



**ERA  
TECHNOLOGY**

**REACH and  
its impact on  
the aviation sector**

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**REACH and its impact on the aviation sector** **ERA  
TECHNOLOGY**

- About ERA
- Global context and trends
- What is REACH
- What obligations fall on the aviation sector
- How REACH is impacting the aviation sector
- Steps to compliance and reducing business risk

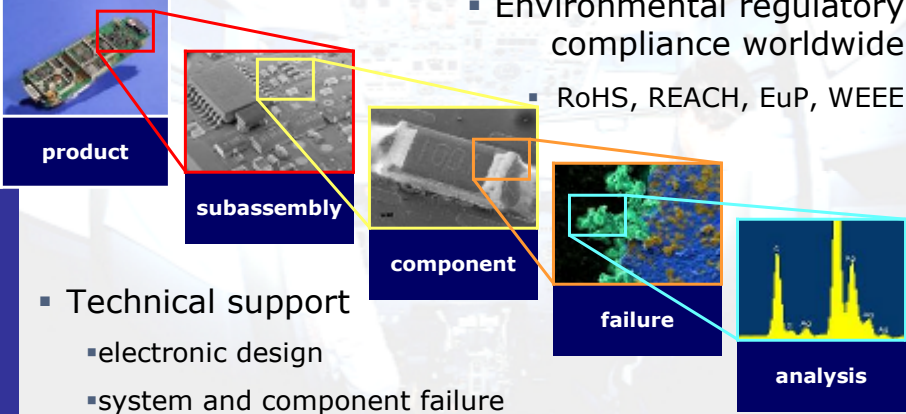
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## About ERA




- Environmental regulatory compliance worldwide
  - RoHS, REACH, EuP, WEEE
- Technical support
  - electronic design
  - system and component failure



**We help many hundreds of manufacturers on global environmental and reliability issues**


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## Introduction

*- Global context and trends*



- Producer responsibility
  - beyond making, selling and maintaining the product
- Reduction of hazardous substances
- Tightening of end-of-life requirements
- Reduction of life cycle impact
- Proliferation of requirements

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## REACH and its impact on the aviation sector



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## Registration, Evaluation, Authorisation and Restriction of Chemicals



- REACH Regulation (EC) No 1907/2006 + Directive 2006/121/EC
- What is REACH?
  - new consolidated EU regulatory framework for chemicals
    - replaces 40 existing pieces of legislation
    - applies to all products imported or sold in EU
- Places onus on industry
  - No data – no market
- Entered force 1 June 2007

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## What is REACH trying to achieve?




**Registration,  
Evaluation,  
Authorisation  
and  
Restriction  
of  
Chemicals**

- Reduction in negative impact on health and the environment through exposure to chemicals
- Restrict use of the most hazardous substances > encourage use of safer alternatives
- Better data on substance properties
- Provide better information to users
- A level playing field

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## REACH - common misconceptions in the aviation sector




- ✗ REACH is about chemicals – nothing to do with us
- ✗ REACH only affects the EU
- ✗ It's too early to do anything yet
- ✗ REACH wah?

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### Comparison of REACH with EU RoHS



RoHS	REACH
<ul style="list-style-type: none"> <li>▪ Producer responsibility</li> <li>▪ Six substances</li> <li>▪ Restriction on all substances covered</li> <li>▪ Sector specific finished products (electrical)</li> <li>▪ Applies to products sold in EU</li> <li>▪ Self declaration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Supply chain responsibility</li> <li>▪ 30,000 + substances</li> <li>▪ Some restrictions + many other requirements</li> <li>▪ ~ All hardware products, materials &amp; processes</li> <li>▪ Applies to exports too</li> <li>▪ Complex &gt; evidence and formal approval</li> <li>▪ Timetable rolling out over 18 years</li> </ul>
<ul style="list-style-type: none"> <li>▪ Single date of entry into force</li> </ul>	

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## Obligations on the aviation sector



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**Impact**  
-1-

As a **“downstream user”** of substances/preparations

**Impact**  
-2-

As an **“importer/producer”** of articles

Focus of the rest of this talk

**Impact**  
-3-

As an **“importer”** of substances/preparations

Only direct impact on non EU manufacturer

**Impact**  
-4-

As a **“distributor”** of substances/preparations


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## Impact -2- As an “Importer/producer” of articles

### - What is an article?




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- “an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition”



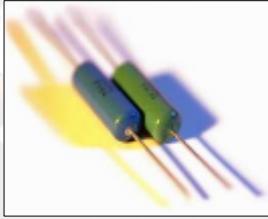
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## Main issues impacting aviation sector

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<b>Accelerated obsolescence</b>	<ul style="list-style-type: none"><li>▶ Substance restrictions: RoHS, batteries, REACH</li><li>▶ Enforced redesign: 2% of substances? &gt; preparations &gt;&gt;&gt; components</li><li>▶ Is reliability and function the same?</li><li>▶ Reapproval required?</li></ul>
<b>Process change</b>	<ul style="list-style-type: none"><li>▶ Capturing REACH requirements (substances)</li><li>▶ Building into product development</li><li>▶ Continued safe use</li></ul>
<b>Maintainability</b>	<ul style="list-style-type: none"><li>▶ Are parts available?</li><li>▶ Do they perform the same?</li><li>▶ Is it legal to use them?</li></ul>

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## Substances nominated as SVHCs and uses identified by ERA

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- Anthracene
- 4,4'- Diaminodiphenylmethane
- Dibutyl phthalate (DBP) \*
- Cyclododecane
- Cobalt dichloride
- Diarsenic pentaoxide
- Diarsenic trioxide \*
- Sodium dichromate, dihydrate
- 5-tert-butyl-2,4,6-trinitro-m-xylene
- Bis (2-ethyl(hexyl)phthalate) (DEHP) \*
- Hexabromocyclododecane (HBCDD) \*
- Alkanes, C10-13, chloro (SCCP) \*
- Bis(tributyltin)oxide (TBTO) \*
- Lead hydrogen arsenate
- Triethyl arsenate
- Benzyl butyl phthalate (BBP) \*

**Selection of uses in or for manufacturing engineering products**

- radiation detectors
- PU foam and resin
- epoxies
- specialist polymers
- plasticisers in plastics, varnishes and papers
- inks; adhesives
- lubricating oils
- pigments and driers
- copper, lead and gold alloys
- GaAs semiconductors
- chromate passivation coatings
- halogenated flame retardants and more

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## Recommended actions



- Strategic
  - Gain top level buy-in and agree reporting
  - Appoint person responsible for regulatory compliance
  - Form team from relevant areas
  - Agree plan and metrics
  - Implement
- Start now!
- Get informed

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## Recommended actions




- Check your legal obligations
  - What obligations do you have?
  - Check against all possible roles you fulfil
    - Don't forget downstream user obligations and pre-registration
- Don't forget RoHS

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## Recommended actions





- Upstream
  - Audit your products and manufacturing processes
  - Look out for withdrawal of substances/components
    - check with suppliers
  - Do you use SVHCs (current or potential)?
    - check with suppliers
- Downstream
  - What are your customers demanding?
  - Develop a response


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## Support - ERA



 ERA REACH and RoHS guides for the engineering sector

 RE<sup>4</sup>view

- news and analysis covering all electrical product environmental legislation worldwide – RoHS, WEEE, EuP, REACH, Batteries etc.

 Technical support, training and audit

- Heathrow Conference 19-20 Nov 2008

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