



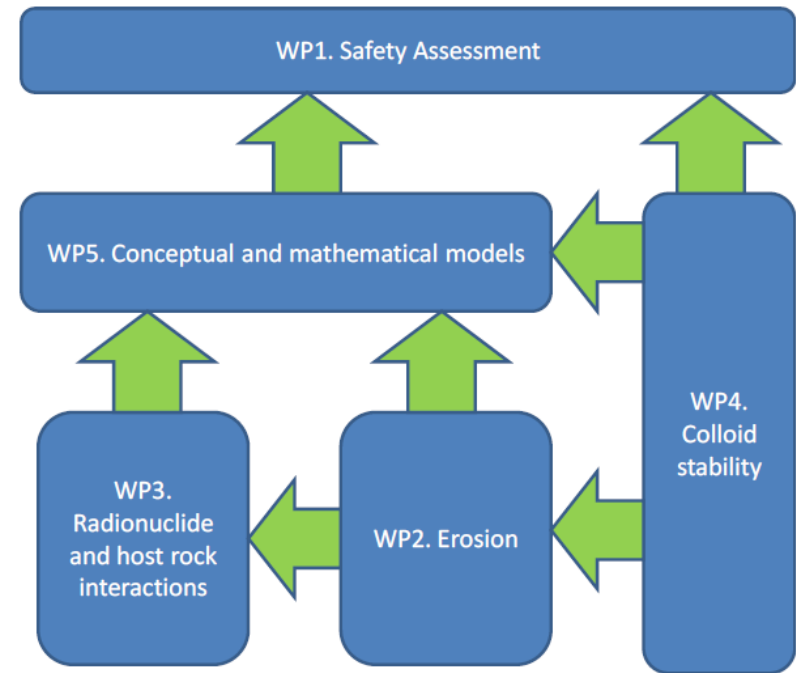
# WP 5: Conceptual and mathematical models

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# WP5 objectives

- Validate and advance the models for predicting
  - mass loss of clay in dilute waters and clay colloids generation in special and
  - clay colloids facilitated radionuclide transport.
- Formulate data needs from other WP's





# WP5 activities in terms of ...

- Mathematical and numerical modelling
  - validate models by predicting the data obtained from WP2-4 and the likes
  - implement new features arising from elaborated conceptual models
- Conceptual modelling
  - reason dominant processes,
  - identify and reason relevant parameters and
  - articulate the data needed to implement new aspects.



# WP5 partners and PM's

<b>Work package number</b>	<b>5</b>		<b>Start date or starting event:</b>					<b>Project Month 1</b>	
<b>Conceptual and mathematical models</b>									
<b>Activity Type</b>	<b>RTD</b>								
<b>Participant</b>	<b>CIEMAT</b>	<b>KIT-INE</b>	<b>POSIVA</b>	<b>SKB</b>	<b>B-Tech</b>	<b>ClayTech</b>	<b>VTT</b>	<b>LANL</b>	<b>KTH</b>
<b>Person-months for the participant</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>24</b>	<b>2</b>	<b>16</b>



# WP5 activities and partners involved

- Generation, stability and transport of clay colloids (CIEMAT)
- Multiphase flow-field and sorption of solids in a natural over-cored fracture from Äspö (KIT)
- Clay erosion due to dilute groundwater in a fracture intersecting a KBS-3V deposition hole (KTH and VTT)



# WP5 deliverables

List of Deliverables					
Del #	Deliverable name	Responsible Organisation	Nature	Dissemination Level	Due date (Month)
Work package 5					
D5.1	Description of conceptual models and the related mathematical models to support D1.1	Posiva	<b>D1.1: Summary of current state-of-the-art regarding treatment of colloids and related issues in the long-term safety case</b>		
D5.2	Progress report of model validation results and model development	Posiva	R	RE	24
D5.3	Synthesis report of model development and validations to support and to be referred to in D1.4	Posiva	<b>D1.4: Synthesis Report: colloids and related issues in the long term safety case</b>		