

Lean & Green International Rule book

Version: 07.12.2022

Document summary

Document name	Lean and Green International Rulebook
Last modification date	01.112.2023
Current document release	7.0
Document status	DRAFT

Contributors

Name	Organisation
Batt, Jonas	GS1 Switzerland
Behrend, Joanna	GS1 Germany
Boruta, Mateusz	ECR Poland
Cat Krause, Bahar	GS1 Germany
Matatula, Alex	Connekt Ltd.
Pecci, Guadalupe	AECOC Ltd.
Pütke, Oliver	GS1 Germany
Simons, Leon	Connekt Ltd.

Log of changes

Release	Date of change	Changed by	Summary of change
3.1	23/11/2020	Leon Simons	Remove 2% rule, shape retention
3.2	25/11/2020	Leon Simons	Reference to 1.9, had to be 1.11 (page 6)
3.3	16/4/2021	Leon Simons	Page 22, 4.5 delete point 8 (reduction GHG)
3.4	16/4/2021	Leon Simons	Page 23, 4.6 Change max 3 years into 2
3.5	6/10/2021	Leon Simons	Proposal
3.6	07/12/2022	Dirk van der Lee	Added 4 th and 5 th star
3.7	08-11-2023	Dirk van der Lee	Semantics; 1.4.5 Definition of scope; 1.5.1 Solution partner; 1.10 Monitoring and retention; 1.13.4 data improvement plan 5.5.1 / 5.5.2 dataquality 4 th Star;

Disclaimer

The greatest of care has been taken in compiling the document contained herein. Lean & Green International and all third parties that were involved in the compilation of this document explicitly declare that they cannot be held liable in connection with this document nor for any damages suffered by third parties, including direct and indirect damages and loss of profits, that arose in connection with the use of these project rules. This document is subject to amendments at any time and may be adapted in the light of new developments. The project rules presented in this document may be adapted to new requirements – particularly legal requirements – at any time. This document may contain protected trademarks or logos that may not be reproduced by third parties without the permission of the holder of these rights.

Table of contents

1	Lean & Green – general information	6
1.1	The key components of the Lean & Green International programme.....	10
1.2	Terms of participation.....	10
1.2.1	Participant rights and obligations	10
1.2.2	Participation of internationally operating participants.....	11
1.2.3	Cost of Participation	11
1.3	Participation application and contract signing.....	11
1.4	Action plan	12
1.4.1	Measurement process/methodology for the Lean & Green Award	12
1.4.2	Review period and definition of the reference year (base/reference measurement)	12
1.4.3	Use of existing balance sheet data (e.g. within the sustainability strategy).....	12
1.4.4	Definition of the scope during compilation of the action plan	13
1.4.5	Definition of the geographic scope for transport volume	13
	Image 1 – GHG protocol Scope 1, 2, 3	14
	Image 2 – Basic supply chain process	14
1.4.6	Inclusion of business partners.....	15
1.4.7	Purchase of green electricity and CO ₂ offset	15
1.4.8	Permitted exclusion criteria in regard to the scope	15
1.4.9	Deadline for submitting the action plan	15
1.4.10	Specification of the units used to express greenhouse gas emissions	15
1.5	Implementation and review of the action plan	16
1.5.1	Lean & Green solution partners	16
1.5.2	Amending the action plan.....	16
1.6	Lean & Green confidentiality	17
1.7	Lean & Green action Plan assessment	17
1.8	Lean & Green Star assessment	17
1.9	The Lean & Green Award/Star Award and the use of the Lean & Green logo	18
1.10	Monitoring	18
1.11	Lateral entry	19
1.12	National Lean & Green Steering Committee and proposal of amendments.....	19
1.13	Exceptions to the rules.....	19
1.13.1	Exceptions due to global/regional events and crises	19
1.13.2	Extending the target deadline.....	19
1.13.3	Maintaining reduction levels	20
2	The 1 st Star requirements.....	20
2.1	Terms of participation.....	20
2.2	Data quality level.....	20

3	The 2 nd Star requirements.....	21
3.1	Terms of participation.....	21
3.2	Data quality level.....	21
3.2.1	Recognised standards in the 2 nd Star Programme	21
3.2.2	Definition of the scope for the Lean & Green 2 nd Star Programme	21
3.2.3	Lean & Green 2 nd Star criteria	21
3.2.4	The requirements of cooperation projects	21
3.2.5	The requirements of innovation projects.....	22
3.3	The Lean & Green 2 nd Star – from application to certification	22
4	The 3 rd Star requirements	22
4.1	Terms of participation.....	22
4.2	Data quality level.....	23
4.3	Recognised standards in the 3 rd Star Programme	23
4.4	Definition of the scope for the Lean & Green 3rd Star Programme.....	23
4.5	Lean & Green 3rd Star criteria	23
4.6	The Lean & Green 3rd Star – from application to certification	23
5	The 4 th Star requirements	25
5.1	Terms of participation.....	25
5.3	Recognised standards in the 4th Star Programme	25
5.4	Definition of the scope for the Lean & Green 4 th Star Programme	26
5.5	Lean & Green 4 th Star criteria.....	26
5.6	The Lean & Green 4 th Star – from application to certification.....	26
6	The 5 th Star requirements	27
6.1	Terms of participation.....	27
6.2	Data Quality	27

Lean & Green – general information

Lean & Green International – an initiative to promote efficient and green logistics in Europe

Less CO₂ thanks to the Lean & Green Community

Lean & Green is an international, cross-sectoral sustainability community whose aim is to support participants to reduce their CO_{2e} emissions in logistics and transport over five phases whereby participants can aim at reaching the Paris COP21 climate goals. The Lean & Green Community in Europe consists of a wide range of participants involved in transport and logistics activities. The Community's national partners build a platform in which knowledge exchange and collaboration for new projects can take place.

After registration within the programme, the registered entity becomes a participant. This confers membership of the Lean & Green Community but does not imply that the entity is taking part in the reduction programmes.

The carbon reduction action plan

A **participant** begins by submitting its carbon footprint, which includes the participant's current greenhouse gas emissions for their logistics and warehousing. Based on this information, the participant puts together a realistic and feasible action plan for CO_{2e} reduction which must conform to specific Lean & Green criteria.

Receiving the Lean & Green Award

Once the action plan has been approved, the participant will receive the Lean & Green Award. This gives the participant the green light to begin implementing the measures to reduce emissions and to use Lean & Green logos and marketing material for external communication.

The Lean & Green 5 Star programme

A five phase programme has been set up to help participants to meet the Paris goals by 2050. This is a 'front runner' programme where participants are rewarded upfront for their commitment to CO_{2e} reduction goals. Once the targets in each phase have been achieved, the participant is awarded a Star in recognition of their achievement.

National or International participation?

A participant can participate in Lean & Green International in two levels: nationally or at the European level or both. The latter meaning the participant joins the international program and is part of the national community where the headquarter is located.

- National

If a participant would like to participate in single national markets where Lean & Green is active, this is possible by signing up via the formal registration document in the national programmes.

- International

If a participant would like to participate in several countries where Lean & Green is active or where the participant operates but where Lean & Green is not yet present, this is possible via the Lean & Green International Programme. To register, the participant should get in contact with the Lean & Green International Organization and sign up via the formal registration document.

The International programme differs from the national programmes in that participants include international logistics in the scope of their reduction commitments. For the First Phase, the minimum scope covers 50% of your outbound transport volume within Europe (to European locations/warehouses, DCs etc).

Detailed requirements can be found in "Requirements per Phase and Data quality" or in Chapters 2 – 6.

The Five Star framework

The programme consists of five Star levels, completion of which brings participants to the successful attainment of the Paris climate goals (see Figure 1). The criteria are the same at both the national and the European levels.

Although many participants will wish to enter the programme at the First Star level, it is possible to enter the programme at a higher Star level and in the middle of a given Star level. Such 'lateral entry' is detailed in 1.11.

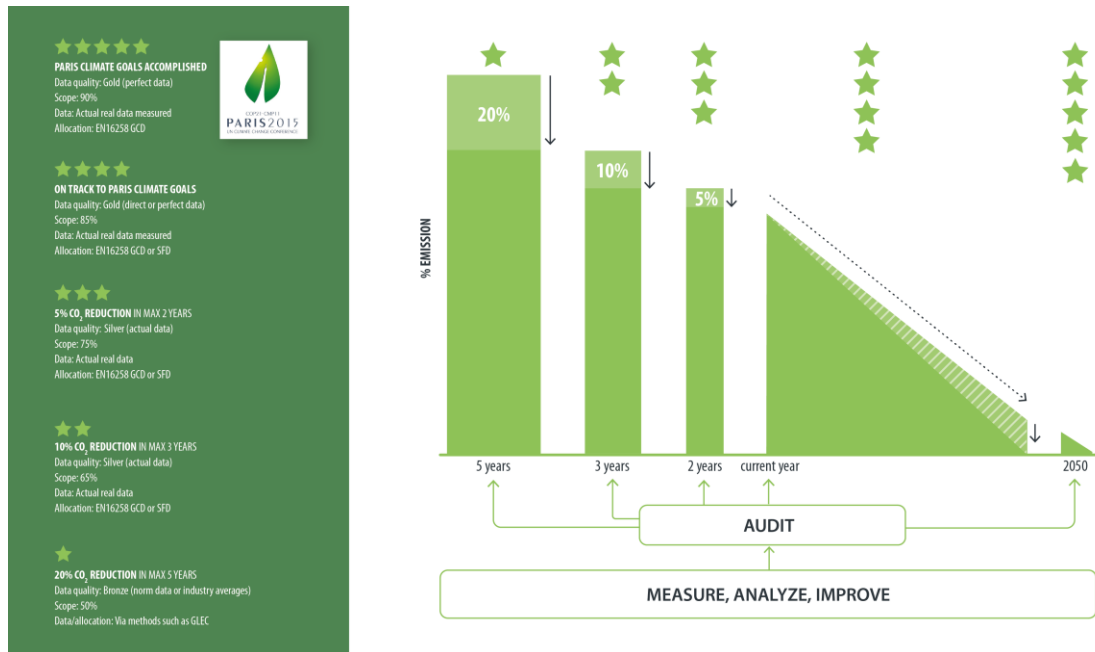


Fig. 1: The path to CO₂-neutral logistics

The five Star levels are described in detail in the following chapters (Chapter 2-6).

Data quality requirements

Achievement of reduction goals requires a high degree of accuracy in the measurement of a participant's CO_{2e} emissions. Such accuracy is achieved incrementally, and, accordingly, the Five Star programme recognises gradually increasing levels of quality as a participant progresses through the phases. Higher data quality means more accurate calculation and allocation of the participant's logistical CO₂ emissions and therefore more accurate insights in the participants carbon footprint. Required data quality levels can be revised annually by Lean & Green International.

The 4 grades of data quality are:

- (B) Bronze: default values, estimates or GLEC figures
- (S) Silver: measured, calculated, derived (actual) values, aggregated per period (year or month)
- (G) Gold: measured, calculated, derived (actual) values per license plate/location per period
- (G+) Gold+: measured (actual) values per stop/trip

Note: Measuring KPI / CPI for National / International transport:

For National transport, the KPI CO₂ per unit is leading

For International transport (outside own country), the CPI * is leading => CO₂ per unit.km (GCD or SFD)

CPI * = Cofret Prestation Indicator

Summary of requirements

	CO _{2e} reduction	Allowed base year (x = current year)	Years to reach CO _{2e} goal in max. x years	Maximum years to maintain reductions	Minimum volume/CO _{2e} scope**	Minimum data quality	Minimum Data completeness
1st Star	20%	Year x-3	5	5	50%	Bronze	95%
2nd Star	10%	Year x-2	3	3	65%	Silver	95%
3rd Star	5%	Year x-1	2	3	75%	Silver	95%
4th Star	Total 55% reduction	3 rd Star result and two consecutive years	Before end of 2030 in line with EU reduction target	Monitor bi-annual result,	85%	Gold – own assets Silver - out-sourced	95%
5th Star	Absolute reduction	Year x-1	2050 at the latest	N/A	90% (expected, in development)	Gold	95%

Fig. 2: Requirements for the Five Star process

*The 5th Star is still under development by the Lean & Green International Steering Committee. This represents a level where the participant is on course to achieve a CO_{2e}-level corresponding to the Paris Agreement climate objectives. Unlike the first four levels of recognition, this will be an absolute decrease in CO_{2e} emissions.

** The minimum scope for each phase is a percentage of total volume or CO_{2e} emissions derived from all outgoing transport flows from locations (e.g. warehouses, distribution centres, depots, terminals) to destinations in the same country (e.g. customers, the participant's own locations, deep-sea ports for export). If certain transport flows are taken out of scope, this percentage decreases accordingly. The minimum scope can be widened by including transport flows abroad, for example to other locations in Europe, and incoming transport flows. The CO_{2e} goal should be achieved on activities covered by the scope.

Lean & Green International has a minimum scope of transport and warehousing from a country to the same country (for example CH, NL, BE or DE). It is allowed to add more volume / supply chains (import-export) to the scope.

The Lean & Green Star recognises the successful reduction of CO₂

After a Lean & Green Award has been received, the participant is responsible for achieving its agreed reduction target of at least 20% within a maximum of 5 years. The achievement of the goals will be reviewed by an external auditing party. An audit is conducted for every Lean & Green Star level. Once the participant has successfully passed this audit, it will be awarded the Lean & Green Star.

If a participant fails to reach the 20% reduction target during the first approach, it is allowed to participate in the Lean & Green Programme with a second approach and a new action plan. This is irrespective of the stage at which it becomes clear that the target reduction is not being met. If a participant then fails to satisfy the requirements of the Lean & Green 1st Star audit, the participant will no longer be entitled to use the award logo. As a general rule, the Lean & Green Award logo may only be used for 5 years following the first Lean & Green Award audit.

Measuring process and methodology

The carbon footprint should be calculated using the current version of well-established international standards and guidelines, provided that these contain a definition of the individual calculation steps. This is of particular importance in the event of any ambiguities regarding the calculation methods used. These standards include:

- **The Greenhouse Gas Protocol** – a corporate accounting and reporting standard
- **ISO 14064-1** – a standard that offers guidance for organisations to quantify and report their greenhouse gas emissions and removals
- **ISO 14083** – Quantification and reporting of greenhouse gas emissions arising from transport chain operations
- **DIN EN 16258** – a method for transport service providers (freight and passenger transport) to calculate and declare their energy consumption and greenhouse gas emissions
- **DSLV guidelines** – the calculation of greenhouse gas emissions for the transport and logistics industries

- **GLEC** – A method for calculation and reporting of logistics emissions
- **CO2Emissiefactoren.nl** – Dutch source for GHG emission factors
- **DEFRA** – UK Source for GHG emission factors
- **GLEC** – European source for GHG emission factors
- Local national sources for GHG emission factors must be mentioned and listed in the application by the participant when used as source for calculations in the action plan.

The external review also checks that the method of calculation is comprehensible and complies with the aforementioned standards and guidelines. The assessment sheet used for the external review, as well as other relevant documents relating to the Lean & Green process, can be found at the website of your national partners.

If, in individual cases, the content of the above standards contradicts the content of the rules and data quality requirements laid down in this document, the content of the data quality requirement rules shall apply and overrule the above standards.

Sharing knowledge and experience is key

One of the specific goals of the initiative is to create a platform where participants can share their knowledge and experience, learn from one another and work as a community to reduce their CO_{2e} emissions. Regular events are held to encourage the sharing of knowledge. The Community - consisting of participants and solution partners - is kindly asked to share some of their knowledge on the platform.

Collaborative initiative

The founding participants of the initiative form national Lean & Green boards and are committed to driving Lean & Green forward. They, in turn, feed into the Lean & Green International Steering Committee which is responsible for the content and development of the initiative. In addition, Lean & Green appoints ambassadors to represent the programme and support its external communication to the outside world, including potential participants, initiatives, governmental bodies and politicians.

Why you should join

1. **Expand your network**
Take advantage of the active expansion of the Lean & Green community, supported by the ambassador concept. Get involved in your network and find other cooperation partners to boost efficiency and improve climate protection.
2. **Secure cost savings**
Reduce your costs by implementing the measures laid down in your action plan to reduce your CO_{2e} emissions.
3. **Create transparency**
Use your own action plan to define your tangible sustainability goals. The reviewer will check your action plan and its implementation, creating transparency and traceability for your customers and partners.
4. **Transfer your knowledge**
Play an active role in shaping the transfer of knowledge within the Lean & Green community. Learn from others, share your own experience and work with others in the community to identify further synergies.
5. **Be a pioneer**
Set an example: The Lean & Green Award and Star are evidence of your commitment and the attainment of your goals. Mention these awards in your customer communication.
6. **Take part in events**
As a Lean & Green member, you can take part in dedicated industry events. This is the place to pick up new ideas and exchange opinions with other participants
7. **Comply with national and European climate laws**
As a Lean & Green member, you prepare yourself to comply with the rules and laws stated in the national and European Climate Agreements

What does your participation include?

The Lean & Green Award/Lean & Green Star certificate

1. Support for project implementation from your national partner
2. Events focusing on sustainability measures for transport and logistics (e.g. themed days, regional meetings)
3. Public relations management
4. Branding, development of marketing materials, press releases, newsletters
5. The Lean & Green ambassador concept: spreading the word about the initiative with the aim of expanding the network

1.1 The key components of the Lean & Green International programme

Lean & Green is built upon three main pillars.

Community

Represented by:

- Shippers and Logistic Service Providers
- Governmental organizations
- Knowledge institutions
- Branch organizations
- Solution partners / Service providers (i.e. accountants, consultants, implementation companies)

A place for:

- Knowledge sharing
- Networking
- Cocreation
- Collaboration
- Inspiration



Insights

CO2 performance
Trend in CO2 performance improvement
Impact of several types of CO2-reduction-measurements / projects
Optimization possibilities

Recognition

5 Star Framework, each Star resembles a certified reduction

Incentives

- EED exemption (RVO)
- Reduced interest rate on impact loans (Rabobank)

Branding

1.2 Terms of participation

In order to participate in the Lean & Green Initiative, a company must sign a formal document for participation with the national partner or multinational with Lean & Green International. While the service level within the community may vary from country to country, the Lean & Green Rule Book is a European harmonized document and is therefore a binding document for all Lean & Green participants.

1.2.1 Participant rights and obligations

Each participant must carry out a reference CO_{2e} measurement of its current greenhouse gas emissions. Based on this information, each participant should draw up a realistic and feasible action plan, which – alongside the CO_{2e} calculation – contains specific measures for reducing its greenhouse gas emissions by at least 20%. The action plan is reviewed by the national partner or an external auditing party. The participant must supply documentary evidence to the review upon request. A participant may request that the award review be carried out by means of an audit. This is recommended if the participant is unable to supply documentary evidence pertaining to

the reference year at the time when the Star review is being carried out. Once a participant successfully passes the review, it receives the Lean & Green Award.

Project progress and the resulting reduction of greenhouse gas emissions must be reported to the national partner once a year using a monitoring tool. The data entered into the tool is secure and can only be read by the participant in question and the national partner. As soon as the participant has achieved its reduction target, the auditor will carry out an on-site audit of the measures implemented. Once the participant has successfully passed this audit, the national partner will award it with the Lean & Green Star certification.

1.2.2 Participation of internationally operating participants

Lean & Green is currently organised on a national basis through the national partners and international through the international office hosted by Connekt. The national partners are members of the Lean & Green International-International Steering Committee. This committee has agreed that participants can include as many internationally based operations in the scope of the action plan if they a) indicate the percentage of the business and emissions that is handled in those added countries and b) add a reasonable explanation of why it is not feasible to register the specific operations with the responsible national partner. The default country of membership should be the one where the headquarters or main operations, as detailed in the scope, are located (Link to the national partner can be found at www.lean-green.eu). The overall target of a 20% reduction in emissions must be achieved in each country included in the plan. This helps to simplify boundaries and allows logistics flows between countries to be taken into account.

A participant's international entities are entitled to use the Lean & Green Award and Star in their communications provided that (a) the entity is included in the scope of the participant's or business unit's action plan, and (b) there is a Lean & Green initiative in the entity's country and the entity is a member of the initiative.

1.2.3 Cost of Participation

Costs for participating on national level are nationally based in order to take account of different national markets and service levels. Costs for participating in the international initiative are internationally based in order to take account of the international market and service level.

If there is no national program carried out by a national partner in a specific country, participation on national level is possible through the International office.

1.3 Participation application and contract signing

The Lean & Green contract is concluded with a participant's top decision makers. The application must be signed by the authorized representative of the Participant as per rules of representation (i.e. CEO/MD, COO Head of Logistics). It is essential that the application is backed by the senior management to underline that the project is a top priority within the participant and that the necessary resources will be provided to ensure its implementation.

The rules for the contract are set out in the Lean & Green International rule book. Changes to the rule book are decided by the Lean & Green International Steering Committee.

The different divisions or businesses that form part of a participant can also participate in the Lean & Green initiative. However, the contract must then be concluded with a clearly defined legal entity and Lean & Green logos and certificates would only be valid for, and exclusively used by, the legal entity in question. It is essential that the entity has a significant transport logistics and warehousing division. If a single division joins the initiative, the following criteria must be fulfilled:

i) A distinct external impact must be guaranteed. The use of the Lean & Green logo is strictly limited to the member division and must be clearly recognisable as such.

The application may be rejected if it is obvious that these requirements cannot be fulfilled.

1.4 Action plan

1.4.1 Measurement process/methodology for the Lean & Green Award

To receive the Lean & Green Award, the participant must submit a carbon footprint (CO_{2e} calculation) for its logistics processes, as well as planned measures to reduce greenhouse gas emissions by at least 20% within 5 years. Participants are free to choose whichever method they prefer for calculating their carbon footprint, provided that the method is well founded, comprehensible and documented. We recommend the use of the current version of well-established international standards and guidelines for this calculation, such as the **Greenhouse Gas Protocol** (a corporate accounting and reporting standard), **ISO 14064-1** (a standard that offers guidance for organisations to quantify and report their greenhouse gas emissions and removals) and the **DIN EN 16258** (a method for freight and passenger transport service providers to calculate and declare their energy consumption and greenhouse gas emissions).

The documents submitted for the Lean & Green Award need to be verified by an external auditing party, checked (see separate Document Auditing Guideline) and sent to the national partner. Besides verifying the feasibility of the planned measures, the external audit also checks that the method of calculation used is comprehensible and complies with the aforementioned standards and guidelines. The assessment sheet that is used for the external review, as well as other relevant documents relating to the Lean & Green process, can be found at the website of your national partner.

1.4.2 Review period and definition of the reference year (base/reference measurement)

A participant that has already calculated its carbon footprint and introduced logistics-related measures to reduce its greenhouse gas emissions can backdate the reference year (base/reference measurement) by a certain number of years (see Fig. 2).

Special ruling: Pioneering participants that have managed to reduce their greenhouse gas emissions by at least 20% (1st Star level) over the past few years may predate their base year for the action plan by up to 5 years, despite the contract being signed in the current year. This is done on the grounds that the participant has implemented a very ambitious sustainability strategy in its logistics processes. Such participants commit themselves to sharing their best practices with other Lean & Green participants. They also commit to putting the necessary measures in place for the Lean & Green 2nd Star membership once the action plan they have submitted has been approved by the external auditing party.

The start of the period during which emissions will be reduced may, for each phase of the initiative, only be determined once for each participant and done so on an individual basis. It is not necessary, therefore, to wait for the beginning of the next calendar year. The fiscal year is also a recognised review period. In the event of force majeure (e.g. Corona), the target year may be postponed by 1 year. If this is the case, the method of calculation must remain the same and the national partner and the external auditing party must be informed. If the target year is pushed back by more than 1 year, a new assessment will be required.

1.4.3 Use of existing balance sheet data (e.g. within the sustainability strategy)

If carbon footprint calculations have been carried out for the entire participant (particularly those based on the GHG Protocol and the current version of ISO standards 14064-1 and 16258), the calculations relating to logistics-related processes can also be used for Lean & Green. In this instance, the underlying data (e.g. fuel consumption, warehouse energy consumption) would be the same. In addition to the CO_{2e} calculation, the specific measures that will be implemented over the following 5 years to reduce the greenhouse gas emissions of logistics processes will need to be defined (if not already done so), clearly quantified and submitted for assessment.

Conversely, Lean & Green can also be the starting point for expanding a participant's sustainability activities. A participant could then extend the Lean & Green carbon footprint calculation to the entire business, including manufacturing, allowing the participant to identify further opportunities for optimisation.

If a participant wants to control and manage its own carbon footprint, we recommend taking the entire participant into consideration, including manufacturing and administrative divisions. For participants in the Lean & Green Programme, however, only greenhouse gas emissions from transport logistics and warehousing will be taken into account.

Both the Lean & Green Award and the Lean & Green Stars support the internal and external communication of a participant's own sustainability commitment. It serves as evidence of active measurement, management and reduction of CO_{2e} emissions. In this regard, Lean & Green participants are entitled to use the awards in their communications, including in sustainability reports, on lorries, in email signatures or on their corporate website.

1.4.4 Definition of the scope during compilation of the action plan

The scope includes all logistics-related greenhouse gas emissions that are generated by the participant in question. This includes the participant's entire transport and warehousing activity (including outsourced logistics). With regard to warehousing, the fuel consumption of forklift trucks needs to be considered, as well as energy consumption such as electricity, heating and cooling. However, some items should be excluded, such as material consumption, the administration footprint and employee-specific emissions like commuting and business trips. The objective is to calculate the participant's total greenhouse gas emissions related to transport and storage. If subcontracted logistics service providers are unable to do this, average data or 'secondary data' (e.g. from life cycle assessment databases) may be used, or realistic assumptions may be made. If the footprint of external parties is included, this must be mentioned in the action plan. The percentage in scope must be evidenced by calculation and be clearly documented. There must also be a clear explanation as to why calculations do not reflect 100% of the scope or in other words how this matches the level of CO_{2e} reduction as required per phase.

Important! The action plan that is to be submitted must clearly state the processes that fall inside the scope, as well as those that are considered outside the scope of the review. The action plan must include logical, verifiable reasoning (e.g. physically measurable parameters such as km, weight, number of pallets, e.g. in inbound/outbound traffic) for any process that is excluded from the scope (see exclusion criteria). A screenshot of the management system, for example, provides satisfactory evidence.

Feel free to ask your national partner for further guidance on the scope calculation.

1.4.5 Definition of the geographic scope for transport volume

For participation on **national** level the mandatory minimum scope requirements are:

All scope 1, 2 and downstream scope 3 CO₂-emissions (image 1) deriving from logistic activities within the national borders. Logistics activities including: transport, handling, warehousing and value added logistics.

Including: Emissions from logistical locations like DC's, warehouse or cross dock; Emission from own assets like trucks and handling equipment; emissions from outsources logistical activities.

e.g. Inbound logistics of raw materials (image 2) are not mandatory for a producer.

e.g. Collection of shipments, returns or emballage as part of national distribution is included in downstream activities.

Emissions from scope 1, 2 and downstream scope 3 logistical activities outside the national border can voluntarily be taken in scope as well.

e.g. Emissions from international distribution from national locations.

Emissions deriving from upstream or inbound logistical activities can voluntarily be taken in scope as well.

For participation on **international** level the mandatory minimum scope requirements are:

All scope 1, 2 and downstream scope 3 CO₂-emissions (image 1) deriving from logistic activities within the continental borders or globally, based on the participating legal entity. transport, handling, warehousing and value added logistics.

Including: Emissions from logistical locations like DC's, warehouse or cross dock; Emission from own assets like trucks and handling equipment; emissions from outsources logistical activities.

e.g. Inbound logistics of raw materials (image 2) are not mandatory for a producer.

e.g. Collection of shipments, returns or emballage as part of international distribution is included in downstream activities.

Emissions from scope 1, 2 and downstream scope 3 logistical activities outside the continental border can voluntarily be taken in scope as well.

e.g. Emissions from international distribution from continental locations.

Emissions deriving from upstream or inbound logistical activities can voluntarily be taken in scope as well.

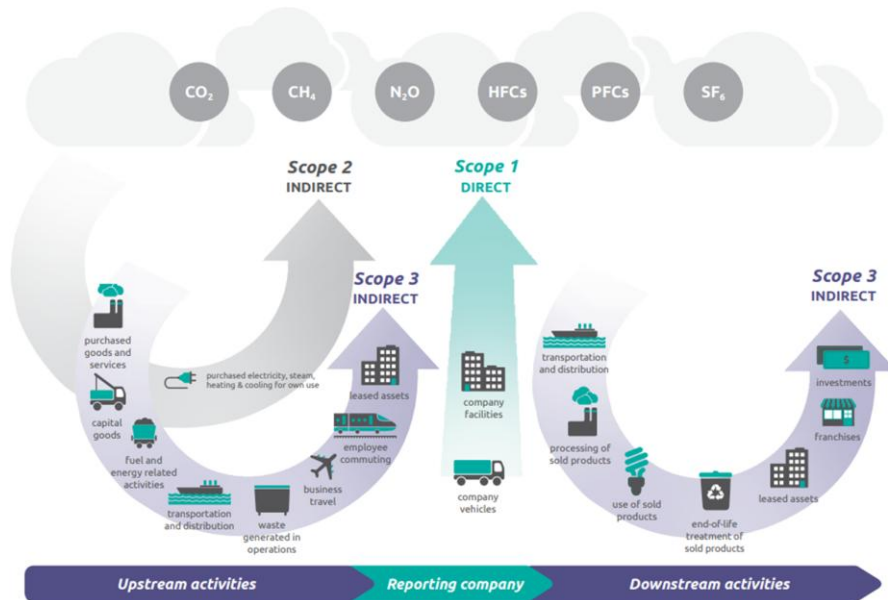


Image 1 – GHG protocol Scope 1, 2, 3

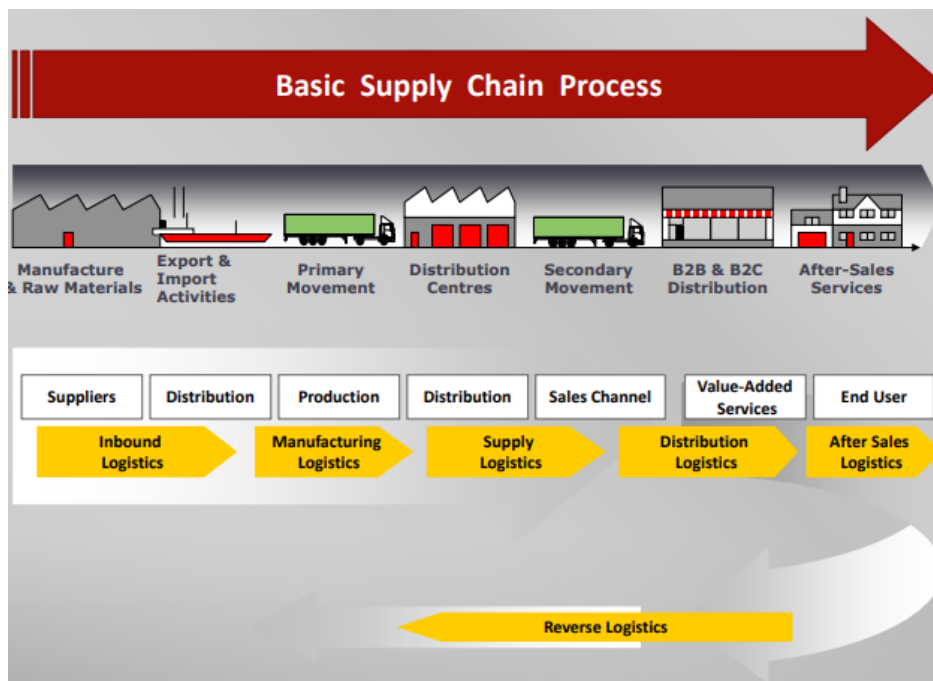


Image 2 – Basic supply chain process

1.4.6 Inclusion of business partners

Business partners (e.g. cooperation project partners) can also be included in a participant's own action plan but must be explicitly stated. It is important that partners are integrated or separated from the action plan of the participant and its greenhouse gas emissions reductions.

In addition, a participant needs to agree on standard KPIs (key performance indicators) with its partners, or solution convert each partner's units so that the progress of partners can be reported in the participant's own scope. Partners also part of the Lean & Green Initiative are entitled to list as their own in their action plans the greenhouse gas reductions achieved as a result of cooperation projects. External partners' databases need to be stored centrally and the external auditing party must be able to verify them. Please see special ruling in chapter 3.2.4 for cooperation projects 2nd Star.

1.4.7 Purchase of green electricity and CO₂ offset

As a general rule, all greenhouse gases must be included in the action plan. If a participant purchases neutral services (e.g. green electricity), these must be listed in a logical, verifiable way (i.e. certificates or bills). The upstream chain of the renewable power generation must also be taken into account. Only green electricity that has been certified by an independent body will be accepted. Supporting evidence must be provided during the assessment. It should be realised, however, that the goal is to reduce emissions by means of optimisation measures, and that therefore **the offset of greenhouse gas emissions or the purchase of corresponding offset certificates is not recognised as a reduction measure within the scope of Lean & Green.**

1.4.8 Permitted exclusion criteria in regard to the scope

A specific process within a participant may be excluded from the scope in three situations:

- **No data:** (only applicable for the 1st Star) If no data is available relating to a process within a participant, or if data cannot be determined, the author of the action plan is allowed to use prudent assumptions or secondary data. It is forbidden to base the entire calculation for a particular measure on secondary data (e.g. average fuel reduction based on industry analyses). One valid example would be to use European standards to calculate the average fuel reduction as a result of fleet renewal, provided that the new fleet structure can be demonstrated by primary data. If this cannot be demonstrated or justified, the process may be excluded from consideration.
- **No influence:** If the author of the action plan has no control over the process in question, i.e. if the process is the responsibility of another company, the process may be excluded from consideration. This does not apply to the commissioning of service providers, given that control or influence over the activity of the service provider is possible.
- **Other participant:** If the process in question could be classified as logistics but is carried out by another legal entity (e.g. a group of companies with one entity responsible for transport and another for storage), the process may be excluded from consideration if it is carried out by the participant that is NOT participating in the Lean & Green Award and the companies are two clearly separate entities, both in terms of their public image and business conduct.

1.4.9 Deadline for submitting the action plan

The action plan must be submitted within 6 months after the kick-off meeting with the participant. The action plan will be reviewed and given feedback. For some national programs not submitting an action plan in time may result additional cost.

1.4.10 Specification of the units used to express greenhouse gas emissions

The base CO_{2e} measurement must be expressed as total emissions as well as relative CO_{2e} emissions of the volume shipped, i.e. in relation to a reference value (e.g. tCO_{2e}/tonkm). The first approach is to determine a common reference value that will apply to the different divisions. If this is not possible, it may be possible to convert the different reference values of each division into a common reference value. Several relative reference values may be necessary to accurately report emissions for transport and warehousing. The calculation needs to be weighted according to the corresponding reference value. (For example, if 20% of emissions are generated by the warehouse, and the warehouse has a reference value of 50%, this would result in a 10% relative reduction in total emissions.)

The effects of business development rarely play a significant role in relation to relative emissions. This also explains why the reduction of greenhouse gas emissions is given in reference to the volume of relative emissions. However, if developments in the business do have an impact, the base year needs to be adjusted or recalculated so that the participant is still able to demonstrate the reductions achieved with the implemented measures.

1.5 Implementation and review of the action plan

1.5.1 Lean & Green solution partners

Lean & Green national partners can provide a solution partner (e.g. consulting or coaching service and not free of charge, coaching costs are being invoiced between participant and solution partner to participants. Solution partners provide a range of services, as listed below:

- **Solution partners** are able to support participants efficiently throughout the Lean & Green process. This saves the participant time because the **Solution partners** are experienced in Lean & Green principles.
- **Solution partners** can help participants due to their expertise in sustainability and logistics, as well as their experience in the subject matters and the compilation of action plans.
- **Solution partners** also have experience in asking the right questions, such as 'Which data do we need?', 'What should we do when specific data doesn't exist?', 'Which emission factors should we use?', 'Which is the most promising strategy for reducing CO₂?', 'What is the key focus?', 'What measures are appropriate?' and 'How do you strike a good balance between CO₂ savings, effort and project costs, etc.?'
- Participants also benefit from a **Solution partners'** experience in defining measures, choosing KPIs and reference values, and carrying out calculations. Emission-reducing measures, for example, can be linked to one another. For example, two measures, each of which has the capacity to reduce CO_{2e} by 5 tonnes on its own, only result in a reduction of 8 tonnes when combined.
- Participants sometimes need support to calculate the investment, to identify the savings that active CO_{2e} management brings and to define measures required to achieve those savings. **Solution partners** can give support to members if required and inspire with measures and methods.

Lean & Green tool providers:

Lean & Green International or a Lean & Green National Partner may provide a list of certified tools (hardware or software), to help reduce emissions / lower fuel consumption / less miles.

- Lean & Green tool providers are authorised to support the Lean & Green certification process as part of the Lean & Green Programme, particularly by implementing suitable measures to reduce greenhouse gas emissions in transport logistics and/or warehousing.
- Lean & Green tool providers offer a variety of solutions that help lower fuel consumption in vehicles, reduce the number of journeys or shorten the journey distance, for example. These solutions can take the form of hardware or software and can be implemented as measures by participants.

1.5.2 Amending the action plan

Because of the rapidly changing environment within a participant or in the world at large during the 5-year window of an action plan, it may well become necessary to carry out additional measures in order to meet the reduction target. Such additional measures must lie within the original scope of calculation and, in turn, within the base CO_{2e} measurement; any measures that lie outside the scope will only be recognised if the scope has been extended to accommodate them, including adjustments to the base CO_{2e} measurement and subsequent calculations accordingly.

The target reduction should be expressed in terms of clearly defined goals in the action plan. If further measures are added over time, these can be inserted into the plan and described at a later date. However, in the action plan, a participant should make it clear at the outset that they have a clear idea of how savings can be achieved as a result of the new measure. If the measures defined in the original action plan have generated smaller reductions than expected, a participant may compensate for these with the introduction of new measures. The success of the measures implemented will be assessed for the Lean & Green Star certification by the external auditing party in the course of the on-site audit.

Special ruling: If the participant makes significant amendments to the action plan over the course of the project, the external auditing party will need to conduct another award assessment. This assessment is compulsory, the costs of which will be invoiced to the participant by the external auditing party.

1.6 Lean & Green confidentiality

All information contained in the action plan (e.g. corporate data, partnerships, etc.) is treated confidentially, due to the fact that some data is sensitive corporate data that is not intended for the public. Only the participants concerned, the national partner and the external auditing party (for assessment purposes), have access to the content of the action plan and dashboard. Details of emission-reducing measures or examples of calculations are only published or made public following the agreement of the participant.

1.7 Lean & Green action Plan assessment

The national partner or the external auditing party carries out the assessment of the action plan based on the documents submitted. However, a participant may request that the award review be carried out by means of an audit. This is recommended if the participant is unable to supply documentary evidence pertaining to the reference year at the time when the Star review is being carried out.

The action plan will be evaluated in terms of comprehensiveness, feasibility and stability and graded as green, yellow or red (please see the assessment sheet at the website of your national partner). If the plan is graded yellow, a participant has one chance to improve it without incurring extra charges). In the event of significant weaknesses or a number of loops that repeatedly result in a yellow or red evaluation, a participant is given the opportunity to submit another action plan (which will require a new assessment). In this instance, the additional costs for the second assessment will be invoiced to the participant.

The participant must supply any supporting documents that the auditor requests, such as:

- Fuel bills
- Digital accounting system reports (e.g. fuel purchases)
- Sales receipts from independent fuel suppliers (e.g. petrol stations)
- Route reports from logistics software systems (in conjunction with a plausible calculation of the distance travelled)

This is a non-exhaustive list of documents that may be requested. Different types of documentary evidence may be requested, depending on the approach and system used. Supporting documents must always be unambiguous and comprehensible. A simple Excel file does not constitute clear-cut evidence, for example, because Excel sheets can be altered very easily.

If a report includes emissions from external service providers, it is important that the reported fuel consumption or distance travelled can be clearly traced back to the reporting participant.

1.8 Lean & Green Star assessment

As soon as a participant has achieved its reduction targets, it must inform the national partner so that the Lean & Green Star assessment can commence. The external auditing party contacts the participant to discuss all audit-related matters, such as the audit date, the audit plan and any management systems that will be needed during the audit to store data that was used for the calculation of greenhouse gas emissions. Following the initial discussion, the external auditing party compiles an audit plan, which is sent to the participant at least 2 weeks before the audit takes place. For an assessment to take place, all necessary documents need to be submitted to the external auditing party on time. If questions cannot be answered during the assessment or if data cannot be verified and the auditor requires further evidence to be submitted, the external auditing party will prepare a deficiency statement. If this is the case, the supporting documents must be submitted to the auditor within an agreed time frame. Once the assessment has been completed and feedback is positive, the participant receives written, official confirmation from the external auditing party that they have passed the Lean & Green Star assessment. A participant may also request a final written report from the external auditing party. The written confirmation from the external auditing party is the basis of the Lean & Green Star certification by the national partner.

The assessment procedure for the Lean & Green Star audit is described in a document provided by the external auditing party. This document is available separately.

1.9 The Lean & Green Award/Star Award and the use of the Lean & Green logo

The relevant assessments carried out by the audit company will be graded with either a 'pass' or a 'fail'. The criteria used for the assessment are clearly defined in the Lean & Green assessment form, which is accessible to all parties.

Depending on the chosen scope, the logo may also be used by participant departments or divisions that are involved in reaching the Lean & Green reduction targets. The logo can be used across all communication channels, including on lorries. The participant or business unit to which the Lean & Green Award and/or 1st – 5th Star applies needs to be easily recognisable.

The Lean & Green certificate (1st – 5th Star) may be used in external communications for a maximum period of 3 years following certification, as long as the participant remains a member. If a participant strives towards another level of the Lean & Green Award, it is entitled to use the current (star) certificate until the targets (for the next star) have been achieved. If a participant does not strive towards the next level of Lean & Green Star Award, it can undergo another assessment once the certificate has expired, to demonstrate that the reduction (>20%) in greenhouse gas emissions from the previous Star test has been maintained. If the participant passes this assessment by the audit company, the validity of the Star certificate is extended by a further 3 years. A re-assessment is required every 3 years. If the participant fails one of these further assessments, it will receive a warning and will have a two more chances to pass the assessment after which failure will result in termination of the participant's membership and the participant will have to withdraw the Lean & Green Logo from its Communication.

Lean & Green International reserves the right to withdraw both the Lean & Green Award and the Lean & Green Star if there is evidence of misuse.

1.10 Monitoring

The participant shall provide data at least once a year and in the first six months of the calendar year to monitor progress on the output indicators. The documented monitoring data analysis is provided by the participant to the national partner and/or uploaded in the My Lean & Green Environment under the 'Monitoring' section if available.

The output indicators are:

1. Total CO₂e emissions in PeriodR over the business activities that fall within the scope of participation in Lean & Green;
 2. Total volume per unit in PeriodR on the business activities that fall within the scope of participation in Lean & Green;
 3. Average CO₂e emissions (per unit type) per unit in PeriodR over the business activities that fall within the scope of participation in Lean & Green;
- a. If applicable, participant also provides the average CO₂e emissions (per unit type) per unit.km(GCD or SFD) in PeriodR over the business activities that are within the scope of participation in Lean & Green plan, too.

At least once every three calendar years, or prior to obtaining each level of recognition, the obligation applies to compile a report of factual findings (standard 4400N) according to the guidelines of the Lean & Green Verification Protocol by a qualified and independent party. The costs of carrying out the Verification Protocol and the preparation of the report of factual findings shall be borne by the participant.

Requirements for retention

For the indicator 'Average CO₂e emissions per logistics unit per calendar year', the participant must aim for retention of the KPI with the previous year.

Retention is demonstrated if the 'Average CO₂e emissions per logistics unit per calendar year' has been reduced or has remained the same compared to the value for which the then applicable Lean & Green recognition level has been provided.

Failing retention

If no retention has been demonstrated by the participant in a year, Lean & Green may ask the participant for an explanation. It is possible to reassess the level of recognition and adjust it. If the business situation so requires (for example due to radically changed business activities that exert a lot of influence on the indicator), a new CO₂e base measurement is made.

Note: Measuring KPI / CPI for National / International transport:

For National transport, the KPI CO₂ per unit is leading

For International transport (outside own country), the CPI * is leading => CO₂ per unit.km (GCD or SFD)

CPI * = Cofret Prestation Indicator

1.11 Lateral entry

Given that some participants have already successfully implemented CO₂ reduction measures in the past, such participants have the opportunity to enter Lean & Green at 1st 2nd or 3rd Star level. This is referred to as Lateral Entry. In order to do so, it needs to comply with the following requirements:

Demonstrate that measures were implemented, and reduction targets were met based on real historical and current data and in line with the Lean & Green Star requirements.

or

(If available through national partner) Benchmarking compared to Sector Competitors Data (only possible if a) data of 5 comparable participants is available. Or national partner provides the process or data is accessible)

The action plan with the scope and the historical data needs to be in line with the timelines which are available to achieve the Stars

For example:

1st Star lateral entry:

Max. 5 years back for data analysis starting from most recent calendar year and comply with all 1st Star requirements.

2nd Star lateral entry:

Max. 8 years back for data analysis starting from most recent calendar year and comply with both 1st and 2nd Star requirements.

3rd Star lateral entry:

Max. 10 years back for data analysis starting from most recent calendar year and comply with 1st, 2nd and 3rd Star requirements.

1.12 National Lean & Green Steering Committee and proposal of amendments

A national Lean & Green Steering Committee can be approached for help on many topics, including the optimisation of processes and work with partners.

In addition, amendments to the Lean & Green Rule Book may be proposed, if these are presented as a change request; proposed amendments will be first presented to Lean & Green International Steering Committee Members for preliminary agreement and will then be put to vote in the Lean & Green International Steering Committee assembly. Following a consensus agreement, the *National* Lean & Green Steering Committees will be notified and will have the opportunity to give feedback in a timely manner. If there is no opposition or feedback by the specified deadline, the changes will then be adopted by the National Lean & Green Steering Committees. Such changes can only be implemented once a year.

1.13 Exceptions to the rules

1.13.1 Exceptions due to global/regional events and crises

If an exceptional global or regional event or crisis means that participants are unable to meet their targets, the Lean & Green International Steering Committee is able to extend deadlines for participants or suspend the rules for monitoring for a certain period of time. Lean & Green International will notify national partners of such actions, who will in turn notify the national community.

1.13.2 Extending the target deadline

Participants that are committed to actively reducing their CO_{2e} emissions by a certain percentage but face significant challenges to meeting such targets as a result of their business model or other external factors are allowed to postpone the target deadline by a further 3 years.

The following requirements must be fulfilled for this to occur:

- A written proposal must be submitted to the national Lean & Green Steering Committee, stating why the deadline cannot be met and indicating when the participant will be able meet their target
- The participant must continue to strive towards a reduction in their CO_{2e} emissions and the next level of Lean & Green certification.
- To back this up, the participant needs to submit supporting documents (e.g. invoices, contracts, dashboard and action plan) to the national partner every 12 months within the framework of a regular monitoring system.

1.13.3 Maintaining reduction levels

If a participant is not able to further reduce their CO_{2e} emissions within a calendar year. We offer them to choose for shape (maintaining reduction levels) retention for a maximum of 3 years in a row.

For the indicator 'Average emissions CO_{2e} per logistics unit per calendar year' the participant should pursue minimal shape retention with the previous year.

If no shape retention has been demonstrated by the participant for the second year in a row, re-audit of the level of recognition and any adjustment will need to be initiated by the participant.

Shape retention is demonstrated if the 'Average emissions CO_{2e} per logistics unit per calendar year' has been reduced or remained equal compared to the value for which the Lean & Green recognition level is then provided.

Note: Once a participant has reached a certain certification level (1st Star, 2nd Star ...), the participant may use the respective certificate for a period of 3 years.

After these 3 years, the participant has the choice to either opt for a re-audit, in which it must prove that the CO_{2e} reduction achieved has been maintained, or strive for the next certification hurdle, which is also linked to an audit.

1.13.4 Secondary data on emissions with data quality improvement plan.

On national level a national partner can decide to invoke an exemption to the data quality requirement for a participant (only applicable for 3rd star or lower).

The data quality requirement for all Star levels are always leading and are the standard way of operating. This exemption is not to be used as standard practice or promoted among participants as an easier route. Yet, in some cases the participant may be able to prove significant reduction with secondary data and a data quality improvement plan may provide them an opportunity to apply for a certain Star recognition.

To make use of this exemption the participant will file a data quality improvement plan to reach the required data quality level. The plan must include:

- a. A statement from the National Partner in question on invoking the exemption.
- b. An explanation for making use of the exemption by the participant.
- c. A description of the (base measure of) current data quality and the required/target data quality.
- d. An improvement plan and implementation path with annual targets.

The National Partner will review the data quality improvement plan to be complete and:

- e. Ambitious
- f. Realistic
- g. Collaborative

On International level the same exemption exists and data quality improvement plan applies. This will be granted and reviewed by the Lean & Green International office.

PLEASE NOTE: These are the first version of this exemption and further details may follow as we finalize this for the rulebook version 3.18 in 2024.

2 The 1st Star requirements

2.1 Terms of participation

To receive the 1st Star certificate the participant must demonstrate that a minimum CO_{2e} reduction of 20% has been achieved within 5 years. At least 50% of volume and/or CO_{2e} emissions of all logistics activities need to be in scope, optionally including inbound and outbound flows to and from Europe.

2.2 Data quality level

In order to meet the requirements of the 1st Star audit, following data quality level needs to be fulfilled: Bronze: Default figures (greenhouse gas protocol, GLEC, estimations etc.) of fuel and energy consumption per year in combination with volume shipped.

3 The 2nd Star requirements

3.1 Terms of participation

Lean & Green participants that have successfully passed the 1st Star assessment, together with those who are using the lateral entry option, are entitled to take part in the 2nd Star Programme. The participant must be able to demonstrate that they will be able to maintain the CO_{2e} reduction of at least 20% from the 1st Star Programme over the course of the 2nd Star Programme and that a further 10% CO_{2e} reduction has been achieved within 3 years taking a minimum of 65% of volume and/or CO_{2e} emissions in Scope. In addition to the quantitative measures, the participant must fulfil additional mandatory criteria for the projects in scope (see 3.2.4 to 3.2.5).

3.2 Data quality level

In order to meet the requirements of the 2nd Star audit, following data quality level needs to be fulfilled:
2nd Star - Silver: Actual figures of fuel and energy consumption per year in combination with volume shipped.

3.2.1 Recognised standards in the 2nd Star Programme

Internationally recognised norms and standards may be used for the calculations in the context of the 2nd Star Programme. The emission factor for energy consumption (diesel, electricity, etc.) must always be expressed in terms of well-to-wheel figures (in line with the current version of DIN EN 16258 and ISO 14083).

The participant's entire lorry fleet must comply with the minimum requirements of the Euro 5 norm. This must also be contractually agreed with subcontractors, and a sample contract must be submitted to the external auditing party. Existing contracts must be amended over time.

Like the 1st Star Programme, the 2nd Star Programme also focuses on the reduction of greenhouse gas emissions. The necessary measures to reach the target must be clearly defined and supporting documents submitted to the audit company for assessment. The quality of data must be sufficient to ensure clear significance. Wherever possible, calculations must be based on primary (raw) data.

3.2.2 Definition of the scope for the Lean & Green 2nd Star Programme

A participant taking part in the 2nd Star Programme must be able to prove that it has expanded the scope from 50% to a total of 65%. Similar to the 'old' requirements (see 3.2.1, or figure 1) detailed above, all business divisions and activities that simultaneously fall within AND outside the scope (e.g. inbound/outbound flows, intralogistics, warehousing, etc.) must be described in the action plan.

Greenhouse gas-reducing cooperation or innovation projects that are included as part of the 2nd Star Programme do not necessarily have to lie within the scope of the 1st Star Programme. The 'new' additional scope must be clearly defined and the greenhouse gas emissions for this scope must also be calculated. When calculating CO_{2e}, it is important to include a comparison to the volume of greenhouse gas emissions **before implementation** of the cooperation or innovation project (before/after comparison).

3.2.3 Lean & Green 2nd Star criteria

Base criteria: The awarded reduction in greenhouse gases achieved during the 1st Star Programme – at least 20% less than the base year – must be maintained and will be re-checked as part of the 2nd Star Programme.

Requirements: All mandatory criteria are listed below. To successfully complete the 2nd Star Programme, all mandatory criteria must be fulfilled.

Mandatory criteria:

1. Reduction of greenhouse gas emissions by a further 10% (total target reduction: 30%), despite an expansion of the scope from 50% to at least 65%.
2. The participant must provide evidence that they have implemented two projects that can be characterised as cooperation and or innovation, ideally with a focus on supply chain optimization to achieve CO_{2e} savings.

3.2.4 The requirements of cooperation projects

Cooperation projects must be designed multilaterally, i.e. the project needs to involve at least 3 active project partners (e.g. retail, industry, logistics) and must clearly be logistics-related. The relative greenhouse gas savings of that project (base year vs. target year) need to be transparently calculated and monitored. However, it must be noted that the measures implemented as part of the cooperation project may not be used as part of the 1st Star

Programme. A cooperation partner working with a participant participating in the 2nd Star Programme does not necessarily need to be a member of the Lean & Green initiative. If the partner is not a member, it must still be possible to carry out a before/after calculation of greenhouse gases saved as part of the project scope and provide evidence of this during the 2nd Star assessment. The cooperation project must have been implemented or concluded by the time of the assessment.

3.2.5 The requirements of innovation projects

The relative greenhouse gas savings generated by the project (base year vs. target year) need to be transparently calculated and monitored. Offsetting greenhouse gas emissions by investing in external projects is not allowed. An innovation project is assessed using the above mentioned requirements defined by the Lean & Green International Steering Committee. In case an innovation cannot be assessed by the audit company, the innovation may be put to the vote in the national Lean & Green Steering Committee. During the innovation voting session, the project will be presented to the members and evaluated, based on the list of innovation project criteria and the expertise of the individual committee members. If the outcome is positive, the project will be credited with the greenhouse gas savings and the criterion considered as fulfilled. The innovation project must have been implemented or concluded by the time the Lean & Green national Steering Committee carries out the assessment and/or evaluation.

In the context of the Lean and Green Initiative, innovation is understood as a new or novel idea that is or has been tested in practice in one or more projects. It is irrelevant whether it is a technical, economic or organisational innovation.

In detail, the following framework conditions apply to the evaluation of innovation projects within the framework of Lean and Green:

- New and novel innovations are permitted. This means that both incremental and radical ideas can be the subject of an innovation project (degree of innovation).
- Various types of innovation are permitted (process, product, service or business model innovations are to be categorised equally).
- Only projects that have already been tested in practice can be submitted and only if corresponding effects, successes or findings can be proven.
- A clear link to logistics is required. The project should take up the fundamental lean and green idea of CO₂ reduction.

3.3 The Lean & Green 2nd Star – from application to certification

A participant may enter the 2nd Star Programme within 3 years of having successfully passed the 1st Star audit. Entrance to the 2nd Star Programme requires a participant to submit their 2nd Star concept to the national partner. The national partner or an external auditing party will conduct a desktop assessment of the concept. The assessment can also take the form of an on-site audit. If the concept is given the all-clear, the participant has a maximum of 3 years to implement their concept. A final assessment is conducted by means of an on-site audit carried out by the external auditing party, assessing whether the concept has been successfully implemented.

The basic and optional criteria are reviewed over the period of time between the date of the 2nd Star assessment and the base year used in the Lean & Green 1st Star Programme. Mandatory criteria, on the other hand, are assessed between the start of project implementation and the date of the 2nd Star assessment. The start date of project implementation can never be earlier than the base year used in the Lean & Green 1st Star Programme.

CO_{2e} saving calculations must always refer to a calendar year or fiscal year (as in the 1st Star Programme) and all cooperation and innovation projects that will be included in the assessment need to be completed. The contract concerning the external auditing party assessment, as well as assessment dates and content of the assessment, will be coordinated and concluded directly between the participant and the audit company. If the participant successfully passes the assessment, it will be awarded with the Lean & Green 2nd Star Award (acknowledgement certificate).

4 The 3rd Star requirements

4.1 Terms of participation

- For the 3rd star 5% reduction in 2 years has been agreed taking a minimum of 75% of volume and/or CO_{2e} emissions in scope. In addition to the quantitative measures, the participant defines (see 4.5) two individual projects / visions in the area of supply chain optimization.

4.2 Data quality level

In order to meet the requirements of the 3rd Star audit, following data quality level needs to be fulfilled:

Silver: Actual figures of fuel and energy consumption per year in combination with volume shipped on shipment level.

4.3 Recognised standards in the 3rd Star Programme

Internationally recognised norms and standards must also be used for the calculations in the context of the 3rd Star Programme. The emission factor for energy consumption (diesel, electricity, etc.) must always be expressed in terms of well-to-wheel figures (in line with the current version of DIN EN 16258 and/or ISO 14083).

The participant's entire lorry fleet must comply with the minimum requirements of the Euro 5 norm. This must also be contractually agreed with subcontractors, and a sample contract must be submitted to the external auditing party. Existing contracts must be amended over time.

Like the 1st and 2nd Star Programme, the 3rd Star Programme also focuses on the reduction of greenhouse gas emissions. The necessary measures to reach the target must be clearly defined in an action plan and supporting documents submitted to the national partner or the external auditing party for assessment.

4.4 Definition of the scope for the Lean & Green 3rd Star Programme

A participant taking part in the 3rd Star Programme must be able to prove that it has expanded the scope from 65% to a total of **75%**. Similar to the requirements detailed above, all business divisions and activities that simultaneously fall within AND outside the scope (e.g. inbound/outbound flows, intralogistics, warehousing, etc.) must be described in the action plan.

Greenhouse gas-reducing cooperation or innovation projects that are included as part of the 3rd Star Programme do not necessarily have to lie within the scope of the 1st and/or 2nd Star Programme. The 'new' additional scope must be clearly defined and the greenhouse gas emissions for this scope must also be calculated. The savings achieved by these projects must also be calculated and demonstrated. When calculating CO_{2e}, it is important to include a comparison to the volume of greenhouse gas emissions before implementation of the cooperation or innovation project (before/after comparison).

4.5 Lean & Green 3rd Star criteria

Base criteria: The awarded reduction in greenhouse gases achieved during both the 1st and 2nd Star Programme – at least 20% + 10% less than the base year – must be maintained and will be re-checked as part of the 3rd Star Programme.

Requirements: All mandatory criteria are listed below. To successfully complete the 3rd Star Programme, at least 2 independent projects are to be completed out of the following list of mandatory criteria.

Mandatory criteria:

The participant must provide evidence that they have implemented two of the following measurements and/or projects. Of course, these should include a clear supply chain logistics focus, and should directly help to achieve a relative CO_{2e} reduction.

- 1 A project which focuses on alternative fuels or energy.
- 2 A project which focuses on high energy efficient modalities (barge, truck, train and/or driver).
- 3 A project which focuses on logistics efficiency, planning and infrastructure. A participant needs to ask themselves: Is my logistics network most suitable for my operation?
- 4 A project which focuses on the density of products and/or packaging or increasing the overall load average.
- 5 A project which focuses on the length of the supply chain and the efficiency of the supply chain.
- 6 A project which focuses on quantity, inventory (stock in trade) management and control, and forecasting
- 7 A project which focuses on innovation in new technologies

4.6 The Lean & Green 3rd Star – from application to certification

A participant may enter the 3rd Star Programme within 3 years of having successfully passed the 2nd Star audit. Entrance to the 3rd Star Programme requires a participant to submit their 3rd Star action plan to the national partner. The national partner or the external auditing party will conduct a desktop assessment of the concept. If the

concept is given the all-clear, the participant has a maximum of 2 years to implement their action plan. A final assessment is conducted by means of an on-site audit carried out by the external auditing party, assessing whether the concept has been successfully implemented.

The basic and optional criteria are reviewed over the period of time between the date of the 3rd Star assessment and the base year used in the Lean & Green 2nd Star Programme. Mandatory criteria, on the other hand, are assessed between the start of project implementation and the date of the 3rd Star assessment. The start date of project implementation can never be earlier than the base year used in the Lean & Green 2nd Star Programme.

CO_{2e} saving calculations must always refer to a calendar year or fiscal year (as in the 1st and 2nd Star Programme) and all mentioned projects that will be included in the assessment need to be completed. The contract concerning the external auditing party assessment, as well as assessment dates and content of the assessment, will be coordinated and concluded directly between the participant and the audit company. If the participant successfully passes the assessment, it will be awarded with the Lean & Green 3rd Star Award (acknowledgement certificate).

Special ruling: Lateral Entry on 3rd star level is only possible after agreement of the national partner.

5 The 4th Star requirements

5.1 Terms of participation

- You achieve the 4th Lean & Green by achieving a total of 55% relative reduction by 2030. With the first three Stars adding up to at least 35% reduction this means an additional reduction of maximum 20% on the CO2 unit after the 3rd Lean & Green Star.
In addition to the data analysis requirements, the participant defines (see 5.5) the results of the two individual projects / visions in the area of supply chain optimization for the 3rd Star as well as two additional individual projects / visions in the area of supply chain optimization.
- The 4th Lean & Green Star is the next concrete step towards Zero Emission. To obtain the 4th Star, there are 3 phases that must be completed;

How do you achieve the 'Aspiring' 4th Star?

- **Phase 1:**
An approved plan of action in which you describe how you will achieve the objectives and requirements of the 4th Star.
- **Phase 2:**
You achieve the annual reduction target as calculated in the action plan over a period of 2 years. (e.g. 4.1% in 2 years with an annual target of 2%).
- **OPTIONAL:** The participant may include in the action plan a non-linear reduction path combined with a data-quality improvement plan. This way the participant can apply for the 4th Star based on its own targets and will be reviewed accordingly.

How do you achieve the 4th Lean & Green Star?

- **Phase 3:**
The participant receives the 4th Lean & Green Star after demonstrating to achieve a total of 55% relative reduction (CO2 unit) within the Lean & Green program before the end of 2030.

5.2 Data quality level

- The data is recent: 12 consecutive months of a maximum of the previous calendar year.
- The sum of the volume and order lines of your dataset is complete (minimum 95%).
- The data corresponds to the chosen scope.

Minimum data quality:

- Gold on volume and emissions operated with own assets (Scope 1)
- Silver for outsourced (Scope 3) volume.
- For DC/warehouse, the annual consumption figures (electricity, gas, etc.) of the building and equipment, if applicable, are sufficient.

Verification data outsourced transport

- Ideally: data with external verification
- For now: contractual agreements on CO2 / fuel KPI
- Optional: Sanity check on feasibility of input. Checked by participant firstly, national partner secondly and auditing party per

NB. BigMile or comparable tooling is used for the 4th Lean & Green Star to determine the data quality level (minimum gold for national and silver for international), the data completeness (minimum 95%) and the KPIs.

5.3 Recognised standards in the 4th Star Programme

Internationally recognised norms and standards must also be used for the calculations in the context of the 4th Star. The emission factor for energy consumption (diesel, electricity, etc.) must always be expressed in terms of well-to-wheel figures (in line with the current version of DIN EN 16258 and ISO 14083).

The participant's entire lorry fleet must comply with the minimum requirements of the Euro 5 norm. This must also be contractually agreed with subcontractors, and a sample contract must be submitted to the external auditing party. Existing contracts must be amended over time. Average euro norm of fleet must be 5,7 or higher.

Like the 1st and 2nd and 3rd Star Programme the 4th Star Programme also focuses on the reduction of greenhouse gas emissions. The necessary measures to reach the target must be clearly defined in an action plan and supporting documents submitted to the national partner or the external auditing party for assessment.

5.4 Definition of the scope for the Lean & Green 4th Star Programme

A participant taking part in the 4th Star Programme must be able to prove that it has expanded the scope from 75% to a total of **85%**. Similar to the requirements detailed above, all business divisions and activities that simultaneously fall within AND outside the scope (e.g. inbound/outbound flows, intralogistics, warehousing, etc.) must be described in the action plan.

Greenhouse gas-reducing cooperation or innovation projects that are included as part of the 3rd Star Programme do not necessarily have to lie within the scope of the 1st and/or 2nd Star Programme. The 'new' additional scope must be clearly defined and the greenhouse gas emissions for this scope must also be calculated. The savings achieved by these projects must also be calculated and demonstrated. When calculating CO_{2e}, it is important to include a comparison to the volume of greenhouse gas emissions **before implementation** of the cooperation or innovation project (before/after comparison).

5.5 Lean & Green 4th Star criteria

Base criteria: The awarded reduction in greenhouse gases achieved during the first three Stars – at least 35% less than the base year – must be maintained and will be re-checked as part of the 4th Star Programme.

Requirements: All mandatory criteria are listed below. To successfully complete the 4th Star Programme, at least 2 additional independent projects are to be completed out of the following list of mandatory criteria.

Mandatory criteria:

The participant must provide evidence that they have implemented two of the following measurements and/or projects. Of course, these should include a clear supply chain logistics focus, and should directly help to achieve a relative CO_{2e} reduction.

- ✓ A project which focuses on alternative fuels or energy.
- ✓ A project which focuses on high energy efficient modalities (barge, truck, train and/or driver).
- ✓ A project which focuses on logistics efficiency, planning and infrastructure. A participant needs to ask themselves: Is my logistics network most suitable for my operation?
- ✓ A project which focuses on the density of products and/or packaging or increasing the overall load average.
- ✓ A project which focuses on the length of the supply chain and the efficiency of the supply chain.
- ✓ A project which focuses on quantity, inventory (stock in trade) management and control, and forecasting
- ✓ A project which focuses on innovation in new technologies

5.6 The Lean & Green 4th Star – from application to certification

A participant may enter the 4th Star Programme within 3 years of having successfully passed the 3rd Star audit. Entrance to the 4th Star Programme requires a participant to submit their 4th Star action plan to the national partner. The national partner or the external auditing party will conduct a desktop assessment of the concept. If the concept is given the all-clear, the participant has a maximum of 2 years to implement their action for the aspiring 4th Star.

Reduction target: total and per year

Calculate and describe both the total and the annual reduction target for the (Aspiring) 4th Star.

Each trajectory for the Aspiring 4th Star starts with a 0-measurement of the most recent full calendar year. The annual reduction target for the Aspirant 4th Star is determined by dividing the total reduction target for the 4th Star by the number of years up to and including 2030.

Total: The reduction target for the 4th Star is to achieve a 55% total demonstrated reduction on the CO₂.unit, to be achieved at the latest over the dates of the year 2030. This is in line with the EU's objectives.

Per year: The annual reduction target for the Aspiring 4th Star is the annual percentage reduction needed to achieve a 55% total reduction per unit transported by the end of 2030.

Determining KPI and objectives 4th Star compared to target 2030 and proven achieved reduction

There are a number of rules in determining the objective and the 0 measurement.

- 3rd Star = 35%. (1st Star 20% / 2nd Star 10% / 3rd Star 5%)
- Reduction target 4th Star is 55% CO₂ reduction per transported unit in 2030
- Reduce up to 20% additionally until 2030 (55% - 35%)
- Proven additional reduction when achieving 3rd Star include*
- Proven additional reduction after 3rd Star (between evaluation measurement 3rd Star and 0-measurement 4th Star)* **
- Historical Benchmark of transport and fuel data (according to requirements 3rd Star level)*

* Proven by analysis report BigMile or similar analysis according to EN-16258 standard

** If KPI (CO₂.unit) from 0-measurement 4th Star is higher than KPI from evaluation measurement 3rd Star;

- > Achieved reduction percentage 3rd Star remains for determining objective 4th Star
- > KPI from 0-measurement 4th Star remains for determining objective 4th Star.

Annually the participant will monitor and report the KPI's to the national partner to prove to be in line with the annual reduction target.

Based on the completed measures and the data from BigMile, the specialists of Lean & Green or an external auditing party determine whether the requirements for the (prospective) 4th Star have been met.

- Awarding "Outline" of the 4th Star for approved Plan of Action AND demonstrably realizing annual reduction target over a period of 2 years.
- Meet the annual reduction target over a period of 2 years (e.g. 4% over 2 years with a target of 2% per year)
- Participant may deviate from annual reduction target for retention Aspirant 4th Star for a maximum of 1 year
- The Aspirant 4th Star will be withdrawn by means of the online register in case of 2nd year deviation objective
- Recognition back at the next year at/or below the line of the annual target (cumulative)
- A final assessment is conducted by means of an on-site audit carried out by the external auditing party, assessing whether the concept has been successfully implemented.

6 The 5th Star requirements

6.1 Terms of participation

The 5th star certification is the final level and demonstrates an absolute CO_{2e} reduction of at least 60% compared to the level of 1990. 90% of volume and/or CO_{2e} emissions need to be in Scope. This level of certification demonstrates that the participant has reached the Paris Climate Goals. Currently, the process is still in development.

6.2 Data Quality

In order to meet the requirements of the 5th Star audit, following data quality level needs to be fulfilled: Gold Actual figures of fuel and energy consumption per month and license plate per use purpose.

As the level of detail (targets, requirements) and process is still in development, changes to this chapter will be implemented (according to 1.12) later.