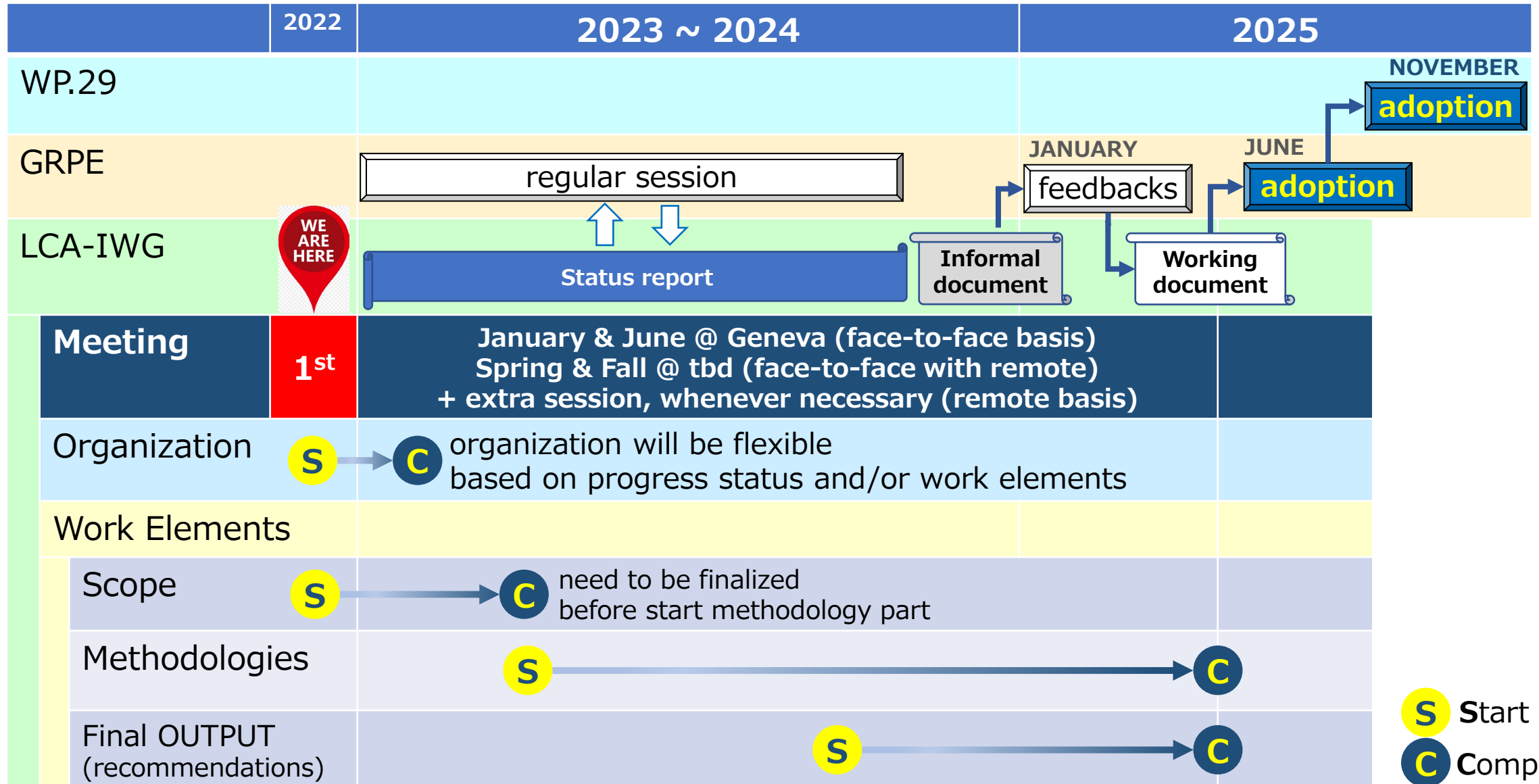


Discussion Starter of LCA IWG Work Plan

prepared by JAPAN

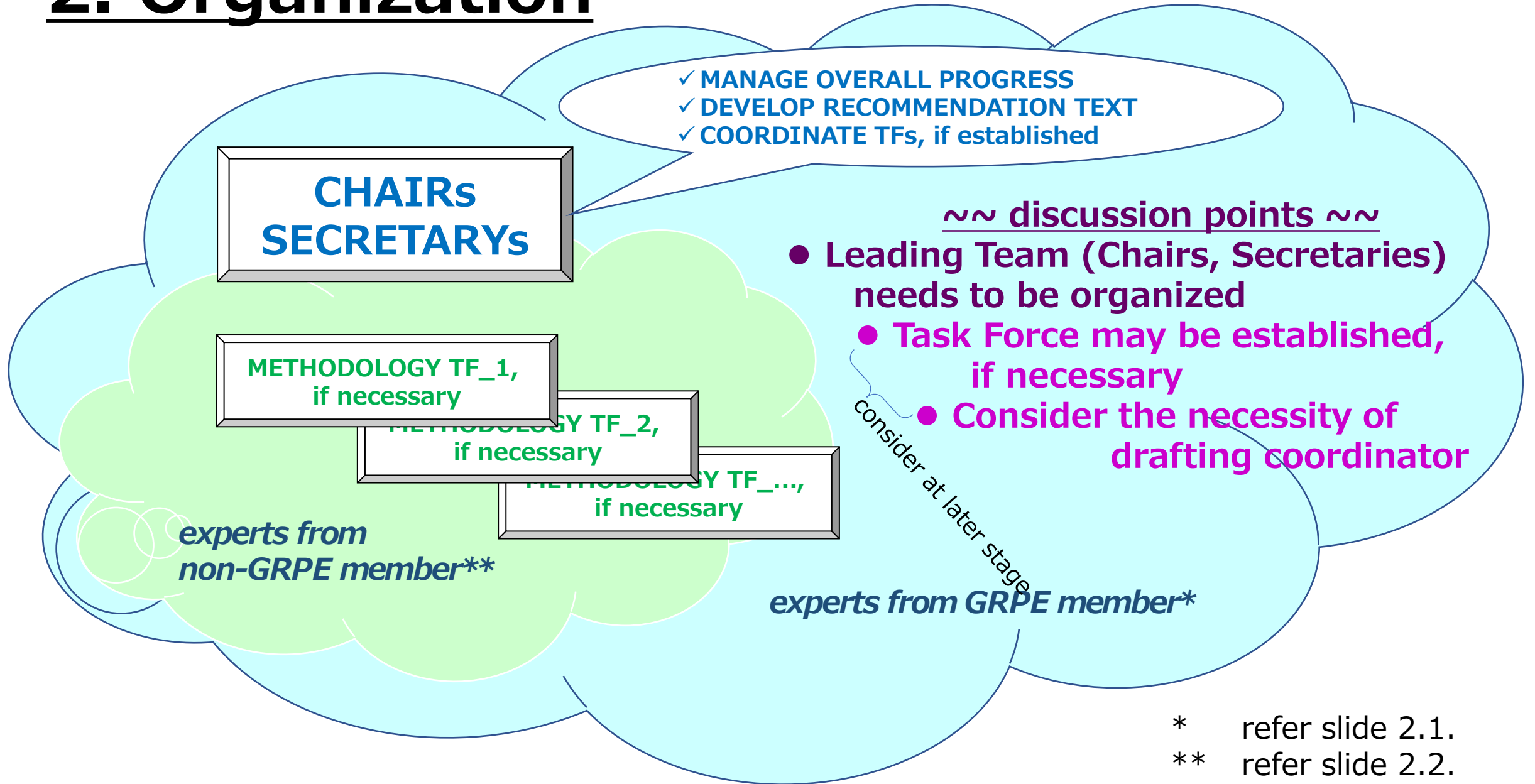
1. Overall Schedule

subject to change according to finalized ToR



S Start
C Completion

2. Organization



2.1. Participation from GRPE member

according to *Rules of Procedure of the World Forum*

1. Participation of Governments

Any country, member of the United Nations, and any regional economic integration organization set up by countries members of the United Nations, may participate fully or in a consultative capacity in the activities of WP.29 and become a Contracting Party to the Agreements administered by WP.29.

2. Participation of NGO

NGOs may participate in a **consultative capacity** in WP.29. An NGO must first be accredited with consultative status to ECOSOC the Economic and Social Council of the United Nations. Consultative status with ECOSOC allows NGOs to contribute to the work programs and goals of WP.29 by serving as technical experts or advisers and consultants to governments and the secretariat. The number of NGOs participating in any session of WP.29 or its subsidiary bodies typically varies between six and fifteen, depending on the topic. A smaller number attend the sessions of the subsidiary Working Parties and informal working groups.

2.1. Participation from non-GRPE member

according to Rules of Procedure of the World Forum

2. Participation of NGO

NGOs may participate

NGOs not in consultative status with ECOSOC may participate in a consultative capacity, subject to prior approval of W.29/AC.2.

WP.29 may, through its Chairperson, invite other persons to participate in its sessions in a consultative capacity.

~~ discussion points ~~

- Which parties are going to join LCA-IWG from non-consultative status?

3. Objective

~~ discussion points ~~


- to possess the same understanding on ToR text within IWG
- 2.1. will enable the exchange of information and experiences on relevant regulations, policy measures and standardization efforts....
- 2.2. to develop an internationally-harmonized procedure to measure carbon footprint of different technologies for fuels and vehicles from production to use and disposal as a new mutual resolution.
- 2.3. recommendations/guidelines on LCA methodology that can be used for CPs to help make policy and can encourage automotive industries to improve carbon footprint


4. Principle framework for LCA

~~ discussion points ~~

- follow existing framework as a base concept for LCA-IWG future activities (no plan to develop new framework)
- the existing framework is going to be ISO 14040
- LCA-IWG is going to develop the Product Category Rules (PCR) for Automobiles (also known as Methodology)

GRPE-86-17

Needs of product category rules 

ISO 14040:2006 
Environmental management — Life cycle assessment — Principles and framework

Principle framework for LCA

- Definition of purpose and scope of LCA
- LCI stage
- LCIA stage
- Life cycle interpretation stage
- LCA reporting and critical review

→ There are **no guidelines** defining detailed LCA methodology for automobiles

ISO 14040 series are written for all products and services. Product category rules for Automobile need to be developed. 11

5. Scope_overall

~~ discussion table ~~

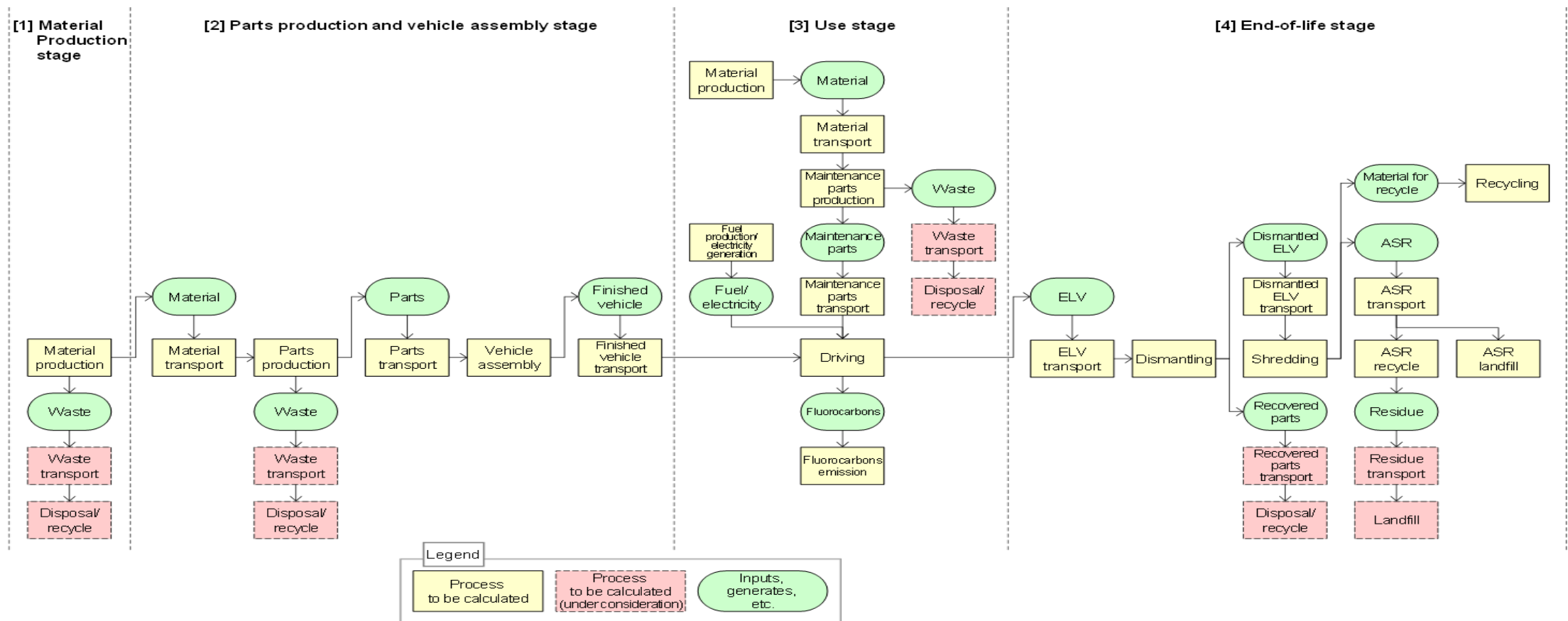
①Product system		②Phases				
		Material Acquisition	Production	Distribution	Use	Disposal
Hierarchy_1	Vehicles defined in R.E.3 and/or S.R.1	✓	✓	✓	✓ (well to wheel)	✓
Hierarchy_2	Tools and standard spare parts (Uniform mass)	✓	✓	✓	NA	✓
Hierarchy_3	Maintenance parts and fluids	✓	✓	✓	tbd	✓
Hierarchy_4	Loading parts	tbd	tbd	tbd	tbd	tbd
③Evaluated Substances	GHG	CO ₂ × equivalent factor		✓		
	Pollutant emissions		NA			
	Others (water pollutions, Landfill,,,))		NA			

5. Scope : Applicable Product System and System Boundaries

~~ discussion points ~~

- define per each vehicle category

sample : category X

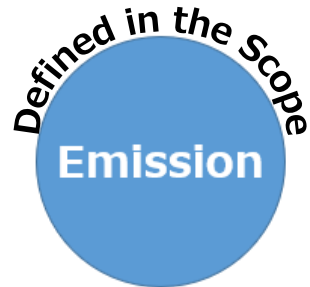


6. Methodologies_outline

GRPE-86-17



Outline of LCA method



Environmental impact

- GHG emission[kg-CO_{2e}]
- Use of Water[m³]
- etc



Activity at each phases

- Material[kg]
- Fuel[L]
- etc



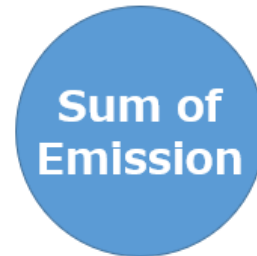
Intensity at each activity

- Material intensity[kg-CO_{2e}/kg]
- Fuel intensity[kg-CO_{2e}/L]
- etc



Environmental assessment

- Vehicle LCA[kg-CO_{2e}/km]
- BATT LCA[kg-CO_{2e}/kWh]
- etc



Environmental footprint

- GHG emission[kg-CO_{2e}]
- Use of Water[m³]
- etc



Performance of product

- Lifetime mileage[km]
- Provided energy[kWh]
- etc

6. Methodologies activity data/intensity

~~ discussion points ~~

① List up the items

per

(1) automobile category

×
(2) powertrain configuration

×
(3) phase

② define per product system × phase according to design drawing

③ define the intensity of each item

(1) international default value

(2) unique default value per region

(3) unique value per manufacture

Production Phase		①	②	③
Item List		Activity Data		Carbon Intensity
Processing	1 Cast Iron	xxx	kg	3.05 kg-CO _{2e} /kg
	2 Non-Alloy, Low Alloy Steel	xxx	kg	0.53 kg-CO _{2e} /kg
	5 Aluminum Alloy	xxx	kg	2.00 kg-CO _{2e} /kg
	3 High Alloy Steel	xxx	kg	2.82 kg-CO _{2e} /kg
	4 Cast Aluminum	xxx	kg	1.56 kg-CO _{2e} /kg
	7 Zinc Alloy	xxx	kg	0.58 kg-CO _{2e} /kg
	9 Platinum, Rhodium	xxx	kg	0.46 kg-CO _{2e} /kg
	10 Thermoplastic Resin	xxx	kg	77.60 kg-CO _{2e} /kWh
	11 Polyurethane	xxx	kg	54.00 kg-CO _{2e} /kWh
	12 Unsaturated Polyester	xxx	kg	80.70 kg-CO _{2e} /kWh
	Tire	xxx	kg	0.02 kg-CO _{2e} /kg
	Specific Parts Production	Lead Acid Battery	xxx	kg
Nickel Metal Hydride Battery		xxx	kWh	0.010 kg-CO _{2e} /kg
Li-Ion Battery (HEV)		xxx	kWh	0.045 kg-CO _{2e} /kg
Li-Ion Battery (EV)		xxx	kWh	0.006 kg-CO _{2e} /kg
Assemble	Vehicle Weight	xxx	kg	0.015 kg-CO _{2e} /kg
Transport & Distribution Phase		Activity Data		Carbon Intensity
Item List		Activity Data		Carbon Intensity
Material	Vehicle Weight	xxx	kg	0.018 kg-CO _{2e} /kg
Parts				0.010 kg-CO _{2e} /kg
Vehicle				0.045 kg-CO _{2e} /kg
Maintenance				0.006 kg-CO _{2e} /kg
EoL				0.015 kg-CO _{2e} /kg

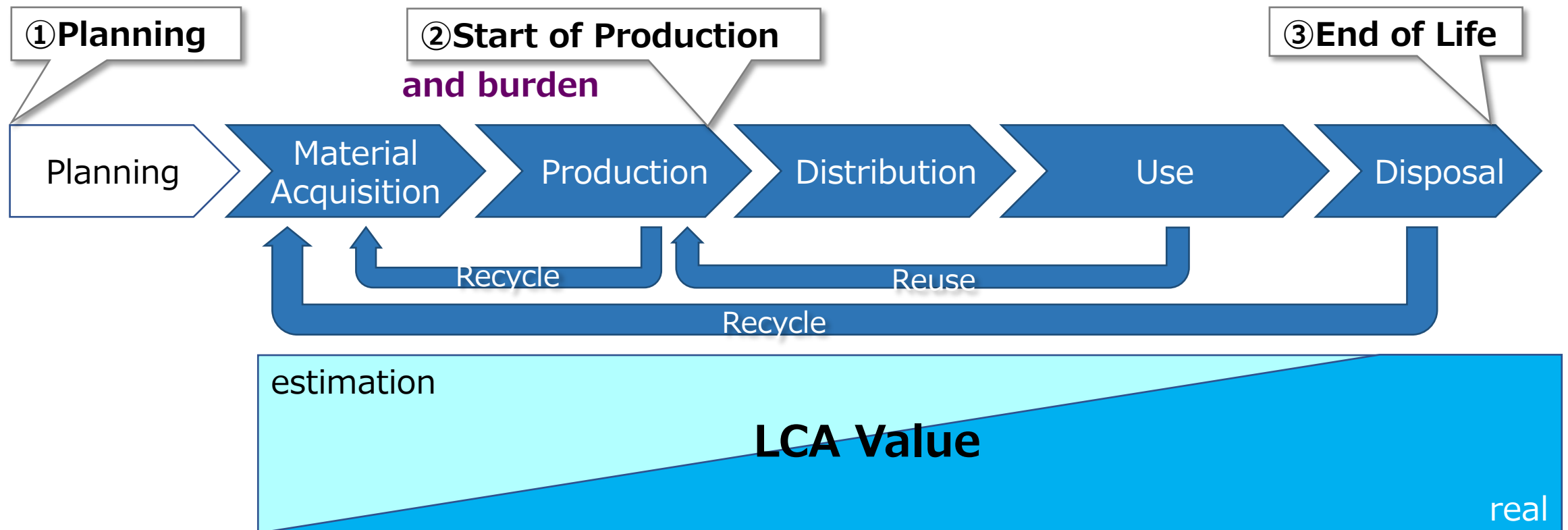
6. Methodologies_function unit

Automobile categories	Lifetime distance	Provided energy	others
Classified based on R.E.3 and/or S.R.1			
	<u>~~ discussion points ~~</u>		
	(1) international default value		
	(2) unique value per region		

7. Timing of LCA Derivation

~ discussion points ~

- depend on the purpose
- consider the balance of profit and burden



8. Outputs

~ discussion points ~

- outputs is going to be recommendation / guideline, neither GTR nor UNR

Global Technical Regulations (GTRs)

1998 Agreement on Global Technical Regulations (GTRs)

Registry of Global Technical Regulations

ECE/TRANS/180 - Global Registry

English	DOC	PDF
French	DOC	PDF
Russian	DOC	PDF

Addenda to the Global Registry (Global Technical Regulations)

No.1 (Door locks)

No.2 (WMTC)

No.3 (Motorcycle brakes)

No.4 (WHDC)

No.5 (WWH-OBD)

No.6 (Safety glazing)

No.7 (Head restraints)

No.8 (Electronic stability control systems)

No.9 (Pedestrian safety)

No.10 (OCE)

No.11 (Engines)

No.12

No.13 (Hydrogen and fuel cell vehicles)

No.14 (Pole side impact)

Addenda to the 1958 Agreement (Regulations 0-20)

[Back to UN Regulations root page: here](#)

Important Note:

1. Some of the regulations presented in electronic format on this Website use WordPerfect fonts. If these fonts are not available on your system, certain symbols and equations may not display correctly. [Click here](#)

0 - International Whole Vehicle Type Approval (IWVTA)

1 - Headlamps (including R2 and/or HS1 lamps)

3 - Retro-reflecting devices

4 - Illumination of rear registration plates

5 - Sealed Beam headlamps

6 - Direction indicators

7 - Position, stop and end-outline lamps

8 - Headlamps (H1, H2, H3, HB3, HB4, H7, H8, H9, HIR1 and/or HIR21)

9 - Noise of three-wheeled vehicles

10 - Electromagnetic compatibility

11 - Door latches and hinges

12 - Steering mechanism

13 - Heavy vehicle braking

13H - Braking of passenger cars

14 - Safety belt anchorages

