State of the Science on the Origin and Evolution of Plate Boundaries

• Importance: How are plate boundaries born and how do they succeed?
• How do these factors come together for the origin and evolution of plate boundaries?
  • the triggers and feedbacks of initiation
  • The dynamic evolution
  • Role of pre-existing conditions
  • Force-balance
  • Mechanical properties of the lithosphere
  • How do we make and maintain the global plate mosaic?

Where do it need to go?

• Need to find locations for
  • Subduction zones
  • Rifts
  • Transform plate boundaries
  • Studies need to focus on local, regional, global processes
• More discussion needed on the understanding
• Need 3-day workshops
  • Define problem and synthesis → white paper
  • Identify ways forward
  • Assess what methods and infrastructure is needed
  • Assess the societal relevance