

The World Business Council for Sustainable Development

Social Life cycle Metrics

for Chemical Products in their Applications

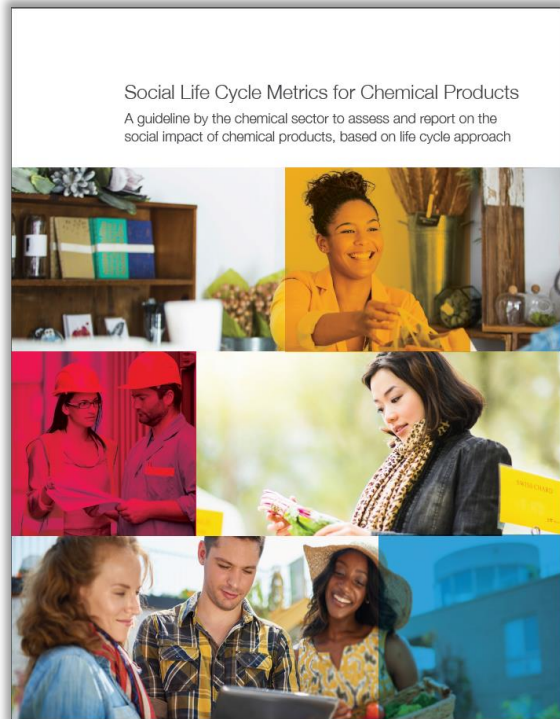
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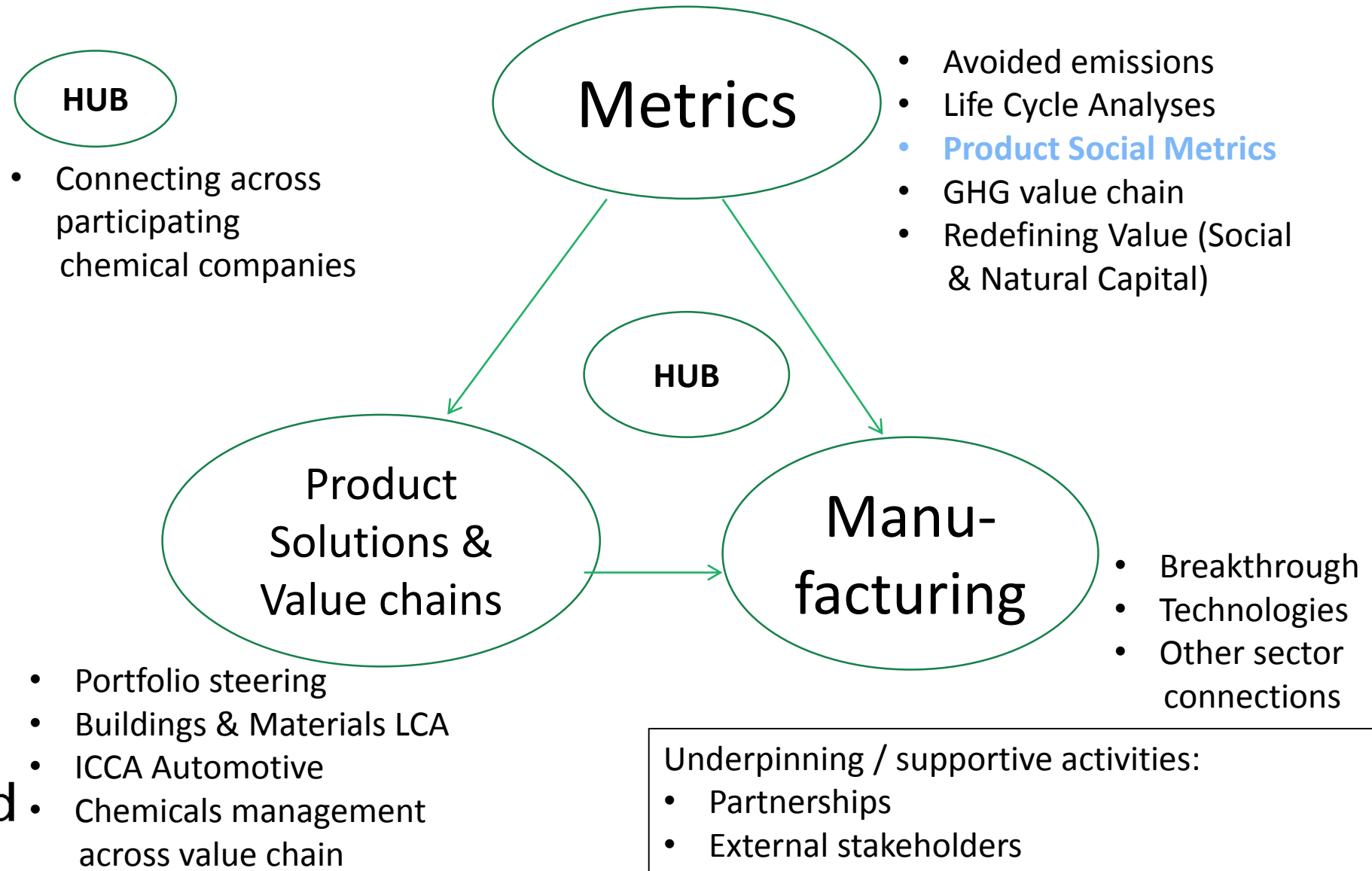
What is the Social Metrics guidance?

A guidance prepared by the chemical sector to assess chemicals life cycle



- The Social Metrics guidance was prepared by **key players of the chemical sector**, members of the WBCSD: Aditya Birla, AkzoNobel, BASF, DSM, Eastman Chemical, Evonik Industries, Henkel, Mitsubishi Chemical Holdings, SABIC, and Solvay.
- This document provides guidelines for **assessing and reporting on the social impact and value of chemical products in a life cycle perspective**.
- It aims at providing **solid foundations for the development of consistent and credible communication** of the social metrics of chemical products throughout their whole life cycle.
- It is **built on the foundations of preexisting methodologies** and has been adapted to best meet the **specificities of the chemical sector**.
- This guidance completes the work already achieved on environmental metrics, thus providing tools for companies to **fully assess their sustainability impact along their life cycle**.
- The guidance has been officially **released in June 2016**.

The Social Metrics guidance is part of the current endeavor of WBCSD and chemical companies to promote more sustainable chemical products



1. Presentation of the WBCSD Social Metrics Guidance purpose and expected benefits

1.1 Purpose of the WBCSD Social Metrics guidance

1.2 Positioning of the guidance in the Social Metrics arena

1.3 The 6 key features of the WBCSD Social Metrics guidance

1.4 Company departments concerned by the assessment

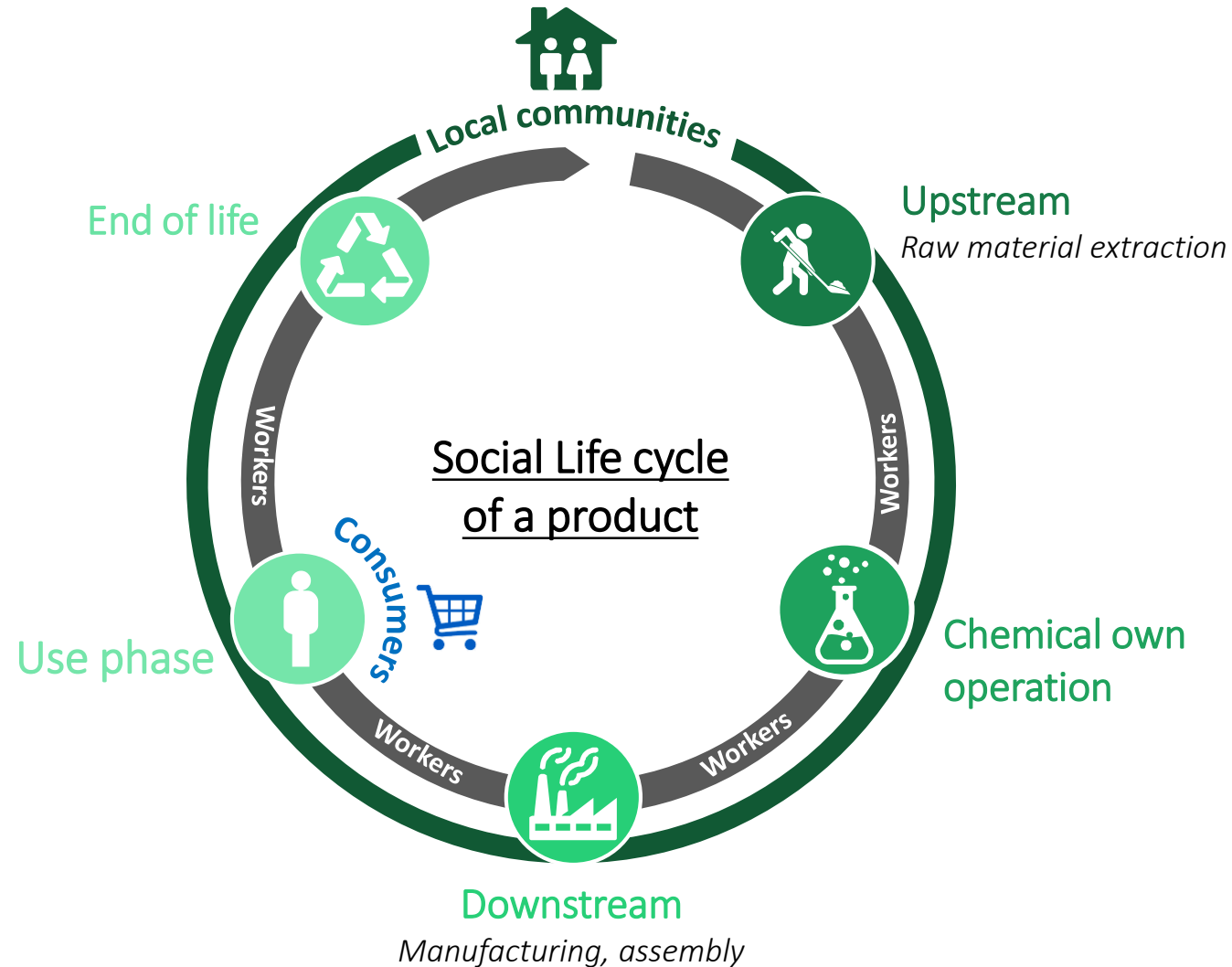
1.5 Possible benefits provided to a company's key audiences

1.6 A joined effort of Chemical sector companies

1.1 Purpose of the WBCSD Social Metrics guidance :

The WBCSD's guidance aims at mapping, prioritizing and assessing the social positive and negative impacts of a product for three key stakeholder groups along its lifecycle regarding

...



1.1 Purpose of the WBCSD Social Metrics guidance:

The guidance to help companies addressing five business challenges...



Mitigate potential risks

The chemical sector is traditionally seen as a sector where health & safety for employees and communities may be at risk

Chemical companies are provided with a complete overview to help them assess and compare potential risks



Anticipate consumer expectations

Consumers expect information about origins and ingredients of products, while chemical products are part of the life cycle of the majority of everyday goods.

Transparent information is provided all along the product value chain (production, use, end of life)



Realization of improvement potentials

An increasing number of companies define social missions alongside business objectives

By defining tangible indicators, an efficient tool is available for companies to track their social performance



Find new products opportunities

Chemical companies are well positioned to deliver products that create a positive impact on the lives of people (end user), employees or the surrounding communities

By defining the performance scales as well as the aspirational levels for chemical products, new product opportunities can be identified



Enhance dialogue with stakeholders

Along their life cycle, products can have (positive or negative) impacts on several stakeholders (worker, local communities, consumers, etc.)

By analyzing the key social impacts of a product on its main stakeholders in the value chain, it provides concrete elements to facilitate the dialogue

1.1 Purpose of the WBCSD Social Metrics guidance:

... and to contribute to the use of Social Metrics, with a focus on chemicals

Chemical industry

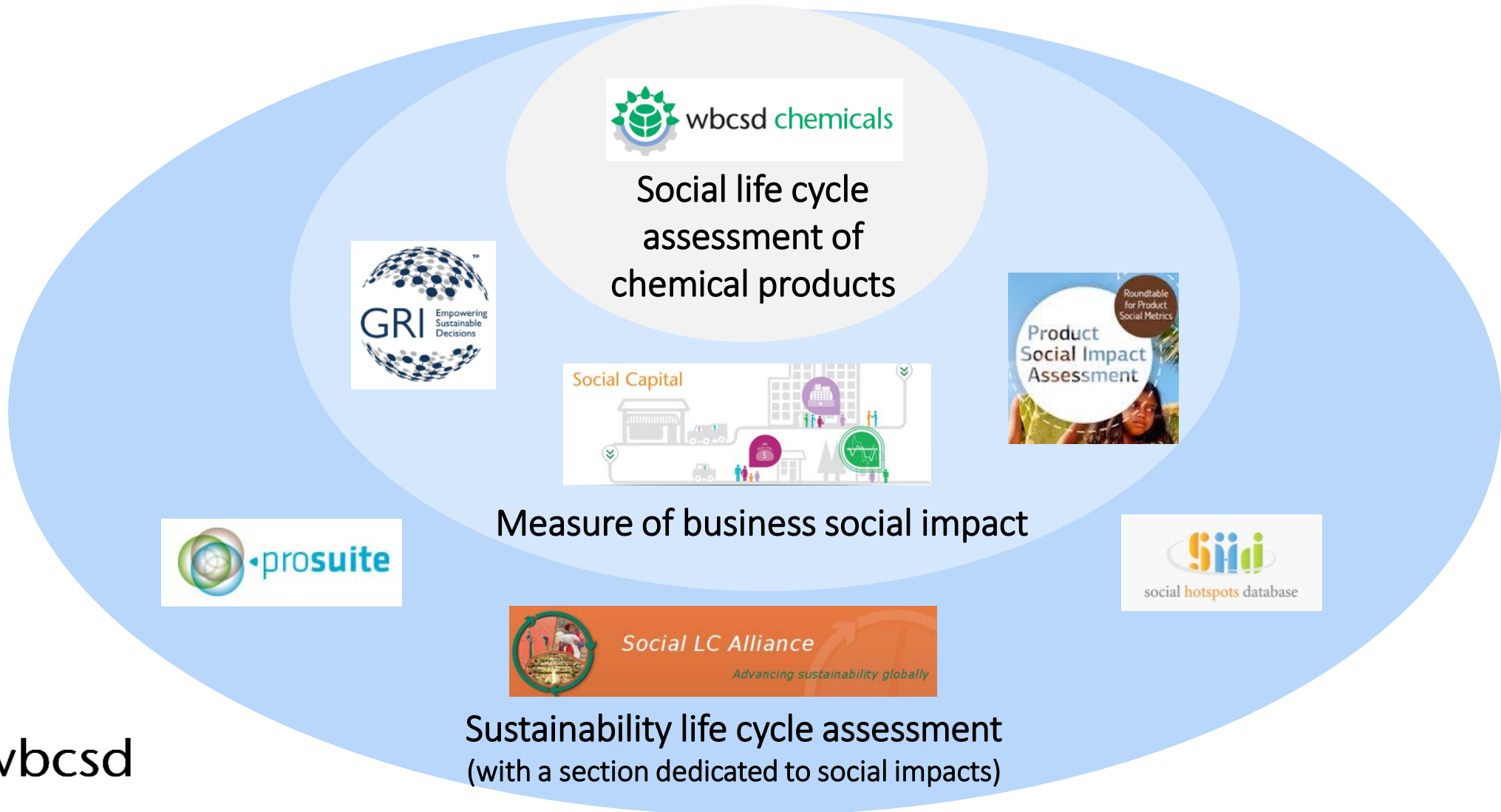
- Increased awareness of the sector on its possible social impacts
- Shared vision of the social topics particularly relevant for the chemical sector
- Definition of standards for scales of social impacts for a specific social issue
- Fact-based communication and reporting, to improve the sector's transparency and help customers achieve informed choices
- Progress towards product comparability concerning social topics

Sustainability assessment practitioners

- Refinement of existing methodologies
- Use of social metrics by an increased number of companies
- More examples and information available on product-related Social Metrics

1.2 Positioning of the guidance in the Social Metrics arena:

The guidance builds on LCA principles as well as on existing social metrics approaches and offers a chemical-sector specific perspective



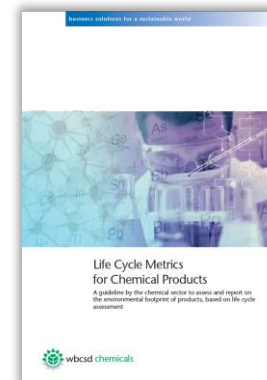
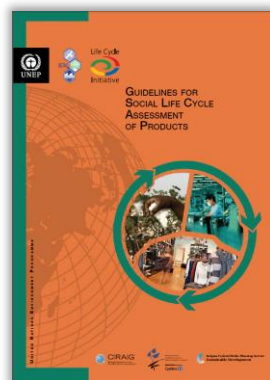
1.2 Positioning of the guidance in the Social Metrics arena:

The guidance has mainly been built on the foundations of three pre-existing documents

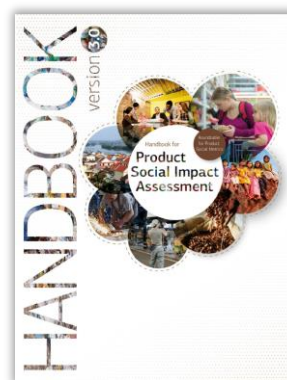


Chemical products social
life cycle Assessment

*Guidelines for Social Life Cycle
Assessment of Products and
Associated Works*
(UNEP/SETAC, 2009)
and associated works, version 2.0



*Life Cycle Metrics for
Chemical Products*
(WBCSD, 2014)



*Handbook for Product Social
Impact Assessment*
(PRé Sustainability, 2014)



1.2 Positioning of the guidance in the Social Metrics arena:

The guidance builds upon LCA methodologies and may contribute to the development of a common framework for the steering of a company's product portfolio by the WBCSD

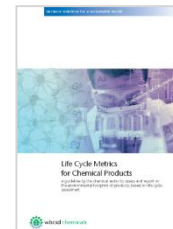
Life Cycle Assessment Standards & methodologies

- ISO 14040:2006 (Environmental management – Life cycle assessment – Principles and framework)
- ISO 14044:2006 (Environmental management – Life cycle assessment – Requirements and guidelines)
- ISO/TS 14067
- PAS 2050
- GHG Protocol (Scope 1+2+3)
- ISO 14045
- European Commission Product Environmental Footprint (PEF)

WBCSD standards



Accounting and reporting corporate GHG emissions in the chemical sector value chain



Life Cycle Metrics for chemical products



Addressing the avoided emissions challenge



Social metrics for chemical products in their applications

Sustainable Portfolio

- Development by October 2016 of a common framework for the sustainability steering of a company's product portfolio to enable companies to compete on sustainability performance, not on methodology
- The framework will enable:
 - Credible & effective communication with stakeholders based on a common language
 - Higher quality product steering methodologies at lower cost through cross-fertilization amongst companies

1.3 6 key features of the WBCSD product Social Metrics guidance:

The WBCSD Social Metrics guidance is characterized by 6 key features

1 CREDIBLE

- The guide has been created by key chemical sector players and reviewed by credible stakeholders
- Life Cycle principles are used as an underlying methodology
- Assessment scales have been built on credible references

2 FLEXIBLE

- A deep dive on social topics is possible as well as a general overview
- The guidance has been prepared to be as much as possible in accordance with existing reporting standards
- Only the key material issues for the product studied are integrated in the assessment



WBCSD Working group



Partners



Stakeholders consulted



1.3 6 key features of the WBCSD product Social Metrics guidance:

The WBCSD Social Metrics guidance is characterized by 6 key features

3 BALANCED

- The guide addresses both positive and negative social impacts
- It covers the key impacts that might be generated by a chemical product during its life cycle:
 - Regarding three key stakeholders
 - Among five social areas

4 SECTOR-SPECIFIC

- The guidance covers material social issues for chemical products, within a selection of 25 social topics
- Whenever relevant, indicator scales are adapted to the specificities of the chemical sector

Scope of the 25 social topics covered by the guidance

	 Workers	 Local communities	 Consumers
 Basic rights and needs	7	2	1
 Employment	1	1	N/A
 Health and safety	3	1	1
 Skills & knowledge	1	1	1
 Well-being	1	3	1

1.3 6 key features of the WBCSD product Social Metrics guidance:

The WBCSD Social Metrics guidance is characterized by 6 key features

5 MEANINGFUL

- This guidance is the first sector-specific methodology to assess the impact of a product all along its value chain
- It provides chemical companies with insights on which social topics are relevant for their sector
- It defines scales of performance levels, in a chemical industry perspective

6 ONGOING

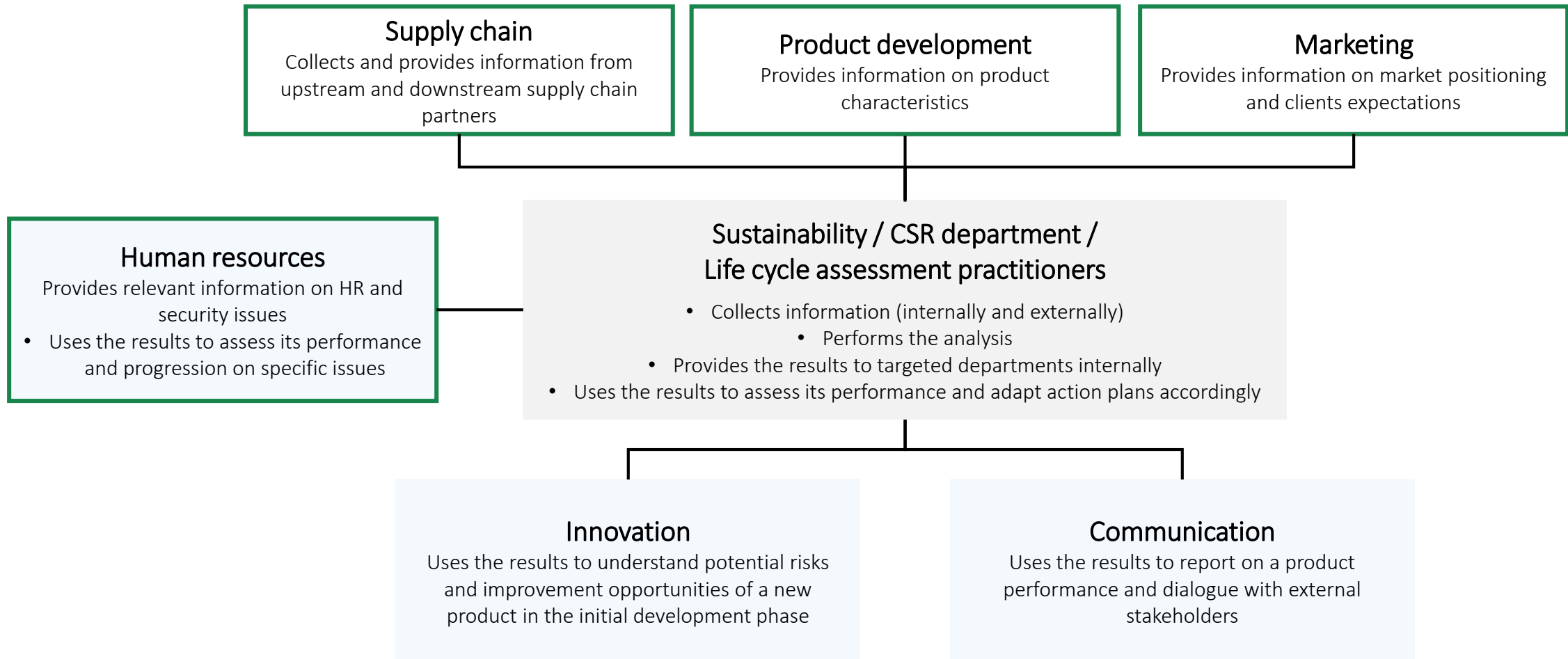
- WBCSD working group members will work on additional case studies, to provide more practical feedbacks on the use of the guidance and suggest potential improvements
- Further challenges that are not fully covered in this guide (e.g., database) may be addressed in future phases of the WBCSD chemical sector project in the years to come

The PVC pipe case study: assessment covering 15 material social topics



1.4 Company departments concerned by the assessment

Several departments may be involved in the Social Metrics approach and/or use the results



1.5 Possible benefits to a company's key audiences

Target

Internal audience

External audience

*Downstream customers (B2B),
Final users (B2C), Local communities*

Purpose

- Have a better and balanced overview of social impacts of products all along their life cycle
 - Assess a product performance to adapt the actions undertaken and plan product-level strategy
 - Understand potential risks and improvement opportunities of a new product in the initial development phase
 - Report on a overall product social performance and dialogue with external stakeholders
 - Use integrated approach to assess all aspects of sustainability
-
- Increase the transparency on social impacts of products all along their life cycle
 - Improve the product and/or company image to guarantee the license to operate and secure new clients
 - Help consumers achieve better informed purchases
 - Promote chemical solutions with positive social impacts
 - Contribute to the public debate on chemicals social impact

1.6 A joint effort of Chemical sector companies with a global perspective



The WBCSD Social Metrics guidance is the result of the collective effort of 10 global chemical sector companies since March 2014, that reached consensus on several issues, such as:

- Key stakeholders to be considered
- Most material social issues for the chemical sector
- Indicator scaling system
- Scope of the assessment (value chain steps to be included)
- Etc.

2. Key technical elements of the methodology

2.1 This guidance is the result of a 2-year project by WBCSD member companies

2.2 The Social Metrics guidance is based on 6 principles

2.3 The assessment is focused on 3 stakeholder groups

2.4 Social consequences are grouped in 5 social areas

2.5 A total of 25 social topics have been selected as the most representative

2.6 Two types of indicators have been defined for each social topic

2.7 Indicators are assessed according to a five-level reference scale

2.8 The assessment is based on a 8-step methodology

2.9 The aggregation of results is suggested as optional

2.10 The guidance proposes a visual representation of the results

2.11 The guidance contains a gap analysis with existing approaches

2.12 Ideas for next steps

2.1 This guidance is the result of a 2-year project by WBCSD member companies

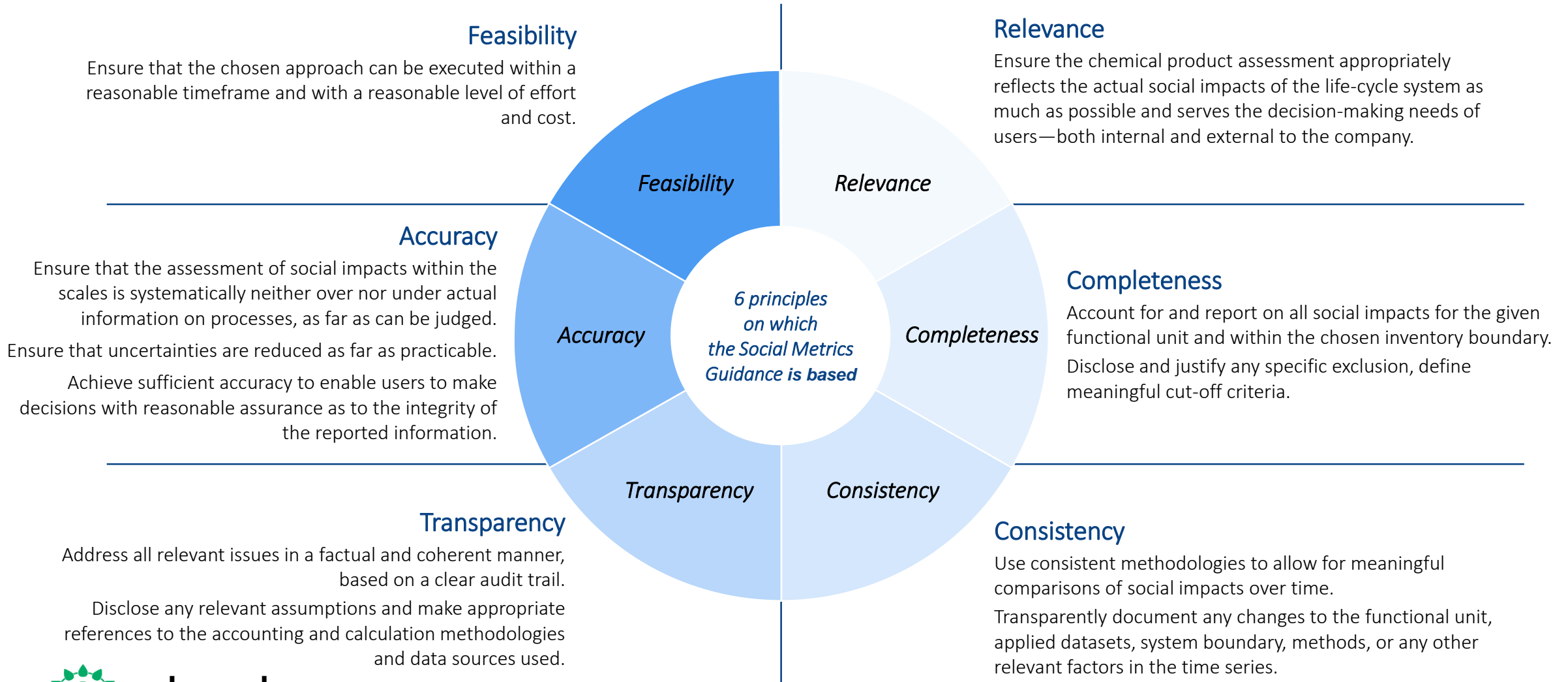
- The guide is the result of a collaborative process among 10 global chemical companies that are WBCSD members.
- It has been supported by the European Chemical Industry Council (CEFIC).
- The collaborative Working Group on Life Cycle Metrics met over 20 months to cooperatively share their best practices and jointly generate a commonly agreed guidance

Companies who contributed to the preparation of the guidance:



2.2 The Social Metrics guidance respects 6 principles

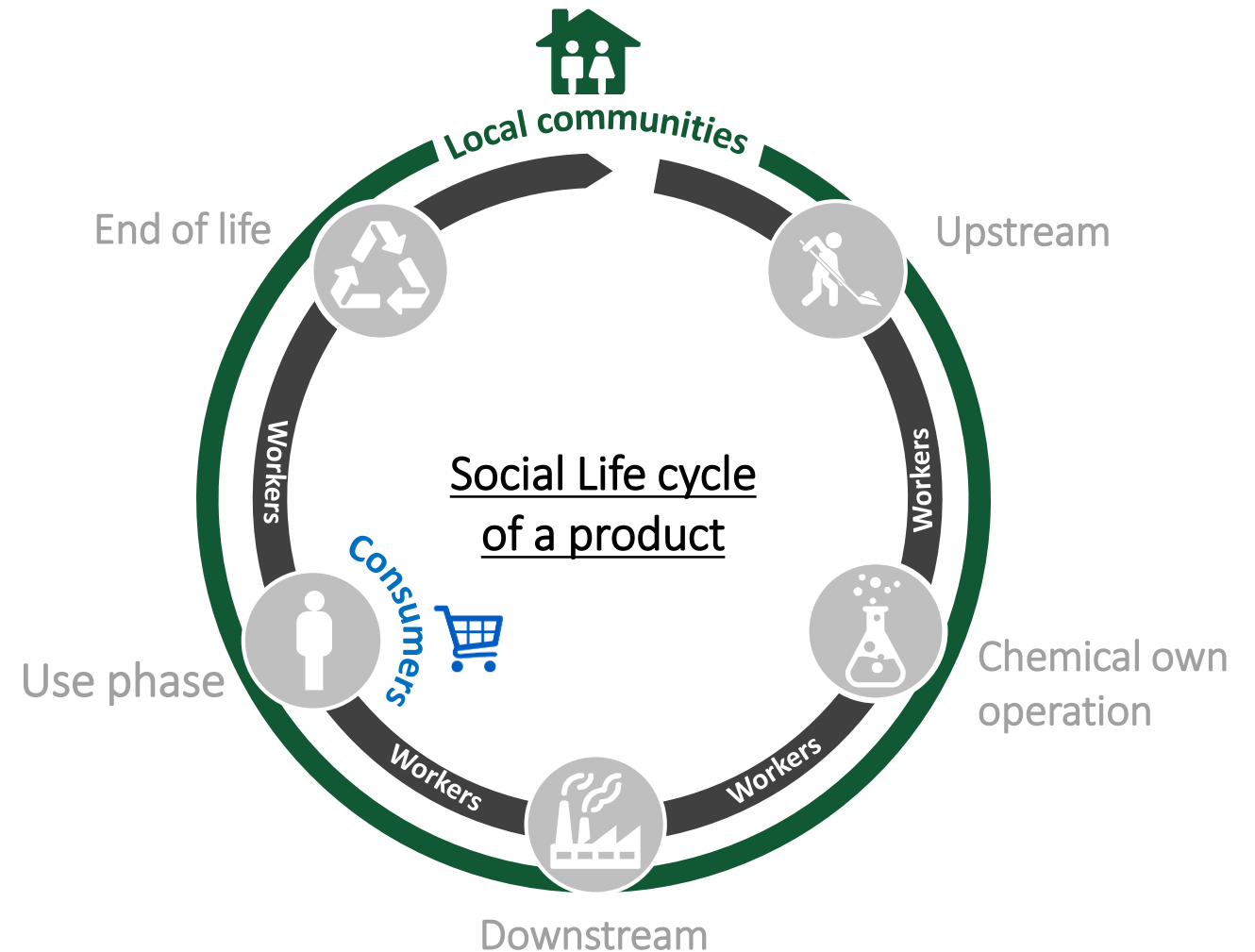
Relevance, completeness, consistency, transparency, accuracy & feasibility



2.3 The impacts assessed focus on 3 stakeholder groups

Workers, consumers and local communities

- As an impact (positive or negative) is always linked to a receiver (here a group of people, as we exclusively analyze the *social* impact), stakeholders had to be defined, in the same way that the *Guidelines for Social Life Cycle Assessment of Products and Associated Works* (UNEP/SETAC, 2009) links each impact subcategory to a group of stakeholders.
- Among the five groups listed by the UNEP/SETAC guidelines (see chart below), **three stakeholder groups** were selected for this work on social metrics: **workers, consumers and local communities**.
- These three stakeholders groups are the same as those selected in version 2.0 of the *Handbook for Product Social Impact Assessment* (PRé Sustainability, 2014).




2.4 Social topics are grouped in 5 social areas

Basic rights and needs, employment, health and safety, skills and knowledge, well-being



2.5 A total of 25 social topics are selected as the most material... ...and divided into 11 mandatory social topics and 14 optional topics

- Social topics are positive or negative social impacts that may occur at the various stages of the life cycle.
- Within the framework of social areas and stakeholders, **25 social topics were selected**, among a total of 70, as the most representative for each combination of stakeholder and social area.
- A minimum set of **11 mandatory social topics** should be assessed.



Social topics	STAKEHOLDERS		
	Workers	Local communities	Consumers
Basic rights & needs	<ul style="list-style-type: none"> - Fair wages - Appropriate working hours - Freedom of association, collective bargaining and labor relations - No child labour - No forced labour, human trafficking and slavery - No discrimination - Social / employer security and benefits 	<ul style="list-style-type: none"> - Access to basic needs for human right and dignity (healthcare, clean water & sanitation, healthy food, shelter) - Respect for indigenous' rights 	<ul style="list-style-type: none"> - Direct impact on basic needs(healthcare, clean water, healthy food, shelter, education)
Employment	<ul style="list-style-type: none"> - Management of reorganisation 	<ul style="list-style-type: none"> - Job creation 	
Health & Safety	<ul style="list-style-type: none"> - Workers' occupational health risks - Management of workers' individual health - Safety management system for workers 	<ul style="list-style-type: none"> - Health and safety of local community's living condition 	<ul style="list-style-type: none"> - Impact on consumers health and safety
Skills & knowledge	<ul style="list-style-type: none"> - Skills, knowledge and employability 	<ul style="list-style-type: none"> - Promotion of skills and knowledge 	<ul style="list-style-type: none"> - Promotion of skills & knowledge
Well-Being	<ul style="list-style-type: none"> - Job satisfaction 	<ul style="list-style-type: none"> - Access to basic needs for sustainable development (infrastructure, ITC, modern energy) - Nuisance reduction - Developing relationship with local communities 	<ul style="list-style-type: none"> - Consumer's product experience



SOCIAL AREAS

Legend
Mandatory social topics
 Additionnal social topics to be selected by a practionner

2.6 Two types of indicators have been defined for every social topic “Indicators” and “advanced indicators”

- **Indicator:** One indicator has been designed for each of the 25 social topics. It combines processes and impact.
- **Advanced indicator:** one (or more) advanced indicators have been designed for each of the 25 social topics. They are generally more quantitative and based on a specific aspect of the social topic. They are considered optional for the assessment.

- **Example of indicator (social/employer security and benefits)**

Social/employer security and benefits	X	a) Policies in reporting company exist
	X	b) Company provides a minimum standard of social security in terms of healthcare and income security
	X	c) Company provides access to remedy
		d) Company provides social security in terms of healthcare and income security (incl. old age) additional to national regulations (e.g. company pension scheme, protection, etc.)
		e) Suppliers are actively encouraged to achieve a,b,c,d
	2	a,b,c,d,e achieved
	1	a,b,c,d achieved
0	a,b,c achieved	
-1	a,b partially achieved	
-2	a,b,c,d,e not achieved	

- **Example of advanced indicator (access to basic needs for the human right to dignity)**

Access to basic needs for the human right to dignity	Local community's access to adequate healthcare services and company's contribution to healthcare services.	
	2	Level 0 AND The company contributes to 0.2 % of their revenue for healthcare services. Alternative : Government invests 2% of the tax income in healthcare services.
	1	level 0 AND The company contributes to 0.1 % of their revenue for healthcare services. Alternative : Government invests 1% of the tax income in healthcare services
	0	At least 95 % of the community has access to adequate healthcare services.
	-1	At least 75 % of the community has access to adequate healthcare services.
	-2	At least 50 % of the community has access to adequate healthcare services.

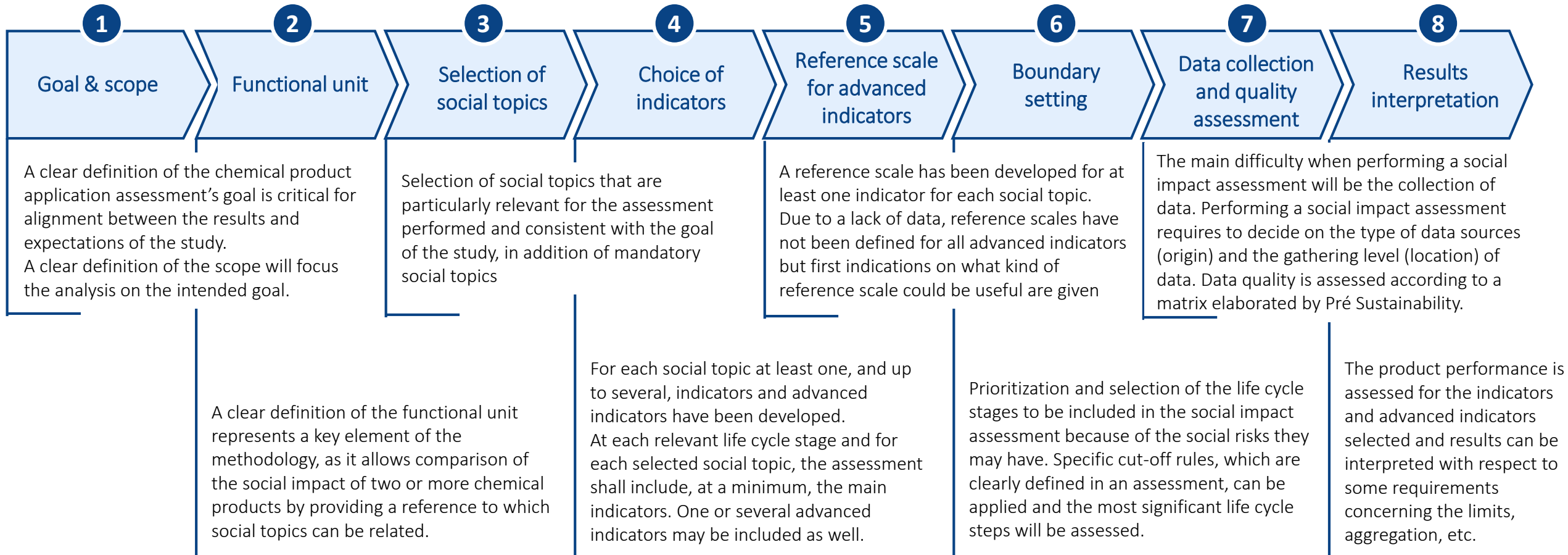
2.7 Indicators are assessed according to a five-level reference scale

- The indicators will enable the **valuation of each social topic with the help of a scale** that assesses each process or input from -2 to +2.
- Setting up reference scales is critical to ensuring that a topic is handled the same way by the different users of the guide.
- The scales defined for each indicator were **built on a chemical industry perspective**, with zero or medium performance indicating the industry's benchmark. Interpretation of scales across the value chain will touch upon sectors that are beyond the chemical sector.
- This reference scale approach is similar to the one used in version 2.0 of the Handbook for Product Social Impact Assessment (PRé Sustainability, 2014).

5 levels reference scale

2	<i>Outstanding/exemplary performance</i>
1	<i>Good performance</i>
0	<i>Standard performance/compliance</i>
-1	<i>Inadequate performance</i>
-2	<i>Unacceptable performance</i>
	<i>Unknown (default)</i>

2.8 The assessment is based on 8 steps



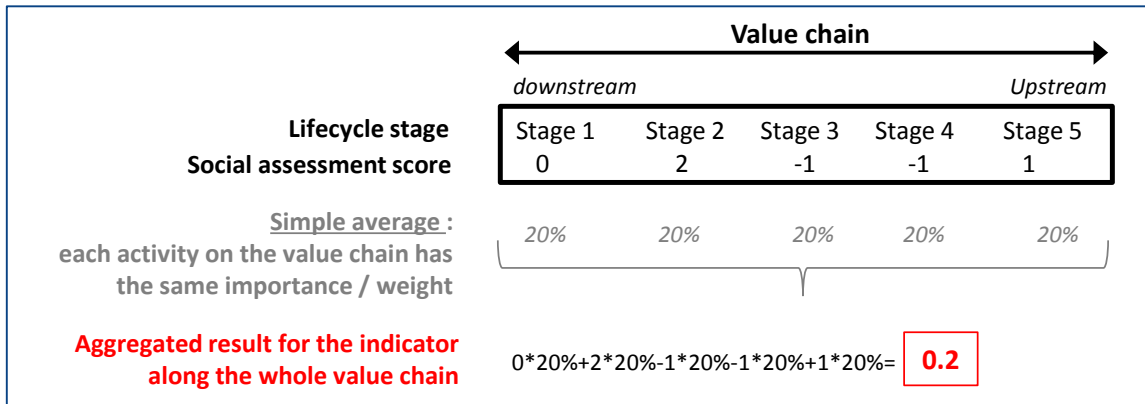
2.9 Aggregation of results is suggested as optional

Along the value chain and across social topics

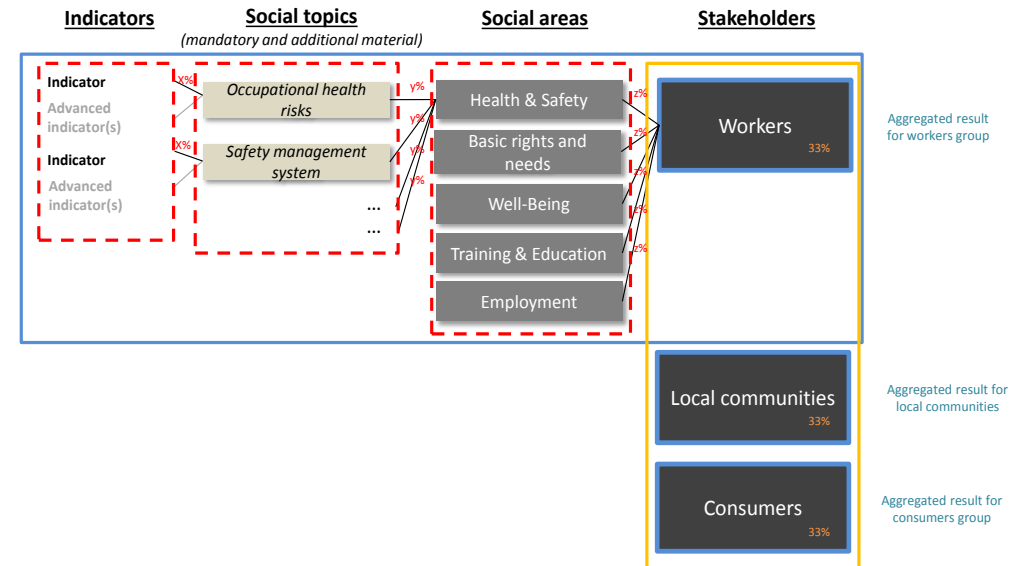
Aggregation along the value chain is the aggregation of results of all the key life cycle stages (see section 5.6) for one indicator.

Aggregation across social topics is the aggregation of all indicators (indicator and advanced indicators), either for a social topic or a social area or a stakeholder category or for all stakeholder categories, grouping all indicators studied.

Example of aggregation along the value chain



Overview of aggregation across social topics

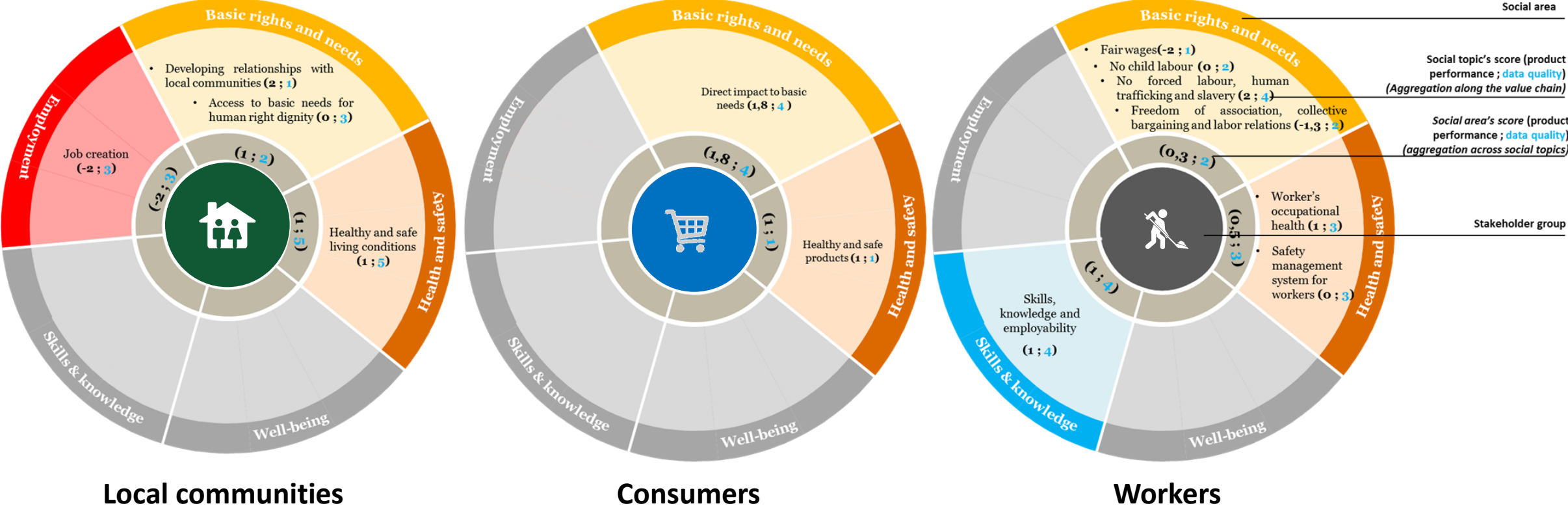


Aggregation can be seen as a way to facilitate the communication of the results of the assessment to external stakeholders and their understanding by non-experts. However, aggregating results can be time-consuming and presents a risk of misinterpretation and/or reduction in the transparency of the results.

➤ At this stage of development of the methodology, the WBCSD working group members recommend **to address this step with particular caution**

2.10 The guidance proposes a visual representation of results

As an illustration, the following communication format could be used to present the key results of the assessment, assuming that one graph would be presented for each stakeholder category. The graph indicates the aggregated results of the assessment: the performance of the product and the quality of the data used to evaluate this performance.



2.11 The guidance presents a gap analysis with existing approaches

- A gap analysis with existing standards on Social Metrics, used as a basis to prepare the guidance, has been performed and is presented in appendix of the report.
- Two aspects have been studied:
 - Key steps of the methodology
 - Social topics covered
- As a result, it demonstrates that WBCSD guidance is in line with preexisting standards, but some aspects of the methodology and social topics covered have been adjusted to best meet the chemical sector's specificities, as well as to refine and improve the assessment.

Overview of the gap analysis detailed in appendix

Key issues	WBCSD Social metrics for chemical products	Comparison with	
		PRé Sustainability <i>Handbook for Product Social Impact Assessment</i>	UNEP/SETAC <i>Guidelines for Social Life Cycle Assessment of Products</i>
1 Stakeholders	3 stakeholder categories: workers, local communities and consumers	3 stakeholder categories: workers, local communities and consumers	5 stakeholder categories: workers, local community, society, consumers and value chain actors
2 Social areas	5 social areas grouping the 23 most relevant impact categories for the chemical sector		6 impact categories (human rights, working conditions, health and safety, cultural heritage, governance, socio-economic repercussion) considered as logical groupings of S-LCA results, related to social issues of interest to stakeholders and decision-makers
3 Social topics	25 social topics corresponding to the most representative positive or negative social aspects for each stakeholder group	19 Social topics corresponding to social areas related to stakeholder groups that should be measured and assessed	31 sub categories representing impacts within an impact category (working conditions of the stakeholder's workers, for instance)
4 Mandatory vs optional impact categories	11 mandatory impact categories identified as material for the chemical sector	Compact assessment (e.g 5 material social topics) for internal communication vs broad assessment (19 social topics) for external communication	

2.12 Ideas for next steps

Areas for the development of the WBCSD guidance

- Development of more accurate advanced indicators, as well as a reference scale for each advanced indicator;
- Guidance for data aggregation and single scoring of results;
- Development of a more detailed communication template;
- Definition of additional user-oriented features such as a checklist for quality assessment, a template for data collection, and/or an extended description of best practices;
- Completion and publication of pilot studies.

Further challenges to be addressed regarding Social Metrics

- Development of a common knowledge base (databases), gathering relevant information, e.g. literature, contacts, especially for the definition of industry averages;
- Development of rules and guidance to allow comparative studies;
- Implementation schemes for the decision-making processes of chemicals industries, in particular to move towards the combination of social and environmental LCA;
- Definition of additional indicators to address regional or cultural specificities.
- Reduce workload to make it easier to apply the framework
- Agreed scheme for data interpretation and integration of LCA information

3. Appendix

3.1 The product final scoring takes into account the quality of data

3.1 The product final scoring takes into account the quality of data

- Final scoring of a product on a social topic is based on two criteria:
 - The **product performance**, assessed through its ranking for the corresponding indicator and/or advanced indicator(s)
 - The **quality of the data** used to assess the performance of the products, assessed through the following matrix.

- Data quality matrix (source : The Handbook for Product Social Impact Assessment, v. 2.0, PRÉ Sustainability, 2014, p.11)

Criteria	Score	1	2	3	4	5
Accuracy, integrity, and validity	Own operations and direct suppliers	Independent 3rd party verified data provided with documentation	Non-verified internal data with documentation, or verified data partly based on assumptions	Non-verified data partly based on assumptions, or data based on grey scientific report	Qualified estimate (e.g. by an internal or external expert), or data based on non-scientific report	Non-qualified estimate, or unknown source
	Other value-chain actors	Data obtained from value-chain actor directly and provided with 3rd party documentation	Data obtained from value-chain actor directly with documentation	Data obtained from other value-chain actors with poor or incomplete documentation	Data obtained from literature	Unknown source
Timelines		Data from current reporting period	Data from previous reporting period	Data from 2 years before reporting period	Data from 3 years before reporting period	Data from more than 3 years before reporting period, or unknown age of data
Correlation		Data from specific site under study	Data from other sites of the company in the same region	Data from relevant sites of the company in other regions	Data from other companies in same region with similar production conditions	Average sector or country data from public or 3rd party database provider

3.2 Complete gap analysis with existing literature

Key issues	WBCSD Social metrics for chemical products	Comparison with	
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4 Mandatory vs optional impact categories	11 mandatory impact categories identified as material for the chemical sector	Compact assessment (e.g 5 material social topics) for internal communication vs broad assessment (19 social topics) for external communication	
5 Indicators	At least one indicator for each impact category and one or more possible advanced indicator(s) Indicators combine the checking of processes in place and the assessment of their impact. Advanced indicators are generally more quantitative and based on a specific aspect of the impact category; they are considered optional for the assessment.	Performance indicators Quantitative and qualitative markers of performance for each of the social topics, e.g. number of working hours during weekends, minimum salary paid, etc. They are used for the systematic monitoring of progress on improving or achieving social topics.	Inventory indicators (qualitative and quantitative) Inventory indicators provide the most direct evidence of the condition or result they are measuring. They are specific definitions of the data sought. Inventory indicators have characteristics such as type (e.g. qualitative or quantitative) and unit of measurement.
6 Reference scale	Scale used for measuring process and outcome & impact indicators that assesses each process or input linked to the functional unit of the product application from -2 to +2	Scale-based approach or quantitative approach	
7 Reference value	NO	YES	NO
8 Impact assessment method	YES	YES	YES
9 Functional unit	YES	NO	YES
10 Life cycle stage selection	Assessment of all life cycle stages by a practitioner who must answer a list of specific question and can use a risk filter analysis to select the most relevant stages to be integrated in the assessment	NO	Hotspot assessment: a methodological framework that allows for the rapid assimilation and analysis of a range of information sources, including life cycle based studies, market and scientific research, expert opinion and stakeholder concerns.
11 Allocation	NO	Only for quantitative KPIs	YES (for co-products)
12 Aggregation	Aggregation along the value chain and across social topics, but no general aggregation (stakeholder results can not be summed up)	Aggregation along the value chain, followed by aggregation of social topics scores into stakeholder group scores and total score.	The subcategory indicator results are aggregated into impact category results
13 Weighting	No specific recommendation	YES	YES

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