





Shaping the future

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PTW & Scooter Fleet Evolution and Forecast



 Mono-directional, linear paths are progressively being replaced by multi-purpose and multi-destination routes. This is true for business as well as for leisure



Acknowledge reality

- Main market forces
 - Brands and products
 - Increasing mobility challenges
 - New needs
 - Congestion
 - Leisure (tourism & sport)
 - Exogenous factors (economic situation, oil cost and scarcity, taxation etc)
- Implications in terms of
 - Road Safety
 - Environment



- Manufacturer's objective: maximize the opportunities of PTWs in transport by addressing challenges
- Key role to be played by Institutions and stakeholders at EU, national and local level in developing initiatives towards this objective





Road Safety



November 2008 edition!

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The Industry Strategy

- Exploit and improve the knowledge
- Integrated approach through ACEM Safety Plan for Action:
 - Act on the product
 - Act on the human factor
 - Act on the infrastructure
- Cooperate with institutions and stakeholders





- Most frequent accident contributing factor: a perception failure by the OV drivers
 - 37% of all MAIDS cases
 - 72 % of the drivers' failures
- Loss of control mostly related to braking: 13 % of all cases (41 % of all cases involving loss of control)
- PTW riders: largely responsible for PTW fatal accidents
 - 52 % of fatal cases
 - 64% of moped fatal accidents



- 40% of moped fatal accidents occur at travel speeds over 50 km/h
 - Speed: not a cause of accident, but an obvious worsening factor
 - An objective indication of the significance of tampering
- Accident related technical failures: 5%
- 9.1% of ejected rider helmets during crashes reported in MAIE ETSC World Health Organization
- Use of crash helmet reduces the incidence of fatal head injuries by 50%
- MAIDS recorded 3417 injuries from 921 accidents



ACEM Commitment on Advanced Braking Systems





ced Braking Systems

Act on the product

 2004 - ACEM
manufacturers committed to develop the offer of street
PTWs equipped with
advanced braking systems.
By 2010, the majority will be
available with advanced
braking systems.

2008 - ACEM manufacturers agreed to renew the commitment to the EU Road Safety Charter, establishing a further 75% objective by 2015



ACEM Commitment on Advanced Braking Systems



- The commitment ensures the large-scale deployment of all systems
 - CBS, F-ABS, R-ABS, ABS, Combined ABS, ABS-PBS, Integral ABS,



- Multitude of possible combinations, a wide variety of solutions adapted to:
 - Main purpose of the products,
 - Distinctive characteristics
- Cost-effectiveness of the technical solutions Shaping the future 5th ACEM Annual Conference – Brussels, 1.12.2008



ACEM Commitment on Advanced Braking Systems



- The commitment ensures the large-scale deployment
 - of all systems
 - on all PTWs





• A legislative approach would be detrimental to the variety of systems, potentially freezing innovation





Conspicuity





Act on the product

- 2003 ACEM manufacturers jointly agreed to fit all PTWs with "Automatic Headlights On" commitment.
- ACEM proposed to integrate this provision in UNECE and EU MP & MC technical regulation
- ACEM is currently involved in research on PTW conspicuity





Vehicle Integrity

Act on the product

- ACEM proposes additional moped anti-tampering measures in technical regulation
- Periodical inspection should contribute to reduce
 - Moped tampering
 - Technical failures

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• ACEM calls for the inclusion of PTWs in the scope of Roadworthiness Tests Directive (96/96/EC)





Training

Act on the human factor

- ACEM proposes compulsory Initial Rider Training focusing on hazard perception and awareness
- Content will be proposed based upon Initial Rider Training project



and instructors' expertise

In future 3DLD context, ACEM favours tailored training against testing in progressive access



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Rersonal Protective Equipment



2007 pilot campaign "Wear & Lock"



Act on the human factor

- Increase the awareness to use appropriate personal protective clothing amongst the different user groups
- Need to investigate problem area's (e.g warm climate) and initiate research
- ACEM will develop new pan-European Integrated Helmet campaigns



Infrastructure





Fahre Vorsichtig



TEA CUIDADO



Cooperate with institutions and stakeholders

- Develop use of ACEM handbook on 'guidelines for PTW-safer road design in Europe', towards road engineers
- Develop awareness on infrastructure limitations towards riders





Safer Urban Mobility





Cooperate with institutions and stakeholders

- Develop relationships between ACEM and major cities & city networks
- ACEM is active member of
 - The eSUM EU co-funded project led by the city of Barcelona
 - The EURSP initiative led by POLIS







Education & Enforcement





Cooperate with institutions and stakeholders

- Education & enforcement demonstrated concrete results in some Member States
- ACEM supports fair and effective enforcement
- ACEM engaged dialogue with TISPOL motorcyclist WG and other stakeholders





Environment



The Industry Strategy

- Representative measurement through accurate and specific test cycles
- Equal treatment between OE and non-OE, as a prerequisite for fair competition and effective regulation
- Enforcement and periodical inspection



Introduction of Euro X



- Started in 1999
- 7 years behind PCs
- Latest status : Euro 2 MP (2002) Euro 3 MC (2006)



A Decade of Progress

Limit Values MC Class II (>150cc)



Moped 2S/4S (50 cc)



Motorcycles

- ECE 40 Euro 3's gap
 - 94 % reduction of CO and HC
- 50 % reduction of NOx Shaping the future

Mopeds

- ECE 47 Euro 2's gap
 - 88 % reduction of CO
 - 76 % reduction of HC + NOx



Future introductions of PTW Euro X



- ACEM proposes the introduction of the following stages
 - 2012: Euro 3 MPs & Euro 4 MCs
 - 2015: Euro 5 MCs, parity with PCs





MC parity with **PCs**

- Euro 4 = 25 % / Euro 3
- Euro 5 = Parity with Euro 5 PC
 - earliest possible proposed implementation dates (subject to legislative process)

New test cycle "WMTC"





CO2



Source: LAT

Contribute to CO2 reduction

- PTW CO2 contribution to transport CO2 emissions
 - Is marginal
 - Will remain marginal
- ACEM manufacturers support CO2 measurement as part of next Euro 4 stage



Noise

normal riding/driving • • • aggressive riding/driving



from EEC Version

Better regulation

- MCs and PCs emit similar noise levels, with exceptions:
 - Aggressive riding
 - Illegal or "almost legal" exhausts
- ACEM supports the revision of UNECE R41 for an improved control of noise emissions for MCs
- ACEM pleads for equal treatment of OE and non-OE silencer manufacturers at type approval

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in only 1 secon



Noise





Awareness & enforcement

- Increase awareness among the motorcycle community about
 - Sale and use of illegal silencer systems (SS)
 - Inappropriate riding behaviour
- Best contribution to noise reduction:
 - Fair and efficient enforcement
 - Periodic inspection through inclusion in the scope of RWT Directive (96/96/EC)





Looking ahead













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New safety technologies

- Active safety
 - Adaptive lighting
 - Tyre pressure monitoring
 - ESC
 - Advanced Braking Systems...
- Passive safety:
 - Airbag: a first market experience —
 - Other applications under research
- ITS
 - 2008: first V2X prototypes tested
 - **BMW: Intersection Assistant** •
 - Honda: Advanced HMI Concept







Looking ahead





New propulsion technologies

- From today's reality up to tomorrow's:
 - Bio-fuels
 - Hybrid
 - Electric
 - Fuel-cell technologies







Conclusion

- Industry commitment to shaping the future of motorcycling
 - Improve safety
 - Reduce the impact on environment
 - Further benefit from PTW mobility advantages
- Key role for Authorities and Stakeholders
 - Cooperation & coordination,
 - Better, simpler and worldwide harmonized regulation ensuring industry competitiveness and job creation
 - Encourage R&D and taking-up of innovations



