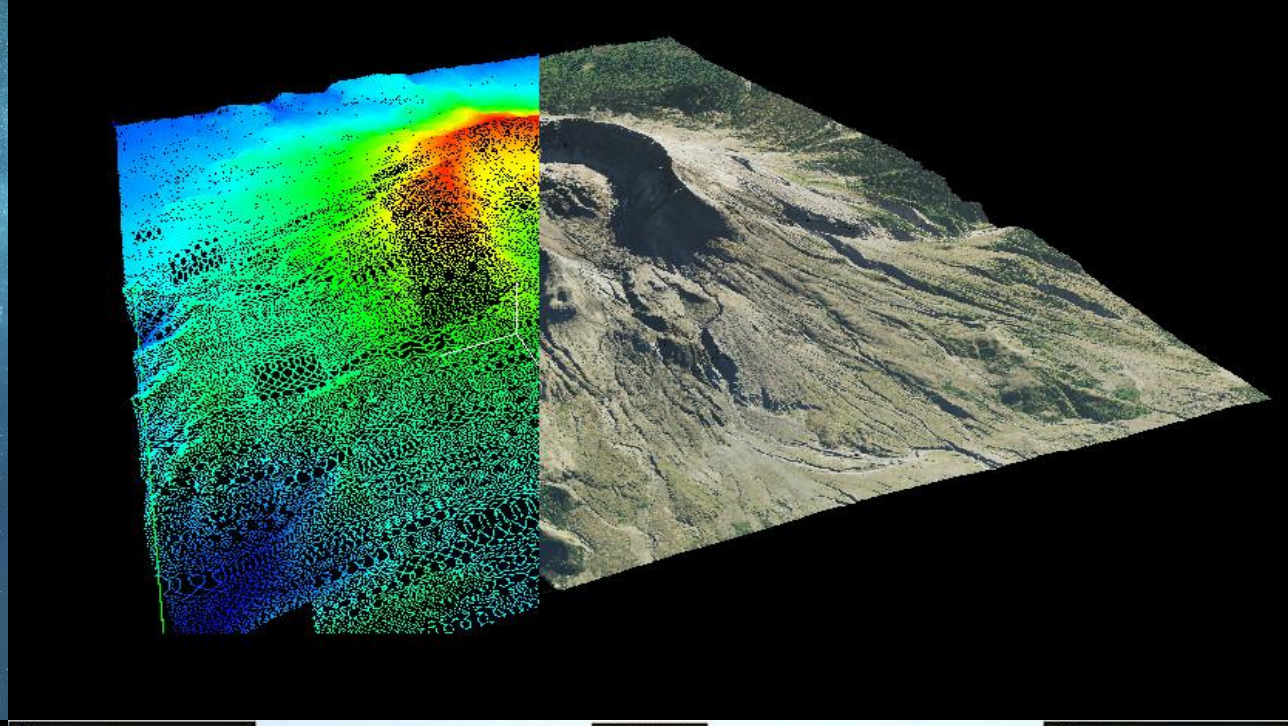
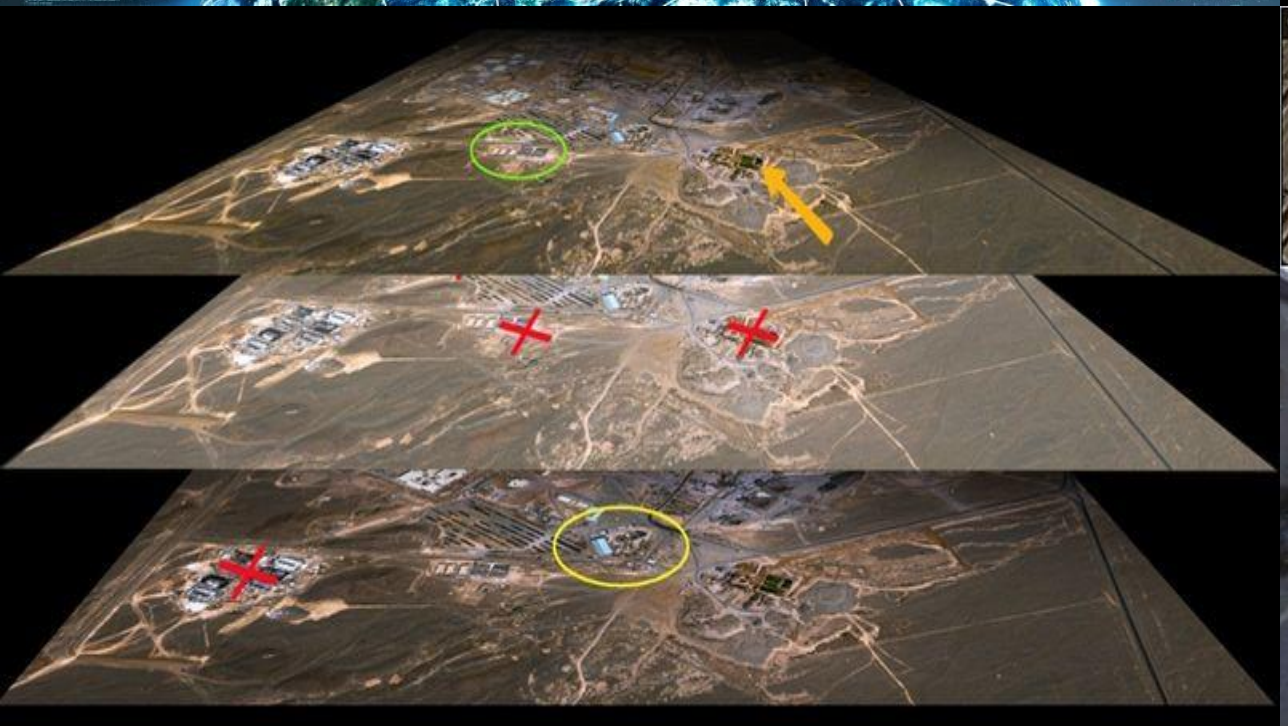
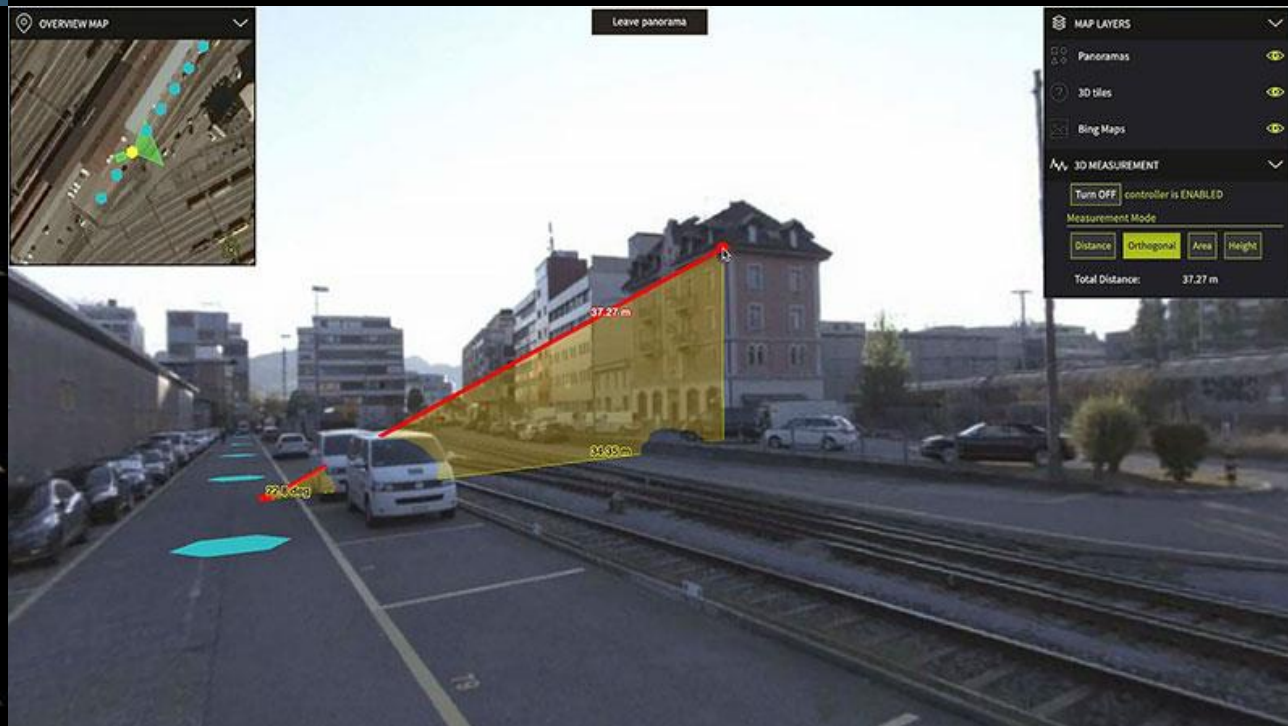
Geospatial Intelligence – Sustaining Development

Josef Strobl

SHARED NODE
ACCESS POINT






OVERVIEW MAP
Leave panorama
MAP LAYERS
Panoramas
3D tiles
Bing Maps
3D MEASUREMENT
Turn OFF controller is ENABLED
Measurement Mode
Distance
Orthogonal
Area
Height
Total Distance: 37.27 m
37.27 m
34.35 m
22.6 deg

Digital Earth for Sustainable Development Goals

Chapter | Open Access | First Online: 20 November 2019

pp 443–471 | Cite this chapter

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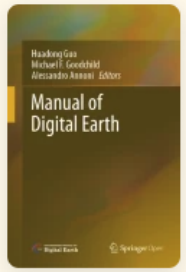

Manual of Digital Earth

Graciela Metternicht, Norman Mueller & Richard Lucas

40k Accesses 10 Citations

Abstract

Sustainable development is nothing new, but it has proven notoriously difficult to implement in practice. The 2030 Agenda for Sustainable Development, with 17 goals, 169 targets and 232 associated indicators, was approved at the 2015 UN General Assembly and addresses the economic, social and environmental pillars of development, aspiring to attain by 2030 a sustainable future that balances equitable prosperity within planetary boundaries. While the goals are universal (i.e., applicable to both developing and developed countries), it is left to individual countries to establish national Sustainable Development Goal (SDG) targets according to their own priorities and level of ambition in terms of the scale and pace of transformation aspired to.

Sections | Figures | Referen

Abstract
Keywords
Fundamentals of Digital Earth for the Sus
Information and Knowledge Relevant to N
State of the Art for the SDGs in DE
Case Study of Australia: Operationalizing
Big Earth Data for the SDG: Prospects
Conclusion
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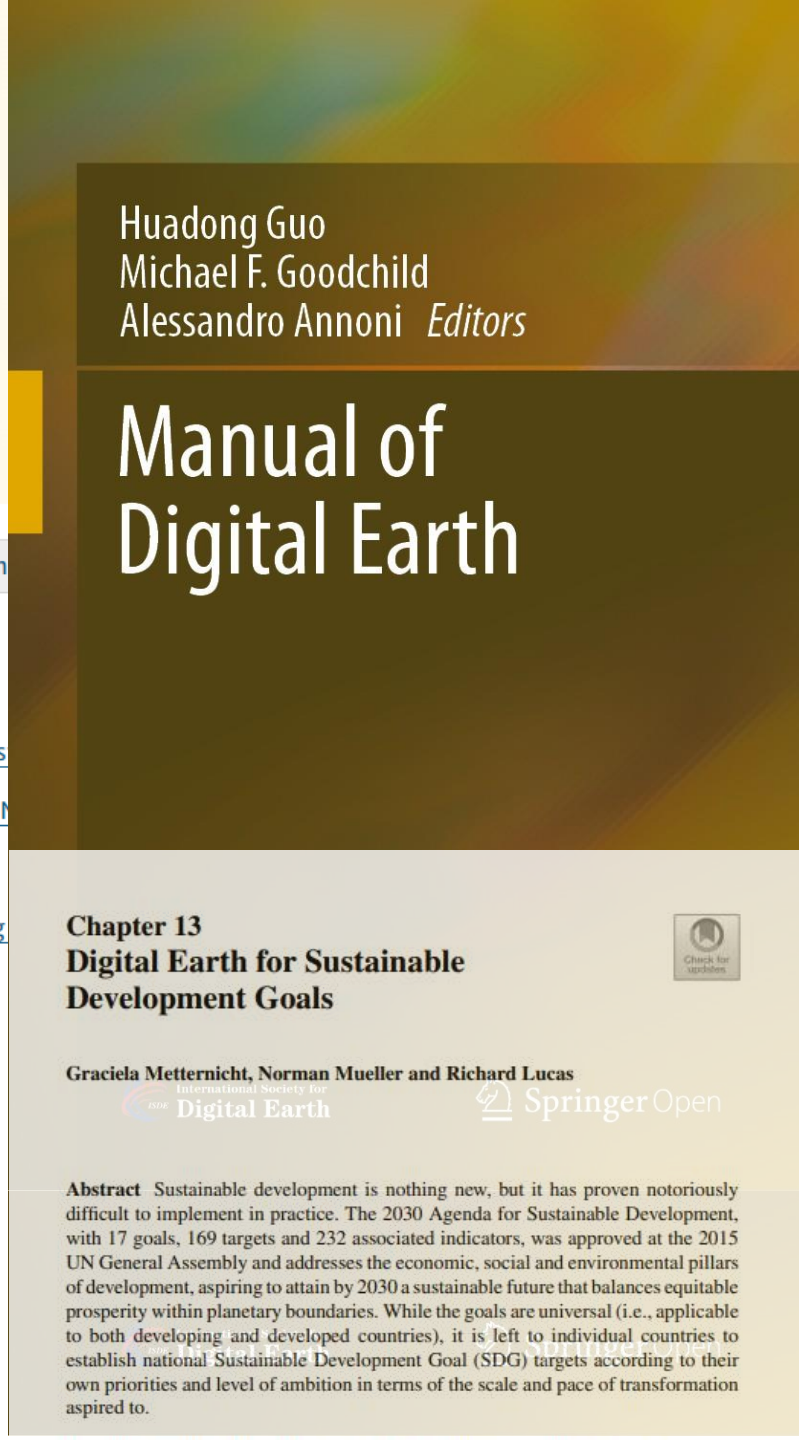
Acknowledgements
Author information
Editor information
Rights and permissions



USING DATA AND GIS TECHNOLOGY TO ACCELERATE THE ACHIEVEMENT OF THE SUSTAINABLE DEVELOPMENT GOALS

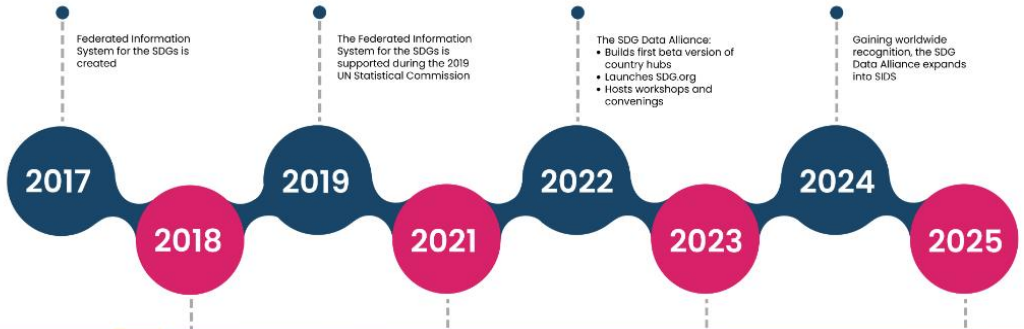
The SDG Data Alliance was launched at the United Nations High-level Political Forum on Sustainable Development in July 2021, but several years before its launch, the United Nations Statistics Division (UNSD) in conjunction with PVBLIC Foundation, Esri and the governments of six pilot countries laid the foundation for the project.

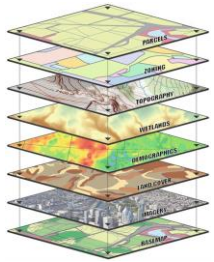
SDG DATA ALLIANCE HISTORY

SDG DATA ALLIANCE TODAY

Today, the SDG Data Alliance has evolved to become an open, community-driven, multi-stakeholder partnership bringing geographic information systems, or GIS, technology and capabilities to developing nations around the world.

SDG DATA ALLIANCE

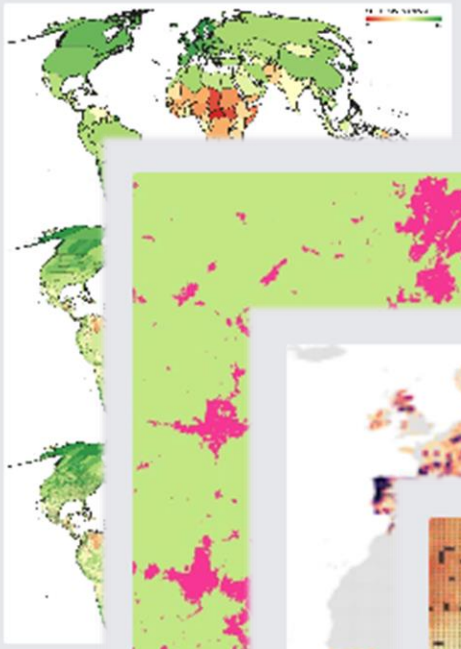




The SDG Transformation Center

Science-based tools and analytics for SDG pathways, policies and financing

Geospatial Data

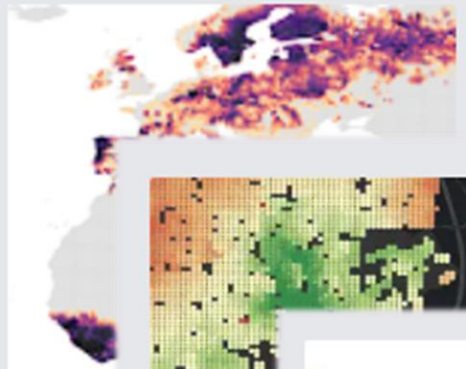


Oct 7, 2024 SDG Index Artificial Neural Networks Leave no One Behind

Localizing the SDG Index with machine learning and satellite imagery

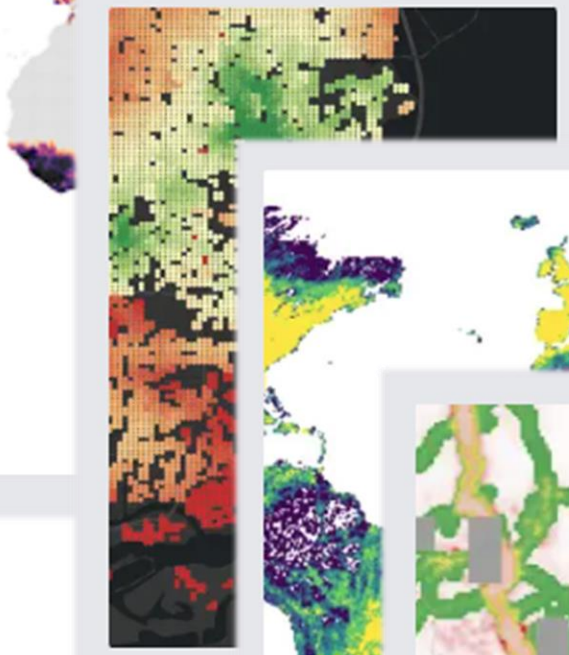
Sep 2, 2024 SDG 11 Transformation 5 Urban Sprawl Land Cover

Land Use Efficiency (SDG 11.3.1 LUE)



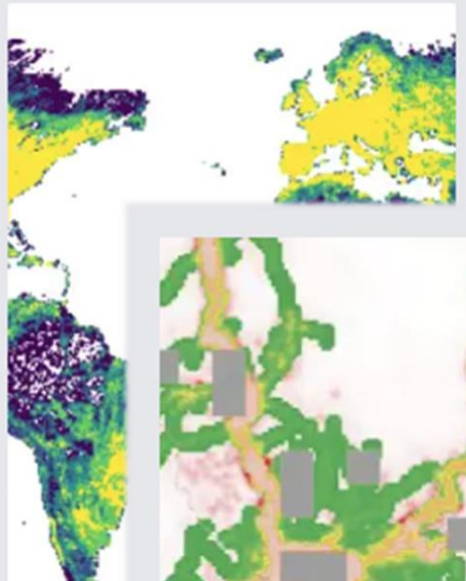
Aug 15, 2024 SDG 12 SDG 15 Transformation 4

Carbon emissions by deforestation driver



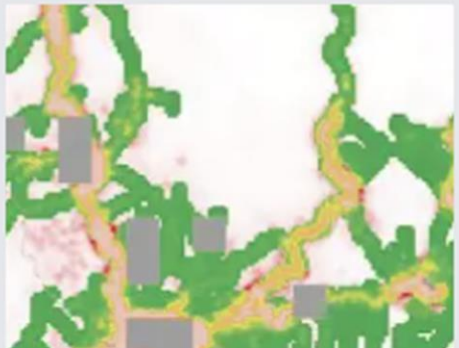
Mar 1, 2023 SDG 11 Transformation 5 OpenStreetMap Accessibility Walkability

The 15-minute city: % of urban populations in walking distance to points



Mar 1, 2023 SDG 9 Transformation 3 Transformation 4 Infrastructure Human impact Microsoft Bing

Global Road Density Index



Apr 1, 2023 SDG 9 Transformation 3 Infrastructure Accessibility

Rural Access Index (RAI)

The Rural Access Index (RAI) is a measure of access, developed by the World Bank in 2006. It was
adopted as Sustainable Development Goal (SDG) indicator 9.1.1 in 2015, to measure the accessibi
of rural populations. It is currently the only indicator for the SDGs that directly measures rural acces

5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION

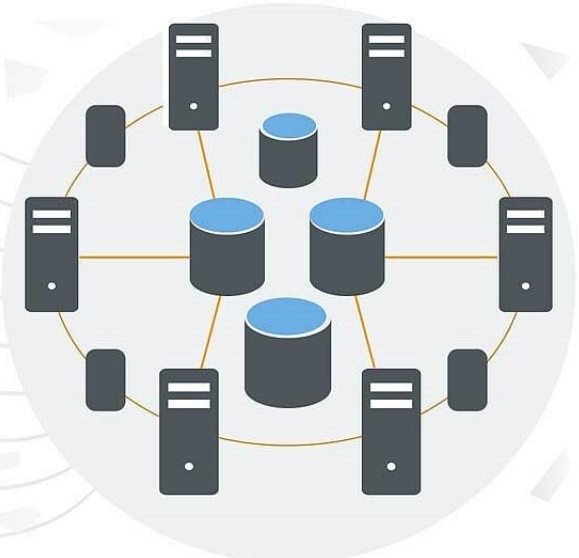
SDG and Big (Earth) Data

BIG DATA → SMART DATA

DATENQUELLEN

„Internet (of Things)“

DATENMANAGEMENT



„Distributed Systems“

DATENANALYSE

„Machine Learning“

DATENNUTZUNG

„Human-Computer-Interaction“

DATENSICHERHEIT

DATENSOUVERÄNITÄT

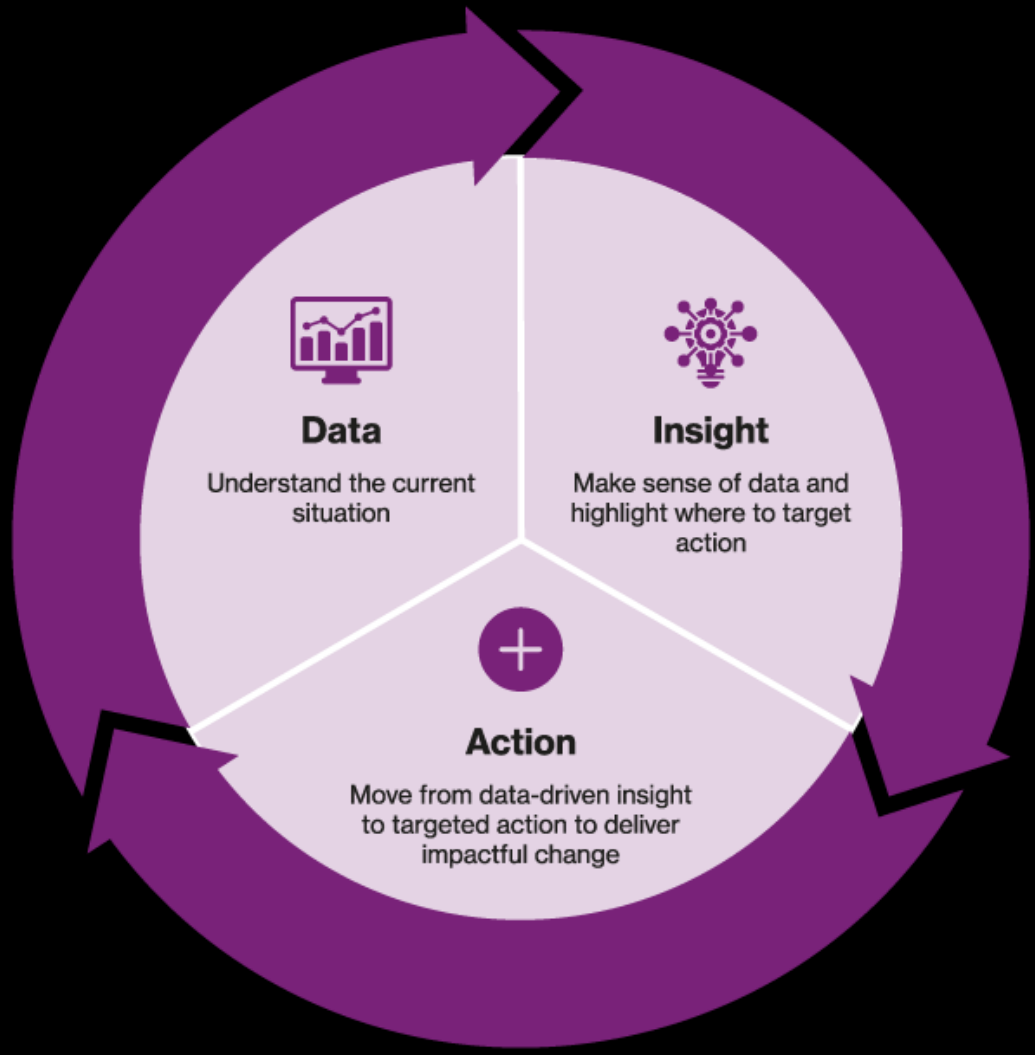
OPEN DATA
IOT DEVICES
GEOLOCATED METADATA
DATA INTEGRATION
DYNAMIC ASSESSMENT

WHERE - TO - NEXT ?

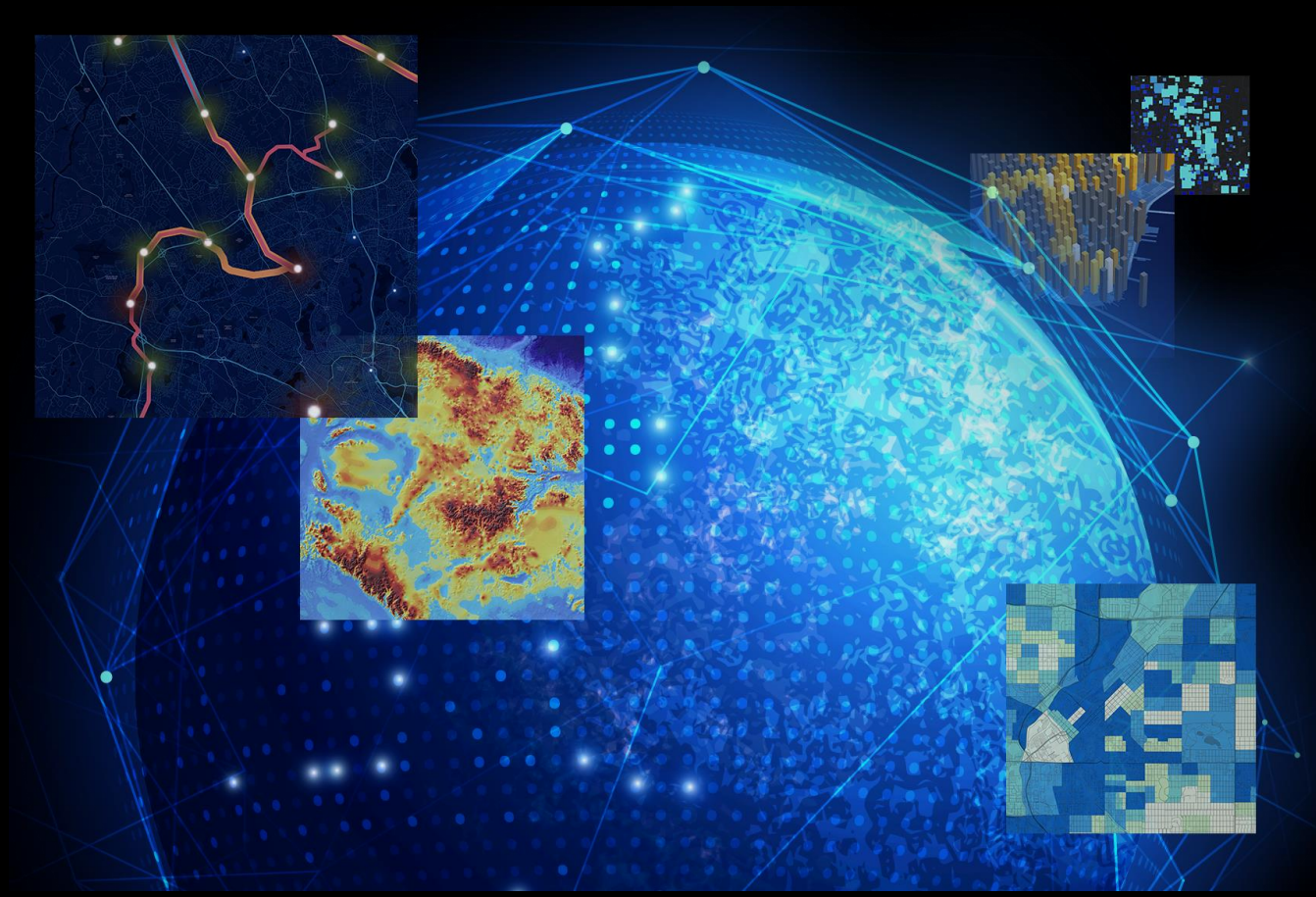
Open Science

Citizen Science & Participation

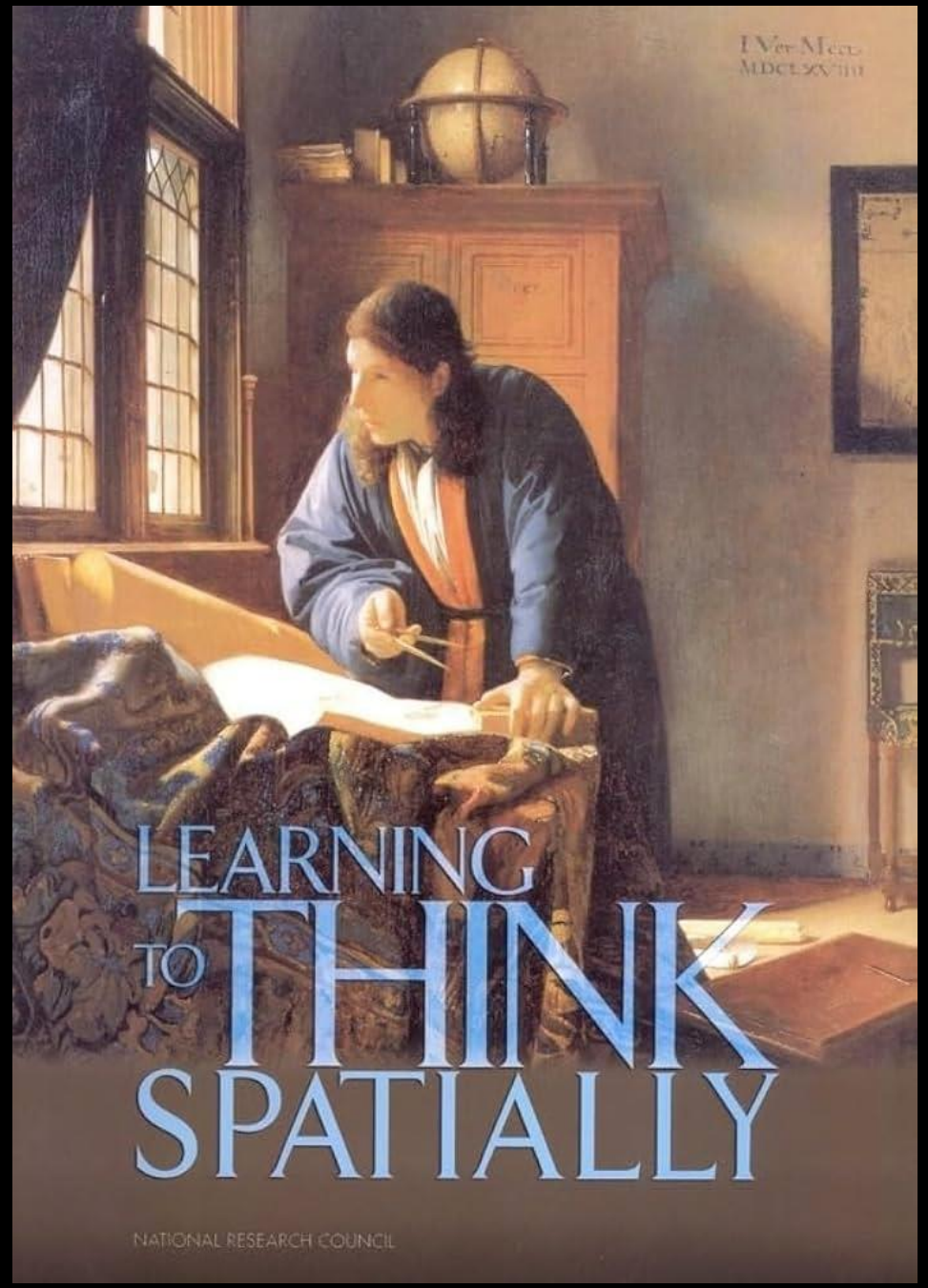
from Big Data to Smart Insights

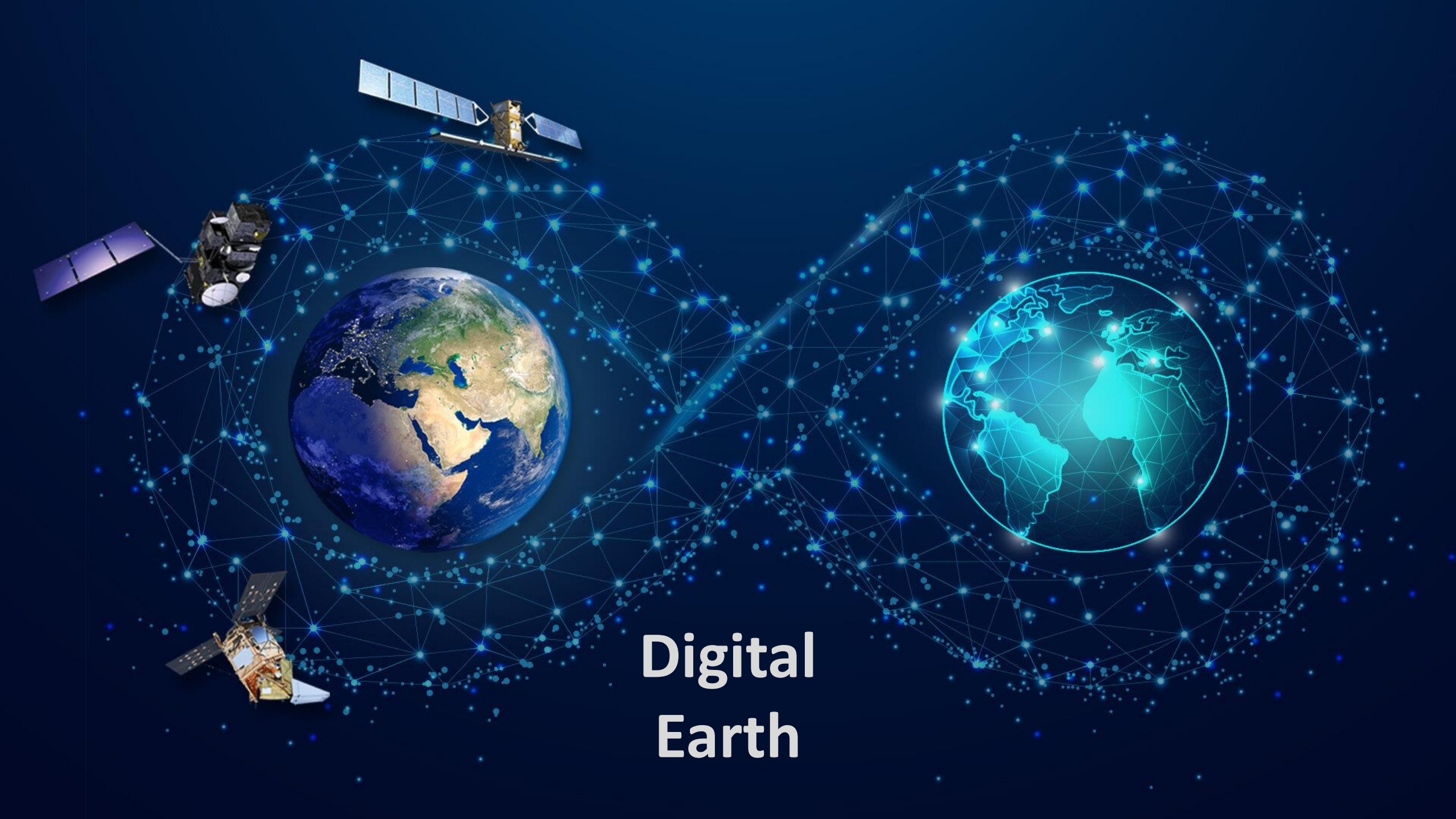


Portals: Communities & Monitoring



Geospatial Competences




Digital
Earth