CO$_2$ PERFORMANCE LADDER

Sample size determination method

This method is used to determine the sample size for assessing the implementation and effectiveness of the CO$_2$ Performance Ladder management system within the boundary of different locations.

Definitions

Entity: A legal entity for which a Chamber of Commerce extract (or international equivalent) is available, or where a Chamber of Commerce extract (or international equivalent) can be used to determine that the legal entity exists.

Location: A permanent place of business for one or more entities that can be physically considered as a whole.
- Main location: the place of business where the key entity (the head office) is located.
- Auxiliary locations: the other places of business.

Method for determining the sample size

Instead of the sampling method listed in IAF MD1 (§6.1.2 and §6.1.3), the sample may be determined as follows (the other IAF MD1 criteria remain in force):
1. Determine the number of locations, which together represent Group W.
2. Determine the scope 1 and 2 emissions per location.
3. Determine the scope 1 and 2 emissions per Group W.
4. Sort the locations within Group W by the magnitude of scope 1 and 2 emissions from large to small.
5. Remove the smallest foreign locations from Group W that together account for less than 20% of the Group W emissions.
6. The remainder of the locations is Group X.
7. Remove the smallest locations from Group X that together account for less than 20% of the Group W emissions.
8. The remainder of the locations is Group Y.
9. Remove the head offices from Group Y. The remainder is Group Z with z auxiliary locations.

The number of locations to visit per:
- initial audit
  a. head office, and
  b. 1.0 * $\sqrt[3]{z}$ auxiliary locations (rounded up). In addition, the locations to visit are chosen such that all specified activities within the scope are assessed.

- annual audit
  a. head office, and
  b. 0.6 * $\sqrt[3]{z}$ auxiliary locations (rounded up). In addition, the locations to visit are chosen such that, for each audit, at least 50% of the specified activities within the scope are assessed,
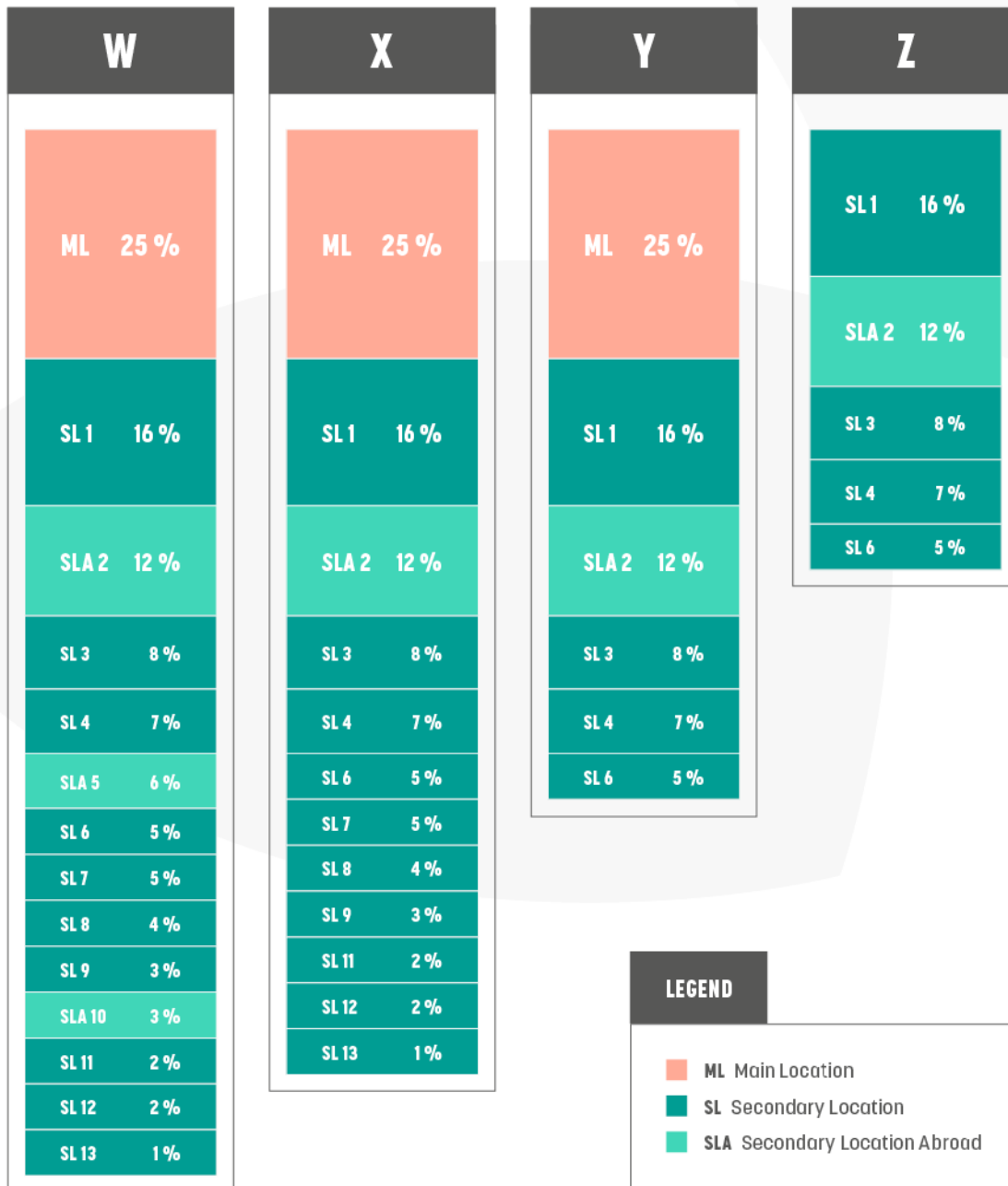
and that both annual audits together assess all specified activities in the scope.

- Recertification audit

  a.   head office, and

  b.   0.8 * $\sqrt[3]{z}$ auxiliary locations (rounded up).

  In addition, the locations to visit are chosen such that all specified activities within the scope are assessed.

Example

W			X			Y			Z	
ML	25 %		ML	25 %		ML	25 %		SL 1	16 %
SL 1	16 %		SL 1	16 %		SL 1	16 %		SLA 2	12 %
SLA 2	12 %		SLA 2	12 %		SLA 2	12 %		SL 3	8 %
SL 3	8 %		SL 3	8 %		SL 3	8 %		SL 4	7 %
SL 4	7 %		SL 4	7 %		SL 4	7 %		SL 6	5 %
SLA 5	6 %		SL 6	5 %		SL 6	5 %			
SL 6	5 %		SL 7	5 %						
SL 7	5 %		SL 8	4 %						
SL 8	4 %		SL 9	3 %						
SL 9	3 %		SL 11	2 %						
SLA 10	3 %		SL 12	2 %						
SL 11	2 %		SL 13	1 %						
SL 12	2 %									
SL 13	1 %									

LEGEND

- ML Main Location
- SL Secondary Location
- SLA Secondary Location Abroad

Steps 1 to 4: Group W consists of a single head office HL1 and 13 auxiliary locations NL1 through NL13. These are sorted by their scope 1 and 2 emissions from large to small.

Steps 5 and 6: The smallest foreign locations from Group W that together account for less than 20% of the Group W emissions are NL10 and NL5, together amounting to 9%. NL2 remains because its removal would exceed the 20% boundary. The remainder is Group X.

Steps 7 and 8: The smallest locations from Group X that together account for less than 20% of the Group W emissions are NL13, NL12, NL11, NL9, NL8 and NL7, together amounting to 17%. The remainder of the locations is Group Y.

Step 9: After removing head office HL1, the remainder is Group Z consisting of 5 auxiliary locations.

Step 10: To visit per:
- initial audit: at least the head office and two auxiliary locations ($1.0 * \sqrt[3]{5} = 1.71$);
- annual audit: at least the head office and two auxiliary locations ($0.6 * \sqrt[3]{5} = 1.03$);
- recertification audit: at least the head office and two auxiliary locations ($0.8 * \sqrt[3]{5} = 1.37$);

and the conditions for assessing the activities specified in the scope must be met.

For all translations of normative documents, the Dutch version prevails in the event of deviations or differences of interpretation.