



The E-moving project

Brussels, 18 December 2013

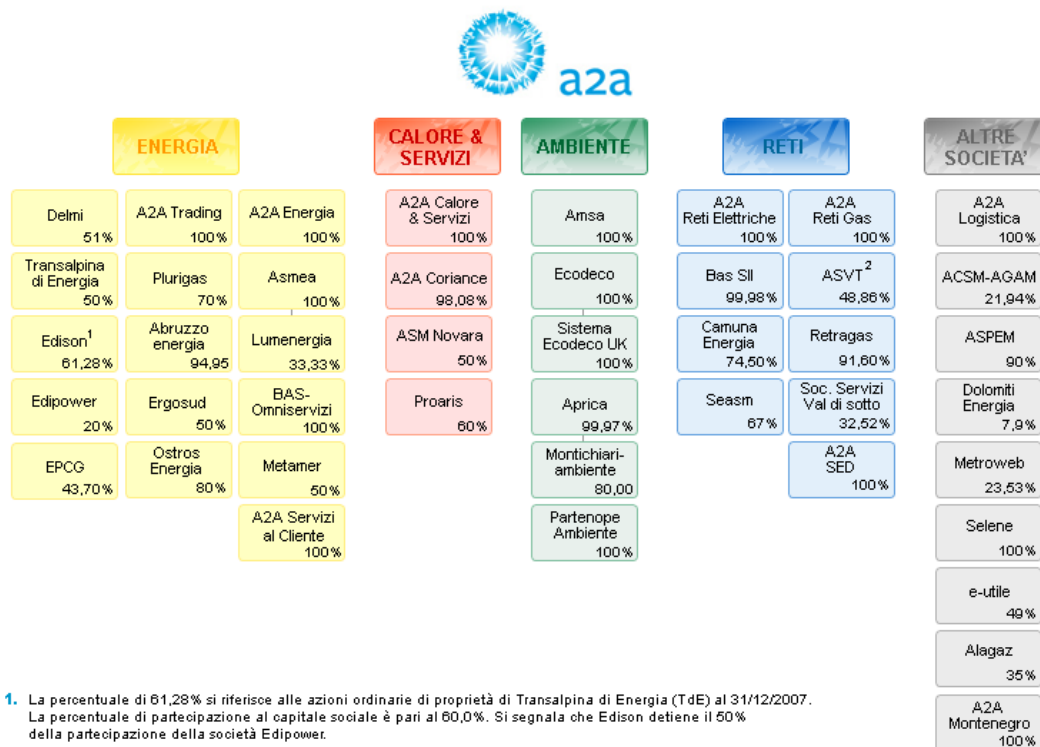
Agenda

- A2A Group
- The E-moving project
- Installation status
- Evolution of the project
- Conclusions

A2A Group

The Company

A2A is the multiutility born in January 1st 2008 from the fusion (joint venture) between **AEM SPA MILANO** and **ASM SPA BRESCIA** with the participation of **AMSA** and **ECODECO**, two environmental companies acquired from the group.



A2A Group – The company

TODAY A2A IS:

- National leader in environmental industry, thanks to over 3 millions tons of waste treated
- at 1°place of the italian ex-municipalized for customers and billing
- at 1°place in Italy in the industry of district heating
- at 2°place in Italy for installed electrical capacity
- at 3°place in Italy for gas

E-moving

A2A electrical mobility



www.e-moving.it

Project targets

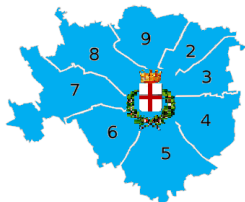
Testing the various parts of the operative model of electrical mobility, with the aim to optimize the charging infrastructure in terms of **technology** and **service** and validate the **geographical distribution**



Find a standard for communication and connection



Set business models for services



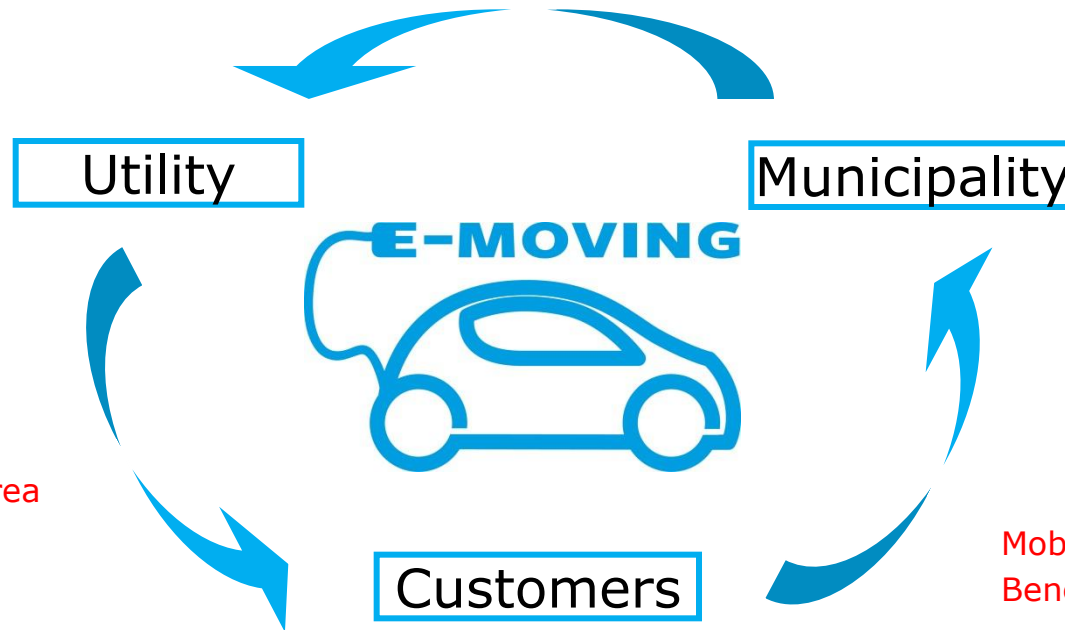
Proper integration with a model of “Sustainable Mobility”

Key elements

Planning and realization of a charging infrastructure for electric vehicles for **public** and **private** use.



Knowledge of the area
Electric knowledge



Milano



Comune
di Milano



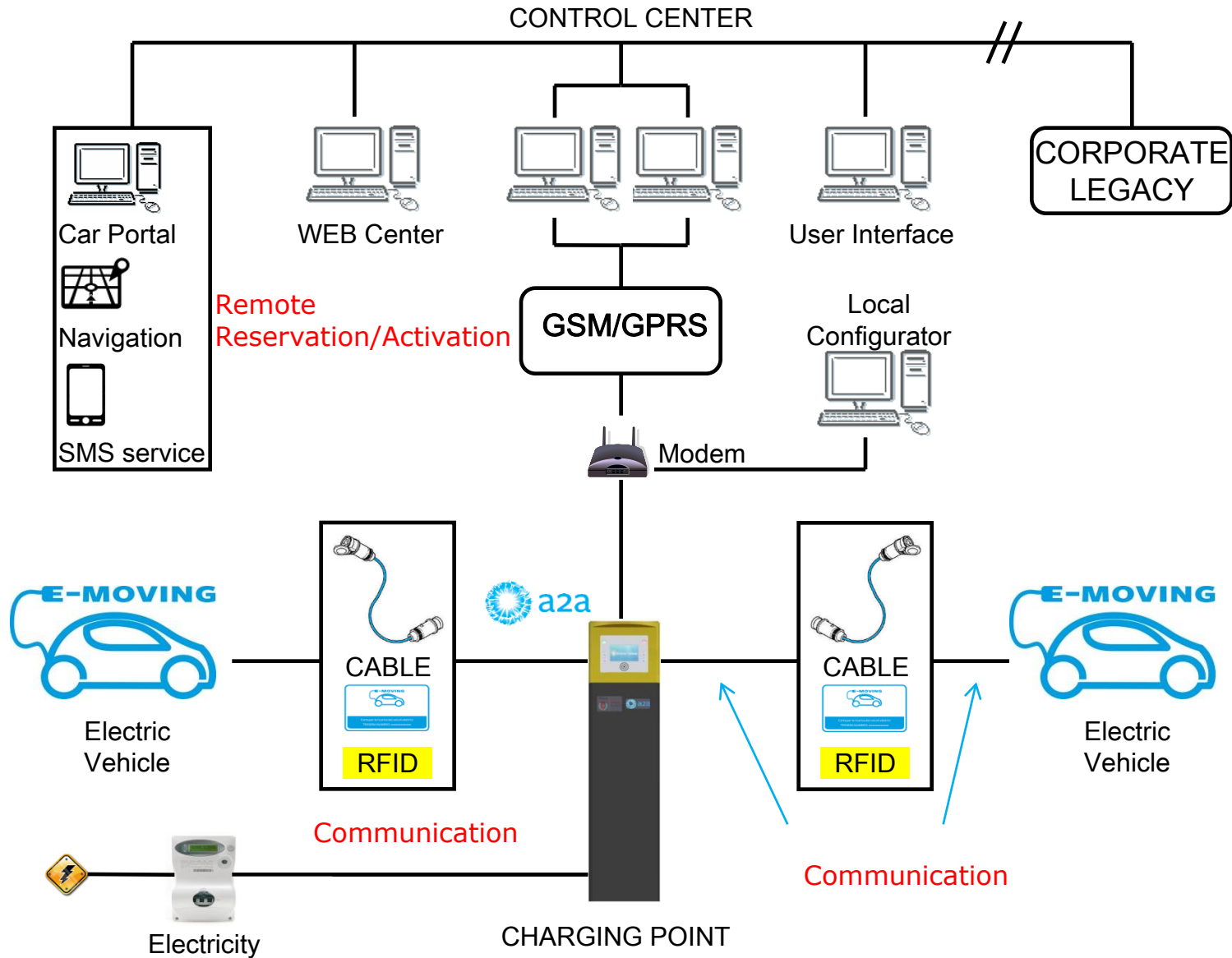
COMUNE DI BRESCIA

Mobility management
Benefits and licences



Necessities
Restrictions
Flexibility

System architecture





Charging point - vehicle integration

The recharge of the electric vehicles takes place in "mode 3" using two different standard:

- Mennekes (type 2)
- Scame (type 3A)

The communication *charging point-vehicle* take place through the connections in order to check:

- User identification
- Connection integrity
- PWM management
(Pulse With Modulation)

	Recharge Mode	Phases	Pin numbers	Max. Amperage	Expected usage
 Mennekes	Mode 3	1-phase/ 3-phase recharge	7 (L1+L2+L3+N+ E+CP+PP)	32-63 Amps	Europe
 Scame	Mode 3	1-phase recharge	4 (L1+N+E+CP)	16 Amps	Italy

Chargin point – Network interaction

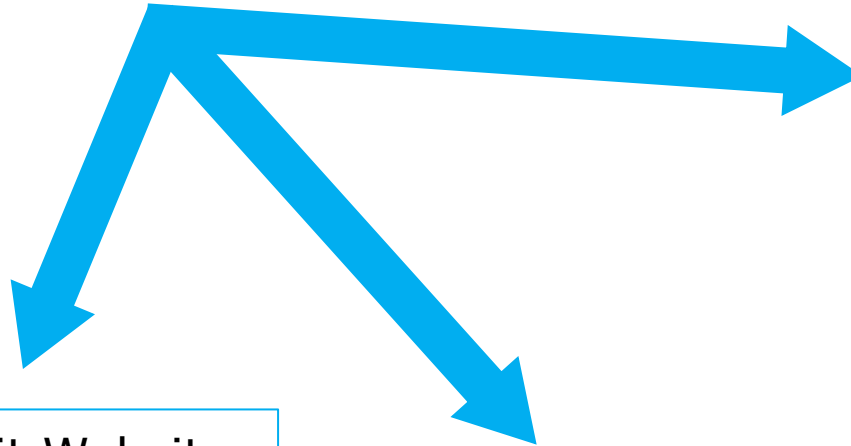
Target: manage the electric energy distribution process.

The next step, when electrical mobility will be strengthened, will be a communication link between the **SMART-GRID** and the charging systems.

This feature will allow the management of charging “users” as the same manner as the management of the usual customers of electric energy.

Public infrastructure localization

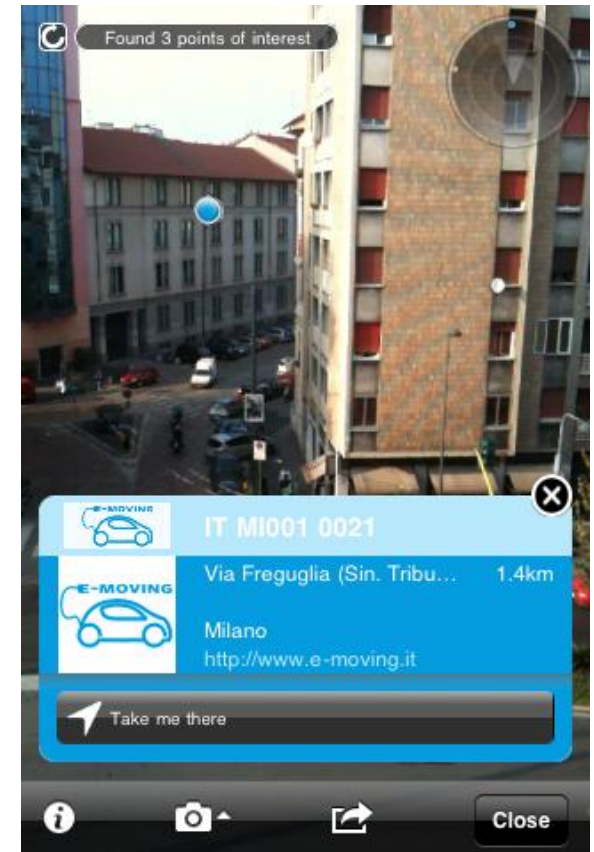
It's possible to find the public charging points through:



www.e-moving.it Website

GPS Maps

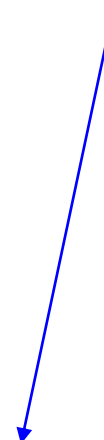
Smartphone App



Installations and cards

OVERALL CHARGING POINTS				
Milano and Lombardia			Brescia	TOTAL
	e-moving	quadri-sharing	e-moving	
Public	64	54	36	154
Private	106	118	26	250
Total	170	172	62	404

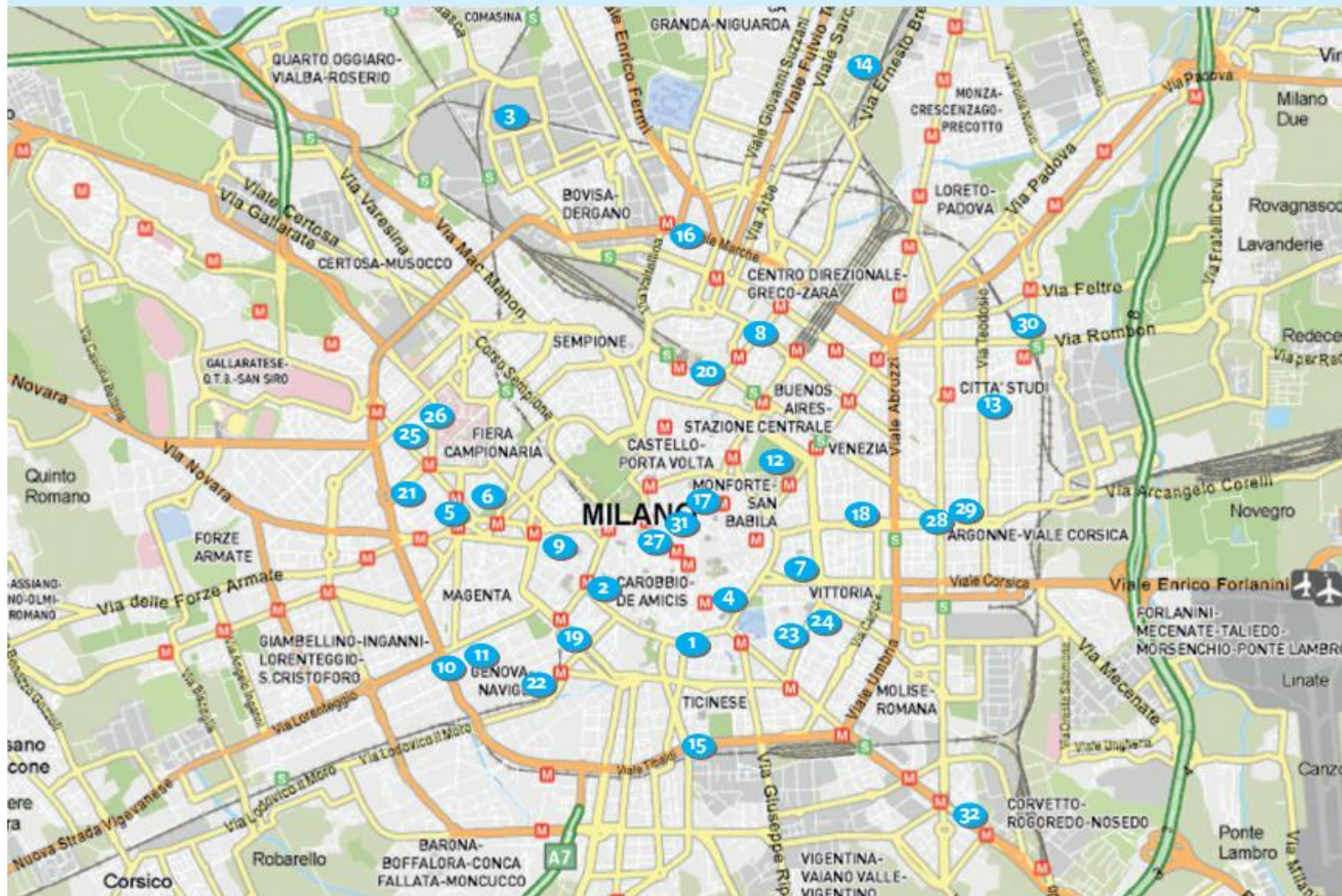
Over the 70% in
Milano



Cards overall			
	CARS	MOTORBIKES	Total
WEB	78	82	160
CONTRACT	69	0	69
EXTENDED LOAN	19	0	19
Total	166	82	248

Milano – public charging points

E-moving punti di ricarica pubblici a Milano



E-moving punti di ricarica pubblici a Brescia



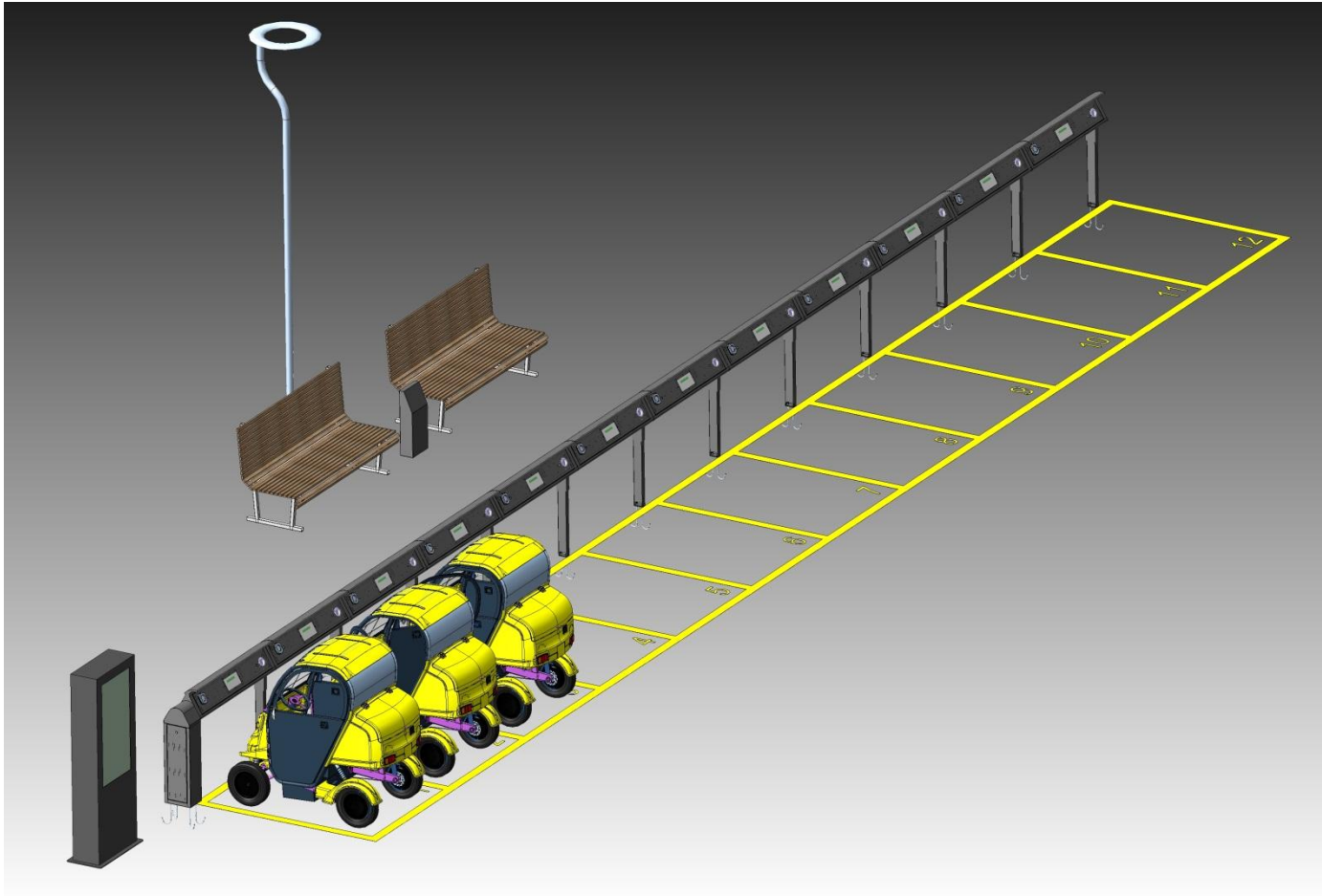
The evolution of the project

With the partnership of Milano Municipality, A2A has projected and realized the new electric-quadricycle's charging infrastructure.



Digital Islands

All this is integrated in NEW Digital Islands of Milano Municipality



Commercial solutions

In order to support the development of the electrical mobility, A2A proposes:

- Supply and installation of public and private charging infrastructure .
- Public charging service subscription.

At present, A2A uses the «Service Provider Exclusive» model and the charging service is billed to the customer.

Agreements with other energy companies are in progress, in order to guarantee the system interoperability.

Honours

The E-moving project has been selected from AEEG as the BETTER PROJECT allowed at national trial.

Deliberazione 13 luglio 2011 – ARG/elt 96/11

Tabella 5 - Sintesi della valutazione progetti presentati.

Ambiti	Punteggio max	ENEL- HERA	COMUNE DI ISERA	A2A	PARMA	ENEL ENERGIA	POSTE ITALIANE	CHARG.IN CR	CLASS ONLUS	ENERGY RESOURCES	FERLA ENERGY
A1	21	15	-	21	16	11	9	11	12	6	8
A2	14	10	-	9	10	11	7	10	12	5	6
A3	8	7	-	8	6	6	5	5	5	4	5
A4	7	5	-	7	4	6	4	5	6	0	3
B1	14	4	-	10	6	14	12	7	8	2	11
C1	10	8	-	10	9	7	2	6	5	3	2
C2	3	1	-	1	1	1	1	2	3	1	2
C3	7	5	-	4	6	2	2	5	3	7	3
D1	8	8	-	8	6	2	2	3	4	1	3
D2	8	3	-	3	1	-	-	-	-	-	-
Totale	100	66	NA*	81	65						
Sub totale (A+B+C+D1.1)	88					60	44	54	58	29	43
Totale normalizzato	100	66	NA*	81	65	68	50	61	66	33	49

* NA: Non ammissibile alla valutazione

Conclusions

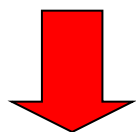
Electrical mobility, even if with a bit of delay, is about to start up.

The Municipalities are very interested in it.

Electric cars are entering the market.

Charging infrastructures, at least for big cities, are ready.

Environmental benefits are real.



LET'S GO!

