

I FORO TÉCNICO DE LA CIVIL UAVS INITIATIVE

Módulo para ingestión y tratamiento de datos geoespaciales de primero y segundo nivel dentro del Centro de Misión y Procesado de Datos (CMPD)





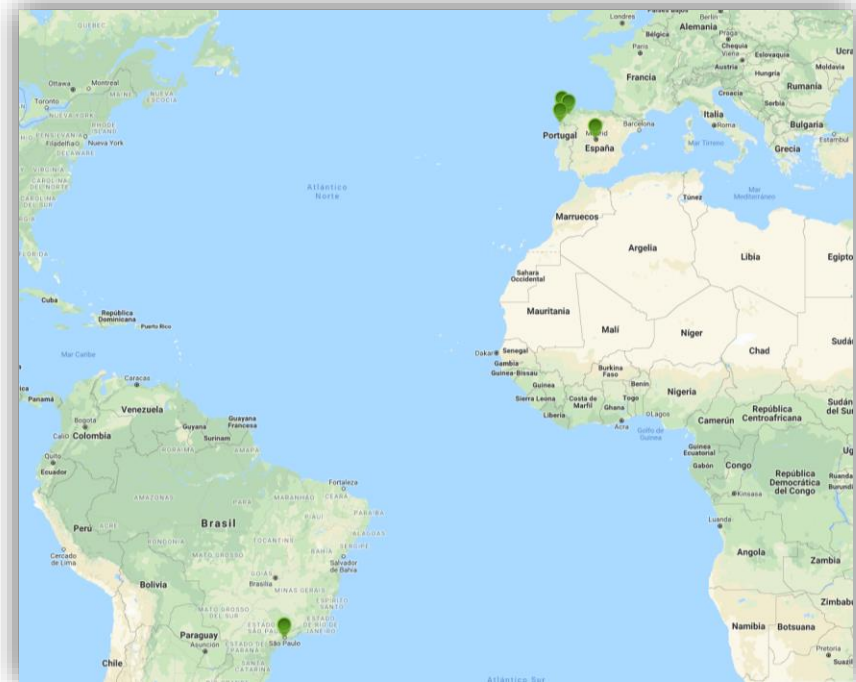
<https://ingenieriainsitu.com/>

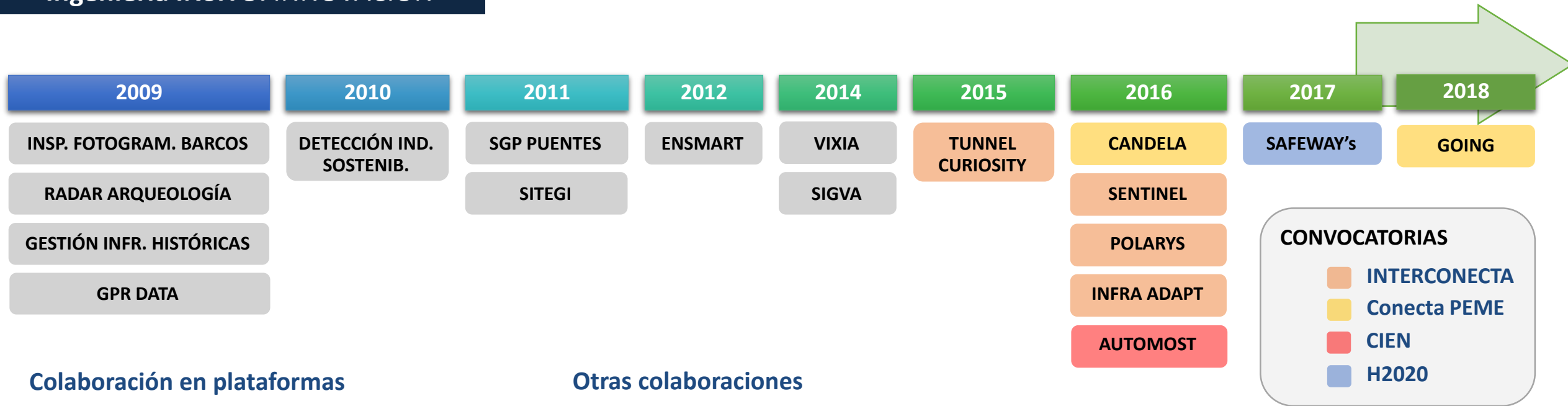
Empresa de base tecnológica (**EBT**) aplicada a la Ingeniería y Arquitectura

2008 – **Instrumento de transferencia al mercado** de la actividad del grupo de investigación GEO-Tecnologías Aplicadas de la Universidad de Vigo

Presencia en:

- España (Madrid, A Coruña, Lugo y Vigo)
- Brasil (Sao Paulo)





Colaboración en plataformas

HUB Ferroviario de Málaga

Plataforma Tecnológica de la Construcción

Plataforma Tecnológica Española de la Carretera (PTC)

Otras colaboraciones

Universidad de Vigo



Válido hasta el 31 de diciembre de 2018



Tecnología

LiDAR
Imágenes
Posicionamiento



MOBILE MAPPING



UAV's



TLS



LASER BACK



INTERNET OF THE THINGS



TIC

Desarrollos Software propios



MSMANAGER



MSINVENTORY



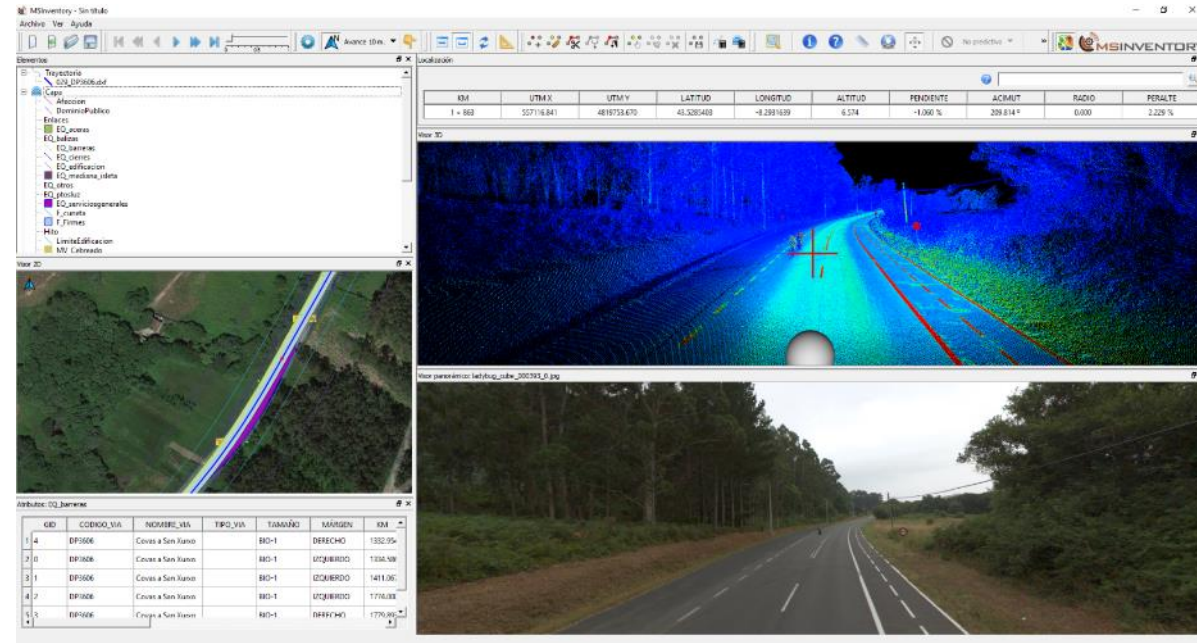
MSPAVEMENT



MSVIEWER

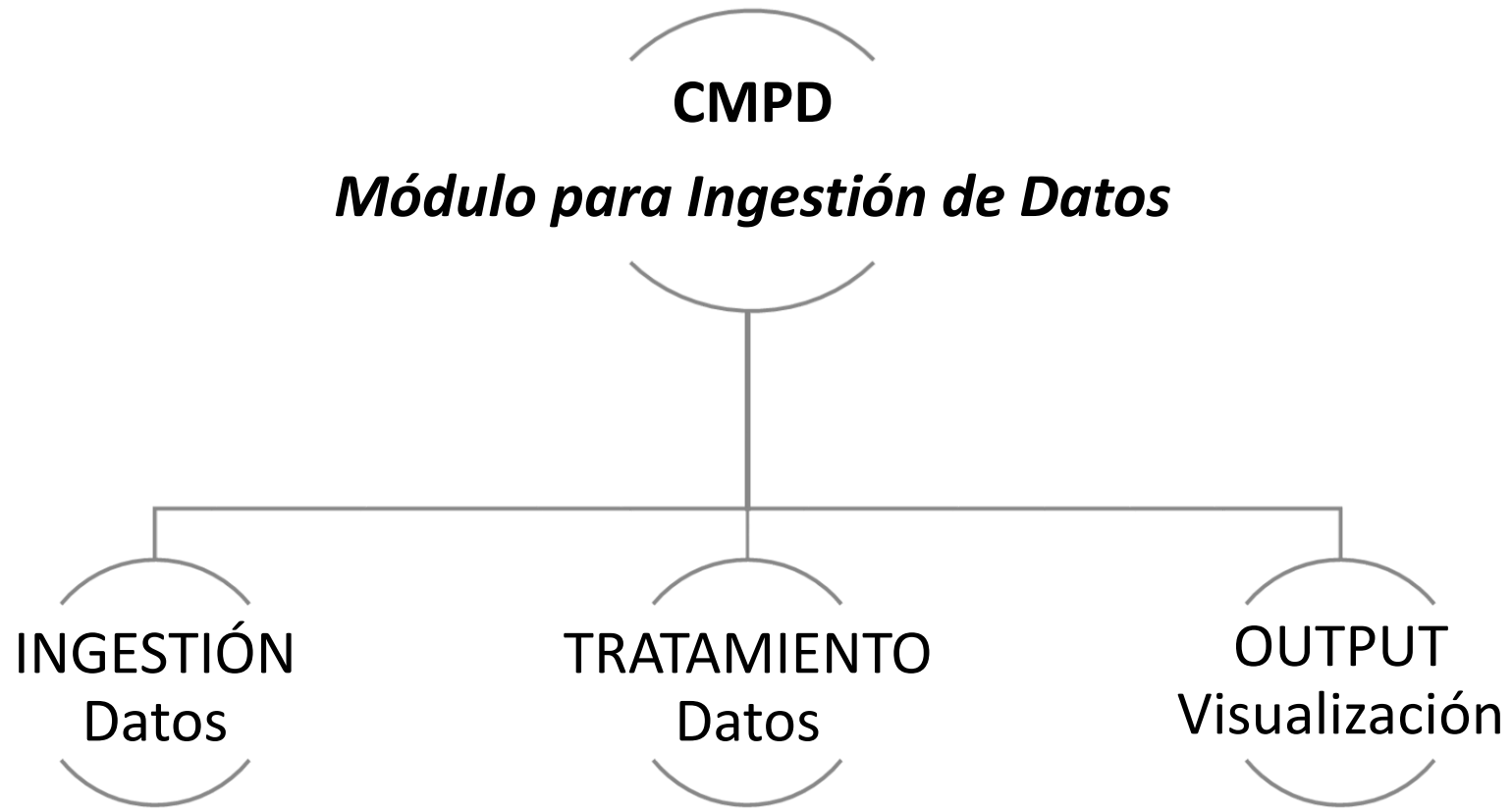


MSAPP
MultiSensor Application



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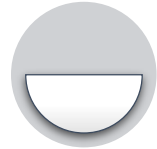






DEFINICIÓN DE REQUISITOS

Requerimientos funcionales
Requerimientos no funcionales



DISEÑO

Visión lógica del sistema
Visión física de la arquitectura
Diagramas de clases
Integraciones
Seguridad y accesos
Modelos de datos
Interfaces
Plan de pruebas



IMPLEMENTACIÓN

Lenguajes de programación

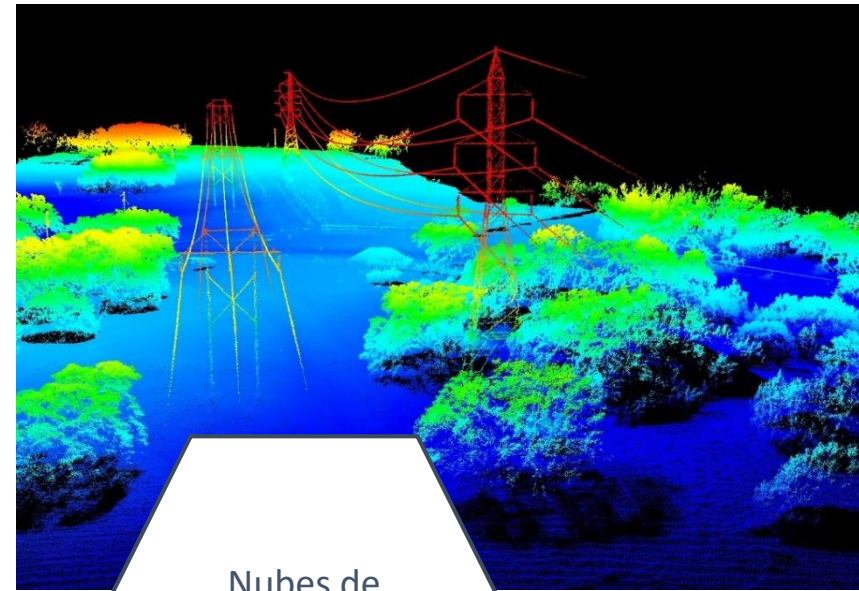


VALIDACIÓN

Consistencia
Precisión
Compleitud



Imágenes RGB



Nubes de
puntos LiDAR



Imágenes
Multi-
Hiperespectrales

MÓDULO PARA
INGESTIÓN DE
DATOS

Otras
tipologías...

Objetivos

Tipología de datos

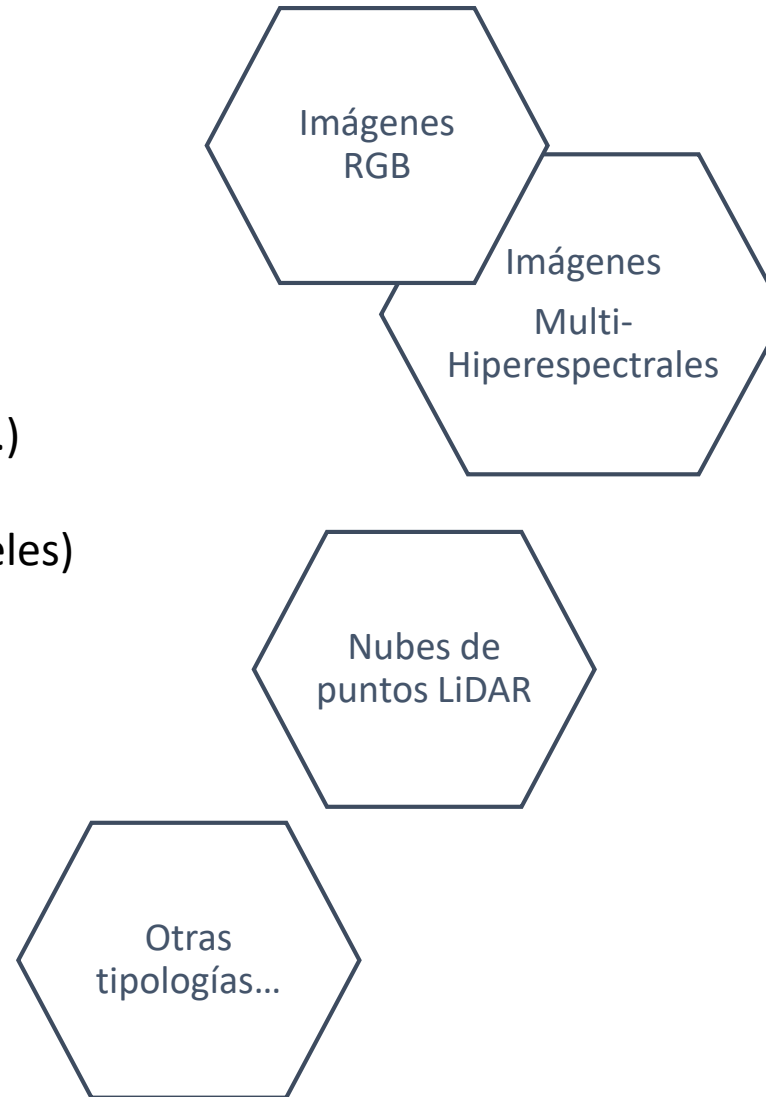
Modo de captura

Análisis de datos (georreferenciación, metadatos, etc.)

Tratamiento y preparación de los datos (distintos niveles)

Selección de niveles

Combinación/fusión de datos



TRATAMIENTO
Datos



LiDAR

TRATAMIENTO Datos

NIVEL 1

Nube de puntos
georreferenciada

NIVEL 2

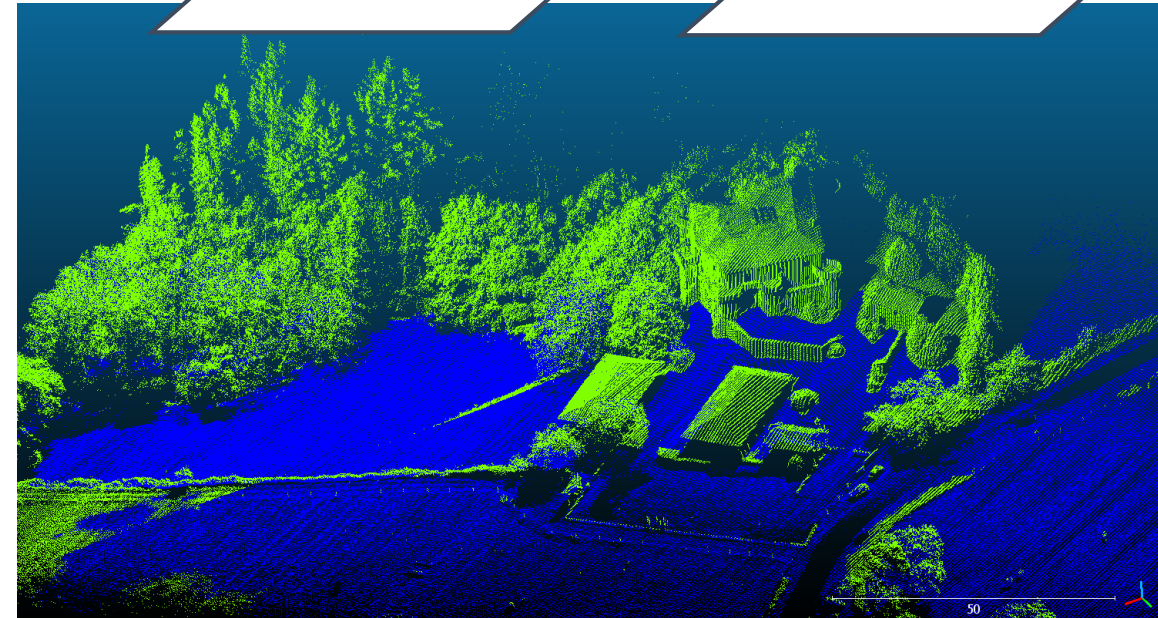
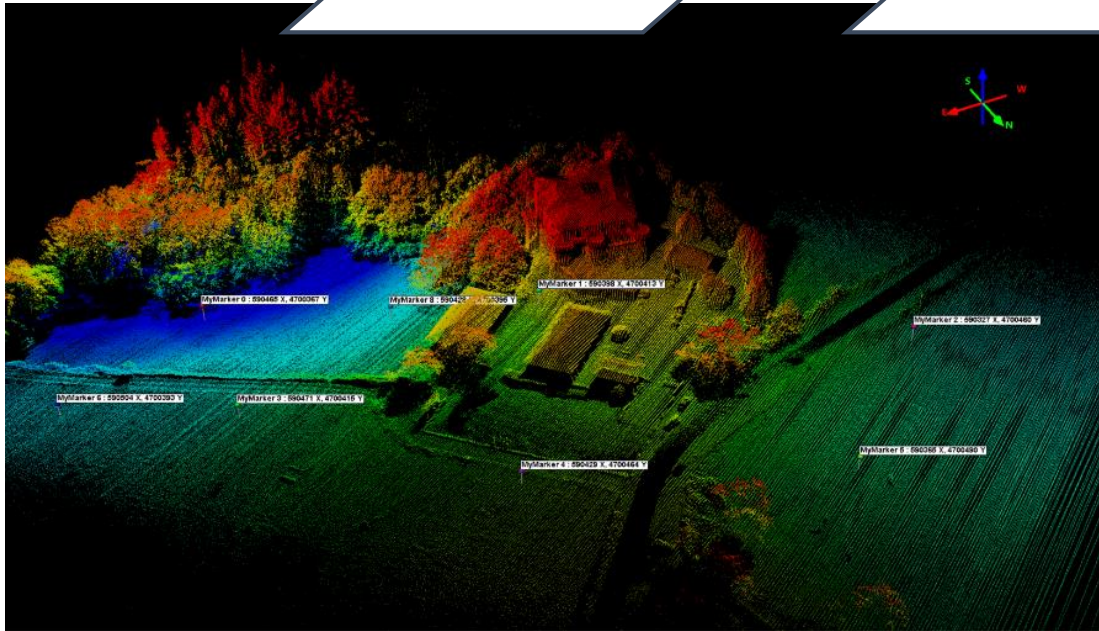
Ajuste de Strips

NIVEL 3

Filtros eliminación
de ruido y suavizado

NIVEL 4

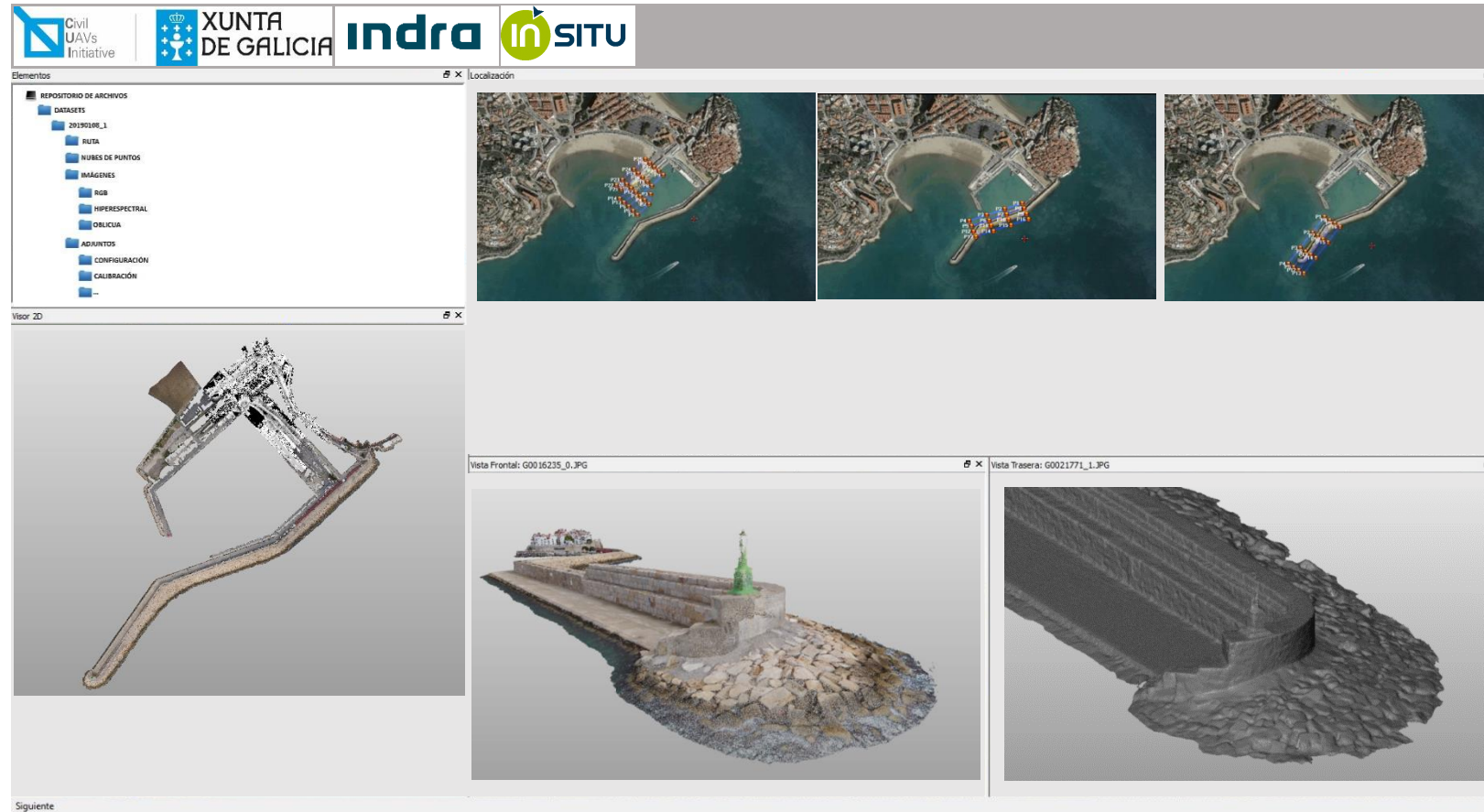
Segmentación
terreno





Gestión, consulta y explotación de la información.
Distintos niveles de acceso (usuarios)

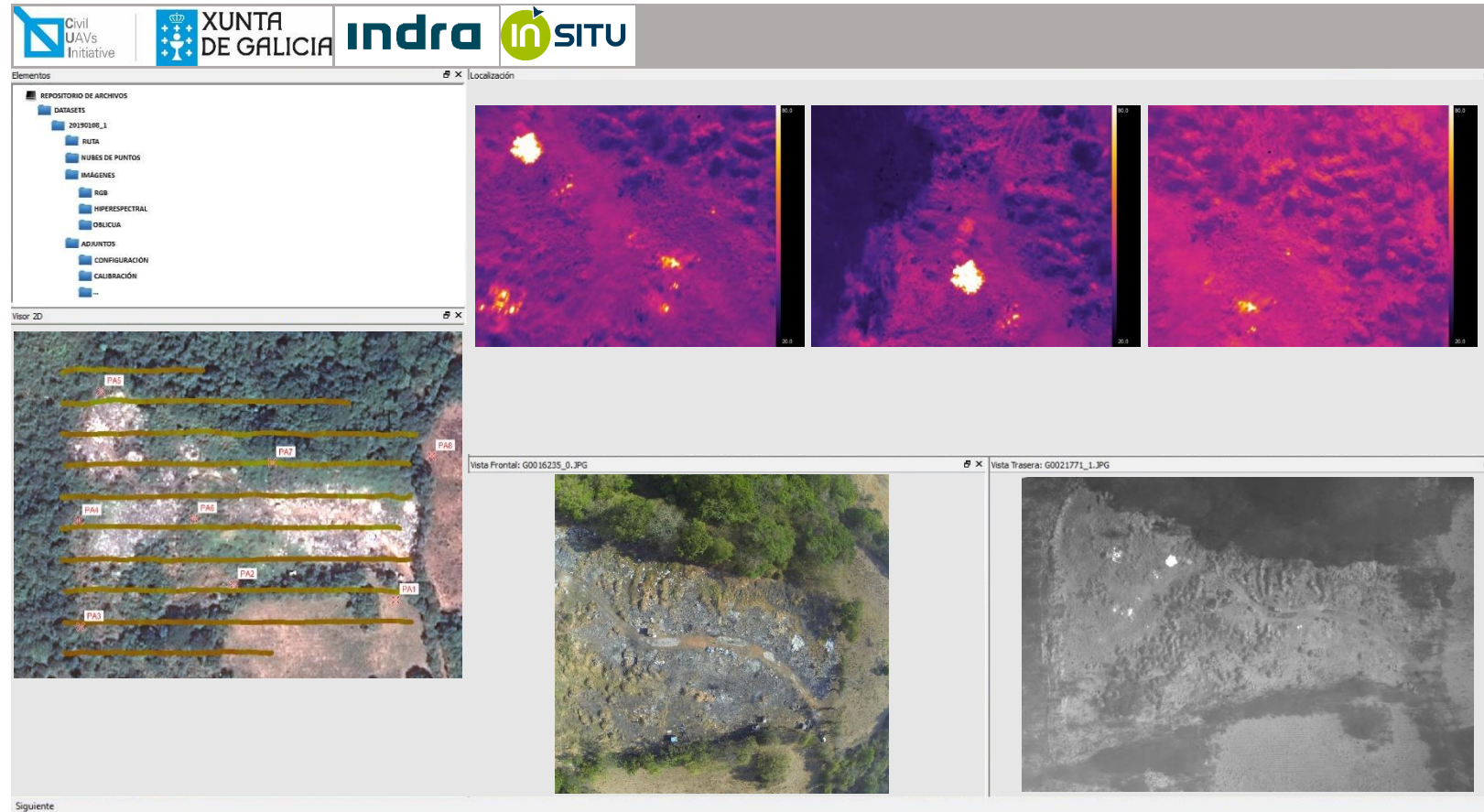
OUTPUT
Visualización



CMPD. Módulo para Ingestión de datos

Gestión, consulta y explotación de la información.
Distintos niveles de acceso (usuarios)

OUTPUT
Visualización



CONCLUSIONES

- ✓ Ingestión de datos de diferentes plataformas y sensores
- ✓ Tratamiento y preparación de datos para usuarios finales
 - Valorizar la información capturada
 - Aportar distintos niveles de información disponible
 - Combinación y/o fusión de información de diferente procedencia



The image is a composite graphic. The top half has a dark blue background. On the left, a word cloud of country names is shaped like a map of the Americas, with 'BRASIL' and 'SÃO PAULO' highlighted in yellow. In the center, another word cloud shaped like Europe highlights 'RUSSIA', 'CHINA', and 'INDIA' in yellow, with 'MADRID - A CORUÑA - LUGO - VIGO' written in white. To the right is a yellow LinkedIn logo. Below these elements, on the right side, is contact information in white text. The bottom half of the image shows a black and white photograph of a long, arched tunnel entrance with a bright light at the end.



The image is a composite of three main visual elements. The top half features a dark blue background with a world map composed of country names in white and yellow text. The names are of varying sizes, with 'RUSSIA', 'CHINA', 'INDIA', 'BRASIL', and 'AUSTRALIA' being the most prominent. The text 'Madrid - A Coruña - Lugo - Vigo' is written in white across the center of the map. To the right of the map is a yellow LinkedIn logo. Below the map and logo, there is a photograph of a long, arched tunnel entrance with a bright light at the end. In the bottom right corner of the photograph, there are four social media icons: Facebook, LinkedIn, YouTube, and Google+. The overall design is professional and modern.

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