

Information and communication technologies applied to urban parking management in Lisbon

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Who we are...

EMEL – Lisbon Mobility and Parking Municipal Company

- Company 100 % owned by the City with private management
- Activity regulated by municipality
- Tariffs and prices established by the municipality
- National legislation on parking and traffic
- Our staff recognized as enforcement agents of authority
 - issue tickets, warnings, tow and “boot”.



What do we do

EMEL – Lisbon Mobility and Parking Municipal Company

- On street parking management & enforcement (45,000 spaces)
- 5 Parking Garages and 17 Parking Lots (3,200 spaces)
- Historical neighborhoods with controlled access
- Electric vehicles and public charging points (+ 600 CPs)
- Park & Ride schemes (7 parks)
- Mobility solutions (park & bike; car sharing partners)



A city of historical buildings

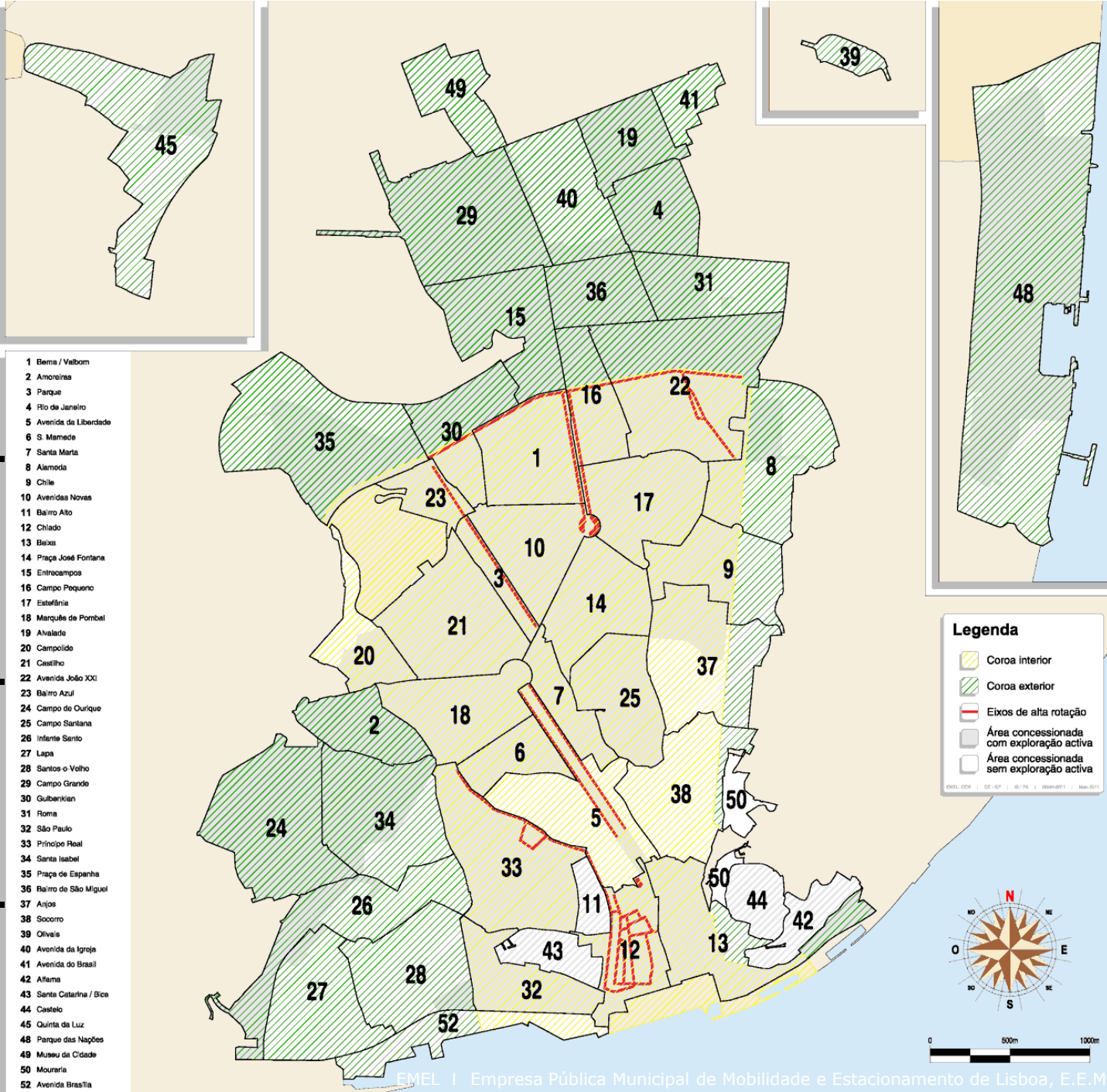


A city of modern neighborhoods



Since 1 July, 2011

- Tariffs:
- Outer zone:
 - 4 hours max.
 - 80 Cents/h
- Inner zone
 - 4 hours max.
 - 1,20 €/h
- Red streets
 - 2 hours max.
 - 1,60 €/h



~380 employees



~25 “booting” teams



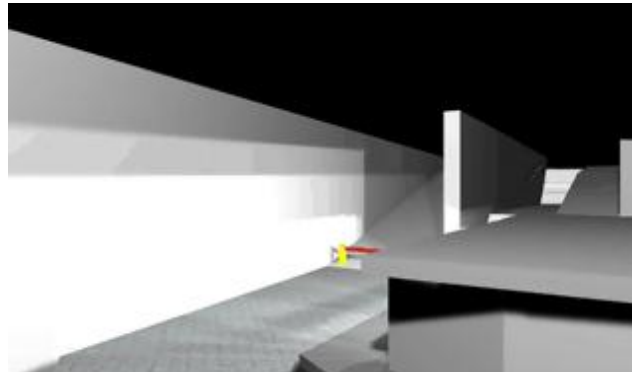
**40 vehicles
(vans & motorcycles)**



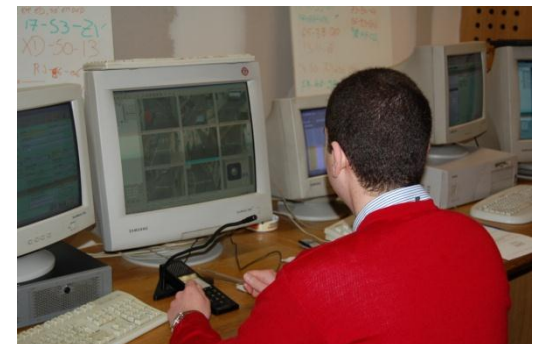
1500 pay & display machines



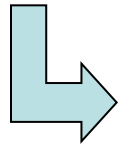
**~ 45000 on street,
3200 off street.**



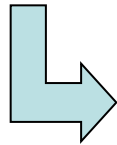
**Managing 4 historical
neighborhoods**



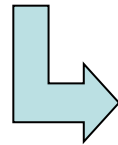
The procedure:



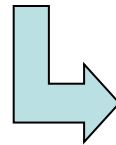
warnings



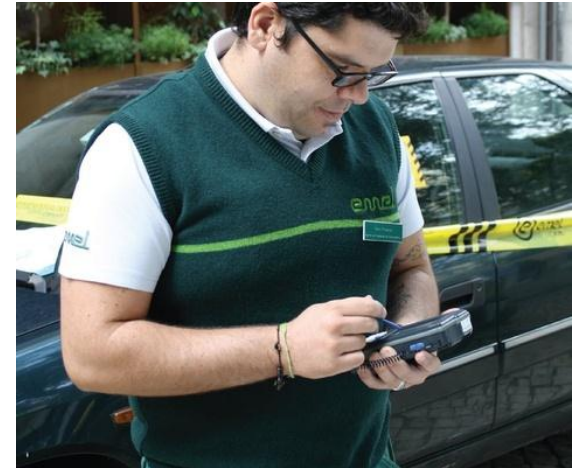
ticket (fine)

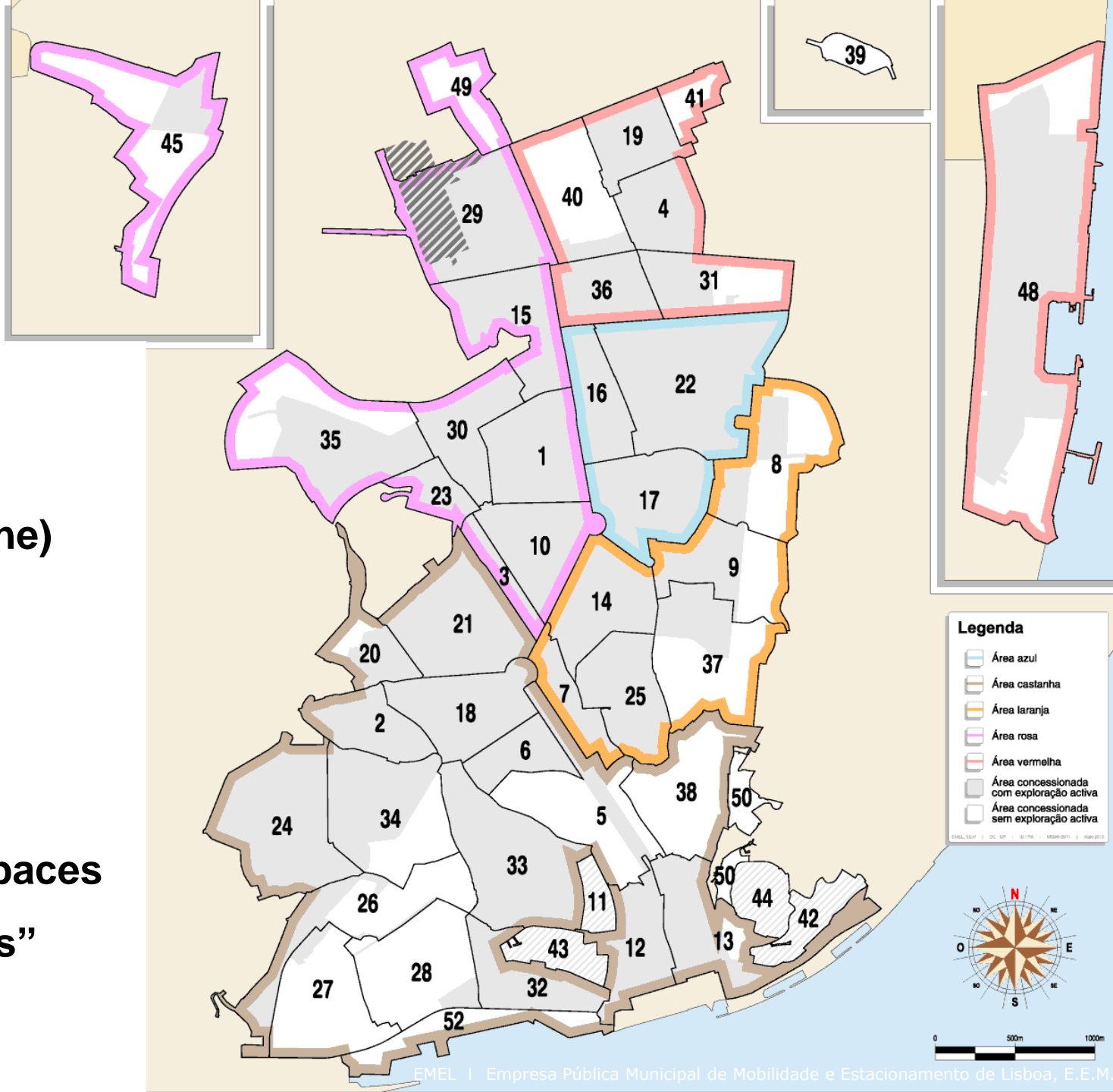


2 hours limit exceeded: “booting”



Towing (limiting cases)





Enforcement

- 5 zones (9000 spaces/zone)

For each zone:

- 1 manager
- 20 agents
- 1 agent / 450 spaces
- 4 “booting vans”
- 1 towing team

Daily Productivity

- 1200 tickets per day
- 2500 warnings per day
 - low payment success
- 200 vehicles clamped per day
- 30 – 40 cars towed per day
- Ticket: ca. 30 - 60 €
- Clamping ca. 120 €
- Towing: ca. 150 €



Parking Payment

Into a fully integrated ticketing system:
1500 pay and display machines

- Coins
- Prepaid tickets
- Smart park



and (until the summer of 2012)

- SMS (text messages)
- Contactless cards (same card for bus, train, metro)



The challenges:

- better enforcement without increasing costs
- increase the efficiency
- become a solid and profitable company
- introduce new management methods
- serve better the client and the city



Centralized Management System

Data collection, online reporting and operational control

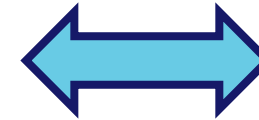


Data collection

Pay & display machines



Analysis and decision
(control room)



Field force action

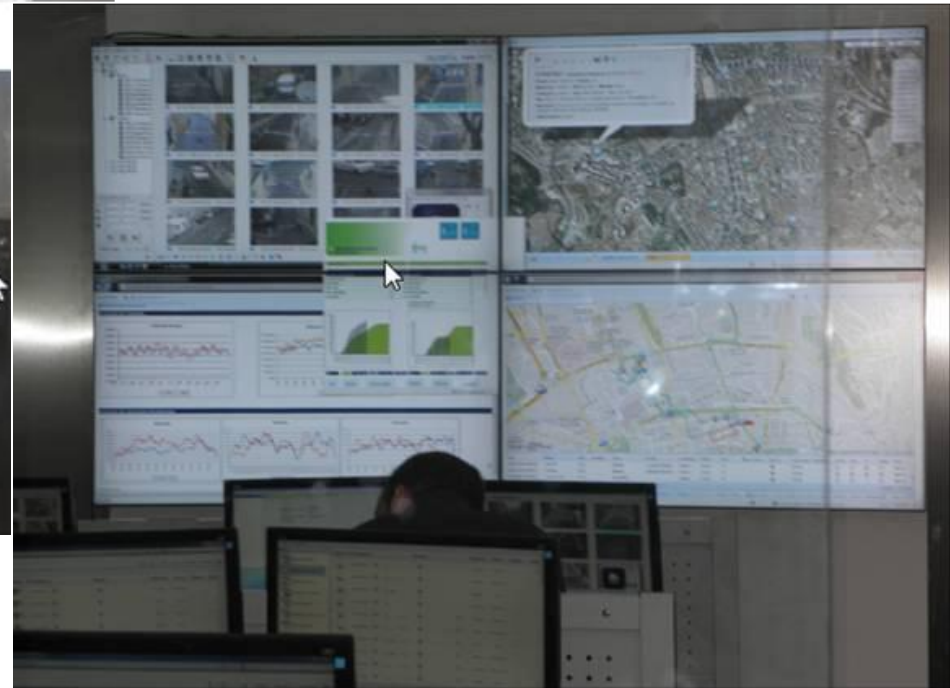


Centralized Management System

Operational Control Room



On screen visualization



Online monitoring with
guidance for field agents



Gestão de Parque

Atalhos

- Visitas em Parque
- Visitas que saíram
- Todos
- Registar entrada
- Registar saída
- Mapa

ID	Denominar	Matrícula	Data hora de entrada no parque	Data hora saída do parque	Tempo em parque	Total
1	10000001	100518	17-04-2000 15:05:47		00:20h:30m	
2	10000001	120034	15-04-2000 14:12:37		20:20h:20m	

Afbeelding 15.png

Mapa Windows Internet Explorer

Mapa

Atualizar

Atalhos

Filtro avançado

Gestão de Parque



> Menu Principal

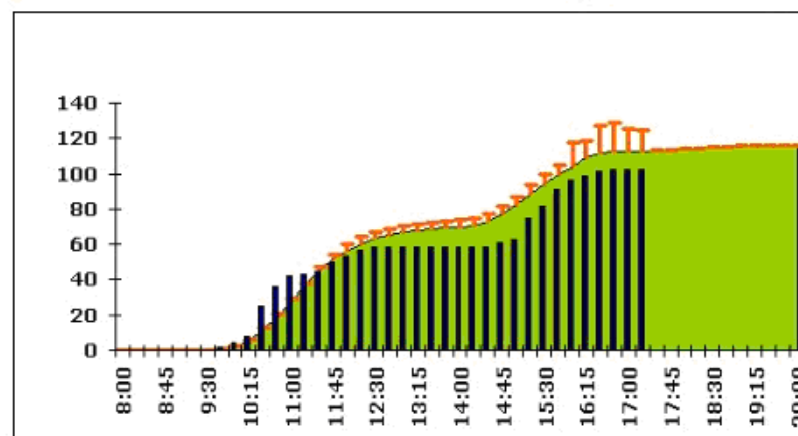
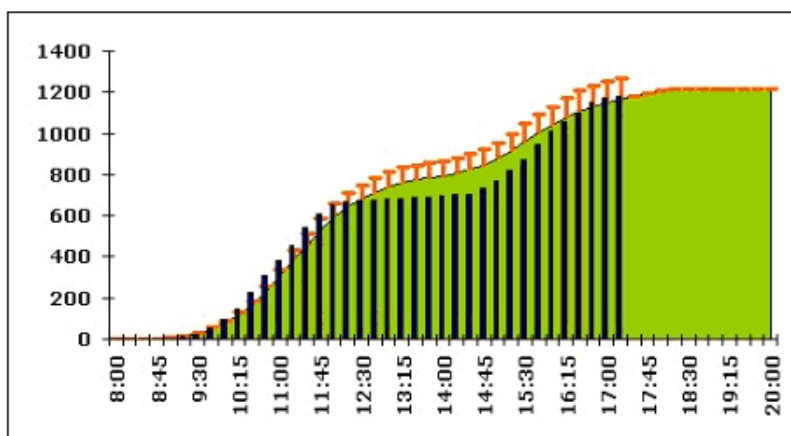
> 21-06-2010 > 17:23

DENÚNCIAS SEM BLOQUEIO

		FIM DO DIA
Quantidade do dia	1181	1240
Média 35 dias	1046	1104
Média 7 dias	1292	1361
Média 5 homologos	1129	1180
Valor padrão	1161	1219

BLOQUEIOS

		FIM DO DIA
Quantidade do dia	102	105
Média 35 dias	114	116
Média 7 dias	104	109
Média 5 homologos	118	120
Valor padrão	113	116
Quantidade de desbloqueios	48	
Quantidade de remoções	23	



AFEs 75 Média den/AFE 16 Sem actividade 0 Equipas 19 Média den/Eq 5 Sem actividade 6

Fiscais

Bloqueadores

Viaturas com + Denúncias

Tabela de Bordo

Análise Semanal

Mapa de Operações

Daily operations status



> Viaturas com multiplas denuncias (365 dias)

> 21-06-2010 > 17:23

						Denuncia de hoje	
Matricula	Qt denuncias	Marca	Modelo	Cor	Ultimo Bloqueio	Hora	Local
33FX23	62	Suzuki	Swift	Cinzento	17-Mai-2010	12:17	Rua Tenente Espanca - 18 - lado oposto
61AO86	55	Volkswagen	Golf	Preto	24-Mai-2010	10:38	Rua Costa Goodolfim - 7a
8255SE	53	Opel	Zafira	Cinzento	26-Jan-2010	16:30	Rua Rodrigo da Fonseca - sn
3347PG	51	Citroen	Xsara	Cinzento		11:05	Avenida José Malhoa - 11a - lado oposto
52DE17	47	Volkswagen	Golf	Cinzento	25-Mar-2010	09:49	Rua Castilho - s/n
0105MZ	47	Honda	HR-V	Cinzento	11-Mar-2010	15:52	Rua Sampaio E Pina - 1b
8407UJ	43	Opel	Corsa	Azul	28-Mai-2010	11:40	Rua Tierno Galvan - s/n
94EP77	42	Smart	Fortwo	Cinzento	13-Abr-2010	10:53	Rua Diogo Bernardes - 21b - lado oposto
3024VS	41	Nissan	Primera	Verde	22-Out-2009	17:21	Rua José de Esaguy - 13b
0503SZ	40	Peugeot	206	Preto	24-Mar-2010	15:30	Avenida Eng. Duarte Pacheco - s/n
3523RX	39	Opel	Corsa	Azul	22-Set-2009	10:43	Avenida Santos Dumont - 48-a
6480RE	39	Toyota	Yaris	Cinzento		10:39	Praça Marquês de Pombal - 14 a - lado oposto
8804VS	38	Volkswagen	Golf	Preto	05-Jan-2010	11:08	Avenida Marconi - 10 - lado oposto
50EG26	36	Mini	Cooper	Branco	13-Nov-2009	17:06	Avenida Rovisco Pais - 32 - placa central
6488MV	35	Volkswagen	Polo	Cinzento	21-Mai-2010	10:50	Rua Bacelar E Silva - s/n
2932XH	35	Peugeot	206	Cinzento		16:33	Avenida António José de Almeida - s/n
82CJ14	35	Toyota	Aygo	Cinzento	13-Abr-2010	12:04	Parque da Piscina do Areeiro - sn
54CO79	34	Opel	Astra	Preto	23-Fev-2010	10:07	Avenida Santos Dumont - 64 - placa central

Operations details



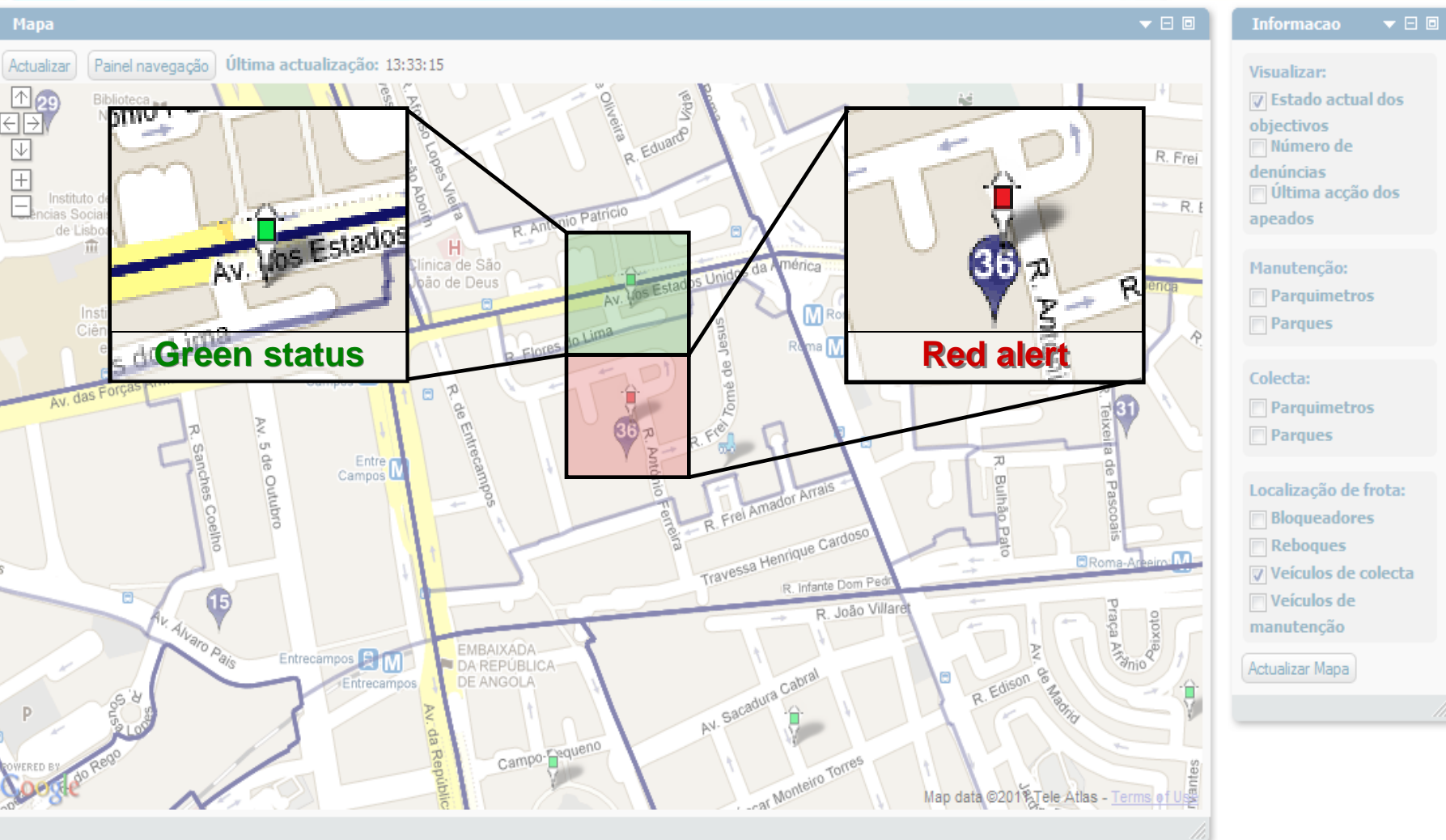
Centralized Management System



Metrics

- **Number** of sales, tickets, warnings, clamps, tows,...;
 - **Revenue** from tickets, parkmeters, clamps,...;
 - **Deviation** from expected values;
-
- Analysis by **time interval** and by **area** (zone, e.g.)





Real-time indicators (vs expected values)
Both zones and subzones visible



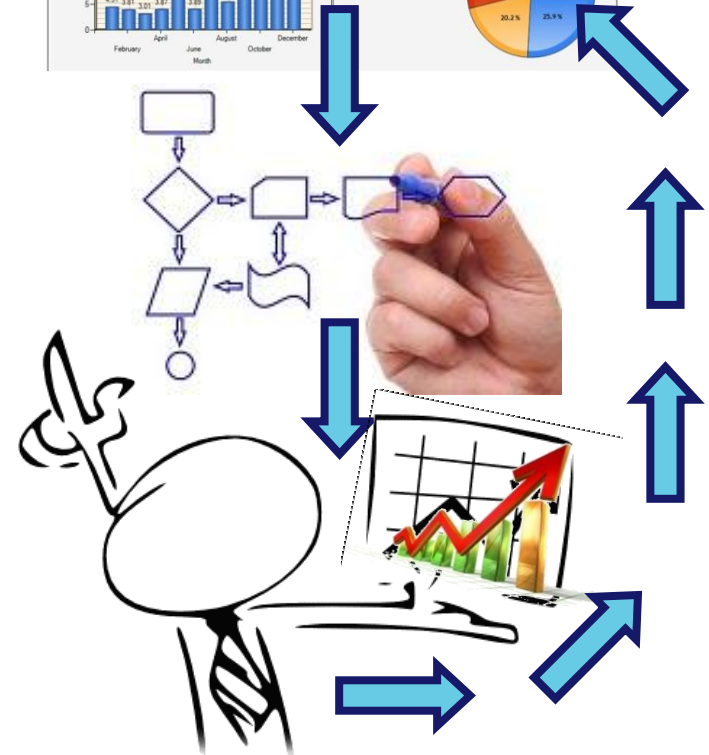
Centralized Management System

In summary



Possibility to

- **Revise planning** with better insight of reality;
- **Real-time enforcement** for optimized field force activity;
- **Business process redesign** and new metric definition.



We are more than just parking....



Thank you!

***EMEL – Lisbon Mobility and Parking
Municipal Company***

