REKLIM 2019

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ALFRED-WEGENER-INSTITUT
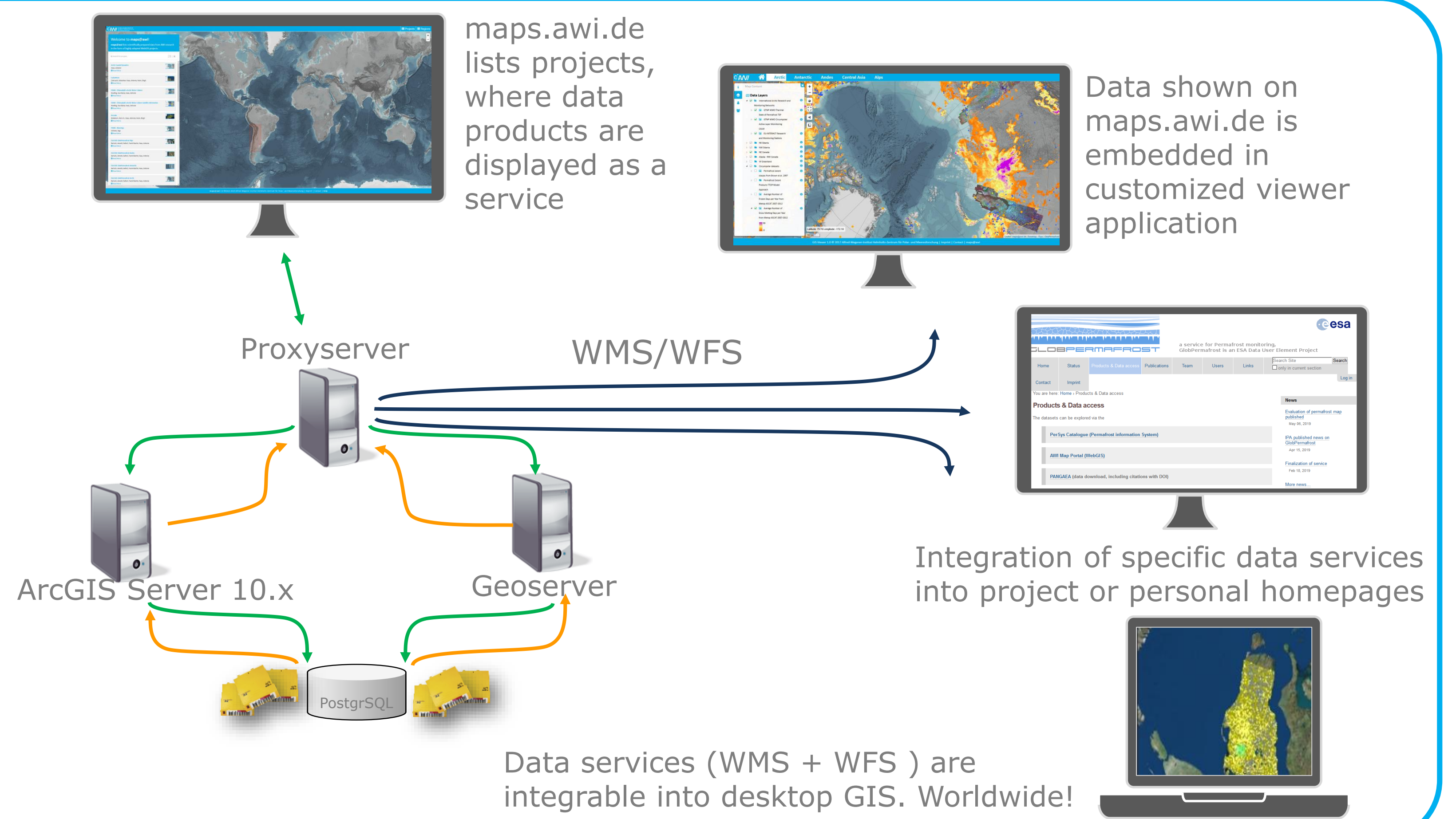HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG

GLOBPERMAFROST

Permafrost-related research data - their accessibility, visualization, and publication using GIS and WebGIS technology

Motivation - The **ESA** (European Space Agency) project **GlobPermafrost** (www.globpermafrost.info) provides a remote sensing service for permafrost research and applications. The service comprises of data product generation for various sites and regions as well as specific infrastructure allowing visualisation and access to datasets.

The **GlobPermafrost** Permafrost Information System **PerSyS** is designed as an open access geospatial data dissemination and visualisation portal. **PerSyS** allows visualisation of a wide range of **GlobPermafrost** raster and vector products: land cover classifications, Landsat-derived trend datasets, lake and wetland extents, InSAR-based land surface deformation maps, rock glacier velocity fields, spatially distributed permafrost model outputs, and land surface temperature datasets.

maps@awi

PerSys is hosted at AWI and technically realised upon **GIS (Geographical Information Systems)-based Geodata Infrastructure (GIS-GDI@AWI)**. GIS server technology enables the digital publication and therefore visualization of multidisciplinary project data in the World Wide Web. **GlobPermafrost** datasets have been published as WebGIS services relying on OGC-standardized Web Mapping Services (WMS) and Web Feature Services (WFS). Due to this, all services are interoperable and can be integrated into various desktop GIS applications. All GlobPermafrost WMS are embedded in a JavaScript GIS viewer application based on a leaflet library.

maps.awi.de lists projects, where data products are displayed as a service

Data shown on maps.awi.de is embedded in customized viewer application

Proxyserver

WMS/WFS

ArcGIS Server 10.x

Geoserver

PostgreSQL

Integration of specific data services into project or personal homepages

Data services (WMS + WFS) are integrable into desktop GIS. Worldwide!

Information and Data - From Global to Local GlobPermafrost Data Products

Project information

List of Data Layers

Project partners

Data product description

Project coordination

Data products by location

Landing page

Mountain permafrost

local

Surface changes in permafrost landscapes

regional

global

Temperature and permafrost modeling

Land cover products

The ESA DUE Permafrost final product data set is already published under doi:10.1594/PANGAEA.780111

www.globpermafrost.info or maps.awi.de

ZAMG
Zentralanstalt für Meteorologie und Geodynamik

UiO : University of Oslo

GAMMA REMOTE SENSING

H2O Geomatics

esa

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