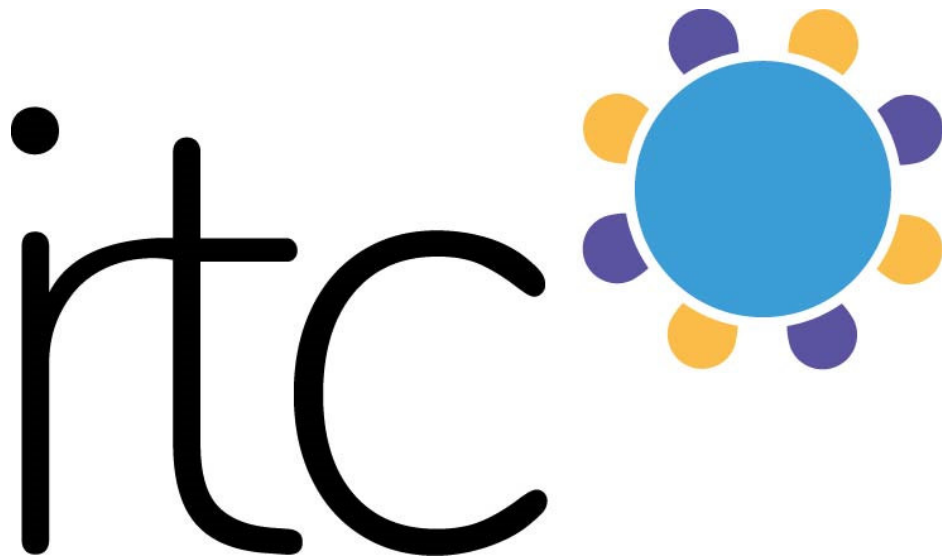


# HOW METHODOLOGY DETERMINES WHAT IS CRITICAL

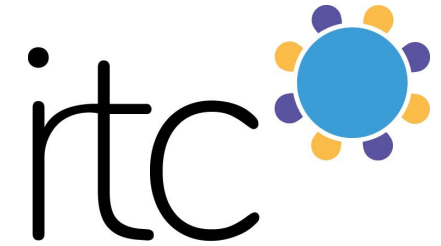
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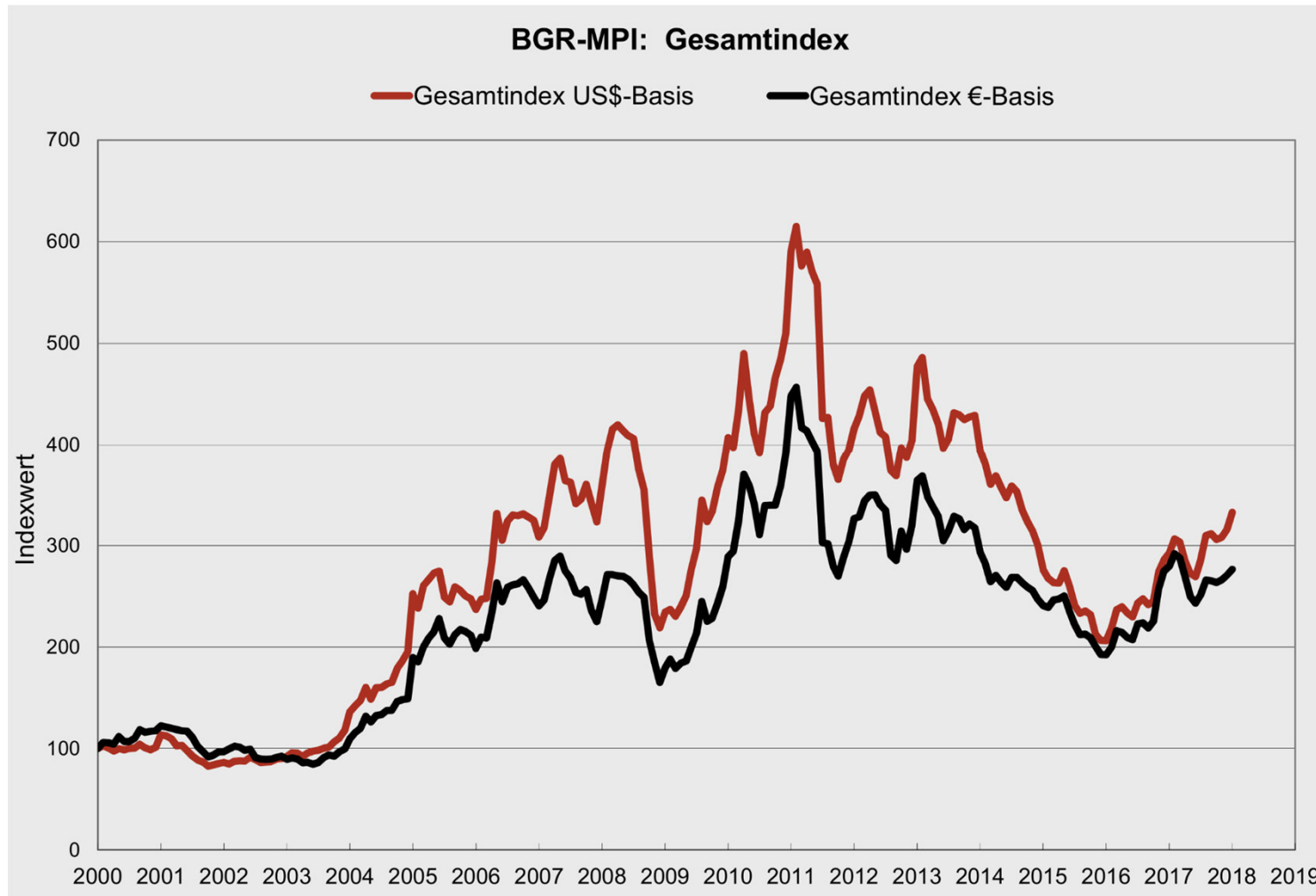


# Setting the scene

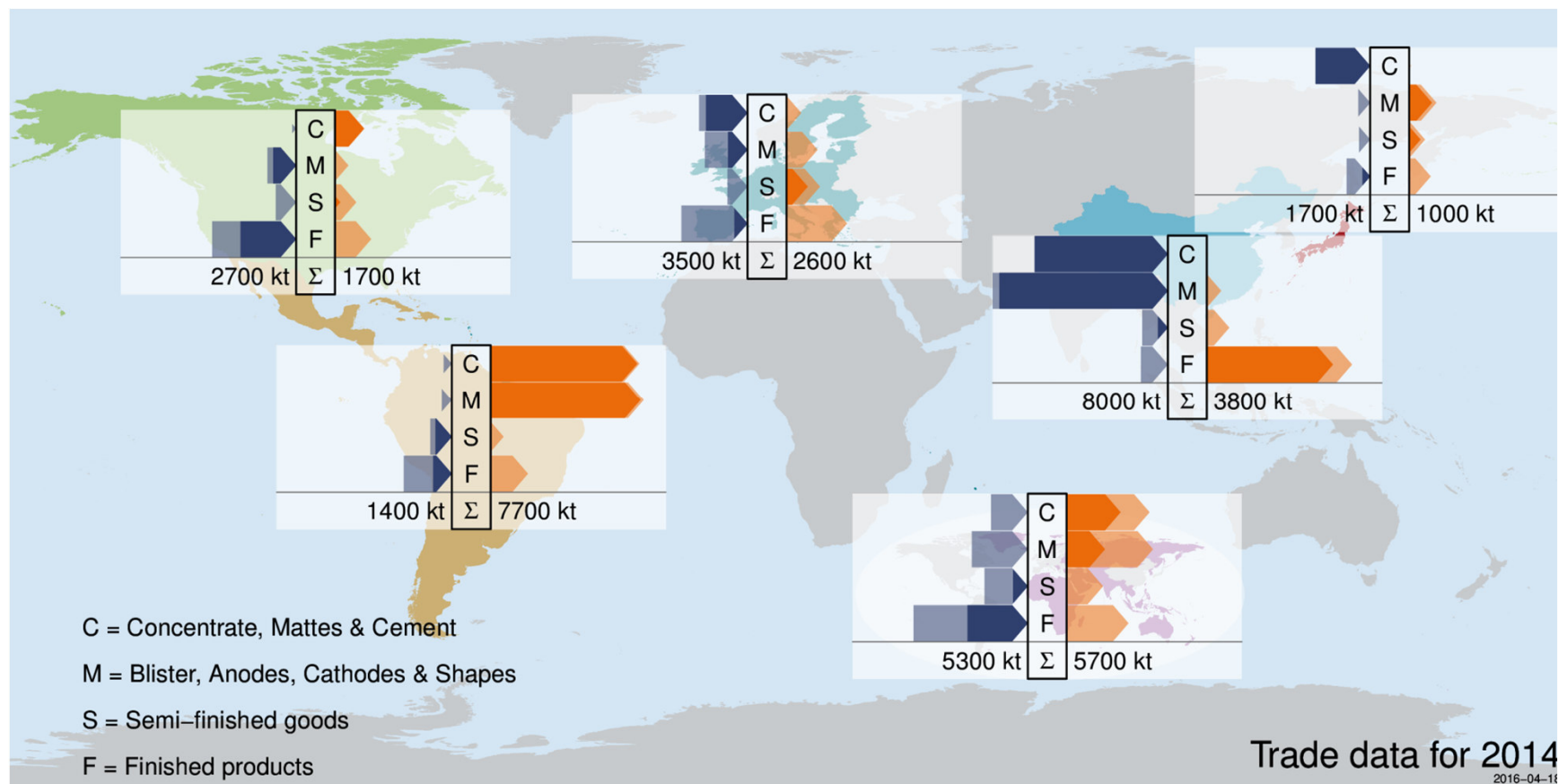
Luis TERCERO ESPINOZA

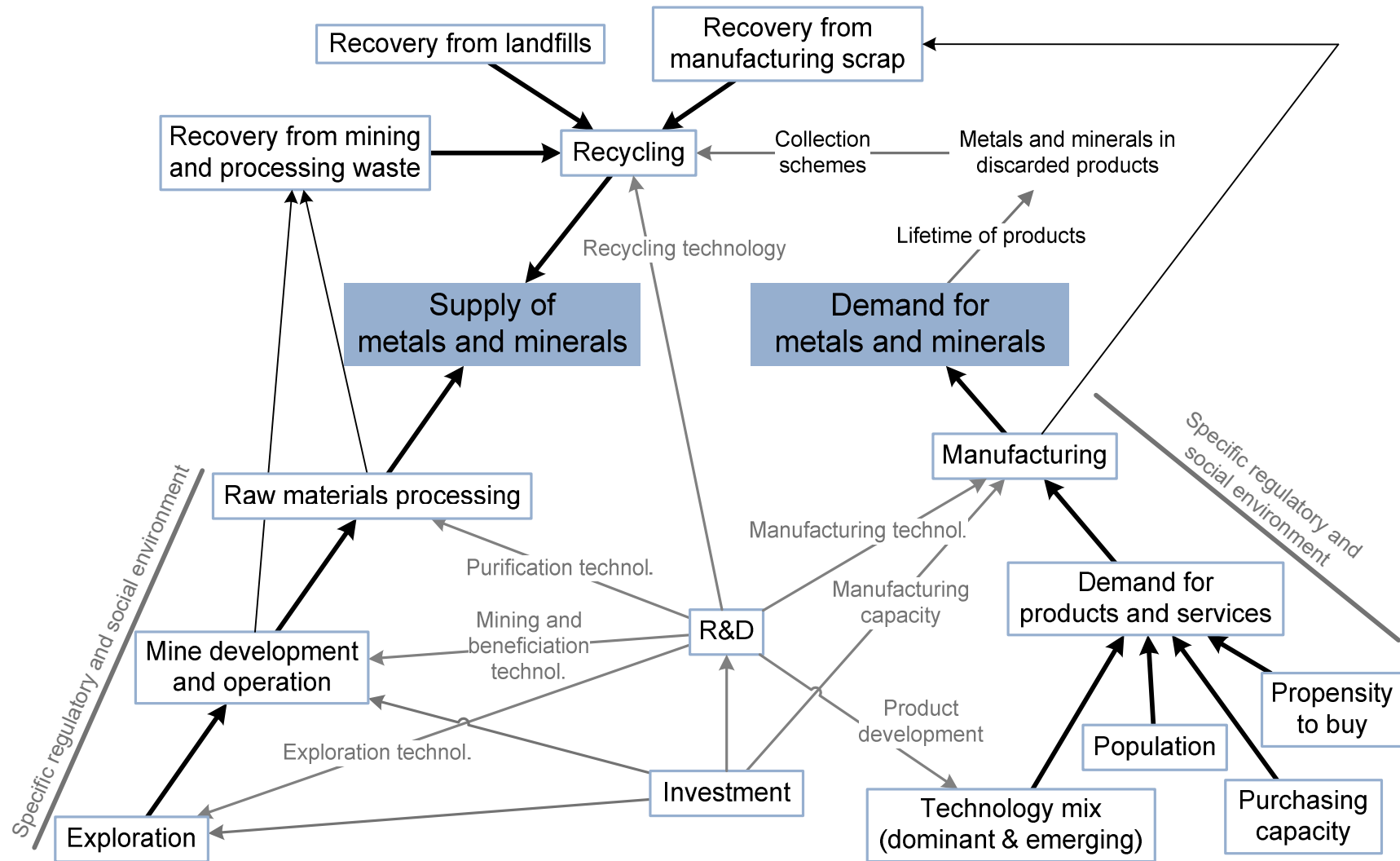
ESM Foundation & Fraunhofer ISI

# Important keywords: Price



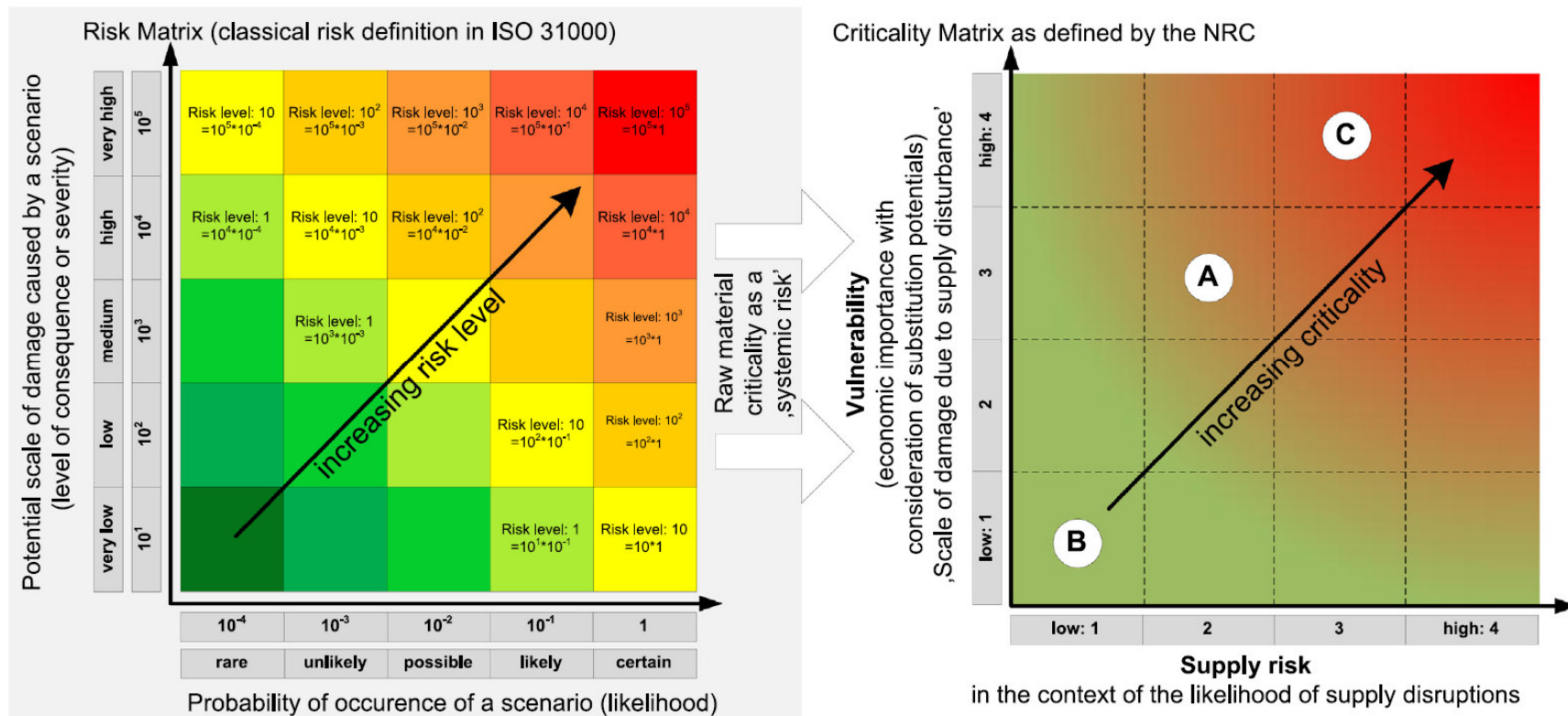
# Important keywords: International dependencies





Modified after Tercero Espinoza, L. ; Wittmer, D. : On the influence of technological change and substitution on the demand for non-energy raw materials. In: Wittmer, D.; Sievers, H. (Hrsg.): *Thematic Report V : Developments on the raw material markets*, 2015, 82–109 , <http://minerals4eu.brqm-rec.fr/node/45532>

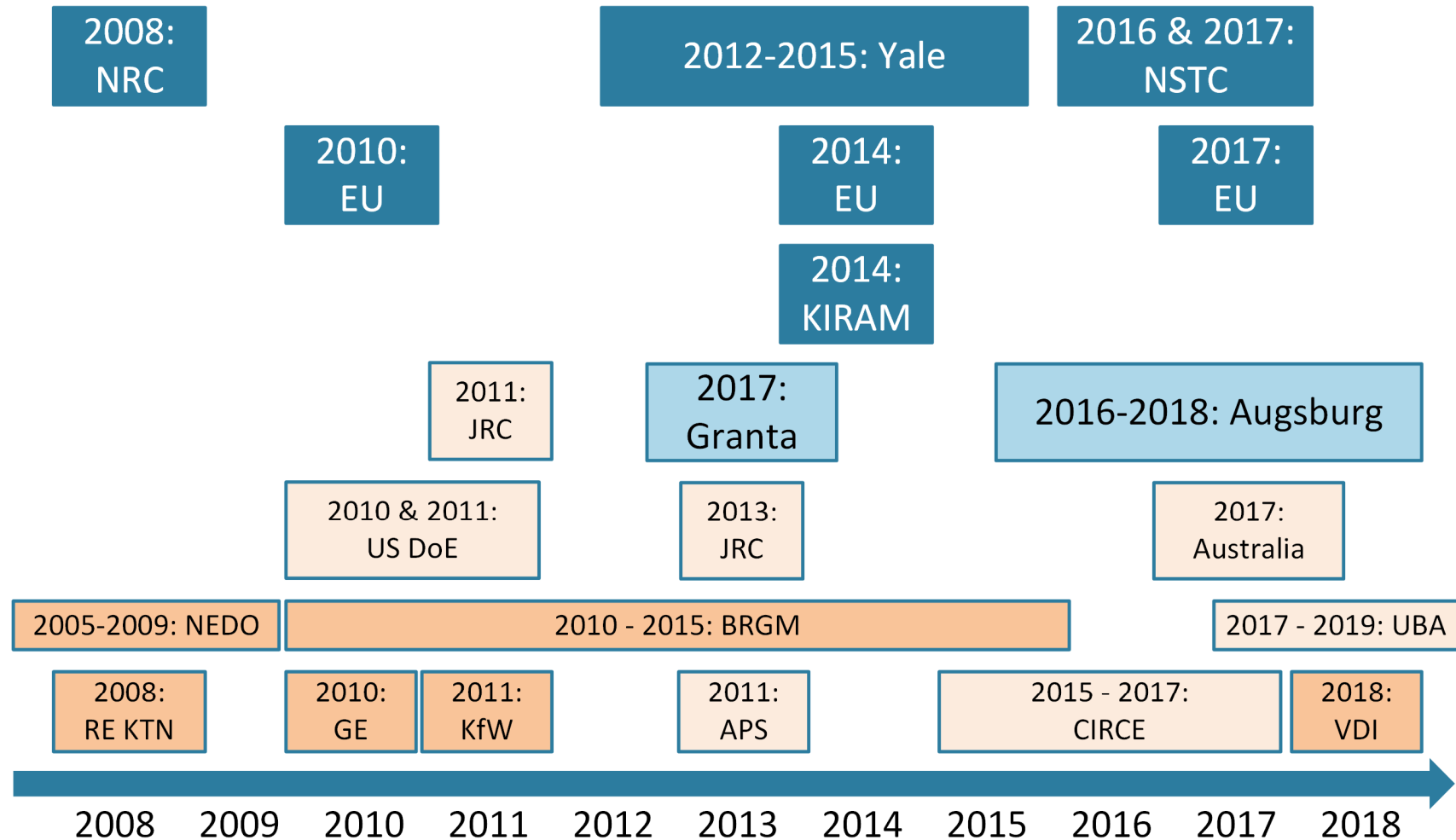
# The concept of “critical raw materials”



# Some features of „criticality“

- Criticality is a relative concept
- Raw materials are not critical in themselves, they are critical to somebody (for some reason or set of reasons) at some point in time
  - Countries or group of countries
  - Parts of countries
  - Sectors
  - Companies
- Criticality has at least two dimensions connected by a logical “AND”
  - Measure of likelihood – generally likelihood of supply interruptions
  - Measure of impact – generally economic
- Instrument to highlight current issues & inform policy / business decisions
- Common theme (hurdle!) in criticality assessments: Data availability!
- No standard: Plurality of methods

# Methodologies to discuss today

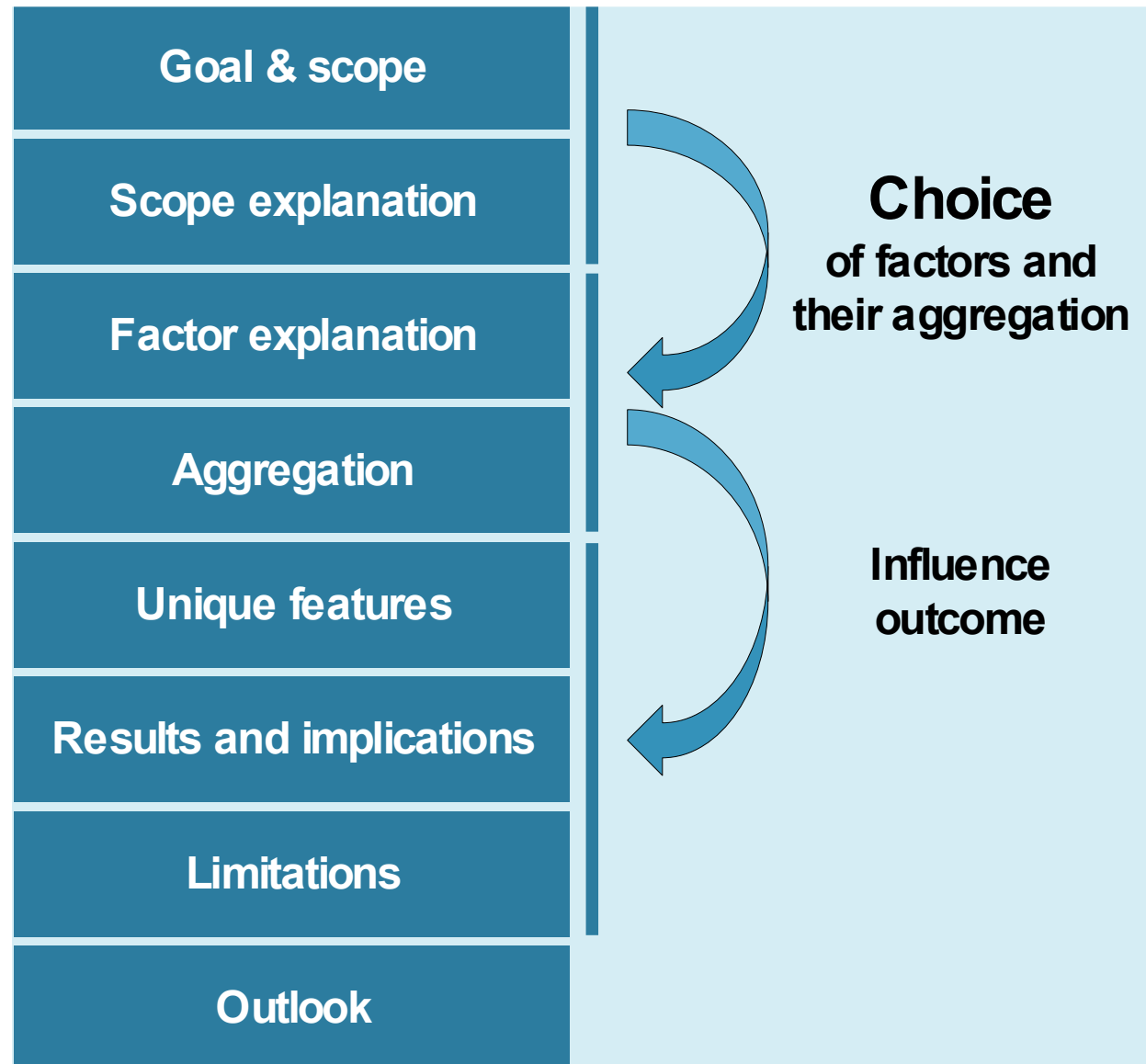




## Structure of short presentations

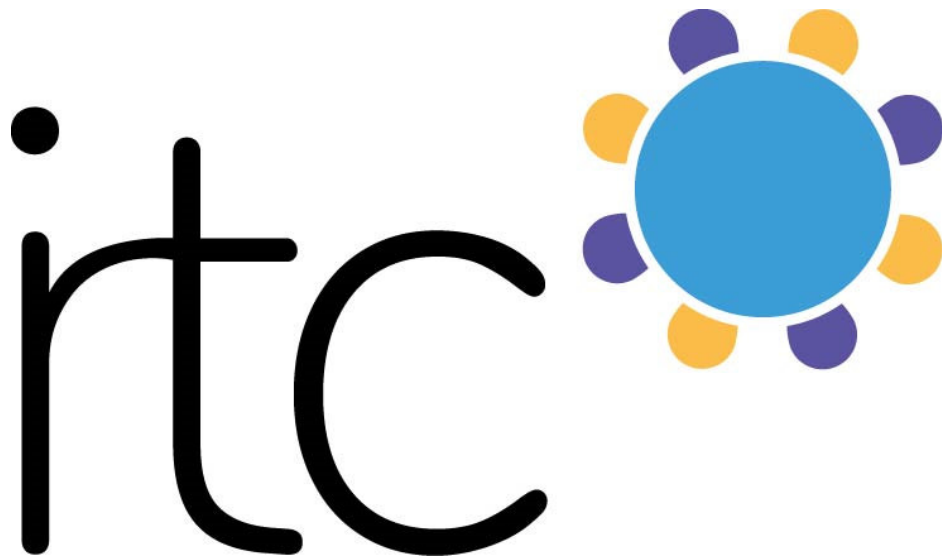
Goal:  
Facilitate discussion

How do methodological choices determine what is critical?



# HOW METHODOLOGY DETERMINES WHAT IS CRITICAL

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