

TELEPAY Vision

Mobile Phones – Mobility Device

- Most people (up to 90% in parts of Europe) already use mobile phones
- Worldwide interoperable services by means of roaming process

Needs for Transport Services

- Easy payment system for seamless intermodal public transport
- Complementary service to smart cards dedicated to occasional users
- European-wide harmonised payment and ticketing solutions for multimodal transport services



Use of mobile phones for transport services (ticketing, payment, travel information)



Telepay Goals

Develop and assess an innovative payment system for transport services (e.g. public transport ticketing, motorway tolls, etc...) using mobile phones.

Customer Convenience

- ☺ Simple, easy-to-use
- ☺ Multilingual
- ☺ Roaming-enabled
- ☺ Multi-mode
- ☺ Harmonized

Transport Operator

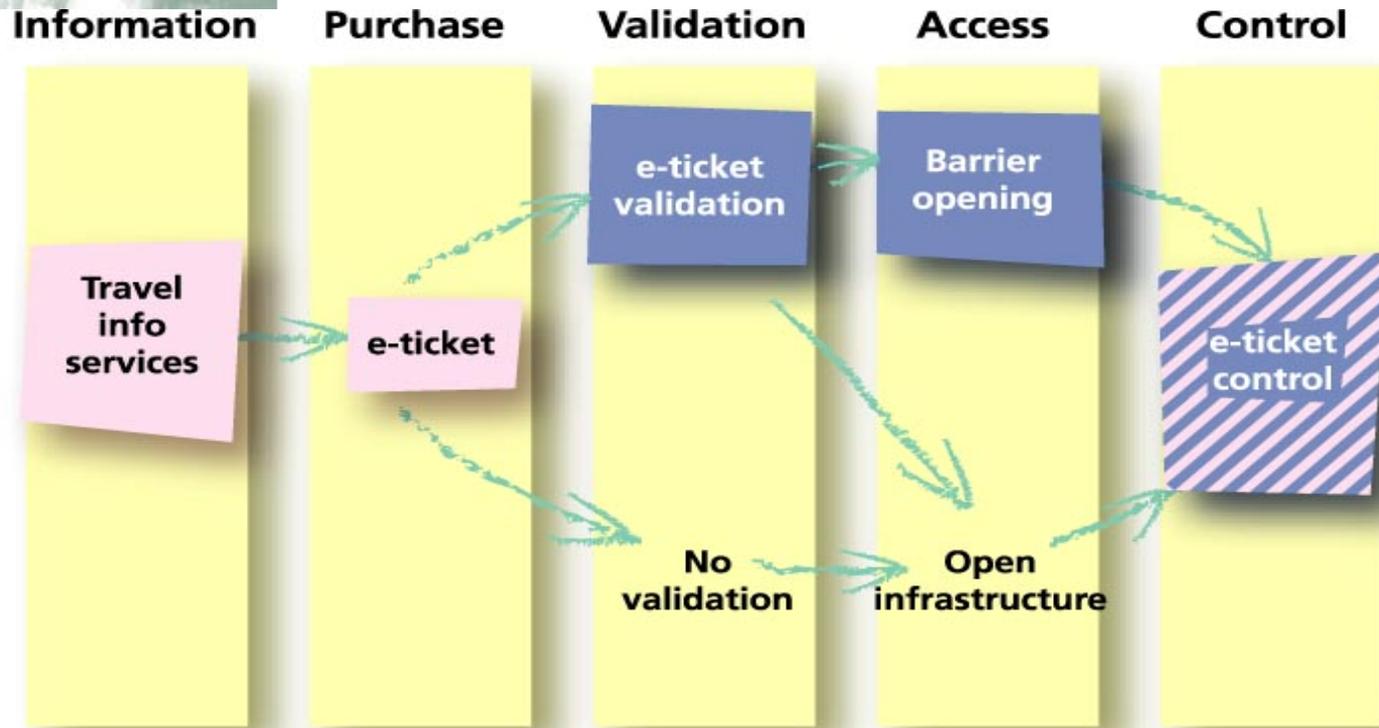
Cost Reduction

- ☺ Cost-efficient
- ☺ Highly automated
- ☺ Standardized
- ☺ Highly available, highly reliable
- ☺ Highly secure



SYSTEM REQUIREMENTS

Ticketing Steps



 Function based on SMS, WAP technologies

 Function based on short-range communication technologies





TELEPAY IN ROME



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Rome Test Site

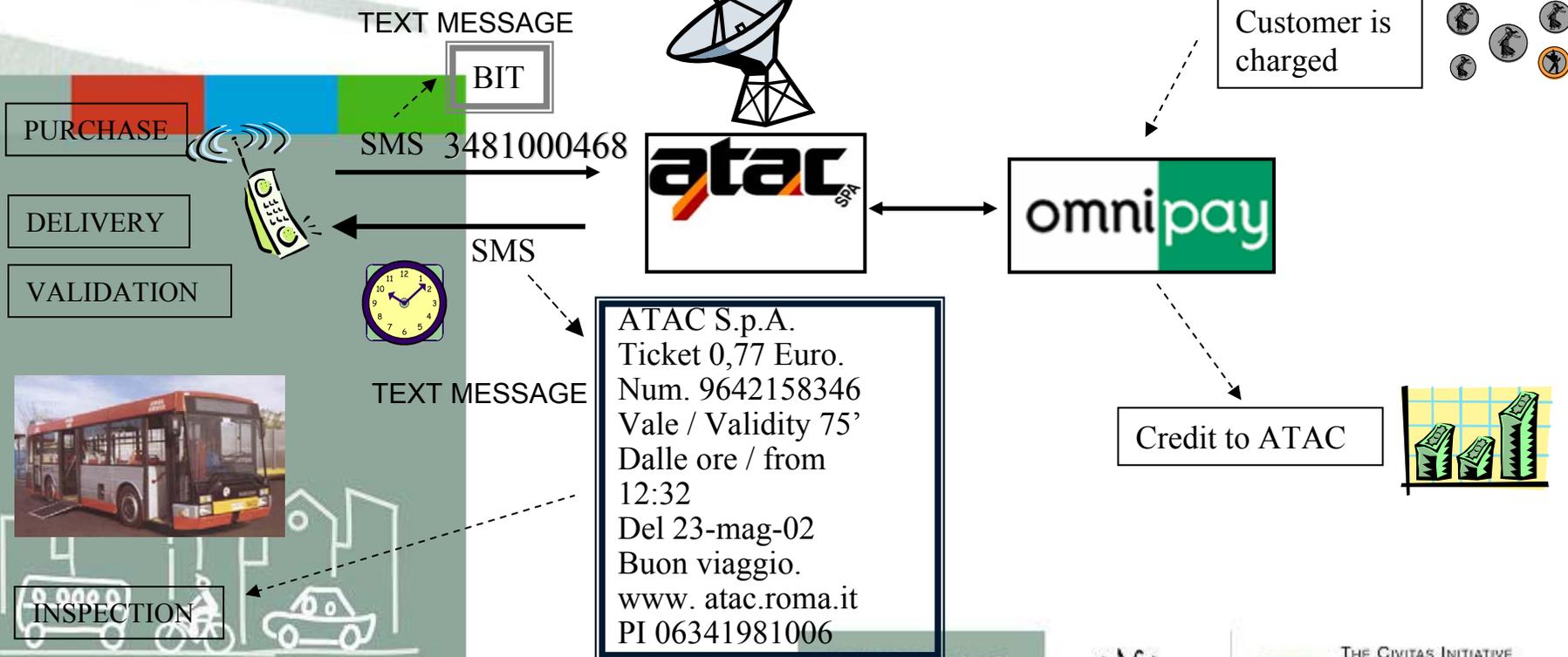
Transaction Framework



REGISTRATION

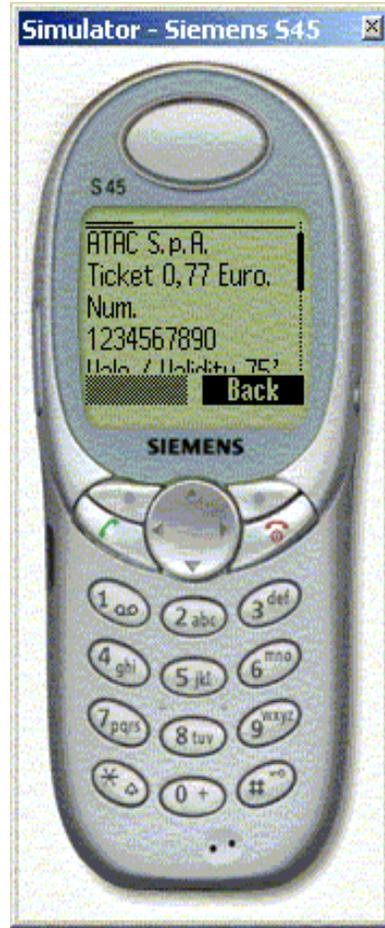
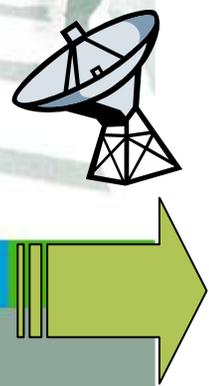
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Electronic Purse
OMNIPAY Pre-paid Card



Rome Test Site

TELEPAY Simulator

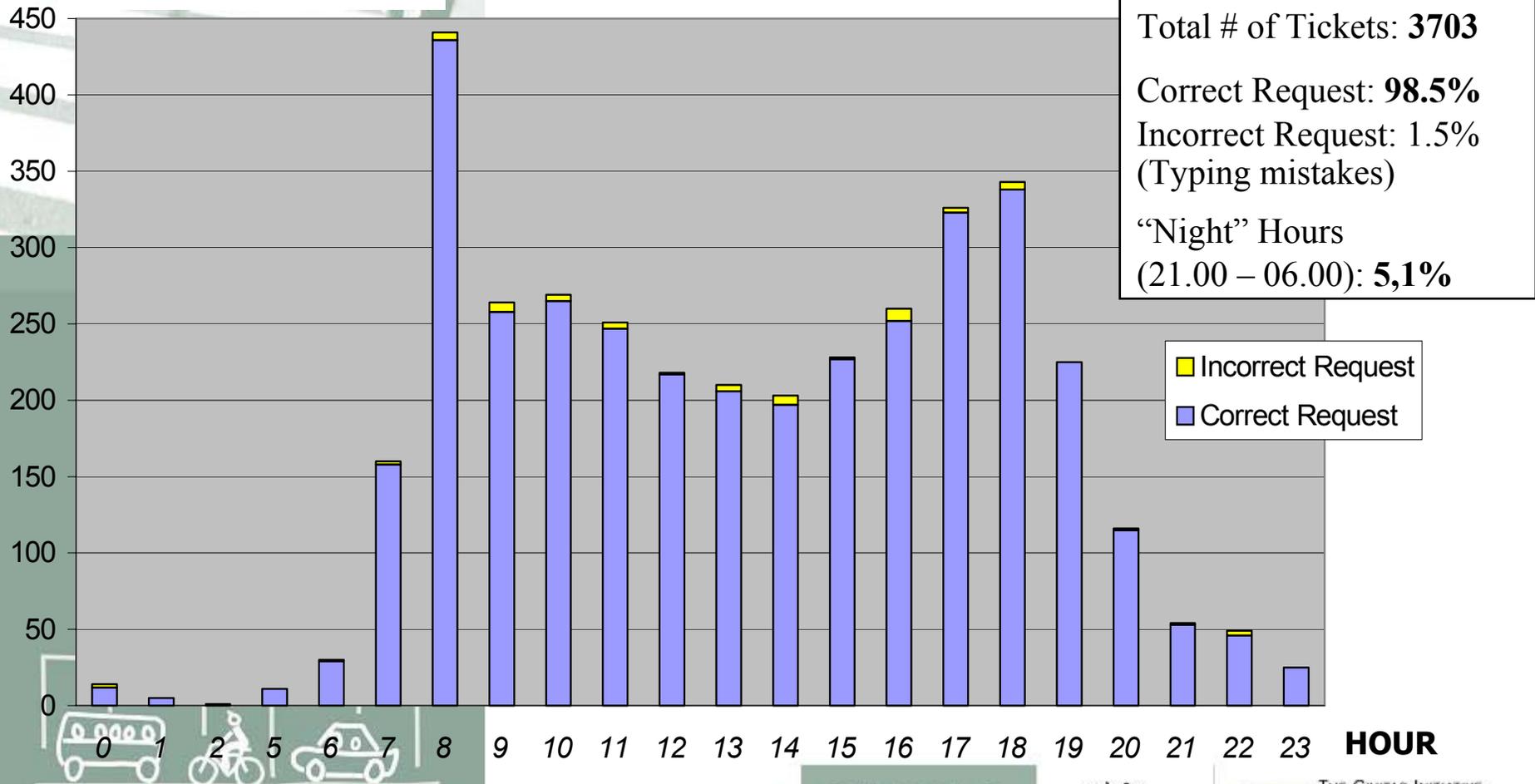




Rome Test Site

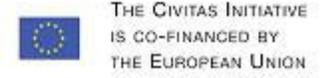
Aggregate Demand of Tickets per Hour

NUMBER OF TICKETS



Total # of Tickets: **3703**
Correct Request: **98.5%**
Incorrect Request: **1.5%**
(Typing mistakes)
“Night” Hours
(21.00 – 06.00): **5,1%**

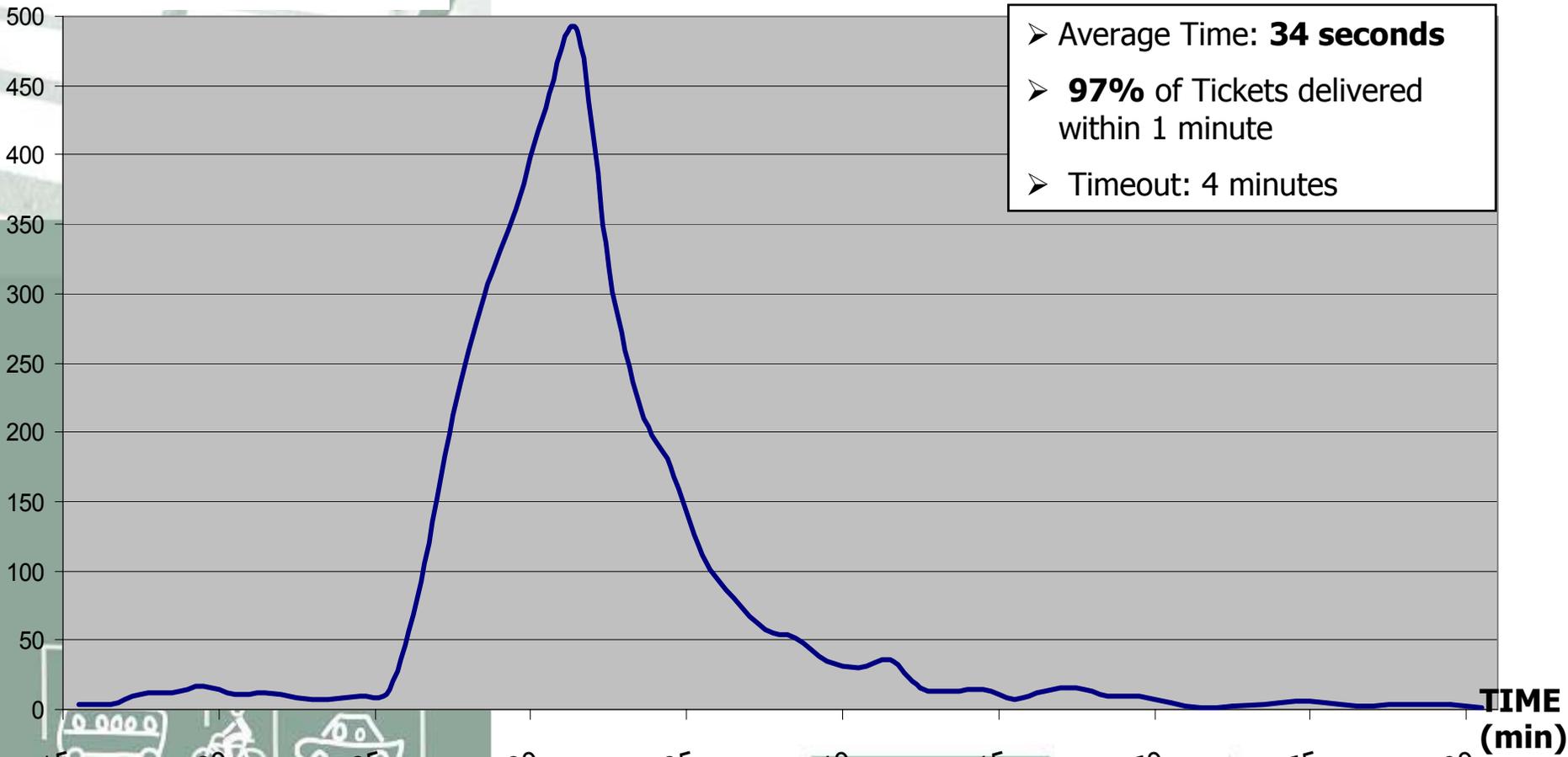
 Incorrect Request
 Correct Request



Rome Test Site

Aggregate Delivered Tickets: Transactions
Time

NUMBER OF TICKETS



- Average Time: **34 seconds**
- **97%** of Tickets delivered within 1 minute
- Timeout: 4 minutes

TIME
(min)



The role of Miracles project

From research...
Telepay



- FP5 DG INFSO ISi Programme
- Key Action 1 Systems and Services for the Citizen
- Duration: 1 July 2001 – 31 December 2002



...to implementation

M-ticketing

- Miracles Project
- Duration: 01 March 2003 – September 2005
- Departments involved: Marketing, IT, Legal, Financial, R&D

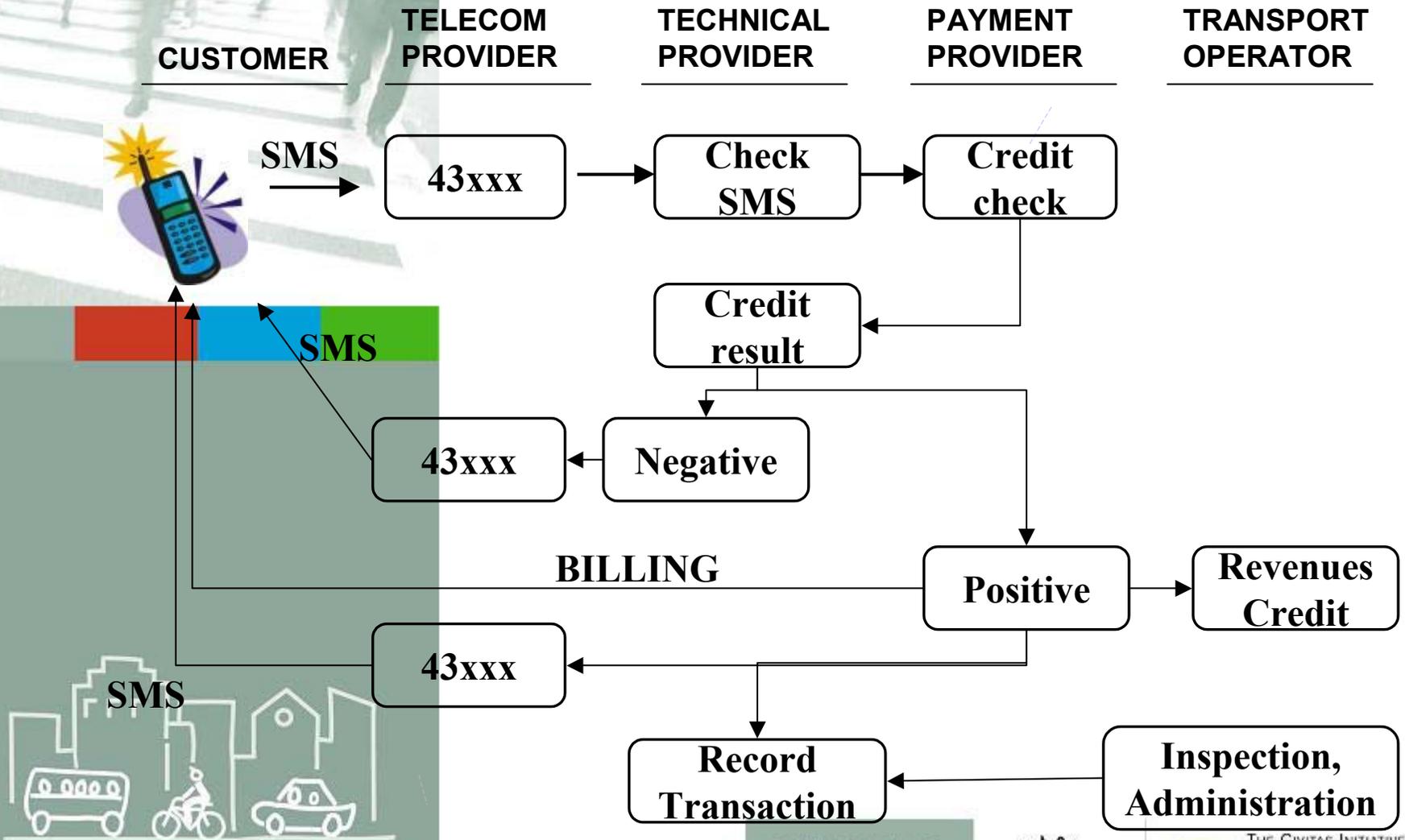


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M-ticketing: Communication Flows



Barriers to implementation

✓ **Legal issues**

- Payment of tickets through the phone bill
- International Roaming agreement for VAS
- Identification of liabilities in contracts

✓ **Organisational issues**

- Implementation within an “Integrated Fare System”
- New procedures for ticket inspection
- Business concept vs. public service (long business negotiations with telecom operators)

✓ **Technological issues**

- Constraints of GSM - SMS technology
- Need for new technology for closed transport systems



In Rome it's easier!

From 16th SEPTEMBER 2005...

**A Roma
è più facile.**

**Questo è il mio
biglietto dell'autobus.**



CIVITAS
Cleaner and better transport in cities

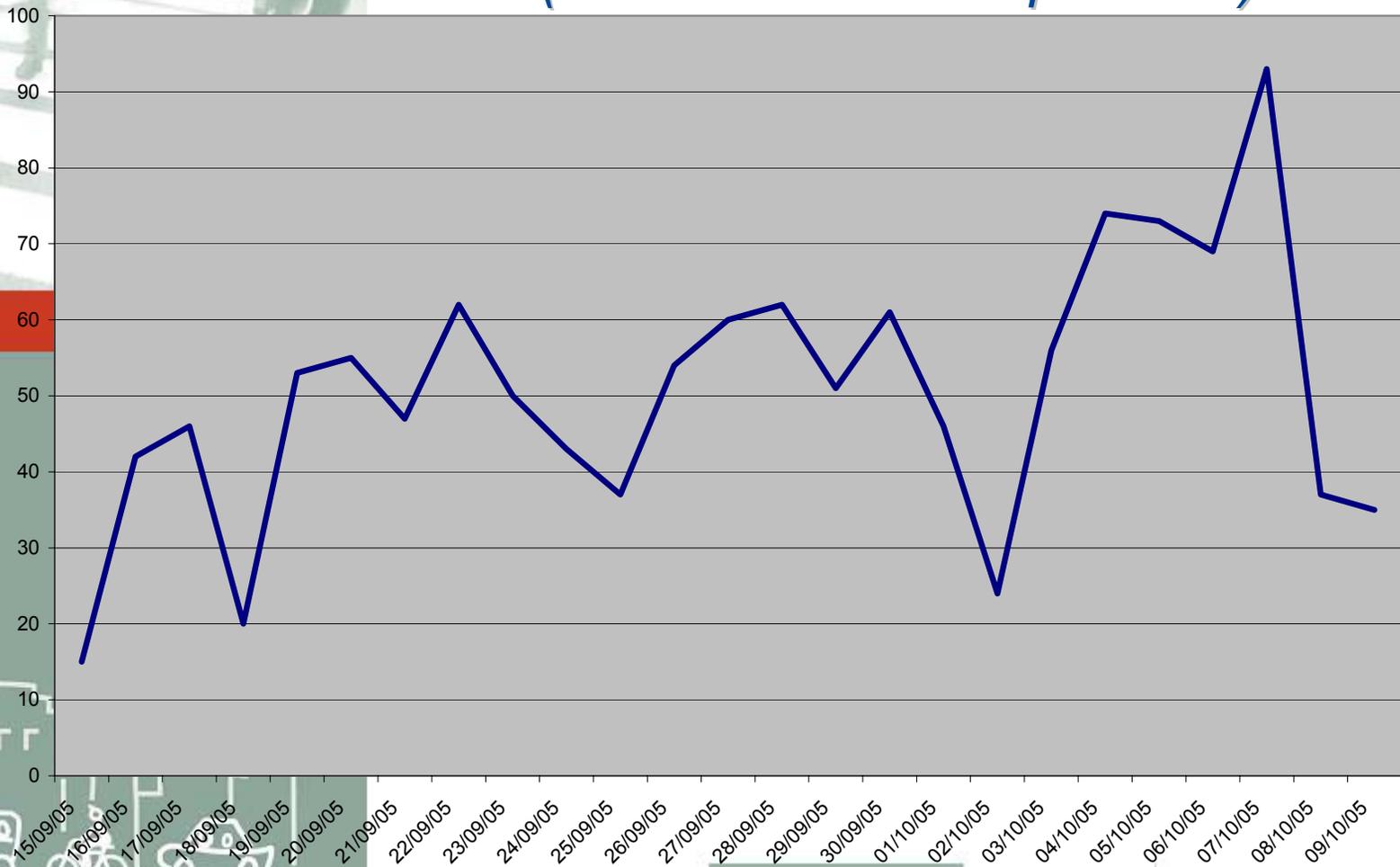


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Early results

BIT sold 16/9 - 9/10

Partial data (2 out of 3 mobile operators)



Recommendations to EC

✓ Consider mobile phone payment for transport related services in European regulations

- Mobile phone payment barriers: waiting for EU single markets
- To allow Telecom operators to charge non communication services

✓ Encourage Telecom Operators to

- Open international roaming for non telecommunication services
- Adapt mobile phone telecom fees



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