

Reach-Serv

TESS Toolbox Demonstration

Notes

**Contains toolbox notes to: Reach Obligations tool,
Environmental Fate tool, Sustainability tool and Bio Blocks
database**

TESS Project Partners

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Reach Legislation

This tool aims to help SMEs understand their responsibilities under REACH and what they must do to comply.

What is this tool about?

This tool has been developed to help SMEs understand the REACH Regulation and the responsibilities they have under REACH. The aim is to provide guidance on the Regulation that is easier to understand and not written in legal language.

The tool does not attempt to reproduce the official technical guidance documents published by ECHA. Links to relevant TGDs are provided through the tool for further information.

The guidance covers the whole spectrum of REACH, with the exception of 'Substances in Articles' is only covered briefly, and 'Intermediates' are covered by a separate section of the Toolbox.

Who can use this tool?

Anyone with responsibility for implementing REACH in their organisation.

What are the materials available within this tool?

The tool provides the following materials:

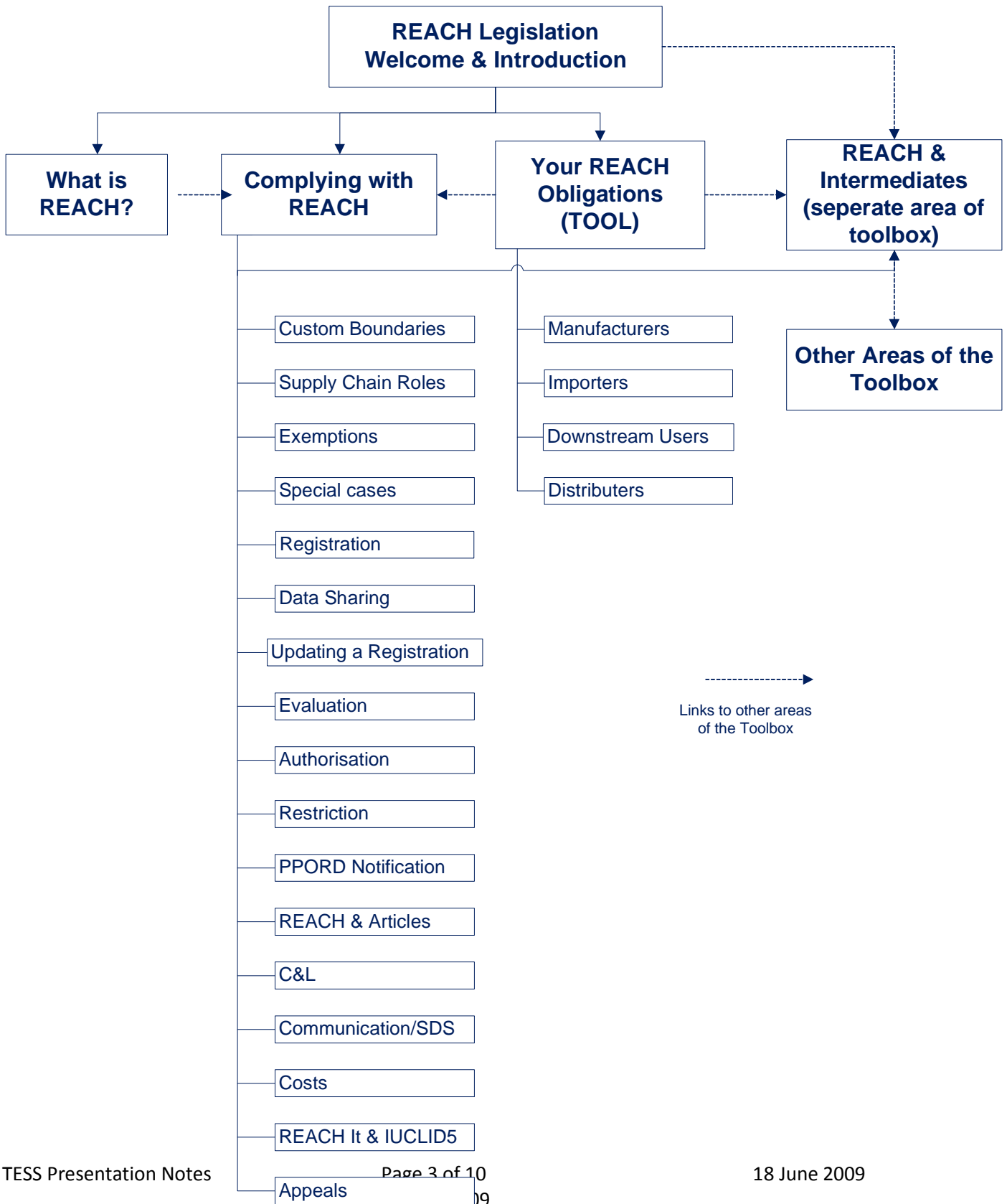
- A Brief Guide to REACH – for users starting with little or no knowledge of REACH
- An Obligations Tool
 - Question and answer tool providing a simple statement of users registration obligations under REACH
 - Also indicates other obligations users may have, e.g.
 - Classification & Labelling Inventory
 - Communication/Safety data Sheets
 - Downstream users CSA
 - SVHC / Authorisation
- Complying with REACH – text guidance on the REACH Regulation

o Arranged under the headings shown in the site map below

- A Glossary of terms and Links Compendium - access from the main menu.

Links are provided throughout the tool to relevant TGDs, useful websites, related information and other tools within Toolbox e.g. Chemical toxicology.

REACH Legislation site map:



Chemical Toxicology Toolbox

This tool mainly aims to help SMEs reduce the cost of their REACH registration by using non-testing methods

What is this tool about?

This tool has been specifically developed to help SME users to assess the toxicity, the environmental impact of their chemical (persistent, bioaccumulative and toxic (PBT)) and to identify the hazard of their chemical being a potential mutagen or endocrine disruptor for REACH purpose using freely available non-testing methods such as computer models (quantitative structure activity relationship;(Q)SAR).

According to REACH legislation, these data on mammalian toxicity, environmental toxicity and environmental fate, including chemical and biotic degradation of your chemical is required for the registration purpose. This is usually made on the basis of experimental testing which require animals. The cost for these tests is significant and is a cost most SMEs cannot afford. Here in this tool we show you how you can use non-testing methods to obtain this information.

All this information about the tool and its use for the SMEs can be found on the front page (as highlighted in the presentation)

Who can use this tool?

A person with a chemistry and IT background can use the tool.

What are the materials available within this tool?

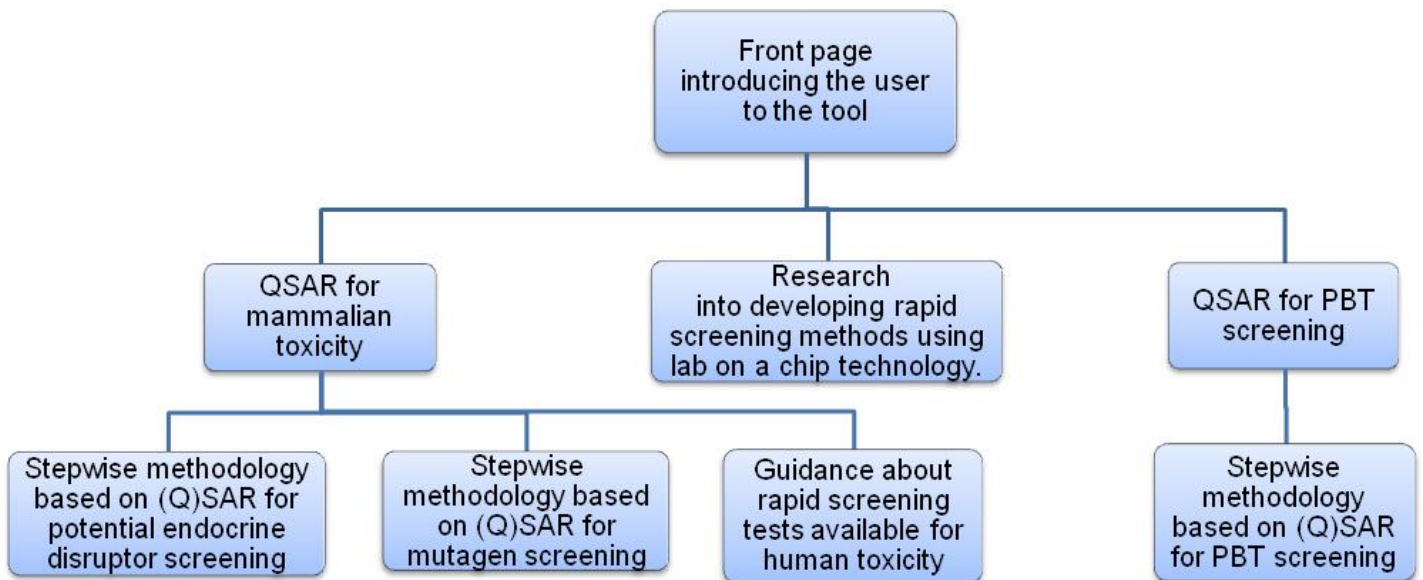
The tool provides the following materials:

- Three stepwise guidance as follow;
 - a stepwise guidance on how to use (Q)SAR methods to fill your data gap and to assess the environmental impact of your chemical (PBT status).
 - stepwise guidance on how to use (Q)SAR to identify the hazard of your chemical being a potential mutagen
 - stepwise guidance on how to use (Q)SAR to identify the hazard of your chemical being an endocrine disruptor.

- Information for using (Q)SAR to assess human health toxicity
- Guidance about rapid screening tests available for human toxicity and reports some research into developing rapid screening methods using lab on a chip technology.

Each stepwise guidance has examples illustration the process. The examples are in a pdf format. The user can then use this template for carrying out screening related to its chemical.

Chemical Toxicology Tool layout:



Supply Chain Toolbox

This tool mainly aims to help SMEs to evaluate a new chemical routing for a either current or new chemical product

A. What is this tool about?

This tool has been specifically developed to provide SME users with a simple systematic methodology to quickly achieve an initial, qualitative assessment of the likely viability of a proposed substitute chemical within a supply chain context.

The tool output is intended to provide the following guidance in a situation where there may be several routings under consideration for a new or revised product:

1. Quickly identify those routings which have a low technical risk and high commercial viability in a situation where several alternatives routings may be under consideration.
2. Identify the areas of a new or revised routing that may lead to a high technical risk and or lower commercial viability. This will allow the user to then address these issues and reevaluate the proposed routing.
3. Identify a 'Critical Failure' - which indicates where the proposition has transgressed beyond acceptable viability limits suggesting that the proposal should be abandoned. When this occurs, the reason for the critical failure is given and a suggestion is made as to how to address the critical failure.

All this information about the tool and its use for the SMEs can be found on the front page (as highlighted in the presentation)

B. Who can use this tool?

A person with business knowledge, and a broad understanding of the chemistry, engineering, and commercial issues involved in the new or revised route can use the tool.

C. How does the tool work?

Overview:

The tool assesses the replies to a series of questions under 11 technical and commercial headings.

Answers to the questions under each heading are evaluated for their technical risk and commercial viability and the output from each section is then displayed as a graph.

The individual answers to these questions are then correlated to provide a final 'Overall Assessment'. This output is also displayed graphically.

Tool detail:

The tool assesses the replies to a series of questions under the following headings:

1. Routing Options
2. REACH Compatibility
3. Chemical-performance
4. Chemical Engineering
5. Sustainability
6. Environmental Impact
7. Operating Costs
8. Supply Chain and Product Pricing
9. Capital Costs
10. Safety
11. Market acceptability

Answers to the questions under each heading are evaluated for their technical risk and commercial viability and the output from each section is then displayed as a graph.

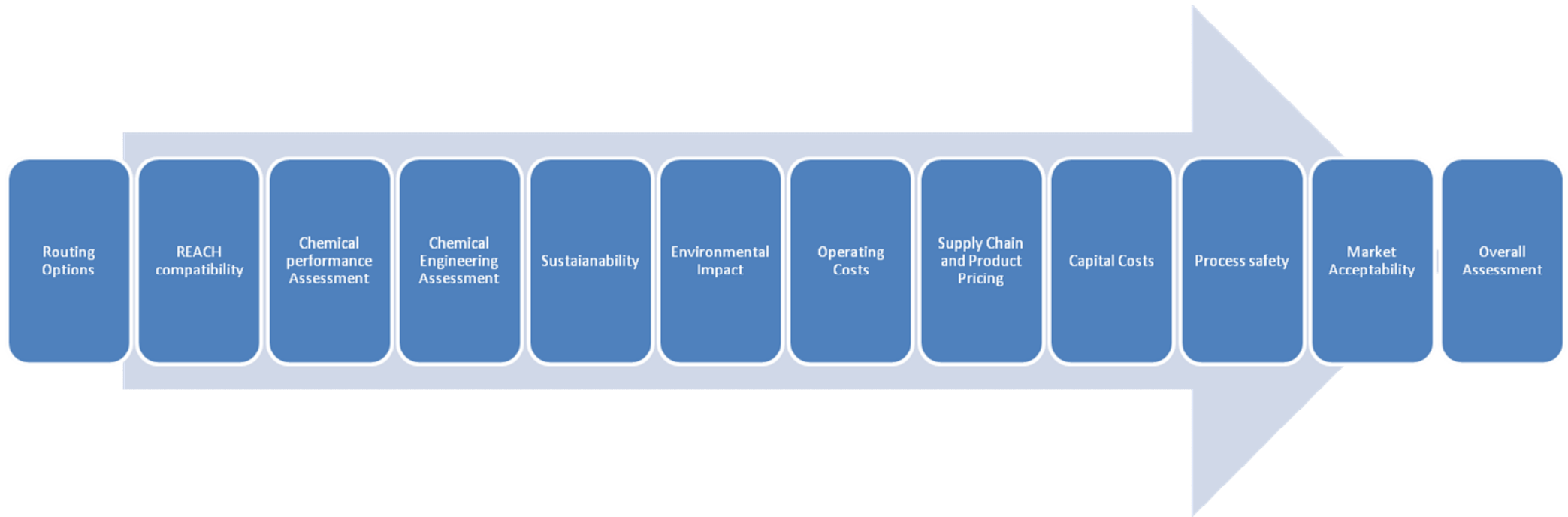
The individual answers to these questions are then correlated to provide a final 'Overall Assessment'. This output is also displayed graphically.

Interpretation of Section Scoring:

If your score:

1. Is in the RED section – then you have a high risk and/or low viability
2. Is in the YELLOW section – then you have a medium risk and/or medium viability
3. Is in the GREEN section – then you have a low risk and/or high viability

D. Supply Chain Tool layout:



Sustainable Chemistry Database

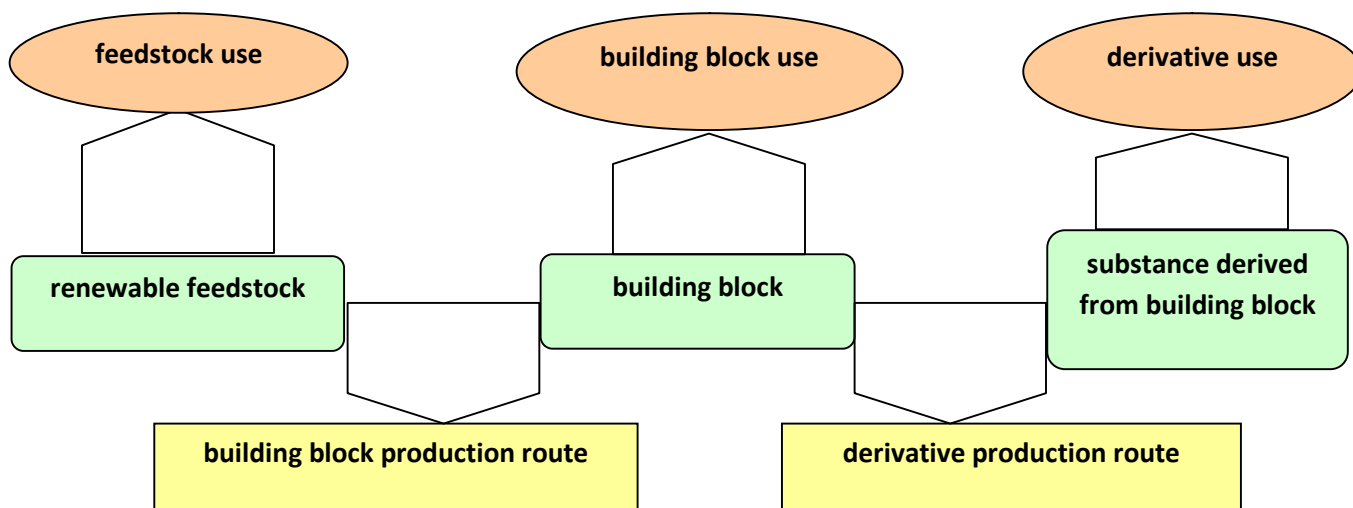
This tool aims to help SMEs develop more sustainable, both in REACH and environmental terms, alternatives to their current product portfolio

What is this tool about?

This database was developed to help SME users search for more sustainable, biomass derived replacements for chemicals they are producing, importing and or/using, in the following cases:

- 1) A specific substance does not comply with the toxicology and safety requirements of REACH and ends up being removed from the market.
- 2) A substance becomes economically non-viable due to the high costs of the testing and/or legislation procedure required for registration, and/or
- 3) The SME user aspires to lead the trend of “greening” chemistry under public pressure, thus raising awareness to gain a competitive advantage.

The data on the substances is held in an easily interrogated database format. Substances are classified as *feedstocks*, *renewable building blocks* and *substances derived therefrom* and each classification is searchable.



Structure of the database

It is possible to browse the database under each of these three headings (feedstock, building block or derivative) and to get basic information on the use of these substances and on the current feasibility of its biomass based production.

This will be extended to incorporate browsing/searching by use and production data.

The data is based on previously published studies and supported by academic and patent literature. Additional information is found in the references that are supporting the information contained in the database. Web links to the references are to be added whenever possible.

Who can use this tool?

A person with a chemistry background can use the tool.

Additional materials within this tool

This tool will shortly contain several examples of more sustainable substitutes, evaluated by criteria previously established by the Sustainable Chemistry team.