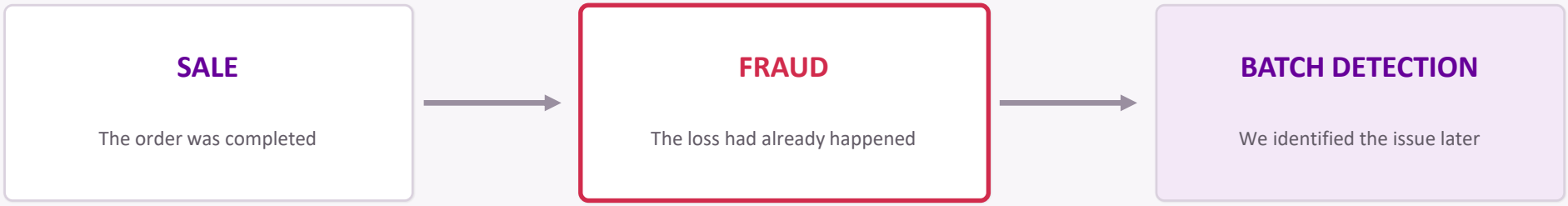


October 2026

THE PROBLEM

We were looking at fraud in the rear-view mirror

The process was designed to detect, not to prevent.



The central issue: the decision came after the damage.

Classification: Internal

THE TURNING POINT

The fraud decision had to move into the sale

Not another report. A decision inside the customer journey.

BEFORE

Sell → wait → detect

Fraud analysis happened outside the moment of decision.

SHIFT



NOW

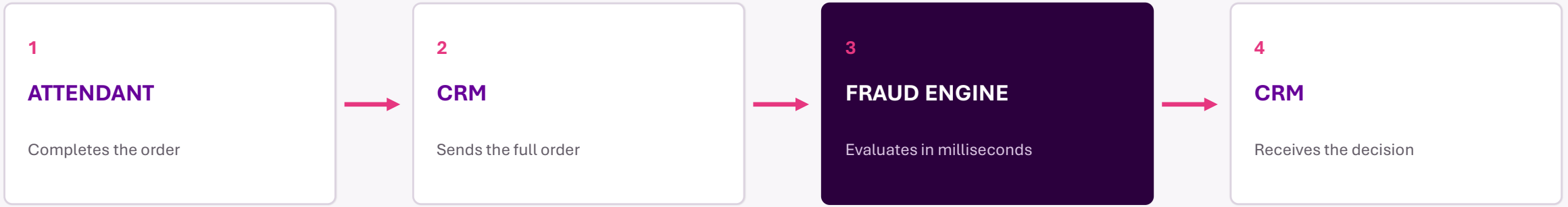
Analyze → decide → sell

Fraud prevention became part of the transaction itself.

HOW IT WORKS

A synchronous decision in the B2C sales flow

The CRM asks. The fraud engine evaluates. The journey continues with a clear response.



Customer • product • address • amount • biometrics • device ID • other security signals

DECISION INTELLIGENCE

Three types of rules, one decision

The engine combines certainty, known risk and suspicious behavior.

PERMISSIVE RULES

Signals that increase confidence

Example: biometric validation

BADLIST RULES

Data already associated with risk

Examples: email, phone, address

BEHAVIOR RULES

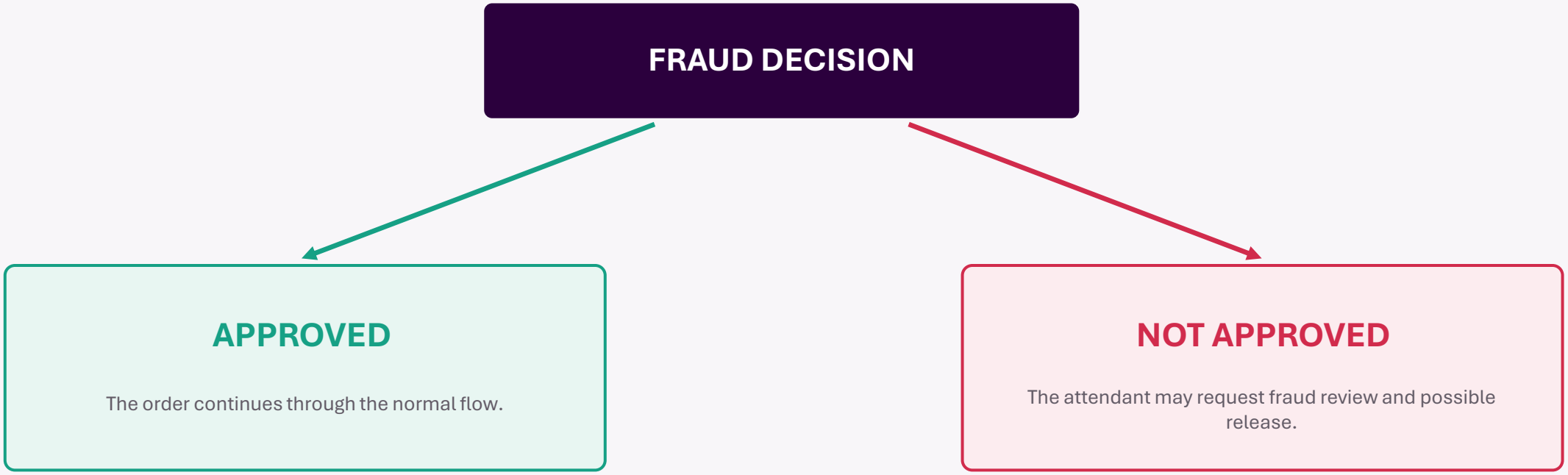
Patterns that deserve attention

Examples: repeated orders by document or address

THE DECISION

Every order leaves with a clear path

Automation where possible, human review where necessary.



Classification: Internal

MEASURABLE IMPACT

From concept to measurable impact

The online model proved that prevention can operate effectively at scale.

FRAUD REDUCTION IN FIXED BROADBAND

79% **fewer fraud cases**

Before: US$ 1,84M/month → After: US$ 0,38M/month

ONLINE SCALE

1.1M **transactions analyzed per month**

Real-time protection embedded in the sales flow

DECISION INTELLIGENCE

53 **active online rules**

Permissive, badlist and behavior-based controls

DECISION SPEED

< 466 ms **average response time**

Online analysis without disrupting the journey

Earlier decisions • Broader coverage • Proven effectiveness

Classification: Internal

THE TRANSFORMATION

We changed the moment of action

From reacting to losses to protecting the transaction as it happens.

	BATCH MODEL		ONLINE MODEL
WHEN	After the sale	→	**During the sale**
POSTURE	Reactive detection	→	**Preventive decision**
CONTEXT	Limited and delayed	→	**Full order and security signals**
OUTCOME	Fraud already materialized	→	**Approve, stop or review before completion**

The best fraud case is the one that never becomes a loss.

Thank you



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Real-time Fraud Prevention Telefonica Vivo Brazil

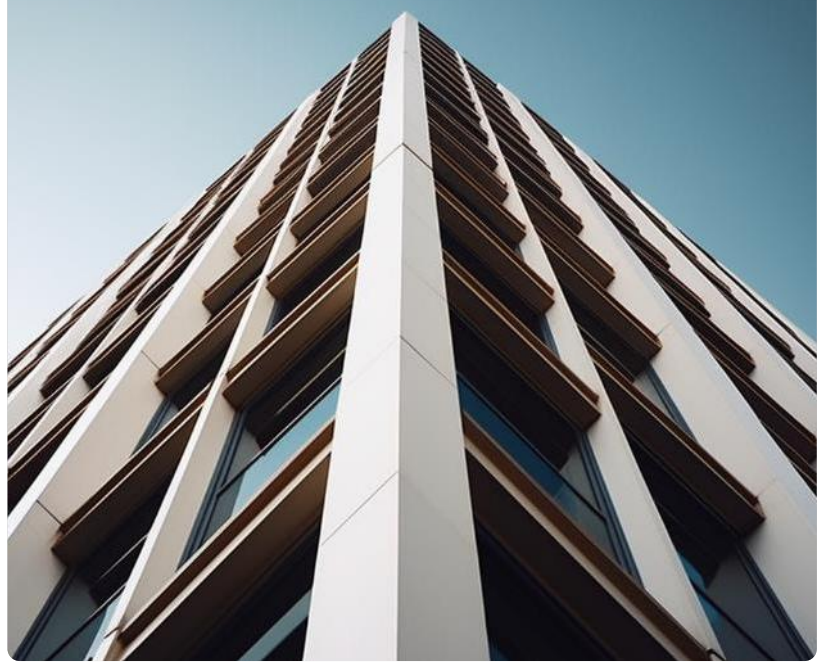
Paolo Maero



Revenue Intelligence User Forum - 2026

Realtime Fraud Prevention
Telefonica Vivo Brazil

Agenda



1. Real-time Everywhere (Shift to Prevention)
2. Analyze Complex Transactions
3. Do it with Performance
4. Integrate ML/AI Real-time Capabilities

Real-time Everywhere (Shift to Prevention)

01

Adapting to real-time world

- Detecting / preventing fraud as soon as possible

01

- **Quick reactions**
- Fraud prevention means reacting as quickly as possible to fraud threats to prevent loss

02

- **Block fraudulent activations / sales**
- Analyzing transactions in real-time means stopping the fraud even before it becomes a loss

03

- **Up-to-date data**
- Real-time transactions analysis needs up-to-date customer data

Opportunity **React fast, detect sooner, prevent most of the frauds**

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Classification: Internal

- Moving to real-time processing and up-to-date customer data requires investment and time

The solution: HCLTech FRM-RRS

The challenge

Moving to real-time processing and up-to-date customer data requires investment and time

Return of Investment

If fraud is immediately prevented the loss is reduced and the RoI is increased

Proven technology

The real-time capabilities of HCLTech FRM-RRS are proven and tested

Real-time analytic queries

HCLTech FRM-RRS can execute rules with real-time analytics queries on customer and past transactions data

Real-time behavior detection

HCLTech is enhancing real-time capabilities: e.g. real-time behavior change detection

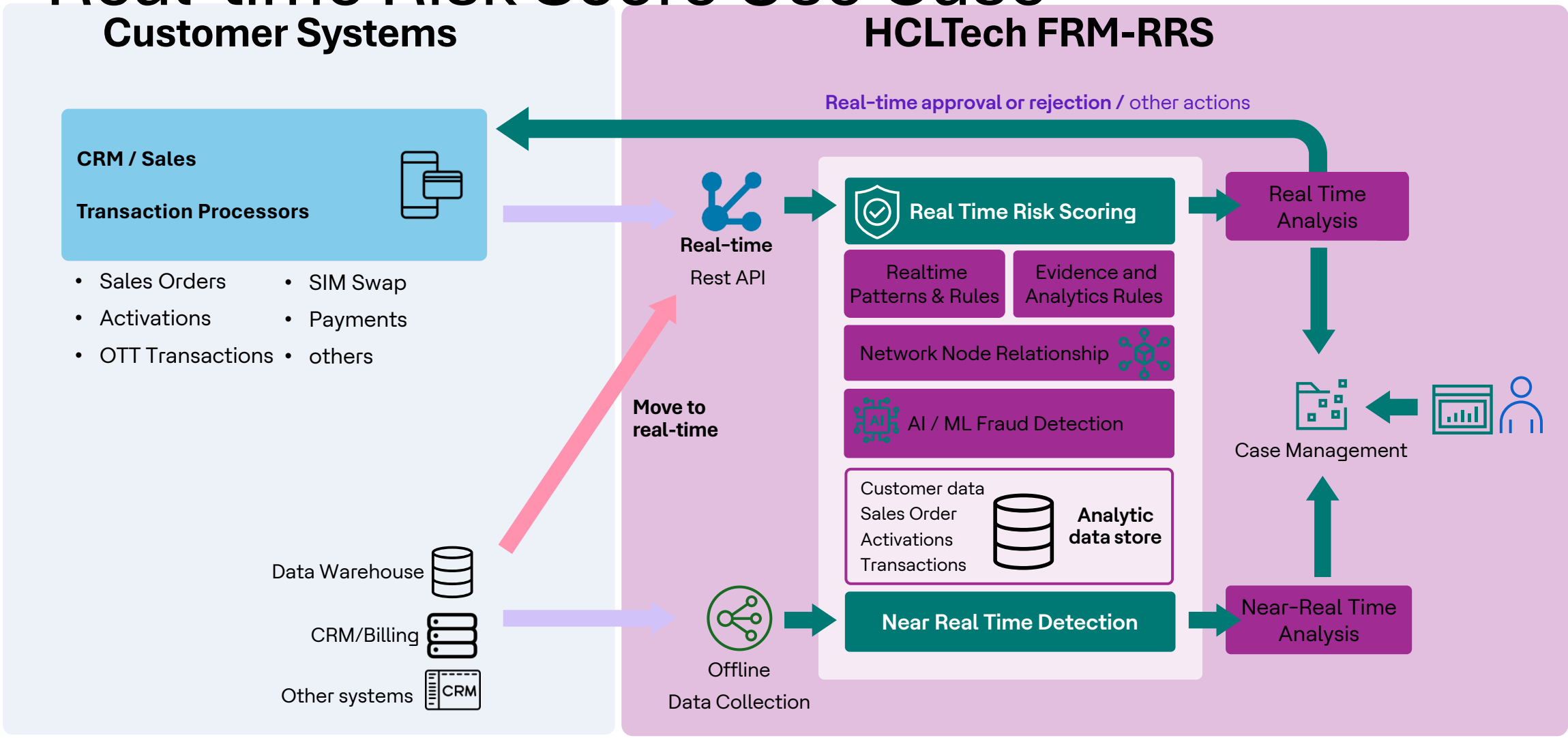
Integrated with FRM

All the capabilities, rules and data of the FRM product are accessible from the real-time pipeline

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Classification: Internal

Real-time Risk Score Use Case



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Analyze Complex Transactions

02

- Analyze Complex Transactions

Real-time Transactions

- Sales transactions are complex
  - Analyzing sale orders:
    - Sale orders includes more products/services
    - The API send each one separately to RRS
    - Then consolidate the returns in a single response
  - RRS can verify various rules:
    - Get "permissive" data, customer passed biometry check
    - Use analytic queries to verify behavior patterns in
      - Past transactions, including other customers tx
      - Customer data in all the customer base
  - A customizable "wrapper" API is available with additional logic to adapt to the customer workflow

Server response:

OK

Elapsed: 210

Overall Elapsed: 214

Score: -1200

Rules no.: 1

- **SFP RT Accept**

Server error message:

KO

Elapsed: 161

Overall Elapsed: 165

Score: 2400

Rules no.: 2

- **SFP RT Reject**
- **Rej_MultipleActivationRequest**

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- Analyze Complex Transactions

- Considering all the customer base data



  - Analytic queries on the full customer base data and transactions

Analytic queries, real-time



  - FRM-RRS can use any field in a transaction to search the customer base and the full transactions database for specific indicators, like



  - A customizable "wrapper" API is available with additional logic to adapt to the customer workflow

Real-time Analytics Queries

Count how many addresses with same personal ID

Number of existing services in same location when selling a new one

Too many open orders in short time with same payment

Verify if a dealer is finalizing too many orders for the same locations

Same email used by more than NN accounts with different IDs

Same biometry hash used in too many transactions

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Do it with Performance

•03

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Real-world Performance Analysis

- Use Case
  - - Peaks of 20 “Sale Order” transactions per seconds
  - - Up to 50K “Sale Orders” per day
  - - Average of 4 products/services per order
  - - 25 analytic queries per order
  - - Average response time < 500 mSec
  - - Analytic queries / badlist check ru parallel
  - - Scalability provided by Analytic DE

```
[2026-10-13 03:28:52.644] Elapsed=00458 crmOrder
[2026-10-13 03:28:56.975] Elapsed=00414 crmOrder
[2026-10-13 03:29:05.299] Elapsed=00426 crmOrder
[2026-10-13 03:29:43.875] Elapsed=00441 crmOrder
[2026-10-13 03:30:50.953] Elapsed=00452 crmOrder
[2026-10-13 03:31:16.306] Elapsed=00517 crmOrder
[2026-10-13 03:31:28.403] Elapsed=00459 crmOrder
[2026-10-13 03:31:46.951] Elapsed=00450 crmOrder
[2026-10-13 03:31:49.118] Elapsed=00479 crmOrder
[2026-10-13 03:31:52.702] Elapsed=00430 crmOrder
[2026-10-13 03:32:55.482] Elapsed=00477 crmOrder
```

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- The Future
  - - Current performance based on Vertica DB
  - - HCLTech commitment on real-time evolution
  - - In-memory DBs to scale up
  - - Real-time behaviour change analysis

Future Improvements

```
[2026-10-13 03:28:52.644] Elapsed=00458 crmOrder
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ML/AI Realtime Capabilities

•04

- FinTech

- The roadmap

Analyze data with ML/AI

- Generate customer score based on customer data and past transactions using ML/AI – Use it in real-time analysis
- Use ML/AI to identify new analytics patterns and lists and use it to configure new detection rules
- Detect outliers and off-the-trend transactions in realtime preventing fraud losses

Process internal and external data through ML/AI models to provide a set of bad-behavior indicators



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Thanks!



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