

National Report from Iceland

The General Assembly of NKG
Chalmers University of Technology in Gothenburg

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National Land Survey of Iceland

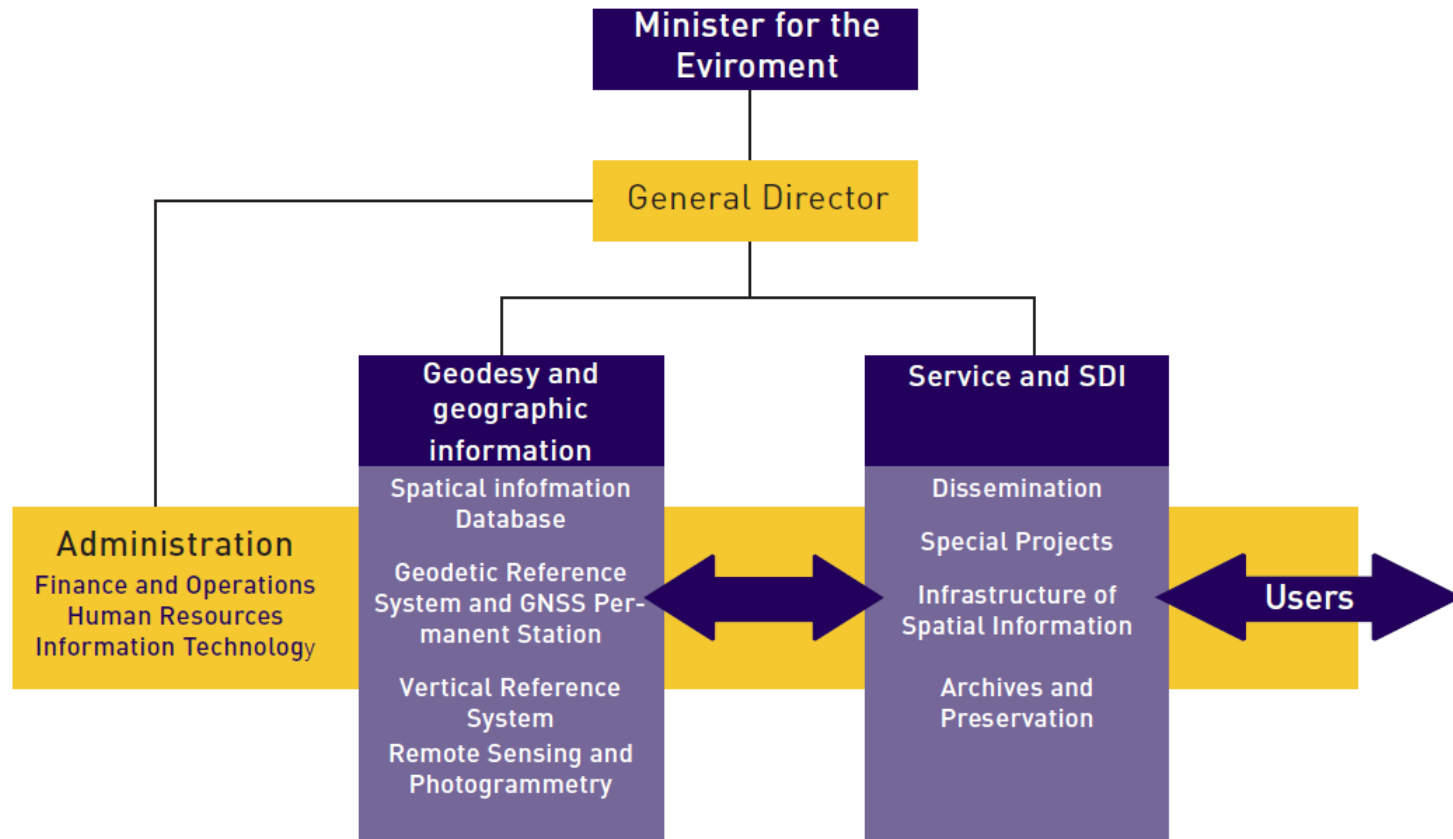
The National Land Survey of Iceland

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



National Land Survey of Iceland

Organizational chart from 1st. January 2011



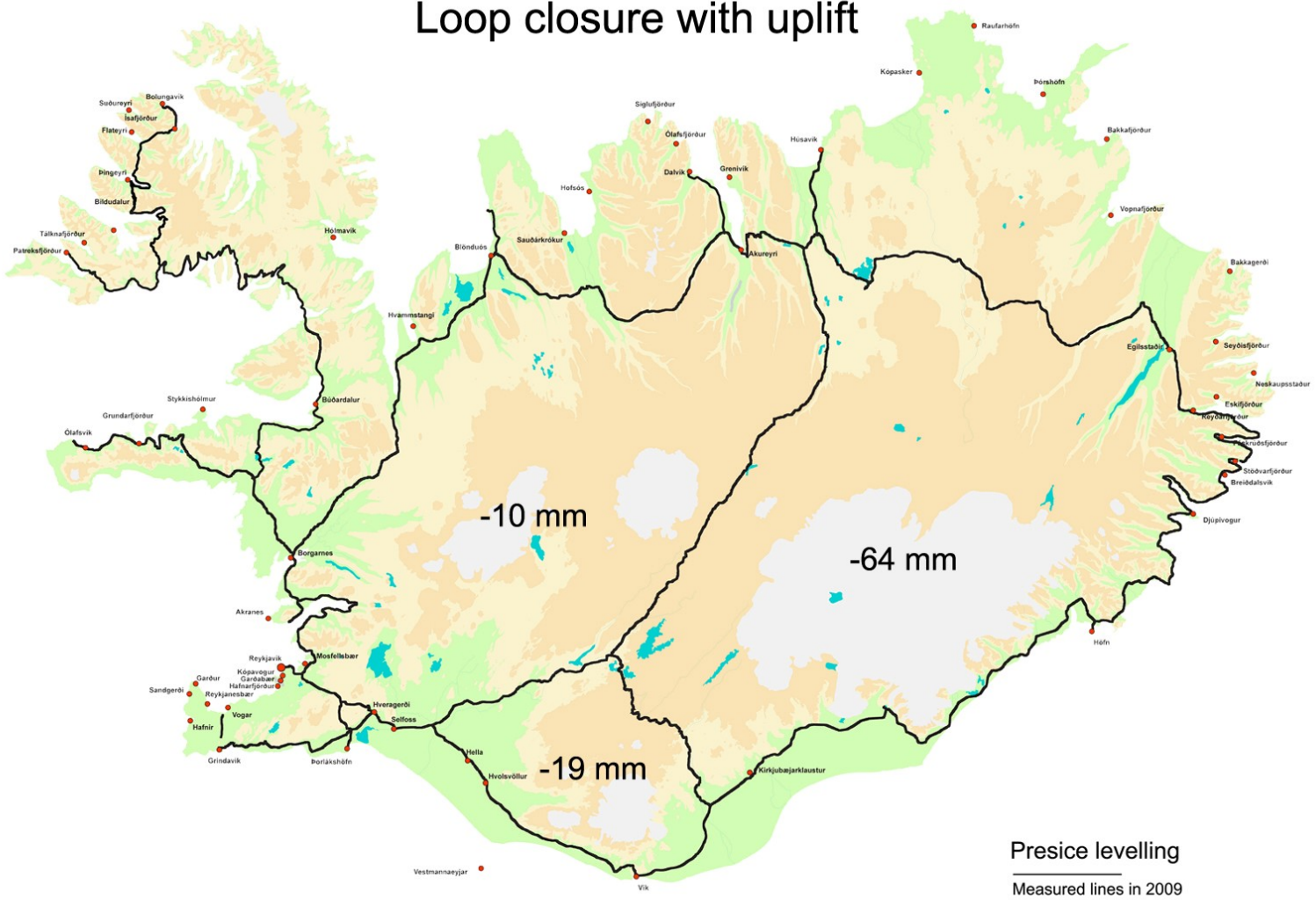
Geodetic activities 2011-2014

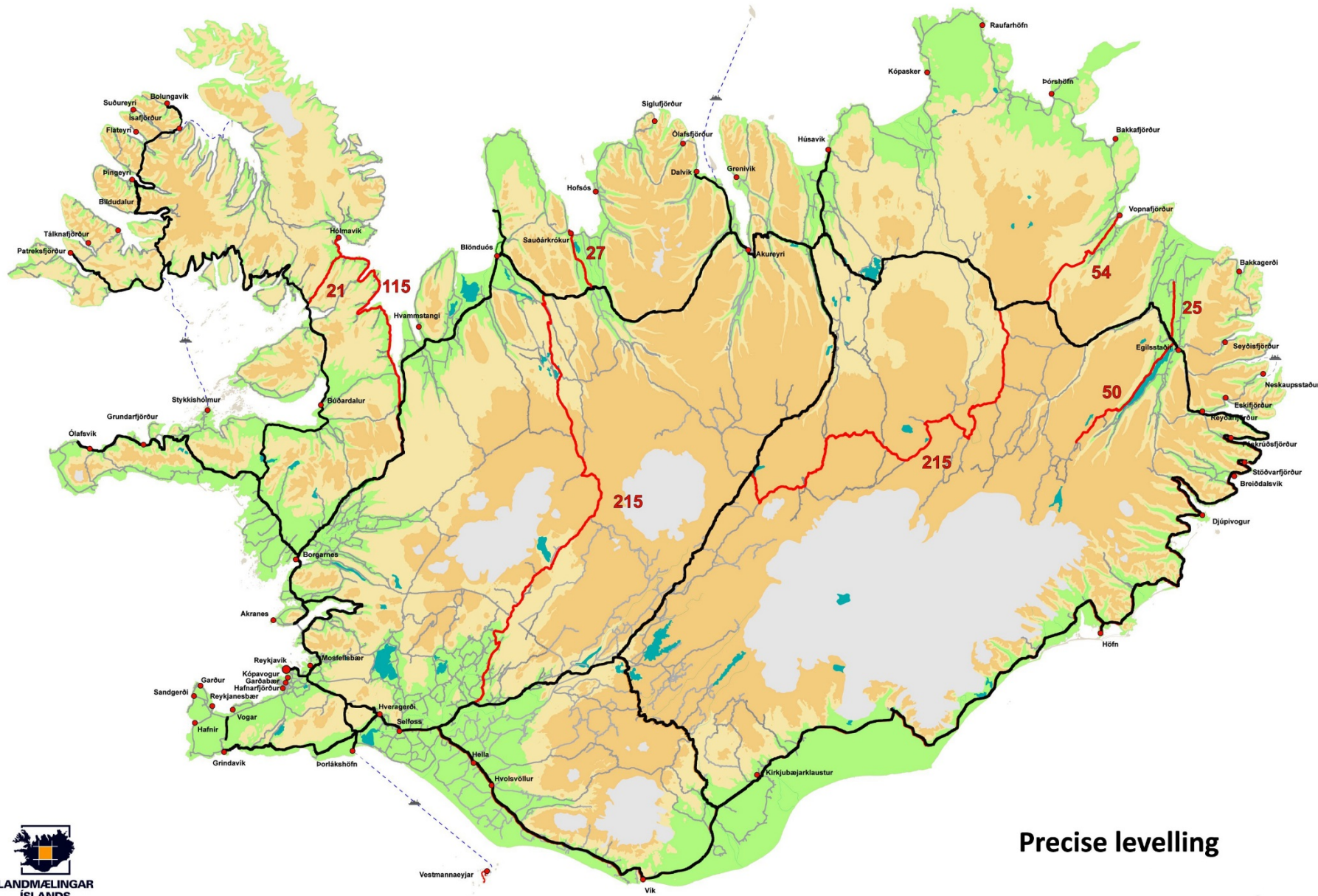
- The first version of the Icelandic Vertical Reference system was established
- A new geoid for Iceland was established
- Work on the CORS network for Iceland
- Maintenance/monitoring of the geodetic networks due to crustal deformation

The Icelandic Height System ISH2004

- Published on Mars 16th
- In cooperation with Finnish Geodetic Institute
- 4000 points
- 300 GNSS/Levelling and gravity points
- Spans over 3000 km
- Continued work on the Icelandic Vertical Reference system

Loop closure with uplift

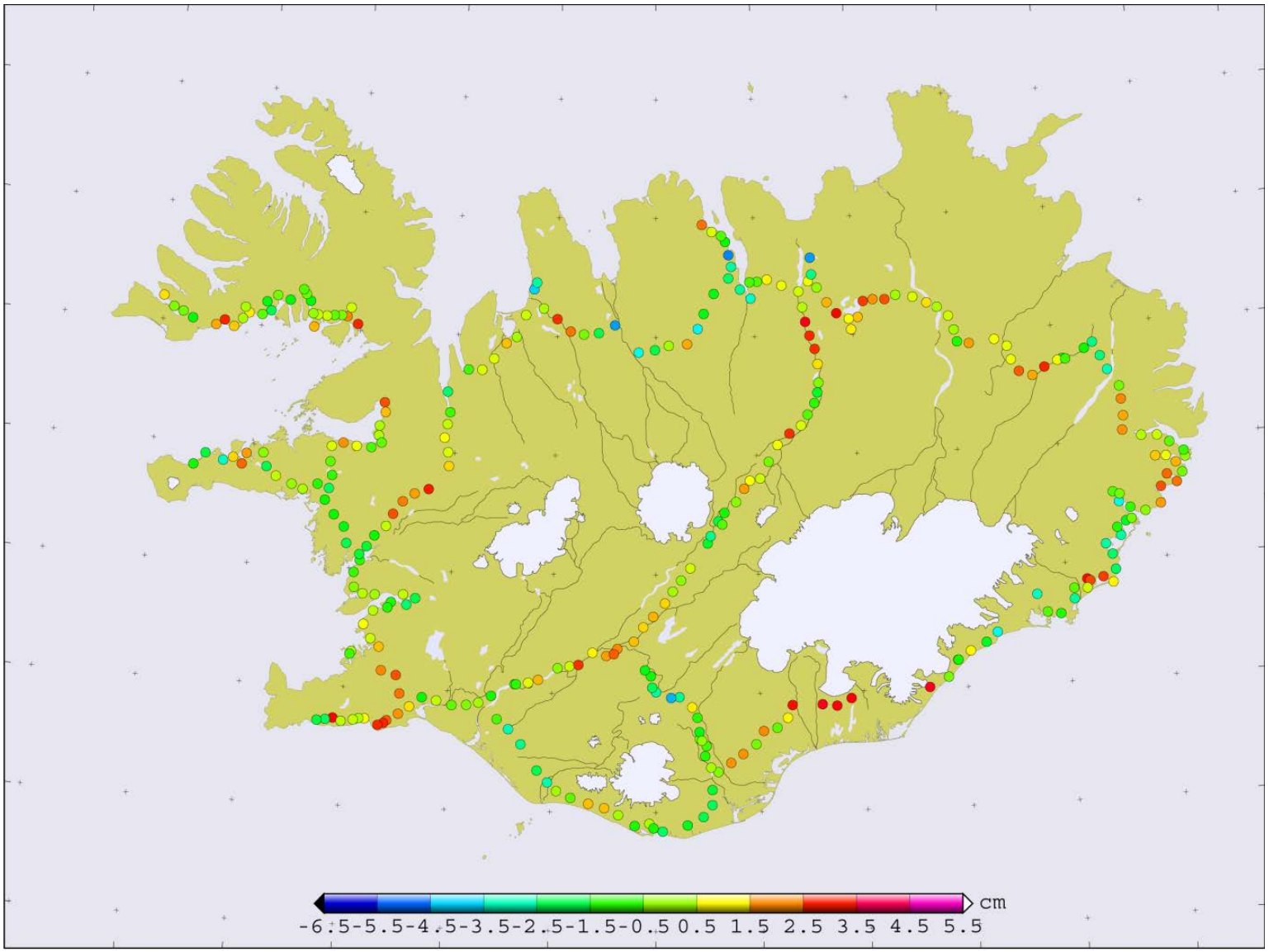


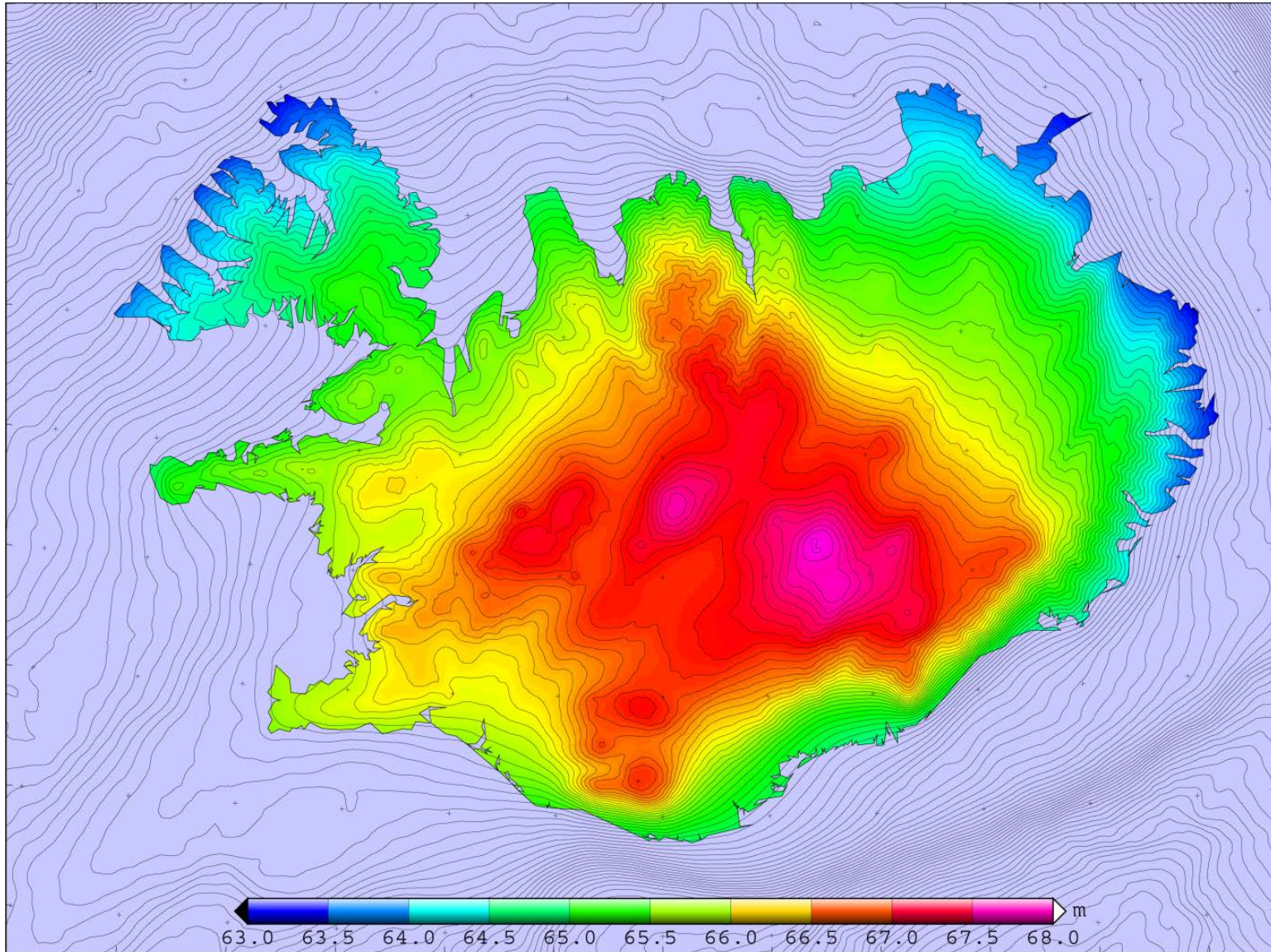


Precise levelling

IceGeoid2011 - New Geoid for Iceland

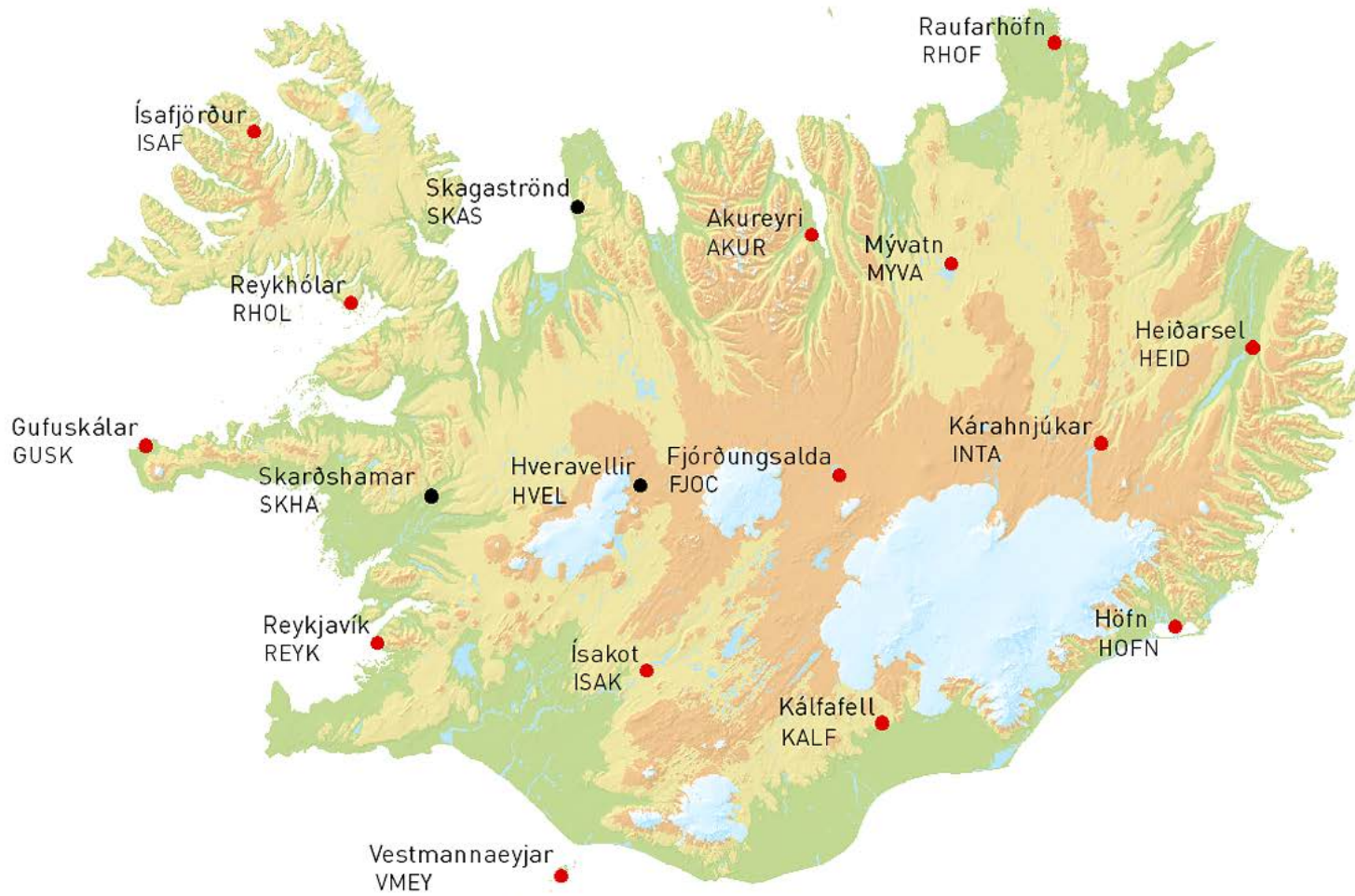
- The geoid was calculated in cooperation with DTU in Denmark
- Comparison of GPS/GNSS benchmarks + IceGeoid2011 to ISH2004:
 - Max residual: +3.5 cm
 - Min residual: -4.7 cm
 - Stdev.: 1.7 cm





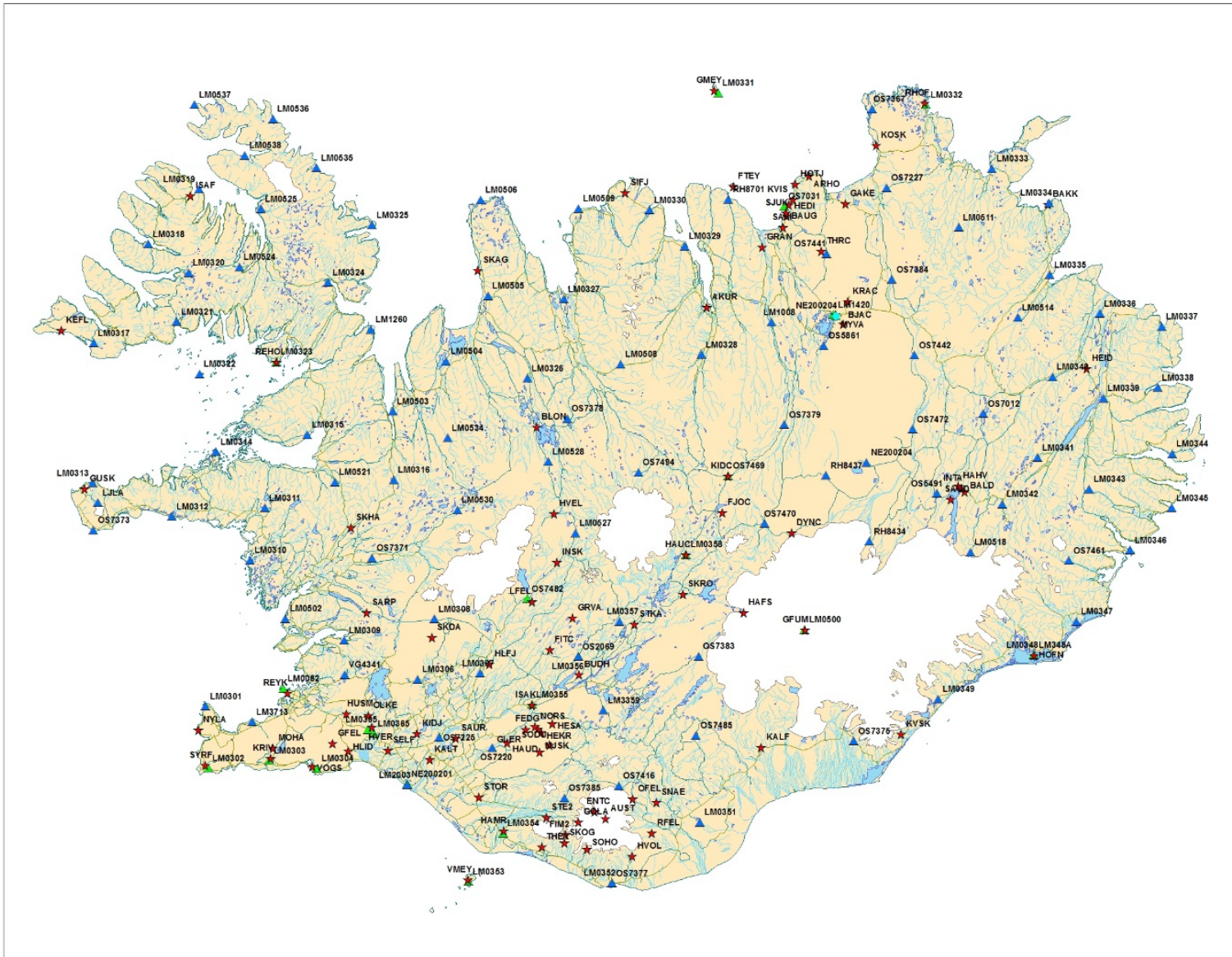
IceCORS - The Icelandic CORS system

- NLSI is building up a CORS system for Iceland
- We use GNSMART from Geo++
 - Today are 14 stations running
 - Allows up to 110 km between stations if there are more than 15 stations in the system
 - Plan to have 25-27 stations in the network
- Very small budget after the economical crises
- Cooperation with the geophysical community
- Use of older GPS receivers
- All data will be available free of charge



The next important project

- ISN2015 – New datum for Iceland
 - 125 benchmarks
 - Today are 91 permanent GNSS stations running
 - Observation from Monday to Friday
 - Considering to use semi-dynamic datum
 - We need reliable and accurate model



Thank you

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