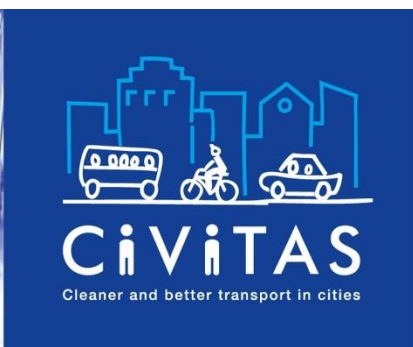




CIVITAS DYN@MO Summer University 2014

15th May 2014

Palma de Mallorca

Ramon Pruneda, Barcelona City Council (LIVE Platform)



THE CIVITAS INITIATIVE IS CO-FINANCED BY
THE EUROPEAN UNION

Some figures about Barcelona and Catalonia: People and Land

	<u>Population</u>		<u>Area</u>	<u>Density</u>
	January 2011	%	km ²	inhab./km ²
Barcelona	1,615,448	3.4	102	15 807
Metropolitan Region	5,029,181	10.7	3 242	1 551
Catalonia	7,539,618	16.0	32 108	235
Spain	47,190,493	100.0	505 986	93

Source : Barcelona City Council and INE

Foreign Population

17.3% of total residents

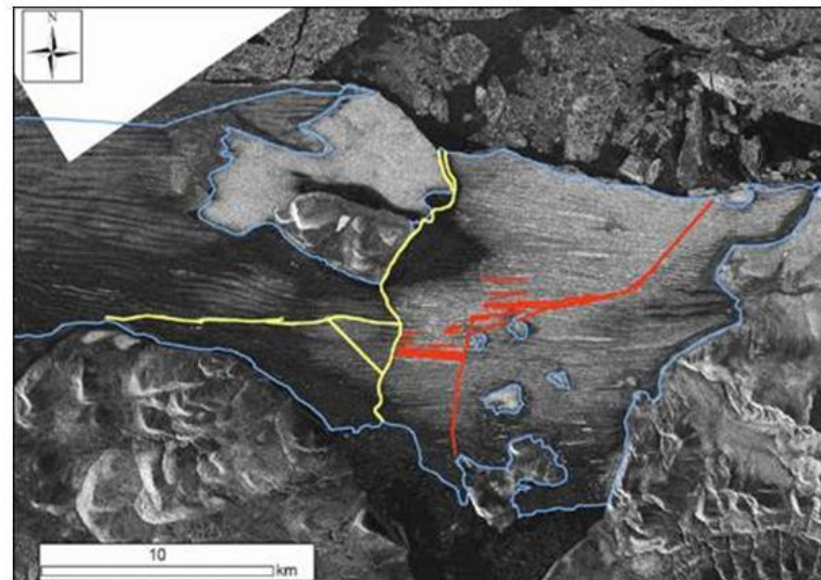
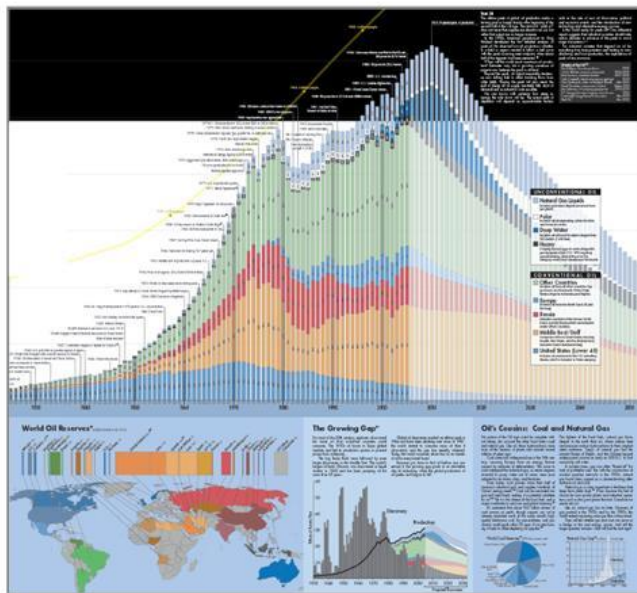
(January 2011)



MOBILITY REVOLUTION = ICT AND INTERNET + NEW ENERGY TECH + MINDSETS CHANGE

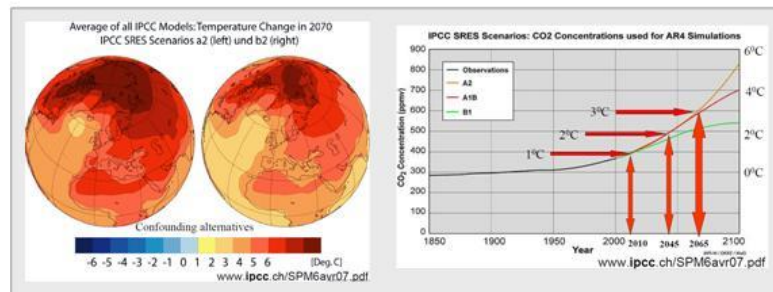


Current reliance on fossil fuel & Environmental Impact of Transportation

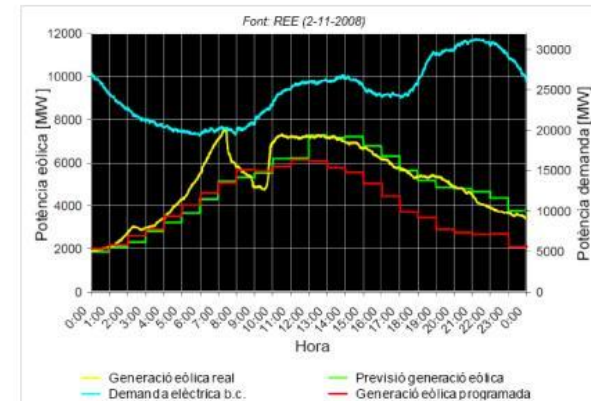
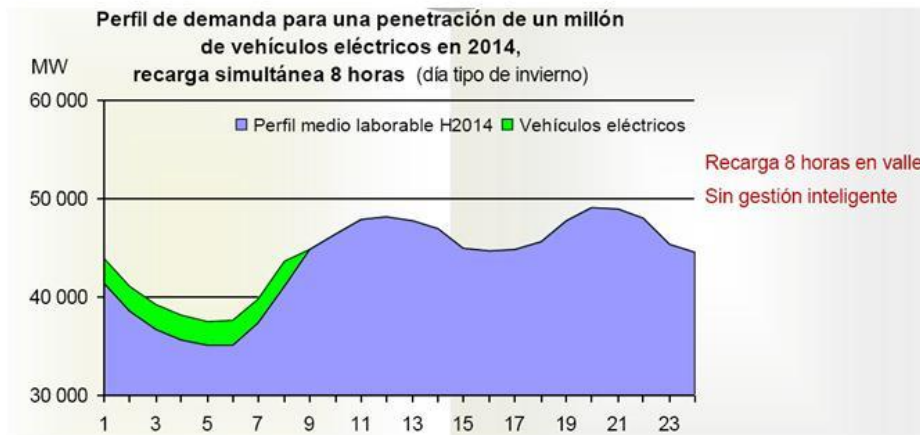


Contaminació atmosfèrica Barcelona 2007				
	SO ₂ (µg/m ³)	O ₃ (µg/m ³)	CO (mg/m ³)	NO ₂ (µg/m ³)
Ciutadella	287	145	2,5	47
Eixample	91-107	126	2,9	68
Gràcia	69	126	2,5	74
Poblenou	81	134	1,2	47
Sants	55	-	1,2	31

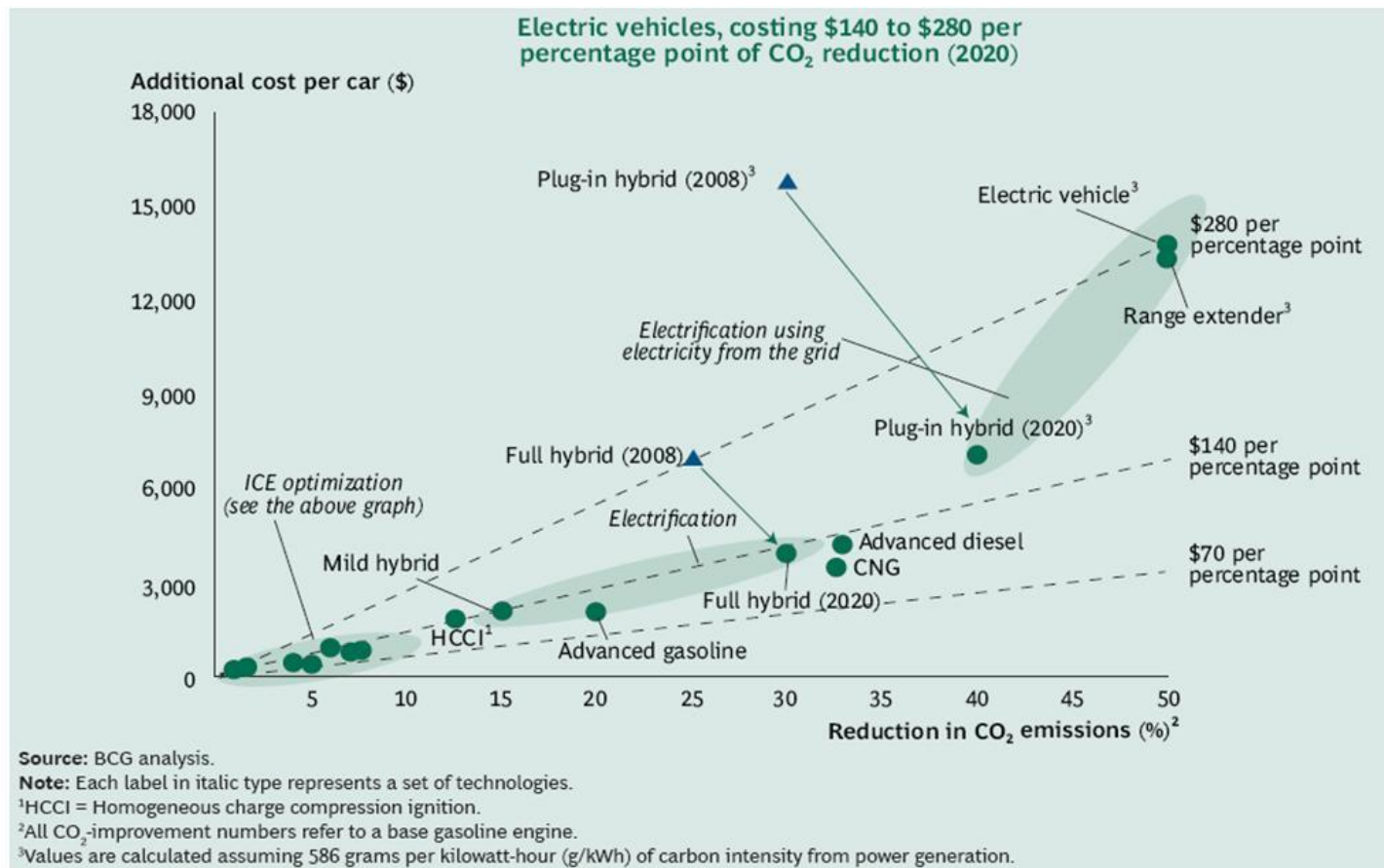
Font: Ajuntament de Barcelona



Smart Grid and User/Vehicle/Infrastructure integration



Technology Transformation - GAP



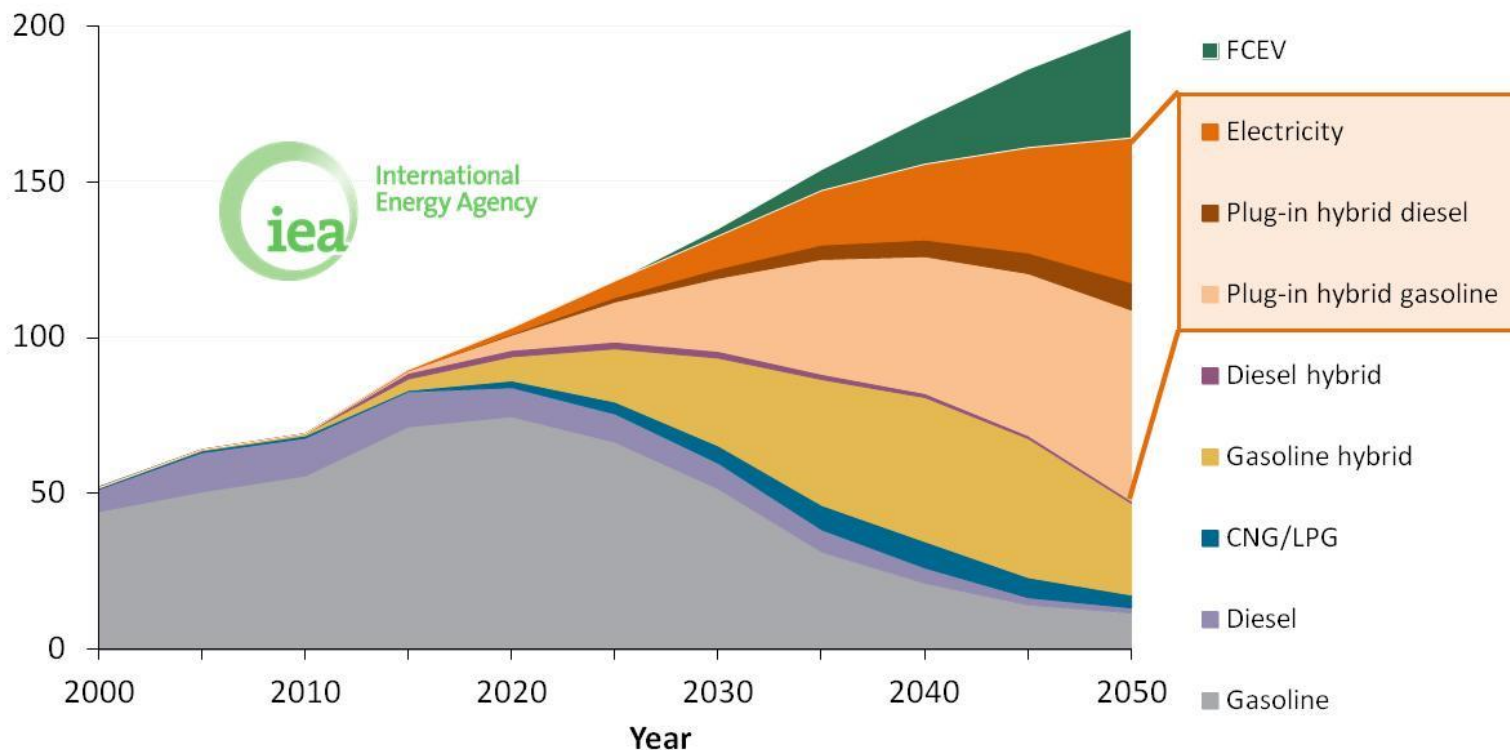
Technology Transformation - GAP



We are not talking about a technologies competition...

Passenger Light Duty
Vehicle sales (million)

IEA (2012)



Reasons by Public Administrations to promote e-Mobility

E-mobility Economic Promotion Opportunities:

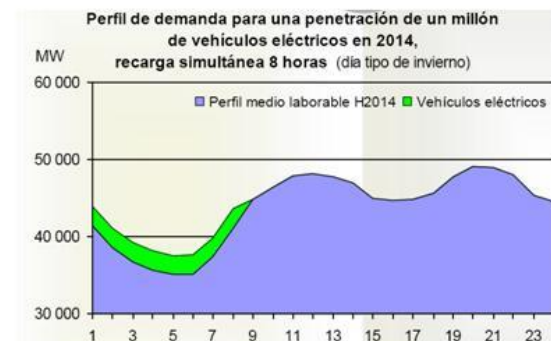
- Entrepreneurs
- Innovation + R&D
- New markets + Business Models
- Investments
- ...

E-mobility opportunities in the urban mobility systems:

- Public Transport Electrification
- Public & Private services fleets electrification
- EV introduction in mobility systems (sharing, car-pool, ...)
- EV Charge stations in Park&Ride Systems
- Policies, Regulation
- ...

E-mobility environmental impacts & opportunities:

- Reduce CO₂, Noise & Air Pollution
- Promote Renewable E, Micro-Generation, ...
- Well to Tank mix-generation. SMART GRID
- Storage Energy
- Balance Demand-Curve
- Re-use and recycle vehicle life cycle



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

International Scenario 2012 - 2020

The Commission presented the CARS 2020 Action Plan for the EU car industry

published on [Thursday, November 08, 2012](#) under [Transports](#)

The European Commission wants to reinforce the automotive industry's competitiveness and sustainability heading towards 2020, therefore it presented a new CARS 2020 Action Plan. Among other measures, the plan intends to provide a massive innovative push by streamlining research and innovation under the European Green Vehicle Initiative.

Presentació Institucional 20/12 Brussel·les



U.S. electric car policy to cost \$7.5 billion by 2019: CBO

Recomendar 64 personas han recomendado esto. Sign Up para ver qui
recomendan tus amigos.

By Bernice Woodall and Deepa Sethuraman
Thu Sep 20, 2012 7:44pm EDT

(Reuters) - U.S. federal policies to promote electric vehicles will cost \$7.5 billion through 2019 and have "little to no impact" on overall national gasoline consumption over the next several years, the Congressional Budget Office said in a report issued on Thursday.



The future for electric car startup tech is in China

Money from Chinese investors, conglomerates, cities and the government, continues to drive a significant amount of the future of next-generation technology for electric cars.



El mercado de vehículos eléctricos capitalizará más de 20.000 millones de euros en cinco años.



Los vehículos eléctricos encuentran dificultades para terminar de despegar por sus elevados precios y la endémica infraestructura de carga, a pesar de lo cual se espera que el mercado llegue a capitalizar más de 20.000 millones de euros en cinco años.

Madrid, 19 Abr. ([Portal de Medio Ambiente](#))

Baterías más pequeñas dentro de vehículos también reducidos y por tanto mucho más baratos. Es la tendencia predicha por la firma de análisis Lux Research, cuyo último estudio espera una crecimiento anual de esta industria cercano al 18 por

LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

International Scenario 2012 - 2020



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

Barcelona: International HUB in EV implementation

Volta BCN, la moto eléctrica española a punto de comenzar su producción



Endesa y Cepsa inauguran el primer punto de recarga rápida de España para vehículos eléctricos

14/04/2011
Madrid

Los vehículos eléctricos tendrán una zona reservada de estacionamiento donde podrán recargar hasta el 50% de su batería en tan solo 10 minutos.

Industries:
Alstom, Better Place, Bosch, IBM,

Association, EDF,
Eurelectric,
Manufacturers:
Go-Vett,

Mobec Hotels, una red de motos eléctricas para turistas en Barcelona

El Gremio de Hoteles de Barcelona y el Ayuntamiento de la capital catalana han presentado hoy Mobec Hotels: una red de motos eléctricas en diferentes hoteles de Barcelona para que los turistas se desplacen por la ciudad.

BMW presenta en Barcelona el eléctrico BMW i3 y el híbrido BMW i8

El eléctrico se lanzará al mercado a finales de 2013 y el BMW i8 a principios de 2014, según ha explicado en rueda de prensa el director de Diseño de BMWi, Benoit Jacob.

ENVIADO POR: ECOTICIAS.COM / RED / AGENCIAS, 30/10/2012, 11:54 H) (419) VECES LEÍDA



BMW ha presentado en exclusiva y por primera vez en España en el concesionario de la marca en Sant Adrià de Besòs (Barcelona) los prototipos de su primer vehículo 100% eléctrico BMW i3 y del híbrido BMW i8.

El eléctrico se lanzará al mercado a finales de 2013 y el BMW i8 a principios de 2014, según ha explicado en rueda de prensa el director de Diseño de BMWi, Benoit Jacob.

El directivo ha remarcado que ambos modelos son un prototipo, pero que está muy avanzado y que se iniciará en breve en la planta del grupo en Leipzig (Alemania).

SEAT eléctricos ya circulan por Barcelona



Going Green invierte 4 millones para fabricar motos eléctricas en Barcelona

La empresa negocia con el Ayuntamiento crear un sistema de motos eléctricas como el Bicing

If Renting, una nueva apuesta por el coche eléctrico de alquiler en Barcelona

Josep Canós
17 de junio de 2012 | 18:00

COMENTARIO

Nissan fabricará la NV200 eléctrica en Barcelona tras invertir 100 millones de euros

Nissan ha anunciado la fabricación de una versión

EXPOELECTRIC FÓRMULA-E CIERRA SU SEGUNDA EDICIÓN CON UN RÉCORD DE PARTICIPACIÓN CIUDADANA DE MÁS DE 10.000 PERSONAS

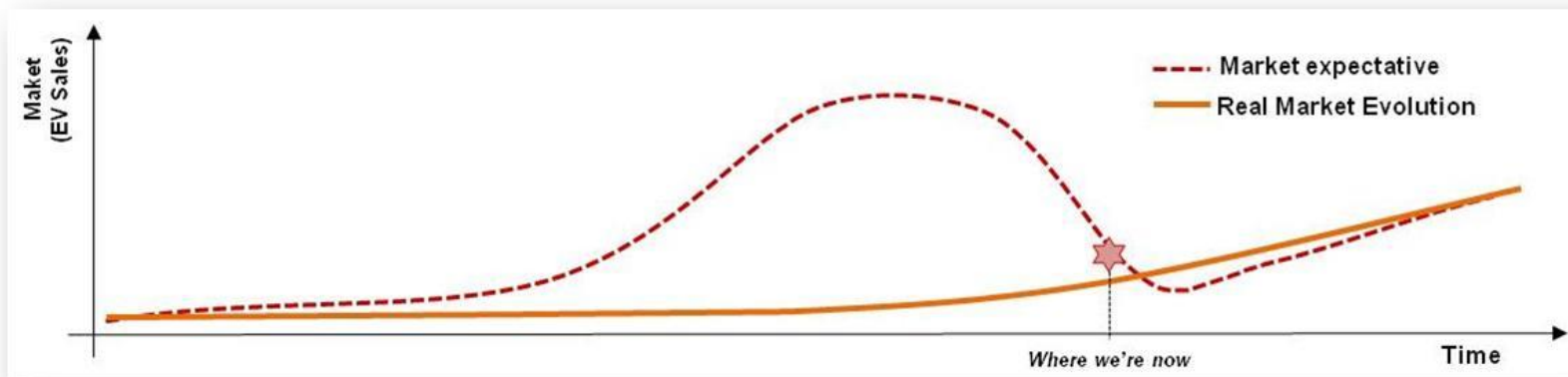
EXPOeLèctric Fórmula-e, el mayor evento de vehículos eléctricos del sur de Europa, se despidió de la ciudad de Barcelona con un récord de participación ciudadana de más de 10.000 personas y el máximo apoyo del mundo del motor, convirtiendo la Ciudad Condal —del 14 al 22 de septiembre— en la capital del vehículo eléctrico.

Patrocinado por Renault, SEAT, Nissan, Peugeot y Aenergy-SECE, con la colaboración de mérito de Magnum Cap y Catalana Occident, EXPOeLèctric Fórmula-e ha contado con un conjunto de actividades lúdicas y divulgativas, totalmente gratuitas, con el objetivo de consolidar el vehículo eléctrico como una alternativa real para la conducción urbana e interurbana en Cataluña.



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

Past & Present of Evs and LIVE Platform



LIVE 2009

LIVE study phase:

A study looking into the Logistics for the Implementation of electromobility in Barcelona concluded that there was a need to promote EV in its early introduction stages through public private partnerships. That is why Platform LIVE 2010 -2013 is created

LIVE 2010 - 2013

1st EV EcoSystem generation:

LIVE, as a public/private collaboration, becomes a motor to establish the bases and first development of EV needs:

Actions under coordination and support from PPP + Favorable ecosystem generation + Reference trademark for citizens and companies..

LIVE 2014

First real market scenario:

Functions related with public policy and citizens are derived to public administrations.

LIVE has new objectives from 2014, focused in the economic promotion of the sector and expands the territorial focus to the Metropolitan area of Barcelona and Catalunya.

LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

LIVE: Logistics for the Implementation of EVs

MAIN
PARTNERS



Ajuntament
de Barcelona



Àrea Metropolitana
de Barcelona



Generalitat
de Catalunya

B:SM



gasNatural
fenosa



FUNCTIONS

- Definition and coordination of the STRATEGIC PLAN for the deployment of EV
- Identification, Incubation, and Coordination INITIATIVES towards electrical mobility
- Facilitation economic and INDUSTRIAL TRANSFORMATION and participations
- COMMUNICATION, PROMOTION, Development Benchmarking and Gather knowledge.

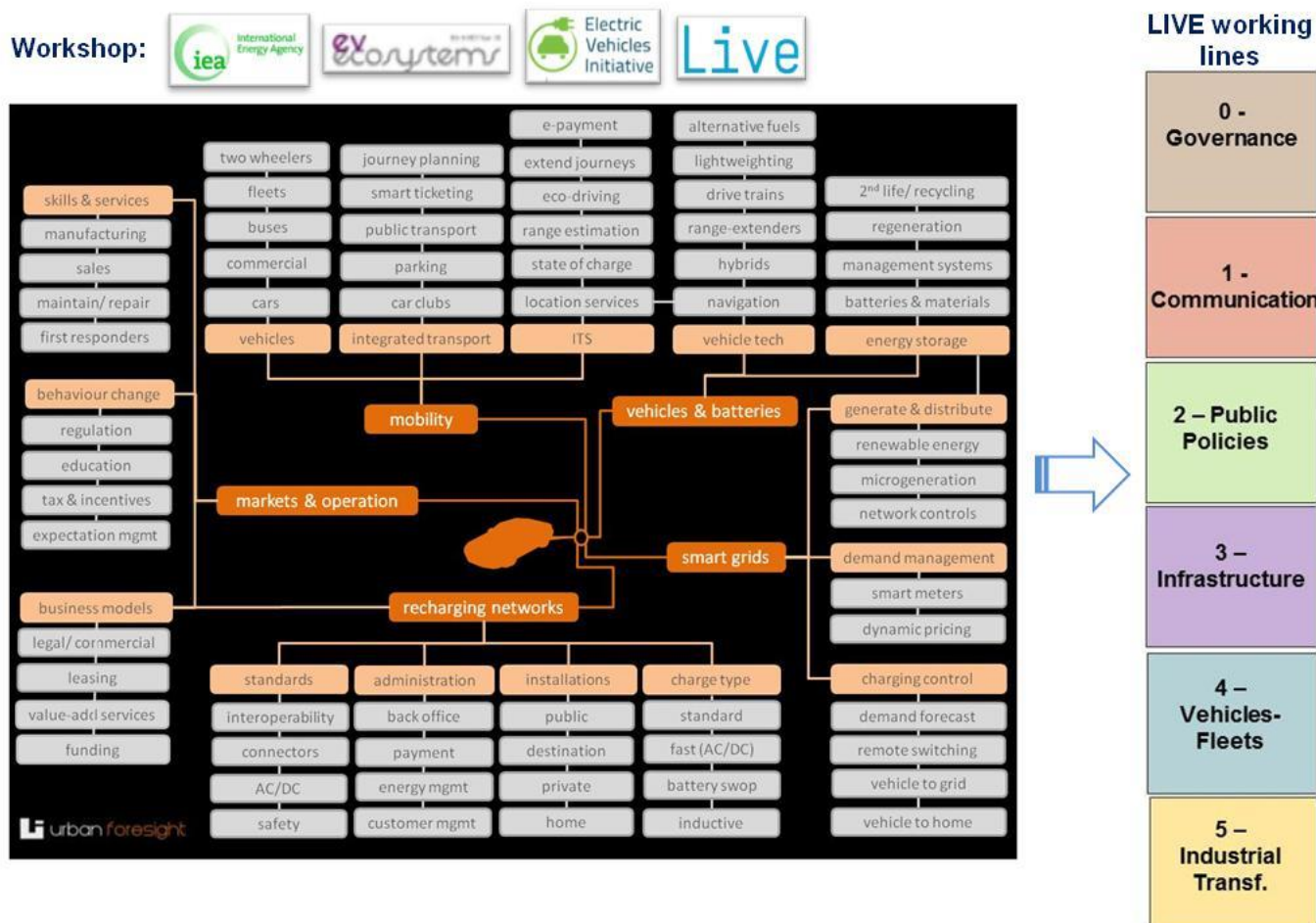


ACTIVITIES



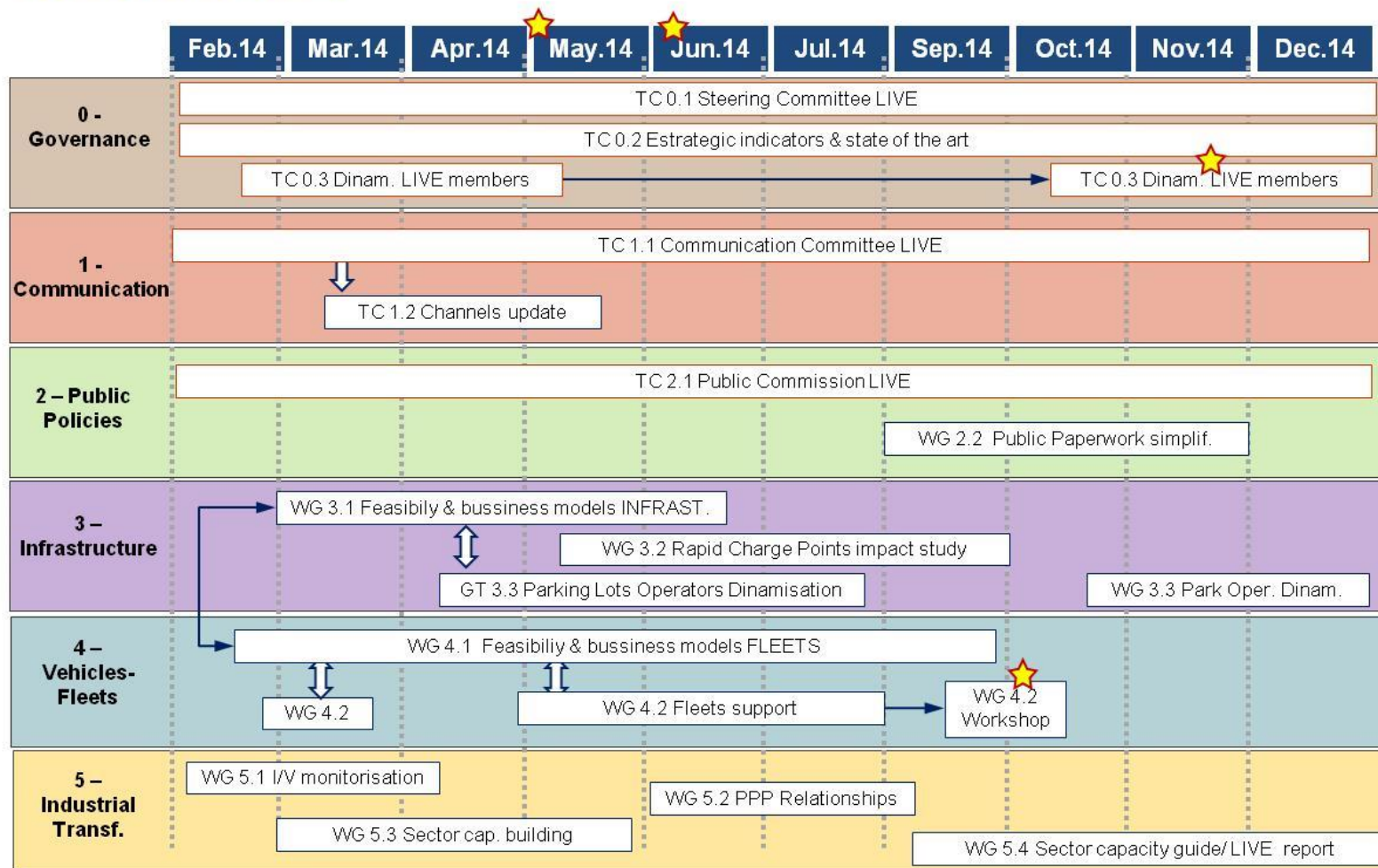
LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

LIVE 2014 Action Plan:



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

LIVE 2014 action plan:



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

KNOWLEDGE & COMMUNICATION: Events and Citizens activities



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

KNOWLEDGE & COMMUNICATION: Website, Social Networks and Publications



www.livebarcelona.cat



@LIVEprojectBCN



[www.facebook.com/pages/
LIVE-Barcelona-Vehicle](http://www.facebook.com/pages/LIVE-Barcelona-Vehicle)

facebook

LIVE Magazine



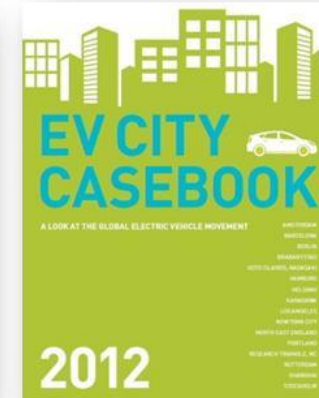
LIVE Brochure-Map



EV Users Guide

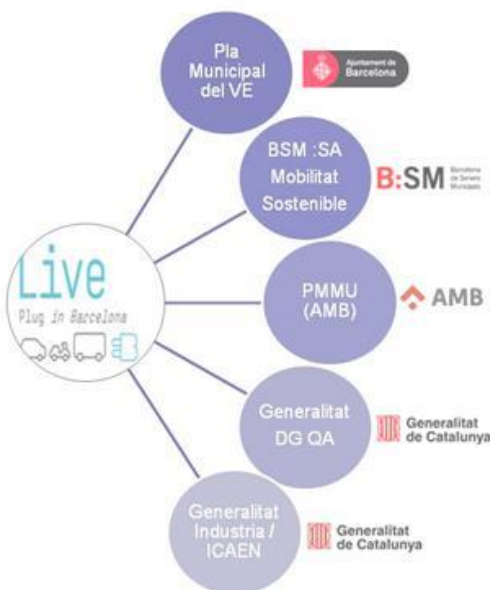


EV City Casebook



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

Public Commission LIVE:



Existing policies and incentives for EV:

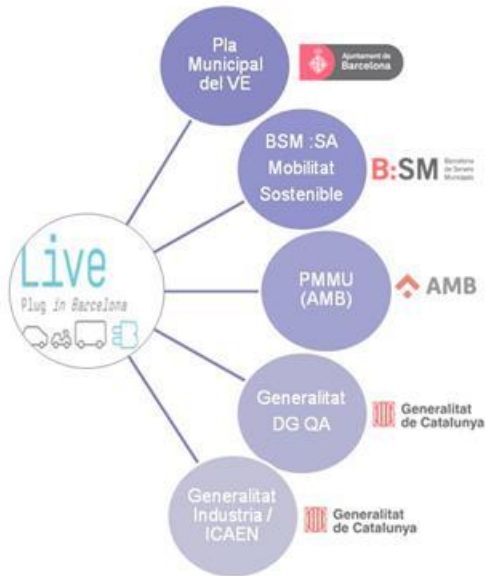
- Tax benefit : 75% reduction in annual road tax
- Regulated Tarif to park in blue and green areas of 0€ for Barcelona residents.
- New public parking lots constructed have a 2% of spaces with CP required
- Reduction in highway tolls
- Permission to circulate in High Occupancy Lanes
- Grants for efficient vehicles purchase: Pla PIVE 5

Nous incentives detected/ in process:

- Grants for local administrations to purchase EV and e-bikes (AMB)
- **Grants to purchase low emission professional vehicles** (in process)
- Up to 8% reduction in company taxes for investment in reduction of CO2 emissions
- Grants for residential buildings rehabilitation that include installation of Charging points for EV

LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

Public Commission LIVE:



- Public CPs network + 13 Fast PdR (Trio)
- 8 semi rapid CPs for DUM
- Incorporate electric needs in taxi regulations
- Proves e-moto GU
- Procurement of 18 eBuses (TMB)
- Urban Mobility Plan
- ExpoElectric, Smart Moto, FormulaS,
- European Projects (FP7 i H2020)
- Etc



- Installation of **250 CPs in BSM parking lots** through 2014-2015 (990.000 € investment)
- Possibility to **rent parking spaces** with access to electric charge (**no extra cost** for the installation of the PdR)
- Inclusion of **10 electric scooters and 5 electric vehicles** a la flota de BSM



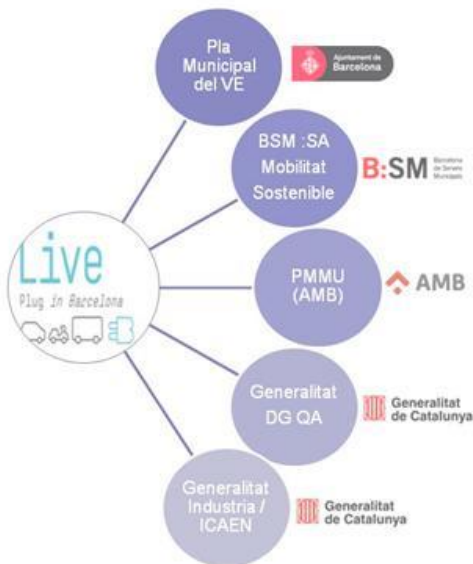
LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

Public Commission LIVE:



Subprogram for the promotion of EV (included in sust. Mobility program) for 2014-15: 1.220.000 €:

- Installation of 10 fast CP in agreement with OEMs
- Grant for public fleet EV procurement
- Procurement of 100 electric bikes for city workers
- Grant for electric bikes purchase
- Elaboration of a guide with municipality directives for the promotions and use of electromobility.



- **Air Quality Improvement Plan (DGQA):**
 - Environmental Quality Guarantee Badge
 - Green purchase guides (public procurement and citizens) , etc.
- **Estrategic plan for Sustainable Mobility (RIS3CAT Acció/DG Industria) (in process)**
- **Energy and Climate Change Plan for Catalunya 2012-2020** Catalunya 2012-2020 + indicators + map

LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

FLEETS AND TEST-BEDS

LIVE promotes the introduction of electric vehicles in both private and public fleets and offers the city for testing in urban real environments:

- Conversion of electric public transport: taxis, minibuses
- Sharing systems with different types of advanced electric vehicle
- Transformation of car rental companies more traditional
- Sustainable tourism mobility projects
- Distribution of goods hyper-center city with electric vehicles
- Solutions intermodal urban and interurban transport.

n^{er} EV in Public Fleet	310
Little Van	174
Middle Van	44
Big Van	36
Tourism	3
Special vehicles	2
Motorbikes	9
n^{er} EV Private	209
Motorbikes	114
Tourism	67
Vans	2
Moped	26
Total EV	519



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

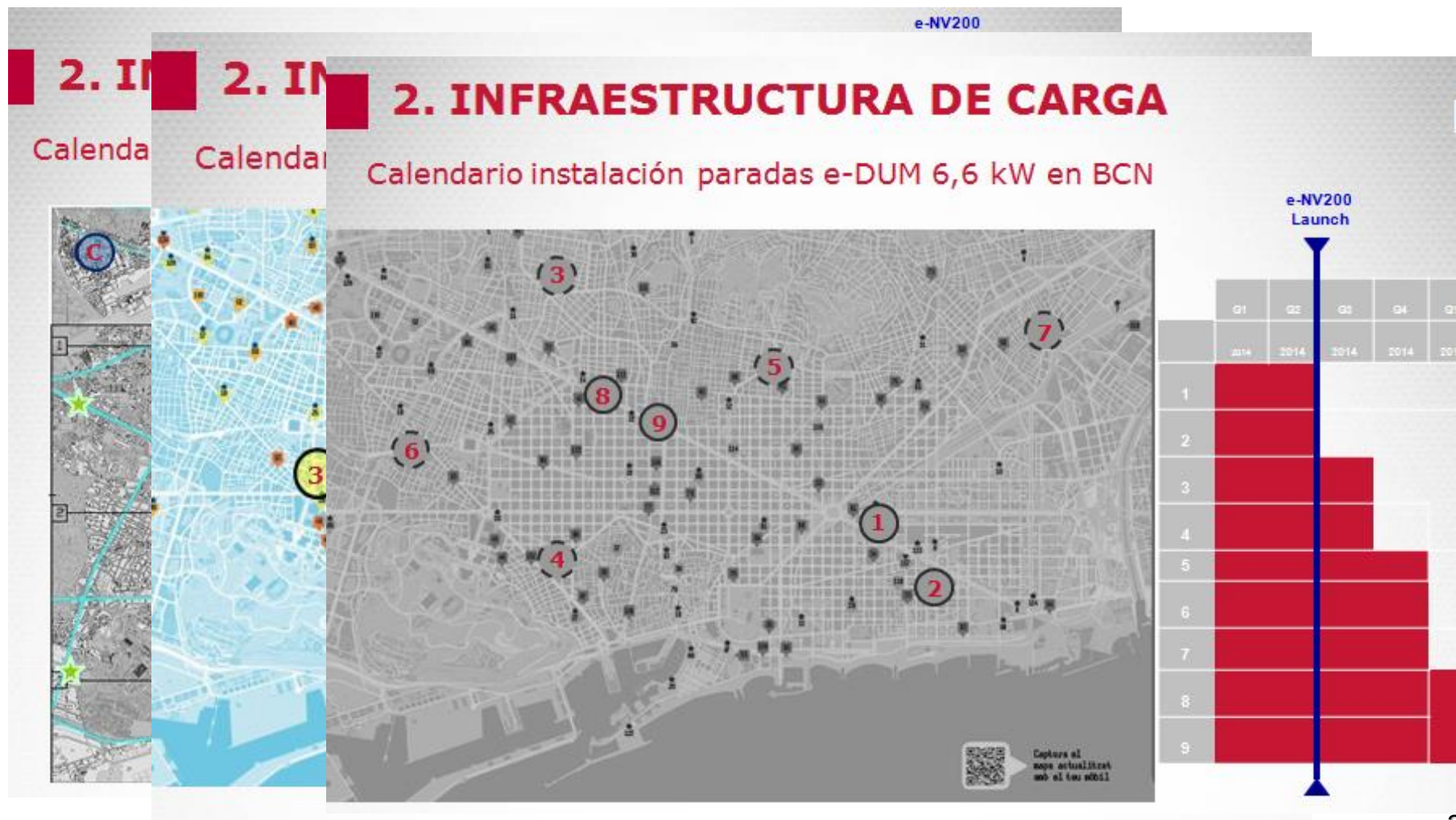
INFRASTRUCTURE AND ENERGY

LIVE Platform collaborates in planning the deployment of the network required for charging electric vehicles and the necessary infrastructure for service management.

Currently more than 240 EV Public
Recharge Stations in Barcelona City



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

INNOVATION AND INDUSTRIAL TRANSFORMATION

SUPPORT ENTREPRENEURS



SUPPORT TO INNOVATION



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

INNOVATION AND INDUSTRIAL TRANSFORMATION

SUPPORT TO UNIVERSITY



SUPPORT TO INDUSTRIAL TRANSFORMATION



LIVE Barcelona: Strategic EV Implementation Plan in Barcelona

INNOVATION AND INDUSTRIAL TRANSFORMATION

SUPPORT TO NEW BUSSINES MODELS



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INTERNATIONAL NETWORK



International Energy Agency

MEMBER COUNTRIES

Austria	France	Italy
Belgium	Germany	Japan
Canada	Greece	South Korea
Czechia	Ireland	Spain
Denmark	Italy	Sweden
Egypt	Japan	Switzerland
Finland	South Korea	United Kingdom
France	Spain	United States

HYBRID & ELECTRIC VEHICLE IMPLEMENTING AGREEMENT

Task 18 members:

Austria	France	Italy
Belgium	Germany	Japan
Canada	Greece	South Korea
Czechia	Ireland	Spain
Denmark	Italy	Sweden
Egypt	Japan	Switzerland
Finland	South Korea	United Kingdom
France	Spain	United States

ONGOING TASKS

Task 1, Information Exchange
Collects, analyzes, and disseminates information

Task 10, Electrochemical Systems
Forum for current issues in advanced batteries

Task 14, Market Deployment of Electric Vehicles: Lessons Learned
Analyzed past EV demonstrations to identify best practices

Task 15, Plug-in Hybrid Electric Vehicles
Focuses on how PHEVs can address real market needs



COOPERATION

Green eMotion

molecules

smartCGM

Overview of the project consortium

CONSORTIUM

CONTRACTORS

ADVISORS

SPONSORS



Electric Vehicles Initiative

CLEAN ENERGY MINISTERIAL

CLINTON CLIMATE INITIATIVE

International Energy Agency

C40 CITIES

UCDAVIS PLUG-IN HYBRID & ELECTRIC VEHICLE RESEARCH CENTER

Rocky Mountain Institute

Live Plug in Barcelona

SEAT

endesa

SIEMENS

B:SM

Generador de Catalunya Institut Català d'Energia

IDAE

evs | 27

Organized by:

Fira Barcelona

avele

Hosted by:

AVERE

INER

In collaboration with:

EVMA

EDTA

Thank you!

Ramon Pruneda

Contact Details

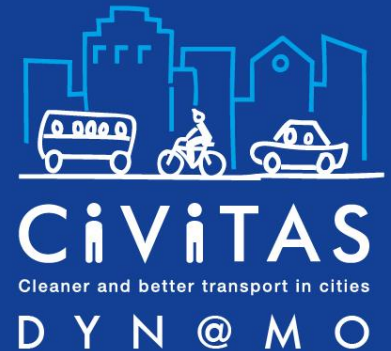
Barcelona City Council

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<http://www.livebarcelona.cat>

<http://www.civitas.eu>



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