Advanced Safety Systems in Automotive

Automotive Summit 2013

Bangkok, June 21st, 2013
Agenda

1. Continental Automotive AG
2. Road Traffic Safety Epidemic
3. Trends of Automotive Legislation for Road Safety
4. Active and Passive Safety Evolution
Since 1871 with headquarters in Hanover, Germany
Sales of €32.7 billion
169,639 employees worldwide
291 locations in 46 countries
One of the top 5 in the automotive supplier industry

Sales by division in %
- Tires 29%
- Chassis & Safety 21%
- Interior 20%
- Powertrain 19%
- ContiTech 11%

Status: December 31, 2012

Continental Corporation
Overview 2012
We Shape the Megatrends in the Automotive Industry:
Safety, Environment, Information, Affordable Cars

Doing more.
For safe mobility.

Doing more.
For clean power.

Doing more.
For intelligent driving.

Doing more.
For global mobility.
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World Health Organization
“The Hidden Global Epidemic”

Over 1.2 million die in road accidents every year
A further 50 million are injured

Traffic accident statistics
Thailand

Cost of Road Accident*
- Permanently impaired: 775,445 baht
- Deceased: 937,626 baht


* Cost per person per year
Crash Causation

95% of all road accidents involve some human error, in 76% of the cases the human is solely to blame

Misjudging, driving dynamics, weather: 50%

Distraction: 38%

39% of passenger vehicles and 26% of trucks do not activate brakes before a collision, some 40% more do not brake effectively

Underlying causes: alcohol, inexperience and tiredness

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Trends of Automotive Legislation for Road Safety
Active Safety Technologies

ABS and ESC Animation
Legal Demand
Mandated Active Safety Technologies

ABS = Anti-lock Brake System; BA = Brake Assist; ESC = Electronic Stability Control; AEBS / LDWS = Advanced Emergency Braking System / Lane Departure Warning System; ACEA = Association des Constructeurs Européens d'Automobiles (EU); EC = European Commission; NHTSA = National Highway Traffic Safety Administration (USA); Contran = National Council of Transport (Brasil); MLIT = Ministry of Land, Infrastructure, Transport and Tourism (Japan); MLTM = Ministry of Land, Transport and Marine Affairs (South Korea)
## Consumer Demand
### NCAP Worldwide (New Car Assessment Programme)

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<tr>
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<th>Overall score rating</th>
<th>Active Safety Functions</th>
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<td>ESC</td>
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- ★ System is relevant for star rating
- ○ Not relevant for star rating, but indicated as: available / not available — standard / optional
- ⊙ System is under consideration for introduction into star rating
- ⊗ No indication for introduction of the system into star rating

June 21st, 2013
Thai Automotive Industry Master Plan 2012-2016

III. Challenges for Thailand
Thailand – Vision 2021

"Thailand is a global green automotive production base with strong domestic supply chains which create high value added for the country."

Strategic Plan
(3 COEs + 2 ENVs)

COE-1 Technology R&D
- Alternative energy
- Light weight vehicles
- Vehicle Safety
- Advanced Production Technology

COE-2 Human Resource
- AHRDI*
- Academic & CPD CURRICULUM
- Certification System
- AHRD Alliance

COE-3 Suppliers Development
- Investment Promotion for Supplier Development
- REM Development
- Green supply chain

ENV-1 Infrastructure
- Testing, R&D
- Logistics
- Information technology

ENV-2 Government Policy
- Policy Integration
- TAX Restructuring Support Green Products
- Promote Investment Promotion for Green Products and Suppliers
- Encourage Market Expansion for REM

COE: Center of Excellence
ENV: Environmental friendly
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Active and Passive Safety Evolution

ContiGuard®

Integrated Safety = Active Safety integrated with Passive Safety

All measures to prevent an accident or to minimize the effects of an accident

All measures to protect the occupants and vulnerable traffic participants against injuries caused by an accident

- ContiGuard® is Continental’s contribution to a traffic without fatalities & serious injuries (Vision Zero)
- ContiGuard® represents Continental’s Integrated Safety System
- The technology basis is scalable, value for money & cost attractive throughout all functional levels. ContiGuard® strives to provide “Safety for Everyone”
Active Safety System
EBA (Emergency Brake Assist)

VDO of EBA
Thank you for your attention!