

International Whole Vehicle Type Approval

*draft proposal for UN Regulation No.0
(ECE/TRANS/WP.29/2015/68)*

Contents

Overview

- 1-1. What is IWVTA
- 1-2. Objective of IWVTA
- 1-3. Who benefits from IWVTA?
- 1-4. Delivering the Vision
- 1-5. Visualizing IWVTA Step 1 approach
- 1-6. IWVTA Step 1 approach and national vehicle type approval

Details

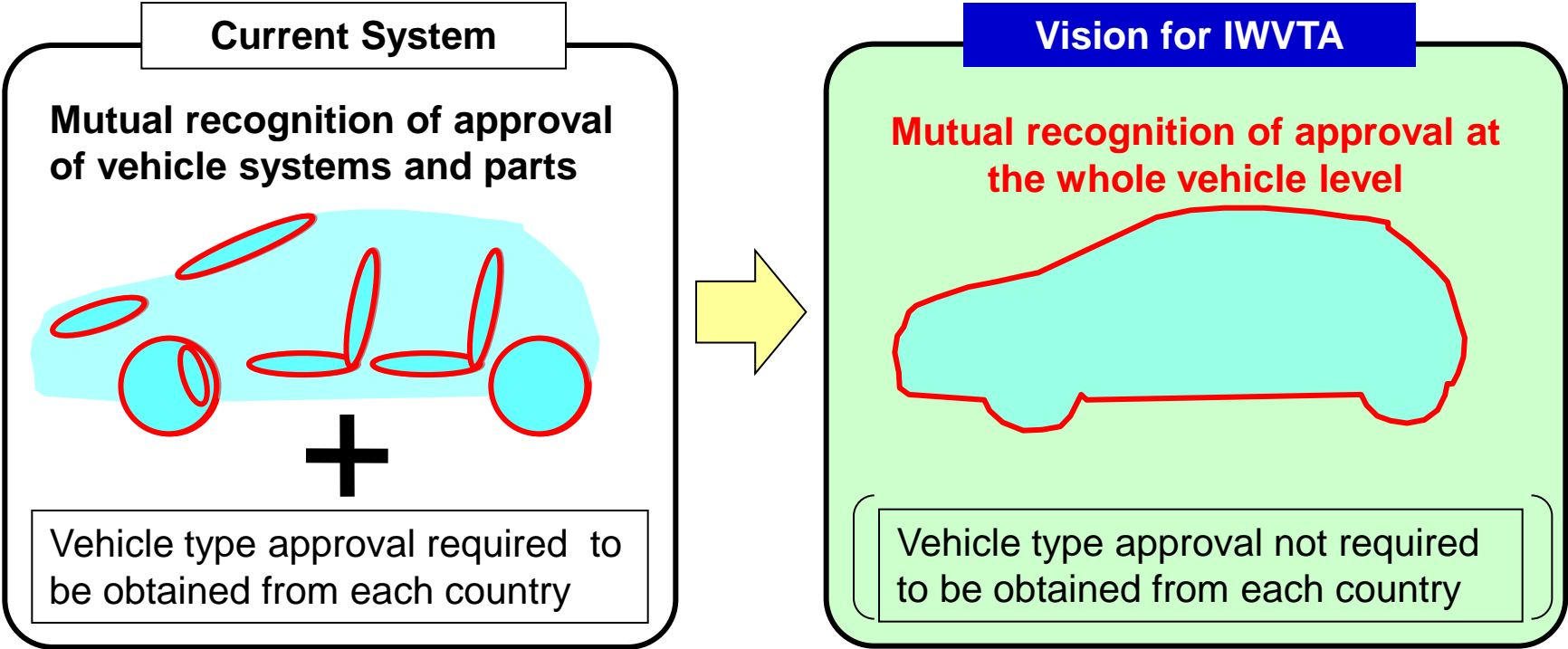
- 2-1. What IWVTA comprises
- 2-2. Major differences between draft UNR0 and other UN Regulations
- 2-3. Contents of draft UNR0
- 2-4. Outline of each section of draft UNR0
- 2-5. The rights of a Contracting Party applying UNR0
- 2-6. The obligations of a Contracting Party applying UNR0
- 2-7. Annex 4 “The technical requirements applicable to IWVTA
- 2-8. The UN Regulations requiring amendments before inclusion in Annex 4
- 2-9. What is Declaration of Conformance (DoC)?
- 2-10. Definition of a vehicle type
- 2-11. Modified Approval Number for IWVTA
- 2-12. Example how to deal with extension of an IWVTA

Future Work

- 3-1. Changes to the formal document of UN R0 (ECE/TRANS/WP.29/2015/68)
- 3-2. Concept for the pre-testing of UN-Regulation No. 0
- 3-3. Schedule
- 3-4. Future evolution of UNR0
- 3-5. Ultimate Goal

Overview 1-1. What is IWVTA?

International Whole Vehicle Type Approval (IWVTA) scheme will be established by UN Regulation No.0 (UNR0) within the framework of revision 3 of the 1958 Agreement.



1-2. Objective of IWVTA

The principal objective of IWVTA is expanding the mutual recognition of vehicle systems and components to whole vehicles by:

- Achieving wider acceptance of the vehicle/component type approvals pursuant to the UN Regulations;
- Increasing the transparency of vehicle type approval procedures in the Contracting Parties applying the IWVTA Regulation;
- Simplifying procedures and minimizing administrative burdens in obtaining national/regional vehicle type approvals; and
- Providing a flexible approach to help Contracting Parties developing their national new-vehicle approval requirements.

1-3. Who benefits from IWVTA?

Realising the IWVTA objective is beneficial for:

- **Governments** - in delivering transparent, robust and reliable processes for whole vehicle type approval.
- **Industry** - by having access to quicker and more cost efficient type approval; and the potential for easier access to markets applying IWVTA.
- **Consumers** - who benefit from vehicles meeting uniform and consistent requirements at lower prices.

1-4. Delivering the Vision

We recognize the entire IWVTA vision cannot be achieved from the very beginning due to:

- the different number of UN Regulations currently applied by CPs, and
- the different requirements for type-approval at whole vehicle level operated nationally/regionally.

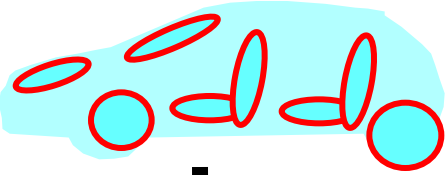
And so;

- in the first version of UNR0 the number of key provisions will not be sufficient to cover all aspects necessary for full type-approval of a whole vehicle → “IWVTA Step 1” = "**partial**" whole vehicle type-approval.
- at a future point this “IWVTA Step1” should develop into a "**complete**" whole vehicle type-approval.
- we are not proposing a timescale for delivering this overall vision.

1-5. Visualizing IWVTA Step 1 approach

Current System

Mutual recognition of approval of vehicle systems and parts

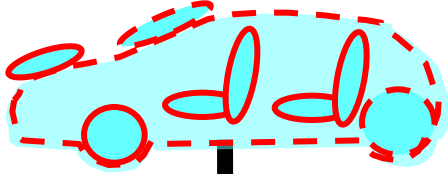


+

Vehicle type approval required to be obtained from each country

IWVTA Step1

Mutual recognition of approval at the vehicle level

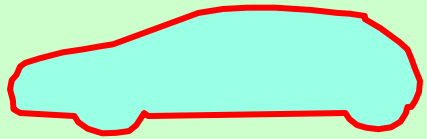


+

Vehicle systems and parts type approval not covered by IWVTA must be completed in Contracting Parties

Vision for IWVTA

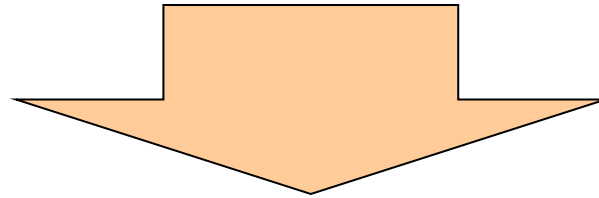
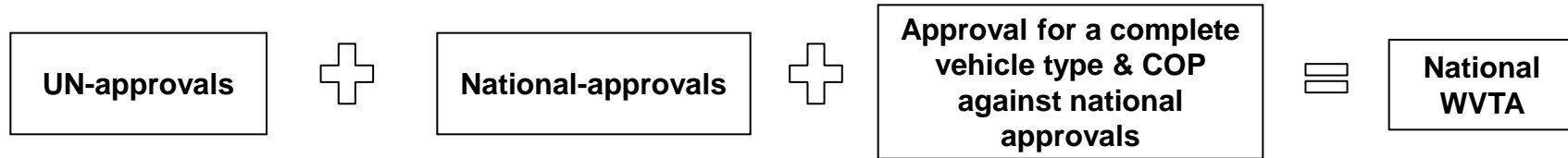
Mutual recognition of approval at the whole vehicle level



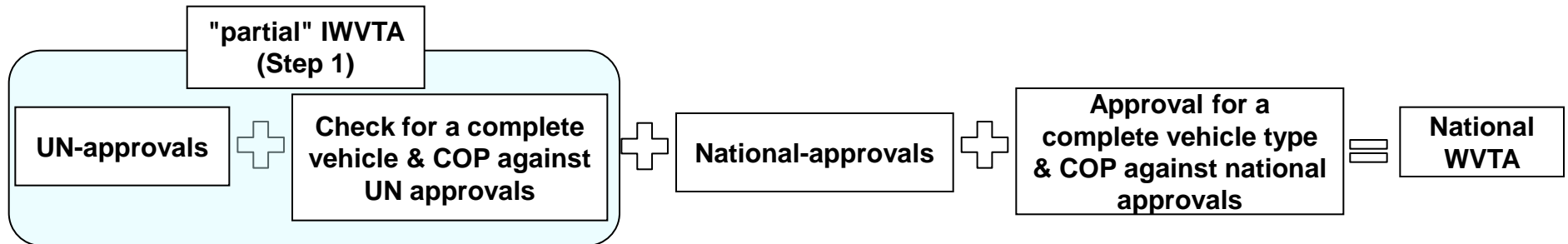
Vehicle type approval not required to be obtained from each country

1-6. IWVTA Step 1 approach and national vehicle type approval

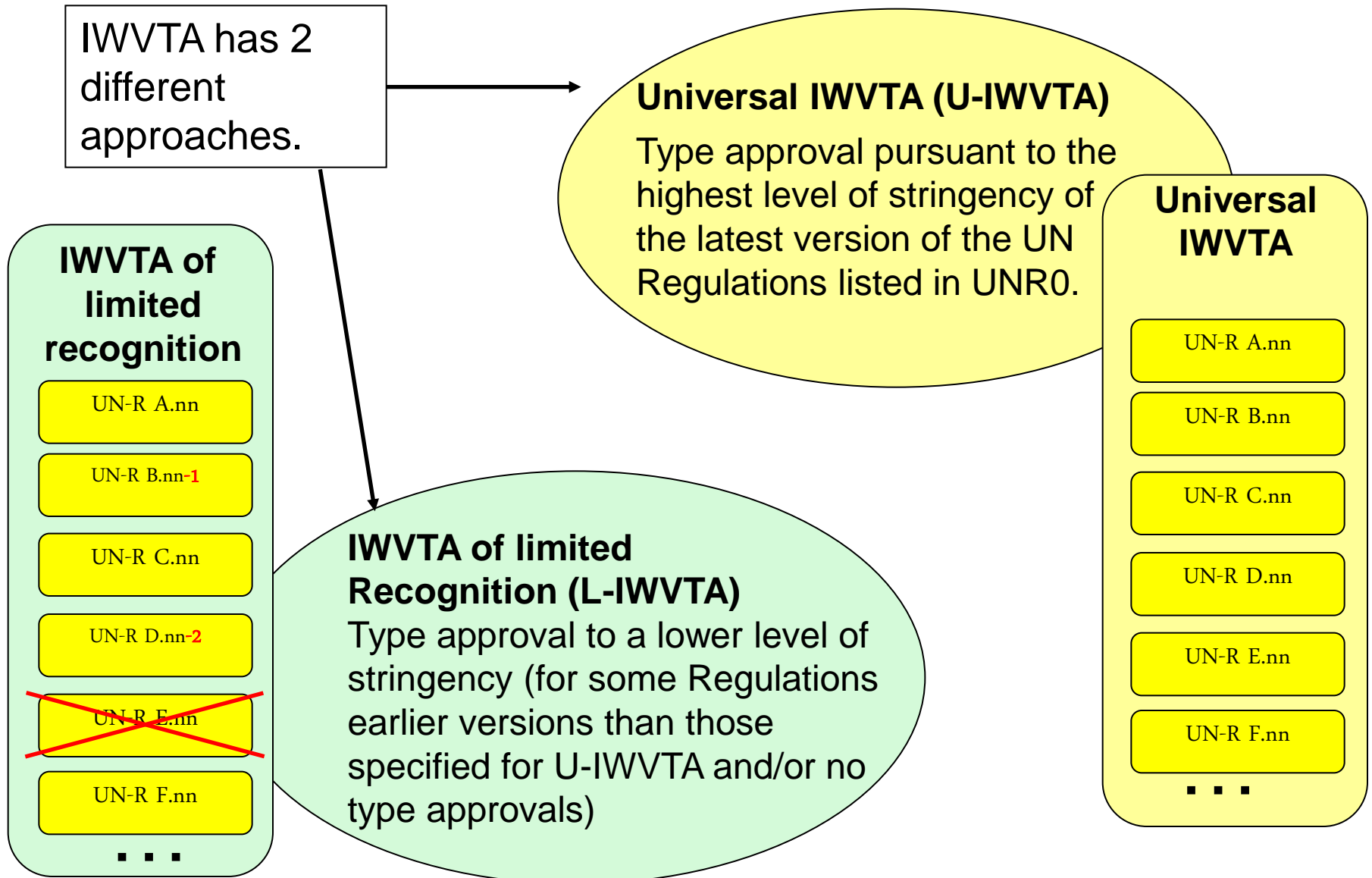
Current situation in many Contracting Parties



IWVTA is a shell over a set of separate UN-approvals that flexibly links these UN-approvals with national approval schemes.



Details 2-1. What IWVTA comprises



2-2. Major differences between UNR0 and other UN Regulations

	Draft UN Regulation No.0 (IWVTA)	Other UN Regulations
Technical requirements	-The technical requirements for UN R0 are not explicitly contained in itself, but are incorporated by reference to a list of UN Regulations found in Annex 4 of UN R0.	-Contain technical requirements to be complied with
Test procedures	-Where compliance is demonstrated by all required certificates covering the vehicle type, no further testing is foreseen for IWVTA.	-Contain test procedures to be followed in order to demonstrate compliance to technical requirements
Update	-The proposal for UN R0 update shall be put to vote once per year at WP.29 November session	-The proposal to amend UN Regulations can be put to vote at any sessions of WP.29
Transitional provisions	-When granting a IWVTA type approval , the transitional provisions of the UN Regulations applicable to IWVTA shall be respected.	-In order to create transparency about the contents of an IWVTA , it is suggested to provide common commencement date of September 1.
Level of stringency	UN R0 contains different levels of stringency, i.e., U-IWVTA and L-IWVTAs in one series	Level of stringency differs between the series amendments. However, one series amendment has only one level of stringency

2-3. Contents of draft UNR0

1. **Scope**
 2. **Definitions**
 3. **Application for approval**
 4. **Approval**
 5. **Specifications**
 6. **Test procedure**
 7. **Modification of vehicle type and extension of approval**
 8. **Conformity of production**
 9. **Penalties for non-conformity of production**
 10. **Production definitely discontinued**
 11. **Names and addresses of Technical Services responsible for conducting approval tests and of approval authorities**
 12. **Introductory and transitional provisions**
 13. **Special requirements for Contracting Parties applying this Regulation**
- Annex 1: Communication**
- Annex 2: Arrangement of the approval mark**
- Annex 3: Procedures to be followed for IWVTA**
- Annex 4: List of requirements for the purpose of IWVTA: List of regulatory acts**
- Annex 5: Information document for the purpose of IWVTA**
- Annex 6: Specifications of the Declaration of Conformance (DoC)**
- Annex 7: Definition of the vehicle type**

2-4. Outline of each section of draft UNR0

Section	Outline, remarks
1. Scope	-Applies to only vehicles of category M1
2. Definitions	-Adds new definitions of “IWVTA”, “U-IWVTA”, “IWVTA of Limited recognition (L-IWVTA)”, “Declaration of Conformance”, etc. -Adds definition of vehicle type (Annex 7)
3. Application for approval	-The application and the accompanying documentation shall be drawn up in English -The manufacturer shall provide translation of the documentation, if requested
4. Approval	-Two kinds of approval mark; one is for U-IWVTA (Annex 1, Section 1), and the other is for L-IWVTA (Annex 1, Section2); alternative use of Unique Identifier
5. Specifications	-For a U-IWVTA, type approval certificates to all UN Regulations as listed in Annex 4, Part A, Section 1 shall be included. -For a L-IWVTA, one or more type approval certificates required for U-IWVTA can be omitted or replaced by the certificate according to an earlier version of the respective UN Regulations as listed in Annex 4, Part A, Section 1 . -If a CP requires so the manufacturer shall provide the necessary information to generate a Declaration of Conformance (DoC) for all single vehicles.

Section	Outline, remarks
6. Test procedure	<p>-Where compliance to the requirements is demonstrated by providing all required certificates covering the vehicle type, no further testing shall be required for the items covered by these certificates.</p>
7. Modification of vehicle type and extension or modification of approval	<p>-Every modification of the vehicle type shall be notified to the approval authority</p> <p>-When new requirements enter into force and the vehicle type concerned is affected by the new requirements, a U-IWVTA has to be extended to certify compliance with the new requirements . Otherwise the U-IWVTA has to be modified into a L-IWVTA.</p> <p>-No amendment to the type approval shall be required if the new requirements are not applicable to that vehicle type</p>
8. Conformity of Production	<p>-The approval authority which has granted type approval may at any time verify the conformity control methods applied in each production facility. Such verification should primarily be aimed at the whole vehicle and assembly level activities and shall not, without reasonable justification, repeat previous CoP assessments undertaken for the separate UN Regulations comprising part of the IWVTA.</p>
9. Penalties for non-conformity of production	<p>-The approval of a vehicle type may be withdrawn if the requirements are not complied with or if a vehicle bearing the approval mark does not conform to the vehicle type approved.</p>

Section	Outline, remarks
10. Production definitely discontinued	-If the manufacture completely ceases to manufacture approved vehicle type, they shall inform the approval authority. That approval authority shall inform the other Contracting Parties using a communication form illustrated in Annex 1.
11. Names and addresses of Technical Services and of approval authorities	-Contracting Parties shall communicate to the United Nations Secretariat the names and addresses of the Technical Services and of the approval authorities.
12. Introductory and Transitional provisions	-As from [9] months after the date of entry into force of UN R0, a Contracting Party shall accept an IWVTA -When granting an IWVTA, the transitional provisions of the UN Regulations applicable to IWVTA shall be respected

Section	Outline, remarks
<p>13. Special requirements for Contracting Parties applying this Regulation</p>	<p>Regardless of whether a Contracting Party applies any UN Regulations listed in Annex 4;</p> <p>13.1 it shall accept a U-IWVTA as evidence of compliance for all vehicle systems, equipment and parts approved therein</p> <p>13.2 it may issue an IWVTA</p> <p>13.3 it shall for the purpose of granting an IWVTA accept any type approvals issued according to UN Regulations listed in Annex 4</p> <p>13.4 it shall for the purpose of placing on the market of equipment and spare parts for vehicles covered by an IWVTA, accept type approvals to the UN Regulations listed in Annex 4, Part A, Section I as evidence of compliance for the respective equipment and parts However, a Contracting Party may notify to the UNECE Secretariat that it is not bound by this obligation for UN Regulations it is not applying.</p> <p>13.5 Subject to notification to the Secretariat of the Administrative Committee, a Contracting Party may accept a L-IWVTA as evidence of compliance for some or all vehicle systems, equipment and parts</p>

2-5. The rights of a Contracting Party applying UNR0

- Contracting Party applying UNR0 **can** grant a U-IWVTA and/or L-IWVTA provided that they have 'technical competence', regardless of whether that CP applies all UN Regulations listed in Annex 4 of UNR0. (see paragraph 13.2 of UNR0)

Excerpt from UNR0(ECE/TRANS/WP.29/2015/68)

2.8. "Technical competence" means, having regard to Article 2 of the 1958 Agreement, that a Contracting Party has the capability to verify the compliance of a whole vehicle type with this Regulation, based on the individual type approvals submitted by the manufacturer in its application and the ability to confirm that the systems and components are installed pursuant to the individual UN Regulations listed in Annex 4. This means that a Contracting Party applying this Regulation need not necessarily have the technical competence required to issue type approvals with respect to all the UN Regulations listed in Annex 4.

- CP **may** accept L-IWVTA (i.e. a lower level of stringency based on earlier version of the UN Regulations listed in Annex 4 and/or by not requiring approvals for all these UN Regulations) provided it notifies the details of this lower level of stringency to the UNECE secretariat. (see paragraph 13.5 of UNR0)

2-6. The obligations of a Contracting Party applying UNR0

Contracting Party(CP) applying UN R0 ***shall*** :

- accept U-IWVTA regardless of whether or not it applies the UN Regulations listed in Annex 4, Section 1.

(see paragraph 13.1 of UNR0)

- Accept, for the purpose of issuing an IWVTA, type approvals issued by other CPs according to UN Regulations listed in Annex 4, Section 1, even where that CP does not apply those UN Regulations.

(see paragraph 13.2 of UNR0)

- notify the secretariat those UN Regulations where the CP will accept a lower level and/or no approval as part of a L-IWVTA.

(see paragraph 13.5 of UNR0)

2-7. Annex 4 “The technical requirements applicable to IWVTA “

Number	Topic	UN-Regulation
1	Retro reflecting devices	3
2	Illumination of rear registration plates	4
3	Direction indicators	6
4	Front and rear position lamps, stop-lamps & end-outline marker lamps	7
5	Electromagnetic compatibility	10
6	Door latches & retention components	11
7	Steering impact	12
8	Safety Belts	16
9	Seats, their anchorages, & head restraints	17
10	Front fog lamps	19
11	Interior fittings	21
12	Reversing & manoeuvring lamps	23
13	External projections	26
14	Audible warning signals	28
15	Tyres	30
16	Filament lamps	37
17	Rear fog lamps	38
18	The Speedometer equipment	39
19	Safety glazing	43
20	Built-in Restraining device for children	44

Number	Topic	UN-Regulation
21	Headlamp cleaners	45
22	Tyres for commercial vehicles	54
23	Rear underrun protective devices	58
24	Parking lamps	77
25	Steering equipment	79
26	Measurement of engine power	85
27	Side marker lamps	91
28	Frontal collision	94
29	Lateral collision	95
30	Headlamps with gas-charge light sources	98
31	Gas-charge light sources	99
32	Electric power train	100
33	Headlamps with filament lamps and/or LED modules	112
34	Tyre wet grip/Noise/RR	117
35	Cornering lamps	119
36	Hand controls and tell tales	121
37	Adaptive front-lighting systems	123
38	Forward field of vision	125
39	Pedestrian safety performance	127
40	LED light sources	128

2-8. UN Regulations requiring amendments before inclusion in Annex 4

SGR0 considers that following UN Regulations are significantly important for IWVTA and therefore need to be reviewed by GRs if and how they can be included in UNR0.

Number	Topic	UN-Regulation
1	Braking	13H
2	ESC	13H
3	BA	13H
4	Safety-belt anchorages	14
5	Fuel tanks	34
6	Indirect vision devices	46
7	Installation of Lighting equipment	48
8	Permissible sound level	51
9	Temporary tires/ TPMS	64
10	Anti-theft/ immobilizer	116
11	Enhanced CRS	129
12	Tyre installation	-
13	WLTP; Emission pollutants, Co2 emissions	-

2-9. What is Declaration of Conformance (DoC)?

Excerpt from UNR0(ECE/TRANS/WP.29/2015/68)

2.9. “Declaration of Conformance (DoC)” means the information for a single vehicle belonging to a vehicle type approved in accordance with this Regulation, certifying to which of the Regulations and their versions listed in Annex 4 the vehicle type is approved at the time of its production.

5.2.1. If a Contracting Party requires so the vehicle manufacturer shall provide and upload on the UN secure internet database for all single vehicles intended to be placed on the market in that Contracting Party and belonging to a type approved according to this Regulation the necessary information to generate within that database a DoC for the vehicle. The process and necessary information are set out in Annex 6.

Annex 6

1.1. The IWVTA DoC includes:

- (a) the information for the identification of a single vehicle (in most cases the vehicle identification number VIN)
- (b) a statement of conformance (Appendix 1);
- (c) the list detailing the UN Regulations according to which the vehicle type is approved (Appendix 2).

2-10. Definition of a vehicle type for IWVTA

- A **vehicle type** can contain all variants regardless of their level of conformity → it corresponds to what we are used to
- Within a vehicle type every single **IWVTA type** defines one level of conformity
- 1 IWVTA approval always covers 1 IWVTA type
- Manufacturer identifies the IWVTA types within a vehicle type by a unique type designation
- Vehicles within one vehicle type get approval numbers that are related (see next slide)
- Approvals for all IWVTA types within 1 vehicle type shall be handled by the same approval authority

Vehicle type Beetle



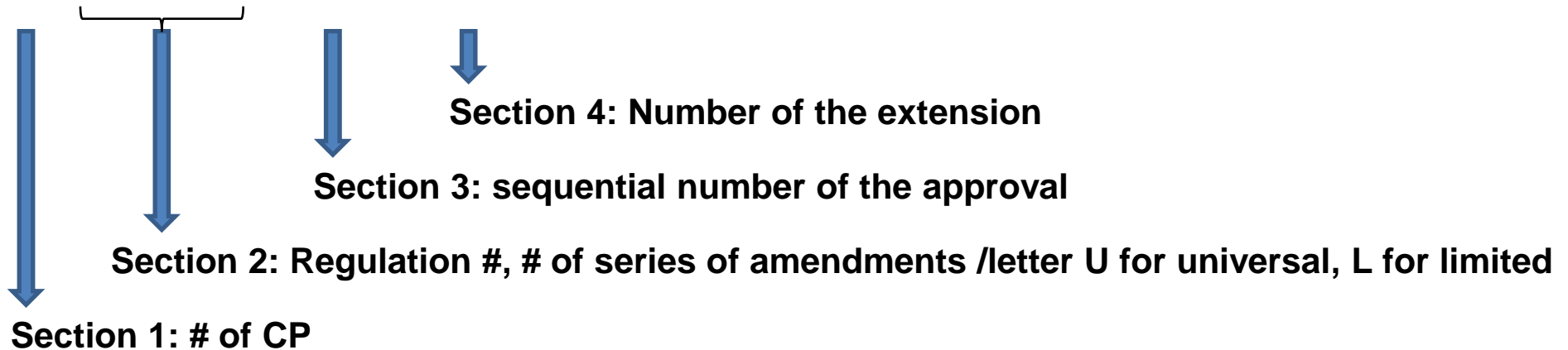
**IWVTA type 1:
“Beetle with ESC”**



**IWVTA type 2:
“Beetle without ESC”**

2-11. Modified Approval Number for IWVTA

E4*0R00/U*0004/01*02



Explanation of changes:

- The letters U or L are included in section 2 after the number of the series of amendments
- A 6-digit number for Section 3 is proposed which is construed as follows:
 - First 4 digits identify the vehicle type : a new sequential number is assigned by the approval authority once the manufacturer applies for the first approval of a new vehicle type
 - / followed by 2 last digits which sequentially number the different type approvals within a vehicle type starting with 01. They correspond to different IWVTA types

2-12. Example how to deal with extension of an IWVTA

Before

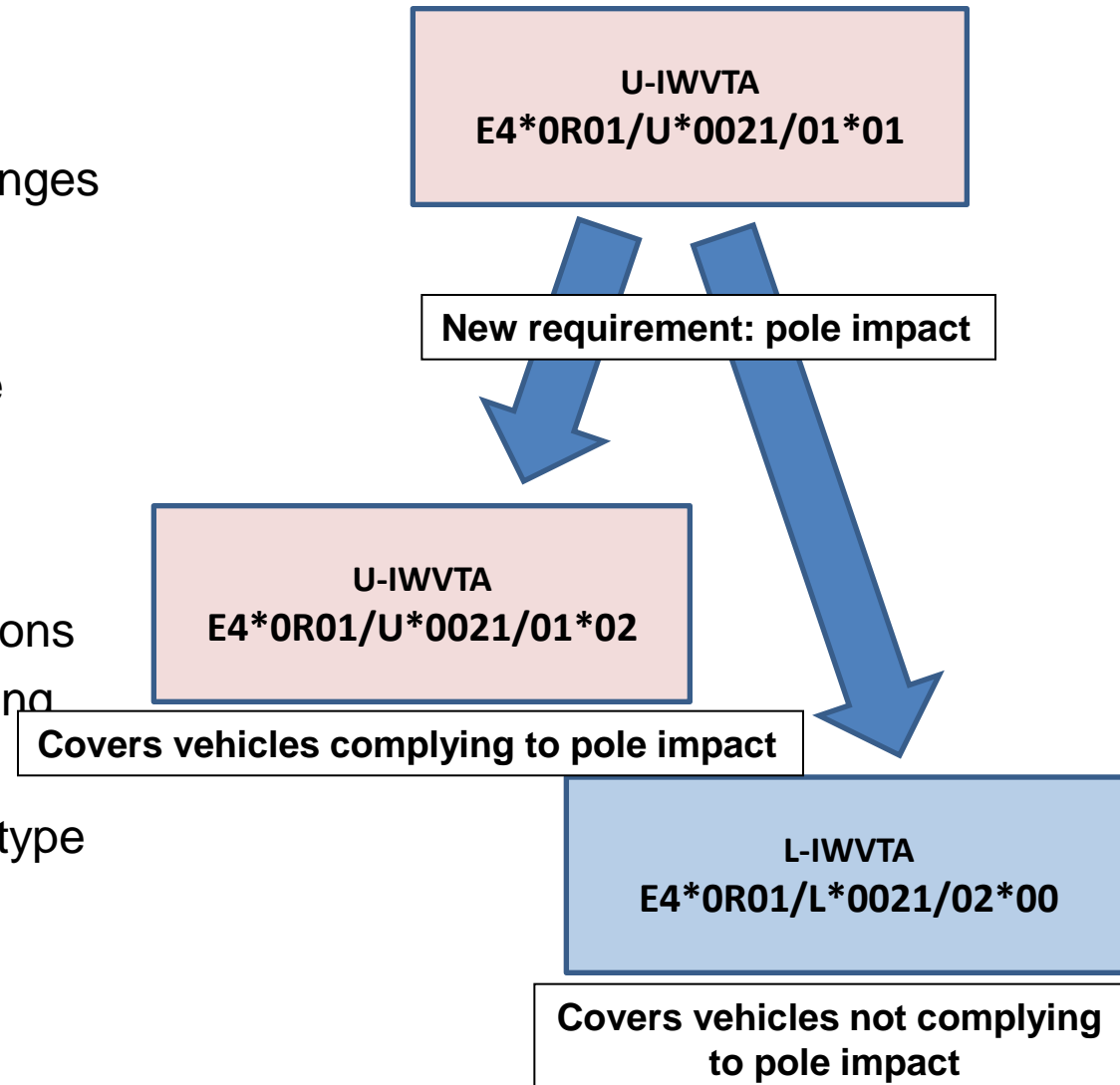
- vehicle type covered by U-IWVTA

What happens

- New requirements enter into force
- Manufacturer performs technical changes in order to meet new requirements (involves no change in vehicle type characteristics) but only for part of the vehicles

What to do

- Extend existing U-IWVTA, here Sections 1-3 of the approval number and marking remain unchanged
- Create a new L-IWVTA under a new type designation



Because of the concept with vehicle type + IWVTA type and the modified type approval numbering the following changes in draft UN-R0 are required:

- Paragraph 2: inclusion of a generic definition of IWVTA type
- Paragraph 3-5: adapt wording to IWVTA type and modified numbering
- Paragraph 7: rewording of the Article to describe the rules when existing approvals can be extended and when new approvals shall be issued
- Annex 1: inclusion of IWVTA type and type designation in section I of the communication form; also the possibility of changing between U-IWVTA and L-IWVTA has to be eliminated
- Annex 2: inclusion of the composition of the type approval number, corresponding adaptation for the examples of the approval marking
- Annex 5: inclusion of IWVTA type and type designation into the information document
- Annex 6: inclusion of IWVTA type / type designation into Appendix 1
- Annex 7: inclusion/revision of the definitions for vehicle type and IWVTA type
- New Annex 8 explaining the modified numbering scheme for IWVTA

3-1. Changes to the formal document of UN R0 (ECE/TRANS/WP.29/2015/68)

The other changes in draft UN-R0 agreed at the 16th SGR0 meeting are as follows:

- Paragraph 2.12: exclude instructions from the definition of "*Type approval certificate*" and change the title of Annex 1 to be "Communication form"
- Paragraph 4.6, 4.8, 4.9, 4.10 and Annex 2, Section III : change paragraphs so that the Unique Identifier may not be used as replacement of the conventional type approval marking for UN Regulation No.0
- Paragraph 4.7: wording agreed and square brackets removed
- Paragraph 13.1: add wording to clarify that vehicles bearing a U-IWVTA remain subject to national or regional requirements for items not covered by the U-IWVTA
- Paragraph 13.4: : wording agreed and square brackets removed
- Annex 4, footnote 3: wording agreed and square brackets removed
- Annex 6, Paragraph 2.2: more precise wording to illustrate the function of DETA to generate a DoC for a single vehicle

3-2. Concept for the pre-testing of UN-Regulation No. 0

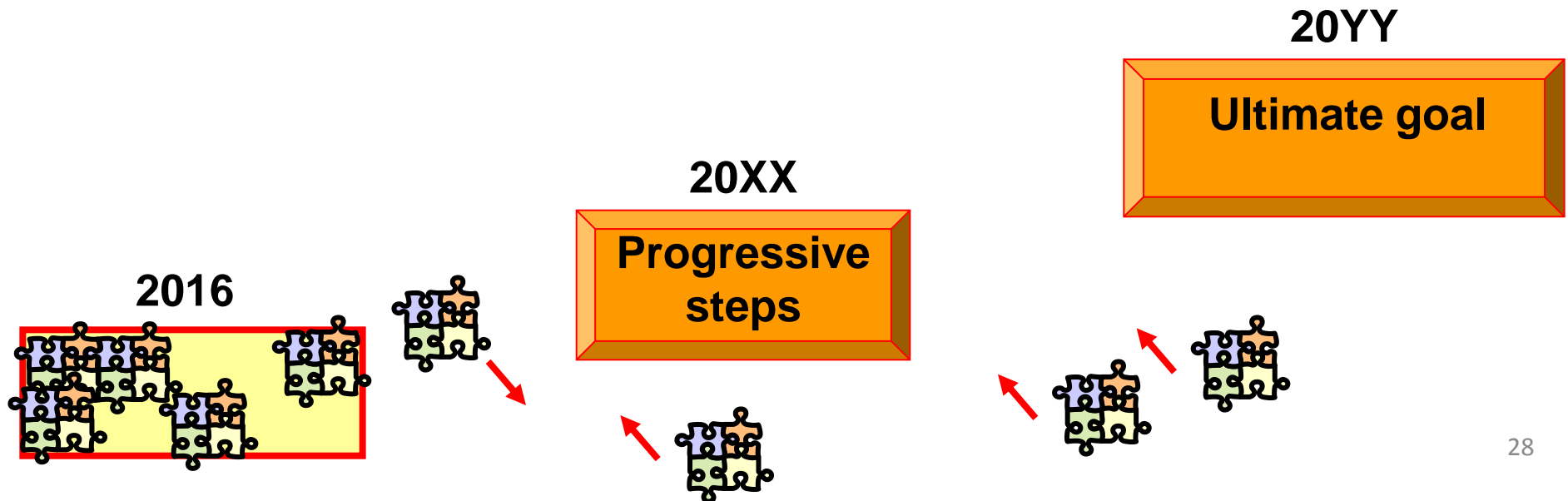
- The current draft text of the UN-Regulation No. 0 has reached a level to which the main aspects have been discussed. Most of the relevant parts of the draft text of the regulation were reviewed and allow a detailed investigation if the provisions are appropriate for granting type approvals.
- Germany proposed at the 14th meeting of the IWVTA subgroup R0 to do a pre-test of UN-R0 with type approval authorities, technical services and manufacturers being involved. This trial of granting type approvals on a testing basis will involve the parties doing the IWVTA type approvals in the future. It will not only allow a dialogue on the different aspects and provisions for granting type approvals with UN-R0, it will also ensure a high level of quality for the future introduction of IWVTA.
- Coordinator and contact point for pre-testing of UN R0:
Mr. Sven Paeslack, KBA (Sven.Paeslack@kba.de)
Mr. Richard Damm, BMVI (richard.damm@bmvi.bund.de)

3-3. Schedule

Action item	2015					2016												2017												2018							
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5		
IWVTA IG and its Sub-Group meetings			◆		◆		◆		◆		◆		◆		◆		◆		◆		◆		◆		◇												
Permanent IG Meeting																								◆					◆								
Revision 3 of the 1958 Agreement					★		★						★																								
UN Regulation No.0								★																													
Pretesting of UN R0	★			★																																	

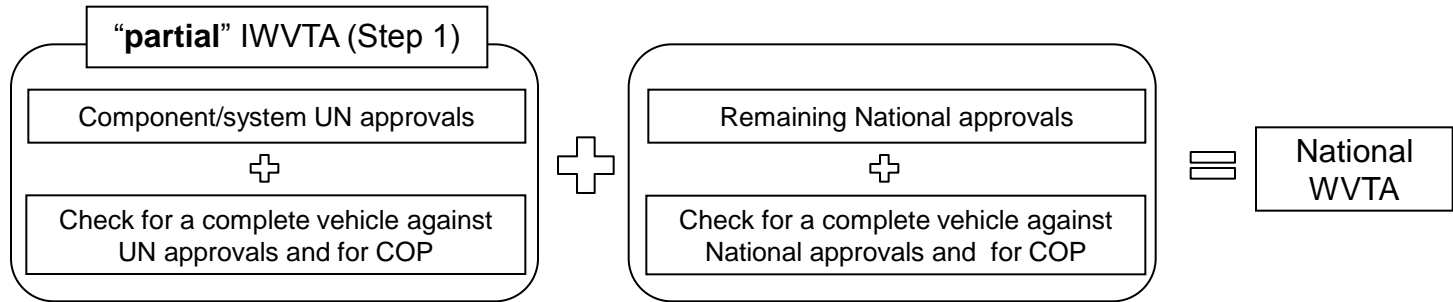
3-4. Future evolution of UNR0

- ✓ The ultimate objective of IWVTA is full mutual recognition of whole vehicle type approvals - without any additional national/ regional requirements and approvals.
- ✓ To move forward towards this objective the following should be addressed after the first version of UNR0 (Step 1) is established.
 - How to increase the number of applicable UN Regulations in Annex 4
 - How to reduce national requirements
 - How to extend the scope to include vehicles other than M1

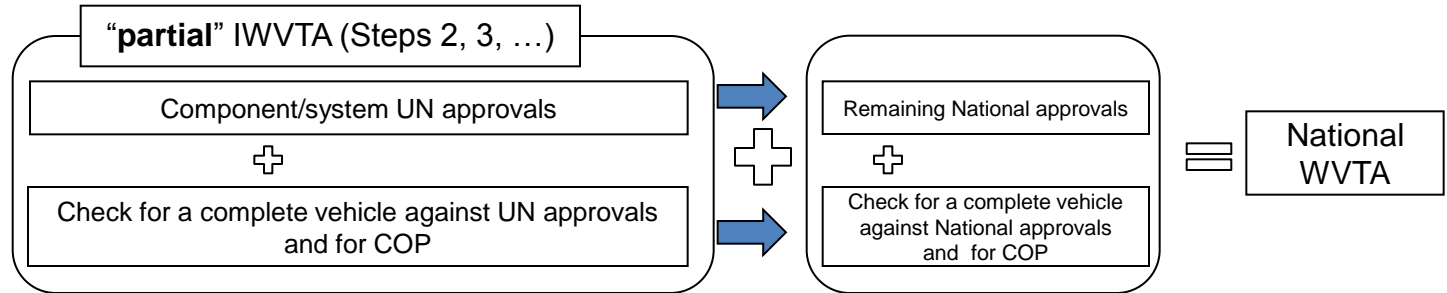


3-5. Ultimate Goal

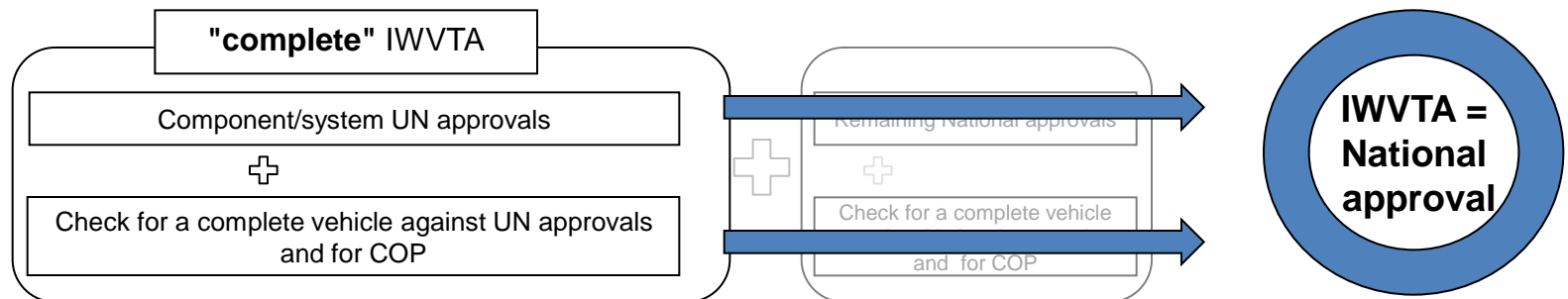
IWVTA sits over a limited subset of component/system UN approvals, as agreed by the CPs adopting IWVTA through R0



Increased scope of IWVTA, more UN approvals brought into R0, reduced need for national requirements



Ultimate Goal



Latest draft UNR0 (ECE/TRANS/WP.29/2015/68) can be found at;

[<https://www2.unece.org/wiki/download/attachments/...>]

Latest draft Q&A document to explain UN R0 and IWVTA (IWVTA-SGR0-16-10-rev.1) can be found at;

[<https://www2.unece.org/wiki/display/trans/SGR0+16th+session>]