11th Iberian Grid Conference
Faro, 10th – 13th October 2022

Technical Presentations Report

Antonio José Sáenz-Albanés
ICT Core e-Infrastructure Operations Coordinator

Junta de Andalucía
Andalucía se mueve con Europa
GOBIERNO DE ESPAÑA MINISTERIO DE CIENCIA E INNOVACIÓN
EUROPEAN UNION
European Regional Development Fund
"A way to build Europe"

Improving the environmental monitoring cycle, remote sensing & space technologies

Emilio de León-Cárdenas

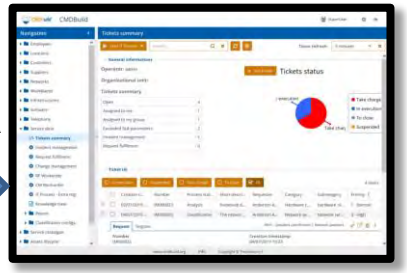
Infrastructure offered by LifeWatch ERIC

- Distributed e-Infrastructure
- Data processing and authoring tools
- VREs, Workflows, LifeBlock
- Availability
  - Redundancy, monitoring, SOC
  - KPIs -> SLAs
- FitSM

FitSM

KPI

SLA

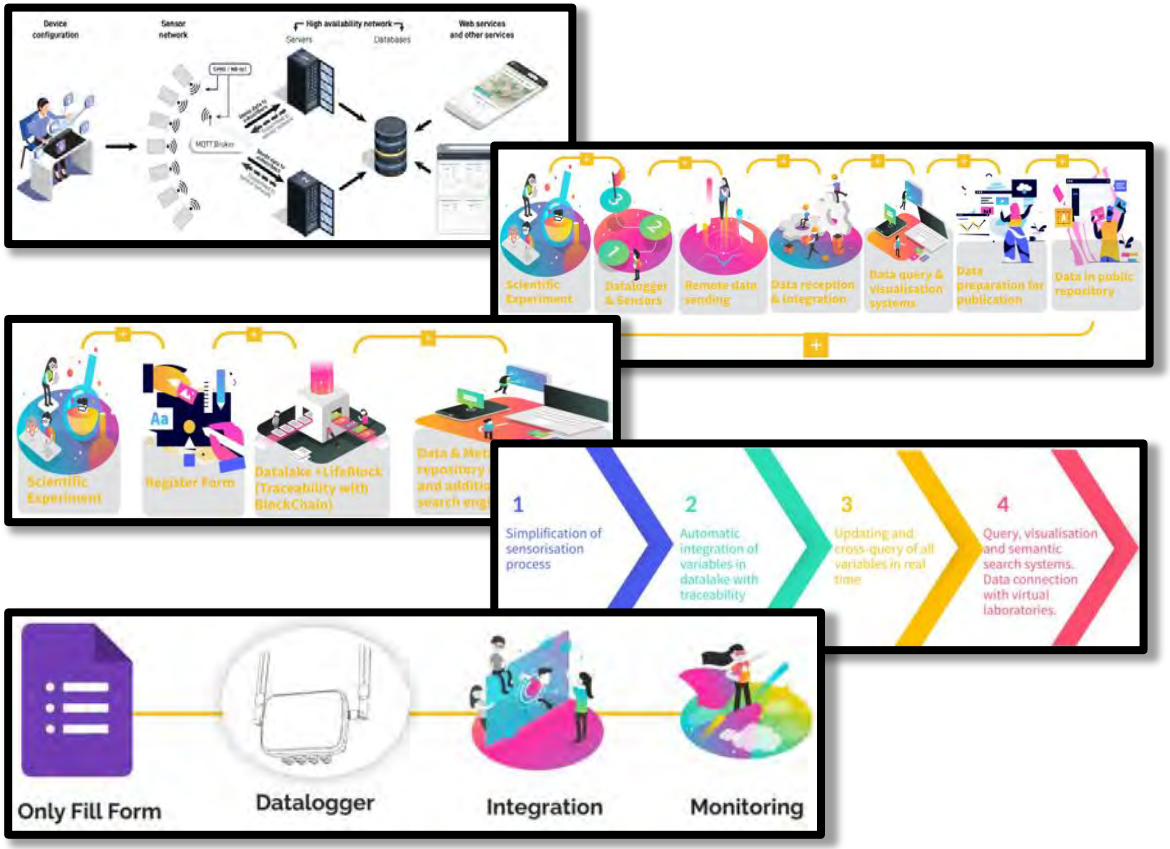


Improving the environmental monitoring cycle, remote sensing & space technologies

Pablo David Guerrero-Alonso

Data capture process

- Traditional IoT environmental monitoring cycle
- Improving the environmental monitoring cycle
  - Simplifying sensorisation process
  - Automatic integration in DB & traceability
  - Real-time updating & queries
  - Exploration through vLabs
- Enhanced Dataloggers

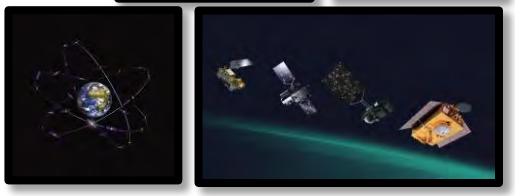


Improving the environmental monitoring cycle, remote sensing & space technologies

Jaime Lobo Domínguez-Roqueta

Biodiversity, Remote Sensing & Space Technologies

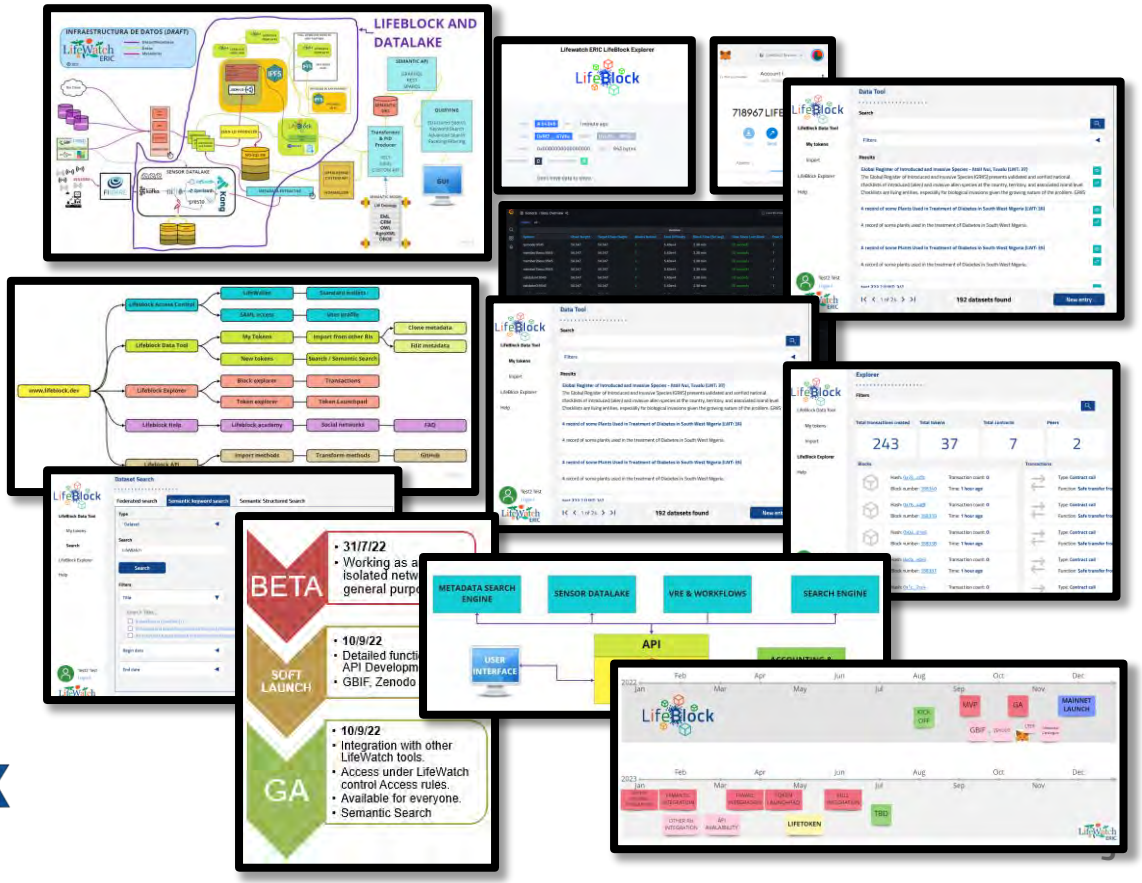
- FAIR DATA & e-Services
- Satellites
  - UNOOSA, Copernicus, Galileo
  - Space 4 SDGS
- High Altitude Balloons
- HAPS
  - High Altitude Pseudo Satellites
- First Andalusian Earth Observation Nanosatellite



LifeBlock and semantic environment status and roadmap

Dr. Joaquín López-Lérida

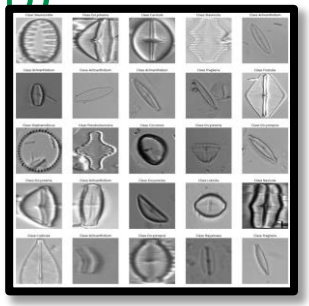
- LifeBlock and datalake architecture
- LifeBlock objectives
- LifeBlock proof of concept (2021)
- Development status
  - Sept. ‘22: Testnet
- LifeBlock functional map
- LifeBlock data tool: Sept ‘22
- LifeBlock explorer: Sept ‘22
- Semantic search and RI: Oct ‘22
- Short term roadmap
- LifeBlock API (REST, GRAPHQL, SPARQL)

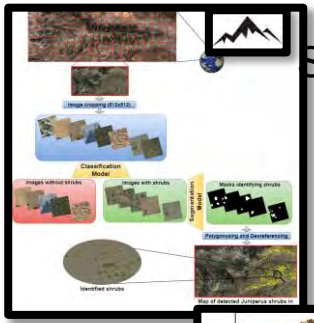


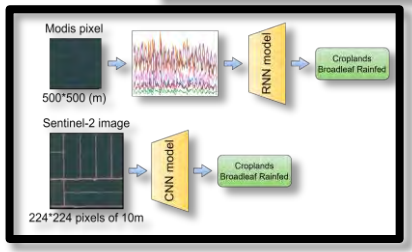
Application of Artificial Intelligence in the study of Ecosystems

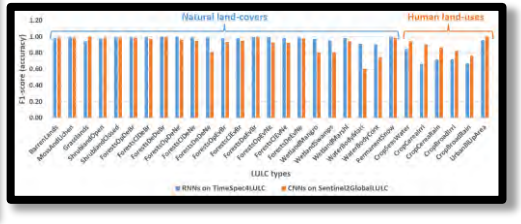
Dr. Rohaifa Khaldi (and on behalf of research group)

- Projects:
  - Land use/cover mapping
  - High mountain shrubs detection.
  - Diatoms recognition
  - Photosynthetic pigments concentration estimation
  - Herbarium species identification





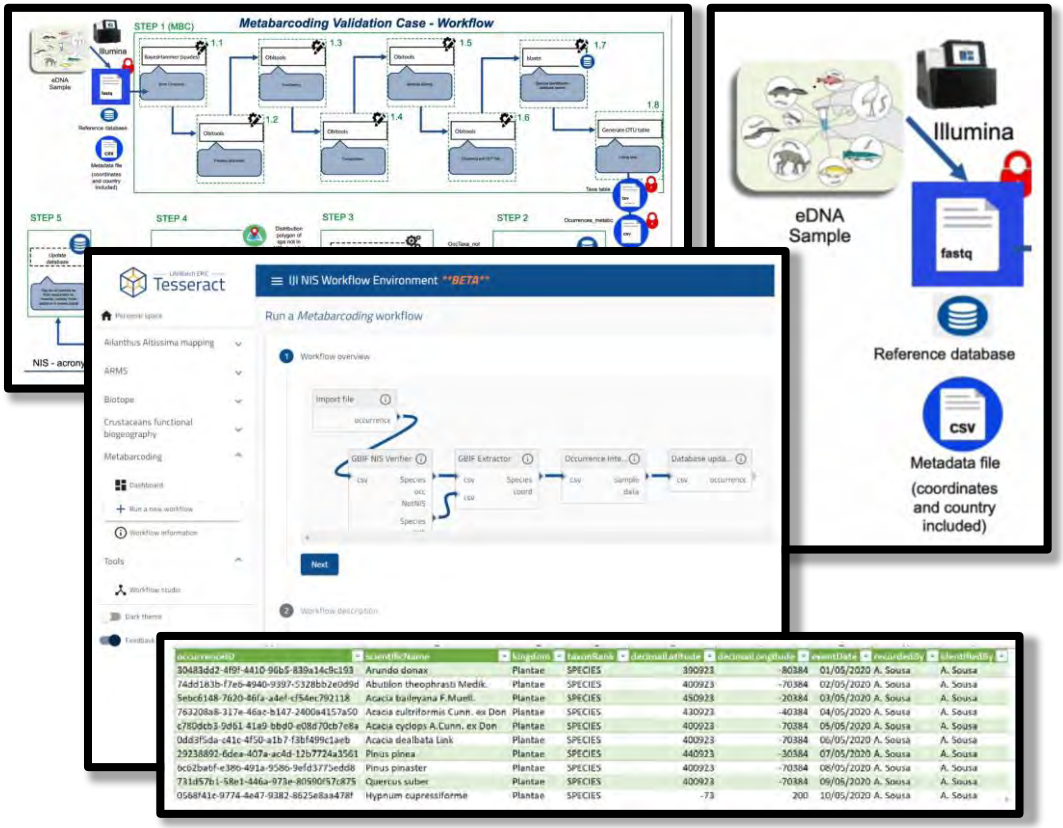




Early detection of invasive species using metabarcoding

Emilio de León-Cárdenas, Francisco Manuel Sánchez-Cano, Filipa MS Martins

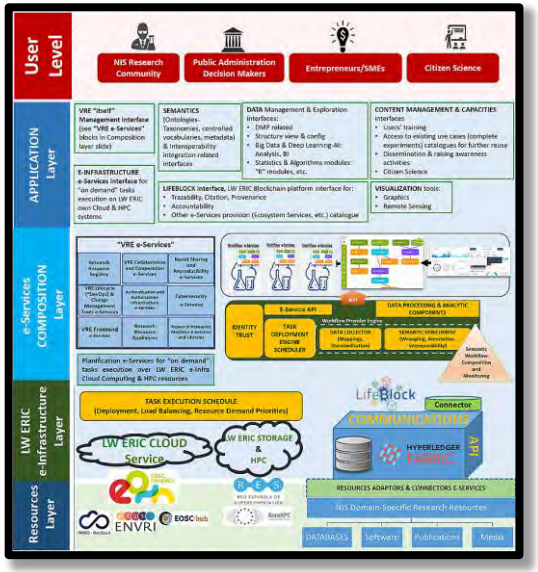
- Validation case: Early detection of invasive species using metabarcoding
  - Key scientific questions
  - Data available
  - Procedures
- Workflow technical design
  - Steps, Inputs, Verifications (GBIF Taxa), Geolocation
- LifeWatch ERIC IJI-NIS VRE

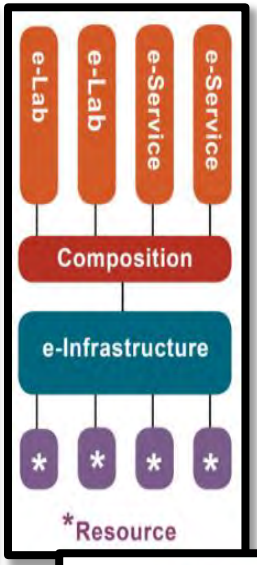


LifeWatch ERIC Tesseract

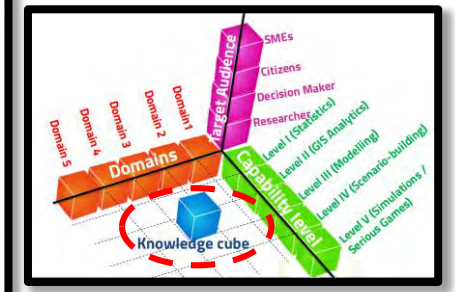
Antonio José Sáenz-Albanés

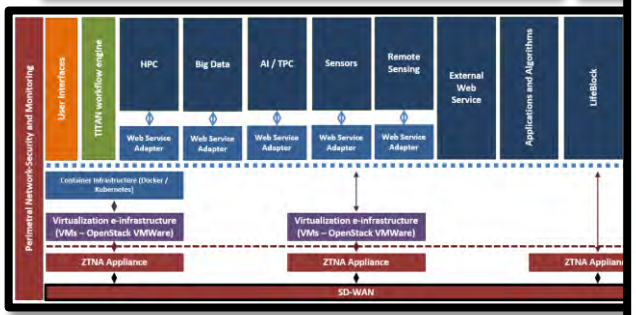
- Reference architecture
- ORCHESTRA model-based service oriented architecture
- User layer
- Application layer
- E-Service composition layer
- LW-ERIC e-Infrastructure layer
- Resources layer
- Design of functional layers on deployment
- Development methodology
  - SecDevOps
  - Knowledge cubes

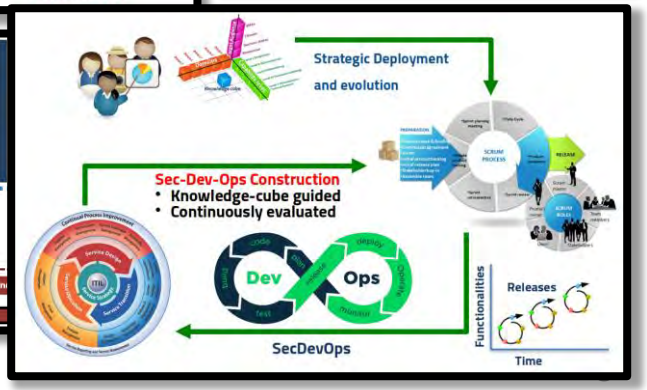


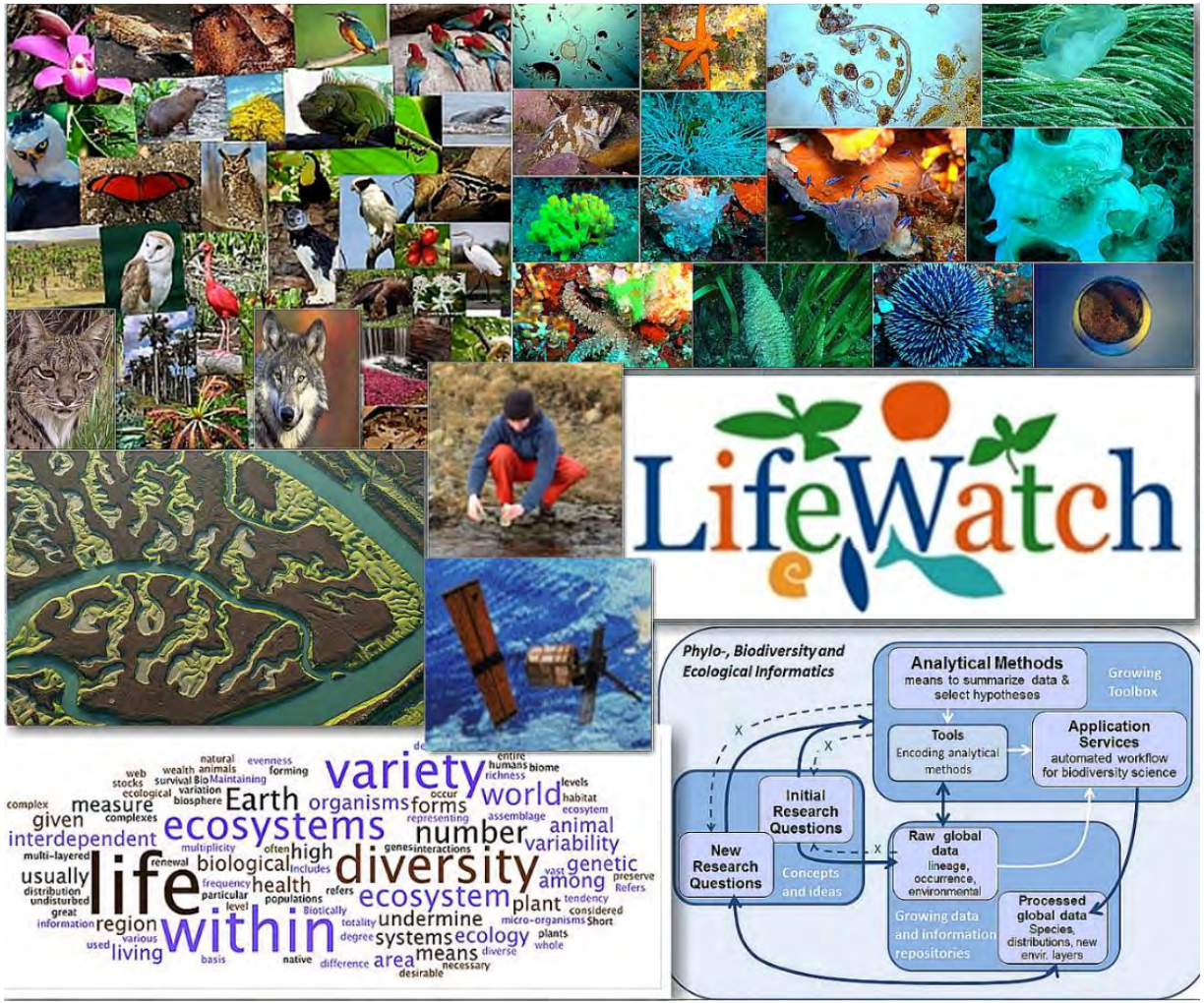


LifeWatch ERIC Tesseract









www.lifewatch.eu

@LifeWatchERIC

Thanks!

Junta de Andalucía

GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA E INNOVACIÓN

Andalucía se mueve con Europa

EUROPEAN UNION
European Regional Development Fund
"A way to build Europe"