Draft Proposal for a Global Road Map for De-carbonization of the Transport Sector

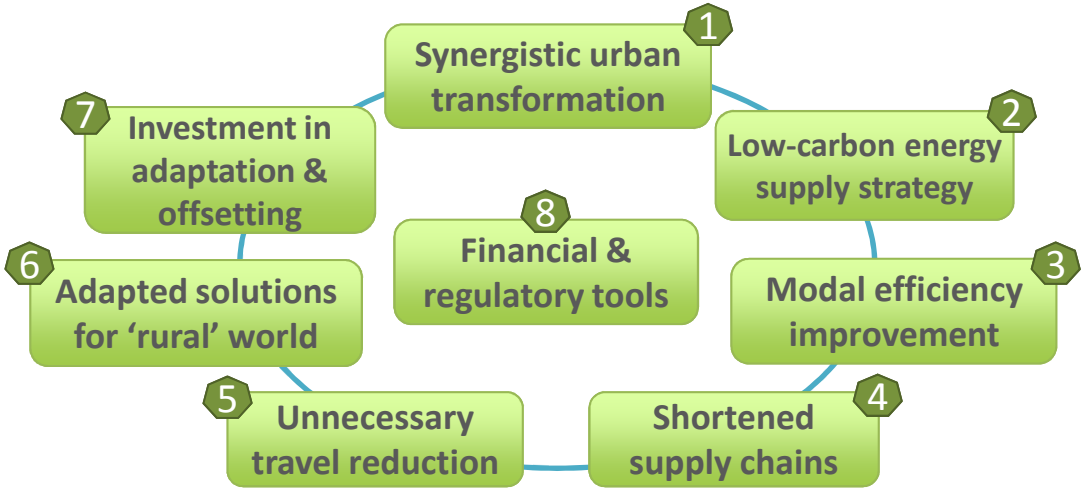
"Re-defining climate ambition" IEA workshop

Paris – June 20th, 2016

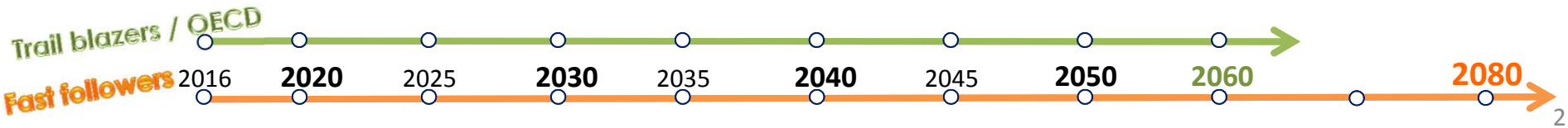
Dr. Patrick Oliva, Michelin

Ambition and 8 priorities of draft roadmap

Put us on track for a **'zero net emission' economy early in the second part of the century,** to secure a 'well below 2°C' landing by century end.

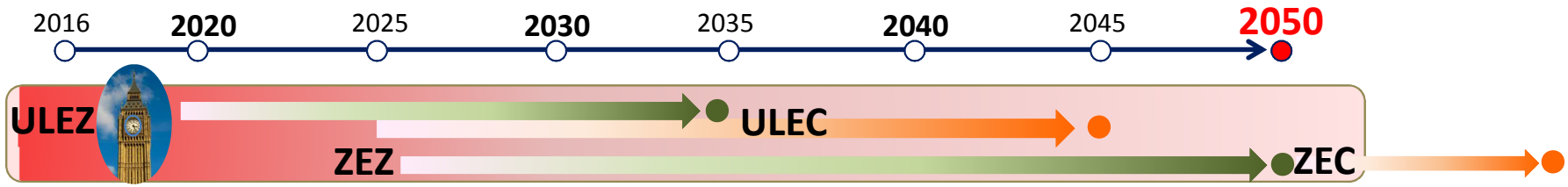


- Make innovation take center stage
- Avoid, Shift, Improve, Enable
- Key Building Blocks are NOW in place already
- Institutional Synergy & Simultaneity
- To be presented in Marrakesh



Focus on synergistic urban transformation

Leverage aspiration for healthier, inclusive lifestyles to drive de-carbonization



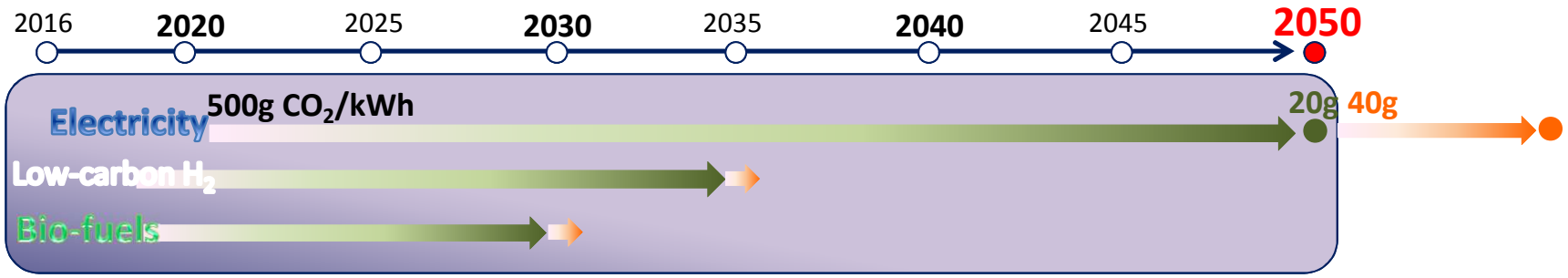
- **Expand ULEZ concept (e.g. London) to include GHG emissions**
- **Move towards ultra-low emission cities (ULEC), before moving to zero transport emission ZEZ/ZEC.**
- **Realize efficient and effective market for new services and technologies.**
- **Maintain local mandate for urban transport policies**

Modal Shift	More walking & cycling high service quality, connected, seamless mass transit solutions (dedicated lanes + rail promotion in dense habitat areas)
Technology	ITS development and hydrocarbon (fossil or bio) combustion reduction (more electric powertrains)
Redesign	Inner city community planning & last mile freight delivery optimization
Finance	New business models & PPP promotion

Suggestions:

- **----- Develop joint SUMP/ULEC approach ----- Work with Covenant of Mayors**

A three-pronged low-carbon energy strategy



- **In addition to low-carbon electricity, sustainable bio-fuel & hydrogen industries are indispensable by 2025/2030 at the latest to significantly start de-carbonizing transport.**
- **An exhaustive low-carbon energy plan is a must for the world.**

Renewables	Essential for low-carbon & decentralized electricity generation
Batteries	Battery industry must be strengthened for secured supply
Bio-hydrocarbons	Sustainable bio-kerosene (aviation) & other bio-fuels are required (road, rail, boats) for internal combustion engines
Hydrogen	Low-carbon hydrogen industry indispensable for transition to electric powertrains, (in addition to battery, supercaps, and power electronics industries).

Orchestrate modal and system efficiency improvement

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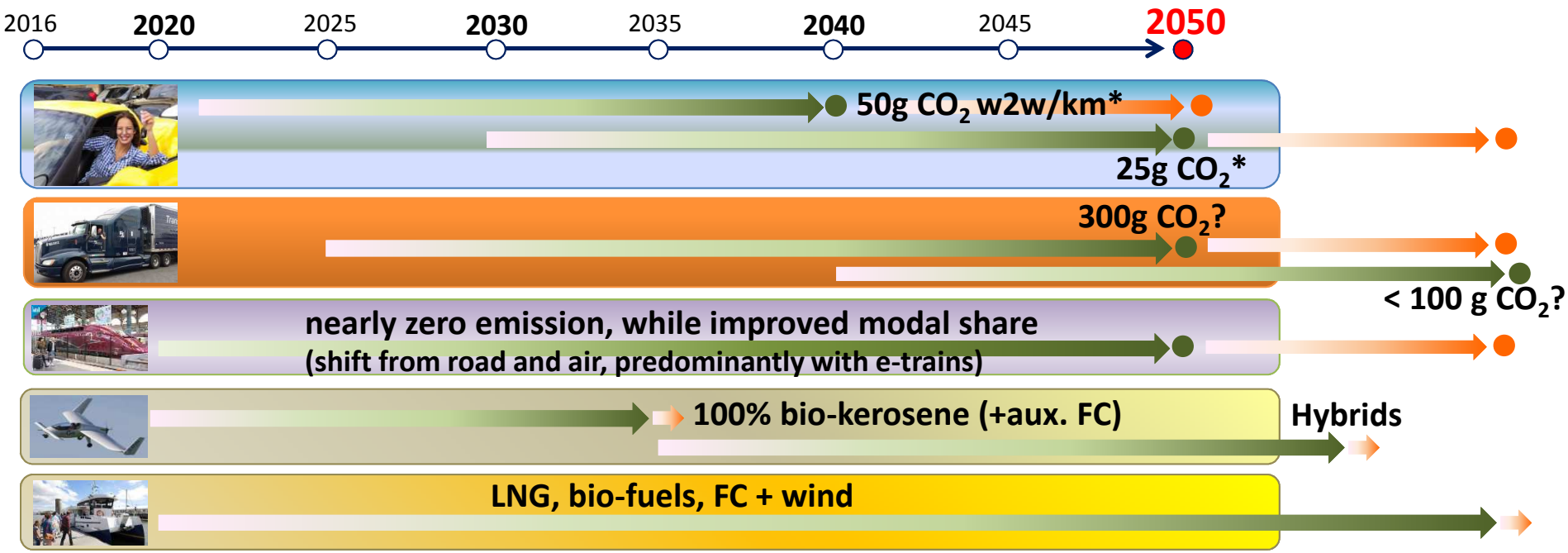

*include CO_2, NO_x and particles in negociated objectives

- Post 2020 emission standards trajectories must extend to 2050, at minimum.
- Encourage co-modality and modal shift to most efficient solutions, based on evidence of performance improvement.
- Optimize the whole multi-modal system as this is perhaps where transport policy can have the greatest impact.

Engineer financial & regulatory tools to support low-carbon solutions

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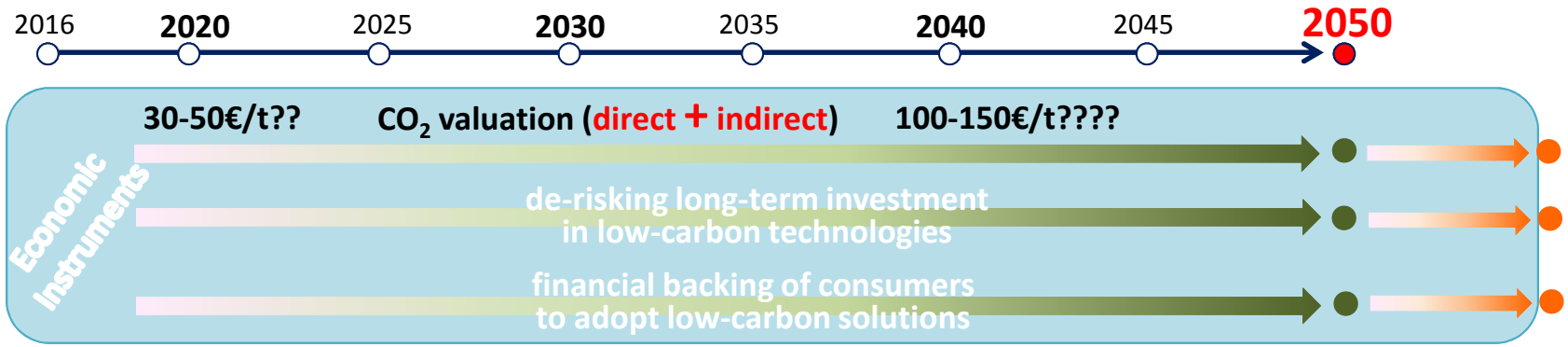

Launch reflection on targeted financial and regulatory tools (externality pricing, fiscal incentives to rapid investment in long-term low-carbon solutions, standards, level playing field and risk cover measures…).

Support an accelerated transport de-carbonization through global standards & technology transfers.

Suggestion:

Complementary Strategies

2016 **2020** 2025 **2030** 2035 **2040** 2045 **2050** 2060 2080

Supply chain Redesign + modal shift

20% km optimization?
10% shift?

Shorten and improve supply chains

Circular economy and industry 4.0 schemes will help re-design supply chains (local & long haul). A public/private workstream on this issue must be launched without delay.

Less unwanted travel through Smart Working

Reduced Congestion
50% less commuting kms?

Avoid unnecessary travel / Promote shared commuting

Side impacts of mode sharing, teleworking from shared remote offices …. on behaviors and the economy may be hugely positive. Strong action in this area must be coordinated, once again , to create business opportunities.

Rural planning

E-Charging (individual or collective) accessible to
50% of the rural population?
50% supplied by bio-fuels?

Deploy pertinent solutions for 'rural' population

Infrastructure planning should in particular take into consideration that decentralized electricity or renewable energy generation is favored in rural areas, with potential considerable benefits. Car pooling to be widely promoted.

Adaptation + Offsetting Strategy

Invest in adaptation, economy resilience and offset strategy

By 2060/2080, the temperature will have increased and the transport sector will not be 'zero-emission'. From now on:
1/ strengthen efforts in adaptation and make our economy more climate-resilient
2/ start imagining and implementing EU-wide, large scale offsetting solutions (unless other sectors become GHG positive enough to counterbalance mobility/transport externalities, which is doubtful).

PPMC is an Open-Ecosystem and is Ready to Work with all of You.

Thank you!

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Send your comments to:

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