Eurometaux
European Association of Metals

RMOA Role play

Purpose - Suggested approach - Example

Se Al Cu Ni Pb Sn Zn Au Ag Pt Sb W Be Si Cr Co Mo Ge V Mn Ir Ru Rh Ta

A Role Play introducing RMOA thinking

PURPOSE

Get participants acquainted with the logics and holistic nature of an RMOA exercise: i.e. introduce them to the complexity of considering value chain parameters in chemicals risk management

APPROACH

A role play is proposed where

- An **imaginary substance** is proposed for discussion. A rough profile is provided covering toxicology (SVHC criteria incl. equivalent concern), use and exposure
- Participants are invited to **defend the interests of another actor in the value chain than the one he or she normally represents.**
- **A moderator launches** the discussion and voices regulator concerns or broader societal issues relevant to the substance
- **The moderator(s) debrief(s) the 'plenary' on what emerged during the role play or was ignored as well as on the dynamics** between actors representing different interests.

A Role Play introducing RMOA thinking

PRACTICAL SUGGESTIONS

1. **Organise small groups** (6 to 7 people maximum) to discuss one or several parts of the value chain. Depending on the number of participants, the groups will bring together participants with manufacture and downstream user roles as well as 'homogeneous' groups (only manufacturers e.g.). A 'homogeneous' group may allow to vividly show that it is difficult to imagine solutions acceptable for a value chain from the point of view of a single segment.
2. **Ask participants to play a role:** represent and defend the interests of a particular segment of the value chain of an imaginary substance.
3. **Provide each one with a small briefing note** that also include company objectives such as e.g. "Company is very close to having an alternative available but doesn't want the competitors to know".

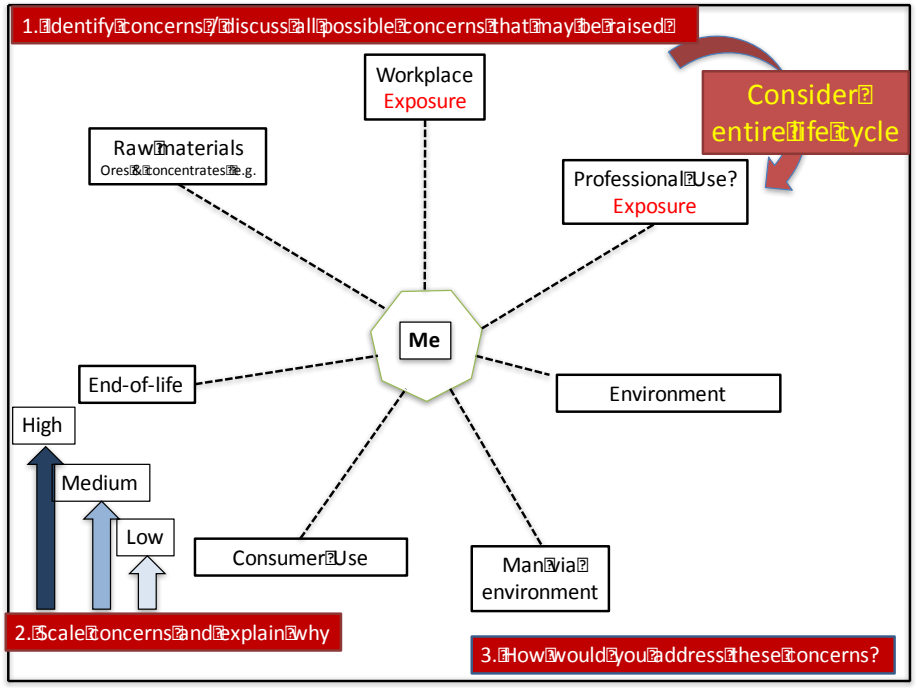
A Role Play introducing RMOA thinking

PRACTICAL SUGGESTIONS

4. **Provide each group with a moderator** – familiar with the RMOA tool – to initiate the discussion and challenge the views expressed by the participants, by pointing to elements they ignore or they are not aware of such as regulator or societal concerns.

5. **Guide the discussion towards** the identification of the concerns, their scaling and possible risk management strategy

(Slide provided in each Briefing pack)



A Role Play introducing RMOA thinking

PRACTICAL SUGGESTIONS

6. **Limit the role play in time (30 minutes e.g.),** inviting participants to imagine how they would address the concerns voiced by regulators, i.e. the substance has a profile that would qualify it for consideration as SVHC or for other RMOs.
7. **Encourage participants to consider their own take-away** from the role play.
8. **Conclude with a debrief in plenary**, where moderators provide feed-back on interesting elements of the discussion such as issues ignored (*on purpose?),* on the level of understanding between value chain actors etc. This proves to be an interesting introduction to the complex assessment of the issues, across value chains

Example of Role Play

EXAMPLE

To illustrate how to set-up the actors briefing, an example is provided in the following slides, based on an exercise performed during a Eurometaux Workshop.

In this example, **Briefing Notes/Memos** (series of slides per user type) were prepared and handed out to participants. They contained information on :

- Imaginary metal Me
- Toxicological profile (equivalent concern profile)
- Use profile (manufacturer or downstream user) with a diversity of issues that are specific to the value chain segments. 4 sectors were considered:
  - Manufacturers of the substance,
  - Downstream Users
    - Manufacturers of alloys / articles made of alloys
    - Plating companies,
    - Catalyst manufacturers.

Example of Role Play

FINAL REMARK

The role play may be built on any substance and/or any type of value chain, that's up to your creativity!

There is no absolute rule in devising the role play parameters. One may however use some dimension or value chain characteristic one knows to be important in the real RMO exercise that will follow the role play.

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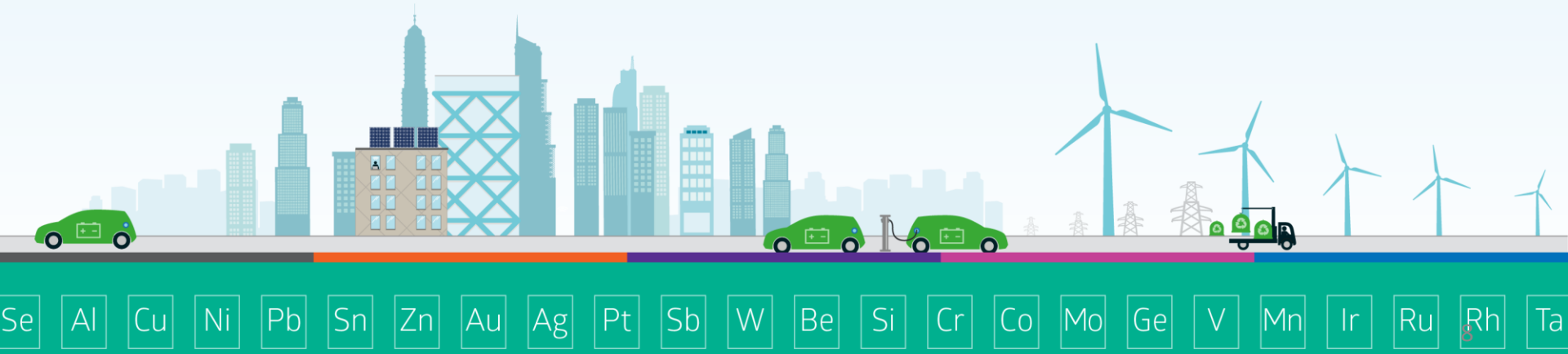
RMOA Role Play Example

Briefings for 4 Sectors having a Stake in Substance ‘Me’



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RMOA Role Play Example

1. Briefing for Me Producers

Role Play RMOA Exercise
A purely imaginary metal Me

Toxicological profile

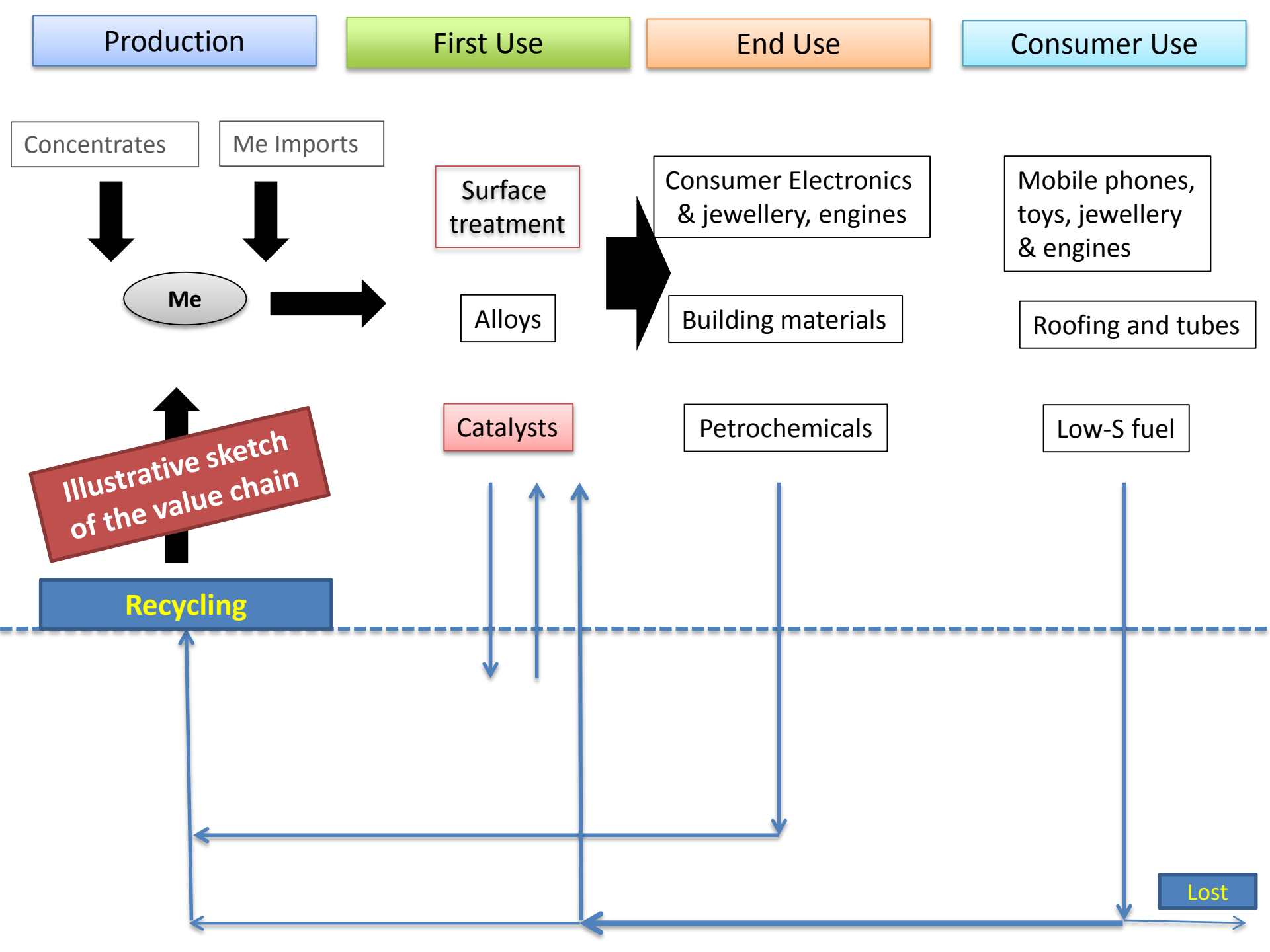
- **STOT RE :** target organ is lung (ingestion and inhalation)
- **Skin sensitizer:** severe effects (asthma-like)

The health challenge

- **Concerns about exposure of people** (occupational & different consumer objects such as mobile phones) and **corrosion of large surfaces** (roofing but also pipes etc.) **leading to pollution of (drinking) water**

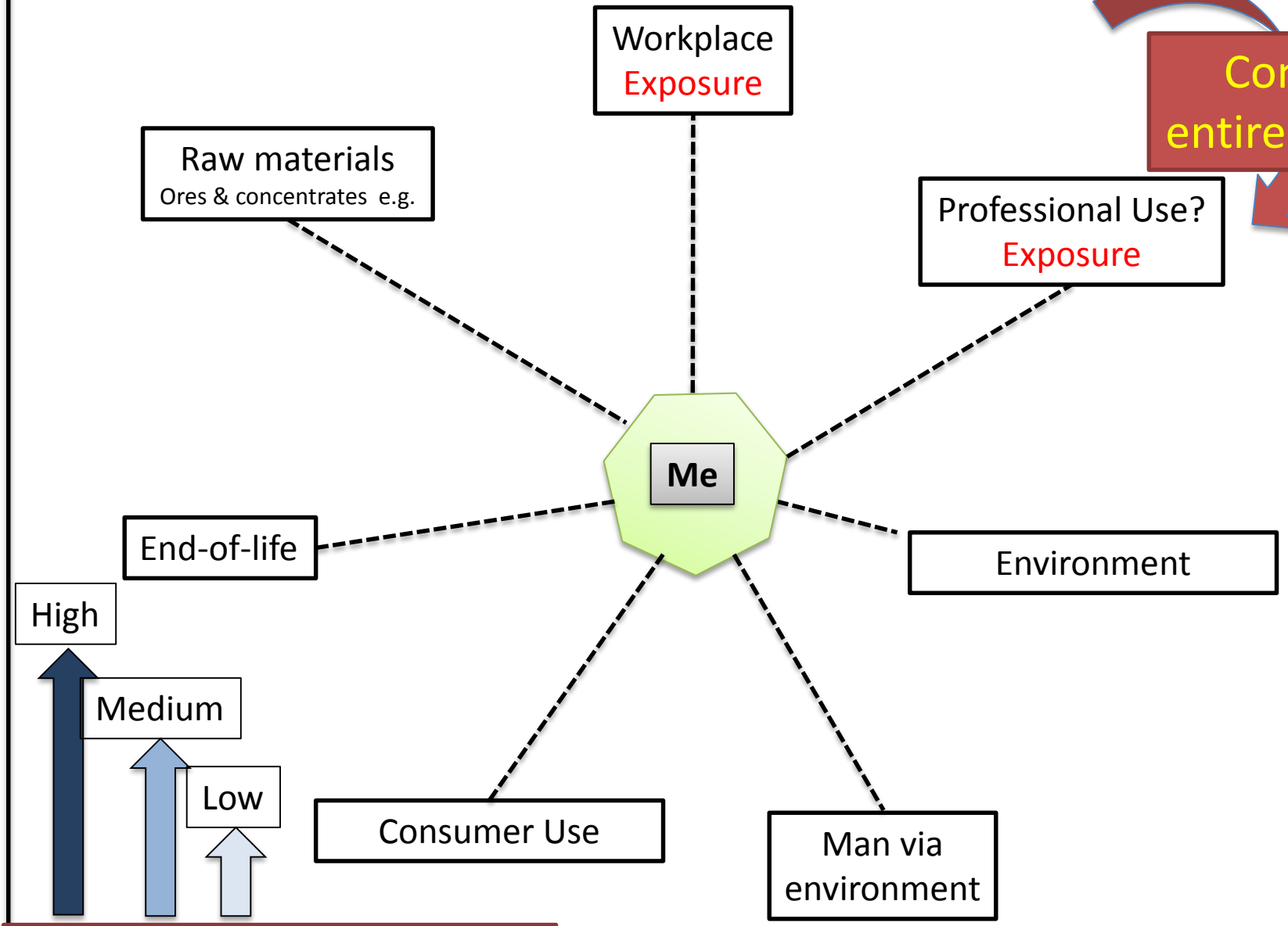
The regulatory environment:

- Huge variability of OELs across the EU (no EU value)
- Industry association in Sweden contacted by authorities who asked some questions about metal Me. They are preparing their next SVHC work plan…


Production
First Use
End Use
Consumer Use
Concentrates
Me Imports
Me
Surface treatment
Alloys
Consumer Electronics & jewellery, engines
Building materials
Mobile phones, toys, jewellery & engines
Roofing and tubes
Catalysts
Petrochemicals
Low-S fuel
Illustrative sketch of the value chain
Recycling
Lost

1. Identify concerns / discuss all possible concerns that may be raised

Consider entire life cycle



2. Scale concerns and explain why

3. How would you address these concerns?

Some characteristics of uses

- **Me:** Me is refined through a pyrometallurgical process, there are some issues at unloading (dust) and later on (powder production)

- **Alternatives:** the production equipment is tailored for Me refinement, no alternatives

Particular concern

- No sites in the country where the lowest OEL has been set; DNEL level expected to be achieved in 5 years
- Only concern is occupational (inhalation)

Information <u>you may not want to share</u> with the group:

- *Headquarters have said that if industry was forced to go lower than the DNEL, sites might be closed and Me will be imported as Me ingots*

Participant's notes and impressions (players and moderators)

- **Issues well covered:**

- **Difficult issues:**

- **Issues ignored:**

- **Other:**

Personal take-away:

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RMOA Role Play Example

2. Briefing for Functional Plating Companies

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Role Play RMOA Exercise
A purely imaginary metal Me

Toxicological profile

- **STOT RE :** target organ is lung (ingestion and inhalation)
- **Skin sensitizer:** severe effects (asthma-like)

The health challenge

- **Concerns about exposure of people** (occupational & different consumer objects such as mobile phones) and **corrosion of large surfaces** (roofing but also pipes etc.) **leading to pollution of (drinking)water**

The regulatory environment:

- Huge variability of OELs across the EU (no EU value)
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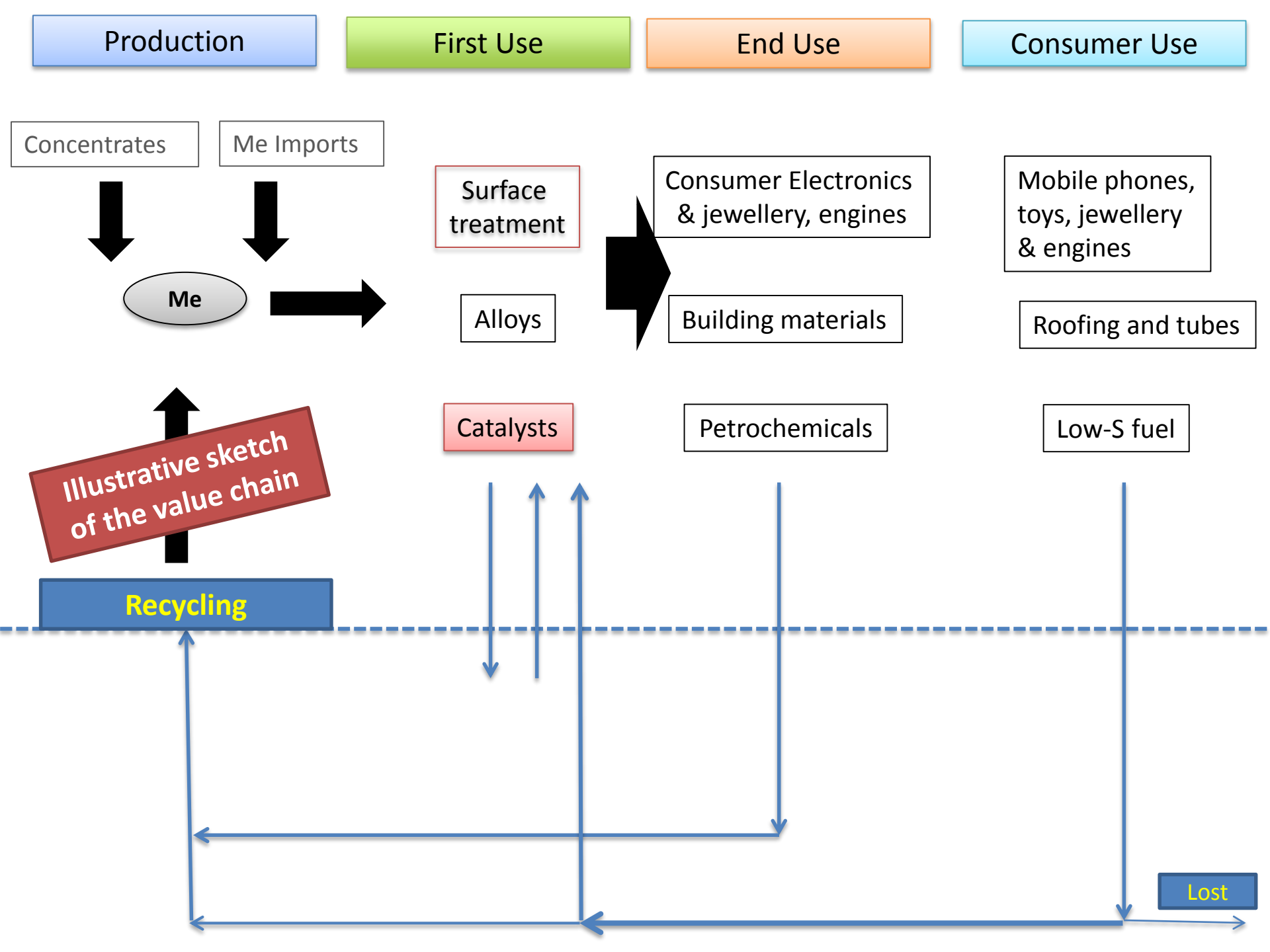
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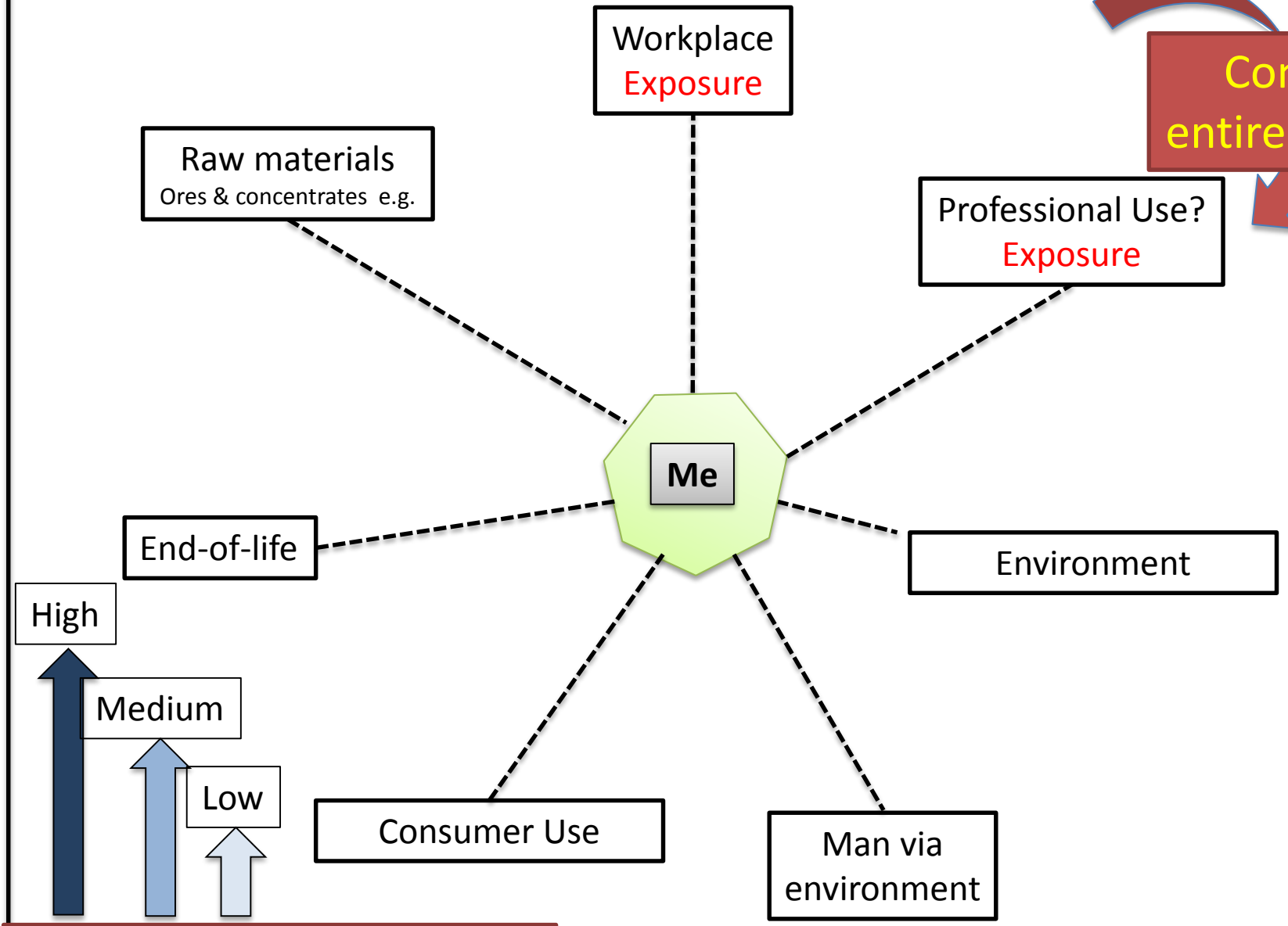

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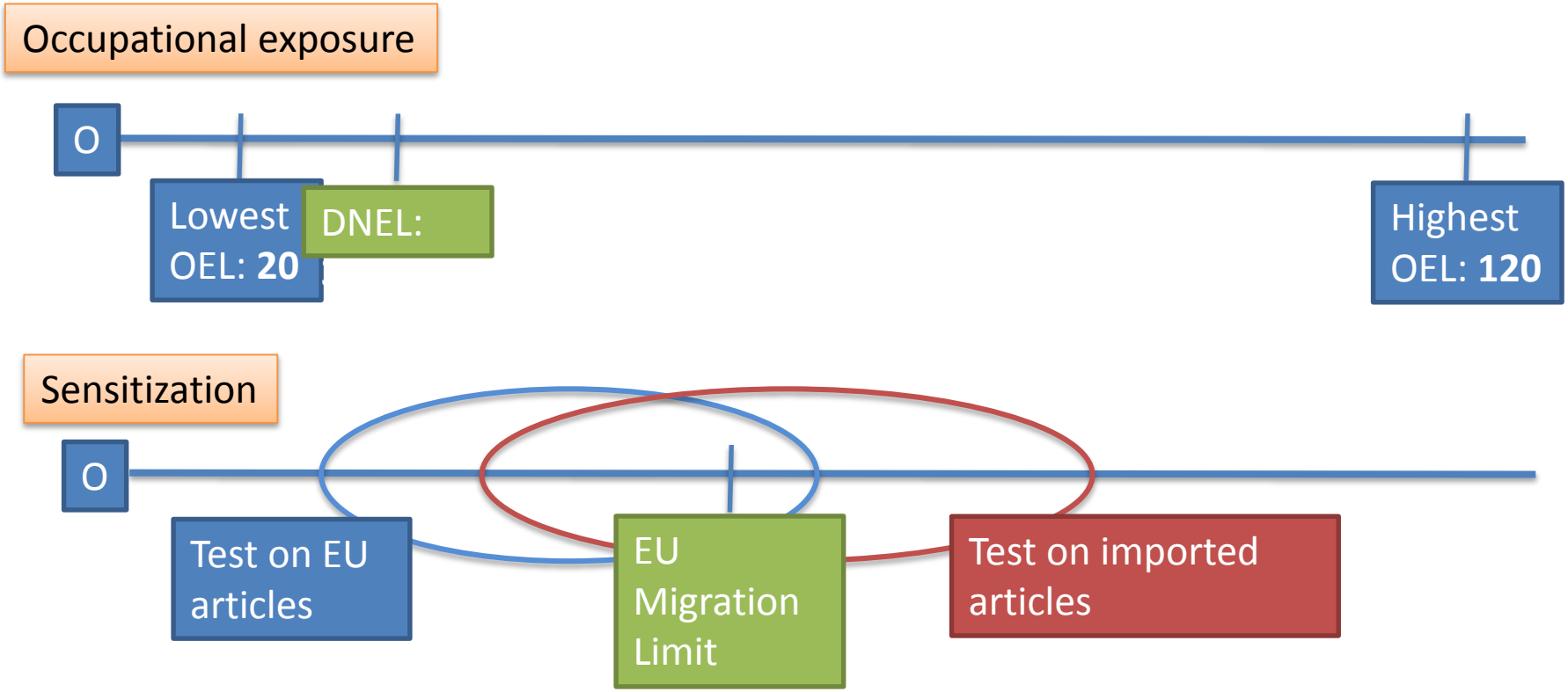
Occupational exposure
O
Lowest OEL: 20
DNEL:
Highest OEL: 120
Sensitization
O
Test on EU articles
EU Migration Limit
Test on imported articles

Some characteristics of uses

- **Surface treatment:** Me is added as such or in solution as MeX. Purposes are decorative (shine) and functional (wear protection and as adhesion enhancer for other metal layers)

- **Use:** No one-fits-all alternative for decorative applications but available, be it with compromises. This may affect 50% of the market!

- **Alternatives:** alternative substances have a similar toxicity profile whilst alternative surface techniques have their own specific issues (metal or paint deposition)

Information <u>you may not want to share</u> with the group:

- *Your company has a new production facility in China where some critical productions could be transferred to.*

Another participant having to play the role of a plater may be told that

- *As a job shop serving EU article manufacturers, you have no possibility to opt for alternatives that would not satisfy their functional or decorative requirements.*

Participant's notes and impressions (players and moderators)

- **Issues well covered:**

- **Difficult issues:**

- **Issues ignored:**

- **Other:**

Personal take-away:

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RMOA Role Play Example

3. Briefing for Catalyst Manufacturers

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Role Play RMOA Exercise
A purely imaginary metal Me

Toxicological profile

- **STOT RE :** target organ is lung (ingestion and inhalation)
- **Skin sensitizer:** severe effects (asthma-like)

The health challenge

- **Concerns about exposure of people** (occupational & different consumer objects such as mobile phones) and **corrosion of large surfaces** (roofing but also pipes etc.) **leading to pollution of (drinking) water**

The regulatory environment:

- Huge variability of OELs across the EU (no EU value)
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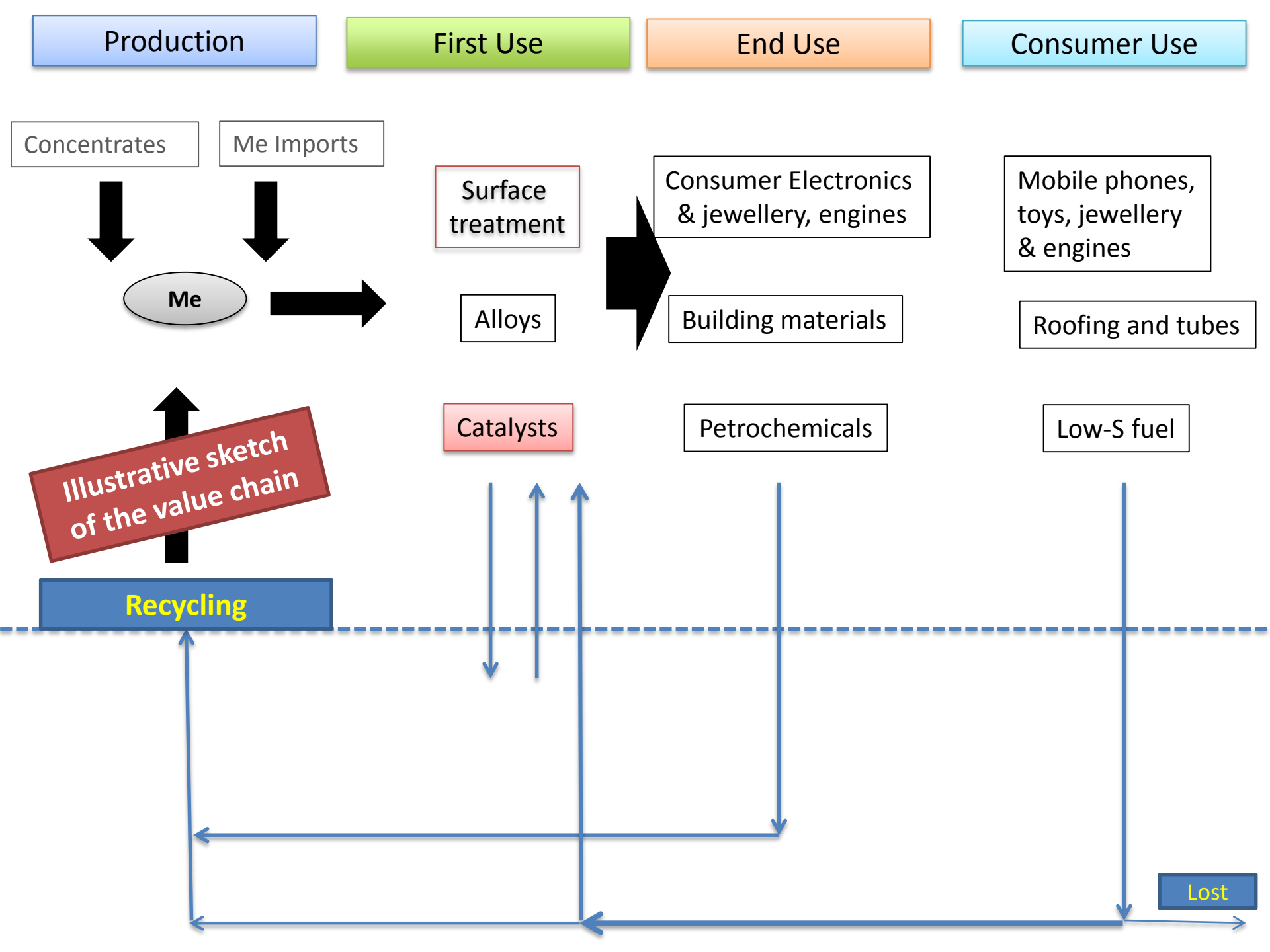
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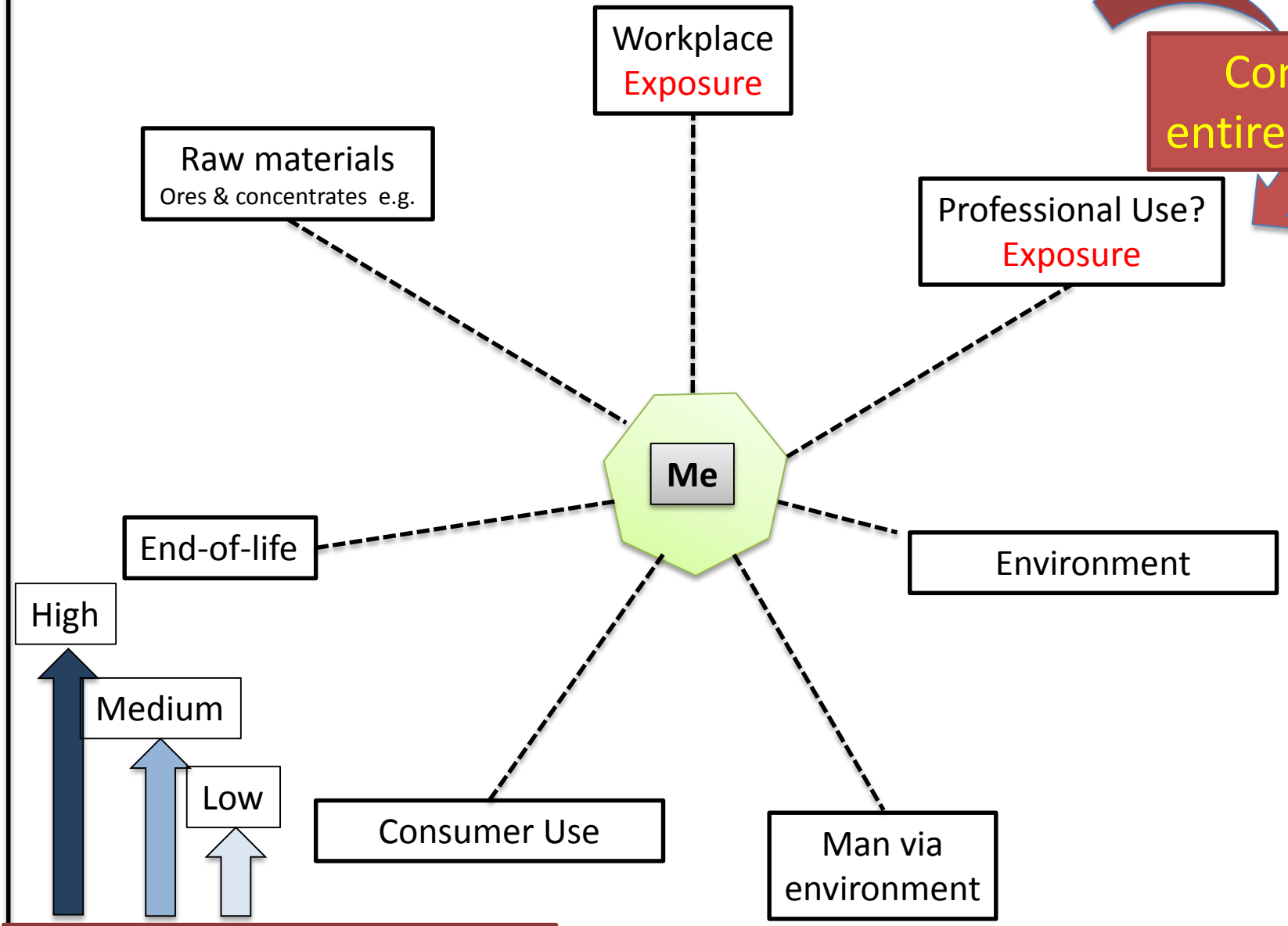
1. Identify concerns / discuss all possible concerns that may be raised

Consider entire life cycle



2. Scale concerns and explain why

3. How would you address these concerns?

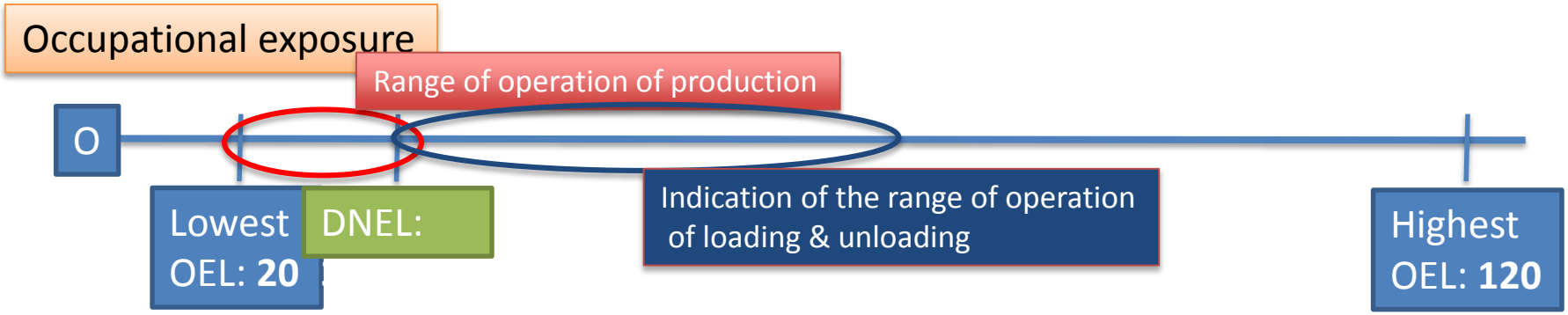
Some characteristics of uses

- **Catalysts:** Me used as precursor to MeX catalysts, but also as such

- **Alternatives:** Alternatives are either as efficient but many times more expensive or way less reactive and with thus other costs (vessel dimension, refinery design etc.)

- **Tox profile of alternatives:**
  - Alternatives that perform as well (or better): under scrutiny but expected to qualify for SVHC status
  - Alternatives with a much weaker catalytic potential: non-SVHC

Particular concern



- Difficult to reduce worker exposure in loading & unloading operations

Information <u>you may not want to share</u> with the group:

- *You would like to involve the loading companies but they don't want to attend*
- *Maybe an OEL as a solution and hope for technological fix for the loading/unloading?*
- *But how to hide the weakness of the case?*

Participant's notes and impressions (players and moderators)

- **Issues well covered:**

- **Difficult issues:**

- **Issues ignored:**

- **Other:**

Personal take-away:

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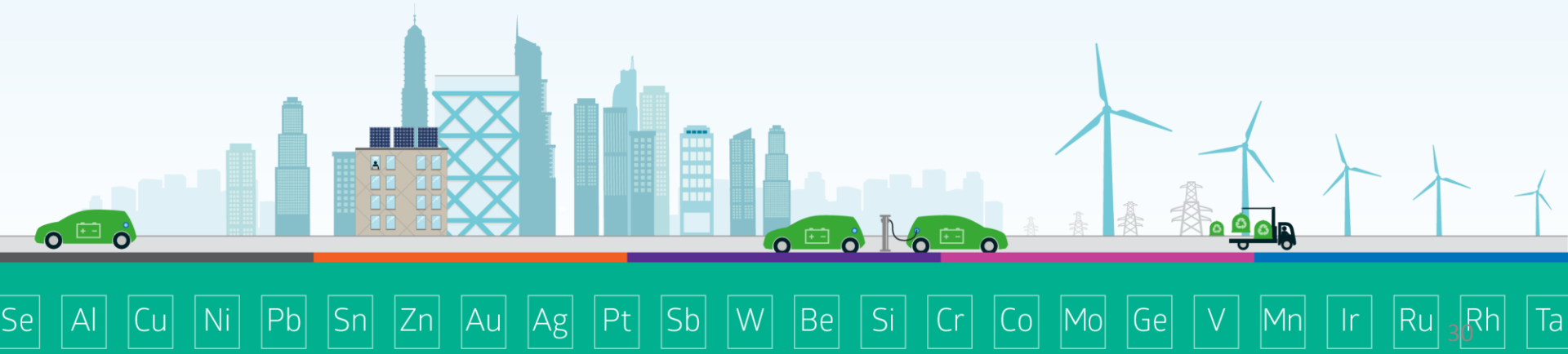
RMOA Role Play Example

4. Briefing for Alloy/alloyed products Manufacturers



Role Play RMOA Exercise
A purely imaginary metal Me

Toxicological profile

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The health challenge

- **Concerns about exposure of people** (occupational & different consumer objects such as mobile phones) and **corrosion of large surfaces** (roofing but also pipes etc.) **leading to pollution of (drinking) water**

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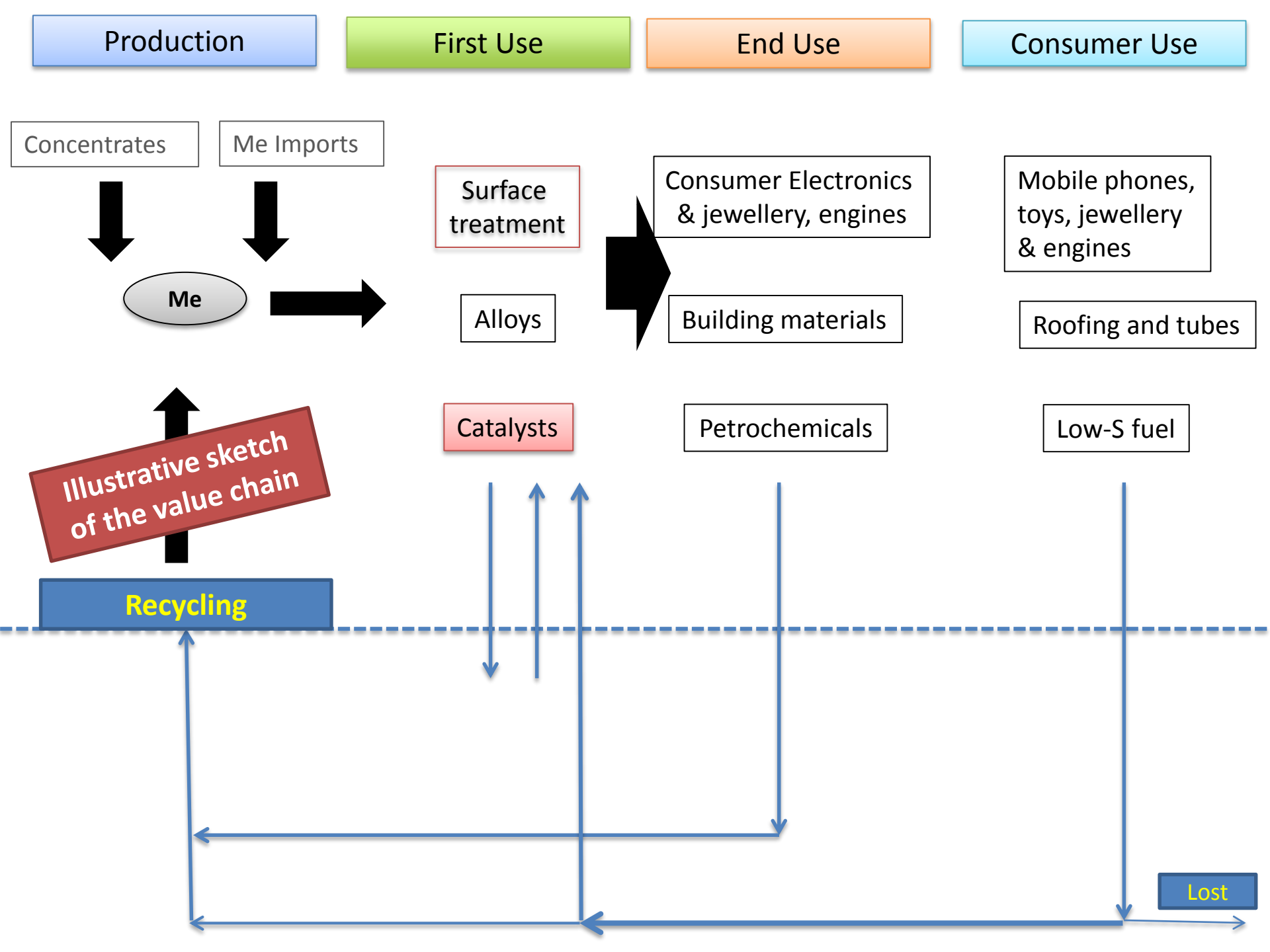
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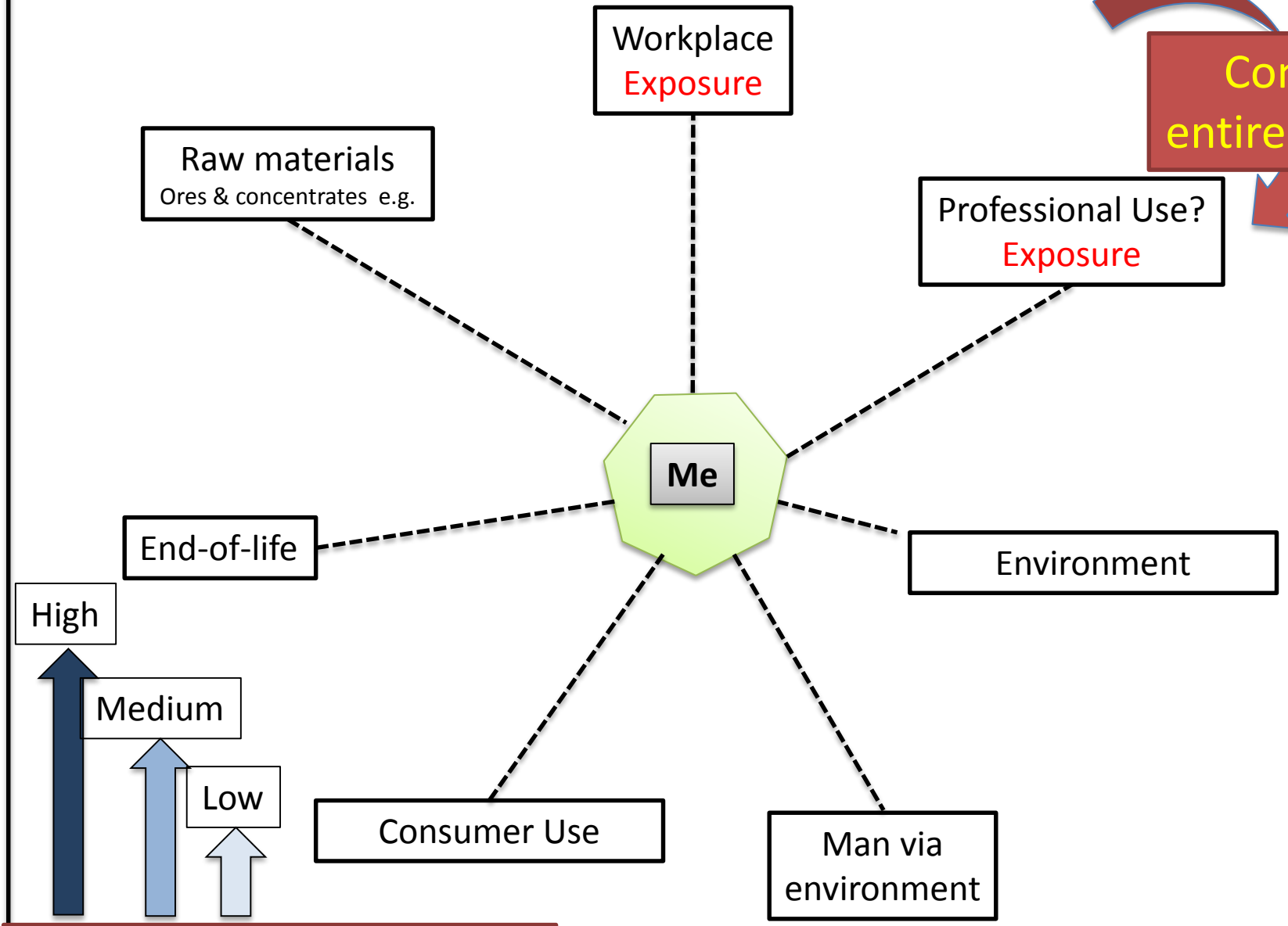


2. Scale concerns and explain why

3. How would you address these concerns?

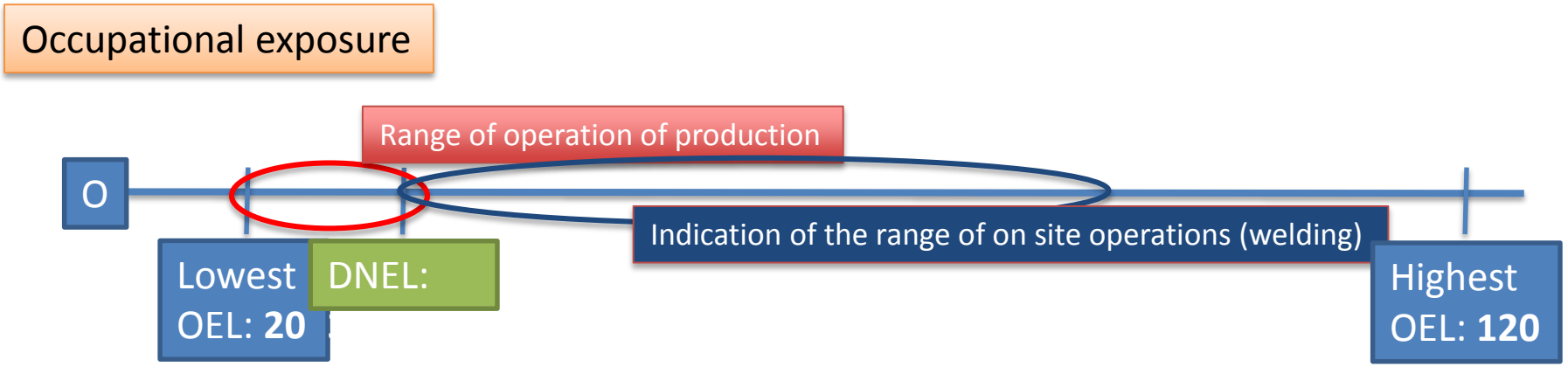
Some characteristics of uses

- **Alloys:** Me is added for corrosion protection and malleability (concentration is between 3% and 65%) of roofing products and pipes/tubes

- **Alternatives:** alternatives are available, but at a cost (reduced durability of the materials, etc.)

- **Tox profile of alternatives:** alternatives have similar profiles when performing equally. Alternatives that perform less well have a better tox profile (no SVHC)

Particular concern

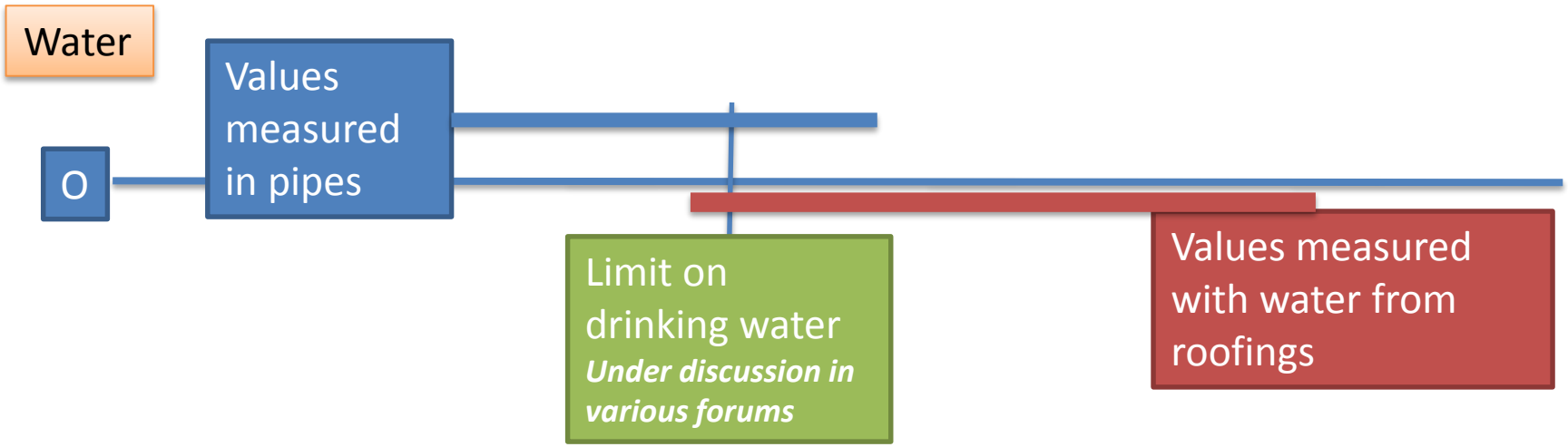


- On-site operations (welding): professional use and a lot of DIY show a rather high exposure level
- DIY market is important in terms of turnover and image

Information <u>you may not want to share</u> with the group:

- *The use of Me is partly linked to architectural hypes, durable though not critical*
- *You are considering a 'narrative' that may explain why installation should happen by professionals. They might be equipped with minimal PPE…*

Particular concern



- Only way to reduce leaching levels might be through a reduction of the Me concentration (but loss of functionality…) or to limit the use to some EU regions (min. 50 km of the sea)

Information <u>you may not want to share</u> with the group:

- *Some producers develop alternative alloys (without Me)*
- *Other producers are vertically integrated in Me companies*

Participant's notes and impressions (players and moderators)

- **Issues well covered:**

- **Difficult issues:**

- **Issues ignored:**

- **Other:**

Personal take-away: