GRPE A-LCA IWG
SG5(EoL) Meeting 007

23rd Jan. 2024

GRPE A-LCA IWG SG5
Leader ; Shoji Aoki (JASIC/JAMA),
Co leader; Zhang Tongzhu (CATARC)

Agenda

1. SG5 006 minutes & 007 agenda confirmation
2. GRPE A-LCA IWG on 8th 9th Jan. cascading
3. EoL LCA discussion
   1) Material/Parts recycling modeling discussion #4
   2) Other controversial topics discussion #2
4. Next action

Minutes of GRPE A-LCA IWG SG5 meeting #6

Date and time : Tuesday, December 12, 2023, 12:00–13:30 (CET)
Location : Online (Teams)
Attendees : See attendee list

Agenda:

1. SG5 organization update
2. SG5 005 minutes & 005 agenda confirmation
3. EoL LCA discussion
   1) Material/Parts recycling modeling #3
   2) Controversial topics discussion #1
4. Next action

Notes:

1. SG5 organization update

- Dr. David Meyer from EPA joined the SG5 meeting as a new main participant. The position of Mr. Dietmar Hofer from CLEPA changed from observer to main participant.

2. SG5 005 minutes & 005 agenda confirmation

- The minutes and the agenda were unanimously approved.

3. EoL LCA discussion
   1) Material/Parts recycling modeling #3

- Mr. Yamamoto explained each CP and NGO's position on CATARC's proposal. Each CP and NGO then gave an update on the results of their internal studies.

[China]

- Ms. Zhao presented the results of their further research on the CATARC proposal. The following comment was made:
  - Nucci (European Aluminium): Even if both cut-off and CFF could be included in the guidelines, I do not agree with defining different objectives. I believe that CFF can be applied not only to compare different technology routes, but also to compare individual products. I do not think that applying a cut-off would provide a proper LCA because it would ignore a part of the life cycle, basically the end-of-life phase. Cut-off can be used to evaluate materials and components, but CFF must be used to evaluate the final product, i.e., the vehicle.
- Since Dr. Zhang from CATARC was not present at this meeting, it was decided that CATARC, Japan, and European Aluminium would hold a separate meeting at a later date.

[Japan]

- There was no update from Japan.

[France]

- France was not present at this meeting.

[OICA]

- Mr. Goy indicated that OICA's position remains unchanged and that no further input from CATARC is needed.
- The results of OICA's review will be presented at the January SG5 meeting.
- In order to consider whether cut-off or CFF is better, a list of pros and cons of each is being prepared. Once completed, this will be shared with SG5.

[CLEPA]

- Mr. Martineau presented the results of the CLEPA study. Questions and comments were as follows:
  - Nucci (European Aluminium): The windshield EPD (Environmental Product Declaration) example takes a cut-off approach to modeling Cradle to Gate, but is required to report the results, subdivided by module, in the Cradle to Grave. Therefore, not only Cradle to Gate but also Cradle to Grave must be reported. Module D is exactly the net credit for recycling used materials. In a sense, this is a compromise, something in between what we are trying to do with the cut-off and the CFF.
  - Martineau (CLEPA): No, this is not somewhere in the middle; the declarations in Cradle to Gate and Cradle to Grave are separate and not integrated.
  - Nucci (European Aluminium): Yes, they are. The difference is that there is an obligation to report all the results posted. What they are required to do is modules A, C, and D, but they cannot be combined.
  - Martineau (CLEPA): For me, this is a different approach than the CFF. Because the CFF compromises between upstream and downstream.
  - Nucci (European Aluminium): You mentioned that suppliers in the automotive industry cannot apply the CFF because they do not have information about the recycling process at EoL. Why do they need this information?
  - Martineau (CLEPA): For example, an electronic device is sold to our customer, installed in a car, and that car is used for 15 years. Thus, we don't know what condition the electronics will be in at the end. So how do we calculate that?
  - Nucci (European Aluminium): That was exactly my question. A semi-finished product manufacturer like an aluminum manufacturer does not put a finished product on the market. Basically, there is no need to model everything that happens at the end of its use.
  - Martineau (CLEPA): The question here is how to model CFF; we don't know what the recycling industry will look like in 10 years. We have no idea if the technology we have today will be the same in 10 years from the recycler's point of view. And what materials will we be able to recycle in 10 years?

- Nucci (European Aluminium): My understanding of this formula is that there is no data needed for end-of-life modeling, only primary data on the materials in the product. That is the why I mentioned it.
- Goy (OICA): I would also add that compared to aluminum, most of our suppliers provide finished products that are incorporated into the vehicle. So, the situation is different between steel and aluminum.
- Nucci (European Aluminium): But if the semi-finished product is part of the finished product, does it make sense to extend the semi-finished product rule to parts? If so, would it also apply to suppliers?
- Goy (OICA): Some products used in automobiles can be used in non-automotive applications.
- Yamamoto (JASIC): Let me check. What are the definitions of Level 3 and Level 4 for Step 1 and Level 1 and Level 2 for Step 2? I am a bit confused because we have a level concept but this level concept does not define use cases yet.
- Martineau (CLEPA): Maybe we can at least link it to the IWG level concept. I meant to say that Level 3 and Level 4 focus on primary data, while Level 1 and Level 2 have the potential for secondary data. This proposal links the cut-off at the levels 3 and 4 that we see today with the CFF for technology comparisons at the levels 1 and 2. This is just our proposal, using the definitions proposed by the IWG.
- Yamamoto (JASIC): My understanding is that there are several use cases reported at Levels 3 and 4. Therefore, if we review these use cases, I think the cut-off is good for reporting and the CFF should be applied to the selected components for technical comparison.
- Martineau (CLEPA): Agreed.
- Yamamoto (JASIC): What image do you have of the selected components?

- Martineau (CLEPA): It could be a tire or a bumper. The key is to limit the number of materials in a component. For example, electronic components should be avoided. It is important to keep the components as simple as possible. For example, it could be a mechanical part of a gearbox. We have to avoid parts with too much material diversification inside that would lead to complexity in the CFF.
- Yamamoto (JASIC): I see. You mean parts with simple materials. You also have specific parts and upstream materials.
- Martineau (CLEPA): These are potential sources to which LCA has already been applied. The key here is that, for example, if you take this tire as an example, or this glass as an example, as we say, you should use CFF to compare technologies; with CFF, you can compare two technologies for tires or two technologies for glass.
- Yamamoto (JASIC): Of course, LCA for components is very important, but what we are discussing is LCA for automobiles.
- Martineau (CLEPA): As CATARC suggests, use CFF when comparing technologies. Now we want to stay with automotive. If we were to compare technologies, would we compare one vehicle with another? If we wanted to apply CFF to a complete vehicle including all the materials, it could be very complicated. The suggestion here is to use CFF to compare vehicle technologies. For example, when there are two cars and they have two different gearboxes, we apply CFF to these gearbox components.
- Yamamoto (JASIC): Understood. So, if we extend your thinking to materials, we can apply CFF to specific materials. For example, if we change steel to aluminum, probably as Dr. Nucci recommends, we can compare that kind of body structure with CFF.
- Martineau (CLEPA): That's right. We treat the structure as a component.
- Yamamoto (JASIC): Your suggestion is very similar to CATARC. Later, we need to see what are the specific parts and what are the specific materials, taking into account the parameters of CFF and future scenario building.

[European Aluminium]

- Dr. Nucci presented the position of European Aluminum as follows:
  - Nucci (European Aluminium): There is no change in our policy to recommend CFF; we do not fully agree with CATARC's proposal. With regard to LCA at the vehicle level, we believe that CFF should be recommended. We believe that cut-off can be used at the component and material level to provide information along the value chain, but not for comparisons between two different products, such as vehicles. We would be happy to discuss this further with CATARC.

[JRC]

- Mr. Patrone presented the JRC position as follows:
  - Patrone (JRC): We recommend CFF. As discussed by European aluminum manufacturers, it takes into account input recycling rates and output recycling rates. Thus, we can get a complete picture of the CFP of a final product such as a vehicle. The general approach is CFF, but as Dr. Nucci mentioned, if we clarify the application and the scope of all components, we can consider the cut-off in the value chain for different components.

[EPA]

- Dr. Meyer presented the EPA position. Comments were as follows:
  - Meyer (EPA): I am in various discussions with the three major U.S. automakers, federal agencies, GREET model researchers, and global consultants about LCA for auto recycling. They are against CFF and strongly prefer to keep the cut-off. What do you think the recycling market will look like in the distant future? Can we really find a reliable answer? They seem to have some really serious doubts about the application of the CFF. They said that CFF is a great thing in theory. However, in actual operation, we need to break down what happens when the product goes through recycling and back to manufacturing. And each subcomponent would need its own CFF factor, which would be a very cumbersome process. And we are not sure if it is feasible.

- Yamamoto (JASIC): Your concerns are valid. We need to create a recycling scenario in the future. It is very difficult to create future scenarios for all materials and all parts of an automobile. Therefore, we are now discussing that we can create future recycling scenarios by applying CFF only to certain materials and parts. So, I would like EPA to study this kind of step-by-step approach as well.

- The results of the EPA review will be presented at the February SG5 meeting.

2) Controversial topics discussion #1

- Of the six items on the list of controversial topics, #1 (Boundary Conditions), #3 (Second Life Parts), and #4 (Logistics) were addressed at this meeting. The remaining items will be discussed at the next meeting. Mr. Yamamoto presented the contents and the proposal of the leading team of each topic. He asked all CPs and NGOs to report the results of their discussions on these topics at the next SG5 meeting.
- Regarding #3 (Second Life Parts), there were questions and comments as follows:
  - Martineau (CLEPA): Is traceability like a battery passport?
  - Yamamoto (JASIC): Yes, it is. But it is not limited to that. If a company or an auto industry association has a specific traceability system for a specific part, then that is fine.
  - Goy (OICA): What if there is or is not traceability for different parts or locations? Can we accurately compare the CFP of vehicles that have traceability and those that do not?
  - Yamamoto (JASIC): It is the same as the CFF argument: you cannot compare the results of applying the CFF with the results of applying the cut-off. It is probably very difficult to perfectly compare CFPs in different regions and with different traceability. In this case, I think that secondary data should be used and options for regions should be used. However, we need to see if such options can be applied in terms of the ToR. In this context, the leading team proposes option 1. If we want a perfect global comparison, but there is no traceability in any region, then we have no choice but to use the cut-off.

- Goy (OICA): That is not my point; if the first goal of the IWG is to define a harmonized LCA methodology for complete vehicles, I think we can compare each vehicle by calculating the CFP of each vehicle. If the calculations are harmonized, I fully understand and agree with the need to consider second life. If the current situation is not systematic, then I think we can include it in the Level 4 discussion of what we should aim for.
- Yamamoto (JASIC): I see, we should also discuss issues such as harmonization first or carbon neutrality first. As I understand it, the goal of A-LCA is to achieve carbon neutrality first, not harmonization; we need to see which is the priority in the IWG's ToR. In any case, I would like you to take this back to OICA and report back their opinion.

4. Next action

- The next SG5 meeting will be held online on Tuesday,January 23, from 12:00 to 14:00 CET.

Appendix 1: Attendee list

Agenda

1. SG5 006 minutes & 007 agenda confirmation
2. GRPE A-LCA IWG on 8th 9th Jan. cascading
3. EoL LCA discussion
   1) Material/Parts recycling modeling discussion #4
   2) Other controversial topics discussion #2
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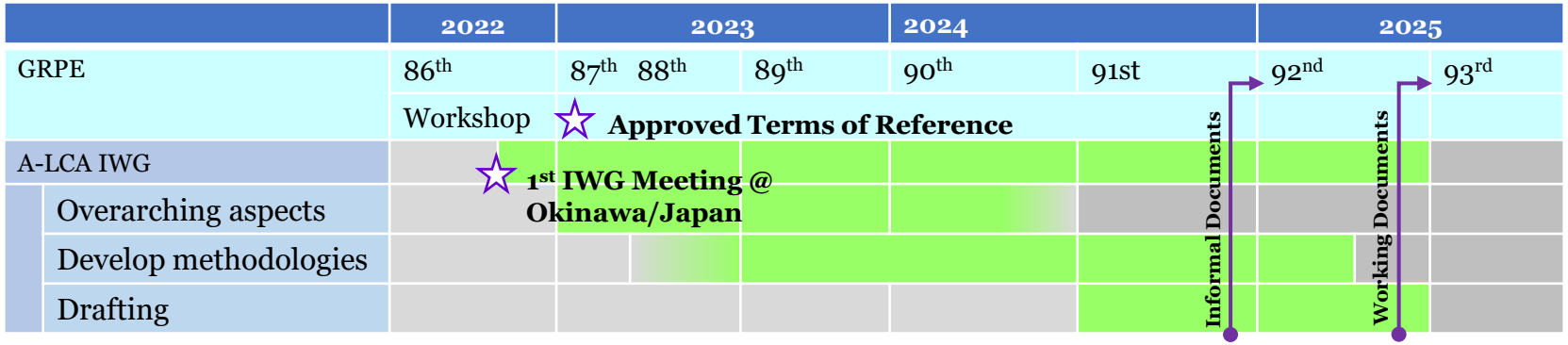
Informal document No. **GRPE-90-31**
90th GRPE, 10 – 12 January 2024
Agenda item 14

Status Report of the IWG on Automotive Life Cycle Assessment (A-LCA)

Prepared by
the A-LCA Informal Working Group

1. Progress of the A-LCA IWG since 89th GRPE

Overall schedule



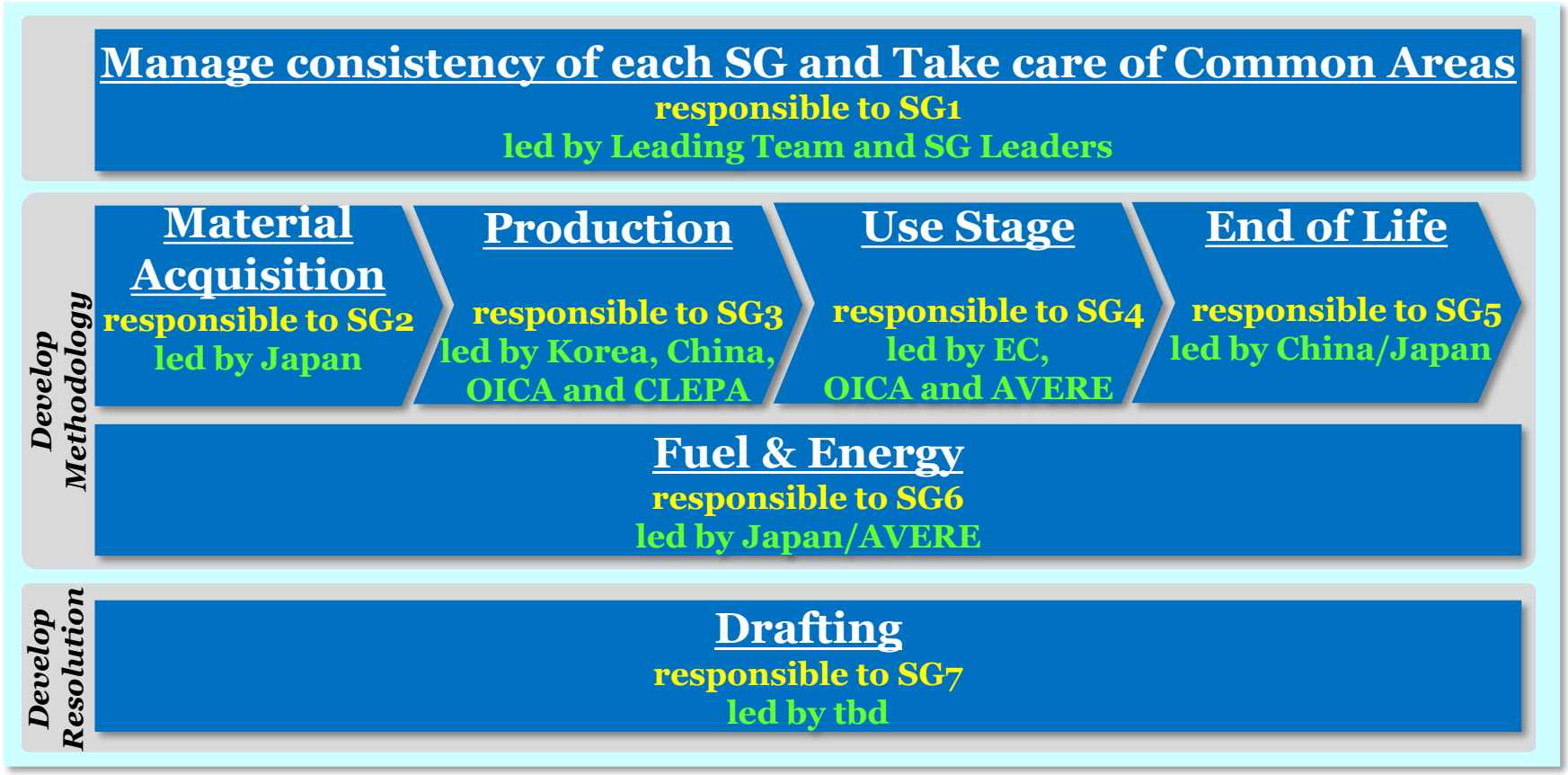
Progress

Held 5 IWG Meetings including one with conjunction to 90th GRPE session

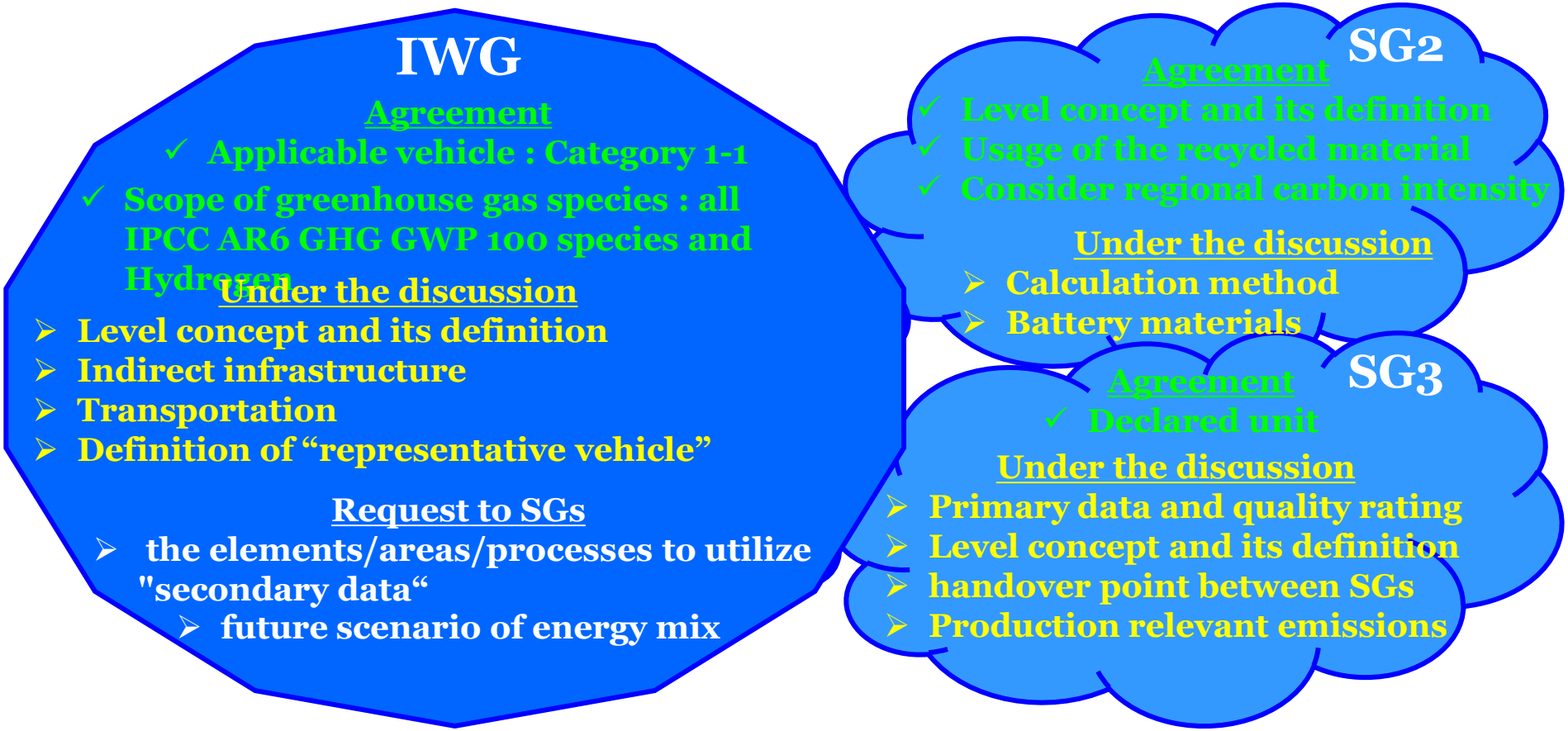
<OUTCOMES>

- ✓ Successfully started the subgroup activities with constructive contribution by member and with excellent leadership by leaders
- ✓ Intensive discussion on “Level Concept” and “Overarching Aspects” is on going

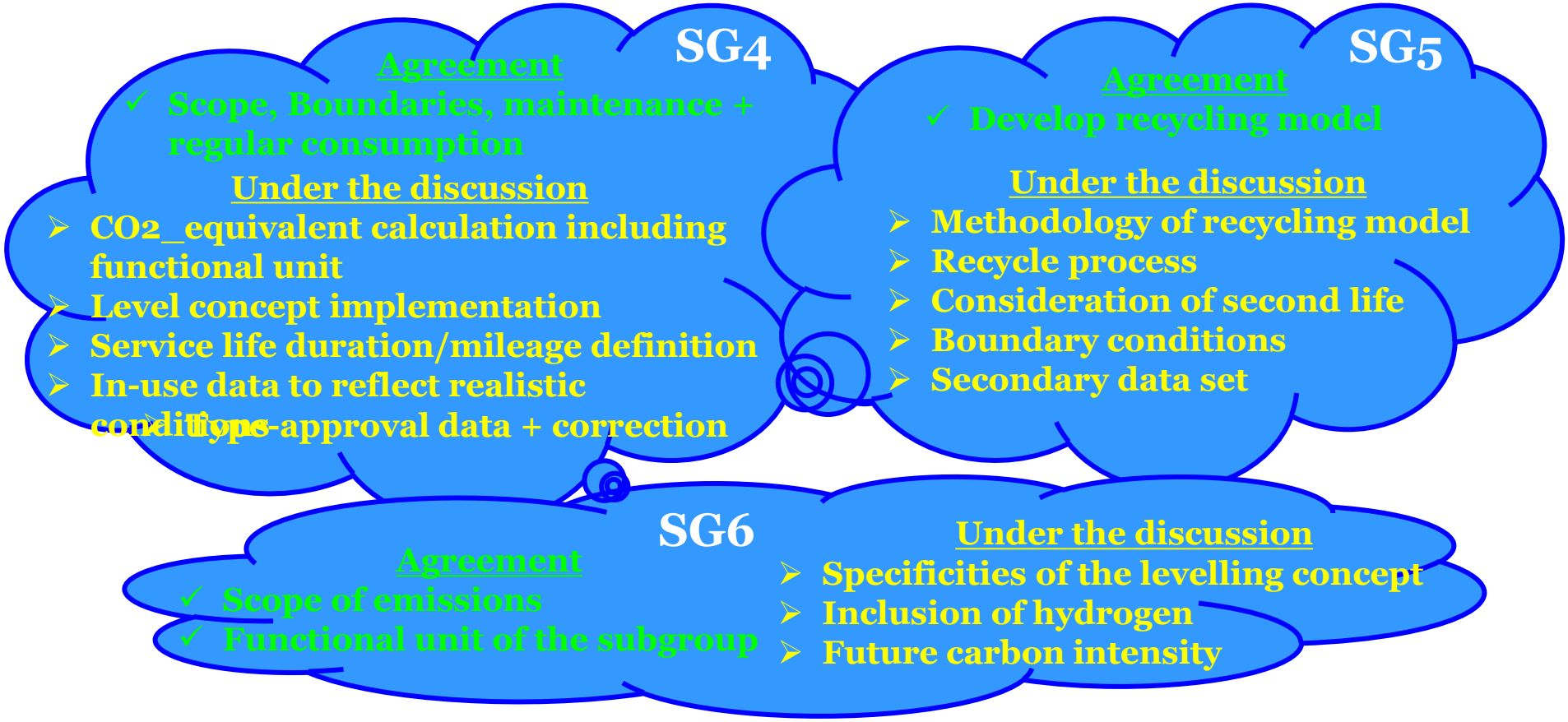
2. A-LCA Working Organisation



3. Remarkable Notes (1)



3. Remarkable Notes (2)



SG5 summary

Controversial topics -Recycling modeling-

- Background
- Discussion on two methods: the Cut off Method (RCM), which evaluates only those who use recycled materials, and the CFF, which divides the effect between those who return recycled materials and those who use them.
- China has proposed a case of using LCA depending on the purpose.
- SG5 leader raised the point of setting up a harmonized method to align with the IWG's ToR.
- The conclusion
- It has been confirmed that it is not a problem to have a choice of using LCA depending on the purpose, as stated in the IWG's ToR.
- Based on this policy, it was decided to continue recycling modeling discussion including the two methods as an option in SG5.

0.Material/Parts recycling modeling
Internal discussion summary of Cutoff and CFF

		Result	Remarks
Leading Team	**China (CATARC)**	**・Both Cutoff and CFF methods should be included in the standard**	① CFF method： for the purpose of comparing different technical route without considering responsibilities ; ② CUT-OFF method：for the purpose of comparing different individual products with same technical route。 ・Detailed boundary and principle of these two methods presemted in SG5 006
	Japan (JASIC)	**・Support CATARC proposal**	・Specific use case description on Cutoff or CFF to be discussed respecting ToR of A-LCA
Main Participants	France	・Under study	・No strong position
	US(EPA)	・Under study **until Feb. SG5**	
	OICA	・OICA sees the potential of the CATARC proposal. However, it is needed to wait for CLEPA to present their proposal too, and to get more detailed information on the CATARC proposal. ・Secondly, To request of a clear definition/condition when to use which method	
	CLEPA	**・Cradle-to-Gate, step 1 (level 3&4 ,reporting'): Support Cutoff** **・Cradle-to-Grave, step 2 (level 1&2 ,technology comparison'): Support CFF for selected parts and associated Materials**	
	European Aluminum	**・Only CFF, need to study Scenario, but having both methodologies in A-LCA could be acceptable**	
Observers	**JRC**	**・CFF approach is favourable. Considering both methodologies in the discussion according to the scope could be acceptable**	European Commission Recommendation (EU) 2021/2279 on the use of the environmental footprint methods to measure and communicate the life cycle environmental performance of products and organisations, in which Annex 1 e 2 refer to PEF (Product Environmental Footprint) while Annex 3 e 4 to OEF (Organisation Environmental Footprint).

Direction for internationally - harmonized procedure in ToR

- Background
  - ✓ SG5 is discussing the harmonization of recycling modeling as the most important item.
  - ✓ During this discussion, two methods (cut off and CFF) are being considered as options for an internationally harmonized procedure, to be used depending on the specific conditions.
  - ✓ Both cut off and CFF align with the objective of reducing carbon footprint, as they can assess the environmental impact of material recycling and parts reuse.
- Confirmation
  - ✓ SG5 leaders are seeking clarification on whether this option meets the requirements of the guidelines that the A-LCA IWG aims for.

GRPE A-LCA Objectives from ToR

1) To develop an internationally-harmonised procedure to determine the carbon footprint* of different technologies

2) This resolution can be used to help make policy and can encourage automotive industries to reduce carbon footprint

3)Shall be developed respecting the principles of transparency and consistency、also strike a balance between the accuracy and the workload considering the complex supply chain

4. Next Actions

Meetings until next GRPE (May 2024)

Main agenda and Expected outcomes

- ~ April 2024 : a couple of virtual meeting *< discuss overarching aspects, review SGs activities and provide the guidance if necessary>*
- 18th & 19th April : Hybrid meeting @ Seoul *<finalise overarching aspects, prepare drafting activities, review SGs activities and provide the guidance if necessary>*
- the week of May 20th : Face-to-face meeting @ Geneva
  request half day session in conjunction with 91st GRPE session *<review overall progress status, take off the drafting activities>*

Each SG activities including meeting schedule are handled by each SG leader(s)

5. Current Progress

▽ : target level as of January 2024

Progress level (%) / items	20	40	60	80	100	Notes
ToR					▽	FIXED with strong leadership by GRPE
	January 2023					
Working Organisation including Subgroup structure					▽	Established 6 subgroups (SGs) 5 SGs are very active with SG leaders initiative
	May 2023					
Overarching aspects					January 2024 ▽	Slightly behind the schedule Continue to discuss in parallel with SG activities
		▽				
A-LCA Methodology					March 2025	Progress of each SG is slightly vary
	▽					
Drafting					June 2025	Activities will be taken off after June 2024

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0.Material/Parts recycling modeling
Internal discussion summary of Cutoff and CFF

The latest status

		Result	Remarks
Leading Team	**China (CATARC)**	**・Both Cutoff and CFF methods should be included in the standard**	① CFF method： for the purpose of comparing different technical route without considering responsibilities ; ② CUT-OFF method：for the purpose of comparing different individual products with same technical route。 ・Detailed boundary and principle of these two methods presemted in SG5 006
	Japan (JASIC)	**・Support CATARC proposal**	・Specific use case description on Cutoff or CFF to be discussed respecting ToR of A-LCA
Main Participants	**France**	**・Under study**	・No strong position
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	OICA	**・OICA sees the potential of the CATARC proposal. However, it is needed to wait for CLEPA to present their proposal too, and to get more detailed information on the CATARC proposal. ・Secondly, To request of a clear definition/condition when to use which method**	
	CLEPA	**・Cradle-to-Gate, step 1 (level 3&4 ‚reporting'): Support Cutoff ・Cradle-to-Grave, step 2 (level 1&2 ‚technology comparison'): Support CFF for selected parts and associated Materials**	
	European Aluminum	**・Only CFF, need to study Scenario, but having both methodologies in A-LCA could be acceptable**	
Observers	**JRC**	**・CFF approach is favourable. Considering both methodologies in the discussion according to the scope could be acceptable**	European Commission Recommendation (EU) 2021/2279 on the use of the environmental footprint methods to measure and communicate the life cycle environmental performance of products and organisations, in which Annex 1 e 2 refer to PEF (Product Environmental Footprint) while Annex 3 e 4 to OEF (Organisation Environmental Footprint).

CFF or Cutoff application condition study (1)
– Summary of CATARC, CLEPA and EU Aluminum -

	CFF	Cutoff	
1. Boundary coverage	Cradle-to-Grave	Cradle-to-Gate	**CATARC/ CLEPA/EU Al**
2.LCA use case	–Comparing different technical route	-Comparing different individual products	**CATARC**
	-Technology comparison	-Reporting	**CLEPA**
	-Every use case		**EU Al**
3.Scenario	–Current EoL process basis -Established recycling tech./process basis		**CATARC/ CLEPA/EU Al**

CFF or Cutoff application condition study (2)
–SG5 leading team proposal–

	CFF	Cutoff	
1.Boundary coverage	-Cradle-to-Grave	-Cradle-to-Grave	-Cradle-to-Gate
2. Recycling tech./process	–Established	-Not established	-N/A
3. Primary/Secondary data availability for CFF parameter	-Available	-Not available	-N/A

Remarks; LCA use case should not be included in the condition because LCA owner should decide considering Pros/Cons of CFF and Cutoff following A-LCA ground rule.

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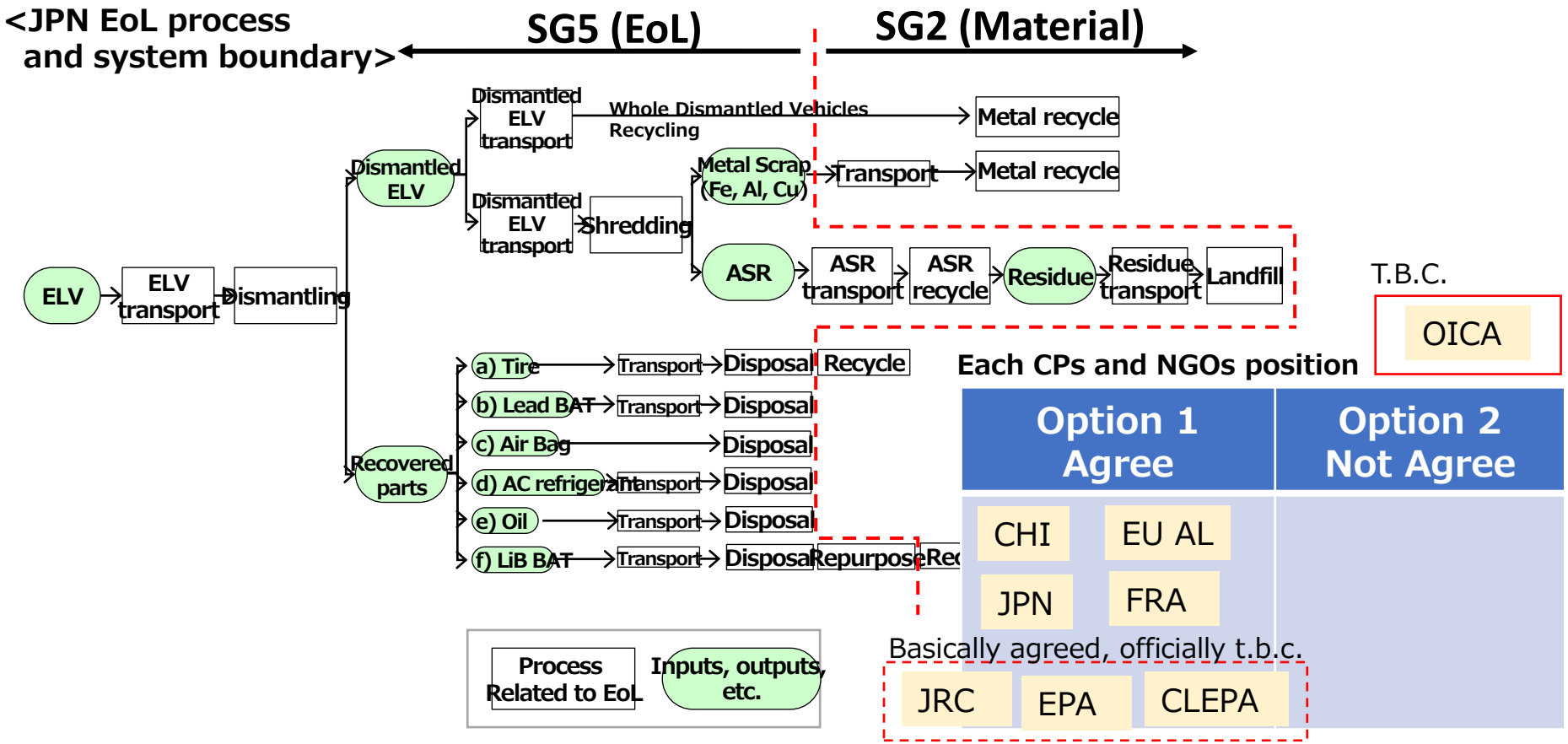
SG5 Controversial topics list

Topic	Option 1	Option 2	Option 3
0.Material/Parts recycling modeling ☆ to be discussed today	Recycled content method (Cutoff)	Closed Loop Approximation Method (CLAM)	Circular Footprint Formula (CFF)
1.Boundary conditions ☆	SG 5	SG 2	
2.Secondary data	Global harmonised	Region by region	Country by Country
3.Second life parts ☆	Include	Exclude	-
4.Logistics ☆	Include	Exclude	-
5.ELV management out of sale region	Take into account process of country of sale	Take into account global average	Take into account process of country of EoL
6.Recycle process	Current process	Future process	-

1. SG5 system boundary including SG2 boundary

1) From ELV transport to Disposal (e.g. Incineration or Landfill)
2) Material recycling
   -SG5(EoL) ; to Scrap generation
   -SG2(Material) ; From Material recycling
3) Parts reuse/repurpose
   -SG5(EoL) ; to reuse/repurpose parts generation



3. Second life parts

T.B.C. FRA EPA OICA EU AL JRC

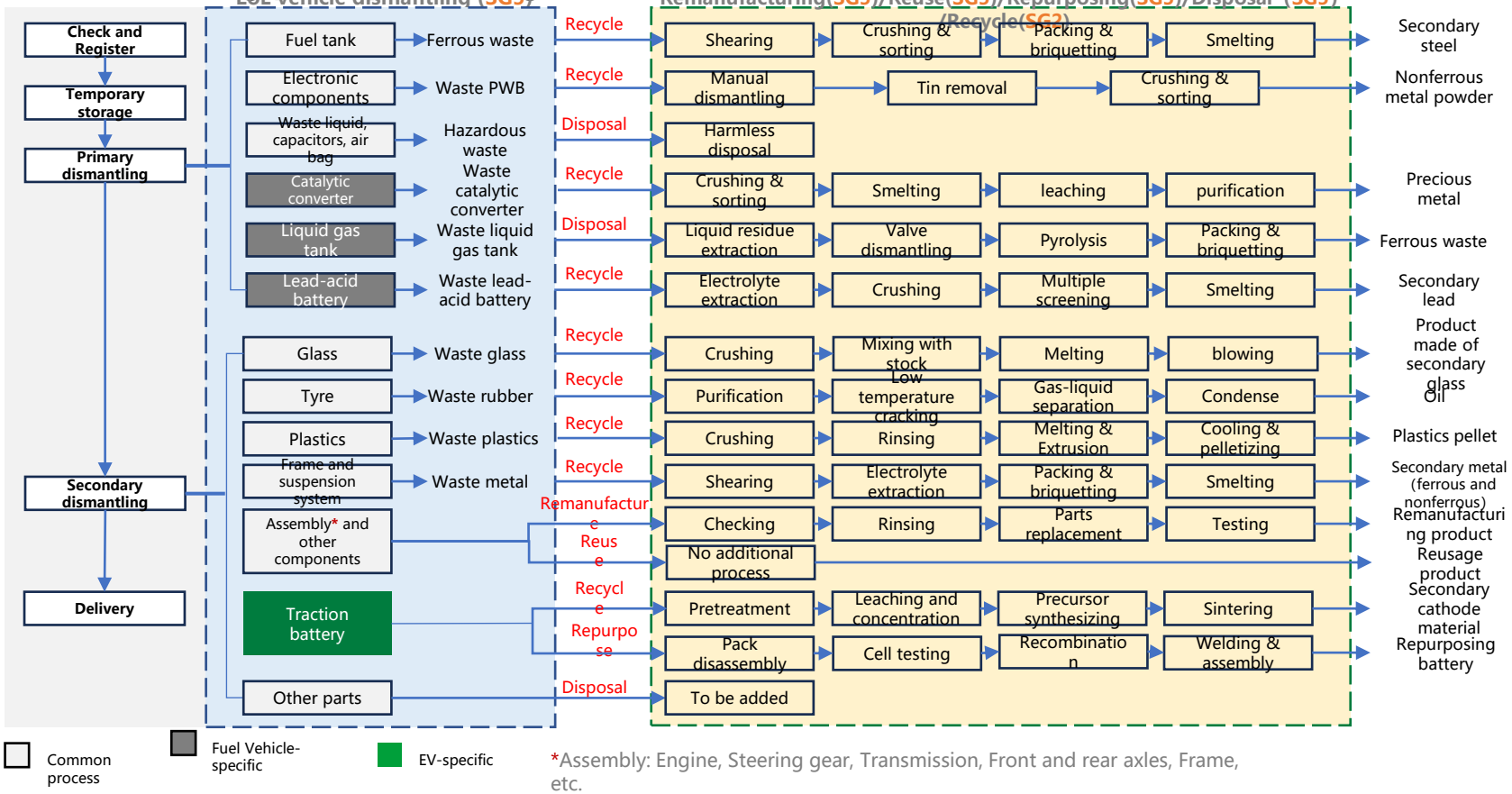
Option 1	Option 2
Include with below condition	Exclude

Each CPs and NGOs position

CHI JPN CLEPA

- Include in case that Second life parts traceability confirmed

<China Dismantling parts processing of EoL vehicle>



*Assembly: Engine, Steering gear, Transmission, Front and rear axles, Frame, etc.

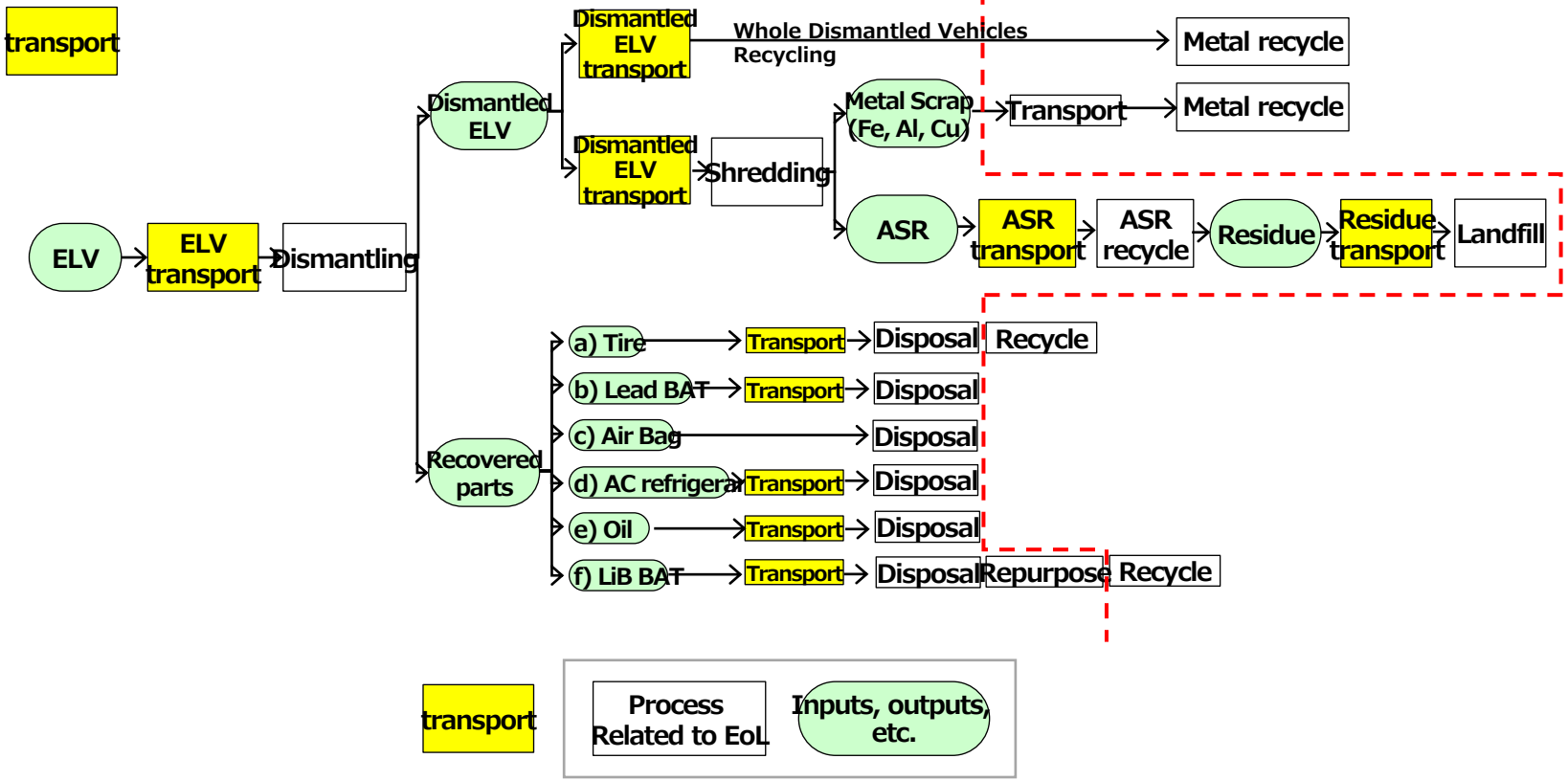
4. Logistics

T.B.C. FRA EPA OICA CLEPA EU AL JRC

Option 1	Option 2	Option 3
Include	Exclude	other
		CHI JPN

- Align with other SG following overarching topics conclusion

<JPN EoL process and system boundary>



SG5 Controversial topics list

Topic	Option 1	Option 2	Option 3
0.Material/Parts recycling modeling ☆ **Discussion to be started in 23rd Jan SG5**	Recycled content method (Cutoff)	Closed Loop Approximation Method (CLAM)	Circular Footprint Formula (CFF)
1.Boundary conditions	SG 5	SG 2	
2.Secondary data ☆	**Global harmonised**	**Region by region**	**Country by Country**
3.Second life parts	Include	Exclude	-
4.Logistics	Include	Exclude	-
5.ELV management out of sale region ☆	**Take into account process of country of sale**	**Take into account global average**	**Take into account process of country of EoL**
6.Recycle process ☆	**Current process**	**Future process**	-

2. Secondary data

Topic	Option 1 <Level2>	Option 2 <Level3>	Option 3 <Level3>
Secondary data	Global harmonised	Region by region	Country by Country

- Need to confirm Secondary date of each process and CFF parameter in each country or region
- Please check them by Feb. SG5

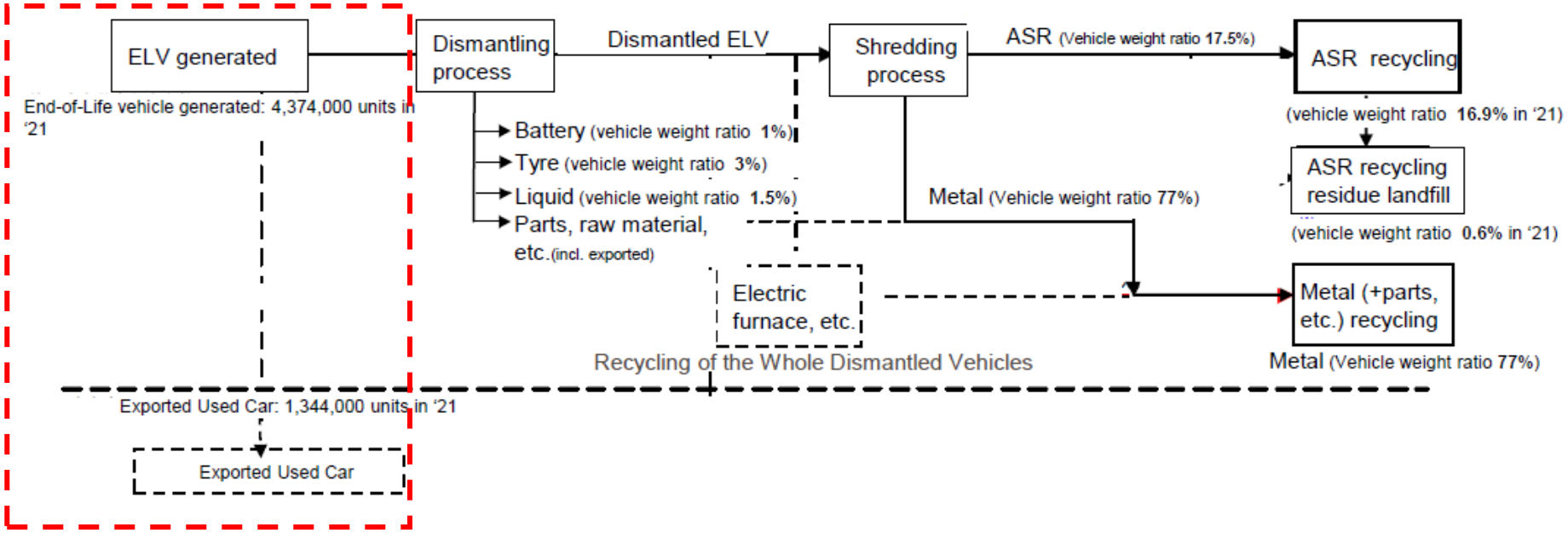
										l unit								
										Level 4								
										Primary								
										US	PRC	FRA	GR	KR	IND	JPN		
										***	***	***	***	***	***	***		
treatment	Dismantling		ELV weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
	Dismantled ELV transport		Dismantled ELV weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
	Shredding		Dismantled ELV weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
Recovered parts treatment	1. Tire	Disposal/Recycle	Parts weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	2. Lead BAT	Disposal	Parts weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	3. Air Bag	Disposal	Parts weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	4. Lubricant	Disposal	Parts weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	5. AC refrigerant	Disposal	Parts weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	6. LiB BAT	Repurpose/Recycle/Disposal	Parts weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
	7. Other Parts	Disposal/Recycle	Parts weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
		transport	Parts weight [kg]							***	***	***	***	***	***	***		
ASR trearment	ASR transport		ASR weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
	ASR Recycle		ASR weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		
	Residue transport		Residue weight [kg]		**	**	**	**	**	***	***	***	***	***	***	***		
	Landfill		Residue weight [kg]	*	**	**	**	**	**	***	***	***	***	***	***	***		

5. ELV management out of sale region

Topic	Option 1	Option 2	Option 3
ELV management out of sale region	Take into account process of country of sale	Take into account global average	Take into account process of country of EoL

- Option 1 preferable because of no data about EoL treatment of exported used car

Japan End-of-Life Vehicle Recycling and Treatment Flow

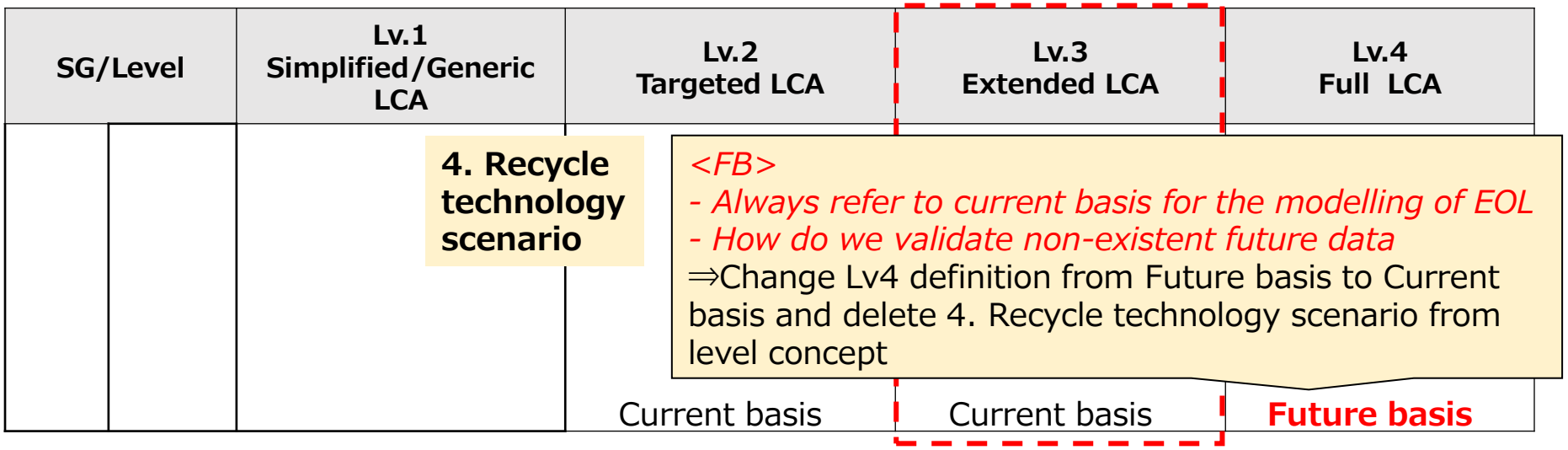


6. Recycle process

Topic	Option 1	Option 2	Option 3
Recycle process	Current process	Future process	-

- Take Option 1 respecting the discussion about “4. Recycle technology scenario” in Level concept @12th July SG5(EoL) Meeting 002

FB summary from 12th July SG5(EoL) Meeting material



Agenda

1. SG5 006 minutes & 007 agenda confirmation
2. GRPE A-LCA IWG on 8th 9th Jan. cascading
3. EoL LCA discussion
   1) Material/Parts recycling modeling discussion #4
   2) Other controversial topics discussion #2
4. Next action

4. SG5 12 months Schedule

Today

			2023						2024					
			7	8	9	10	11	12	1	2	3	4	5	6
Main activities			Develop Methodologies											
GRPE A-LCA IWG			☆10		☆7	☆ 17-18			☆					☆
SG5 leading team Meeting (LTM)			☆11 ☆26	☆23	☆6 ☆20	☆12 ☆25	☆9 ☆22	☆5 ☆21	☆18	☆ ☆	☆ ☆	☆ ☆	☆ ☆	☆ ☆
SG5 Meeting		☆26	☆12		☆4	☆19	☆ 13	☆ 12	☆ **23**	☆	☆	☆	☆	☆
Objectives	1. Level concept Definition & Initial target		☆12											
	2. System boundary with activity data & Intensity data based on each regional EoL process				**Reginal info. sharing** ☆ JPN, CHI	☆ EU#1	☆ EU #2			**Harmonization** ☆ **US** ▪▪▪▪▪▪▪▪▪▪ ☆ **#2** **(Regional Study)**				☆ **Final**
	3. Contro versial topics — 1) Material/Parts recycling modeling		☆JRC CFF intro.		☆ JAMA CFF intro.	☆ #1	**Common Pros/Cons Discussion** ☆ #2	☆ #3	☆ **#4**	☆ **#5**	CFF Application Study & Road Map			☆ **Final**
	3. Contro versial topics — 2) Other				Boundary Conditions ☆			**1.Boundary #2** **3. 2nd life Parts** **4. Logistics** ☆	☆	2.Secondary data 5. ELV management out of sale region 6. Recycle process ☆	☆	☆		
	4. Summary for drafting													☆

- Next SG5 meeting

1. Date ; 2hours, the middle of Feb.
2. Venue; Online
3. Attendee; all SG5 member
4. Agenda; according to SG5 12 months schedule
   - US EoL process sharing
   - Material/Parts recycling modeling #5
   - Other controversial topics discussion #3
   - Next action

<SG5 Leading team proposal>
Prior to 20th Feb. IWG, Feb SG5 should be held on 19th from 12:00 to 14:00 @CET