



CSR, SEA and AofA
for defining the scope of the
application

Based on materials and first experiences

H. Waeterschoot

Content

- Relevancy of the « Use description »
- BIU/BDU
- Scoping of AofA and SEA
- Benefits of a tiered approach
- Conclusions

Each time from a *manufacturer's* and /or a *DU perspective* (if possible)

Use(s) identification

Questions :

- What **uses to defend?**
 - Manufacturers and users perspective :
 - What use is ***critical from an economic and technical viewpoint***
- ***Manufacturers*** perspective :
 - What uses do I want to keep in my portfolio ? And why
- ***User*** perspective :
 - What use is not (easily) replacable and the reason why
- **What's driving** the importance to defend the use application ?



Example : what uses to defend?

☞ **Lead compounds :**

- ⇒ Used for Stabilisers for Plastics
- ⇒ Used for Lead Batteries (mainly automotive)

☞ **Manufacturer's viewpoint:**

- ✓ Lead Batteries : safe application, large volume, high technical performance at low cost and high societal value

☞ **Users viewpoint:**

- ✓ Stabilizers : voluntary phase out given technical performant alternatives available
- ✓ Lead Batteries : high technical performance at low cost

Conclusions from the « use description »

HELPS to DEFINE :

- 1. What is defensible** from a technical/commercial and medium to long term viewpoint
 - So what Uses to prepare an AA
- 2. Common interests** of manufacturers and users
 - So what parts of the AA could be conducted commonly
- 3. Define the Broad description of use**
 - How to best describe them
- 4. Identify the boundaries** between Uses/Applications
 - How many to defend?
- 5. Identify areas of Confidentiality (CBI)**(technical performance, cost, ...)
 - Where can't we work together

Broad Information of Uses

CRITICAL : from the start.... **define BROAD Information / Description of USES carefully**, considering:

- Need for detail on Technical Specifications
- Balance with CBI
- Can a relevant Impact Assessment be performed



SEA-AofA ECHA for defining the scope of the application

Broad Information of Uses

Example 1: *for a battery constituent*

- i. Battery constituent to charge rechargeable batteries* **OR**
- ii. Battery constituent to charge high density automotive starter batteries allowing cold start and available in > 1 mio t a year*

Example 2: *for a plating material*

- i. Substance used in electroplating* **OR**
- ii. Substance used in electroplating for specialised building applications in high corrosion conditions (sea water,...) compliant with the EC-building standard n° ...*

Example 3: *for use in building material*

- i. Substance used in ductile and maleable materials for roofing and gutters* **OR**
- ii. Substance used in ductile and maleable materials for roofing and gutters of historical buildings to ensure a corrosion resistance level and a life time performance > 100 y*

Conclusion : BIU is a key tool to focus and streamline the scoping of the AA and interests of manufactures and DU's

- i. would reduce n°of applications, allow users to group but easily challengeable by third parties and leading to complex and extensive SEA & AofA's (costly and time intensive)*
- ii. focus the SEA and AofA's, focus the third party consultation but increase n°of applications and more splitted Consortia*

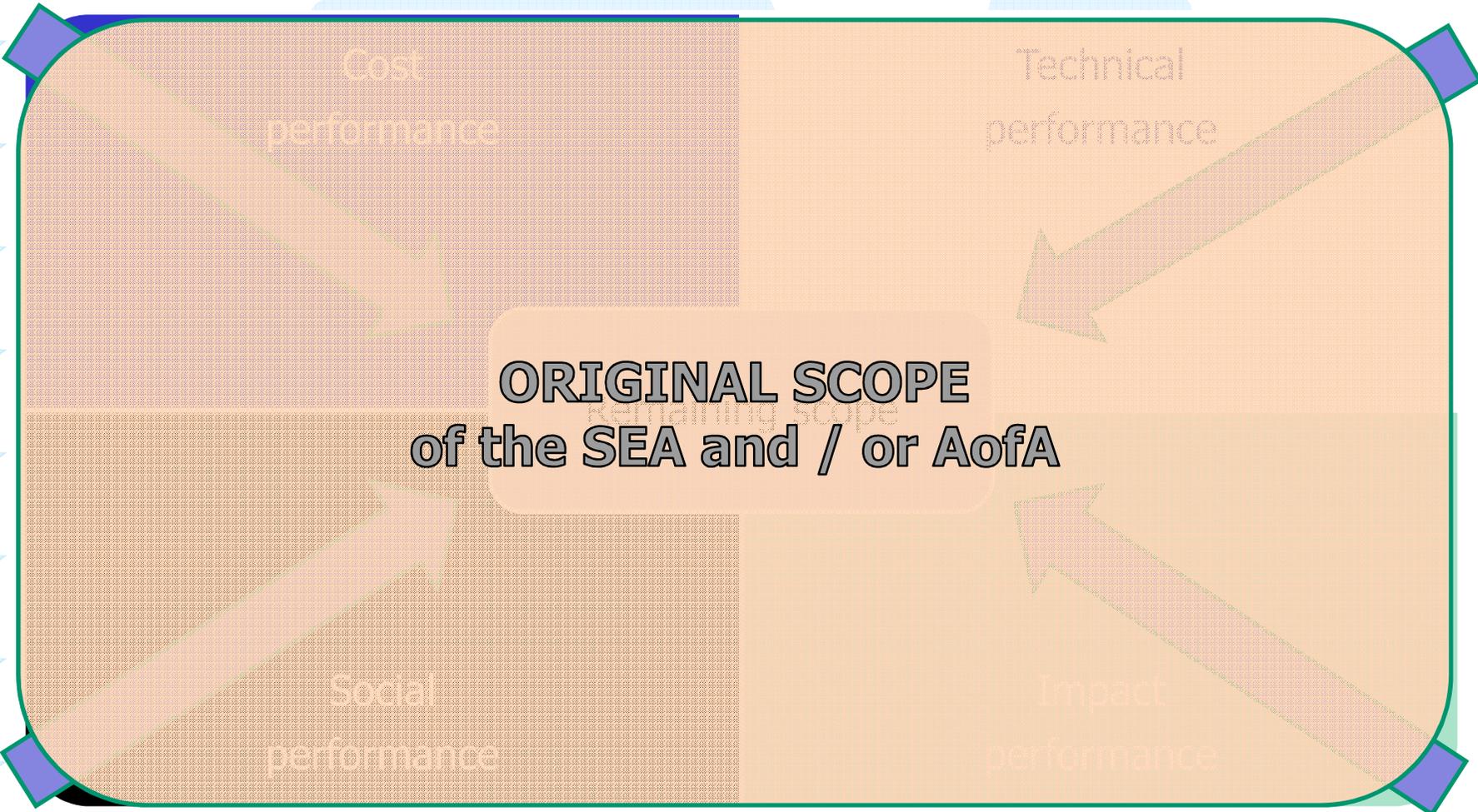
Scoping the AofA and SEA



Walk before running : *the feasibility phase*

- ☞ Start from a « draft » **BIU/BDU**
- ☞ Define a **ROBUST baseline scenario** which is realistic !
 - ✓ Recognizing the impact of the candidate list or ongoing restrictions
 - ✓ Technical trends and spontaneous occurrence of alternatives
- ☞ Use an **alignment approach** to reduce the scoping of AofA or SEA, e.g.
 - ✓ Simple: by identifying possible responses to challenge the AA, eg
 - ✗ Article can be imported without significant cost impact
 - ✗ The product/service will still be made in the EU using an alternative substance
 - ✓ Qualitative/quantitative : alignment approach (see next slide)
- ☞ Most scoping work is **not Confidential** so allows better for DU contributions

Alignment approach to define/reduce scope of AofA or SEA



Scoping case: metal catalyst used in steam reforming

☞ **Steam reforming:** main industrial process for producing hydrogen. It is applied at very large scale for hydrogenation processes in refineries and chemical industry

☞ Estimated 1400 plants worldwide

☞ Currently ***all commercial steam reforming*** catalysts are **metal X-based**.

Identified **alternatives:**

☞ Ruthenium (Ru) based catalysts

☞ Platinum group metals (PGM) catalysts: platinum, palladium, iridium, rhodium

Scoping Case: steam reforming

Technical performance

- ☞ PGM's are more active, more poison resistant and have a longer lifetime

Metal	Cost performance	Other performance
Metal X		
Ruthenium		
Platinum		
Palladium		
Rhodium		

Raw material	Catalyst product
Ru (III) nitrosyl nitrate*	ruthenium oxide*
Oxid. Solid (H272)	Skin Irr. H315
Skin Corr. 1A (H314)	Eye irr. H319
Eye Dam. 1 (H318)	
Met. Corr. 1 (H290)	

Cost performance and impact assessment

- ☞ Others than Ruthenium are not considered feasible alternatives.

Other performance

- ☞ Based on availability...no reasonable substitute seems available

Case: steam reforming

Conclusion:

Technically Ru could be used,

- ✓but increased demand will strongly influence market price of the metal.
- ✓Ru-catalysts will quickly become too expensive for a cost-effective operation.

Ru and PGM seem from a hazard point of view acceptable.

Downstream consequences of substitution could be significant:

- ✓ affecting the removal of sulphur
- ✓Technically compromising many downstream refinery processes.

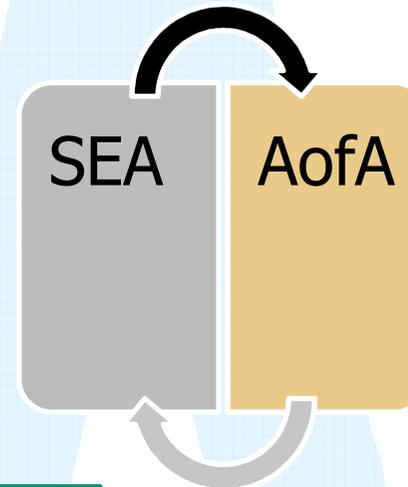
Currently no suitable alternatives to Metal X based catalysts seems available! => SO a GOOD case to ask an AA for

Conduct SEA-AofA in a Tiered way

NON TIERED

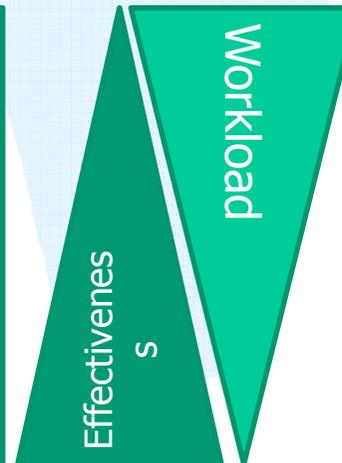


TIERED



Metal X catalyst example:

- Gather alternatives
- Assess TP of all alternative
- Gather cost data on X and alternatives
- Compare Impact of X and alternatives
- ...

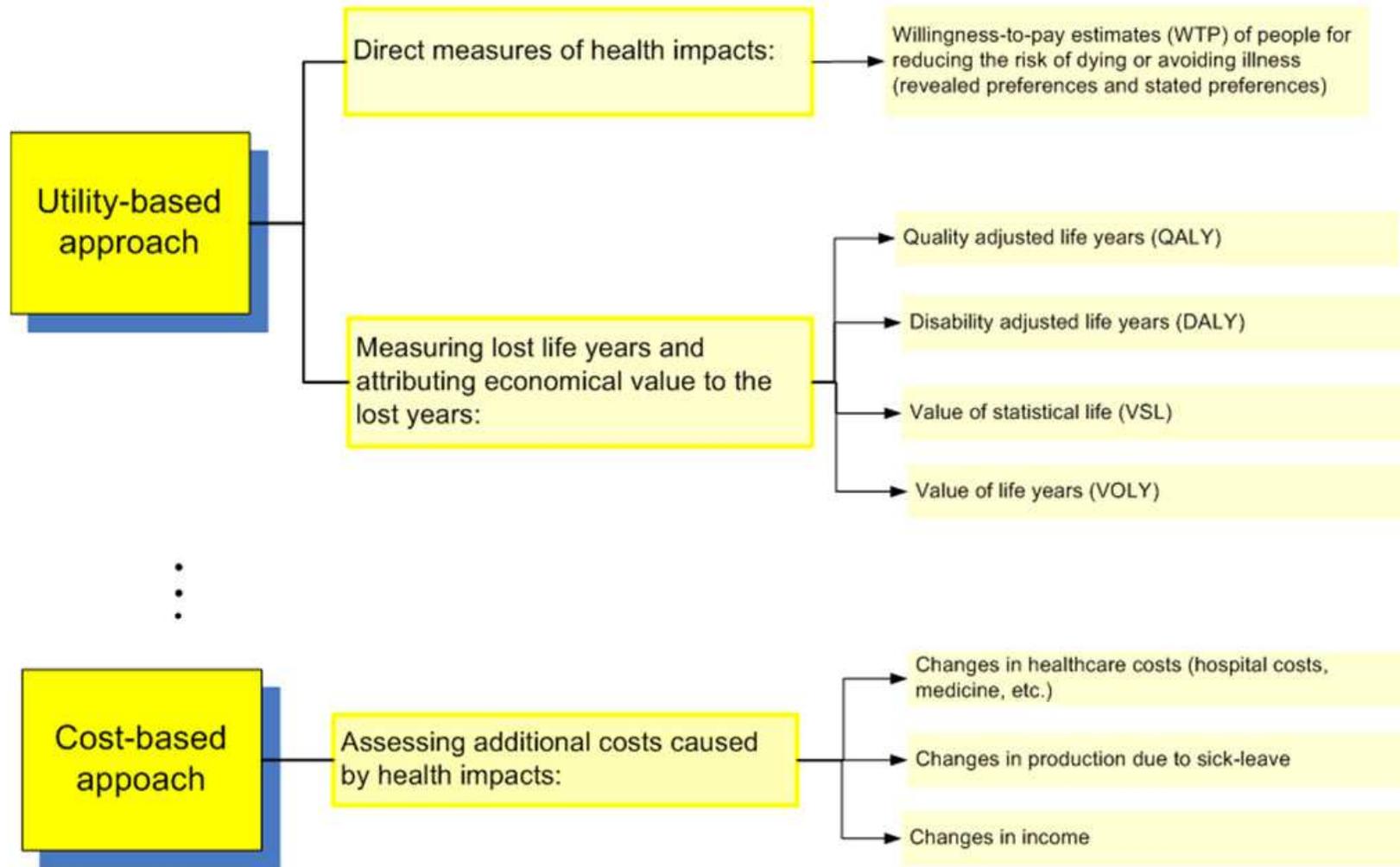


Metal X catalyst example:

- Define TP
- Compare TF of alternatives
- Compare Impact of X and remaining alternatives
- Gather cost data on X and remaining alternative

Valuation of HH impacts

Choose your SEA HH impact assessment concept based on the most appropriate model for the remaining options



Conclusions

- ☞ Define the **Technical performance** as precise as possible given it guidance CBI area's, collaboration potential, BIU, ...
- ☞ Conduct your **BDU or BIU in a tiered refinement** mode together with DU's to achieve the right balance between CBI/workload
- ☞ **Scoping of AofA's and SEA's** allows focuss on the real drivers
- ☞ **Tiered and interactive approaches** in SEA and AofA increases effectiveness and avoid extensive data gathering and CBI and allows for refining the BIU
- ☞ **Choosing an optimal SEA-impact model** for remaining alternatives makes the outcome easier to interpret

STRIVE FOR KISN't
(Keep It Simple but NOT sTupid)