Plans for the project period 2017–2019

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Boundary conditions

- Planning for a new 3-year project period
- Budget 2017 the same as 2014–2016, but 2018 and 2019 not known yet.
- NGI’s *raison d’être* demands the project to be of value to society, i.e., applied research to solve pressing problems connected to snow avalanches.
- Ryggfonn and Fonnbu are the central pillars of the project.
- Protect earlier investment – pick up loose ends...
- ... but also start something new and exciting!
Continuation of earlier topics

- **Experiments at Ryggfonna / field observations:**
  - Hope for interesting avalanches (artificially released)
  - Intensify collaboration with Norwegian partners (SVV, others) and foreign institutes (BFW Innsbruck, ...)
  - Limited work on model development (MoT-Voellmy, D2FRAM)
  - Investigate interesting avalanche events all over Norway

- **Statistical methods in forecasting and hazard mapping:**
  - Extend the framework to hazard mapping, test it, apply it

- **Slushflows:**
  - Further testing of snowpack models under melting conditions
  - Develop forecasting concept
  - Test simple dynamical models
New topic: Improving local forecasting

Practical requirements:
- Better quantification of release probability during next day
- Objective verification of accuracy of forecast

Methods:
- Determine local wind field near release areas
- Estimate snow drift fluxes
- Use infrasound sensors to determine avalanche activity, compare with local forecasts
- Develop methods for comparing release probabilities of different potential release zones in same area
Further topics on the wish list

- Avalanche flow models:
  - Intensive development of D2FRAM
  - Powder-snow avalanche model (coupled to dense-flow model)
  - Avalanches in forests (release probability, braking effect)

- Large avalanches: Instrumentation below the Ryggfonna dam

- Small avalanches: Participation in Niseko experiments

- Effect on objects:
  - How much pressure can a typical girder mast tolerate?
  - Up to which pressure is a typical Norwegian wood house safe?
Next steps

- Draft proposal is written.
- Feedback and suggestions from NVE and other interested parties will be considered.
- Final version to be submitted at the end of November.
- Final work plan will be available on the project web site https://www.ngi.no/Prosjekter/Snoeskredforskning in December.