

# Breakout discussion for Exposure through Product Life Community of Research

Split the discussion to two topics, first explore what we have learned through the scrimmage about the **Exposure CoR**, and second focus us on specific outcomes for the Exposure through life cycle CoR.

**Keep an eye on the practical outcomes – such as  
(from this morning)**

- Author a peer-review journal publication discussing harmonization of methods, as a pre-standardization activity that would transparently present future needs
- Author one or more proposed program announcements outlining harmonization activities for potential adoption by research funding programs in the US and Eu.
- Author one or more focus paper(s) or peer-reviewed journal publications on status, state of the art, and research gaps within CoRs.

# Questions for the Exposure breakout

For other CoRs in the breakout:

How did you feel exposure information played into your scrimmage evaluation?

Was it critical?

Not necessary to the final outcome?

For the Exposure CoR participants in the breakout:

Did you think that the exposure data needs/methods needs issues critical to the scrimmage were covered well?

Anything missing?

Were there any issues critical to exposure analysis that would have been critical to the scrimmage in real life? such as

- Lack of data on what we are exposed to
- Lack of understanding of background vs anthropogenic
- Possible range in what exposures happen in different scenarios and different time scales.

For some regulatory mechanisms to work well (superfund in US) we would need to know who is responsible.

- When an ambient water quality criteria level is found to be exceeded, could we tell what is anthropogenic?
- Could we trace a path back to the source?

If we understood exposure better, what do you think the likelihood is that we could use one criteria value to cover all forms of nTiO<sub>2</sub>?

–Or could multiple release mechanisms/pathways/composites/initial forms of the TiO<sub>2</sub> create a need for multiple criteria values.

- For the “situation room” scenario of the scrimmage – do you think it is more important to know?
  - What causes n-specific toxicity (or n-enhanced toxicity) – more tox data and modeling on hazard.

Or

- What we are exposed to – specific knowledge of what comes off of the uses?



How likely do you think it would be to design material uses so that exposure to “more toxic” nTiO<sub>2</sub> can be avoided?

- What information do we need to be able to decide this
- If we think it is already true, then what assessment approaches are needed to make it work?

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