



Service4EO: supporting smart development of marine applications

Koushik Panda

Technology and Business Innovation Expert

DEIMOS Engenharia

Located in **Lisbon, Portugal** since 2002

Staff of 50 Engineers

Areas of Expertise

Earth Observation Systems and
Applications

Guidance Navigation and Control

Ground Segment Systems

Satellite Navigation





TECHNOLOGY COMPANY OF THE ELECNOR GROUP



SPACE



AERONAUTICS



MARITIME



TRANSPORT



INDUSTRY
& UTILITIES



TELECOM
& MEDIA

+500
High-tech
projects

18
Years of
expertise

5
Countries

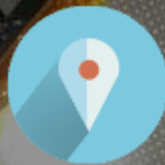
400
Highly-
qualified
employees

Excellence, commitment and innovation

SPACE



SPACE SCIENCE &
EXPLORATION



SATELLITE
NAVIGATION



**EARTH
OBSERVATION**



SPACE
SITUATIONAL
AWARENESS



LAUNCHERS

Expertise across the entire value chain in satellite systems
Deimos technology is present in more than 60 satellites

Capabilities to lead a complete space mission

DEFINITION

DESIGN

DEVELOPMENT

LAUNCH

APPLICATIONS



DEIMOS EARTH OBSERVATION SYSTEMS

Mission Payload Data Systems

- - Systems to handle satellite data
- - Ground segment products

gs4EO

3 locations: Lisboa, Madrid, Harwell

4 teams:

R&D
Systems

Products
Operations

Earth Observation Systems

- - EO applications
- - EO systems

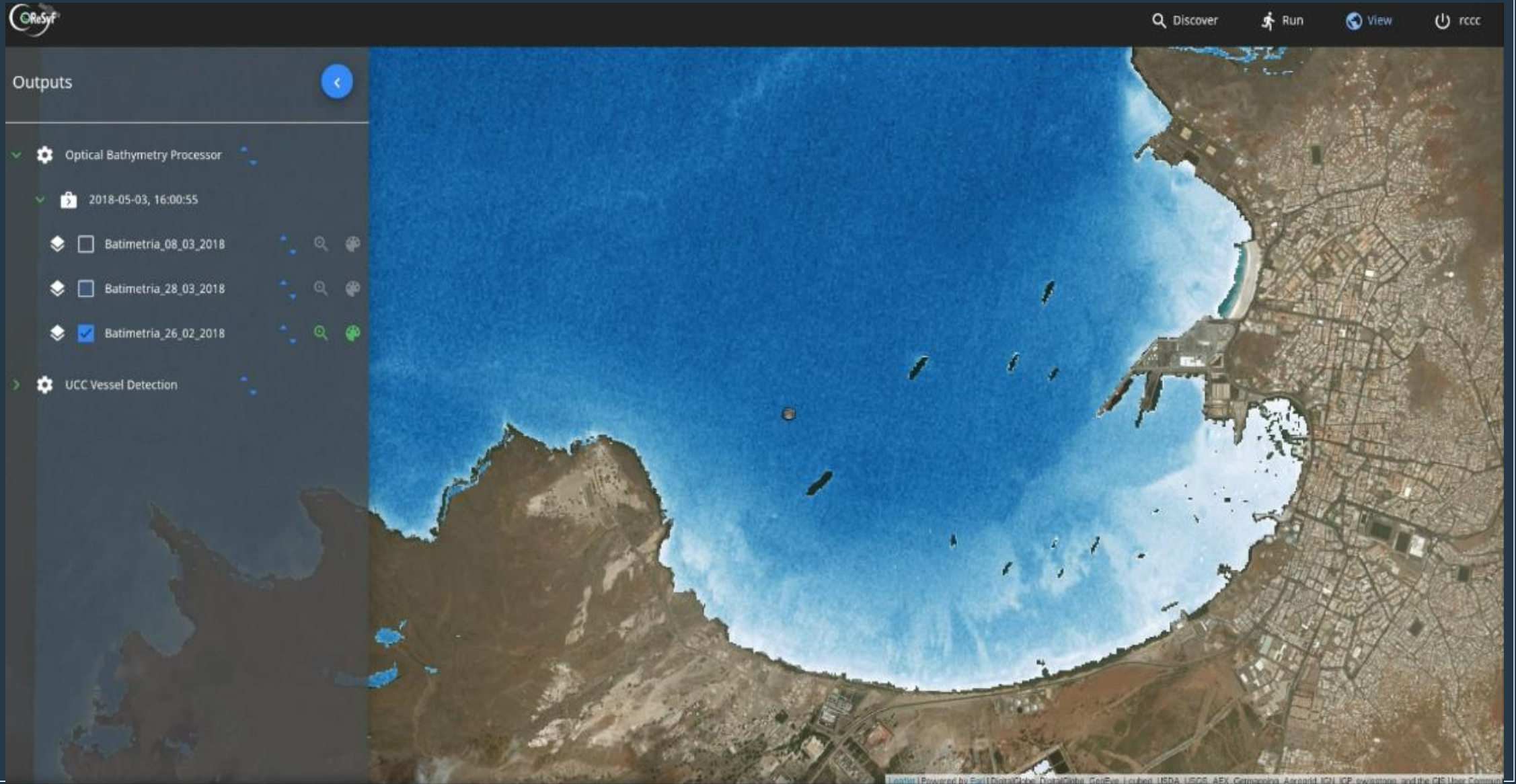
service4EO

Main Clients

ESA
EUMETSAT
EMSA

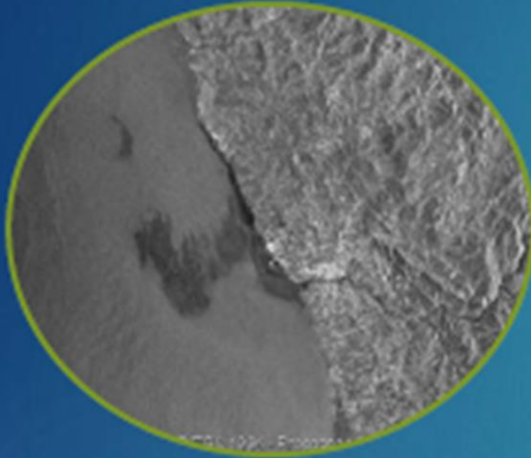
Thales
Airbus
OHB

Research Centres & Agencies
SMEs, e.g. applications & VA Services

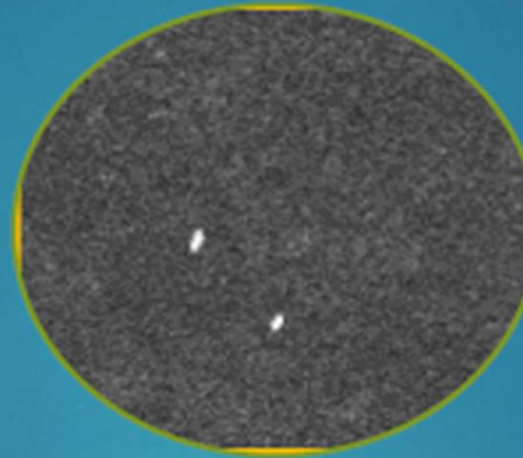


service4EO Ocean - Virtual Research Lab

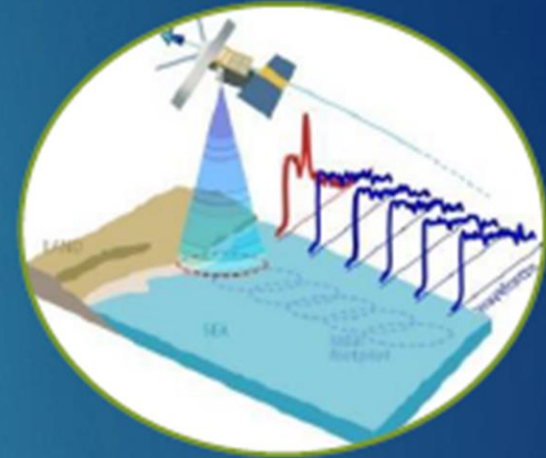
Oil spill detection



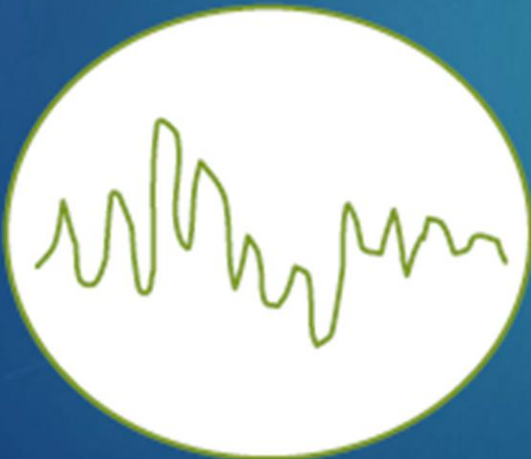
Vessel detection



Coastal Altimetry



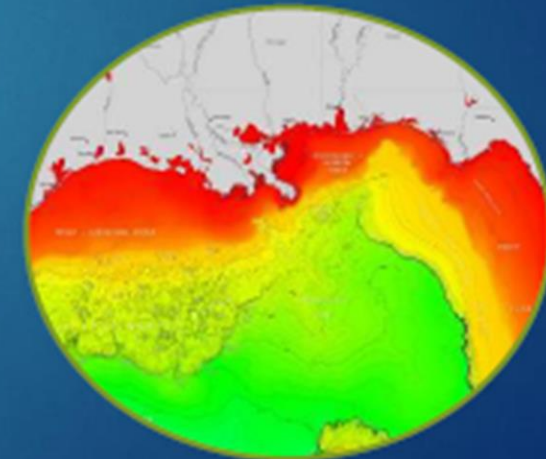
Hyper-temporal Time Series



Water quality & benthic habitat mapping



Optical & SAR Bathymetry





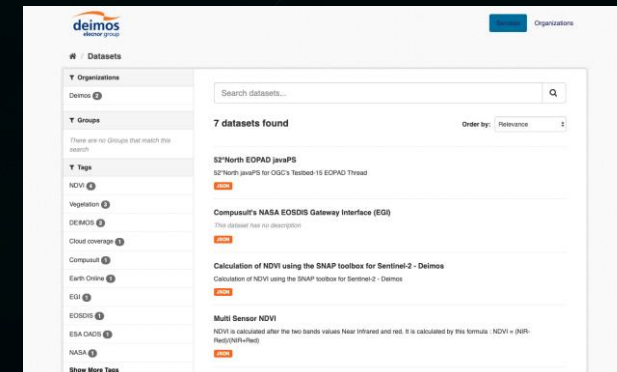
*service***4EO** FOR EO APPLICATIONS AND SERVICES

Data Archiving and Cataloguing

- *Data Harvesting*
- *Data Access*
- *Data Archiving*
- *Data Upload*
- *Data Discovery*

Service Catalog

- *Service Publishing*
- *Service Discovery*
- *Service Channing*

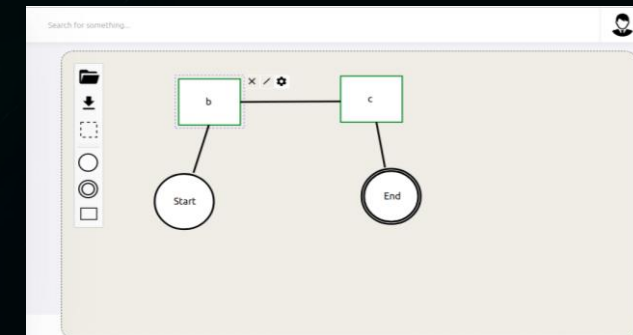




*service***4EO** FOR EO APPLICATIONS AND SERVICES

Micro-services chaining

- *E-commerce of micro-services connecting service providers and EO value adders*
- *Workflow Manager for service chaining*
- *Flexible Service Deployment (for example , multi-cloud deployment)*
- *Subscription based or on-demand triggering*





service4EO FOR EO APPLICATIONS AND SERVICES

identity4EO

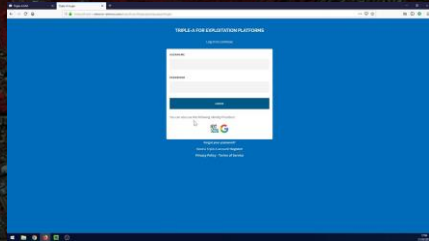
User Management aaS

Authentication, incl. SSO

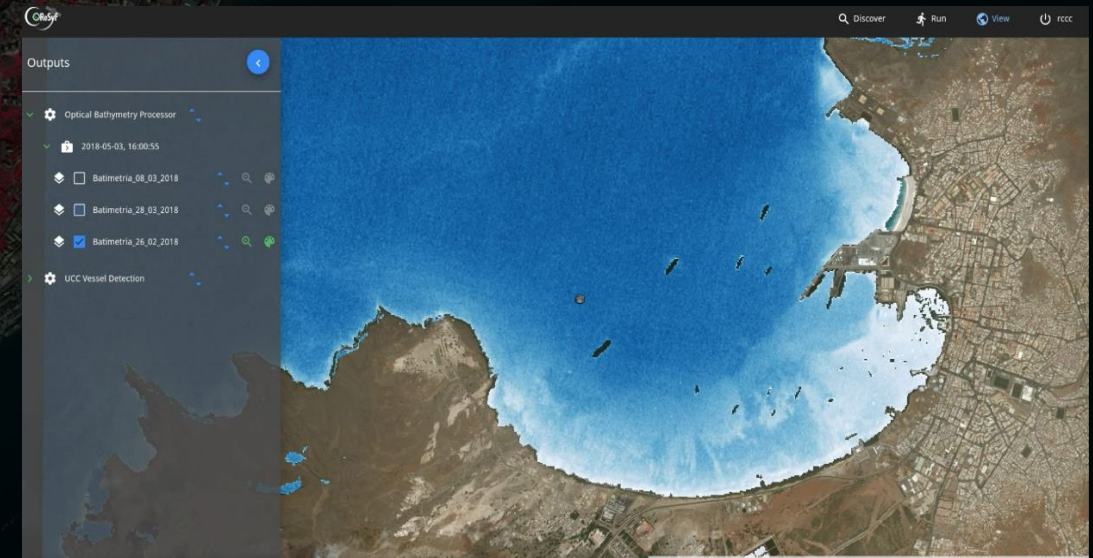
Authorisation for services

Accounting for BI and billing

COIH – with ESA and EARSC



portal4EO
Geoportal kit





*service*4EO FOR EO APPLICATIONS AND SERVICES

Operations and Analytics Dashboards (*monitor*4EO)

- *Monitoring performance of EO applications*
- *Measuring KPIs*
- *Business Intelligence*



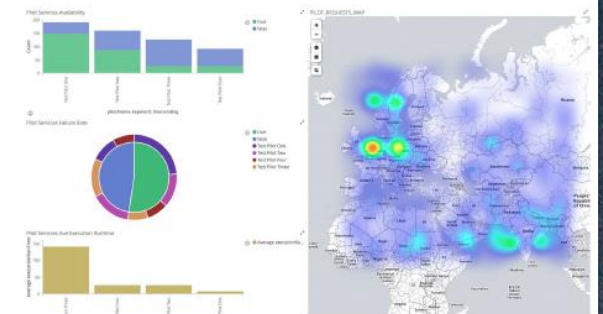
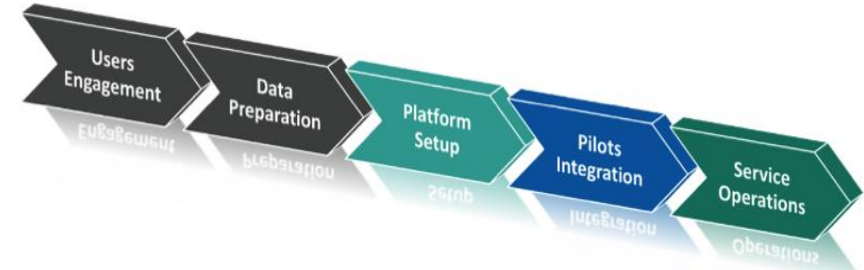
Operations Support

- *Multitier support service via service desk*
- *Providing operations support to*
 - *NextGEOSS*
 - *Service4EO commercial EO services*
 - *E-shape*
 - *Hydrology-TEP*

NEXTGEOSS

European Data Hub and Platform

- Five steps engagement process
- Data and services hub with community feedback
- Cloud Integration for large, systematic processing
- Operations and monitoring
- GEO Community of practice



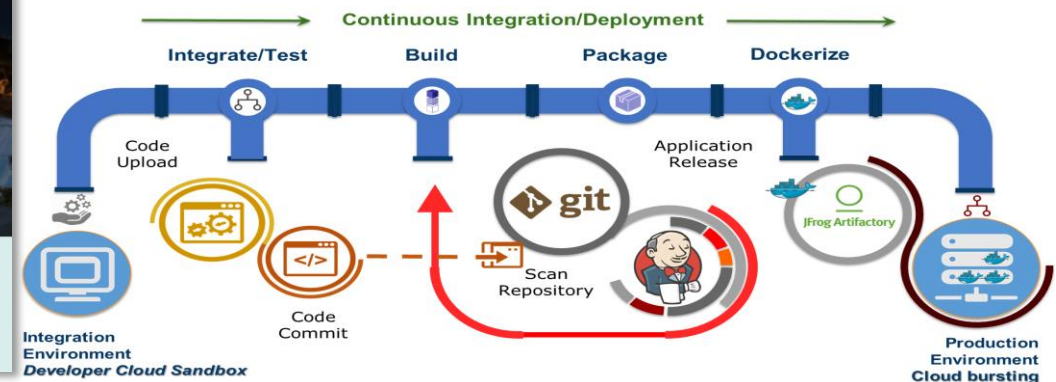
Europe's Earth Observation Data Hub

Satellite, remote sensing, in situ, and citizen science data about climate change, agriculture, pollution and more.

1,174,183 Earth observation datasets

Want to explore the full catalogue?

[Start exploring Datasets](#) [Start exploring Data Collections](#)





NextGEOSS DataHub



NEXTGEOSS

[Catalogue](#) [Data Collections](#) [Datasets](#) [Data Providers](#) [Thematic Areas](#) [OpenSearch](#) [Support](#) [About](#)

Europe's Earth Observation Data Hub

Satellite, remote sensing, in situ, and citizen science data about climate change, agriculture, pollution and more.

1,215,205 Earth observation datasets

Want to explore the full the catalogue?

[Start exploring Datasets](#)

[Start exploring Data Collections](#)

NextGEOSS DataHub

- OGC Compliant OpenSearch API
- Empowering the regional GEO interoperability
- Quality of Service



AmeriGEO

AfriGEO
Earth Observations for Africa

H2020 Project data output



Plan4All

118719 Datasets



EPOS

11 Datasets



SIMOcean

570 Datasets

Data Providers

 CGIAR-CSI 1 Dataset	 Copernicus Marine Service CMEMS 8691 Datasets	 Deimos 54 Datasets
 European Commission Joint Research Centre EU Joint Research Centre 67 Datasets	 EPOS EUROPEAN PLATE OBSERVING SYSTEM EPOS 11 Datasets	 ESA SciHub 1029359 Datasets
 GBIF Global Biodiversity Information Facility GBIF 1 Dataset	 European Environment Agency European Environment Agency - Copernicus 3 Datasets	 European Space Agency 1 Dataset
 ISRIC World Soil Information ISRIC 1 Dataset	 GDACS Global Disaster Alert and Coordination System GDACS (Global Disaster Alert and Coordination System) 7316 Datasets	 Global Land Cover Facility (GLCF) 0 Datasets
	 NASA	 UNIVERSITY OF TWENTE



NextGEOSS Platform Services



Data Cataloguing



Cloud Integration



Service Cataloguing



Cloud Bursting



Data Discovery



User Management



Geospatial User Feedback



Operations Analytics and
Dashboards



NextGEOSS Pilot Services

Innovative Pilot Services

IP1
Agricultural
Monitoring



IP2
Biodiversity



IP3
Space &
Security



IP4
Cold Regions



IP5
Air Pollution
in Mega Cities



IP6
Disaster Risk
Reduction



IP7
Co-ReSyF



Business Pilot Services

BP1
Territorial
Planning



BP2
Food Security



BP3
Smart Cities



BP4.1/2
Energy*



BP5 Marine
Drift



BP6 Geo
Wetland





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Please get in touch for any collaboration