

Simplification of Lighting and Light-Signalling Regulations

Draft overview for GRE-75 based on
outcome of discussions of IWG-SLR at its 9th session

Assumptions:

- simplification work cannot progress without stopping the continual amendment of the existing regulations
- stopping the amendment of the existing regulations may cause some disturbance to innovation but it is expected that the existing regulations will not present significant barriers to innovation during the simplification process
- in the case of an urgent need to introduce new technologies the exemption provisions in article 6 and Schedule 7 of the draft Revision 3 of the 1958 agreement (ECE/TRANS/WP.29/2015/40) can be implemented.

The ultimate target of the simplification is to produce regulations that will be stable over many years (*i.e. not requiring regular amendment to accommodate advances in technology*).

To achieve this, the regulations will define minimum levels of performance to assure required safety levels (*minimum road illumination, maximum glare levels, geometric visibility, minimum and maximum signal intensities, etc.*)

The Installation Regulation will :

- provide administrative requirements for type approval
- mandate which devices or systems shall be installed
- identify which devices or systems may be installed
- be based upon the principle that devices or systems shall only be installed if they are listed in the installation regulation and if they are type approved (***More discussion will be required***)
- define the overall performance requirements to be achieved by the devices and systems as installed

The Device Regulations will provide:

- administrative requirements for type approval
- technical requirements for verification of performance (individually and when installed)

Develop 3 new Regulations

- Road illumination devices
- Signal Lighting devices
- Retro-reflective Devices

To continue to grant new type approvals to the existing Regulations during development of the new Regulations

WP.29 has signalled its strong reluctance to process the regular amendments to the existing lighting and light-signalling Regulations

Urgent need to remove barriers to innovation

Treat this as an opportunity to develop new Regulations suitable for the future

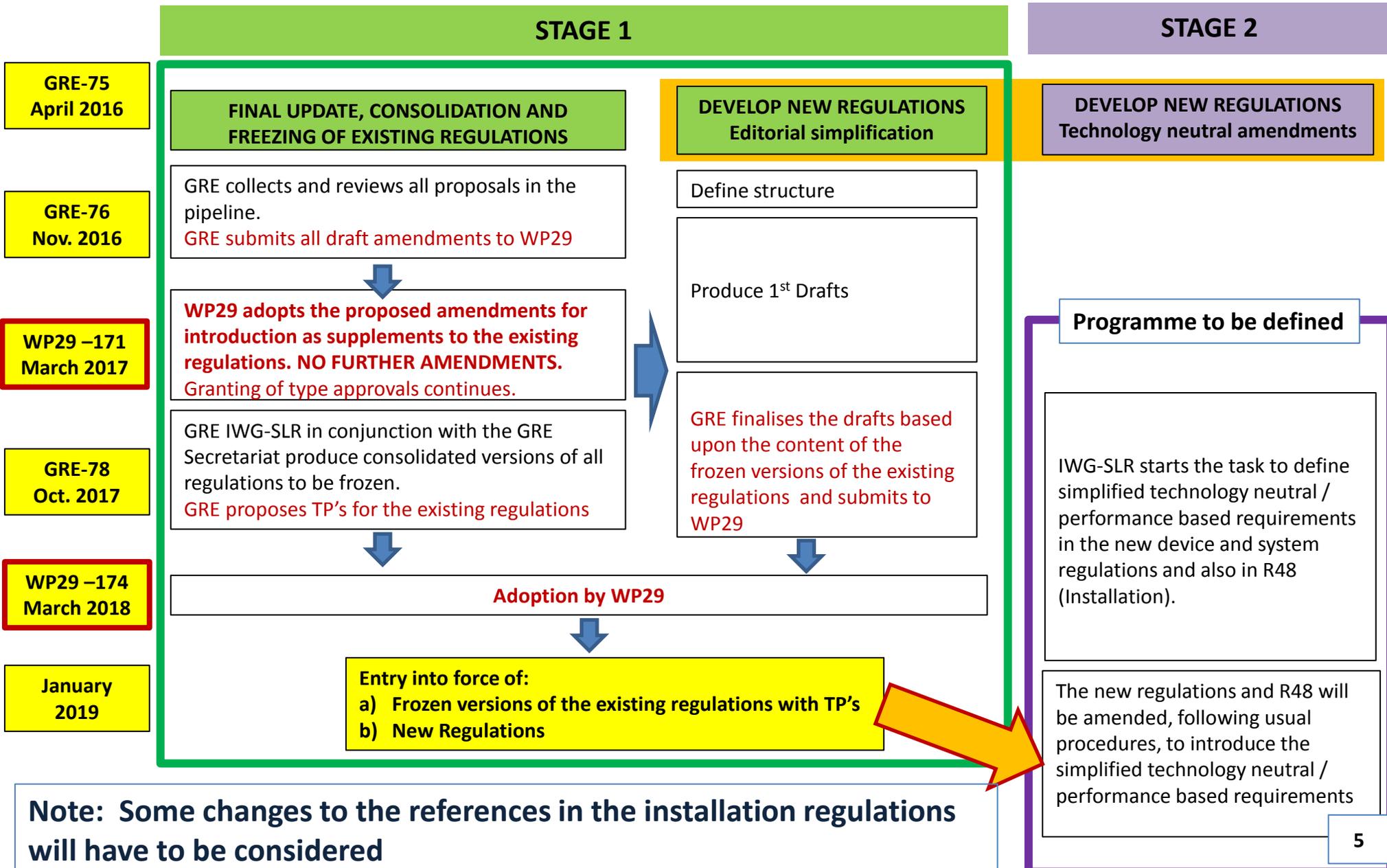
Make the UN system more attractive to contracting parties

Create a stable regulatory system (legal certainty)

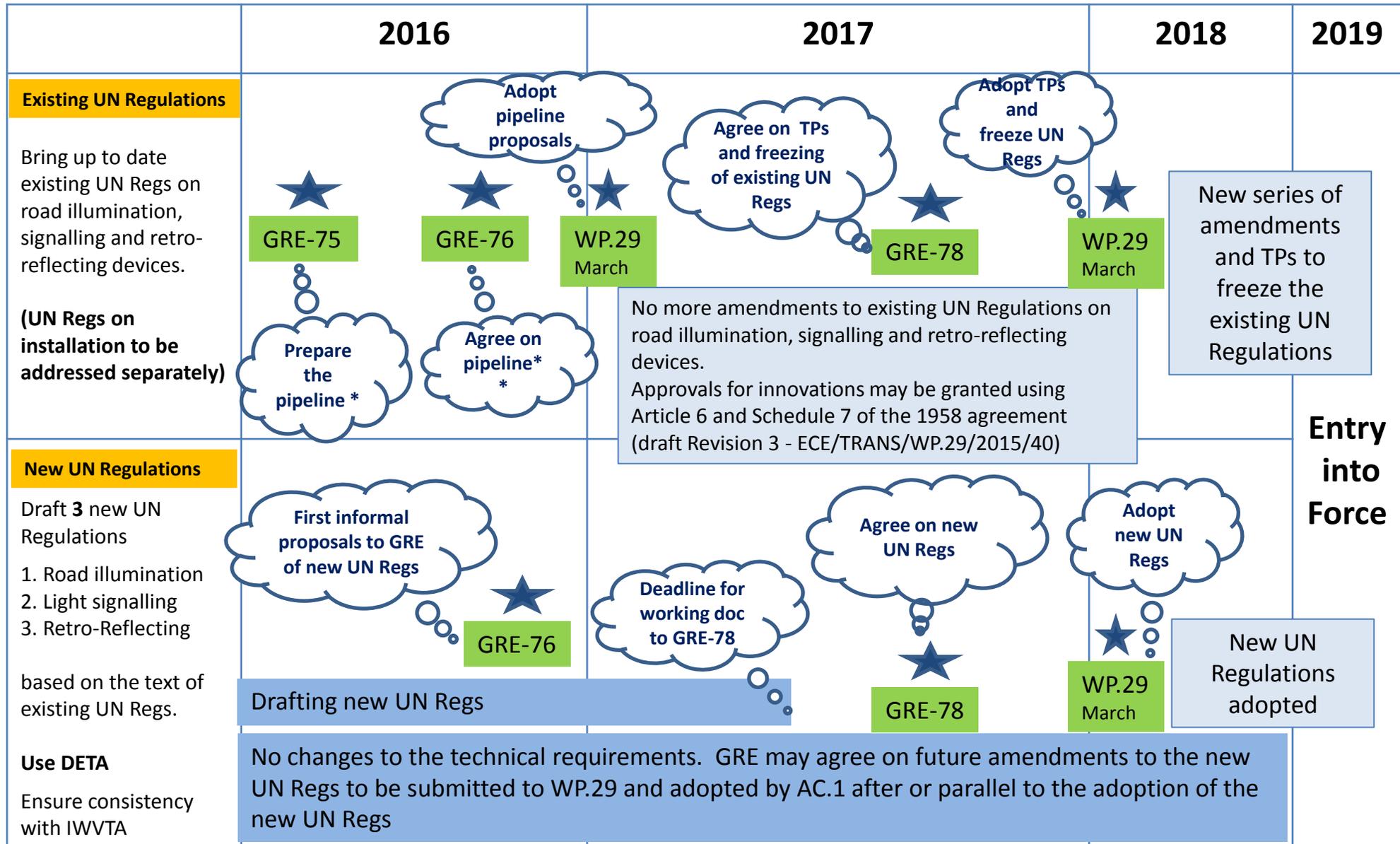
Develop technical requirements suitable for global adoption

- as part of type approval systems
- as part of other certification systems
- objective requirements based upon research findings
- possible incorporation into GTR's with proactive support of 1998 contracting parties

Simplification delivered in two stages



The detailed plan – Stage 1 (Simplification)



* Decide which pending proposals shall be on GRE-76 agenda - Last change to Regulations candidate for simplification

** Agree on each pending proposal to be submitted to WP.29

14 Live Regulations

New Regulations	
new1	road illumination devices
new2	light signalling devices
new3	Retro- Reflecting Devices
Existing Regulations - Installation	
48	vehicles with regard to the installation of lighting and light-signalling devices
53	category L3 vehicles with regard to the installation of lighting and light-signalling devices
74	category L1 vehicles with regard to the installation of lighting and light-signalling devices
86	agricultural or forestry tractors with regard to the installation of lighting and light-signalling devices
Existing Regulations - Light Sources (Simplified structure with reference to a res	
37	filament lamps for use in approved lamp units of power-driven vehicles and of their trailers
99	gas-discharge light sources for use in approved gas-discharge lamp units of power-driven vehicles
128	light emitting diode (led) light sources for use in approved lamp units on power-driven vehicles and their trailers
Existing Regulations – Various	
10	electromagnetic compatibility
45	headlamp cleaners
65	special warning lamps for power-driven vehicles and their trailers
88	Retroreflective tyres for two-wheeled vehicles

To be decided whether to combine into one new regulation

31 Superseded “frozen” Regulations

- 1 motor vehicle headlamps emitting an asymmetrical passing beam and/or a driving beam and equipped with filament lamps of categories R2 and/or HS1
- 2 incandescent electric lamps for headlamps emitting an asymmetrical passing beam or a driving beam or both
- 3 retro-reflecting devices for power-driven vehicles and their trailers
- 4 devices for the illumination of rear registration plates of power-driven vehicles and their trailers
- 5 power-driven vehicle's "sealed beam" headlamps (SB) emitting a European asymmetrical passing beam or a driving beam or both
- 6 direction indicators for power-driven vehicles and their trailers
- 7 front and rear position (side) lamps, stop-lamps and end-outline marker lamps for power-driven vehicles and their trailers
- 8 motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (H1, H2, H3, HB3, HB4, H7, H8, H9, HIR1, HIR2 and/or H11)
- 19 power-driven vehicle front fog lamps
- 20 motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with halogen filament lamps (H4 lamps)
- 23 reversing lights for power-driven vehicles and their trailers
- 27 advance-warning triangles
- 31 power-driven vehicle's sealed-beam headlamps (SB) emitting an European asymmetrical passing beam or a driving beam or both
- 38 rear fog lamps for power-driven vehicles and their trailers
- 50 front position lamps, rear position lamps, stop lamps, direction indicators and rear-registration-plate illuminating devices for vehicles of category L
- 56 headlamps for mopeds and vehicles treated as such
- 57 headlamps for motor cycles and vehicles treated as such
- 69 rear marking plates for slow-moving vehicles (by construction) and their trailers
- 70 rear marking plates for heavy and long vehicles
- 72 motor cycle headlamps emitting an asymmetrical passing beam and a driving beam and equipped with halogen lamps (HS1 lamps)
- 76 headlamps for mopeds emitting a driving beam and a passing beam
- 77 parking lamps for power-driven vehicles
- 82 moped headlamps equipped with filament halogen lamps (HS2)
- 87 daytime running lamps for power-driven vehicles
- 91 side-marker lamps for motor vehicles and their trailers
- 98 motor vehicle headlamps equipped with gas-discharge light sources
- 104 retro-reflective markings for vehicles of category M, N and O
- 112 motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or LED modules
- 113 motor vehicle headlamps emitting a symmetrical passing beam or a driving beam or both and equipped with filament lamps
- 119 cornering lamps for power-driven vehicles
- 123 adaptive front-lighting systems (AFS) for motor vehicles

The Plan – Stage 2 (Technology Neutral)

Further development of the new regulations
to become technology - neutral / performance - based

	Detailed programme to be defined			
Technology Neutral Regulation 48 update	<p>Scope of R48 to be reviewed with regard to the issue of “all functions not clearly defined and allowed in R48 is prohibited”</p> <p>Mandatory functions to be installed, optional functions that may be installed</p> <p>New approach to define minimum and maximum performance requirements to be achieved by the installation</p> <p>New approach to simplify the definition of a single lamp and apparent surface</p>			
Update the new device and system regulations Develop technical requirements for GTR's??	<p>Technical requirements in the device and system regulations to be adapted to the safety requirements in the updated Regulation 48</p> <p>Objective practical testing and /or virtual testing for verification of compliance</p> <p>Objective requirements based upon research findings (following GTR practice)</p>			

Wider Global Harmonisation

In addition to simplifying the UN Regulations and removing unnecessary barriers to innovation there are wider benefits to be exploited

- Encouraging more countries to join the 1958 agreement
- Overcoming the objections of the US NHTSA to the current UN Regulations that are deemed to be unsuitable as a basis for a self certification system and its enforcement. (note; current work by NHTSA and SAE to introduce ADB into the FMVSS108)
- Synchronisation of the technical requirements of the individual mandatory national standards with the UN regulations. (e.g. China, Republic of Korea, India, Brazil)
- Development of technical requirements that may provide a firm basis for development of GTR's for lighting and light signalling.