



52nd ASECAP DAYS

Challenges of Future
Mobility | The Role of Road
Infrastructure

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MCR Virtual Agent

AI- Powered solution for Toll Payment assistance

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autostrade
per l'Italia



Christian Guarini

IT Business Partner

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THE LARGEST TOLL OPERATOR IN EUROPE



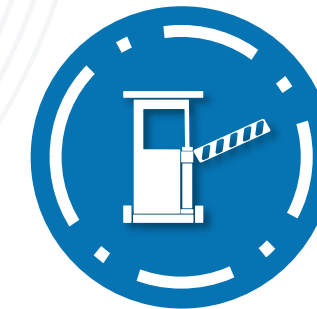
~ 3.000 km highway
15/20 regions crossed



~ 2,7 mln
daily transits



9 Regional Headquarters
2 Central Headquarters
15 Toll Road managed



257 toll stations
2.152 toll lanes
over 70% fully automated

MCR CENTRAL SYSTEM

WHEN

MCR operates 24/7

WHO

MCR back-office operators

WHY

Facilitate seamless toll payment by identifying and solving potential issues

WHAT

System that manages issues users may encounter during toll payment

WHERE

Currently, there are approximately 100 MCR active workstations across ASPI network

HOW

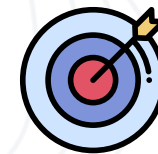
Once an anomaly is detected, the MCR algorithm assigns it to an available workstation and manages real-time communication between the user and a back-office operator



WHY A VIRTUAL AGENT IS ESSENTIAL

How many anomalies are handled by MCR operators?

~ 200.000 anomalies / day



BUSINESS OBJECTIVES

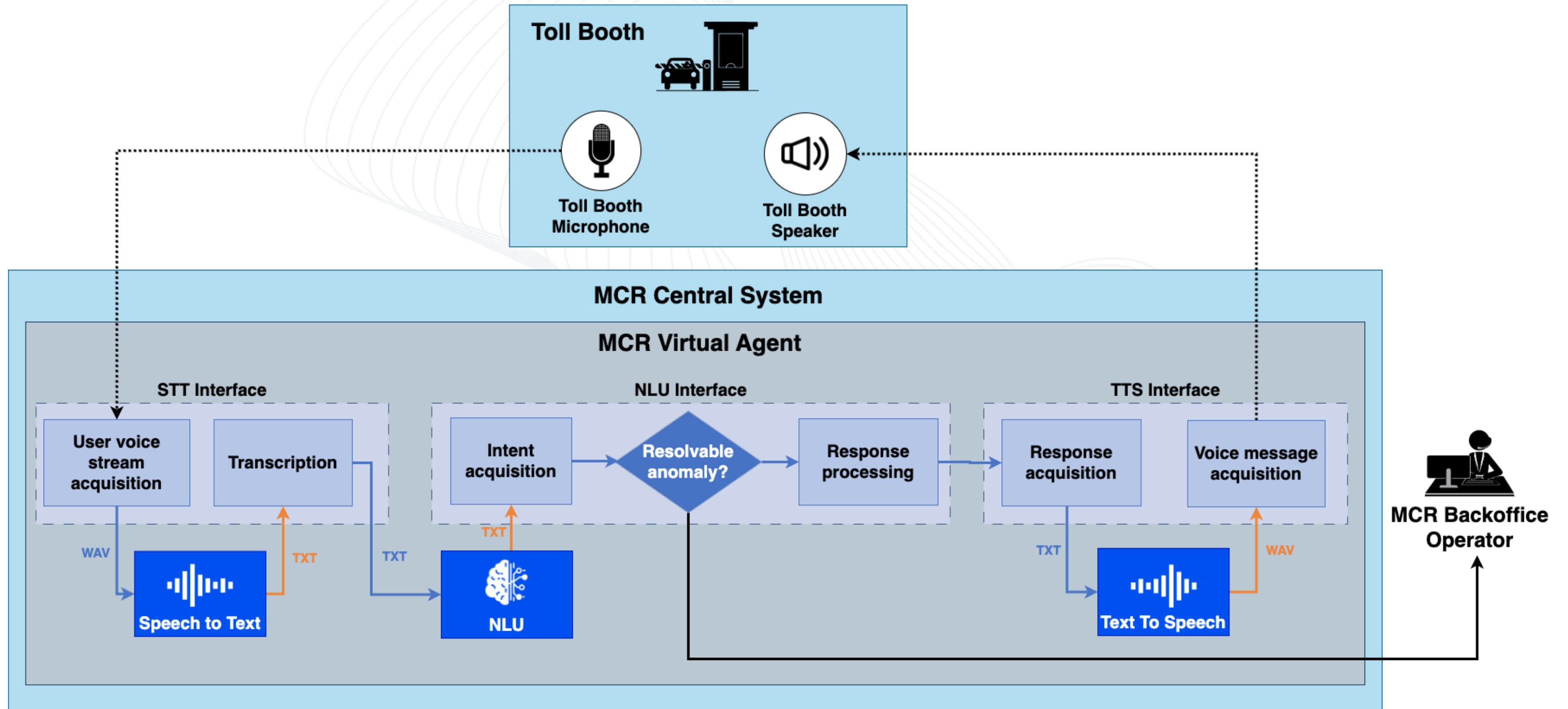
- ✓ Provide **support to back-office operators** during high-traffic days
- ✓ **Digitalize customer channels** and **replace manual procedures**
- ✓ **Reduce** the number of human **workstations** currently active



SOLUTION: VIRTUAL AGENT

- ❖ Provides first-level support by autonomously handling anomalies
- ❖ Escalates to a human operator when necessary

PROCESS DIAGRAM



MAIN CHALLENGES



MAIN CHALLENGES



Reducing highway background noise to accurately interpret user requests



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Understanding the variety of regional accents and dialects across Italy is crucial to improving the quality of assistance provided by the Virtual Agent



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Reducing highway background noise to accurately interpret user requests



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Provide a service that is **efficient in response time**, avoiding long waits for users who may already be frustrated by other circumstances

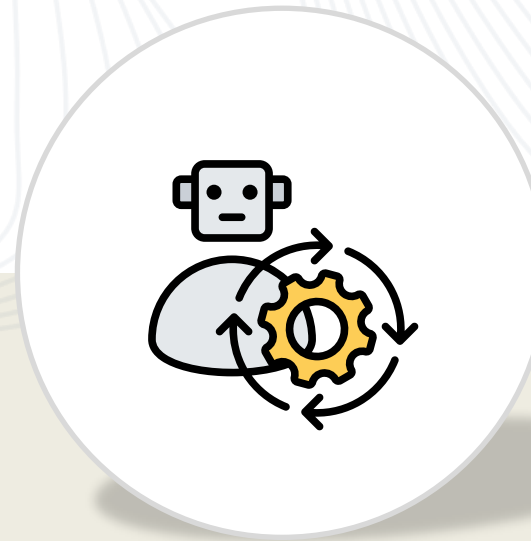
KEY BENEFITS

**Equal, standardized
assistance for all users
across the network**



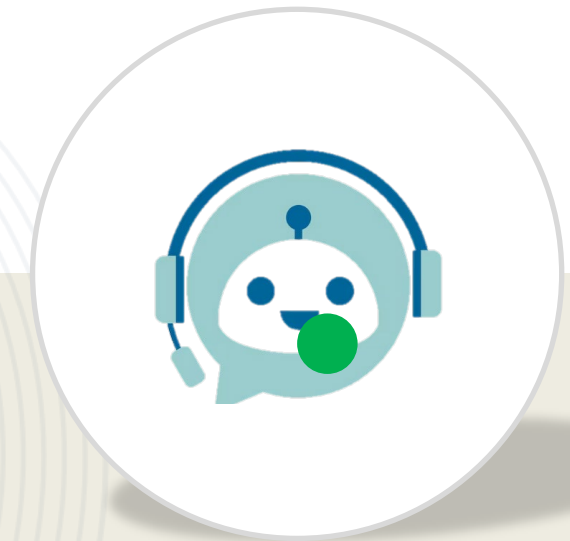
**Same high-quality support,
from North to South Italy**

**Detection and
resolution of most
recurrent anomalies**



**Less manual effort,
12 FTEs/year saved**

**Always available (24/7)
never tired
doesn't require break**



**Instant help
no queues, no delays**

KEY OUTCOMES



- ❖ Virtual Agent currently working on ETC toll lanes
- ❖ Anomalies currently handled:
 - Missing entry toll station
 - No OBU device detected



215 toll lanes
interacting with the VA



0" / 1" avg wait time
vs. 10" / 60" with human operator



~ 70% anomalies
solved without human intervention



27" / 1' avg handling time
vs. 23" / 5' with human operator



- ❖ Plans to extend the Virtual Agent to self-service lanes:
 - No entry ticket
 - No valid card
 - Partial cash payment
- ❖ Support for English language to meet the needs of foreign travelers

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MADRID 2025

Thank You
Grazie

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