TEST Step 4- IMPROVEMENT

	Step	Purpose
DO	**2. SUPPORT AND OPERATION**	Implementation of the **TEST action plan** including improvement measures and monitoring to increase performance in resource use.
CHECK	**3. PERFORMANCE EVALUATION**	Measuring and evaluating performance of important material and energy flows.
ACT	**4. IMPROVEMENT**	**Reflection on experience gained and integration of TEST into business strategies and operations.**
FOLLOW-UP AND CONTINUOUS IMPROVEMENT		

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P 4 – Improvement

How can the can the company reflect the experience gained with TEST in its business strategies and day-to-day operations?

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

switchmed

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Table of contents

- Overview
- Management system review
- New planning phase
- Follow up and expansion in new directions
- case studies

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Completion of the first TEST cycle

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Overview of Step 4

Inputs	Activities	Outputs
Company vision, strategy and management systems Management review Stakeholders expectations	Top management reviews strategy & management systems, linking them to the results of the TEST experience, aligning to SD goals and new Eco innovative business models Take corrective actions Discuss possibility of launching a second cycle of TEST (steps 1.4 – 1.8) Initiate dialogue with stakeholders for building partnerships for new circular models	Integration of TEST approach into the enterprise's strategy, operations and management systems, Corrective actions are taken for ensuring continuous improvements Replication of TEST i The design of fully-fledged EMS/EnMS systems for possible certification Kick-off of new projects related to LCA and/or PEF for product design Introducing CSR.

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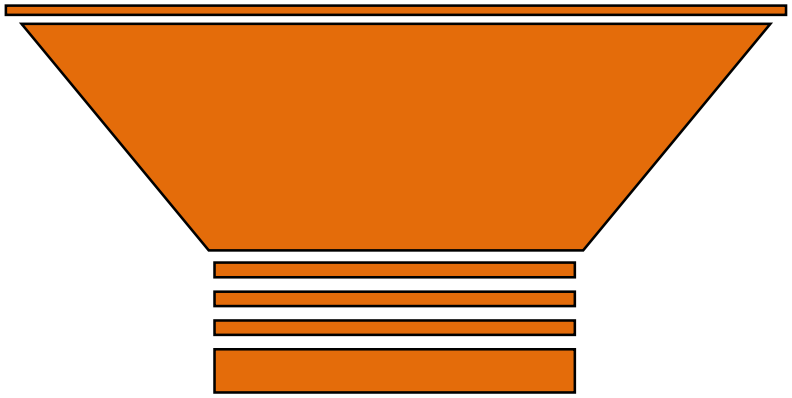
Management Review process

INPUT

TEST results
EMS performance
Recommended improvements

INPUT

Existing business strategy
Sustainability threats in business environment



OUTPUT

Revised policy and strategy
Planning TEST new phase
Orientation toward circular economy

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How?

Plan a management meeting/workshop with the company TEST team in order to:

- Deliver comprehensive presentation on the **results of TEST project,** using data from the monitoring step 3 to summarize:
  - Actual KPIs/OPIs for environmental and economic performance compared to baseline at project start
  - Changes in management practices and business culture

- Review existing company strategy (values, objectives, etc.) for possible changes based on:
  - Experience and results of TEST
  - Sustainability issues arising from stakeholders

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Outcomes - Examples

- Shift in enterprise values and strategic priorities from labour productivity and reactive environmental management to material productivity as a strategy for reducing production costs and business risks;
- Adoption of a strategy for communication with stakeholders, focused on local community and authorities
- Continuation of TEST to address other priority flows and areas that were not addressed during the first TEST cycle; setting up of new objectives and targets that were included in the revised policy statement.

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Preparing new planning phase

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Importance of reflection before new planning

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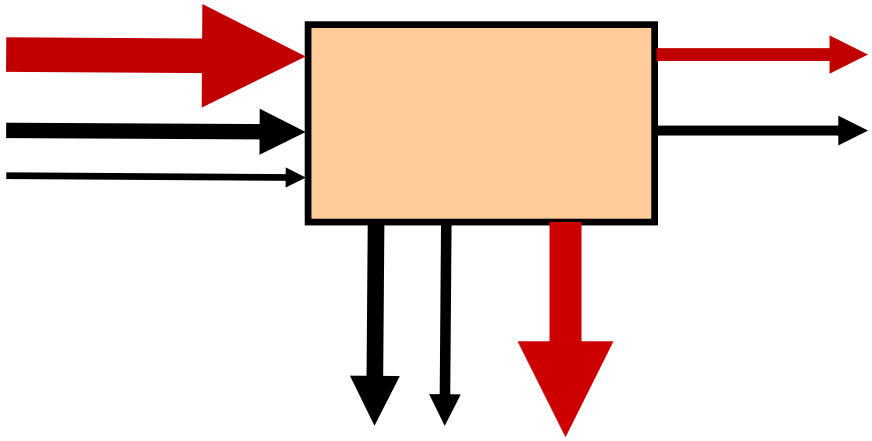
Preparing new planning

First step can be to choose new priority flow(s) or focus area(s) for the next TEST cycle (or to stick to further improvement of the existing priorities)



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Identifying priority flows

- Select important flows based on their:
  - » **Environemntal risks** (toxicity)
  - » **Total costs**
  - » Total amount (bulky materials could be significant due to logistical trequirements)
- **For final selection of priority flows** utilise also estimation of potential for reduction of NPO losses

New data collection and analysis will be most probably needed within the new planning phase (information system on flows should be already improved) – you can start new TEST cycle by repeating steps 1.4 – 1.6.

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Review of the business strategy

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Highlights

Reflect the experience gained from TEST at the strategic level - **What are the lessons learned and how do they impact on our goals and strategy?**

TEST approach can be integrated into enterprise operation only if its benefits are linked with interests of specific stakeholders

Are existing business strategy goals aligned sustainability core issues?

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In Place after TEST cycle

- **Resource efficiency integrated into enterprise policy**

- Adoption of preventive strategy orienting the company toward **win-win business solutions**

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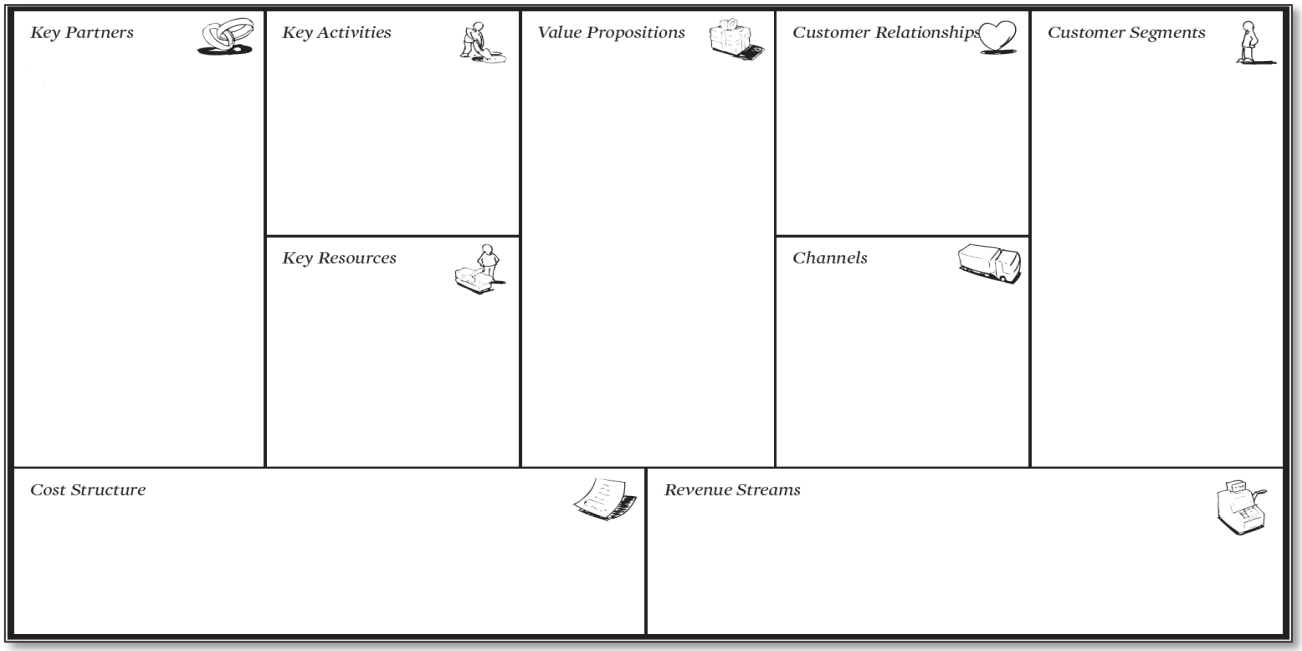
Follow-up and expansion of TEST

Review of existing business model and adoption of new eco-innovative models incorporating product lifecycle dimensions – **Business Model Canvas:**

More information at: http://en.wikipedia.org/wiki/Business_Model_Canvas



Source: UNEP Eco-Innovation Manual

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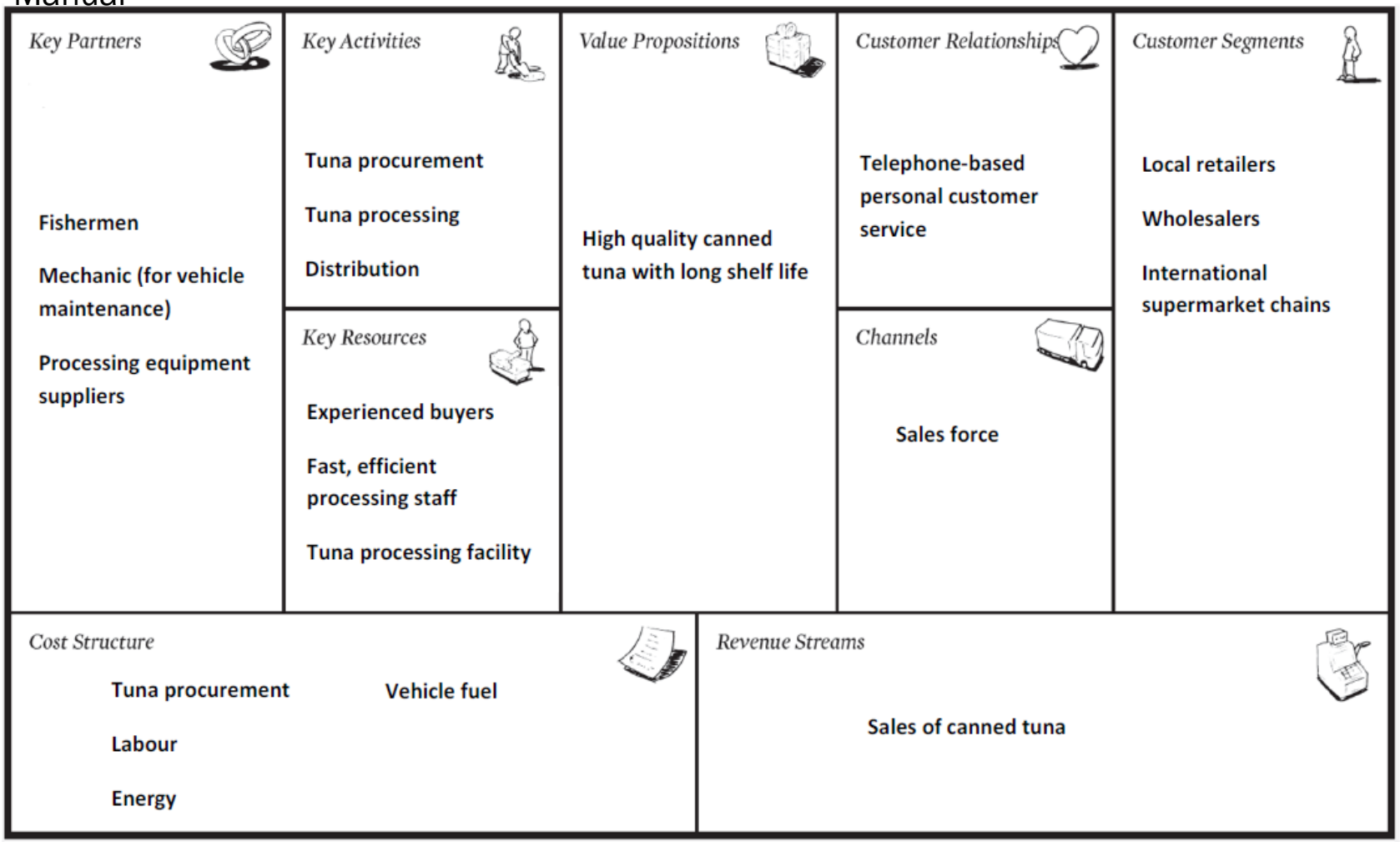
Business Model Canvas of a Tuna Fish Company

Source: UNEP, Eco-Innovation Manual



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Management and information systems

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In Place after TEST cycle

- TEST approach integrated in the existing management and information systems (at least core elements of MFCA and EMS/EnMS in place)
  - **Core elements of EMS/EnMS:** policy, significant environmental and energy aspects, management programmes, operational procedures related to resource efficiency measures and performance monitoring
  - **Core elements of MFCA:** information system for tracking relevant NPOs costs at company system boundary and cost centres

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Follow-up and expansion of TEST

- **Complete** EMS/EnMS for certification according to ISO 14001 or ISO 50001 standards
- **Integrated management system** (IMS)
- Implementation of **full-scale MFCA** information system following ISO 14051
- **Extended allocation of environmental costs** (including NPOs) **to individual products** using MFCA techniques may result in changes in the product pricing strategies and/or phasing out of those products that are carrying the highest environmental cost burden (see the next case study)
- Adopt **monitoring and targeting (M&T)** techniques to control important flows

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Production

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In Place after TEST cycle

- Enhanced resource efficiency performance related to implemented technical solutions

- Organizational skills developed in the area of resource efficiency and integrated environmental management

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Follow-up and expansion of TEST

- Techno-economic appraisal of high investment needing solutions
- Expand TEST to other production areas/important flows that were not targeted in first TEST cycle
- Training of larger number of staff in TEST to expand organizational skills

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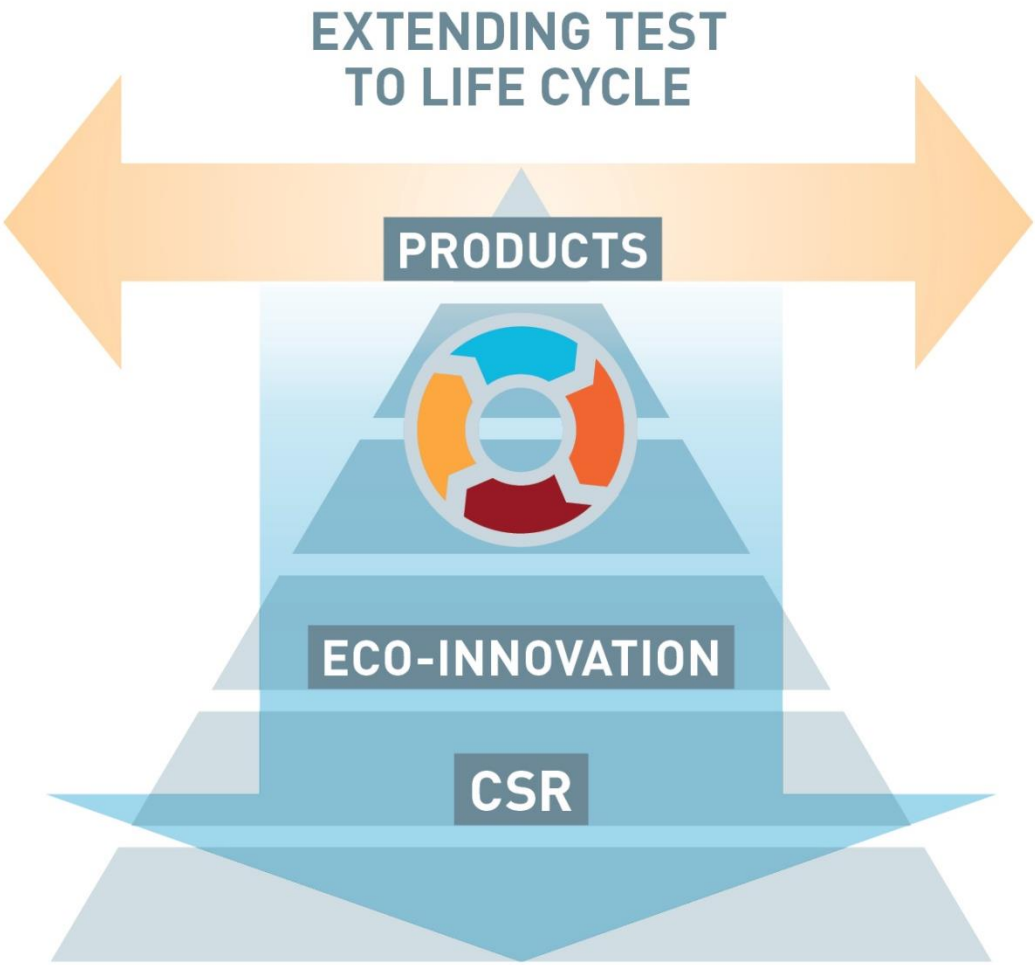
Possible directions for follw up



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Products

Single Market for Green Products EU Initiative

A given company wishing to market its product as a green product in UK, France, Italy and Switzerland would need to apply different schemes in order to compete based on environmental performance in the different national markets.

More info at:
http://ec.europa.eu/environment/eussd/smgp/index.htm

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Single Market for Green Products EU Initiative

The ***Single Market for Green Products*** initiative will:

- Establish two methods to measure environmental performance **throughout the lifecycle**, the **Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF);**
- it recommends the use of these methods to Member States, companies, private organisations and the financial community through a Commission Recommendation;
- it announces a three-year testing period to develop product- and sector-specific rules through a multi-stakeholder process;
- it provides principles for communicating environmental performance, such as transparency, reliability, completeness, comparability and clarity;
- it supports international efforts towards more coordination in methodological development and data availability.

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SWITCH_Med and the Green Product initiative

Output 4.3 (Tunisia, Morocco, Egypt and Lebanon):

- Country background analysis to identify "product category" potentially relevant for each of the four country among those that will be targeted by the 25 PEF pilots for the development of Product Category Environmental Footprint Rules (PEFCRs)

- Awareness raising technical local workshops to present and disseminate the outcomes of the PEF pilots and Product Category Environmental Footprint Rules (PEFCRs) for selected and relevant products to the national economies to wider local business/industrial

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Case study

Product Environmental Footprint study in a pasta factory

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Dry Pasta product

- Background of the « shadow » PEF
- Goal and scope definition
- Impact assessment
- Results
- Recommendations and conclusion

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Background

- Pilot project under SWITCHMED programme/networking component,
- PEF study following the principles of the PEFCRs guidelines developed under the pilot phase for pasta products in EU.
  - "Dry pasta - Product Environmental Footprint Category Rules (PEFCR), Rev. 29/12/2016";
  - Product Environmental Footprint – Category rules guidance, Version 6.1– 2017

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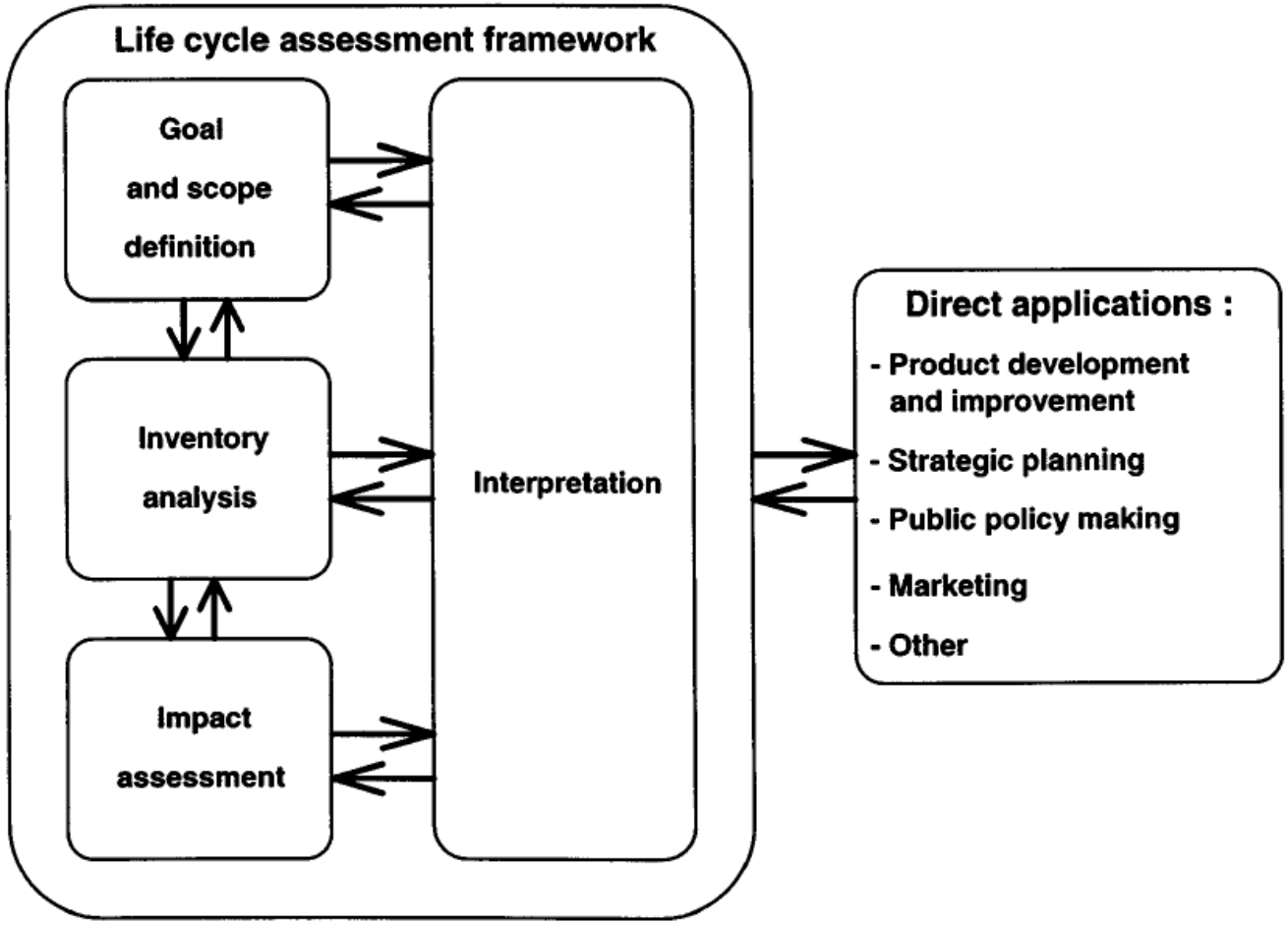
LCA steps

The PEF Guide is using a harmonized approach, building on existing Life Cycle Assessment (LCA)-based product claim standards (ISO 14040-44)



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Goal and scope definition

Functional unit: 1 kg

Selected Product

Dry Pasta (-Spaghetti II) made from durum wheat semolina packed in 500 gram packs as it is the best-selling product.

Goal

To evaluate the life-cycle environmental burdens of Pasta production system and to identify the environmental hot spots

Scope

The life cycle stages included ingredients production; packaging manufacturing;- pasta manufacturing; distribution; cooking; and end of life of packaging.

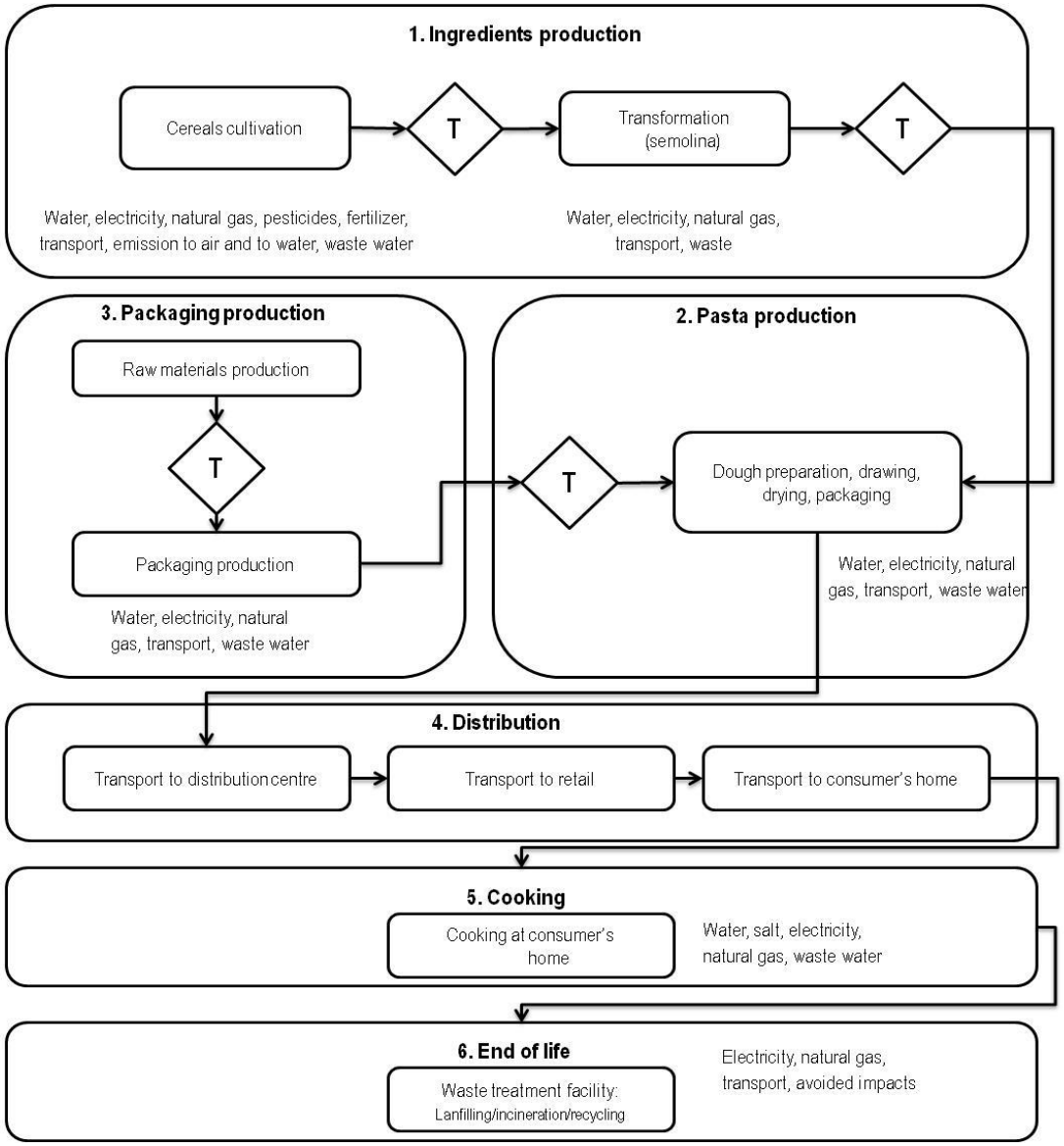
Generic life cycle model for Pasta

System boundaries

- ingredients production;
- packaging manufacturing;
- pasta manufacturing;
- distribution;
- cooking;
- end of life of packaging

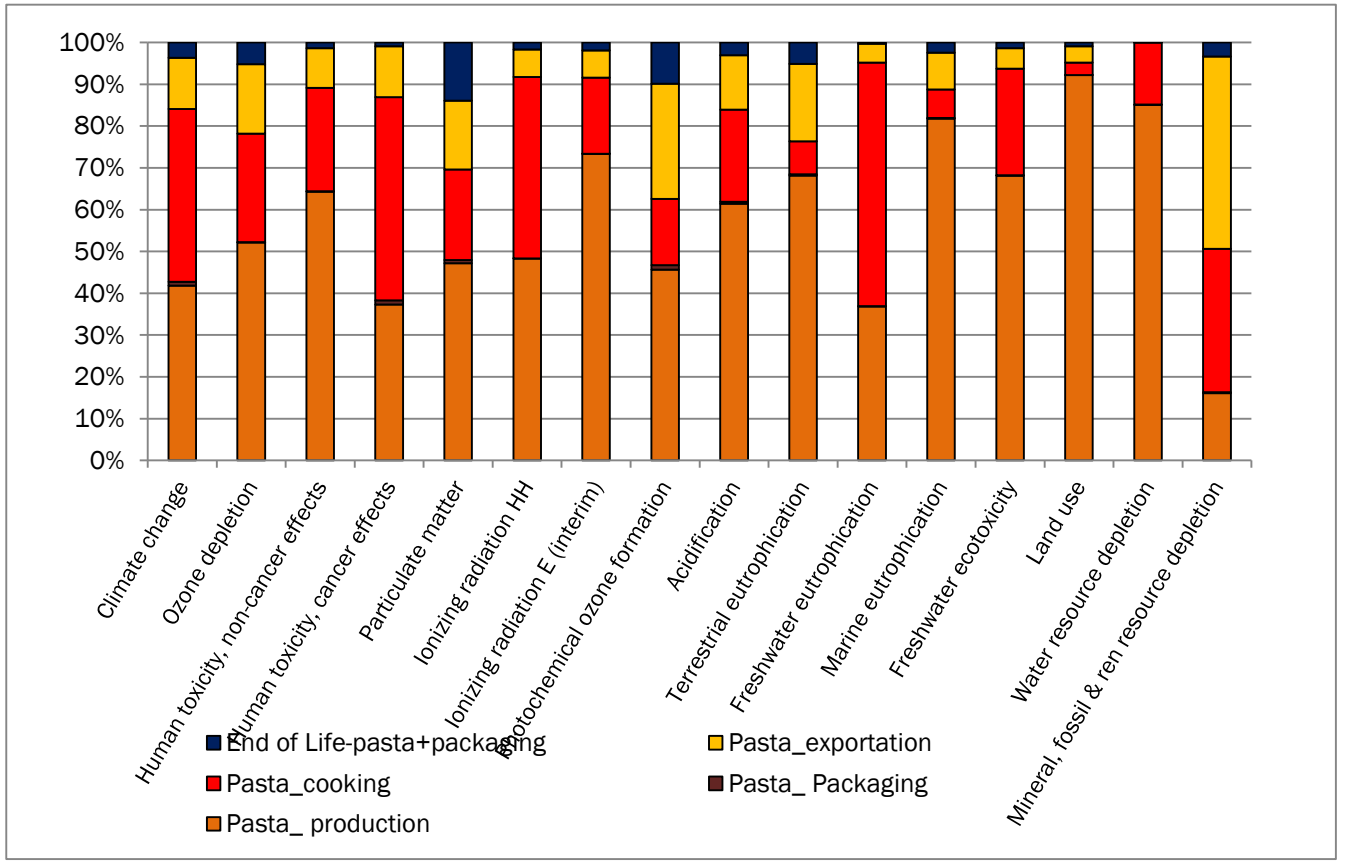
Life Cycle Inventory

- Primary data (foreground) provided by the company
- Secondary data (background) from the Ecoinvent database v3.3



Impact assessment results

Characterized results of PEF of dry pasta



Accordingly to PEF category rules, 16 impact categories were computed

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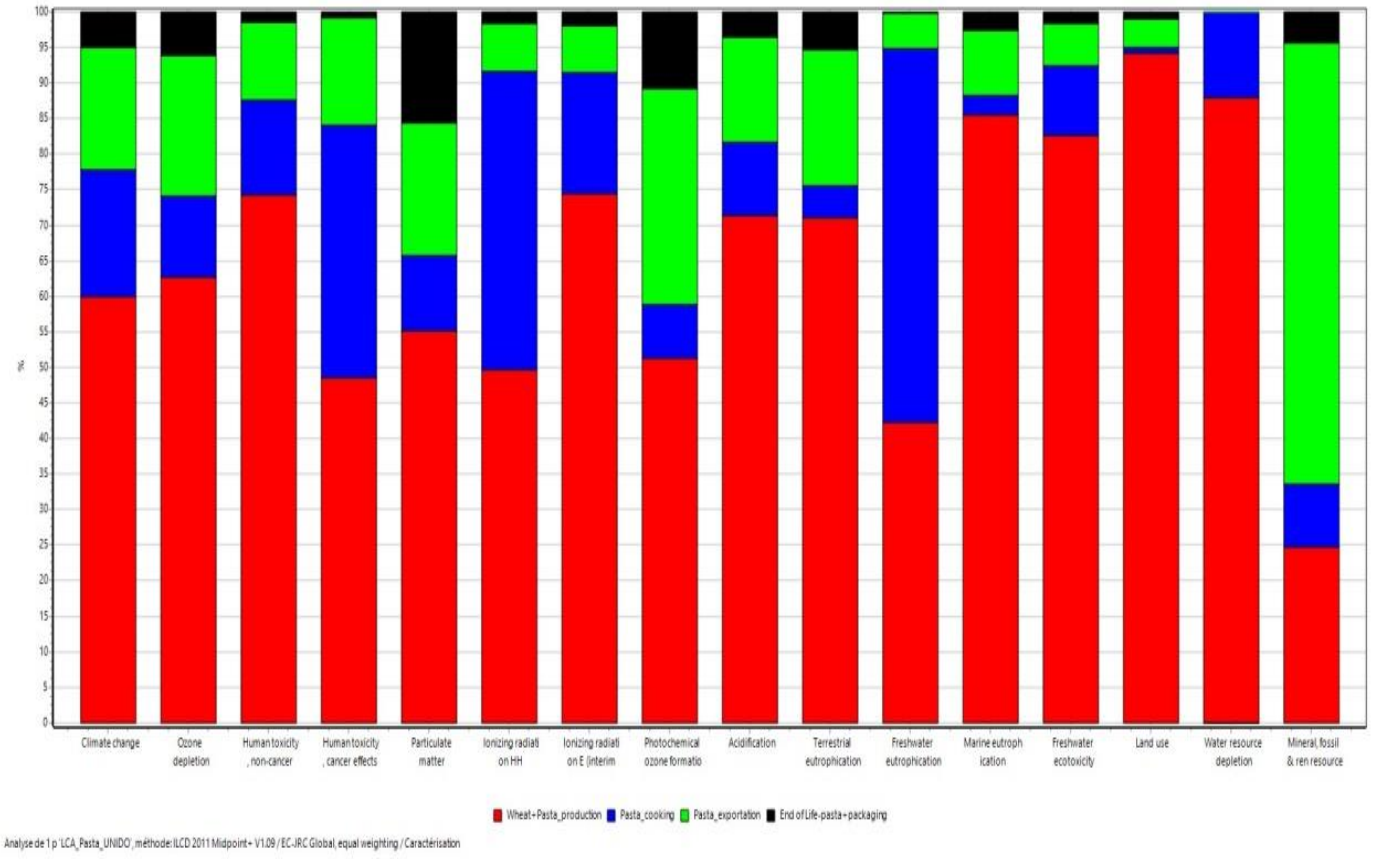
Relative contribution of each subsystem to the environmental impacts of Spaghetti II

Impact assessment results



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Identification of hotspots

Most relevant Impact categories *	Most relevant life cycle stages **
Marine eutrophication Mineral, fossil & renresource depletion Acidification Freshwater eutrophication Land use Particulate matter Ionizing radiation HH Photochemical ozone formation Terrestrial eutrophication	- **Pasta production**: including processes: pasta manufacturing and transportation of cereals and packaging to pasta factory ; - **Pasta_cooking**; - **Pasta exportation** to European consumers (marine and terrestrial transportation).

- Representing 80% of total environmental impacts

* *contributing at least 80% of any of the most relevant impact categories identified

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Recommendations to reduce the environmental footprint of pasta

- Shift to the use of locally produced eco-friendly wheat
- Switch to the use of biodegradable packaging.
- Install and use of photovoltaic solar panels for the production of electricity that will partially replace electricity produced from fossil fuels
- Collect and use rainwater
- Implement RECP action plan to reduce the water and energy consumption in the processes of production of semolina and pasta

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PEF conclusion

- PEF pilot focus on capacity building and engagement of exporting companies
  - Raise awareness in industry
  - understand the implications of the new European policies for industry and be ready to respond
- Awareness about the product hotspots and the potential to reduce its environmental impacts;
- Communication with the stakeholders and consumers about greening its product.

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Corporate social responsibility (CSR)

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In Place after TEST cycle

- **Environmental pillar of CSR based on results of implemented** resource efficiency programmes, data on economic and environmental performance, compliance programmes with environmental legislation) **ready to be communicated** to relevant stakeholders
- **Stakeholder mapping**

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Follow-up and expansion of TEST

- Materiality analysis
- Stakeholder engagement programmes
- Social responsibility, gap analysis and improvement programme
- Reporting on corporate social responsibility (CSR)
- Independent CSR verification report
- CSR management system design and implementation according to ISO 26000 standard
- Carbon footprint
- .....

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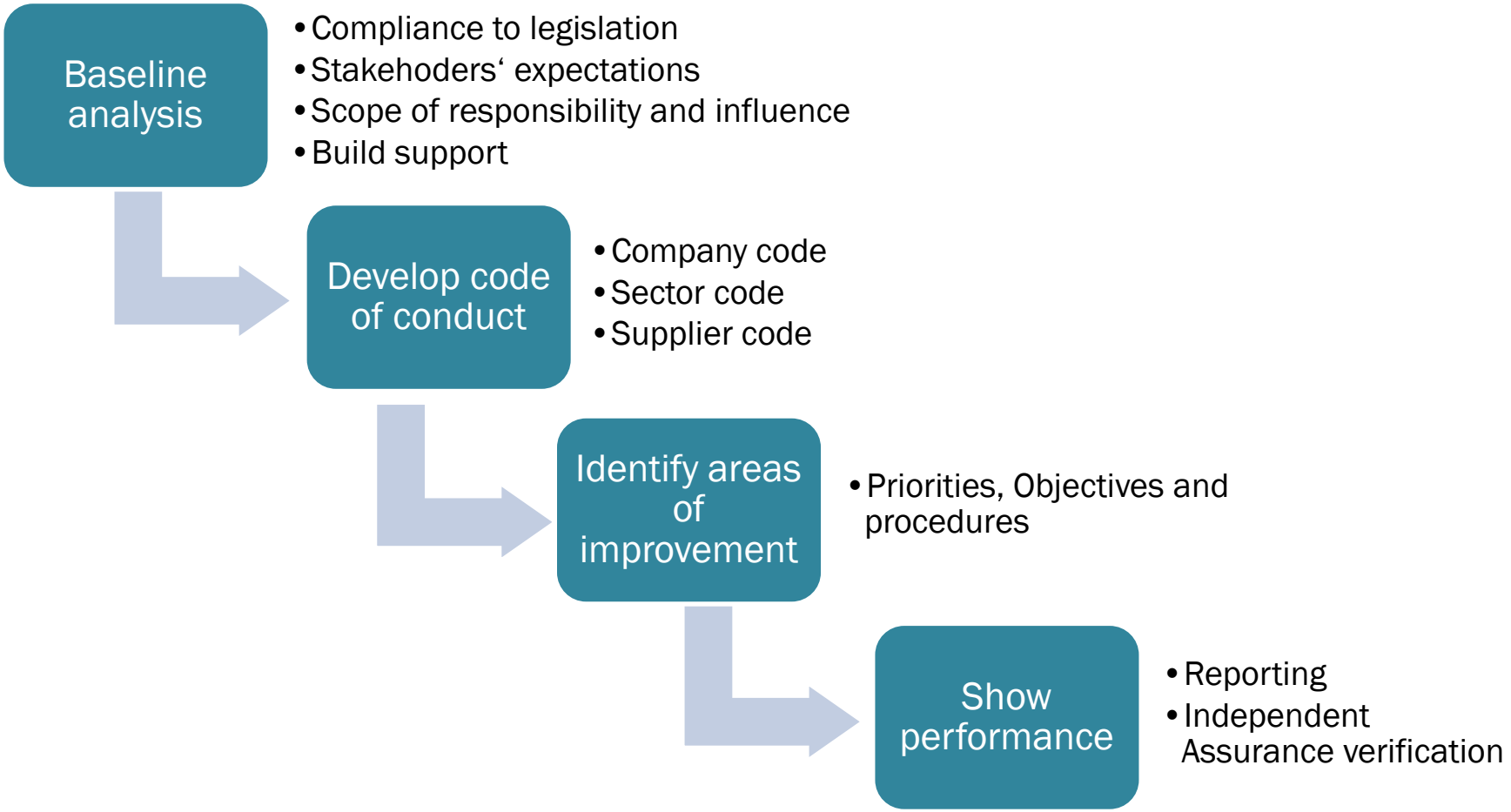
Working on CSR



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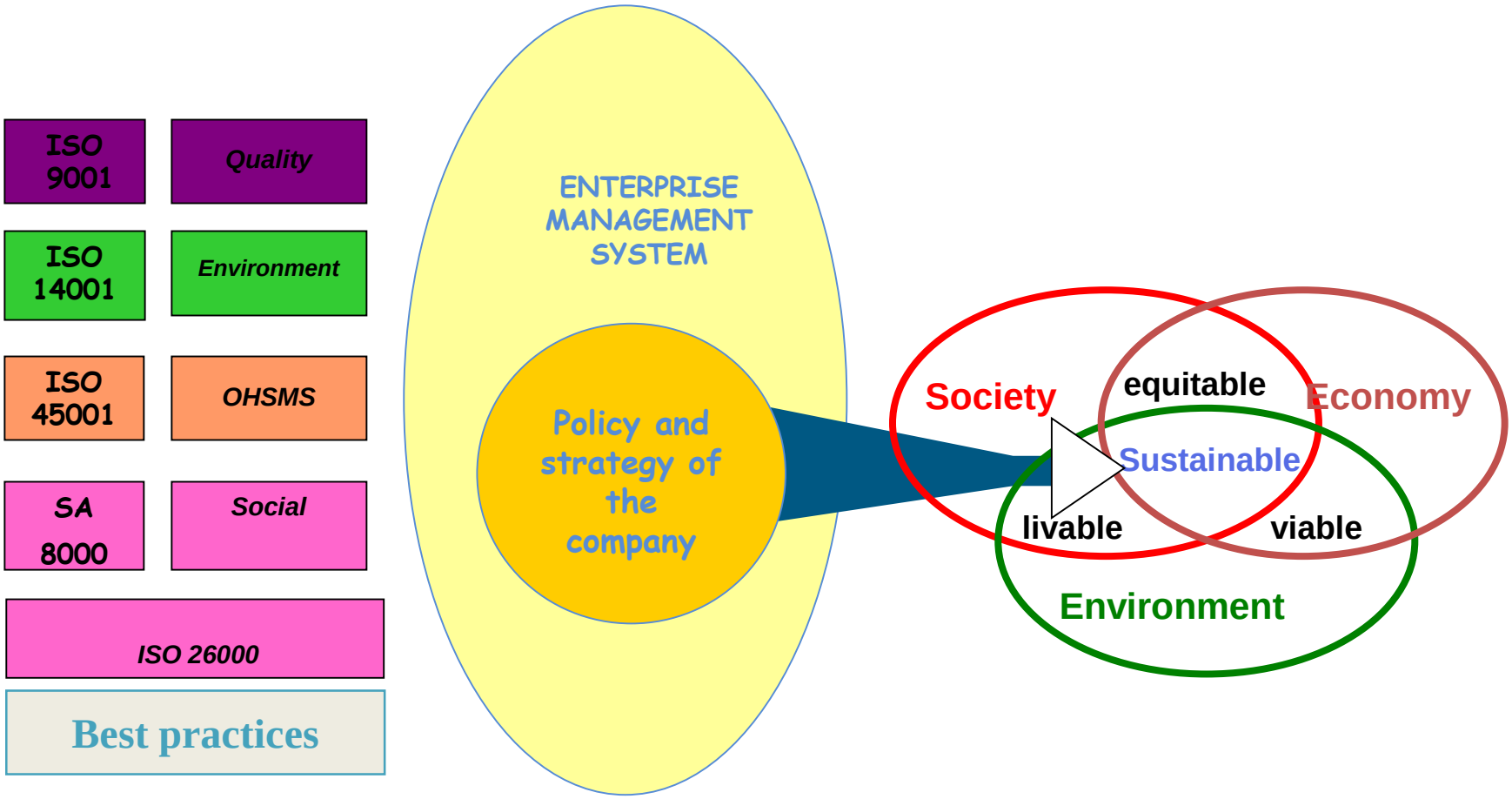
Management tools for CSR



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ISO 26000

Social responsibility: 7 core subjects

ISO 26000
SOCIAL RESPONSIBILITY

* The figures denote the corresponding clause numbers in ISO 26000.

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Implementing CSR
(PHARMACEUTICAL company)

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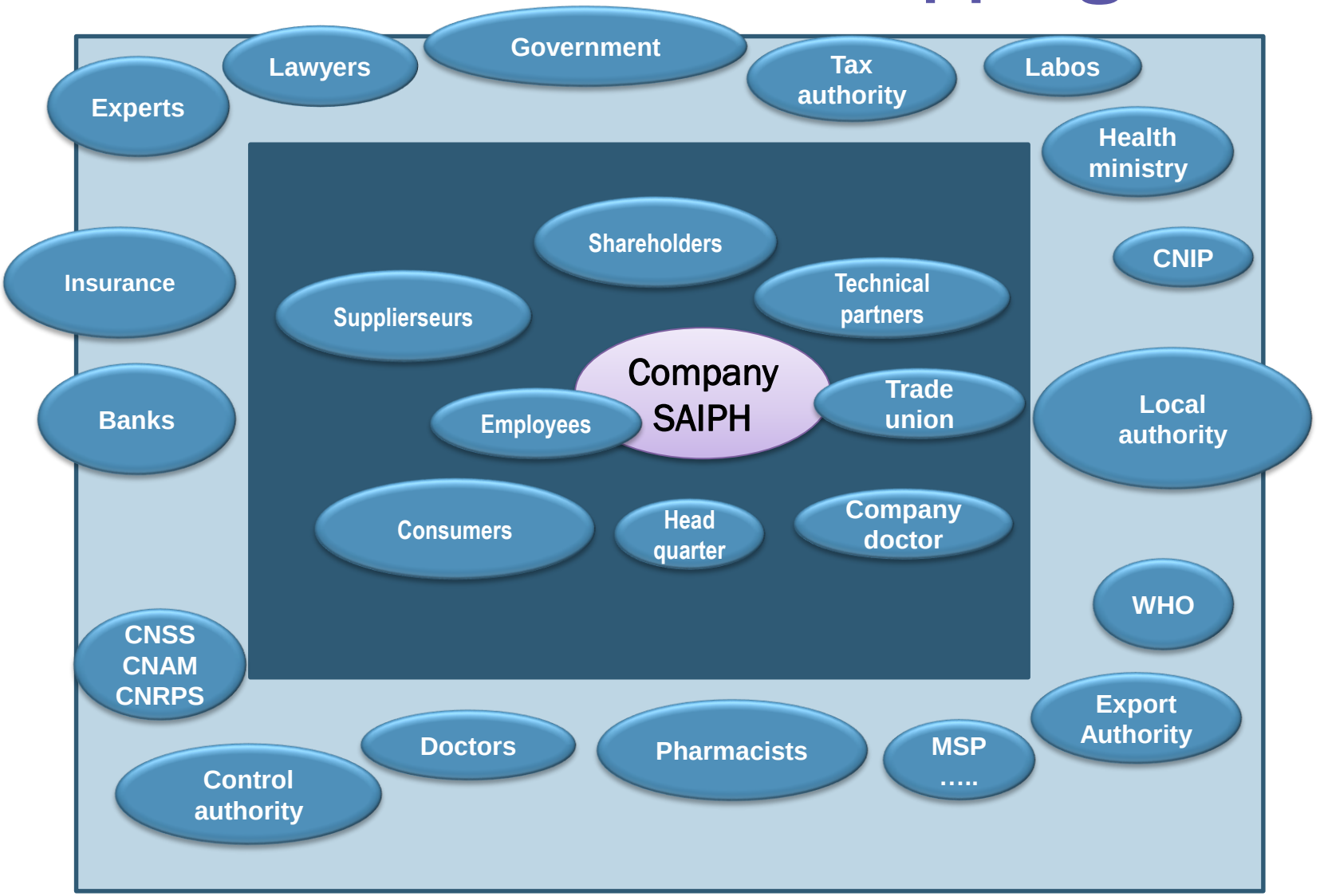
Stakeholders mapping



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Implementation of CSR based on ISO 26000 standard

Governance
Sustainable development chart and SD reporting
...

Human rights
Equal opportunity M/W
Salary grid

Labor practices
OHSAS program
Insurance coverage

Environment
Use of natural gas
Waste segregation for recycling
EMS and enMS

Fair operating practices
transparent bidding process

Consumer issues
Information and awareness raising
80% Generic products

Community involvement and development
priority for recrutement from the neighbourhood
Training for students (PFE)

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CSR code of conduct

Les Laboratoires SAIPH
Charte Responsabilité Sociétale (RSO)

Les laboratoires **SAIPH** perçoivent la responsabilité sociétale comme application du développement durable aux entités économiques. C'est la responsabilité de **SAIPH** à évaluer les impacts de ses décisions et de ses activités sur la société et sur l'environnement au regard des questions centrales de l'ISO 26000, se traduisant par un comportement transparent et éthique.

I. Concepts et définitions

Il s'agit de mettre en place des stratégies de développement durable contribuant simultanément à la croissance économique, au progrès social, et à l'équilibre écologique.

Le développement durable : c'est la capacité de satisfaire les besoins des générations présentes sans compromettre ceux des générations futures.

II. Objectifs et attentes de la RSO

Par le biais d'un engagement volontaire, SAIPH vise à :

1- Fonder un climat social assurant le bien être et l'évolution des employés.
2- Renforcer l'image de marque de la société **SAIPH**.
3- Contribuer au développement durable y compris à la santé et au bien-être.
4- Identifier et prendre en compte les attentes des parties prenantes et dialoguer avec elles.
5- Respecter les lois en vigueur et être compatible avec les normes et référentiels internationaux.
6- Intégrer les principes et concepts RSO dans l'ensemble de l'organisation à fin de favoriser la mise en œuvre de la démarche.

III. Démarche générale et principes de mise en œuvre (Maitres-Mots)

1- **La participation des PP** est effective à toutes les étapes et le plus en amont possible pour permettre à tous de construire et de s'approprier le projet ou la politique.
2- **Le pilotage** organise l'expression des différents intérêts des parties prenantes et les modalités de choix et de mise en œuvre.
3- **Identification des parties prenantes et sphères d'influence** (Personnel Et organisation liée, Actionnaires, Clients, Fournisseurs, banques, Etat, Parties politiques, société civile, parties sociales, Médias, Localités…)
4- **La transversalité de l'approche** vise à concilier le développement économique, l'amélioration du bien-être, la cohésion sociale, la protection des ressources environnementales et du climat.
5- **L'évaluation partagée** permet de vérifier l'adéquation et la pertinence des politiques au regard des enjeux globaux et locaux, des principes du développement durable, des attentes des populations ainsi que l'efficacité des moyens mis en œuvre. Elle permet d'être en accord avec l'évolution des besoins et attentes de la société **SAIPH.**
6- **L'amélioration continue** contribue à l'évolution de la stratégie **SAIPH** et de ses projets.

Maîtres-mots de la démarche générale RSO :

-Positionnement
-Priorisation
-Dynamisme
-Participation
-Intégration

IV. Pratique de la gouvernance

La gouvernance désigne le système par lequel une organisation prend des décisions et les applique en vue d'atteindre ses objectifs

1- Engagement de la direction :
- Adopter le concept RSO en termes de développement durable.
- Adopter le sens et directions de la norme ISO 26000 et de toute référence liée.
- Fournir du support.

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ECO-DESIGN

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Carpet producer I: Implementation of ecodesign

Improving product through selected Eco-design strategies:

- **Shifting to low impact materials** – there is a choice of renewable materials like for example wool, sisal or hemp)
- **Design for low-impact use** – lowering indoor air pollution and risks from chemicals and alergens
- **Design for easy recycling** (done by others)

Getting a green label to communicate improved performance to customers

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Carpet producer II: Possible new business model based on carpet leasing within a product-service system

In addition to the previous Eco-design strategies enterprise is coming with a **new product concept** (healthy floor coverage) which can further optimise:

- **low-impact use** through an optimised cleaning and maintenenace (provided by a local vendor utilising high quality eqipment and non-toxic chemicals)
- **design for long lifetime** (also in interest of producer)
- **design for reuse** - ready for refurbishement by producer
- **design for recycling** to be done directly by the producer

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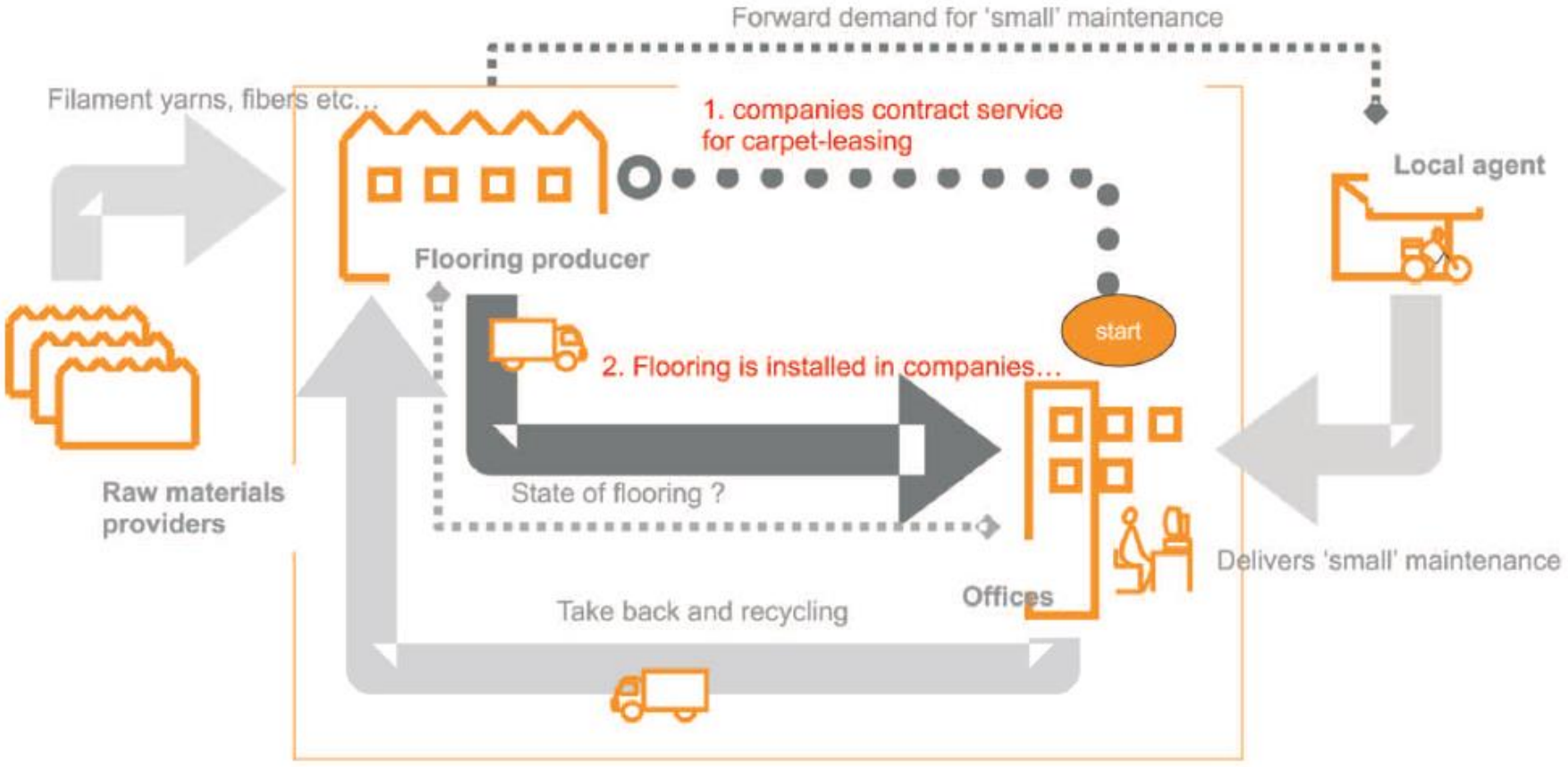
Adoption of eco-innovative business model

- example of shifting from carpet production to carpet leasing



Source: ECONCEPT / D4S

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Case study - interface

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INTERFACE

- Introduced the first ever carpet leasing programme **Evergreen Lease** – a visionary alternative to purchasing carpet
- By using a **"less is more" concept**, client carpet needs can be met initially and rejuvenated periodically, prolonging the useful life of the carpet
- Large initial capital expenditures are eliminated and replaced by predetermined **monthly billings for sevices** ("lease" on the flooring systems and the services associated with them)
- **Delivering value by combining product and service** over time provides opportunities to reduce the life-cycle footprint of commercial buildings

More information: https://www.interface.com/EU/en-GB/sustainability/our-journey-en_GB

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INTERFACE - Results

- Reducing the total life cycle costs and environmental footprint of flooring services
- Eliminating multiple transaction costs of flooring products and services
- Providing a single, accountable contact for the customer's total flooring needs
- Creating the conditions where producer is highly motivated to utilise its expertise to maximise the life of materials being used
- Creating the conditions where fundamental product redesign is driven to maximise delivery of value over multiple life cycles rather than by minimising internal costs at the date of purchase
- Producer continues to own the flooring for its useful life in the building, ensuring that as product is replaced, it is either used again or reclaimed and recycled

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"I believe we must redesign commerce in the next industrial revolution, and redesign our role as manufacturers and suppliers of products and services. Already, we are acquiring, and forming alliances with, the dealers and contractors that install and maintain our products. With these moves downstream into distribution, we are preparing to provide cyclical, 'cradle to cradle' service to our customers, to be involved with them beyond the life of our products...

Leasing carpet rather than selling it, and being responsible for it cradle to cradle, is the future. Toward this end, we've created and offered to the market the Interface Evergreen Lease, the first ever perpetual lease for carpet. We sell only the services of the carpet: colour, design, texture, warmth, acoustics, comfort under foot and cleanliness, but not the carpet itself. The customer pays by the month. In this way we make carpet into a 'product of service'.„

Ray Anderson – founder of Interface Inc.

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Linkages with EMS

EMS Not in place

- Improvement actions are defined at this stage, including corrective actions, continual improvement initiatives, breakthrough change, innovation and reorganization.

EMS In place

- Integration of RECP into the core value proposition of a company's strategy and operations is the expected result of the successful implementation of TEST project.
- A formal commitment for sustainable development in the environmental policy can be obtained by the end of this step.

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Highlights

- Top management evaluation, reflection and decision making on new actions for continual improvement are the outcome of this step.
- Decisions on follow up opportunities are taken at the end of this step (planning TEST second cycle; EMS certifications, adopting SD model)
- Decision for expanding TEST to CSR and circular business opportunities to respond to stakeholders expectations and align with the new and evolving business environment ,
- Decision for implementing new, advanced sustainable production tools for product and service such as LCA or PEF

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