Reference:

O. Reiff-Musgrove, *Introduction to the ESA REACH Tool,* 4th ESA REACH Workshop, ESA HQ Daumesnil, Paris, 18th October 2022

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Introduction to the ESA REACH Tool

A Digital Materials Obsolescence Management Tool

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18th October 2022 | 4th ESA REACH Workshop | ESA HQ Daumesnil, Paris

Introduction to the ESA REACH Tool
Agenda

1. Background
2. Concept
3. Overview of features
4. Analysis
5. Conclusions

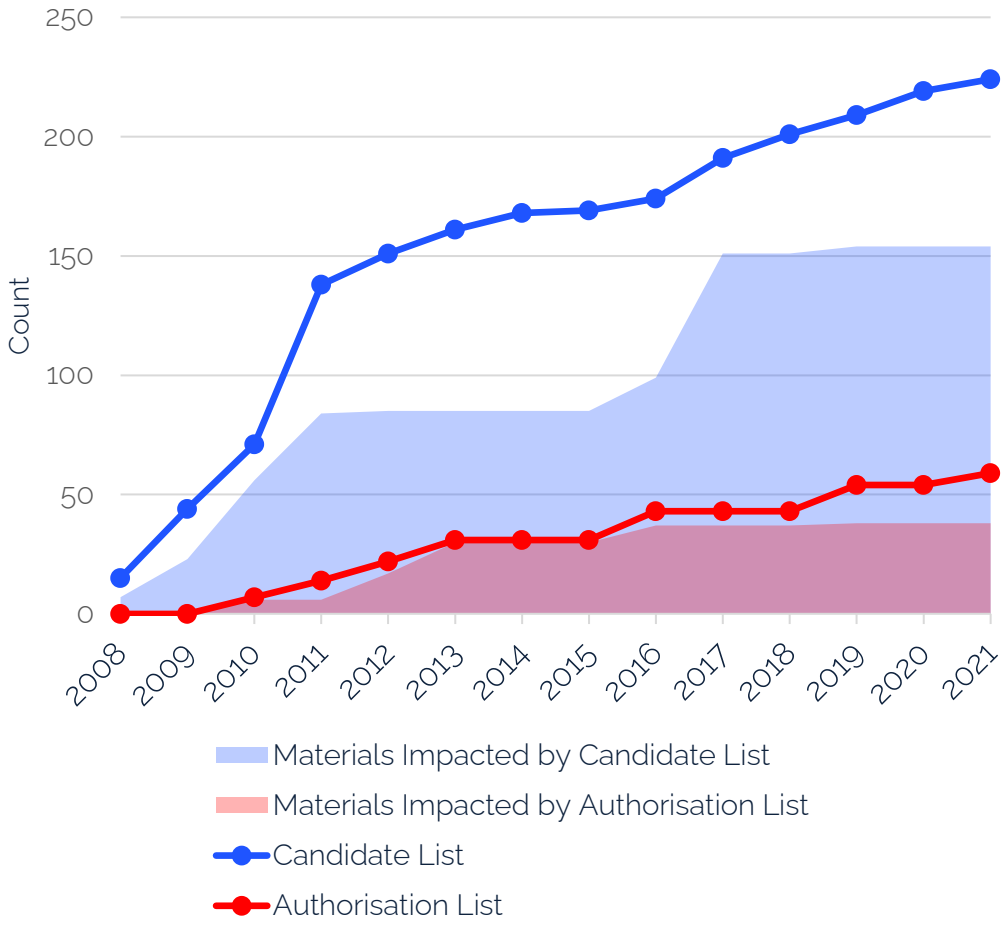
Background Obsolescence Tracking

- Each update to a REACH substance list creates a possible risk of obsolescence.
  - Authorisation and Restrictions Lists being the highest
  - Candidate and CoRAP offer an insight into the future

Previously at ESA…

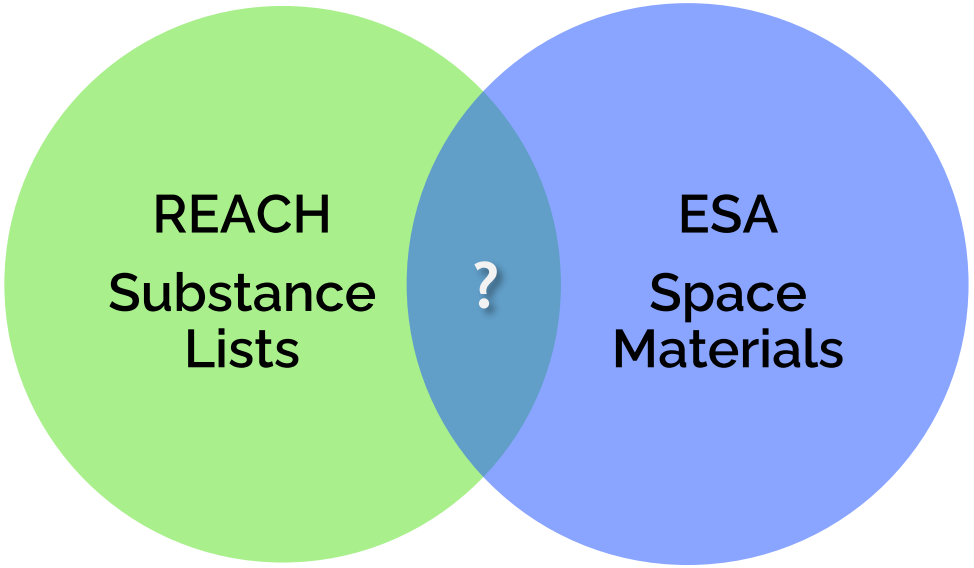
- Obsolescence
  - Little forecasting, exposure analysis performed on each update.
- Compliance
  - Manual work to look through Material Safety Data Sheets (SDSs) in a Declared Materials List (DML) looking for impacted substances

- Error-prone and burdensome (yet repetitive) process



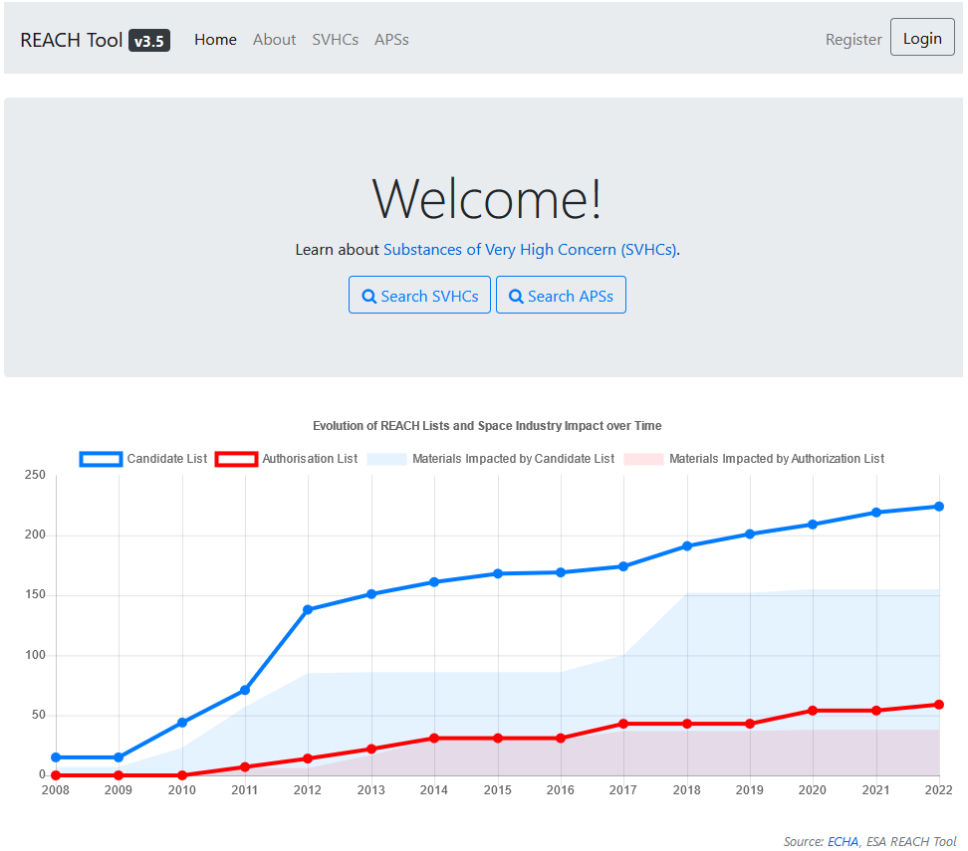
Evolution of entry count in relevant EU REACH lists and subsequent space relevant materials impact over time, based on the bill of materials in the ESA REACH Tool.

Background Automation



- ✓ Automate REACH substance list monitoring
- ✓ Automate REACH list impact assessment
- ✓ Automate materials obsolescence risk management

ESA REACH Tool



Source: ECHA, ESA REACH Tool

Background EU REACH Substance Lists

Space-relevant EU REACH Substance Lists

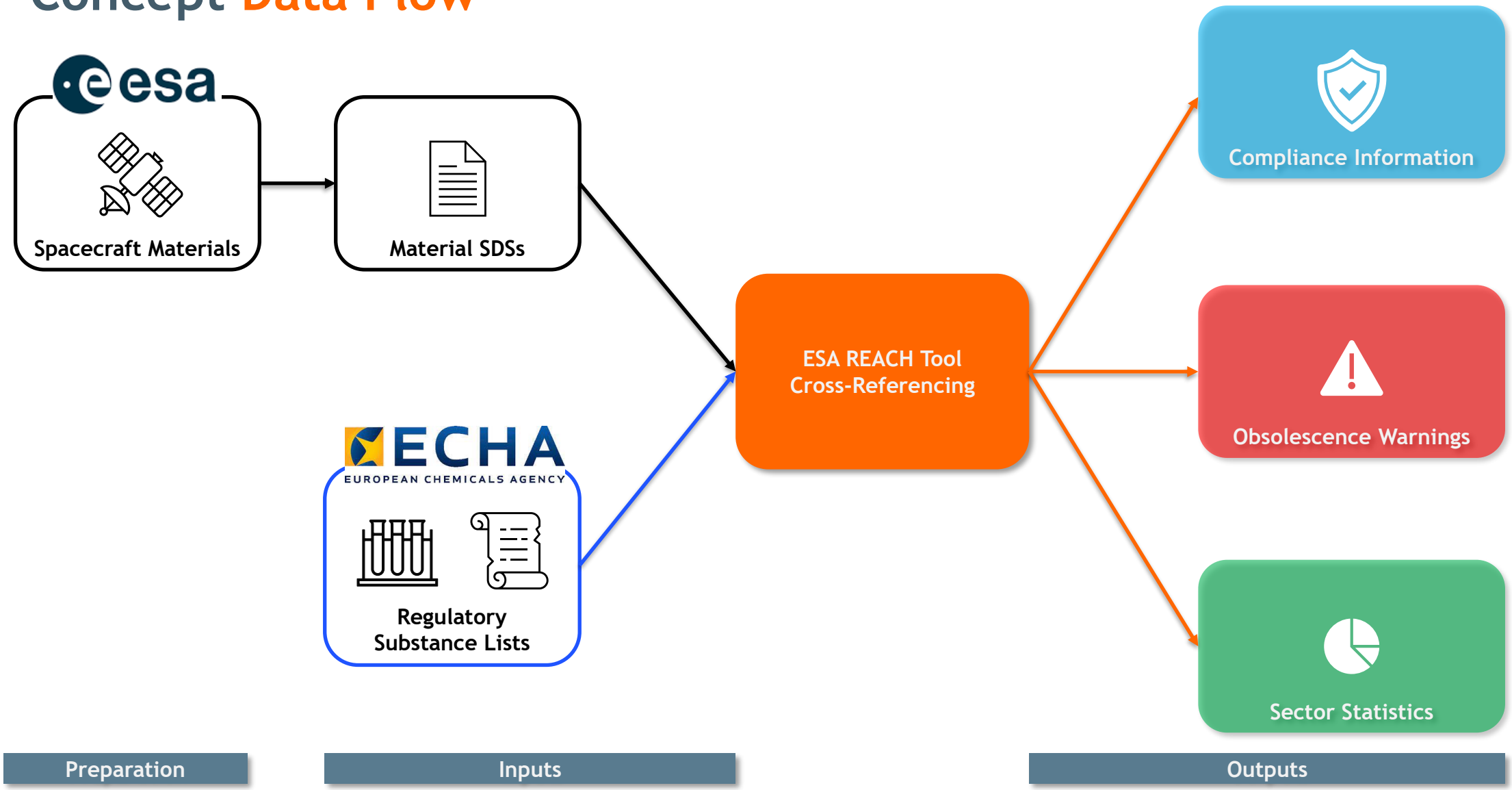
	CoRAP	Candidate List	Restriction	Authorisation
Compliance Obligations	None	Reporting duties	Restriction on certain uses	Ban without authorisation
Obsolescence Risk	Low	Medium	High* (for ban)	Very High
Update Frequency	1x/year	2x/year	No schedule	No schedule
Entries (Δ 2022)	386	224 (+5)	71	59 (+5)

*Restriction entry text specific

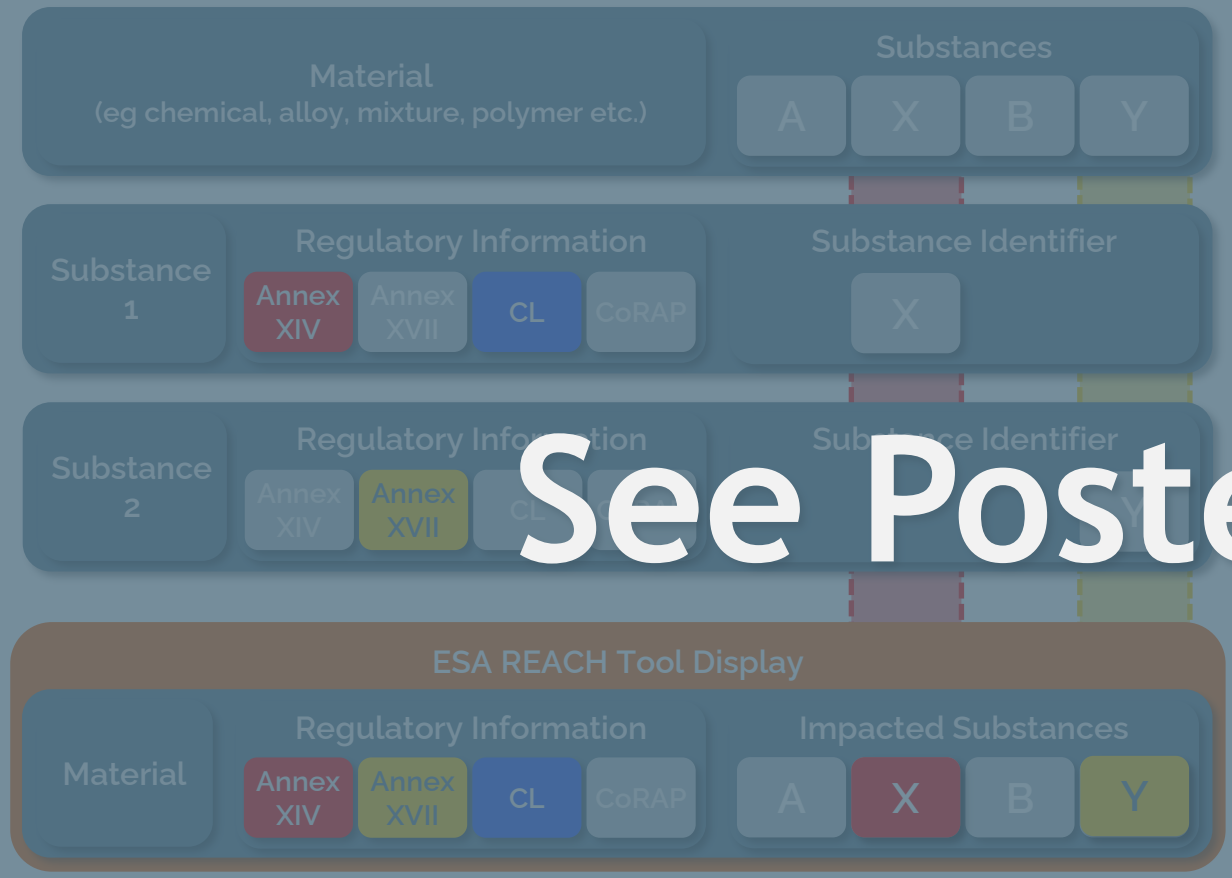
Multiple regulatory updates each year from EU REACH alone!

CoRAP = Community Rolling Action Plan

Concept Data Flow



Concept Cross-Referencing In Detail



Material Content (SDS)

Regulatory Status of Individual Substances

See Poster!

Dynamic Cross-Reference

Material Regulatory Status

Schematic demonstrating how the ESA REACH Tool provides REACH regulatory visibility through the process of dynamic cross-referencing.

Concept Application

MAP PU1 Base	12	EU	03/12/2018	29/07/2022	Map Space Coatings	17/10/2018	78-93-3 108-88-3 108-88-3 90-72-2 111-55-7

Contains...

SVHC Name	CAS Numbers	Reasons	Regulatory Status
Butanone	78-93-3	Suspected Reprotoxic	CoRAP | Information requested
Toluene	108-88-3	CMR	CoRAP | Concluded; Restrictions List | Indirectly Space Rel. Restr.

Showing 1 to 2 of 2 entries

Previous 1 Next

What does this mean?

Production of MAP PU1 Base has a **high risk** of becoming **obsolete** due to REACH.

Regulatory Compliance

Based on the known composition, indexed from the SDS with the above revision date, the REACH Tool has identified that MAP PU1 Base contains a SVHC.

MAP PU1 Base contains a substance found in the **Restrictions List** (REACH Annex XVII), therefore **action may be required**. Restrictions may be any condition for or prohibition of the manufacture, use or placing on the EEA market. Please consult the ECHA website for further details on the specific entry that covers the substance(s) in question, the latest EU REACH Safety Data Sheet provided by the substance/mixture supplier and – if in doubt – regulatory experts.

Concept Application

★ ARADUR HY 905 New	10	EU	07/10/2022	07/10/2022	Huntsman	24/05/2018	85-44-9 85-42-7 85-43-8 2210-79-9 ✓

Contains...

SVHC Name	CAS Numbers	Reasons	Regulatory Status
Cyclohexane-1,2-dicarboxylic anhydride	85-42-7	Respiratory sensitising properties (Article 57(f) - human health)	Candidate List | Inclusion Date: 19/12/2012

Showing 1 to 1 of 1 entries

Previous 1 Next

What does this mean?

Production of ARADUR HY 905 has a **medium risk** of becoming **obsolete** due to REACH.

Regulatory Compliance

Based on the known composition, indexed from the SDS with the above revision date, the REACH Tool has identified that ARADUR HY 905 contains a SVHC.

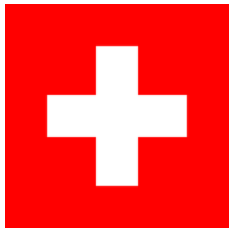
ARADUR HY 905 contains a substance found in the **Candidate List** of Substances of Very High Concern for Authorisation*, therefore **action may be required.** If the material (qualifying as article as such or assembly of articles) containing this substance above 0.1 % weight by weight in the article is being supplied to another entity in the EEA, the EEA supplier is required to provide a REACH Article 33 Declaration. Furthermore, as from 5 January 2021 EU suppliers of such articles/assemblies (including EU importers) are required to submit a SCIP notification based on Article 9 of the EU Waste Framework Directive in association with the applicable national law.

*Note: In a worst-case scenario, the substance may enter the Authorisation List within about 2 years from the Candidate List inclusion date, banning its use within the EEA without authorisation after the specified sunset date.

Overview
Tracked Substance Lists

Automatically Tracked Substance Lists:

- EU REACH Candidate List
- EU REACH Authorisation List (Annex XIV)
- EU REACH Restrictions List (Annex XVII)
- ECHA Community Rolling Action Plan (CoRAP)



Other Tracked Substance Lists:

- UK REACH Candidate List
- UK REACH Authorisation List
- UK REACH Restriction List

- Swiss ChemO Candidate List
- Swiss ORRChem Authorisation List
- Swiss ORRChem Restriction List

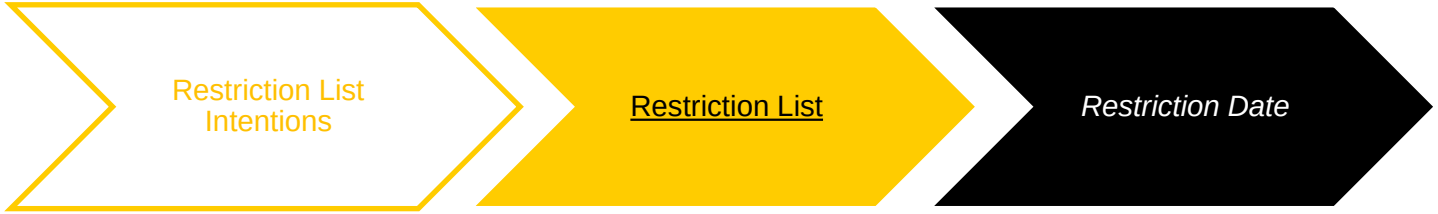
- EU REACH Candidate List Intentions
- EU REACH Restriction List Intentions
- EU REACH Recommendations for Authorisation

Overview Improved EU REACH Fidelity in the Tool

Possible Restriction or Authorisation Precursor

Aspects may change with the **CSS REACH revision!**

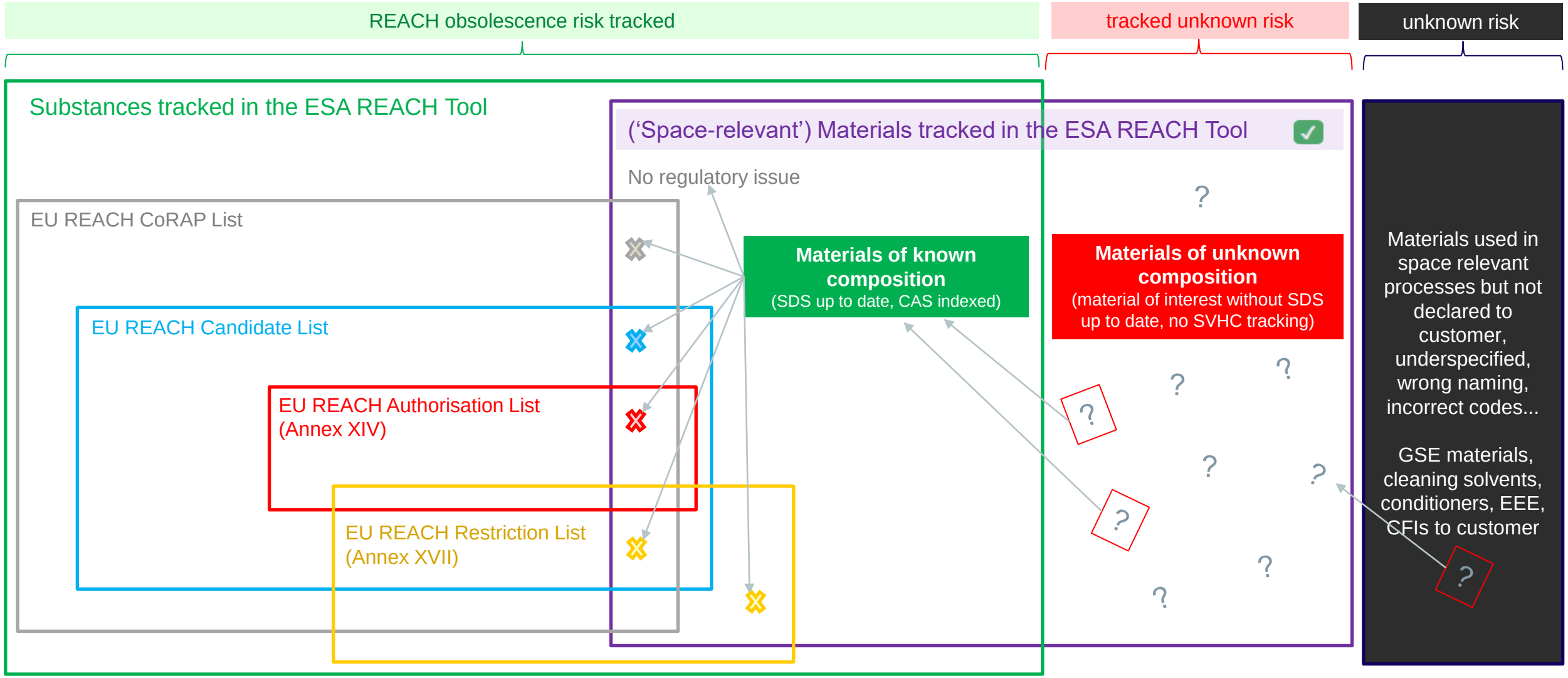
Possible Restriction Path



Possible Authorisation Path

Source: MPTB List of Lists

Overview Obsolescence Risk

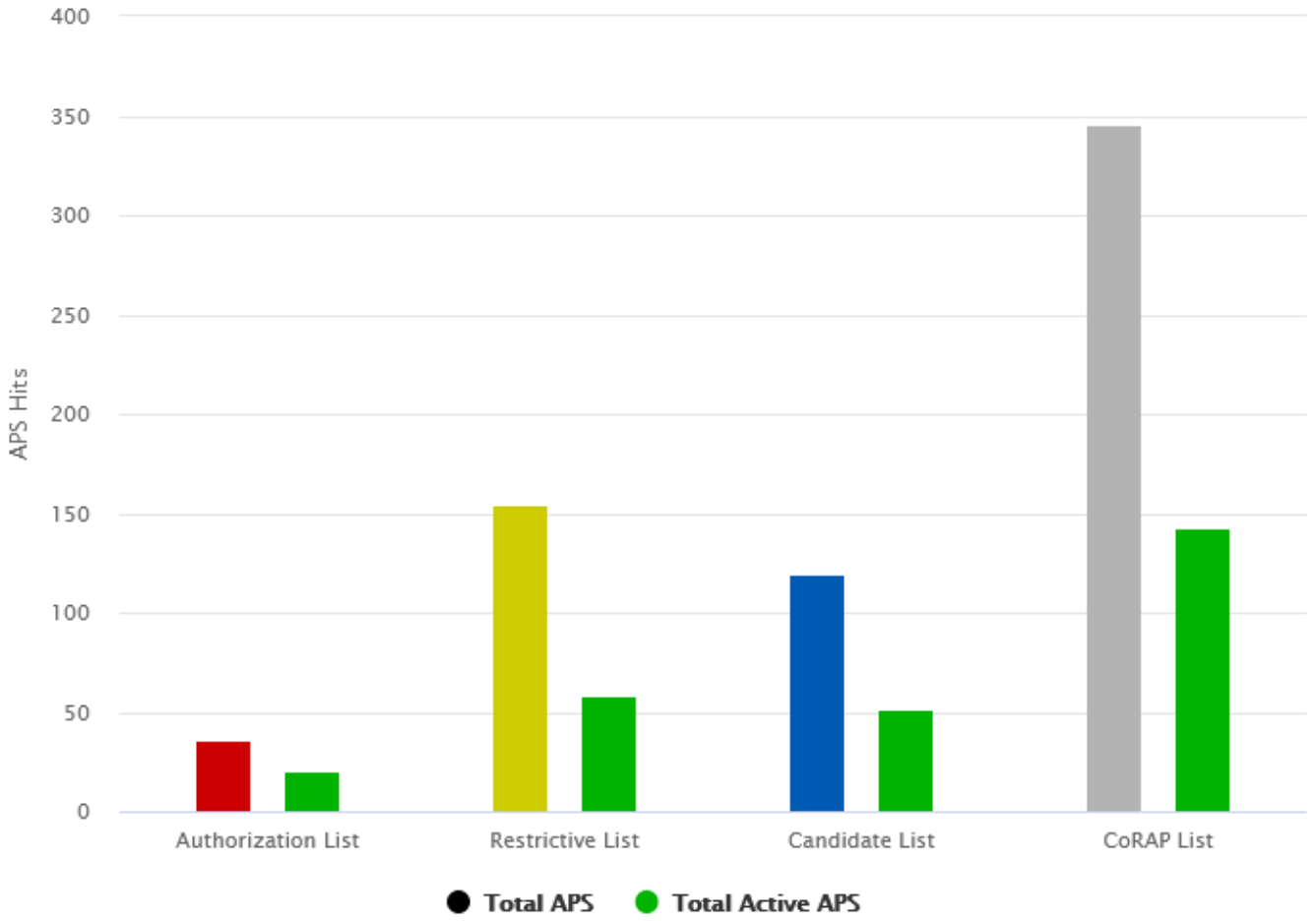


Note: It is impossible to perform a REACH cross-check/regulatory risk assessment if the CAS Numbers are not input to the ESA REACH Tool database

Analysis Space Materials Statistics

726
Substances

907
Materials



Source: ESA REACH Tool

Analysis Group Entries

- Manually analysing group entries is very **time-consuming…**
- **No limit** to the group entry size that can be analysed
  - See right (Restriction 27)
- Trend for more group entries
- **Wide-scope PFAS** restriction upcoming
  - 4700 to 12000 CAS Numbers to be analysed

Substance Name Nickel and its compounds

EC Numbers -

CAS Numbers

7440-02-0 27016-75-7 12795-30-1 1303-22-6 12068-61-0 13477-70-8 67632-50-2 18283-82-4 24640-21-9 15699-18-0
7785-20-8 16122-03-5 4454-16-4 14177-51-6 14177-55-0 14216-75-2 14220-17-8 14264-16-5 14267-17-5 14332-34-4
14406-66-7 14428-08-1 14448-18-1 14507-36-9 14516-71-3 14522-99-7 14550-87-9 14708-14-6 14721-18-7 14874-78-3
14949-69-0 14998-37-9 15060-62-5 15317-78-9 15521-65-0 15586-38-6 18718-11-1 18721-51-2 20437-10-9 20543-06-0
21264-77-7 21784-78-1 22484-07-7 22605-92-1 25481-21-4 26043-11-8 27574-34-1 27637-46-3 28680-76-4 28984-20-5
29204-84-0 29317-63-3 30868-55-4 30947-30-9 31748-25-1 33882-09-6 34831-03-3 35884-66-3 36026-88-7 36259-37-7
15751-00-5 15780-33-3 15843-02-4 15843-91-1 15851-52-2 15852-21-8 16083-14-0 16337-84-1 16432-37-4 16812-54-7
12503-49-0 12519-85-6 12607-70-4 12619-90-8 12653-76-8 12688-64-1 12794-26-2 13001-15-5 13007-90-4 13138-45-9
13462-88-9 13462-90-3 13463-39-3 13478-93-8 13637-71-3 13654-40-5 13689-92-4 13770-89-3 13775-54-7 13842-46-1
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68784-84-9 68912-08-3 68958-86-1 68958-87-2 68958-88-3 68958-89-4 69011-05-8 69012-29-9 69012-50-6 69524-96-5
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1314-06-3 2223-95-2 3264-82-2 3333-67-3 3349-06-2 3349-08-4 3906-55-6 41476-75-9 42739-61-7 42844-93-9
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68016-03-5 68025-13-8 68025-40-1 68025-41-2 68052-00-6 68130-36-9 68133-84-6 68134-59-8 68186-85-6 68186-89-0
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131866-99-4 177997-13-6 13477-97-9 15629-92-2 10101-97-0 10101-98-1 34492-97-2 1314-04-1 12035-71-1 16039-61-5

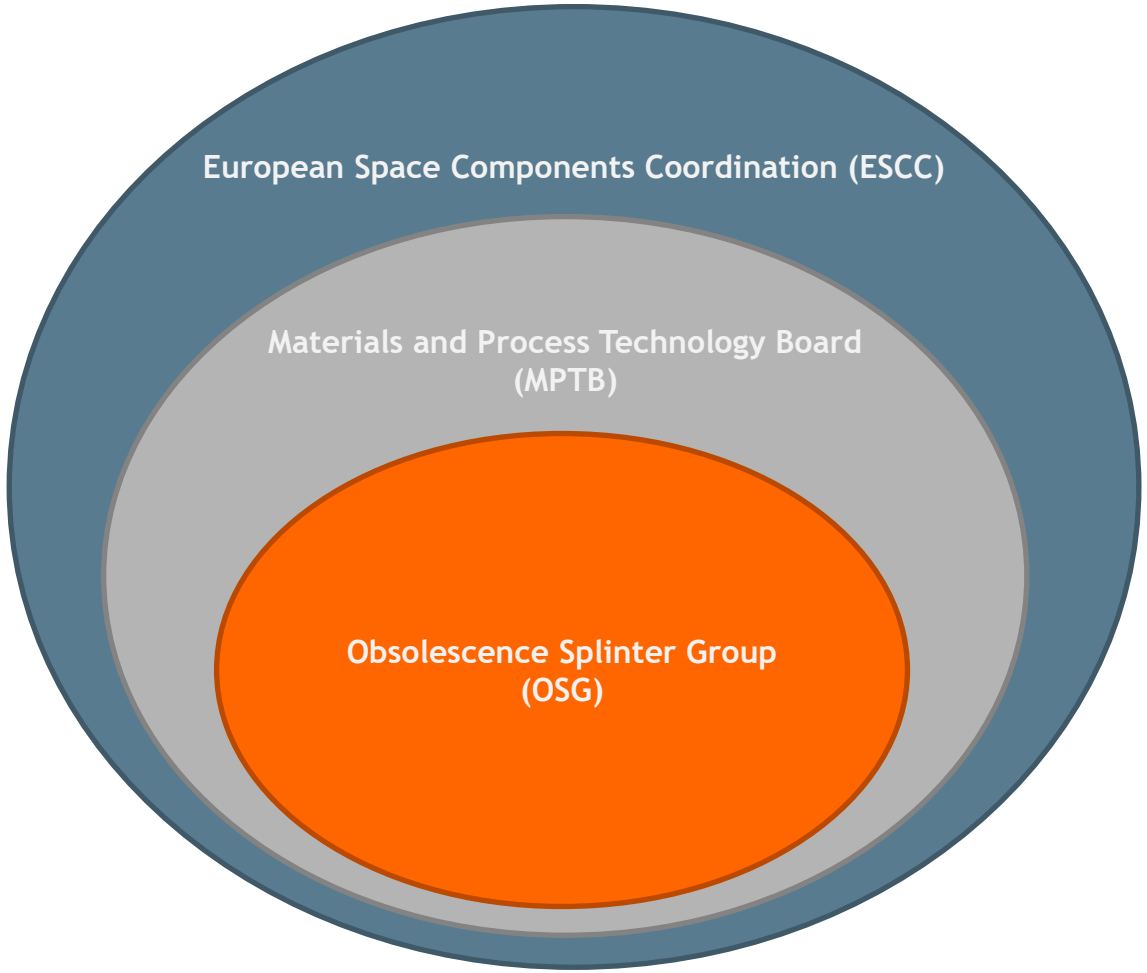
… >400 CAS Numbers

Conclusions
ESA REACH Tool Access

- Currently only available to ESA and the Obsolescence Splinter Group (OSG)
- **No confidential** information, data entry is entirely voluntary
- Working on a solution to give space **SMEs access**, express interest below:

To request access to the ESA REACH Tool, **please contact**:

reach.officer@esa.int
or scan the QR Code

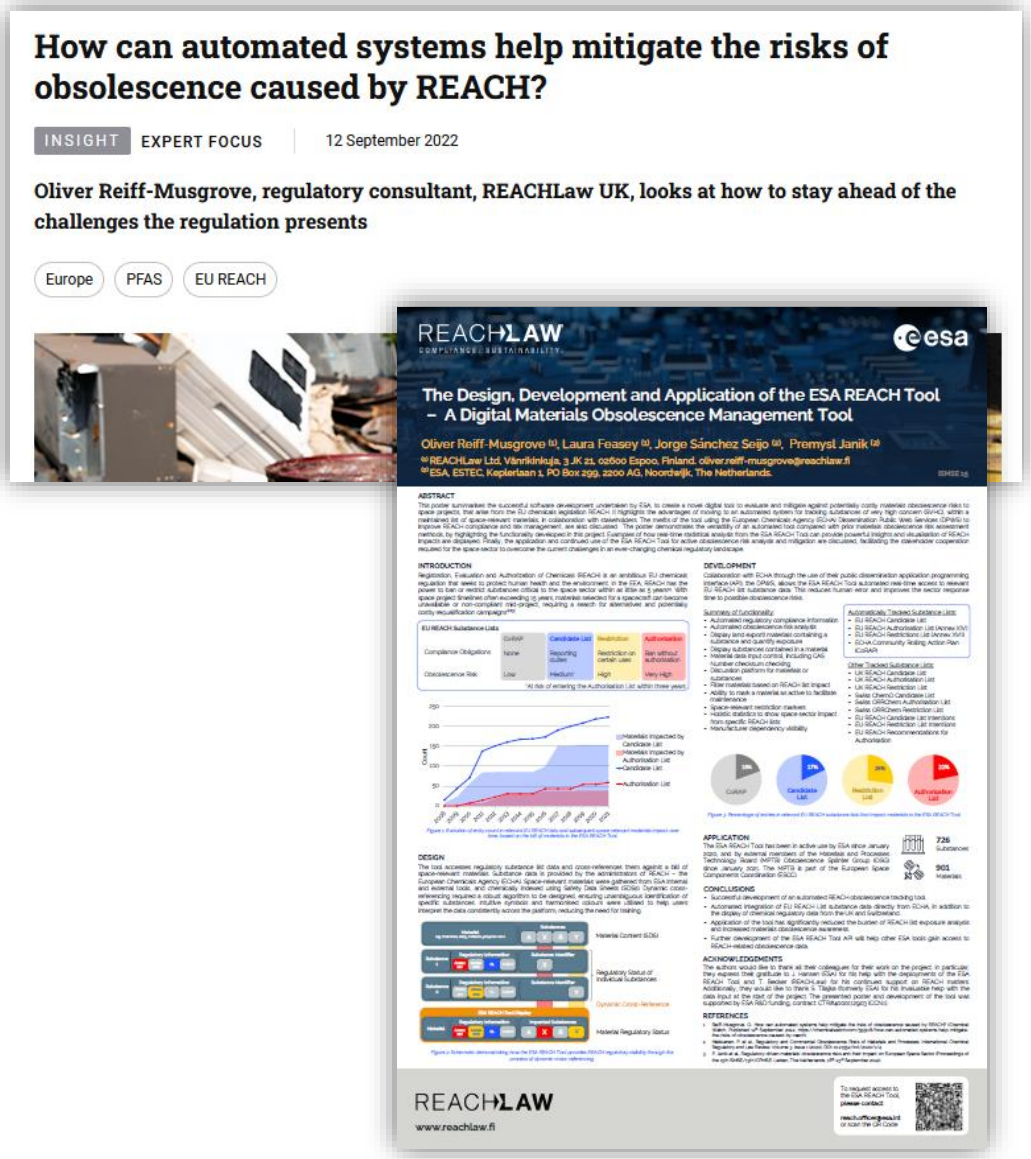


Conclusions Acknowledgements & Further Reading

I'd like to thank the following for their continued support on the ESA REACH Tool project:

- Jorge Sanchez Seijo (TERMA for ESA)
- John Hansen (TERMA for ESA)
- Laura Feasey (REACHLaw)
- Premysl Janik (ESA)
- Tim Becker (REACHLaw)

➢ For more information on automated materials obsolescence management systems, please read my article in Chemical Watch & Poster


How can automated systems help mitigate the risks of obsolescence caused by REACH?

INSIGHT EXPERT FOCUS 12 September 2022

Oliver Reiff-Musgrove, regulatory consultant, REACHLaw UK, looks at how to stay ahead of the challenges the regulation presents

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The Design, Development and Application of the ESA REACH Tool – A Digital Materials Obsolescence Management Tool

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Thank you for listening!

Any Questions?

Contact: oliver.reiff-musgrove@reachlaw.fi
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