

National Report of Iceland EUREF 2019 Symposium in Tallinn

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The National Land Survey of Iceland

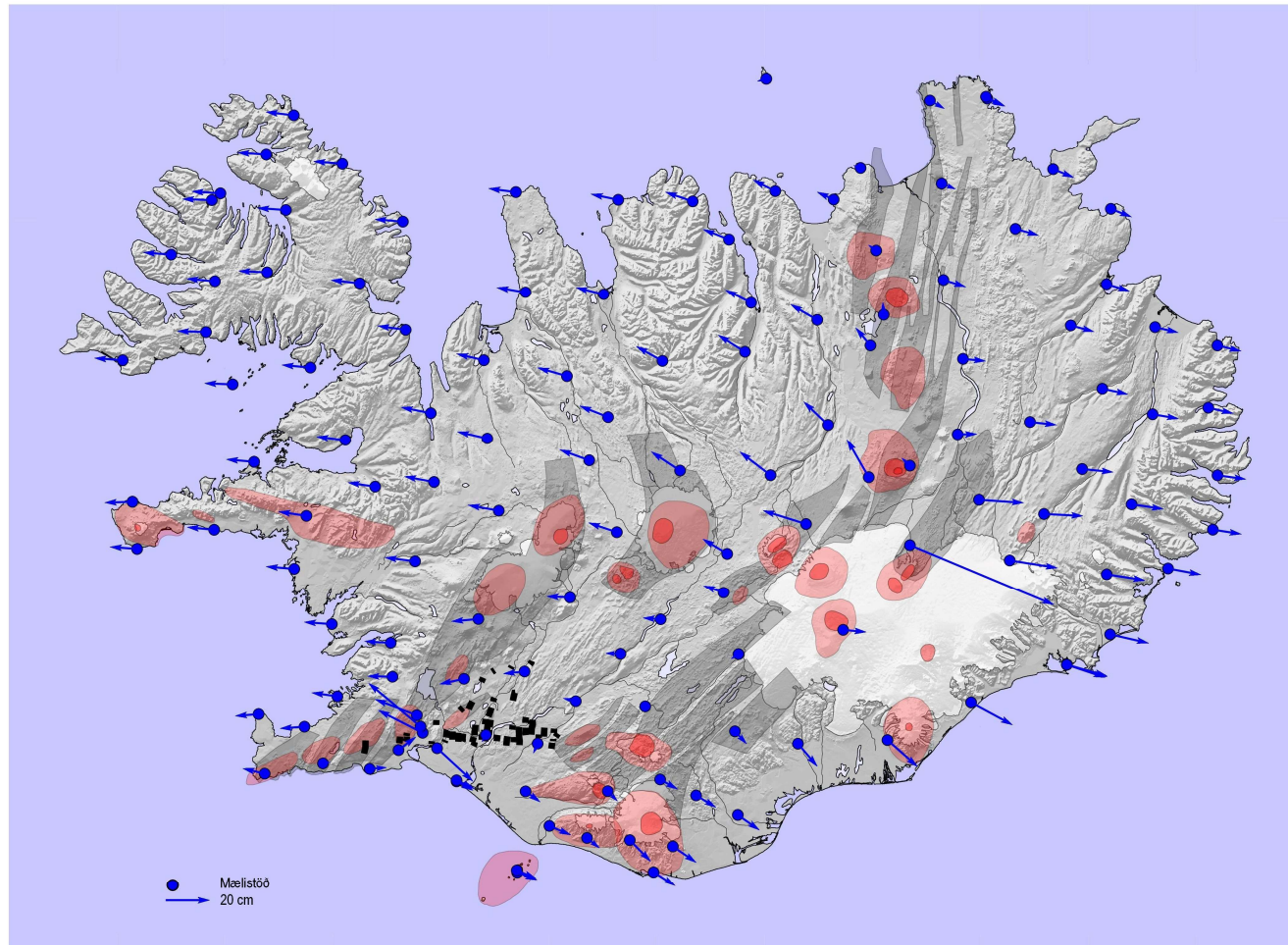
- Main activities are within Geodesy, GIS and Remote Sensing
- Responsible for mapping, surveying and monitoring of 103.000 km²
- 26 employees
- 3 employees at Geodesy



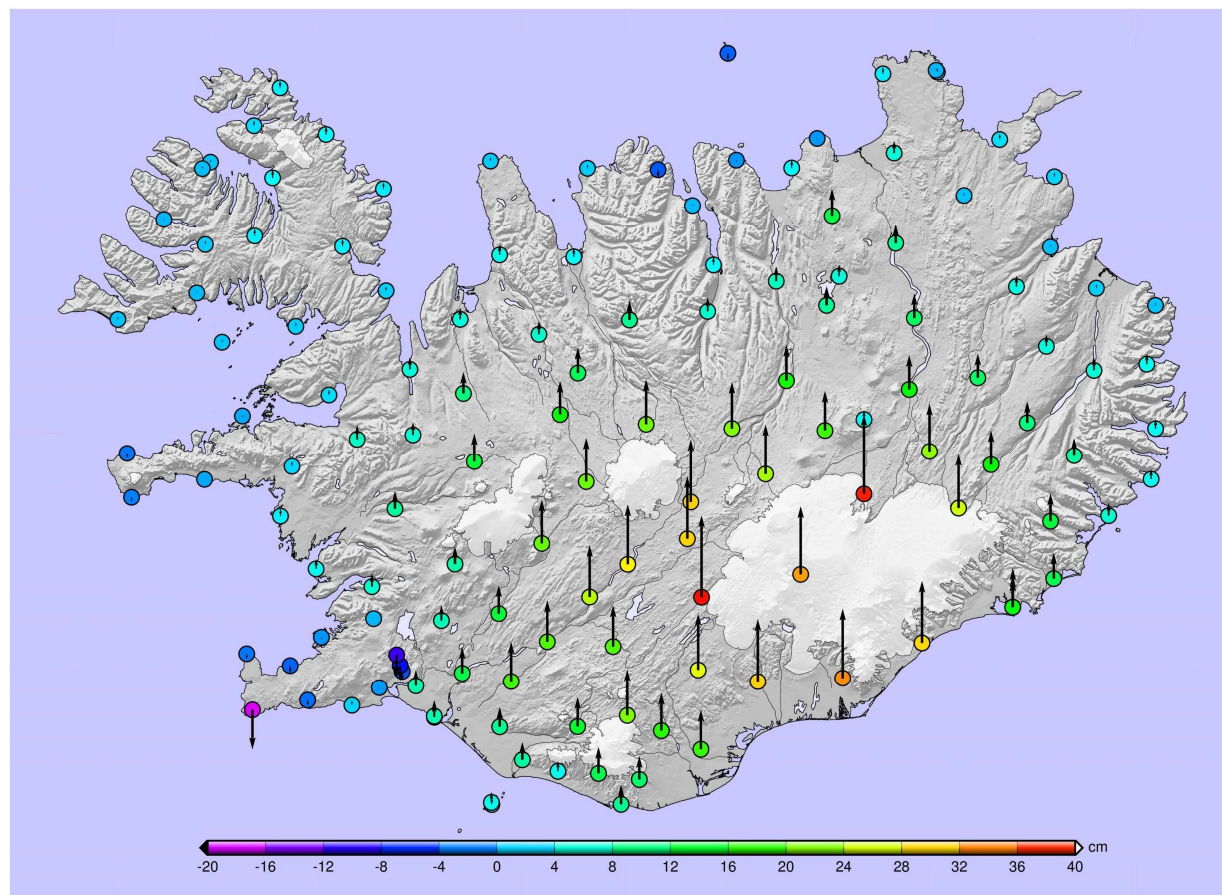
New datums/reference systems for Iceland

- We are currently introducing new reference systems in Iceland
- ISN2016
 - Semi-dynamic datum
- ISN_DRF
 - Dynamic datum

ISN2016 vs. ISN2004 horizontal deformation



ISN2016 vs. ISN2004 vertical difference



Adaption of ISN2016 and ISN_DRF

- We have published the results of the ISNET2016 campaign
- Transformation grids from ISN93 and ISN2004 to ISN2016 are available
- We have made a preliminary secular velocity model
- We have developed a new version of our transformation service, Cocodati, based on PROJ
 - <http://sandmerki.lmi.is/cocodati/>

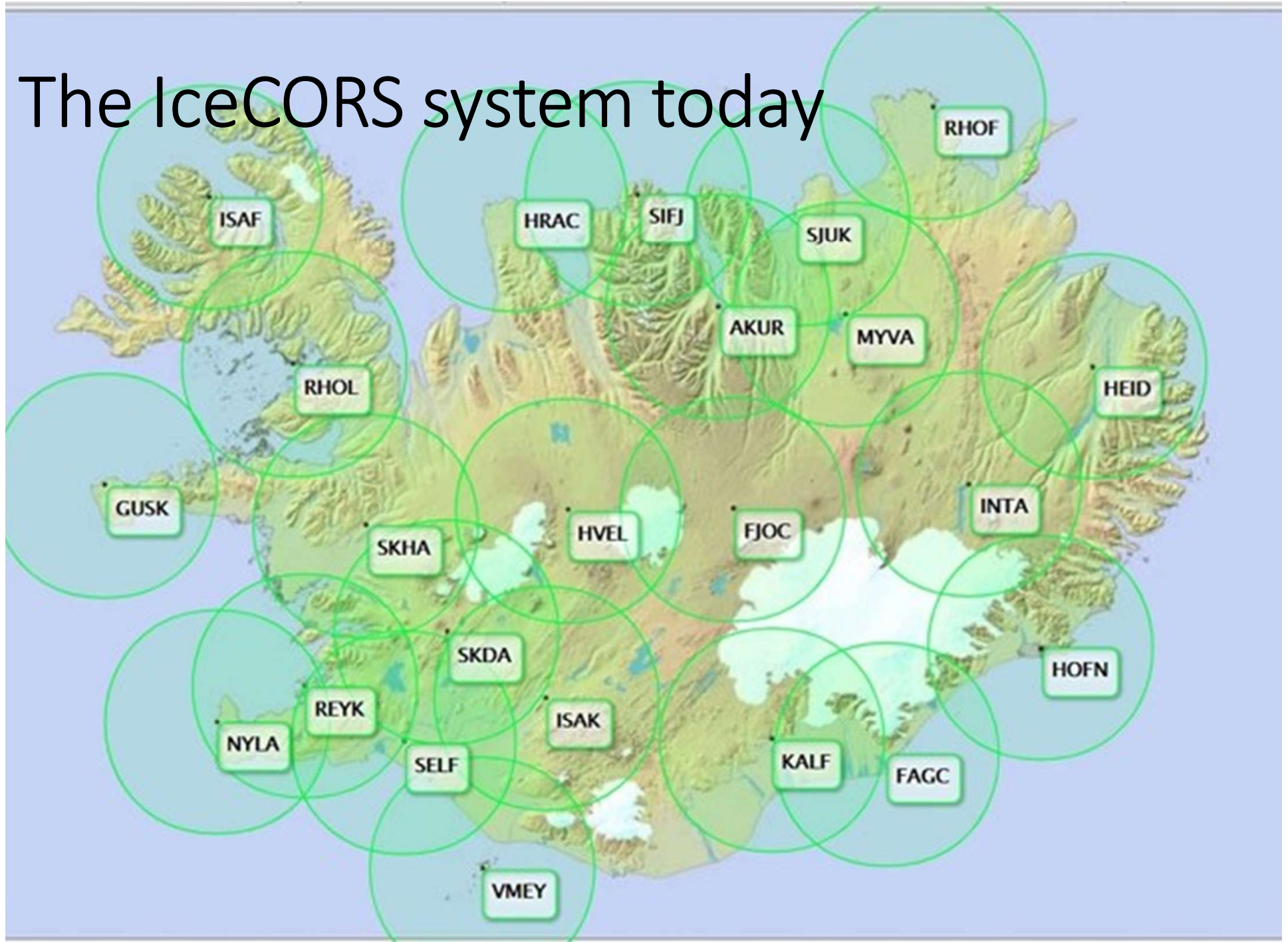
Adaption of ISN2016 and ISN_DRF

- Users are very positive towards ISN2016
- Not the case after ISN2004
- More people affected by deformation of ISN93 with the increase of accurate GIS data
- With GDAL 3.0 we can use the same PROJ commands as in our transformation service to transform vector and raster data

IceCORS - The Icelandic CORS system

- NLSI is building up a CORS system for Iceland
- We use GNSMART from Geo++
 - Today we are operating 23 stations
 - Planning to have 30-32 stations in the network
- Cooperation with the geophysical community and foreign institutions like BKG and BADW
- Use of older GPS receivers like Trimble NetR5
- Successful testing of sending out streams both in ISN2016 and ISN_DRF
- All data are available free of charge
- The stations are also a part of the NKG AC center project

The IceCORS system today



Vertical reference system

- Plans to finish the highland line over Kjölur this summer with trigonometric levelling
 - About 70 km
- Re-adjustment of the levelling network

Other work

- Transformation from the Reykjavík local network to ISN2016
- Reprocessing of all CORS stations in Iceland
 - Around 100 stations
- Reprocessing of GPS/GNSS campaign data done by the National Land Survey
- Developing Earthquake patches for our transformation service

Thank you

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