行政院所屬各機關因公出國人員出國報告書

（出國類別：其他(國際會議)）

# 亞太經濟合作會議（APEC）
# 第四十五次運輸工作小組會議報告

服務機關：交通部
姓名職稱：劉信宏科員
出國地點：韓國首爾
出國期間：107 年 4 月 22 日至 4 月 25 日
報告日期：106 年 7 月 25 日

# 目　　錄

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# 亞太經濟合作會議第四十五次運輸工作小組會議報告

## 一、會議目的

整合 APEC 區域內運輸系統，發展智慧型運輸科技，訂定運輸技術與安全標準，促成運輸技術合作，並加速運輸部門自由化，以促進亞太地區之貿易自由與經濟發展。

## 二、會議時間與地點

會議時間：107 年 4 月 22 日至 4 月 25 日。

會議地點：韓國首爾 Lotte Hotel Sogong-dong。

## 三、我國與會代表

我國出席本次運輸工作小組會議代表團成員共計 19 人，由交通部運輸研究所副所長黃新薰博士擔任領隊；出席會議代表依路、海、空及複合運輸領域分工，詳如下表：

出席人員單位職銜及分工

| 序次 | 姓名 | 單位 | 職稱 | 備註 |
|---|---|---|---|---|
| 1 | 黃新薰 | 交通部運輸研究所 | 副所長 | 領隊 |

| | | | | |
|---|---|---|---|---|
| 2 | 邱佩諄 | 交通部運輸研究所 | 研究員 | 複合運輸 |
| 3 | 劉建邦 | 交通部科技顧問室 | 技正 | 複合運輸 |
| 4 | 饒智平 | 交通部航港局 | 組長 | 海運 |
| 5 | 許家駒 | 交通部航港局 | 科長 | 海運 |
| 6 | 陳勁睿 | 交通部航政司 | 副研究員 | 海運 |
| 7 | 劉信宏 | 交通部路政司 | 科員 | 陸運 |
| 8 | 楊雅萍 | 交通部道路交通安全督導委員會 | 專員 | 陸運 |
| 9 | 朱衍達 | 交通部民用航空局 | 科長 | 空運 |
| 10 | 邱美珍 | 交通部民用航空局 | 技正 | 空運 |
| 11 | 張任緯 | 交通部民用航空局 | 專員 | 空運 |
| 12 | 周承霈 | 交通部民用航空局 | 技士 | 空運 |
| 13 | 吳昆峯 | 國立交通大學 | 助理教授 | 陸運 |
| 14 | 許志成 | 財團法人車輛安全審驗中心 | 處長 | 陸運 |
| 15 | 范建武 | 台北市航空貨運承攬商業同業公會 | 理事長 | 空運 |
| 16 | 陳惠智 | 車輛公會(國瑞汽車) | 理事 | 陸運 |
| 17 | 陳俊銘 | 臺灣港務股份有限公司 | 經理 | 海運 |
| 18 | 顏君聿 | 台灣經濟研究院 | 組長 | 專案 |
| 19 | 劉禹伸 | 台灣經濟研究院 | 副研究員 | 專案 |

我國代表團成員合影

## 四、 會議議程

本次 APEC 運輸工作小組(TPT-WG)會議包括全體會員大會及 4 個專家小組會議，並未循往例召開領隊、管理會議及次級專家小組會議，各次級專家小組討論議題納入其所屬專家小組會議議程中討論，由 4 個專家小組會議主席彙整其次級專家小組討論之共識，向全體會員大會報告，各日會議重點摘要如下：

(DAY 1) 4 月 22 日 星期日

| | 會議及主題 | 擬議出席代表說明 |
|---|---|---|
| 1400-1800 | 會前安排會議<br>(主事成員與各專家小組主席) | 代表團陸續到達 |

(DAY 2) 4 月 23 日 星期一

| 時間 | 會議及主題 | 擬議出席代表說明 |
|---|---|---|
| 0800-1200 | 代表團報到 | |
| 0900-1200 | 大會開幕式 | 全體代表出席 |
| 1200-1300 | 午餐時間 | |
| 1300-1900 | 各專家小組分組會議 | |
| | - 航空專家小組(AEG) | 請民航局朱衍達科長、邱美珍技正、周承霈技士、張任緯專員、台北市航空貨運承攬商業同業公會范建武理事長代表出席 |
| | - 陸運專家小組(LEG) | 請路政司劉信宏科員、道安會楊雅萍專員、交通大學吳昆峯助理教授、車輛公會(國瑞汽車)陳惠智理事、車輛安全審驗中心許志成處長代表出席 |
| | - 海運專家小組(MEG) | 請航政司陳勁睿副研究員、航港局饒智平組長、許家駒科長、台灣港務公司代表出席 |
| | - 複合運輸與智慧型運輸系統專家小組(IIEG) | 請科顧室劉建邦技正、台經院顏君聿組長、劉禹伸副研究員代表出席 |
| 1900-2030 | 歡迎晚宴 | 全體代表出席 |

(DAY 3) 4 月 24 日 星期二

| 時間 | 會議及主題 | 擬議出席代表說明 |
|---|---|---|
| 0900-1300 | 各專家小組分組會議 | |
| | - 航空專家小組(AEG) | 請相關代表持續代表出席 |
| | - 陸運專家小組(LEG) | 請相關代表持續代表出席 |
| | - 海運專家小組(MEG) | 請相關代表持續代表出席 |
| | - 複合運輸與智慧型運輸系統專家小組(IIEG) | 請相關代表持續代表出席 |
| 1300-1430 | 午餐時間 | |
| 1430-1600 | 各專家小組分組會議(準備總結報告) | |
| | - 航空專家小組 | 請相關代表持續代表出席 |
| | - 陸運專家小組 | 請相關代表持續代表出席 |
| | - 海運專家小組 | 請相關代表持續代表出席 |
| | - 複合運輸與智慧型運輸系統專家小組(IIEG) | 請相關代表持續代表出席 |
| 1630-1815 | 閉幕式 | 全體代表出席 |

## 五、陸運專家小組會議

1. 包含道路與軌道安全次級專家小組(Road and Rail Safety Experts Sub-Group, LEG-SAF)與車輛標準調和次級專家小組(Vehicle Standards Harmonization Sub-Experts Group, LEG-VSHG)議題。
2. 由副主席韓國 Jae-Pyoung Lee 先生擔任代理主席(原澳洲主席 James Marcus 先生退休)。
3. 參與會員體有澳洲、加拿大、印尼、韓國、馬來西亞、巴布紐亞幾內亞、秘魯、俄羅斯、新加坡、中華臺北、泰國、美國及越南等 13 個會員體共 37 位代表出席會議。
4. 馬來西亞建議道路與軌道安全次級專家小組應繼續舉行，以確保軌道與交通安全議題討論之延續性，距離聯合國道路安全行動十年只剩 2 年，惟仍有許多議題尚未討論，LEG 確保會將 LEG-SAF 議題納入 LEG 議程中，如有需要將會要求舉行 LEG-SAF 次級專家小組會議。
5. 各會員體持續討論及分享 APEC 區域內車輛法規調和、技術發展及實施情況，促進 APEC 區域內連結性。藉

由深入的法規技術交流，探討 APEC 區域法規調和之重要性。此外，韓國持續向各會員體更新及分享「聯合國歐洲經濟委員會(UN/ECE)內陸運輸委員會第 29 工作小組(WP.29)」法規調和情形。

(1) 韓國於會中報告道路安全車輛法規調和UN法規、全球技術法規 GTR 及 2018 年工作計畫，包括調和 UN R107 安全出口數量規定、學校交通車強制裝設速限控制裝置、11 公尺以上客車或車輛淨重 20 公噸以上之商用車強制安裝自動緊急煞車系統(Advanced Emergency Braking System, AEBS)及車道偏移警示系統(Lane Departure Warning System, LDWS)、後方行人保護裝置等。我方向韓國洽詢 UN 107 導入實施對象是否包含使用中車輛，及改變車體結構是否影響安全性，韓國表示針對 16 人座以上之客車即為評估實施對象，且包含草案評估期間 2 年的緩衝，因此新型式自 2019 年 7 月 1 日、既有型式自 2020 年 7 月 1 日起實施，政府單位亦未提供相關補助，由車體打造業者及車主符合法規要求。越南則針對後方行人保護裝置提問，其技術

原理藉由鏡頭偵測行人位置以避免碰撞發生，且此項法規尚不包含機車。

(2) 我國於會中報告車輛型式安全審驗制度發展、國際車輛安全法規調和情形，亦於會中報告國際法規調和之優點及重要性。自 2006 年起我國即定期每半年檢討導入「聯合國歐洲經濟理事會(United Nations Economic Commission for Europe, UN/ECE)」車輛安全法規，包含既有規定新版本之調和修正及 UN/ECE 公告實施之新法規，以期持續與國際接軌。本次會中並以自動頭燈與晝行燈作動法規(3 種情境)符合性進行說明，若各個會員體對於特定法規未進行調和，將造成導入實施時對於法規符合性認知之差異，亦容易形成貿易障礙。因此各會員體報告車輛法規調和情況將有助於了解其法規調和導入狀況，並可針對特定法規符合性內容進行交流，亦可作為我國調和導入規劃之參考。韓國則回應我方，如自動頭燈與晝行燈作動原理等較為複雜之技術法規，一般消費者不會有此深入認知，因此法規深入交流探討有其必要性，亦可增加

APEC 區域內車輛法規之連結性。

6. 本次小組會議亦針對新興之自動駕駛車輛議題進行討論及報告：

(1) 韓國報告對於自動駕駛車輛政策藍圖，分為兩階段推動，第一階段為 2020 前達到自動駕駛等級 level 3 車輛商用化，第二階段於 2026 年發展準備 level 4 自動駕駛車輛。韓國於 2016 年發布自駕車測試允許相關規定，以利申請者提出及依循，目前已有 44 項申請。此外，韓國預計於 2018 年底完成測試場域 K-city 建置，K-city 以訊號控制塔控制場域內自駕車測試資訊交換，建構 3D 地圖及運用高精度 GPS 技術，提供自駕車測試模擬環境以蒐集資訊。馬來西亞則回應除了技術原理的分享外，亦應針對法規面，如標準、規範等有進一步探討。

(2) 加拿大報告針對自動駕駛車輛未來政策發展方向，推動上整合政府各部門，朝向更具效率、安全環境友善及便利性的目標，並預計投入近五千萬美金發展自動駕駛車相關規則與標準。加拿大也指出，未來推動必須克服的一大挑戰，由傳統駕駛人操控轉

為自動操控，須經由精密的感測、決策系統以達到安全化、自動化控制。

(3) 針對自駕車此類新興發展之運具，部分會員體積極投入封閉場域及開放場域之測試，可針對法規面、標準規範進一步研討，以了解各會員體目前對於自駕車發展政策及方向。

7. 美國及加拿大建議該專家小組中，有關 ITS 之議題可併入複合運輸及智慧型運輸系統專家小組(IIEG)進行討論，並提案進行半天與 LEG 的聯合會議，主席回應將向 IIEG 主席進一步研商，以利針對此議題有更深入之交流。

8. 我國於會中提出「APEC 區域機車傷亡統計及事故調查項目定義之參考手冊(Developing Guidelines for Motorcycles Crash Data Collection and Reporting in the APEC Region)」自籌經費計畫簡報說明，此計畫將藉由蒐集各國機車事故調查項目，研究最佳實務調查項目、建議至少列入的調查項目及對該項目的定義並以文獻回顧、問卷調查、專家會議、成果撰寫等方式進行，視情況在臺灣辦理研討會，邀請學者專家組織、

相關產業及 APEC 會員體參加，以共同改善 APEC 區域的交通安全。本項計畫由越南、馬來西亞、巴布亞紐幾內亞及韓國共同支持，並獲 LEG 採認。

## 六、結論與建議

1. 參加 APEC 會議可促進我國之能見度，而運輸工作小組會議之陸運專家小組討論議題，包含原有道路與軌道安全次級專家小組(LEG-SAF)及車輛標準調和次級專家小組(LEG-VSHG)就陸運安全、法規調和及創新科技應用等探討之面向，將有助於了解 APEC 各經濟體重要計畫、政策執行狀況及發展趨勢，並交流分享我國經驗，應持續派員參與會議。
2. 本次會議我國於陸運專家小組會議中報告車輛安全法規調和之優點及重要性，其除了減少各經濟體於調和導入車輛安全法規時對於法規符合性認知之差異，避免形成貿易障礙，有助於 APEC 區域內貿易發展，更能促進各經濟體對於法規導入項目及方向共識，建議各經濟體應持續更新目前導入 UN 法規之狀況，及關注全球法規調和論壇 WP29 相關活動及重點資訊。
3. 本次運輸工作小會議係首次合併次級專家小組會議

(LEG-SAF、LEG-VSHG)於陸運專家小組會議中討論，雖可適度整合相關議題，惟相較於以往對於道路、軌道安全及車輛標準調和之議題較無深入交流，建議未來仍可適時舉行次級專家小組會議，並視主題內容結合其他專家小組或次級專家小組共同舉辦。

4. 建議各專家小組會議可將重要之推動計畫或成果納入議程討論，俾延續相關工作之推動，重要之成果亦可提交於 TPT-WG 大會中報告，或適時納入年度工作計畫。

5. 我國可藉由國際會議場域，擴大培養我國國際人才，積極安排更多人員參加會議，包含政府機關、學術單位及民間機構，維持與其他經濟體之互動關係並培養人脈。

## 七、 附件

本次會議資料。

APEC
Asia-Pacific Economic Cooperation

Advancing
Free Trade for Asia-Pacific
Prosperity

# Overview of the Motor Vehicle Safety Type Approval in Chinese Taipei

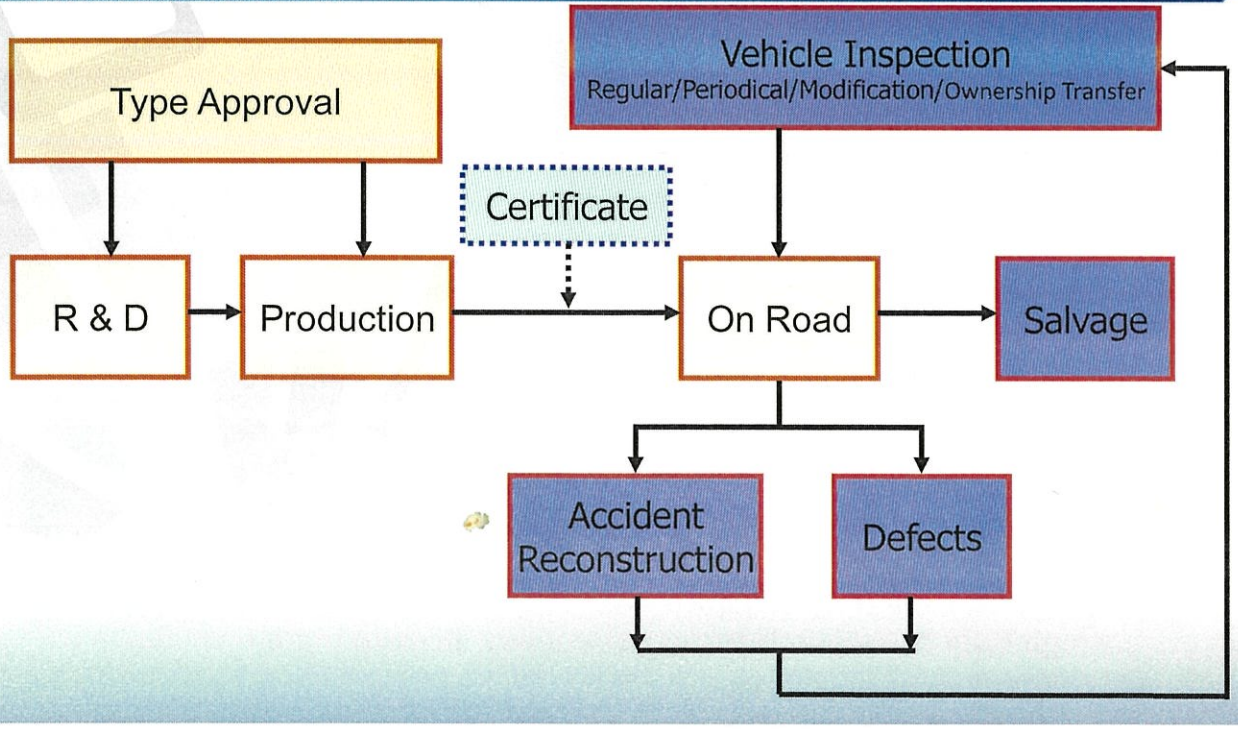
24 04 2018 – Seoul

Presented by
Simon HSU, Vehicle Safety Certification Center, Chinese Taipei



## Cycle for Securing Motor Vehicle Safety

APEC
Asia-Pacific Economic Cooperation



# Regulation Structure

Asia-Pacific Economic Cooperation

**Basic Act**

**The Highway Law** (Paragraph 5, Article 63)

**Subsidiary Regulation**

**Vehicle Safety Type Approval Management Regulations**

- ❖41 articles and 3 attachments
- ❖Effective since 29 January 2007

**Subsidiary Regulation**

**Vehicle Safety Testing Directions**

- ❖84 required testing items
- ❖Effective since 31 January 2007

**Harmonized with 66 UN Regulations**



# Structure of "Vehicle Safety Type Approval Management Regulations"

Asia-Pacific Economic Cooperation

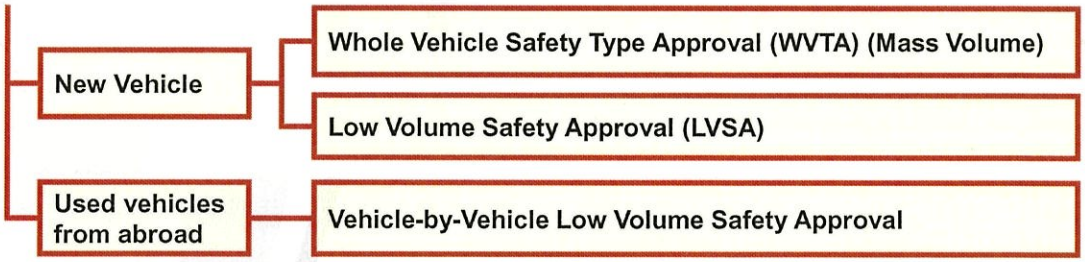
- Chapter 1 General Regulations
  - Definitions
- Chapter 2 Motor vehicle safety type approval
  - Qualifications, documents, procedures and so on
- Chapter 3 Accreditation of Technical Services
  - Qualifications, documents, procedures and so on
- Chapter 4 Verification, Supervision and of administration
- Chapter 5 Supplementary provisions
- Attachment 1 to 3

❖**According to paragraph 3 : The applicant shall apply for the tests conducted by technical services or certification institution to acquire test reports according to the vehicle safety testing directions. Then proceed with the application toward certification institution and acquire the Vehicle Safety Type Approval Certificate and then apply for registration, inspection and get the new license plate from the local Motor Vehicle Office.**

# Elements (1/2)

Asia-Pacific Economic Cooperation

- Vehicle safety type approval: the examinations conducted for the safety and specifications of motor vehicles before applying for the new license.

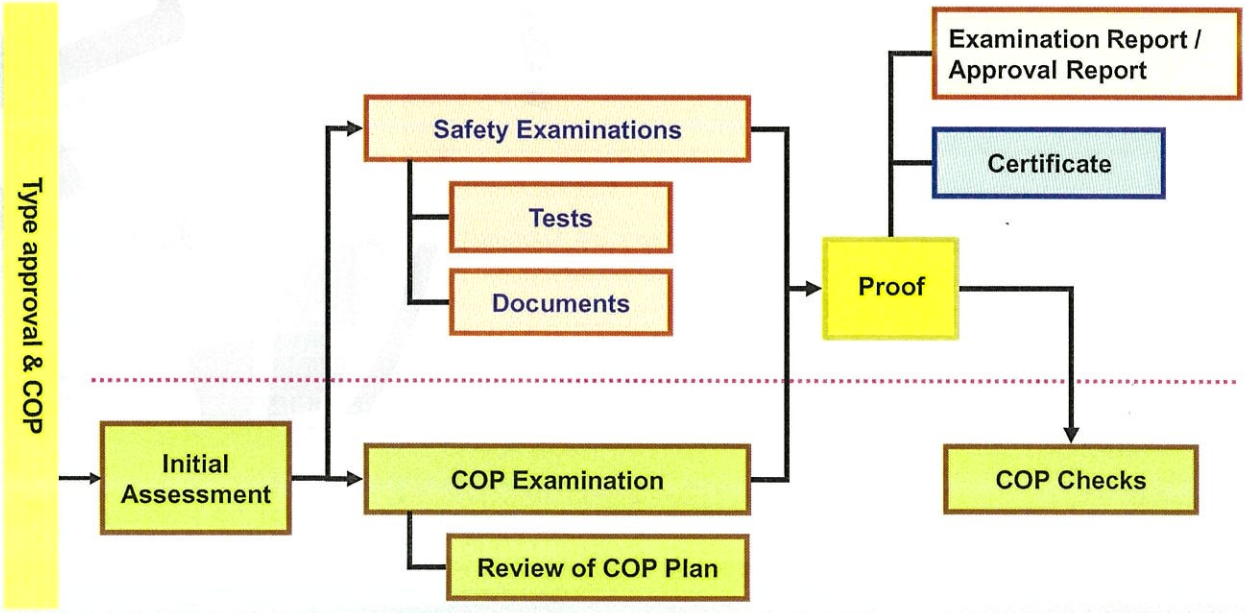



- Examination of conformity of production (COP): means review of COP plan and check of COP to ensure the mass-produced vehicle safety quality compliant with the approved vehicle under the vehicle safety type approval. The check of conformity of production includes the checks of annual reports, on-site checks and sampling inspection and testing.
- Technical Service: Domestic or foreign institution, which obtains the approval from MOTC for safety inspection and testing of vehicles or its devices.
- Certification Institution: The domestic professional vehicle institution authorized by MOTC to process relevant affairs of vehicle safety type approval.



# Elements (2/2)

Asia-Pacific Economic Cooperation



# Infrastructure

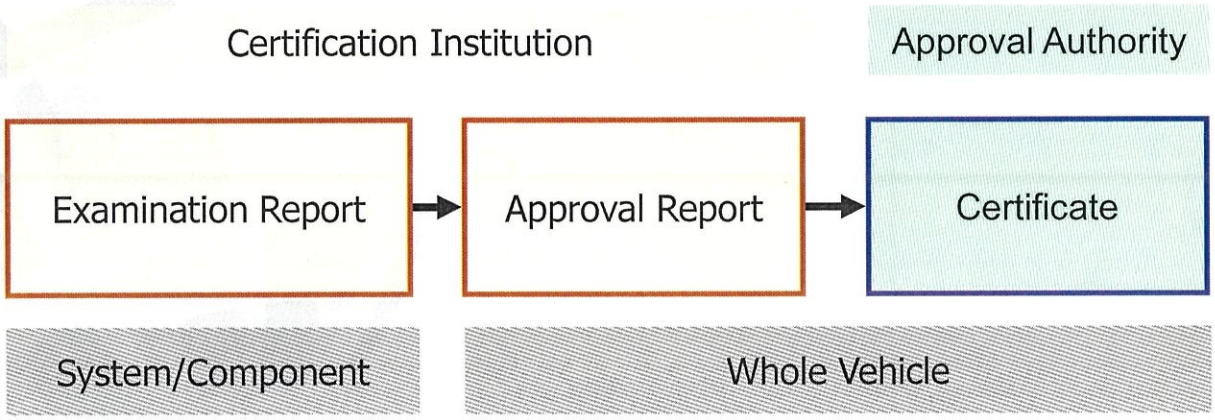
APEC Asia-Pacific Economic Cooperation

| | |
|---|---|
| Approval Authority | 交通部 MINISTRY OF TRANSPORTATION AND COMMUNICATIONS<br>Ministry of Transportation and Communications (MOTC) |
| Certification Institution Authorized by MOTC | VSCC 財團法人車輛安全審驗中心 Vehicle Safety Certification Center |
| Technical Services Accredited by MOTC | **53Technical Services (149 Witnessed Lab.)**<br>**Domestic institutions:**<br>1.Automotive Research & Testing Center<br>2.Taiwan Rubber Research & Testing Center<br>3.Hi Safe Technologies Co., Ltd.<br>4.KINGDOM Vehicle Inspection co.<br>...<br>**Foreign institutions:**<br>1. TÜV SÜD, Rhineland, NORD,DEKRA,KIT (Germany)<br>2. VCA,BSI (UK) 3. RDW,TNO (Netherlands)<br>4. UTAC (France) 5. AVI (Belgium)<br>6. IDIADA, INTA(Spain) 7.LUXCONTROL (Luxembourg)<br>8. FAKT, CSI (Italy) 9.SP( Sweden)<br>... |



# Relation between Proofs

APEC Asia-Pacific Economic Cooperation



# Comparison of Proofs between Europe and Taiwan

Asia-Pacific Economic Cooperation

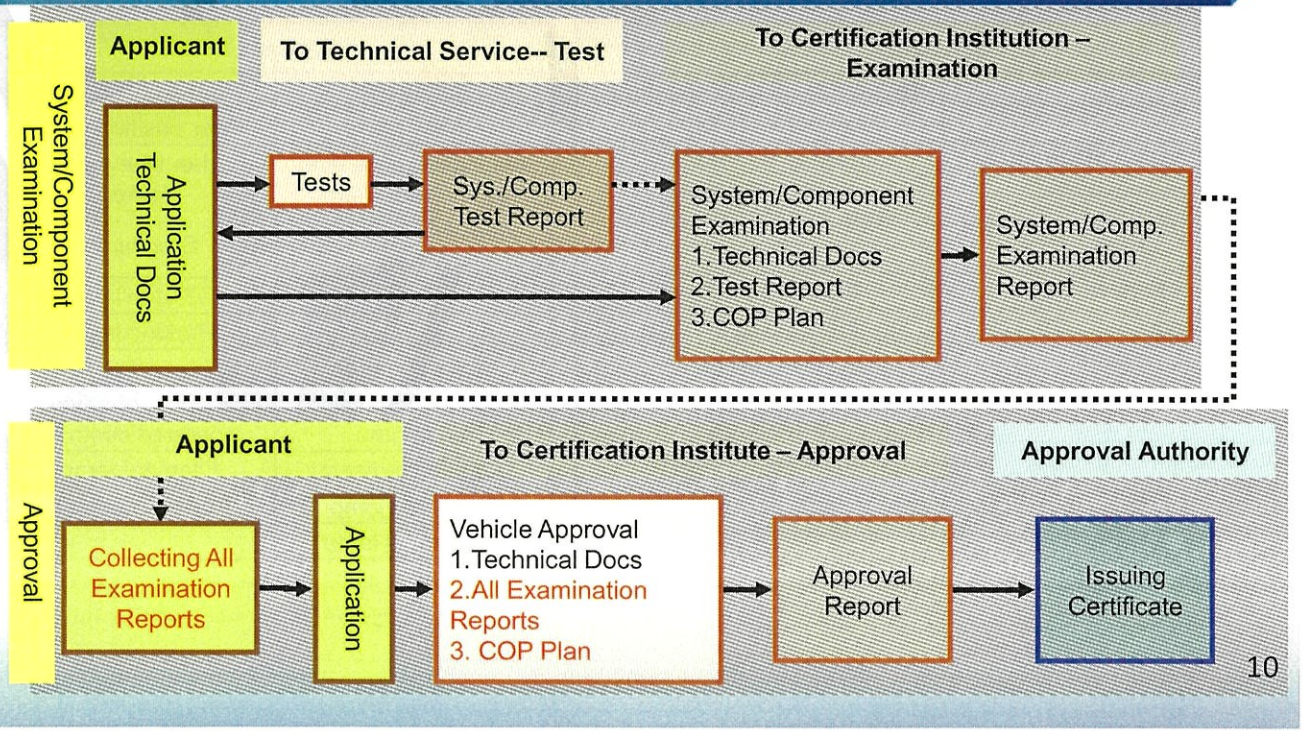
| | System / Component | Whole Vehicle |
|---|---|---|
| European System | E9 ECE / e9 EEC Certificate | WVTA Certificate |
| Taiwanese System | Examination Report | WVTA Certificate |

- Taiwan's system is similar to EEC WVTA, including document examinations and system(vehicle)/component tests. Among the tests, the applicant can choose two options: Institution test, witness test.



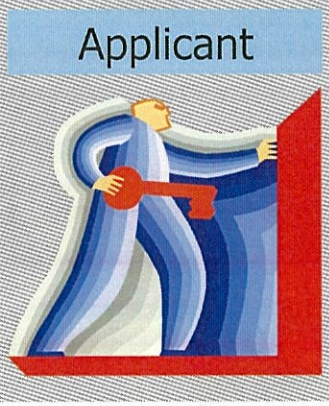
# Proofs Issuing Procedures (WVTA)

Asia-Pacific Economic Cooperation



# Ways to attain Testing Report

Asia-Pacific Economic Cooperation




To the accredited Technical Services

To Certification Institution

Institution Test

Witness Test



## Vehicle Safety Testing Items History

Year 1998~2004 2006 Next Page

Add* 19(5) +21(20)

Total 19(5) 40(25)

Asia-Pacific Economic Cooperation

| Regulation | |
|---|---|
| Motor vehicle specification | Thermal-insulation of exhaust system for motorcycle |
| Installation of turning & reversing AWD | Stability & durable of motorcycle stand |
| Flammability of the interior material | Passenger hand-hold of motorcycle |
| LPD& RUPD | Digital tachograph |
| Inspection of LPG fuel system | Strength of luggage rack for small vehicle |
| Inspection of CNG fuel system | Strength of coupling device for small vehicle |
| Installation of payload meter | Installation of lights |
| Payload meter | Sound level of AWD |
| Vehicle tilt stability | Retro-reflective marking |
| Static braking | |

| Regulation | |
|---|---|
| Safety belt | Front position lamp |
| Safety glass | Rear position lamp |
| Installation of devices for indirect vision | End-outline marker lamp |
| Devices for indirect vision | Stop lamp |
| Tyre | S3 stop lamp |
| AWD | Parking lamp |
| Speedometer | Side-marker lamp |
| Gas-discharge headlamp | Symbol of driver operated controls |
| Direction indicator | Filament lamp |
| Front fog lamp | Reflex reflector |
| Reversing lamp | |

■Counted from the earliest implemented date, given some regulations have different implementing time for each category of vehicle

■( ) Numbers of regulation are harmonized from UN Vehicle Regulation

## Vehicle Safety Testing Items History

| Year | 2007~2008 | 2010~2011 |
|---|---|---|
| Add* | +16(20) | +7(4) |
| Total | 56(45) | 63(49) |

Next Page

APEC Asia-Pacific Economic Cooperation

| Regulation |
|---|
| Dynamic braking |
| Electronic control device of small-light moped |
| Fatigue strength of frame for small-light moped |
| Occupants protection of lateral collision |
| Occupants protection of frontal collision |
| Impact protection of driver for steering system |
| Steering equipment |
| Safety belt anchorage |
| Seats strength |
| Head restraint |
| Door latches &Hinges |
| Headlamps(w/o gas-discharge headlamps) |
| Rear fog lamps |
| Anti-lock braking system(ABS) |
| Strength of super structure for large passenger vehicle |
| Prevention of fire risk for large passenger vehicle |

| Regulation |
|---|
| Devices for indirect vision with reversing-assistance lamp |
| Specification of low floor vehicle |
| Protection of high temperature compression & electrical shock for electric motorcycle |
| Electromagnetic compatibility(EMC) |
| Adaptive front lighting system(AFS) |
| Installation of mechanical coupling device |
| Mechanical coupling device |



## Vehicle Safety Testing Items History

| Year | 2013 | 2018 | Now | 2019 |
|---|---|---|---|---|
| Add* | +9(6) | +9(7) | | +4(4) |
| Total | 72(55) | 81(62) | | 85(66) |

APEC Asia-Pacific Economic Cooperation

| Regulation |
|---|
| Flammability of interior materials for motor vehicle |
| Battery electric vehicles safety |
| Fuel tank |
| Wheelchair accessible vehicle |
| TPMS |
| Manoeuvring lamp |
| Driving vision assistance system |
| Daytime running light |
| LED light sources |

| Regulation |
|---|
| Location and identification of hand control, tell-tales and indicators |
| Speed limitation devices(SLD) |
| External projections |
| Rear marking plates for heavy and long vehicles |
| Vehicle of CHSS |
| Compressed hydrogen storage system (CHSS) |
| Components of CHSS |
| BAS |
| ESC |

| Regulation |
|---|
| LDWS |
| AEBS |
| External projections (commercial vehicle) |
| Quiet road transport vehicles |

- Counted from the earliest implemented date, since some regulation have different implemented time for each category of vehicle
- ( ) Numbers of regulation are harmonized from UN Vehicle Regulation

# Safety Testing Items for Category L

APEC Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR53/74)
3. Installation of AWD(UNR28)
4. Thermal-insulation of exhaust system
5. Stability & durable of stand
6. Passenger hand-hold
7. AWD(UNR28)
8. Speedometer(UNR39)
9. Installation of devices for indirect vision(UNR46/81)
10. Symbol of driver operated controls (UNR60)
11. Devices for indirect vision(UNR46)
12. Tyre(UNR75)
13. Filament lamps(UNR37/99)
14. Gas-discharge headlamp(UNR98)*
15. Direction indicator(UNR06/50)
16. Front fog lamp(UNR19)*
17. Front position lamp(UNR07/50)(L1*)
18. Rear position lamps(UNR07/50)
19. Stop lamp(UNR07/50)
20. Reflex reflector(UNR03)
21. Dynamic braking(UNR78)
22. ABS(UNR78)*
23. Headlamp(w/o gas-discharge headlamp)(UNR112/113)
24. Rear fog lamp(UNR38) *
25. EMC(UNR10)
26. Electronic control device
27. Fatigue strength of frame
28. Protection of high temperature compression &electrical shock for electric motorcycle*
29. Daytime running light(UNR87)
30. LED light sources(UNR128)*

*Optional



# Safety Testing Items for Category M1 (1/2)

APEC Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR48/70/104)
3. Static braking
4. Inspection of LPG fuel system*
5. Inspection of CNG fuel system*
6. Installation of AWD(UNR28)
7. Strength of coupling device*
8. Strength of luggage rack*
9. Flammability of interior material(UNR118)
10. Retro-reflective marking(UNR104)*
11. AWD(UNR28)
12. Speedometer(UNR39)
13. Installation of devices for indirect vision(UNR46/81)
14. Safety glass(UNR43)
15. Safety belt(UNR16)
16. Devices for indirect vision(UNR46)
15. Tyre(UNR30)
16. Filament lamp(UNR37/99)
17. Gas-discharge headlamps(UNR98)*
18. Direction indicator(UNR06)
19. Front fog lamp(UNR19)*
20. Reversing lamp(UNR23)
21. Front position lamp(UNR07)
22. Rear position lamp(UNR07)
23. Parking lamp(UNR77)*
24. Stop lamp(UNR07)
27. S3 stop lamp(UNR07)
28. End-outline marker lamp(UNR07)*
29. Side-marker lamp(UNR91)*
30. Reflex reflector(UNR03)

* Optional

# Safety Testing Items for Category M1 (2/2)

Asia-Pacific Economic Cooperation

31. Dynamic braking(UNR13h)
32. ABS(UNR13h)*
33. Impact protection of driver for steering system(UNR12)
34. Steering equipment(UNR79)
35. Safety belt anchorage(UNR14)
36. Seats strength(UNR17/80)
37. Head restraint(UNR17/25)
38. Door latches &Hinges(UNR11)
39. Headlamp(w/o gas-discharge headlamp)(UNR031/112)
40. Rear fog lamp(UNR38)
41. EMC(UNR10)
42. AFS(UNR123) *
43. Devices for indirect vision with reversing-assistance lamp*
44. Battery electric vehicle safety (UNR100) *
45. Fuel tank(UNR34)
46. Wheelchair accessible vehicle*
47. TPMS(UNR141)
48. Manoeuvring lamp(UNR23)*
49. Daytime running light(UNR87)
50. LED light source(UNR128)*
51. Location and identification of hand control, tell-tales and indicators(UNR121)
52. SLD(UNR89)*
53. External projections(UNR26)
54. Quiet road transport vehicle(UNR138)*
55. Vehicle of CHSS(UNR134)*
56. CHSS(UNR134)*
57. Components of CHSS(UNR134)*
58. BAS(UNR139)
59. ESC(UNR140)

* Optional



# Safety Testing Items for Category N1 (1/2)

Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR48/70/104)
3. Static braking
4. Inspection of LPG fuel system*
5. Inspection of CNG fuel system*
6. Installation of AWD(UNR28)
7. Strength of coupling device*
8. Strength of luggage rack*
9. Retro-reflective marking(UNR104)*
10. AWD(UNR28)
11. Speedometer(UNR39)
12. Installation of devices for indirect vision(UNR46/81)
13. Safety glass(UNR43)
14. Safety belt(UNR16)
15. Devices for indirect vision(UNR46)
16. Tyre(UNR30/54)
17. Filament lamp(UNR37/99)
18. Gas-discharge headlamp(UNR98)*
19. Direction indicator(UNR06)
20. Front fog lamp(UNR19)*
21. Reversing lamp(UNR23)
22. Front position lamp(UNR07)
23. Rear position lamp(UNR07)
24. Parking lamp(UNR77)*
25. Stop lamp(UNR07)
26. S3 stop lamp(UNR07)*
27. End-outline marker lamp(UNR07)*
28. Side-marker lamp(UNR91)*
29. Reflex reflector(UNR03)
30. Dynamic braking(UNR13/13h)

* Optional

# Safety Testing Items for Category N1 (2/2)

APEC Asia-Pacific Economic Cooperation

31. ABS(UNR13h)*
32. Impact protection of driver for steering system(UNR12)
33. Occupants protection of lateral collision(UNR95)
34. Steering equipment(UNR79)
35. Safety belt anchorage(UNR14)
36. Seats strength(UNR17)
37. Head restraint(UNR17/25)
38. Door latches &Hinges(UNR11)
39. Headlamps(w/o gas-discharge headlamps)(UNR031/112)
40. Rear fog lamp(UNR38)
41. EMC(UNR10)
42. AFS(UNR123) *
43. Devices for indirect vision with reversing-assistance lamp*
44. Battery electric vehicles safety(UNR100) *
45. Fuel tank(UNR34)
46. TPMS(UNR141)
47. Manoeuvring lamp(UNR23)*

*Optional

48. Daytime running light(UNR87)
49. LED light source(UNR128)*
50. Location and identification of hand control, tell-tales and indicators(UNR121)
51. SLD(UNR89)*
52. External projections(UNR61)
53. Quiet road transport vehicle(UNR138)*
54. Vehicle of CHSS(UNR134)*
55. CHSS(UNR134)*
56. Components of CHSS(UNR134)*
57. BAS(UNR139)
58. ESC(UNR140)



# Safety Testing Items for Category M2/M3 (1/2)

APEC Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR48/70/104)
3. Static braking
4. Inspection of LPG fuel system*
5. Inspection of CNG fuel system*
6. Vehicle tilt stability
7. Installation of turning & reversing AWD*
8. Installation of AWD(UNR28)
9. Tachograph / Digital tachograph
10. Flammability of interior material(UNR118)
11. Retro-reflective marking(UNR104)*
12. AWD(UNR28)
13. Speedometer(UNR39)
14. Installation of devices for indirect vision(UNR46/81)
15. Safety glass(UNR43)
16. Safety belt(UNR16)
17. Devices for indirect vision(UNR46)
18. Tyre(UNR54)
19. Filament lamp(UNR37/99)
20. Gas-discharge headlamp(UNR98)*
21. Direction indicator(UNR06)
23. Front fog lamp(UNR19)*
24. Reversing lamp(UNR23)
25. Front position lamp(UNR07)
26. Rear position lamp(UNR07)
27. Parking lamp(UNR77)*
28. Stop lamp(UNR07)
29. S3 stop lamp(UNR07)*
30. End-outline marker lamp(UNR07)*
31. Side-marker lamp(UNR91)

* Optional

# Safety Testing Items for Category M2/M3 (2/2)

APEC Asia-Pacific Economic Cooperation

32. Reflex reflector(UNR03)
33. Dynamic braking(UNR13)
34. ABS(UNR13)*
35. Steering equipment(UNR79)
36. Safety belt anchorage(UNR14)
37. Seats strength(UNR17/80)
38. Head restraint(UNR17/25)
39. Headlamp(w/o gas-discharge headlamp)(UNR031/112)
40. Rear fog lamp(UNR38)
41. Prevention of fire risks(UNR107)
42. Strength of super structure(UNR66)
43. EMC(UNR10)
44. AFS(UNR123) *
45. Devices for indirect vision with reversing-assistance lamp*
46. Low floor vehicle(UNR107) *
47. Battery electric vehicles safety(UNR100) *
48. Fuel tank(UNR34)
49. Wheelchair accessible vehicle*
50. Manoeuvring lamp(UNR23)*
51. LDWS(UNR130)
52. Driving vision assistant system
53. AEBS(UNR131)
54. Daytime running light(UNR87)
55. LED light source(UNR128)*
56. Location and identification of hand control, tell-tales and indicators(UNR121)
57. SLD(UNR89)
58. Quiet road transport vehicle(UNR138)*
59. Vehicle of CHSS(UNR134)*
60. CHSS(UNR134)*
61. Components of CHSS(UNR134)*

*Optional




# Safety Testing Items for Category N2/N3 (1/2)

APEC Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR48/70/104)
3. Static braking
4. Inspection of LPG fuel system*
5. Inspection of CNG fuel system*
6. LPD& RUPD
7. Vehicle tilt stability
8. Installation of AWD(UNR28)
9. Installation of payload meter
10. Installation of turning & reversing AWD
11. Payload meter
12. Tachograph / Digital tachograph
13. Retro-reflective marking(UNR104)*
14. AWD(UNR28)
15. Speedometer(UNR39)
16. Installation of devices for indirect vision(UNR46/81)
17. Safety glass(UNR43)
18. Safety belt(UNR16)
19. Devices for indirect vision(UNR46)
20. Tyre(UNR54)
21. Filament lamp(UNR37/99)
22. Gas-discharge headlamp(UNR98)*
23. Direction indicator(UNR06)
24. Front fog lamp(UNR19)*
25. Reversing lamp(UNR23)
26. Front position lamp(UNR07)
27. Rear position lamp(UNR07)
28. Parking lamp(UNR77)*
29. Stop lamp(UNR07)
30. S3 stop lamp(UNR07)*

*Optional

# Safety Testing Items for Category N2/N3 (2/2)

APEC Asia-Pacific Economic Cooperation

31. End-outline marker lamp(UNR07)
32. Side-marker lamps(UNR91)
33. Reflex reflectors(UNR03)
34. Dynamic braking(UNR13)
35. ABS(UNR13)*
36. Steering equipment(UNR79)
37. Safety belt anchorage(UNR14)
38. Seats strength(UNR17/80)
39. Headlamp(w/o gas-discharge headlamp)(UNR031/112)
40. Rear fog lamp(UNR38)
41. EMC(UNR10)
42. AFS(UNR123) *
43. Devices for indirect vision with reversing-assistance lamp*
44. Installation of mechanical coupling device(UNR55) *
45. Mechanical coupling device(UNR55) *
46. Battery electric vehicles safety(UNR100) *
47. Fuel tank(UNR34)
48. Manoeuvring lamp(UNR23)*
49. LDWS(UNR130)
50. Driving vision assistant system
51. AEBS(UNR131)
52. Daytime running light(UNR87)
53. LED light source(UNR128)*
54. Location and identification of hand control, tell-tales and indicators(UNR121)
55. SLD(UNR89)
56. External projections(UNR61)
57. Quiet road transport vehicle(UNR138)
58. Rear marking plate for Heavy N (UNR70)
59. Vehicle of CHSS(UNR134)*
60. CHSS(UNR134)*
61. Components of CHSS(UNR134)*

*Optional




# Safety Testing Items for Category O

APEC Asia-Pacific Economic Cooperation

1. Motor vehicle specification
2. Installation of lights(UNR48/70/104)
3. Static braking
4. LPD& RUPD
5. Installation of payload meter
6. Installation of turning & reversing AWD
7. Payload meter
8. Strength of coupling device(O1/O2)
9. Retro-reflective marking(UNR104)
10. Tyre(UNR54)
11. Filament lamp(UNR37/99)
12. Direction indicator(UNR06)
13. Reversing lamp(UNR23)
14. Front position lamp(UNR07)
15. Rear position lamp(UNR07)
16. Parking lamp(UNR77)*
17. Stop lamp(UNR07)
18. S3 stop lamp(UNR07)*
19. End-outline marker lamp(UNR07)*
20. Side-marker lamp(UNR91)*
21. Reflex reflector(UNR03)
22. Dynamic braking(UNR13)
23. ABS(UNR13)
24. Steering equipment(UNR79)
25. Rear fog lamp(UNR38)
26. EMC(UNR10)
27. Installation of mechanical coupling device(UNR55)
28. Mechanical coupling device(UNR55)
29. Fuel tank(UNR34)
30. LED light source(UNR128)*
31. Retro-reflective-marking(UNR104)
32. Rear marking plate for Long Trailer(UNR70)

*Optional

APEC
Asia-Pacific
Economic Cooperation

*Thank you for your attention!*

VSCC 財團法人車輛安全審驗中心
Vehicle Safety Certification Center

APEC
Asia-Pacific
Economic Cooperation

Advancing
Free Trade for Asia-Pacific
Prosperity

# Progress Report on Harmonization in Chinese Taipei

## 24 04 2018 – Seoul

Presented by
Simon HSU, Vehicle Safety Certification Center, Chinese Taipei



## CONTENTS

APEC
Asia-Pacific
Economic Cooperation

# P1. Amendment/Revision as considering UN Regulations

Asia-Pacific Economic Cooperation

1. Periodical Review :
   Twice a year (1st half & 2nd half),
2. Proposal by any interest group
   ① Extensive concerns
   ② Clarification
   ③ Harmonization issue



# P1. Amendment/Revision GRRF

Asia-Pacific Economic Cooperation

| Item | 2nd half of 2016 | 1st half of 2017 |
|---|---|---|
| Tyre | UN R30 02-S18<br>UN R54 01-S21 | UN R75 00-S16 |
| Dynamic Braking | UN R13H 01<br>UN R13 11-S13<br>UN R78 03-S3 | UN R13 11-S14<br>UN R78 04 |
| Anti-lock braking system (ABS) | UN R78 03-S3 | UN R13 11-S14<br>UN R78 04 |
| Mechanical coupling device | UN R55 01-S5 | UN R55 01-S6 |
| Electronic stability control systems (ESC) | UN R140 00 | |
| Braking assist system(BAS) | UN R139 00 | |
| Steering equipment | UN R79 01-S5 | |
| Tyre Pressure Monitoring Systems | | UN R141 00 |

# P1. Amendment/Revision GRSP

Asia-Pacific Economic Cooperation

| Item | 2nd half of 2016 | 1st half of 2017 |
|---|---|---|
| **Frontal collision** | | UN R94 03 |
| **Seat Belt** | UN R16 06-S7 | UN R16 06-S8<br>UN R16 07 |
| **Belt anchorage** | UN R14 07-S7<br>UN R16 06-S7 | UN R14 07-S7<br>UN R16 06-S8<br>UN R16 07 |
| **Seat** | | UN R80 03-S2 |
| **Door latches and retention components** | UN R11 03-S4<br>UN R11 04-S5 | |



# P1. Amendment/Revision GRSG

Asia-Pacific Economic Cooperation

| Item | 2nd half of 2016 | 1st half of 2017 |
|---|---|---|
| **Rear-View Mirrors Installation or Device** | | UN R46 04-S2<br>UN R46 04-S4<br>(not included CMS of I~IV classes) |
| **Driver operated controls** | UN R60 00-S5 | |
| **Prevention of fire risks for the large passenger vehicle** | | UN R107 04-S5<br>UN R107 05-S6<br>UN R107 06-S6<br>UN R107 07-S1 |
| **The location and identification of hand controls, tell-tales and indicators** | | UN R121 00-S9<br>UN R121 01-S1 |
| **Installation of fuel tank** | | UN R34 03-S1 |
| **Rear-end collision for prevention of fire risks** | | UN R34 03-S1 |

# P1. Amendment/Revision GRE

Asia-Pacific Economic Cooperation

| Item | 2nd half of 2016 | 1st half of 2017 |
|---|---|---|
| **Light Installation** | UN R53 01-S18 ,02<br>UN R48 06-S7 | UN R48 04-S17 , UN R48 05-S10,UN R48 06-S7,UN R48 06-S8, UN R53 01-S18,UN R53 01-S19,UN R53 02-S1 |
| **Filament lamp** | | UN R37 03-S45<br>UN R99 00-S12 |
| **HID Headlamp** | UN R113 01-S6 | |
| **Headlamp** | UN R113 01-S6,<br>01-S2-C1<br>UN R112 01-S6 | |
| **Front and rear position(side) lamps, stop lamps and end-outline marker lamps** | | UN R07 02-S25 |
| **Daytime running lamps** | | UN R87 00-S18 |
| **LED light sources** | | UN R128 00-S16 |



# P2. Plan for Introducing New UN Regulations

Asia-Pacific Economic Cooperation

## UN DECADE OF ACTION FOR ROAD SAFETY

## Pillar 3 :

Safer Vehicles

# P2. Plan for Introducing New UN Regulations Group #1

Asia-Pacific Economic Cooperation

| No | UN Reg. | Title | Status Quo |
|---|---|---|---|
| 1-1 | R58 | RUPD | Waiting for announcement |
| 1-2 | R73 | LPD | |
| 1-3 | R93 | FUPD | |
| 1-4 | R26 | External Projection for M1 | Announced |
| 1-5 | R61 | External projections of commercial vehicles | Announced |
| 1-6 | R87 | DRL | Announced |
| 1-7 | R121 | Location and identification of hand controls, tell-tales and indicators | Announced |
| 1-8 | R128 | LED Light Source | Announced |
| 1-9 | R89 | Speed limitation devices | Announced |
| 1-10 | R130 | LDW(S) | Announced |
| 1-11 | R127 | Pedestrian Safety | Waiting for announcement |
| 1-12 | R131 | AEBS | Announced |



# P2. Plan for Introducing New UN Regulations Group #2

Asia-Pacific Economic Cooperation

| No | UN Reg. | Title | Status Quo |
|---|---|---|---|
| 2-1 | R21 | INTERIOR FITTINGS | Waiting for announcement |
| 2-2 | R29 | CAB OF A COMMERCIAL VEHICLE | Waiting for announcement |
| 2-3 | R70 | REAR MARKING PLATES | Announced |
| 2-4 | R125 | THE FORWARD FIELD OF VISION | Waiting for announcement |

# P2. Plan for Introducing New UN Regulations Group #3

| No | UN Reg. | Title | Status Quo |
|---|---|---|---|
| 3-1 | R134 | Hydrogen and fuel cell vehicles (HFCV) | Announced |
| 3-2 | R138 | Quiet road transport vehicles | Announced |
| 3-3 | R34 | Prevention of fire risks in the event of collision | Ready for announcement |
| 3-4 | R32 | Rear-end collision | Waiting for announcement |
| 3-5 | R137 | Frontal impact with focus on restraint systems | Waiting for announcement |
| 3-6 | R136 | Electric Safety of category L (EV-L) | Drafted for discussion |

## #3rd Group Candidates

UN R35-00-S1 - Foot controls;
UN R111-00-S1 - Handling and stability of vehicles;
UN R117-00 - Tyres, rolling resistance, rolling noise and wet grip
UN R135-00 - Pole Side Impact (PSI)



# SUMMARY
# P1. Amendment/Revisions

1. Keep moving

   2 times yearly, Periodical Review on updating of UN Regulations and just completed the discussion with industry

2. 2nd half of 2016 announced on September 7, 2017

3. 1st half of 2017 ready for announcement

   GRRF: 9 items 2nd half of 2016 / 5 items 1st half of 2017
   GRSP : 4 items 2nd half of 2016 /5 items 1st half of 2017
   GRSG: 1 items 2nd half of 2016 / 9 items 1st half of 2017
   GRE : 6 items 2nd half of 2016 / 12 items 1st half of 2017

# SUMMARY

## P2. Plan for Introducing New UN Regulations

APEC Asia-Pacific Economic Cooperation

### 4. Introducing more UN Regulations

- 1st Group of 12 candidates
  - 8 Announced
    - 4 Waiting for announcement
- 2nd Group of 4 candidates (UN R21, 70, 125, 29)
  - 1 Announced
    - 3 Waiting for announcement
- 3rd Group of 10 candidates
  - 2 Announced
    - 1 Ready for announcement
    - 2 Waiting for announcement
    - 1 Drafted for discussion
    - 4 Drafting Regulations



APEC Asia-Pacific Economic Cooperation

*Thank you for your attention!*

VSCC 財團法人車輛安全審驗中心 Vehicle Safety Certification Center

Asia-Pacific Economic Cooperation

Advancing Free Trade for Asia-Pacific Prosperity

# Observation on Harmonization

## -- Relation between the harmonization of vehicle regulations and international trade issues

24 04 2018 – Seoul

Presented by

Simon HSU, Vehicle Safety Certification Center, Chinese Taipei



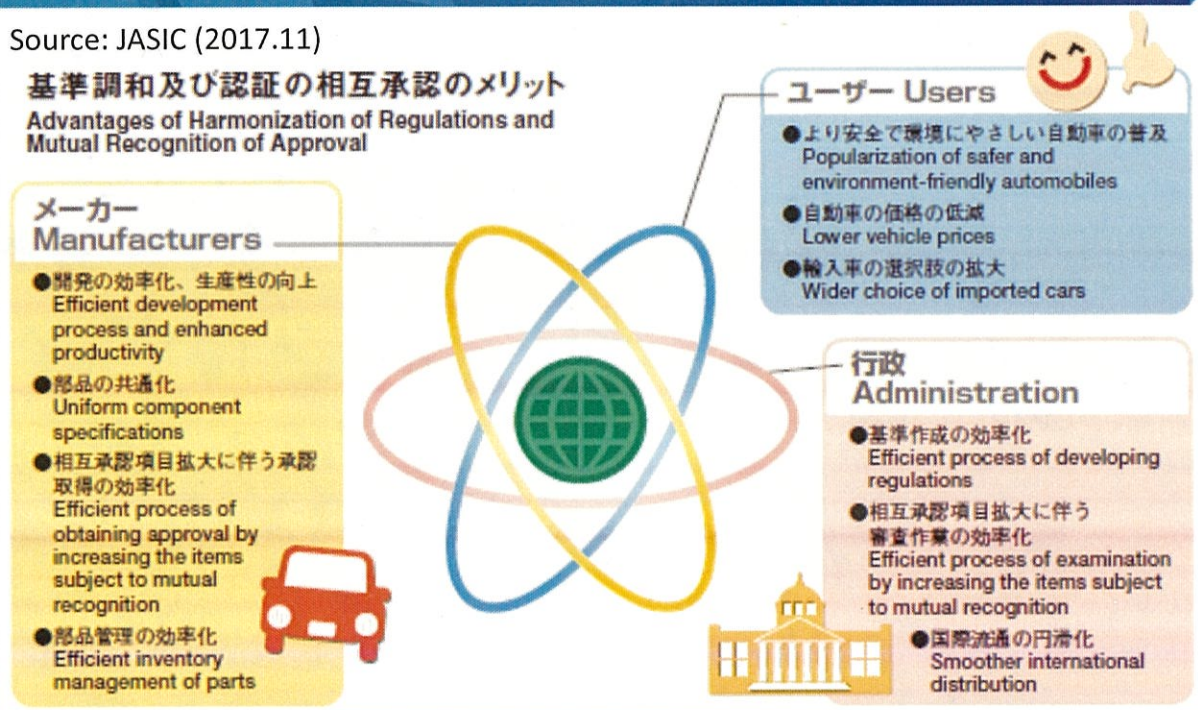
# CONTENTS

Asia-Pacific Economic Cooperation

# Benefits of Harmonization 1/2

Asia-Pacific Economic Cooperation

Source: JASIC (2017.11)






# Benefits of Harmonization 2/2

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**Advantages** of harmonizing regulations

Source: JASIC (2017.11)

- **commonization** of parts
- reduced development and production **costs**
- the **standardization** of vehicle design specifications
- **easier and simplified** certification procedures of each country
- **expanding the market** and giving users a wider range of choices
- streamlining automobile **trade between economies**

# Scenario 1/3 - with full-care

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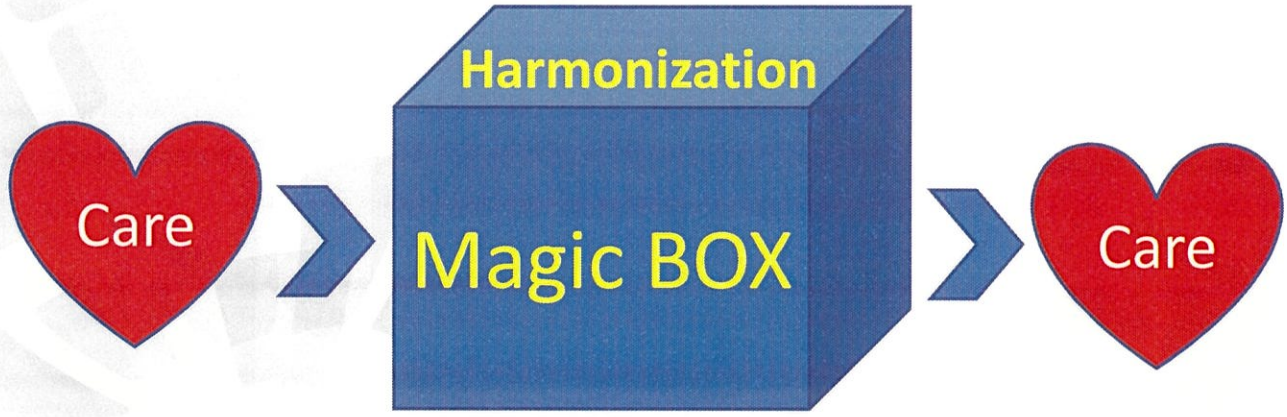




# Scenario 2/3 - with semi-care

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# Scenario 3/3 - without care




# Examples of "without care" 1/12

## Case Study

#1. **DRL is OFF** in DRIVing condition
**(Speed >10 km/hr)**

#2. **DRL is replaced** by Front Position Lamp
**(Speed >10 km/hr)**

#3. **Headlamp Automation is OFF** in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk) (**Speed >10 km/hr**)

# Examples of "without care" 2/12

Asia-Pacific Economic Cooperation

## Case Study #1

#1. **DRL is OFF** in DRIVing condition **(Speed >10 km/hr)**

#2. DRL is replaced by Front Position Lamp (Speed >10 km/hr)

#3. Headlamp Automation is OFF in the ambient with low light intensity less than 1000 lux (such as in tunnel, at dusk) (Speed >10 km/hr)



# Examples of "without care" 3/12

Asia-Pacific Economic Cooperation

## #1. **DRL is OFF** in DRIVing condition **(Speed >10 km/hr)**

According to UN Regulation 48, DRL should remain on except for the following situations: (Source: MLIT, Japan)

- Vehicle speed does not exceed 10km/h. (paragraph 6.19.7.2.)
- Engine (propulsion system) is impossible to operate (paragraph 6.19.7.3.)
- Front fog lamps or headlamps are switched ON (paragraph 6.19.7.3.)
- Direction indicators operate, provided that front indicators are reciprocally incorporated with DRLs or the distance between both lamps is less than 40mm. (paragraph 6.19.7.5. and 6.19.7.6.)

In case that vehicle speed exceeds 10km/h, there is no legal basis that the DRLs can be switched OFF when only the front position lamps are switched ON.

# Examples of "without care" 4/12

Asia-Pacific Economic Cooperation

## #1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

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Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Industrial Transformation and Advanced Value Chains
**Automotive and Mobility Industries**
Head of Unit

Brussels, 09. 03. 2018
GROW/C4/IK/cdp (2018)1411002

**Q1. Should daytime running lamps (DRL) be always on automatically from the moment the vehicle is in motion (under any lighting mode)?**

Yes, provided that a contracting party (e.g. EU Member States, Japan, etc.) applies DRL regulation requirements (UN Regulation 87).

More specifically, 06 series of UN R48 provides:

6.19.7.1. The daytime running lamps shall be switched ON automatically when the device which starts and/or stops the engine (propulsion system) is set in a position which makes it possible for the engine (propulsion system) to operate. However, the daytime running lamps may remain OFF while the following conditions exist:

6.19.7.1.1. The automatic transmission control is in the park position; or

6.19.7.1.2. The parking brake is in the applied position; or

6.19.7.1.3. Prior to the vehicle being set in motion for the first time after each manual activation of the propulsion system

11

# Examples of "without care" 5/12

Asia-Pacific Economic Cooperation

## #1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

**Mandatory installment of a Daytime Running Lamp (DRL) for all vehicles**

Source: 2015 KOREA GOVERNMENT STATUS REPORT

After the introduction of DRL in 2010, installment of DRL was initially optional and became mandatory in June 2014.
The mandatory use of DRL is based on results of studies that suggest the positive impact of DRL on ensuring the field of visions of drivers and road users under foggy, rainy, dusty and other adverse weather conditions during daytime as well as in the evening and at dawn. A study shows that mandatory installation of DRL would reduce the regional traffic accidents by 19% in average, suggesting an expectative traffic-accident prevention effect [3].

### Regulations for Performance and Safety Standards of Motor Vehicle and Vehicle Parts

[Table 6-8] Requirements for installation and luminous intensity of Daytime Running Lamp (Article 38-4 Item 3, Article 75-2 Item 3)

1. Installation requirements of DRL

E. Operation requirements

1) The DRL shall be switched on automatically when the engine is started. However, the daytime running lamps may remain OFF while the following conditions exist.

a) The automatic transmission control is in the park position; or

b) The parking brake is in the applied position; or

c) Prior to the vehicle being set in motion for the first time after engine on.

2) The DRL shall be switched off automatically when headlamps or front fog lamps are switched on, except that the DRL is used momentarily for the purpose of warning.

12

# Examples of "without care" 6/12

## Case Study #2

#1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

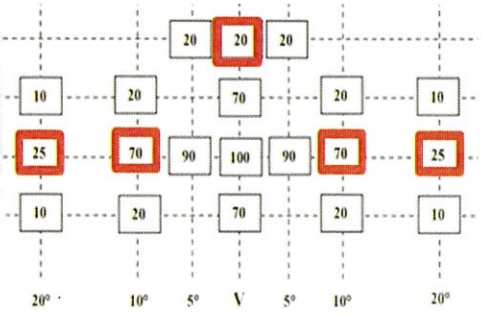
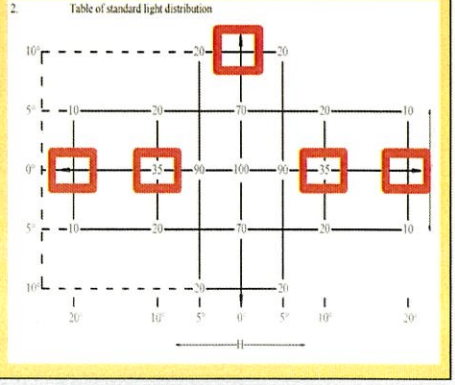
#2. **DRL is replaced** by Front Position Lamp **(Speed >10 km/hr)**

#3. Headlamp Automation is OFF in the ambient with low light intensity less than 1000 lux (such as in tunnel, at dusk) (Speed >10 km/hr)



# Examples of "without care" 7/12

## #2. DRL is replaced by Front Position Lamp (Speed >10 km/hr)

| Comparison of Intensity between DRL and Front Position Lamp | | |
|---|---|---|
| | DRL UNR87 | Front Position Lamp UNR 7 |
| Luminous Intensity in the reference axis | Min. 400 cd | Max. 140 cd |
| Light Distribution |  |  |

# Examples of "without care" 8/12

## Case Study #3

#1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

#2. DRL is replaced by Front Position Lamp (Speed >10 km/hr)

#3. **Headlamp Automation is OFF** in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk) (**Speed >10 km/hr**)



# Examples of "without care" 9/12

#3. **Headlamp Automation is OFF** in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk)

**What UN Regulation 48 says …**

6.2.7.6. If daytime running lamps are present and operate according to paragraph 6.19., either

6.2.7.6.1. The dipped-beam headlamps shall be switched ON and OFF automatically relative to the ambient light conditions (e.g. switch ON during night time driving conditions, tunnels, etc.) according to the requirements of Annex 13;

**Annex 13**

**Automatic switching conditions dipped-beam headlamps**

| *Automatic switching conditions dipped-beam headlamps*[1] | | |
|---|---|---|
| Ambient light outside the vehicle[2] | Dipped-beam headlamps | Response time |
| less than 1,000 lux | ON | no more than 2 seconds |
| between 1,000 lux and 7,000 lux | at manufacturer's discretion | at manufacturer's discretion |
| more than 7,000 lux | OFF | more than 5 seconds, but no more than 300 seconds |

# Examples of "without care" 10/12

Asia-Pacific Economic Cooperation

## #3. **Headlamp Automation is OFF** in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk)

すれ違い用前照灯（ロービーム）について、以下の要件に従って、周囲の明るさ（照度）に応じ、自動的に点灯及び消灯する機能を有さなければならないこととします（※1）。また、このうち、自動点灯に係る機能については、手動による解除ができないものでなければならないこととします。

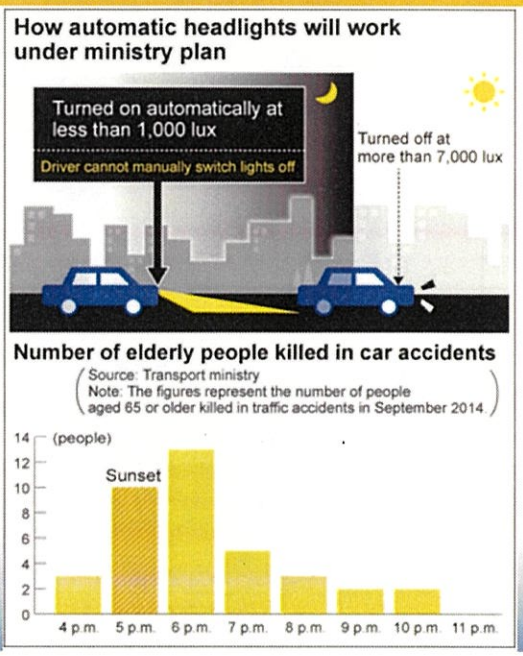
※1　走行用前照灯又は前部霧灯を点灯している場合及び自動車が駐停車状態にある場合等を除く。

すれ違い用前照灯の自動点灯及び消灯に関する要件（※2）

| 周囲の照度 | すれ違い用前照灯 | 応答時間 |
|---|---|---|
| 1,000lx 未満 | 点灯する | 2秒以内 |
| 1,000lx 以上 7,000lx 以下 | －（※3） | －（※3） |
| 7,000lx 超 | 消灯する | 5秒超 300 秒以内 |

※2　「灯火器の取付けに係る協定規則（第 48 号）」におけるすれ違い用前照灯の自動点灯及び消灯機能と同等の要件

※3　自動車製作者の定めるところによる。






# Examples of "without care" 11/12

Asia-Pacific Economic Cooperation

## #3. **Headlamp Automation is OFF** in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk)

EUROPEAN COMMISSION
Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Industrial Transformation and Advanced Value Chains
**Automotive and Mobility Industries**
Head of Unit

Brussels, 09. 03. 2018
GROW/C4/IK/cdp (2018)1411002

**Q3. Follow the item two. If the car has equipped manual select automatic switching light function and the automatic switching comply with Annex 13 automatic switching conditions dipped-beam headlamps requirement. Does it also compliance the UN R48 6.2.7.6.1 paragraph requirement "switched ON and OFF automatically?"**

Yes, despite the fact that the car is equipped with manual switching light function (i.e. light switch control position that switches OFF dipped-beam headlamps), the dipped-beam headlamps should be switched ON automatically at least again when the ambient light outside is less than 1000 lux (According to Annex 13).

# Examples of "without care" 12/12

Asia-Pacific Economic Cooperation

#3. Headlamp Automation is OFF in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk)

| Daytime Running Lamp | Passing-beam Headlamp |
|---|---|
|  |  |
| **DRL** creates **Glare** to the driver's eye in the upcoming vehicle | |
|  |  |
| **DRL** emits **Much Less Intensity** for vision illumination | |



# Example of Scenario 3/3 - without care

Asia-Pacific Economic Cooperation

**What's getting INTO the Magic Box**

#1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

And/Or #2. DRL is replaced by Front Position Lamp

And/Or #3. Headlamp Automation is OFF in the ambient with low light intensity (such as in tunnel, at dusk)

**Harmonization**

**Magic BOX**

**What's getting OUT OF the Magic Box**

#1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

And/Or #2. DRL is replaced by Front Position Lamp

And/Or #3. Headlamp Automation is OFF in the ambient with low light intensity (such as in tunnel, at dusk)

# Example of Scenario 3/3 - without care

Asia-Pacific Economic Cooperation

**What's getting INTO the Magic Box**

**Harmonization**

**Magic BOX**

#1. DRL is OFF in DRIVing condition (Speed >10 km/hr)

And/Or #2. DRL is replaced by Front Position Lamp

And/Or #3. Headlamp Automation is OFF in the ambient with low light intensity (such as in tunnel, at dusk)



# Into the Magic Box Under "without care" 1/4

Asia-Pacific Economic Cooperation

| Switch Control | | Dipped Beam Headlamp |
|---|---|---|
| ...M...<br>...N...<br>...H...<br>...T... | | Dipped Beam Headlamp ON (DRL OFF) |
|  | | **1. ON Position Lamp or DIMMED Daytime Running Lamp** to be declared as a Position Lamp<br>2. ie. **DRL remains OFF** even Speed > 10kph **And Without AUTOMATIC** Dipped Beam Headlamp **ON/OFF** |
|  | **OFF** | **1. Some DRL remain ON or Some remain OFF** when Speed > 10kph<br>**2. BUT Still Without AUTOMATIC** Dipped Beam Headlamp **ON/OFF** |
| | AUTO | AUTOMATIC Daytime Running Lamp ON/OFF With AUTOMATIC Dipped Beam Headlamp ON/OFF |

# Into the Magic Box Under "without care" 2/4

APEC Asia-Pacific Economic Cooperation

| | Switch Control | | Dipped Beam Headlamp |
|---|---|---|---|
| ...M...<br>...N...<br>...H...<br>...T... |  | | Dipped Beam Headlamp ON (DRL OFF) |
| | | | **1. ON Position Lamp**<br>**Or DIMMED Daytime Running Lamp** to be declared as a Position Lamp<br>2. ie. **DRL remains OFF** even Speed > 10kph<br>**And Without AUTOMATIC** Dipped Beam Headlamp **ON/OFF** |
| | | AUTO | AUTOMATIC Daytime Running Lamp ON/OFF<br>With AUTOMATIC Dipped Beam Headlamp ON/OFF |



# Into the Magic Box Under "without care" 3/4

APEC Asia-Pacific Economic Cooperation

#1. DRL is OFF in DRIVing condition (**Speed >10 km/hr**)

#2. DRL is replaced by Front Position Lamp (**Speed >10 km/hr**)

**However, There's no details in Test Reports about How DRL/Headlamp Automation operate to fulfill the Technical Regulation**

***UNR48 – Test Report by Technical Services such as ...***

| | | | |
|---|---|---|---|
| 2.2.19 | **Daytime running lamps**<br>Number<br>Tell-tale | :<br>: 2<br>: no | *Test Report 1 – Couldn't tell from Only these 2 paragraphs* |

| | | |
|---|---|---|
| 3.2.19 | Daytime running lamps: | *Test Report 2 – no description on How to judge* |
| | The vehicle is equipped with the daytime running lamps listed in item 13.10.1 of Annex MID.<br>The lamps fitted are approved according to the ECE Regulation No. 87. The approval numbers can be found in item 13.10.1 of Annex MID.<br>The requirements of item 6.19. of the ECE Regulation No. 48 are fulfilled. | |

Film_Daytime Day 03:06_PostionON_DRLOff

At 03:06, Switch to "Position Lamp" position, then DRL Off.

When driving speed > 10kph, Check DRL which still remains OFF.

# Into the Magic Box Under "without care" 4/4

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#3. Headlamp Automation is OFF in the ambient with low light intensity **less than 1000 lux** (such as in tunnel, at dusk)

**However, There's no details in Test Reports about How DRL/Headlamp Automation operate to fulfill the Technical Regulation**

***UNR48 – Test Report by Technical Services such as ...***

***Test Report 3 – but Only "AUTO" position fulfills the requirements***

| | | | |
|---|---|---|---|
| | **(R48.05 on)** | Where DRLs are present and oper ate to para. 6.19, either: | |
| | Required for new M1/N1 approvals from 30/07/2016 (see Para 12.22) | The dipped-beam headlamps shall be switched ON and OFF automatically relative to the ambient light conditions (e.g. switch ON during night time driving conditions, tunnels, etc.) according to the requirements of Annex 13 | **Yes** |

Film_Nighttime Night 26th sec PositionOn_DRLOff_AutomationHeadlampOFF

At 26th sec, Switch to "Position Lamp" position , then DRL Off and AutomationHeadlamp OFF

When driving speed > 10kph, Check Headlamp which still remains OFF.



# Harmonization under "without care"

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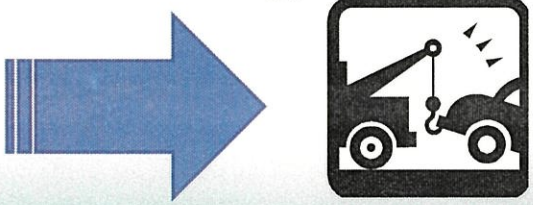
The Relation/Connection in Harmonization would break :

# Harm ON ization

which is

# Harm On Making Real



# Why Bother Harmonization

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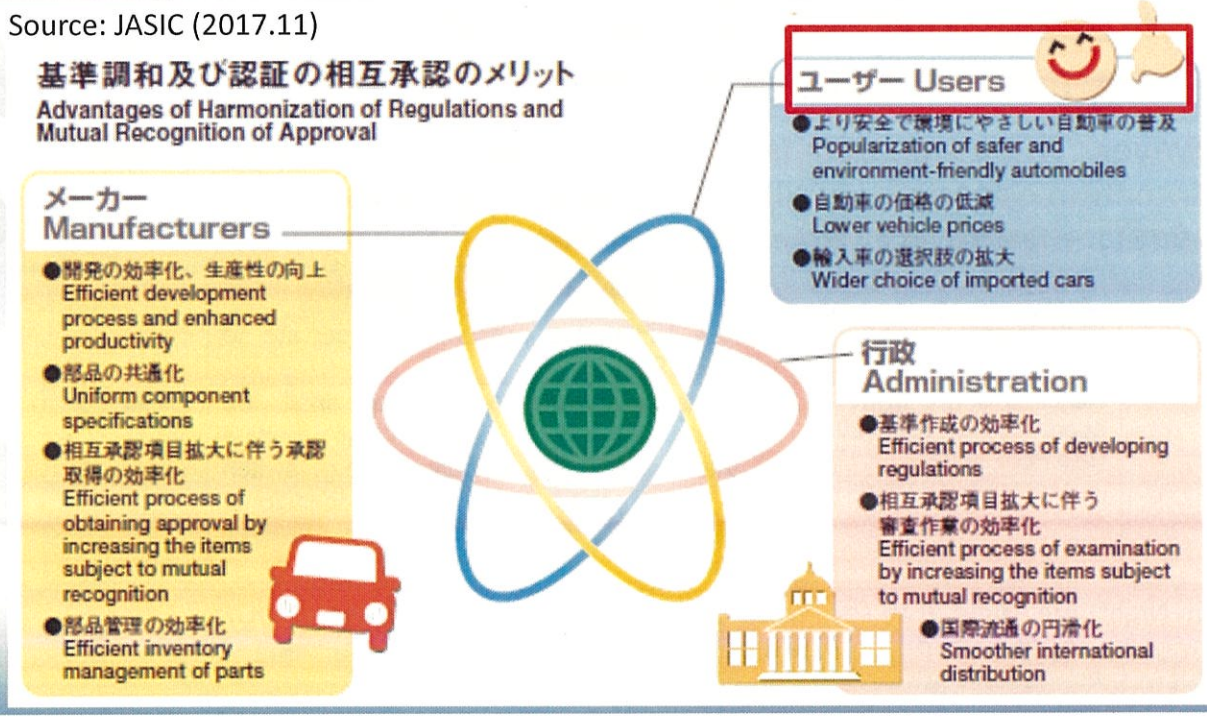
Source: JASIC (2017.11)






# Potential Problems

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**Dis**Advantages of harmonizing regulations

- **commonization** of parts
- **reduced** development and production **costs**
- the **standardization** of vehicle design specifications
- **easier and simplified** certification procedures of each country
- **expanding the market** and giving users a wider range of choices
- streamlining automobile **trade between economies**

# Harmonization "With Care"

Asia-Pacific Economic Cooperation

Care

Let's enjoy advantages of harmonization by making it right TOGETHER for PEOPLE. The opposite is true as well.



Asia-Pacific Economic Cooperation

*Thank you for your attention!*

謝謝您的關注

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Advancing Free Trade for Asia-Pacific Prosperity

# Developing Guidelines for Motorcycle Crash Data Collection and Reporting in the APEC Region

23 April 2018

Presented by
Kun-Feng (Ken) WU and Cheng-Hsin PAN, Chinese Taipei



## The Challenge (1):
Different stakeholders need different info.

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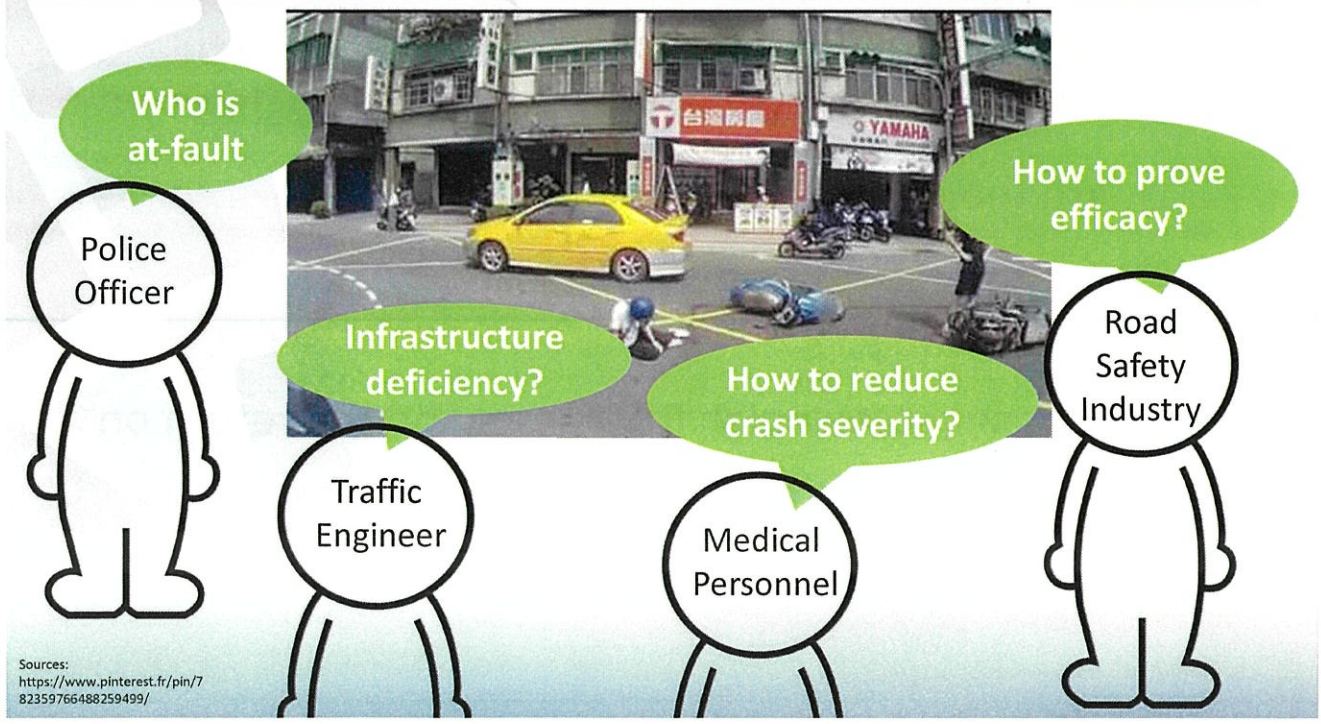


Sources:
https://www.pinterest.fr/pin/782359766488259499/

# The Challenges (2): How much information is needed?

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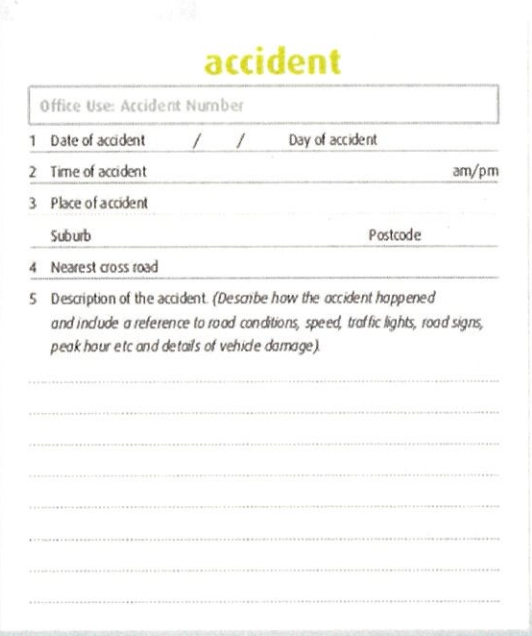

accident

Office Use: Accident Number

1 Date of accident / / Day of accident

2 Time of accident am/pm

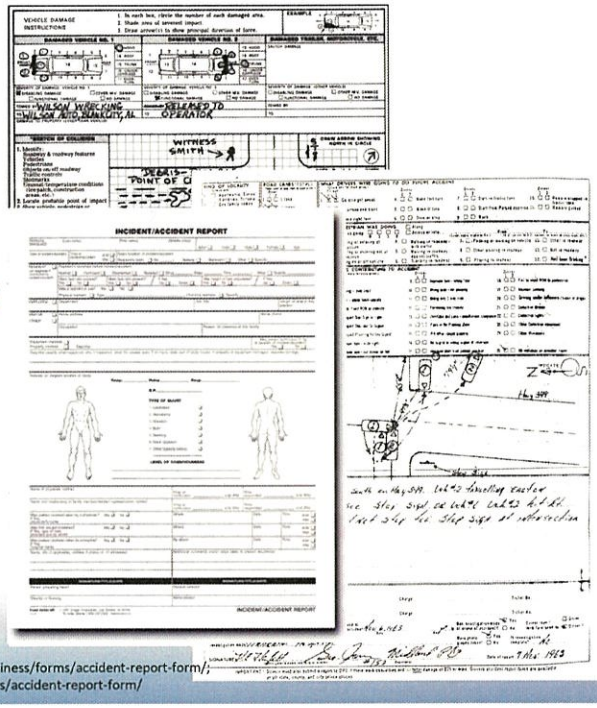
3 Place of accident

Suburb Postcode

4 Nearest cross road

5 Description of the accident. *(Describe how the accident happened and include a reference to road conditions, speed, traffic lights, road signs, peak hour etc and details of vehicle damage).*

**Or?**


INCIDENT/ACCIDENT REPORT

Sources: http://www.spelplus.com/post_printable-accident-report-forms_290559/; https://www.template.net/business/forms/accident-report-form/; https://commons.wikimedia.org/wiki/File:Laura_Bush_police_report.jpg; https://www.template.net/business/forms/accident-report-form/

# The Challenges (3): High R&D costs for potential countermeasures

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1. **The challenge:** what countermeasures should be first implemented to reduce motorcycle crashes?
   1) Are they effective?
   2) Are the results transferable across APEC economies?
2. **The consequence:** high R&D costs and the return on safety investment is not maximized

# This Concept Note:

## Coherent crash data collection and reporting

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1. To improve the accessibility and transferability of motorcycle crash data among different stakeholders, not only within each APEC economy but also among APEC economies as a whole.
2. To develop guidelines regarding with what "minimum set" of data elements should be included when updating crash report forms, with special emphasis on those data elements needed for motorcycle safety decision-making purposes.

# From Research to Practice:

## Factors influencing crash occurrence and severity

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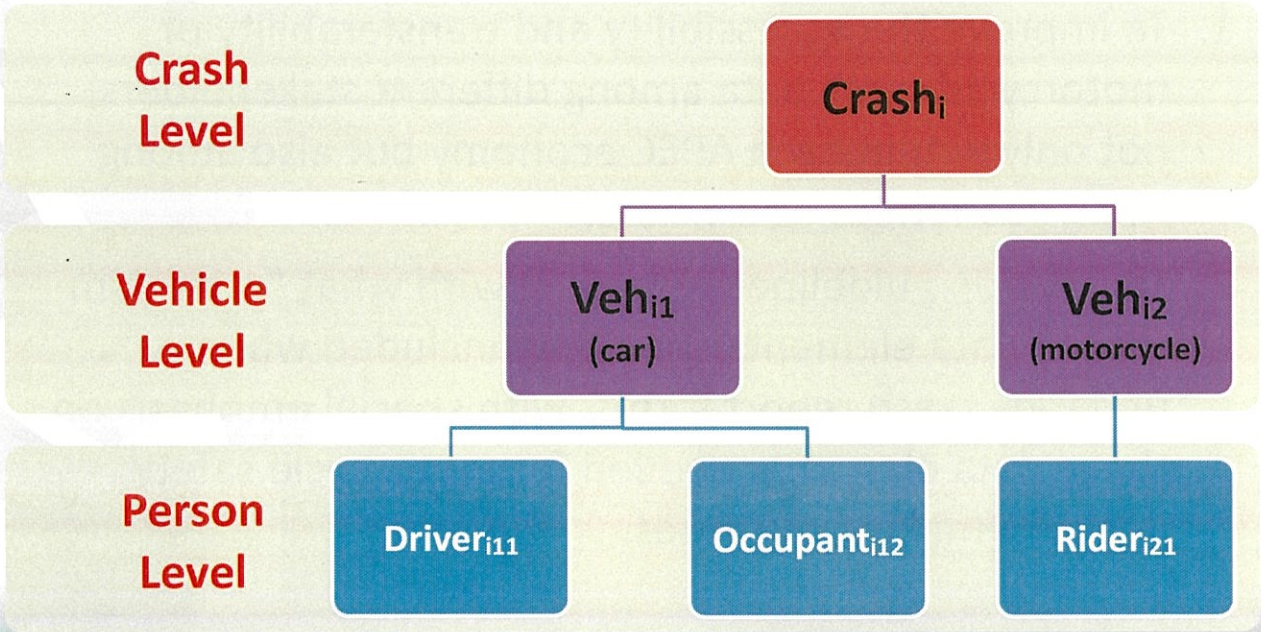
| | Human factors | Vehicle design | Roadway infrastructure |
|---|---|---|---|
| Pre-crash (crash prevention) | 1. Driver education<br>2. Driver training program<br>3. Safety campaign | 1. Motorcycle design<br>2. Safety device | 1. Roadway geometric design<br>2. Traffic control device |
| Crash (injury prevention during the crash) | 1. Use of helmet | 1. Crashworthiness design<br>2. Crash protective design | Forgiving roadside design: clear zone design, roadside hazards (trees, utility poles) |
| Post-crash (life sustaining) | 1. Emergency response; 2. Reduce economic impact because of both the loss of lives and that of quality of life | | |

# Basic Crash Data Structure




# Examples of Data Elements Desired for Motorcycle Safety Decision-Making Purposes

- **Crash level:**
  - Location, date and time,
  - Roadway surface condition
  - Types of collision
- **Vehicle level:**
  - Vehicle type
  - Traffic control device type
- **Person level:**
  - Age, gender
  - Person type
  - Use of helmet
  - Violation code
  - Alcohol or drug involvement

# We Need Your Help!
## How Do We Work Together?

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1. Report the numbers of motorcycle fatalities and injuries
2. Share each economy's current Traffic Accident Report form, including variable definitions
3. A comprehensive literature review on what data elements are desired for motorcycle safety decision making purposes
4. Chinese Taipei will host a workshop on discussing on a "minimum set" of standardized data elements that can be used to describe a motorcycle-related crash on any crash report form

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**Advancing**
Free Trade for Asia-Pacific
**Prosperity**

# Questions?

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國立交通大學
National Chiao Tung University

# APEC Transportation Working Group (TPT-WG)
# Strategic Plan 2018-2020

## FINAL
## (incorporating changes coming out of APEC TAFT)

## 1. Introduction

Established in 1991, the Transportation Working Group (TPT-WG) normally meets biannually to work towards an efficient, seamless, safe, secure, and sustainable transportation system, and to promote the Bogor Goals of free and open trade and investment in the APEC region.

Chaired by a Lead Shepherd, the TPT-WG's work is implemented through Leadership groups, four Expert Groups, with approved sub-groups, as follows:

- **Leadership Groups:**
  - Heads of Delegation (HODs) from each APEC Member Economy with the Lead Shepherd, Deputy Lead Shepherd, and Program Director
  - Management Group, comprised of the Lead and Deputy Lead Shepherds, Chairs of Experts Groups, and the Program Director
- **Experts Groups:**
  - **Aviation Experts Group (AEG)**
    - AEG - Safety (AEG-SAF)
    - AEG – Security (AEG-SEC)
    - AET – Air Service (AEG-SRV)
  - **Intermodal & Intelligent Transportation Systems (ITS) Experts Group (IIEG)**
    - GNSS (Global Navigation Satellite Systems) Implementation Team (GIT)
  - **Land Experts Group (LEG)**
    - LEG-Vehicle Standards Harmonization (LEG-VSHG)
    - LEG-Road & Rail Safety (LEG-SAF)
  - **Maritime Experts Group (MEG)**
    - MEG-Security (MEG-SEC)

The APEC Port Services Network (APSN), although not an expert group, also reports to the TPT-WG.

The TPT-WG aligns its work with instructions from Leaders' and Transportation Ministers' Statements as well as with the priorities and decisions of Senior Officials and the Steering Committee on ECOTECH (SCE).

The TPT-WG is composed of member economy transportation experts covering aviation, intermodal, land and maritime transport. It works with the private sector, international organizations and other APEC fora by conducting studies; supporting compatibility of policies,

rules, and economy standards; building human resource capacity; exchanging information and research data.

This Strategic Plan (2017 to 2020) replaces the Strategic Plan (2013 to 2016) and provides a roadmap to address critical issues pertaining to the TPT-WG's mandate.

## 2. Vision Statement

The TPT-WG promotes and enables a harmonised, liberalised, seamless, comprehensive, safe, sustainable, resilient, secure and reliable transport network that fosters a prosperous Asia-Pacific region.

## 3. Mission Statement

The TPT-WG brings together APEC economies to facilitate the creation, maintenance and expansion of open economic networks across the Asia-Pacific region by promoting transport-focused information exchange, collaborating on solutions of common challenges, and capacity building to enhance transport safety, security, accessibility, sustainability and seamless connectivity.

It addresses people-to-people linkages, industry leadership, socio-economic issues, compliance with international standards, and regulatory cooperation to achieve its purposes mentioned above.

## 4. Objectives

The TPT-WG will respond to the direction of APEC Leaders, Transport Ministers and SCE to achieve:

- Deepened regional economic integration by promoting quality, seamlessly connected, accessible, sustainable, safe, and secure transport infrastructure and systems; and by leveraging Public-Private Partnerships, sharing best practices with remote areas, and pursuing socio-economic improvement.
- Enhanced liberalized, efficient, safe, resilient and secure flow of goods, people, services and capital in the APEC region through improving aviation, maritime, land, intermodal and mass transit transportation systems.
- Encouraged uptake and evaluation of technology development in the transportation sector through corresponding information exchange, and by complying with international standards to lead harmonious growth across the region.
- Enriched human resource capacity to better enable each APEC Economy to achieve transport aspirations which will contribute to the APEC region's future economic growth potential. Under this context, encourage more women's activities in transport and more enforced measures against human trafficking.
- Comprehensive and seamless connectivity built by better promoting accessible mobility and sustainable transport systems.

- Expanded connectivity of APEC's three pillars (physical, institutional, and people-to-people connectivity) through cooperation with other international organizations as appropriate for better integrated economic flows and inclusive development.

The TPT-WG will address initiatives arising from the 10th APEC Transportation Ministerial Meeting (TMM10) to:

A. Promote Quality Infrastructure Connectivity through:
   - Developing a Transport Connectivity Map pursuing broad-based economic growth;;
   - Implementing the Supply Chain Connectivity Framework Action Plan in Transport;
   - Leveraging Public-Private Partnerships in developing, financing, maintenance, and operation of quality infrastructure;
   - Supporting the APEC Connectivity Blueprint 2015-2025 to accelerate seamless cooperative development;
   - Sharing information and best practices for regional integration; and
   - Pursuing more seamless business and aviation operations across the APEC region.

B. Enhance Transportation Accessibility, Safety, Security, and Sustainability through:
   - Improving business viability during disasters under the seven principles of Supply Chain Resilience;
   - Working with other relevant APEC fora and international organizations;
   - Encouraging compliance with ICAO (International Civil Aviation Organization) standards and with ISPS (International Ship and Port Facility Security) codes to utilize the latest security technology, and to apply GNSS (Global Navigation Satellite System);
   - Exploring regulatory approach for high-mass heavy-road vehicle safety and productivity as well as a more harmonized approach for labeling, handling, and transporting dangerous goods;
   - Deploying advanced technologies as well as removing corresponding regulatory barriers safely, efficiently, and reliably; and
   - Opening dialogue with one another to facilitate information exchanges on research and data and sharing best practices that are necessary for safety regulators across the Asia-Pacific region to sufficiently evaluate rapidly evolving technologies, such as automated and connected vehicles, intelligent transportation systems and, more broadly, the evolving relationship between humans, technology and the operation of transportation.

C. Crosscutting Socio-Economic Improvement through:
   - Participating more in Women in Transport (WiT) activities and encouraging member economies to continue implementation of WiT activities.
   - Taking steps to prevent APEC transport networks from being utilized for human trafficking.

**5. Critical Success Factors/ Key Performance Indicators (KPIs)**

Critical success factors and Key Performance Indicators have been developed in consideration of the following assumptions:

- the sustained engagement and commitment of member economy experts;

- economies' willingness to implement recommendations and actions that may require special attention;
- buy-in from other APEC fora;
- proposals that are effective in moving the TPT-WG toward achieving its goals; and
- availability of adequate funding.

| **Objectives** | **Key Performance Indicators (KPIs)** |
|---|---|
| Deepened regional economic integration:<br><br>by promoting quality, seamlessly connected, accessible, sustainable, safe, and secure transport infrastructure and system | • Developing a Transport Connectivity Map pursuing broad-based economic growth<br>• Implementing the Supply Chain Connectivity Framework Action Plan in Transport<br>• Increasing the quality of infrastructure by creatively scoring competitive bids, which also consider not only the purchase price but also key elements such as life cycle costs including performance, durability, environmental impacts, safety, and maintainability.<br>• Supporting the APEC Connectivity Blueprint 2015-2025 to accelerate cooperative development seamlessly.<br>• Improving business viability during disasters under the seven principles of Supply Chain Resilience. |
| Deepened regional economic integration:<br><br>by leveraging Public-Private Partnership, sharing best practices with remote areas, and pursuing socio-economic improvements | • Expanding institutional capacity to leverage private investment to support the development, financing, maintenance, and operation of quality transportation infrastructure through Public-Private Partnerships (PPPs)<br>• Letting the transportation network facilitate broad-based economic growth, from dense urban centers to remote rural areas and everywhere in between.<br>• Sharing best practices in terms of mechanisms and programs that promote the integration by each economy of remote areas within their common transport area.<br>• Encouraging greater participation of women in the transportation sector and more equal access of transportation users.<br>• Discouraging the use of any transportation network by human traffickers within and across our borders. |
| Facilitating liberalized, efficient, safe, resilient, and secure flow of goods, people, services and capital in the APEC region through:<br><br>Improving intermodal and mass transit | • Enhancing multi-modal seamless supply chains through the application of ITS, GNSS and related technologies.<br>• Exchanging best practices in the fields of intermodal and ITS developments.<br>• Working to address chokepoints identified by the APEC Supply Chain Connectivity Framework.<br>• Strengthening capacity building in the area of emergency preparedness and global supply chain resilience;<br>• On-going collaboration with other fora, including the |

| Objectives | Key Performance Indicators (KPIs) |
|---|---|
| transportation systems | International Transport Forum (ITF), on intermodal and mass transit transportation systems. |
| Facilitating liberalized, efficient, safe, resilient, and secure flow of goods, people, services and capital in the APEC region through:<br><br>Improving the aviation transport system | • Enhancing Aviation Connectivity and Emissions Reduction via the Implementation of a Performance-Based Navigation (PBN) Assistance Program.<br>• Exchanging best practices and lessons learned in the area of aviation security.<br>• Identifying technological solutions to air security challenges.<br>• Working to address the eight critical elements of an effective aviation safety oversight system.<br>• Implementing Aviation Language Proficiency, GNSS, Automatic Dependent Surveillance-Broadcast (ADS-B) and the ICAO-mandated Safety Management System by APEC economies.<br>• Site visits to APEC economies to identify and promote best practices.<br>• Providing capacity building assistance to APEC economies in meeting internationally recognized requirements and procedures on air safety and security. |
| Facilitating liberalized, efficient, safe, resilient, and secure flow of goods, people, services and capital in the APEC region through:<br><br>Improving the maritime transport system | • Capacity building for preventing accidents in maritime dangerous goods &containers transportation.<br>• Collecting and sharing best practices regarding cruising ports.<br>• Conducting a study on enhancing the global capacity of seafarers in the APEC region.<br>• Promoting comprehensive connectivity through port connectivity from physical, institutional and people-to–people perspectives, in terms of the APEC Port Services Network (APSN)<br>• Holding an APEC Port Connectivity Forum to promote the connectivity of APEC ports by APSN.<br>• Restructuring the shipping and port industry in terms of the APSN.<br>• Promoting communication and cooperation on ports connectivity by working with other international organizations as appropriate.<br>• Conducting standardized capacity-building training courses focusing on risk mitigation; port facility security audits, drills and exercises; and port security regulation and development workshops to promote the implementation of the International Ship and Port Facility Security (ISPS) Code and improve port security governance. Economic benefits may be measurable through reductions in vessel or cargo delays resulting from |

| Objectives | Key Performance Indicators (KPIs) |
|---|---|
| | ISPS Code implementation consistent across the region.<br>• Implementation of GNSS for the Automatic Identification System (AIS). |
| Facilitating liberalized, efficient, safe, resilient, and secure flow of goods, people, services and capital in the APEC region through:<br><br>Improving the and transport system | • Developing a better understanding of the intersection between road and rail safety issues.<br>• Identifying best practices on road safety measures (heavy and light vehicles, motorcycles and scooters).<br>• On-going road safety initiatives and increased road safety efforts in response to the United Nations Decade of Action for Road Safety, 2011-2020.<br>• On-going capacity building for economies to develop their own road safety measures for heavy vehicles in the transport supply chain sector, with a view to sharing and promoting a common approach for implementation and the alignment of safety measures and standards<br>• On-going collaboration with other fora, including the International Transport Forum (ITF), on road safety data, and the International Working Group on Land Transport Security on land security matters.<br>• Exchanging information, plans, or status of vehicle standards by economies.<br>• Strengthening efforts to improve land transport security, including the development and promotion of best practices in bus anti-terrorism measures. |
| Encouraged uptake and evaluation of technology development: | • Exploring regulatory approach for high-mass heavy-road vehicle safety and productivity as well as more harmonized approach for labeling, handling, and transporting dangerous goods<br>• Pursuing the safe and reliable application of GNSS technologies.<br>• Studying the application of Air Traffic Management Modernization tools as a means to reduce aviation emissions in the APEC region.<br>• Developing a framework to use clean energy, reduce energy consumption, and identify best solutions and practices to reduce exhaust emissions from ships.<br>• Promoting energy-efficient modes, including rail, inland river transport and short-sea shipping.<br>• Deploying advanced technologies as well as removing corresponding regulatory barriers for the enhanced safety, efficiency, and reliability of transportation. |
| Encouraged uptake and | • Holding workshops and seminars to disseminate and |

| Objectives | Key Performance Indicators (KPIs) |
|---|---|
| evaluation of technology development:<br><br>Through corresponding information and best practices exchanges | encourage implementation of technologies to advance regional integration on transportation-related issues.<br>• Sharing information and best practices for regional integration in promoting quality infrastructure connectivity.<br>• Publishing the APEC Port Development Report annually.<br>• Conducting seminars on the factors and elements that promote sustainable transport, including the benefits of intermodal freight strategies and transit-oriented development.<br>• Exchanging best practices and lessons learned in the area of green growth and sustainable development with the APEC Energy Smart Communities Initiative (ESCI). |
| Encouraged uptake and evaluation of technology development:<br><br>By complying with international standards to lead harmonious growth across the region | • Exchanging information, plans, or status of vehicle standards by economies.<br>• Encouraging compliance with ICAO (International Civil Aviation Organization) standards and with ISPS.<br>• Following the International Ship and Port Facility Security code to utilize the latest security technology, and to apply GNSS (Global Navigation Satellite System).<br>• Providing capacity-building assistance to APEC economies in meeting internationally recognized requirements and procedures on air safety and security. |
| Performing complementary policy measures for;<br><br>Proactive learning by life-cycle evaluation of transport infrastructure | • Evaluating mechanisms to better maintain, manage and operate existing transportation infrastructure so that its utility to the people and business of the APEC region are both sustained and long lasting.<br>• Increasing the number of APEC economies that adopt a comprehensive assessment method in evaluating proposals for infrastructure projects: the method of considering not only the purchase price, but also key elements such as life cycle cost including performance and durability, environmental impacts, safety and maintainability. |
| Enriched human resource capacity<br><br>To better enable each APEC economy to achieve transport aspirations which will contribute to the APEC region's future economic growth potential, and more | • Participating more in Women in Transport (WiT) activities.<br>• Continue implementation of activities under the WiT Data Framework to increase women's employment in transportation jobs in the APEC region.<br>• Launch Phase 2 of pilot projects under the WiT Data Framework.<br>• Transition the existing WiT Taskforce into a more sustainable and permanent sub-Group or other organizational unit within the TPT-WG to appropriately address the Ministers' instruction to continue work in this area. |

| Objectives | Key Performance Indicators (KPIs) |
|---|---|
| enforced measures against human trafficking | • Discouraging APEC transport networks to be utilized for human trafficking. |
| Enriched human resource capacity | • Conducting standardized capacity-building training courses focusing on risk mitigation; facility security audits, drills and exercises; security regulation; and governance.<br>• Holding workshops and seminars to disseminate and implement best practices and technologies to advance regional integration on transportation-related issues.<br>• Developing a compendium of best practices, and holding regular dialogues, on Women in Transportation.<br>• Setting up the APSN Study Center to conduct research on APEC port development. |
| Building comprehensive and seamless connectivity through:<br><br>Promoting accessible mobility | • Linking economies and people to one another to help accelerate the region's economic and inclusive growth. |
| Building comprehensive and seamless connectivity through:<br><br>Developing sustainable transport systems | • Pursuing low-carbon and environmentally friendly transport systems.<br>• Evaluating quality infrastructure performance by considering the external cost paid by the overall society and environment.<br>• Implementing the Green Port Award System (GPAS) through the APEC Port Service Network.<br>• Publishing the Best Practices of APEC Green Ports.<br>• Holding an APSN Green Port Award System Workshop to Promote Green and Sustainable Port Development in the APEC Region.<br>• Economic benefits of this effort may be measured in terms of capacity usage data, delivery of economy priorities during a crisis, and reductions in low-priority cargo movement compared to overall system capacities.<br>• Holding studies and seminars on the application and benefits of seamless transportation systems.<br>• Enhancing surface transportation as a component of multi-modal seamless supply chains through the application of ITS, GNSS and related technologies. |

| Objectives | Key Performance Indicators (KPIs) |
|---|---|
| Expanded connectivity of APEC's three pillars (physical, institutional, and people-to-people connectivity),in coordination with other international organizations as appropriate,for better integrated economic flows and inclusive developments | • Working with other relevant APEC fora and international organizations to enhance transportation accessibility, safety, security, and sustainability.<br>• Encouraging international education cooperation for deepening connectivity in APEC and with relevant international organizations.<br>• Addressing variations in cross-border standards and regulations for movement of goods, services and business travelers.<br>• Encouraging collaboration by APEC economies in developing joint personnel training. Taking into account that transport education belongs to APEC's "people-to-people connectivity" pillar, which will be addressed with the other two pillars in coordination with other international organizations as appropriate. |

**6. Prioritized Implementation Schedule**

An implementation schedule will prioritize activities across the four-year strategic plan period and will be reflected in the TPT-WG Annual Workplan (prepared and endorsed by SCE during SOM-1 on an annual basis).

During TPT-WG meetings, activities will be assessed against Key Performance Indicators (KPIs). A list of TPT-WG projects is attached (Annex A).

**ANNEX A – TPT-WG Projects**

| Objectives | Activities | Start | Completion | Lead Economy/Fora |
|---|---|---|---|---|
| Regional economic integration through:<br><br>Liberalization and Facilitation of Transport Services | Continue to work toward achieving air service liberalization | 2010 | Ongoing | TPT-WG AEG SRV |
| | Continue to work in APEC Port Service Network (APSN) to promote regional connectivity | 2017 | 2018 | TPT-WG MEG APSN |
| Regional economic integration through:<br><br>Seamless Transportation Systems | Promoting Supply Chain Resiliency in the APEC Region: Reviewing Progress on the 7 Principles | 2017 | 2018 | United States/ TPT-WG IIEG |
| Regional economic integration through:<br><br>Participating in the Implementation of the Supply Chain Connectivity Framework Action Plan | Share best practices on the role and the practical use of ports in natural disasters | 2012 | Ongoing | TPT-WG MEG-SEC |
| | Promote GNSS and its support on supply chain growth and ITS | 2017 | Ongoing | TPT-WG IIEG GIT |
| | The Study of Best VGM Practices to Maintain and Enhance Supply Chain Connectivity in the APEC Region | 2017 | 2018 | Chinese Taipei/ TPT-WG IIEG |
| Regional economic integration through:<br><br>Human Resource Development | Women in Transportation (WiT) Taskforce to update the compendium of best practices; and | 2013 | 2018 | United States/ TPT-WG |

| Objectives | Activities | Start | Completion | Lead Economy/Fora |
|---|---|---|---|---|
| | Continue implementation of activities under the WiT Data Framework to increase women's employment in transportation jobs in the APEC region.<br><br>Launch Phase 2 of pilot projects under the WiT Data Framework.<br><br>Transition the existing WiT Taskforce into a more sustainable and permanent sub-Group or other organizational unit within the TPT-WG to appropriately address the Ministers' instruction to continue work in this area. | 2013<br><br>2018<br><br>2018 | Ongoing<br><br>2021<br><br>2019 | |
| | Cooperation in the field of transport education for the benefit of APEC transport connectivity.<br>Developing guidelines for transport education and joint educational programs.<br>Discussing the preparation of staff for certain infrastructural project. | 2015 | Ongoing | Russia/TPT-WG |
| Safety and security through:<br><br>Aviation Safety and Security | APEC Performance-Based Navigation Regulatory Review and Evaluation Program | 2011 | Ongoing | United States/ TPT-WG AEG |
| Safety and security through:<br><br>Land Safety and Security | Develop a framework covering a range of regulatory, educational and other aspects to address the impacts of heavy vehicle overloading for selected economies<br><br>Developing Guidelines for | 2017<br><br>2018 | 2018<br><br>2019 | Australia/ TPT-WG LEG-SAF<br><br>Chinese Taipei/ |

| Objectives | Activities | Start | Completion | Lead Economy/Fora |
|---|---|---|---|---|
| | Motorcycle Crash Data Collection and Reporting in the APEC Region | | | TPT-WG LEG-SAF |
| Safety and security through:<br><br>Maritime Safety and Security | International Ship and Port Facility Security (ISPS) Code Implementation Assistance Program<br><br>Study prevention measures of accidents in transporting dangerous cargo | 2013<br><br>2018 | Ongoing<br><br>2018 | United States/ TPT-WG MEG-SEC<br><br>TPT-WG MEG |
| Follow up to TMM10 | -Developing a Transport Connectivity Map<br>-Implementing Supply Chain Connectivity Framework Action Plan<br>- Improving business viability during a disaster<br>-Participating more in Women in Transport (WiT) activities –<br>-Take steps to prevent APEC transport networks from being utilized for human trafficking | 2018<br>2017<br>2017<br>2017<br>2017 | 2020<br>2020<br>2020<br>Ongoing<br>Ongoing | TPT-WG |

# APEC Transportation Working Group's Proposed Workplan for 2018

## Introduction

The APEC Transportation Working Group (TPT-WG) works to advance APEC's overarching agenda of improving connectivity and deepening regional economic integration by promoting quality infrastructure connectivity; enhancing transportation accessibility, safety, security, and sustainability; and crosscutting socio-economic improvement. The TPT-WG aligns its activities with instructions from the Leaders' and Ministers' Statements as well as the APEC host economy's priorities and other SOM and SCE priorities and decisions.

## 1. Expected Outcomes and Deliverables for 2018

Priorities for the TPT-WG are:

- Continue building more seamless infrastructural operation through Transportation Connectivity Map, Supply Chain Connectivity Framework Action Plan, private investment, APEC Connectivity Blueprint for 2015-2025, and APEC Port Services Network (APSN).
- Enhance supply chain resiliency in response to natural disasters/hazards, collaborate with other APEC fora and international organizations (e.g. ICAO, ILO, or IMO) complying with corresponding safety/security/environmental sustainability/facilitation international standards, facilitate a more harmonized approach to the labelling, handling, and transport of dangerous goods across the APEC region, and promote advanced technologies (e.g. Automated and connected vehicles, intelligent transportation systems, drones)..
- Facilitate women's participation in the economic life of the Asia-Pacific transportation sector, through the ongoing Women in Transportation Initiative, and discourage the use of transport networks for human trafficking.
- Expand connectivity of APEC's three pillars (physical, institutional, and people to people connectivity) in coordination with other international organizations, as appropriate, for the better integrated economic flows and inclusive development..
- Encourage collaboration by APEC economies in developing joint personnel training as per the TMM10 statement. Consider facilitating APEC cross – fora collaborations to create more significant synergy with EWG, Friends of Chairs on Connectivity/Urbanization, or others as appropriate.

The 45th TPT-WG meeting will take place in Seoul, Korea in April 2018 and the 46th TPT-WG meeting will be held in Lima, Peru in October 2018.

The work of the TPT-WG is largely progressed through four Expert Groups covering Aviation, Maritime, Land, and Intermodal and Intelligent Transport Systems issues respectively. These Expert Groups (and their associated subgroups, if necessary) will meet in Seoul, Korea and Lima, Peru with a focus on progressing TPTWG objectives. Examples of the further initiatives to be developed include activities that promote quality infrastructure connectivity, enhance transportation accessibility, safety, security, and sustainability, and encourage economic growth and human resource growth

The TPT-WG will also continue to conduct workshops to increase knowledge and provide practical assistance and training to member economies in facilitating the creation, maintenance, and expansion of economic and people-to-people linkages across the Asia-Pacific region, as well as our industry's leadership in technology commercialization, international best practices dissemination, and regulatory cooperation.

In addition to these capacity building workshops, the TPT-WG has a number of activities to promote transport resilience and connectivity, including:

- Promoting the development of transportation technologies (ITS, Automated and connected vehicles, global navigation satellite systems)
- Promoting energy-efficient and sustainable modes of transportation
- Investing in new, upgraded or replacement infrastructure, in order to meet increased transportation needs
- Encouraging international air transport liberalization
- Promoting rail and road safety initiatives, including in relation to heavy vehicles

TPT-WG will continue its ongoing programme of initiatives to promote the role of women in the transport sector, including consideration of measures to provide for their personal security.

**Include the issue of transport specialists training as part of the agenda of APEC TPTWG meetings.**

## 2. Itemized Work Plans for 2018

| Title | Summary of Specific Plans | Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations) | ECOTECH Priorities and/or Host Year Priorities | Cross-fora collaboration (Within APEC and beyond APEC) |
|---|---|---|---|---|
| Capacity Building for Preventing Accidents in Maritime Dangerous Goods and Containers Transportation<br><br>(TPT 01 2017T) | On a global level, the volume of seaborne trade continues to increase and the quantity of containerized dangerous goods is also growing dramatically. Preventing accidents involving seaborne containers carrying such cargos is increasingly challenging and crucial for both the safety and economic efficiency of marine-based trade involving APEC economies.<br><br>In the context, holding a seminar/workshop (taken place in the 4th quarter around November) aimed at achieving safer seaborne transportation by enhancing APEC economies' understanding and implementation of the regulations that could prevent such incidents/accidents is necessary. | Approved as TILF project Endorsed by TPT-WG in 2017 | - Technologies and Innovation<br>- Inclusive Growth<br>- Regional Economic Integration<br>- Sustainable Growth<br>- Human Security | |
| Promoting Supply Chain Resiliency in the APEC Region: Reviewing Progress on the 7 Principles<br><br>(TPT 02 2017A) | This project aims to increase the capacity of APEC economies to build resilient supply chains by instituting systems and processes that can reduce disruptions to global supply chains caused by natural disasters. The project includes two components:<br><br>- An APEC-wide workshop that will seek to review and reflect on the progress over the past 5 years by APEC economies on the seven principles on promoting supply chain resilience. This will include sharing experiences and lessons learned over the past 5 years and delving into principles not already discussed in TPT-WG workshops with a focus on supporting critical transportation infrastructure and inter-modalism. This workshop will occur possibly in conjunction with TPT-WG meeting in 2018.<br><br>- Targeted short-term Technical Assistance to address capacity gaps or areas that need additional support in implementing Action Plans | Endorsed by TPT-WG in 2017 | - Sustainable Growth<br>- Human Security | |

| Title | Summary of Specific Plans | Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations) | ECOTECH Priorities and/or Host Year Priorities | Cross-fora collaboration (Within APEC and beyond APEC) |
|---|---|---|---|---|
| Cooperation in the Field of Transport Education for the benefit of Transport Connectivity in the APEC region<br><br>(TPT 01 2017S) | The APEC Conference "Cooperation in the field of transport education for the benefit of transport connectivity in the APEC region" was held on 7-8 February 2018 in Moscow, Russia within the framework of the Forum "Transport education and science 2018" . The APEC TPTWG Lead Shepherd, speakers and representatives of government authorities, academia and business community from 11 economies attended the Conference.<br>The participants concurred on the need to encourage working out a Comprehensive Program of Transport Human Resourcing for APEC economies, and proposed recommendations for consideration by the APEC TPTWG.<br>The Outcomes and Recommendations of the APEC Conference "Cooperation in the field of transport education for the benefit of transport connectivity in the APEC region" will be circulated among APEC TPTWG members for consideration. | Self-funded project from Russia<br><br>Endorsed by TPT-WG in 2017 | - Inclusive Growth<br>- Regional Economic Integration<br>- Sustainable Growth<br>- Human Capital Development | |
| The Study of Best VGM (Verified Gross Mass) Practices to Maintain and Enhance the Supply Chain Connectivity in the APEC Region<br>(TPT 04 2017S ) | Several port companies operate in the APEC region are interviewed and their current VGM practices are summarized. An Analytic Hierarchical Process questionnaire is employed to survey various VGM stakeholders, whose perceptions on the degree of performance on different VGM practices are to be calculated. | Self-funded project from Chinese Taipei<br><br>Endorsed by TPT-WG in 2017 | - Regional Economic Integration<br>- Sustainable Growth | |
| Putting the Brakes on Human Trafficking: Integrating APEC Ministries of Transport into Economies' Domestic and Regional Efforts to Combat Human Trafficking<br><br>(TPT 05 2017S) | The modern slavery of human trafficking has significant economic costs, such as the degradation of human capital and the stunting of communities' economic development.<br><br>Accordingly, building capacity in volunteer APEC Economies will help the general public, transportation sector workers, and government transportation regulators better report possible incidents of human trafficking by sharing policies and examples.<br><br>(25 AELM and TMM10 directive) | Self-funded project from United States<br><br>Endorsed by TPT-WG in 2017 | - Sustainable Growth<br>- Human Security | Anti-Corruption and Transparency Working Group (ACT) |

| Title | Summary of Specific Plans | Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations) | ECOTECH Priorities and/or Host Year Priorities | Cross-fora collaboration (Within APEC and beyond APEC) |
|---|---|---|---|---|
| APEC Women in Transportation (WiT) Forum 2017<br><br>(TPT 07 2017S) | One of APEC's goals is to support inclusive employment for women in a variety of sectors, including transportation, and foster policies to advance women's employment in the transportation sector and use of transportation systems. The Forum may be held serving as an opportunity to discuss the status of implementation of the APEC WiT initiative, and highlighting ongoing pilots taking place across APEC economies, learning from the experiences, challenges, and successes in advancing women's employment in transportation with data collection.<br><br>The Forum will also provide an opportunity for representatives from both the public and private sectors to learn about progress toward women's employment in and use of transportation throughout the region.<br><br>(25 AELM and TMM10 directive) | Self-funded project from United States<br><br>Endorsed by TPT-WG in 2017 | - Inclusive Growth<br>- Human Security | |
| APEC Forum on Building the Global Capacity of Seafarers<br><br>(TPT 02 2017S) | With the aim of enhancing the global capacity of seafarers in the APEC region, a seminar was held to explore and exchange knowledge and ideas on the future direction of building the global capacity of seafarers among APEC economies in 2017.<br><br>As a follow-up measure of the seminar, KIMFT(Korea Institute of Maritime and Fisheries Technology) plans to hold a working- level discussion on 27th February-1st March 2018 in Korea to discuss how to build 'Maritime Education and Training (MET) Network' among the related economies. Based on its result, a new concept note will be submitted. | Self-funded project from Republic of Korea | Technologies and Innovation | |
| Framework of Heavy Vehicle Safety in Transport Supply Chain for APEC | Papua New Guinea held a well-attended workshop at TPT-WG 42 in April 2016 to consider technical aspects of heavy vehicle safety, including measures to prevent truck roll-over. Following that meeting, Papua New Guinea continues to develop guidelines on compliance, enforcement and pricing signals, and the importance and benefit of | Self-funded project from Australia and Papua New Guinea<br><br>Endorsed by TPT-WG in | | |

| Title | Summary of Specific Plans | Mandate (Leaders/Ministers/SOM/SCE Priorities and Decisions, Strategic Plans and to ABAC recommendations) | ECOTECH Priorities and/or Host Year Priorities | Cross-fora collaboration (Within APEC and beyond APEC) |
|---|---|---|---|---|
| Developing Economies<br><br>(TPT 01 2016S) | establishing strong partnerships with industry.<br><br>A practitioner workshop was held from 3rd -6th April 2017 in Brisbane, Australia which was attended by 10 economies. A draft regulatory toolkit was developed as part of the resolution of the workshop and was circulated to participants for further comments. The final version of the regulatory toolkit was cleared by Papua New Guinea in November 2017 for presentation to the APEC Secretariat in Singapore in late 2017.<br><br>The final project deliverable was accepted on 2 February 2018, which is a toolkit designed to assist APEC member economies in developing approaches to better regulate heavy vehicles to deliver better safety outcomes for communities.<br><br>Two further workshops in which the regulatory toolkit will be discussed are scheduled to be held in Papua New Guinea with the industry to coincide with the trial operations of the new weighbridges recently installed by the PNG National Roads Authority. | 2016. TPTWG and LEG endorsed PNG's presentation of the regulatory toolkit | | |