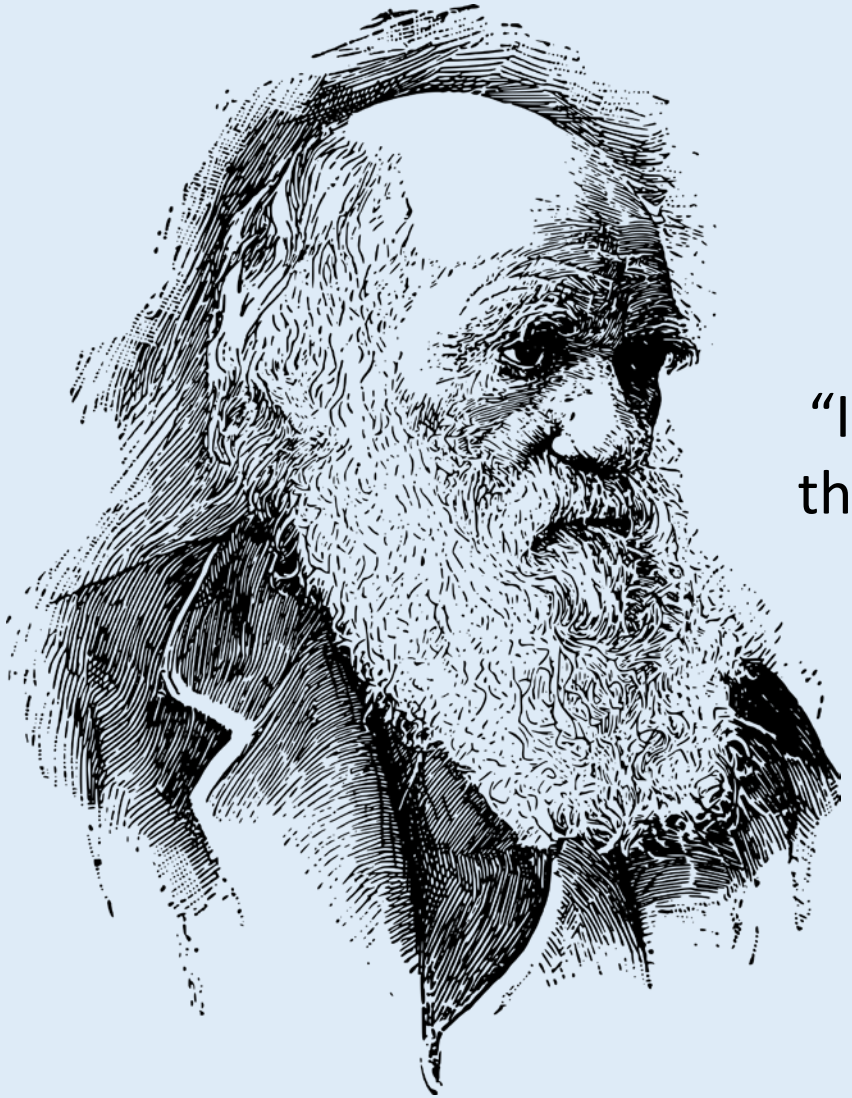
UNIVERSITY OF TWENTE.

Challenging Education, Challenging the Education!

Parya Pasha Zadeh

The ESA Earth Observation Φ-week
15 November 2018, Frascati, Italy


Earth
Open
Φ-week
Data
Innovation
Space
New
earth
esa
event
Future
Satellite
AI4EO
Learning
Connect
European
Hyperspectral
Intelligence
sustainable
Artificial
Research
Land
managed
Education
Applications
Citizen
according
Image
Big
data
Deep
Mission
Aerospace
Platform
HAPS
Maria
Information
Sentinel-2
Brockmann
Production
contributions
Technologies
Marco
Analysis
Operations
Systems
payload
Machine
platform
Spatial
Economy
Copernicus
Visualisation
including
ISO
Time
Brovelli
Cover
System
Session
Series
Classification
particular
Services
Hall
services
using
Using
Challenges
research
based
Cube
Lorenzo
Digital
Diego
High
Prieto
Final
Enabling
system



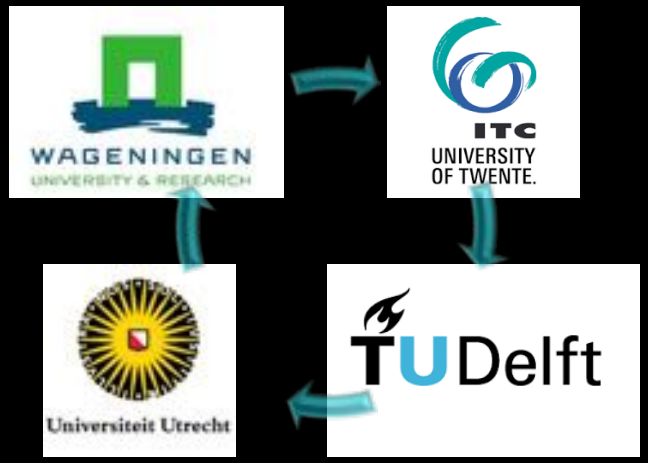
“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.”

Not Charles Darwin!

Education becomes a life long endeavor

PART TIME, BLENDED, AND DISTANCE OPTIONS

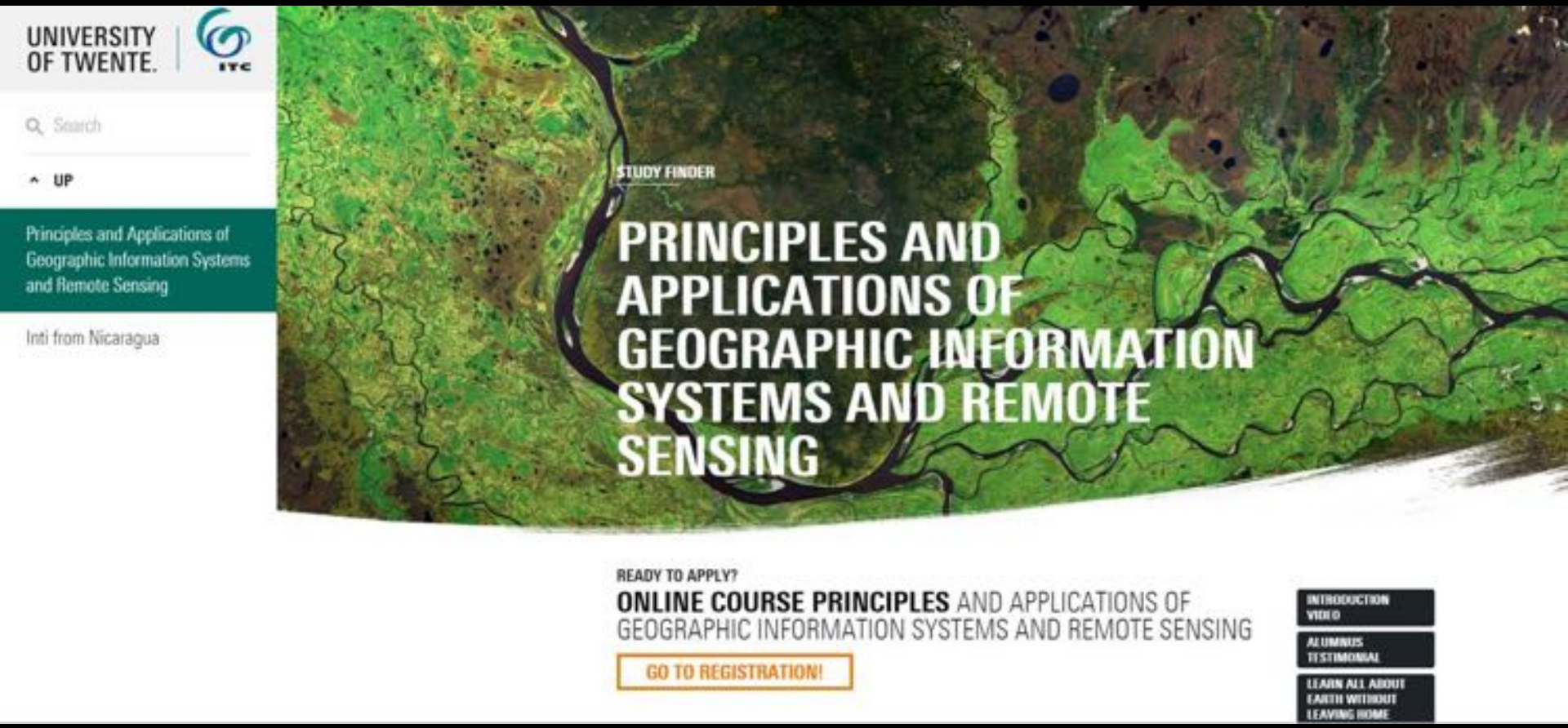
GIMA
Geographical Information Management and Applications



You will get **the best from geo-information experts from four universities in the Netherlands**: University of Twente/ITC Enschede, TU Delft, Utrecht University and Wageningen University. These universities have joined forces to offer GIMA, each with their own specializations related to geo-information technology, management and applications. The GIMA programme offers more than advanced use of GIS (Geographic Information Systems) for a variety of applications: it also covers the management of geo-information and spatial data infrastructures in organizations and management styles. Since the start of the programme in 2003, GIMA has become one of the most popular and well evaluated master programs on geo-information applications and management in the Netherlands and our community keeps growing.

GIMA is a **blended learning** Master programme (see Programme Structure): most of the time you are studying from the place where you think you can study best (e.g. at home). For the first part of the programme (one or two years depending on whether you are a full-time or part-time student) there are only four short contact periods per year, one at each partner university. During those contact periods (with a duration of one or two weeks only) you are supposed to be present in person but for the rest of the year you can study through our electronic learning environment from wherever you are. Obviously, the same holds for the individual thesis research project of 6 (full-time) or 12 (part-time) months duration in the last part of the programme. When doing the program's internship with the same duration, of course you will have to be present at the geo-information company or institute you have selected for your internship.

PART TIME, BLENDED, AND DISTANCE OPTIONS



PART TIME, BLENDED, AND DISTANCE OPTIONS

PART TIME, BLENDED, AND DISTANCE OPTIONS


KHAN
ACADEMY


canvas


coursera


Future
Learn


UDACITY

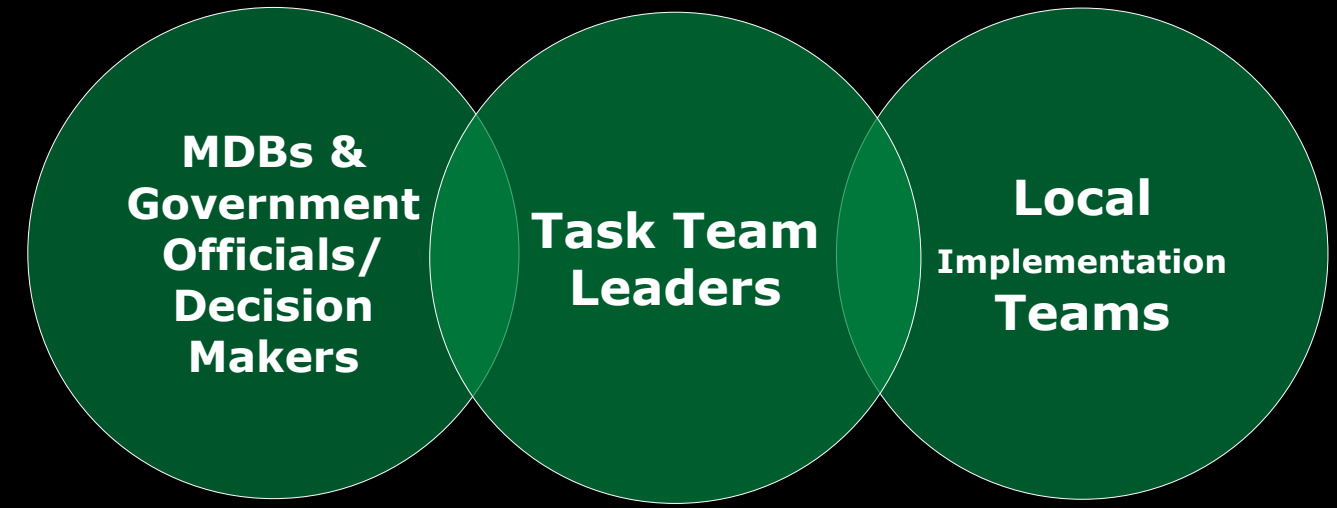

Udemy


edX


iversity

High-Level Capacity Building:
1-day awareness events followed by Q&A sessions, short recorded videos, integration in existing learning environments

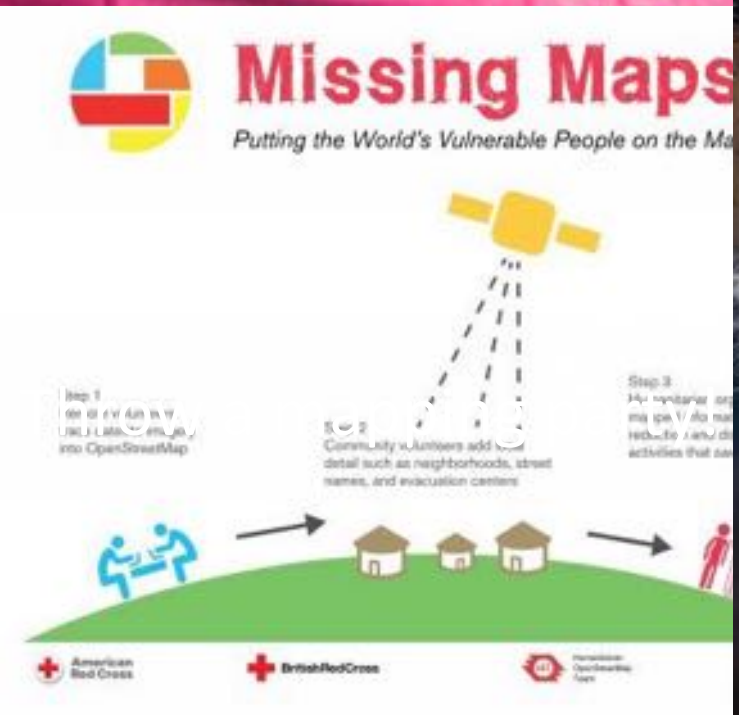
Hands-on Capacity Building:
Local workshops in two steps, self study follow up materials, project based learning, E-learning packages, MOOCs



General Awareness: News, Brochures, Knowledge portals, Webinars

Need for higher capacity


GeoFort
GRENSVERLEGGEND
powered by:
ebn
TNO


Missing Maps
Putting the World's Vulnerable People on the Ma
into OpenStreetMap
detail such as neighborhoods, street
names, and evacuation centers
American Red Cross
BritishRedCross


esa
ANDRÉ KUIPERS

THE 4 Cs OF EDUCATION
IN THE 21ST CENTURY

C
Communication

C
Collaboration

C
Critical Thinking

C
Creativity

STUDENT CENTRED LEARNING

New exercise designs

Flipped classroom

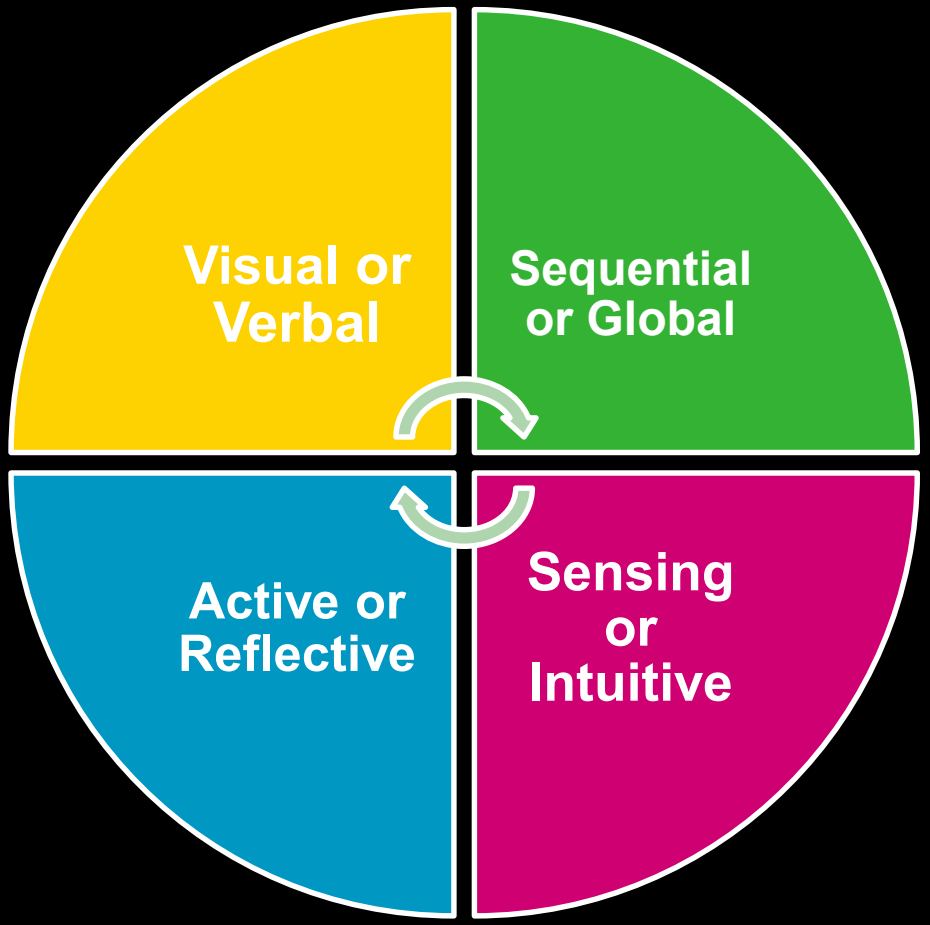
Increased engagement

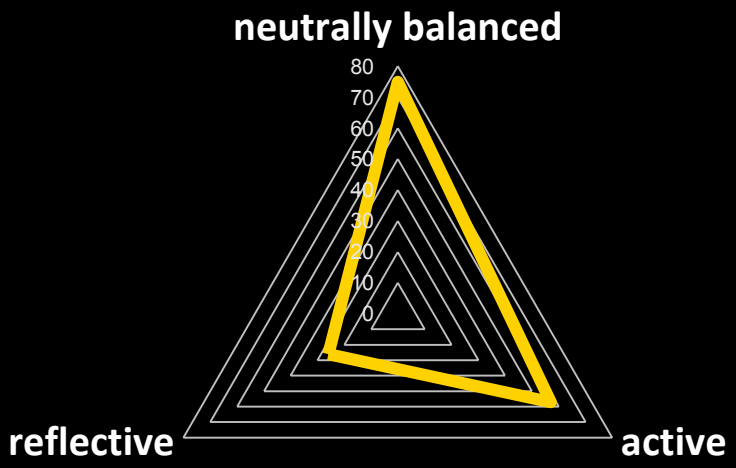
Project based learning

Peer reviews

STUDENT STUDY APTITUDES

DIFFERENT LEARNING STYLES




neutrally balanced
80
70
60
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30
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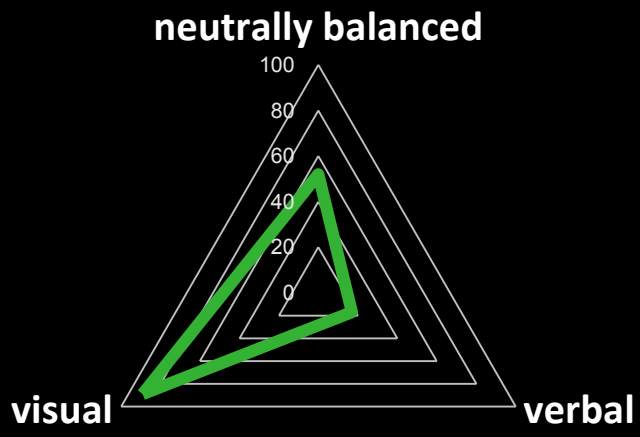
10
0
reflective
active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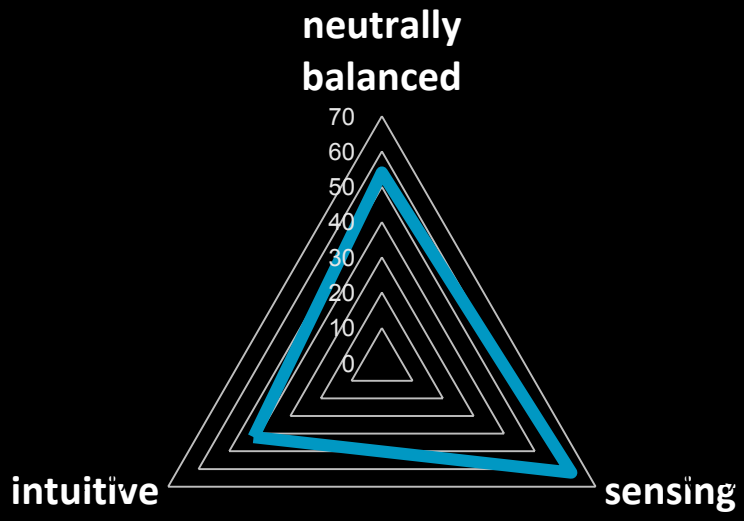
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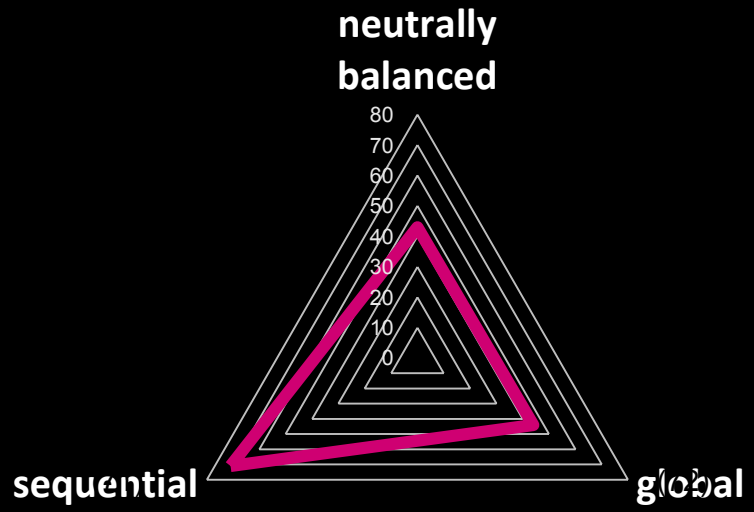
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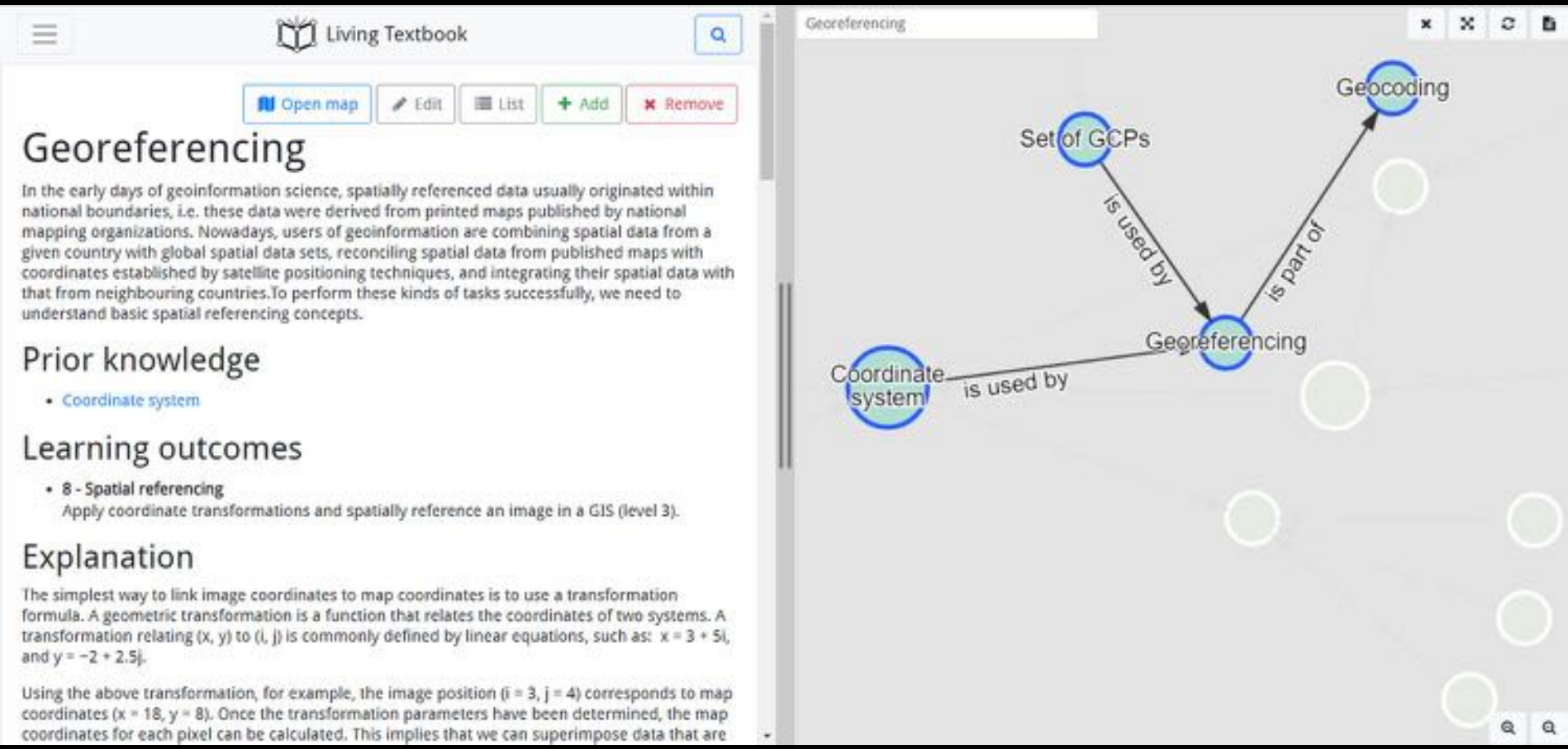
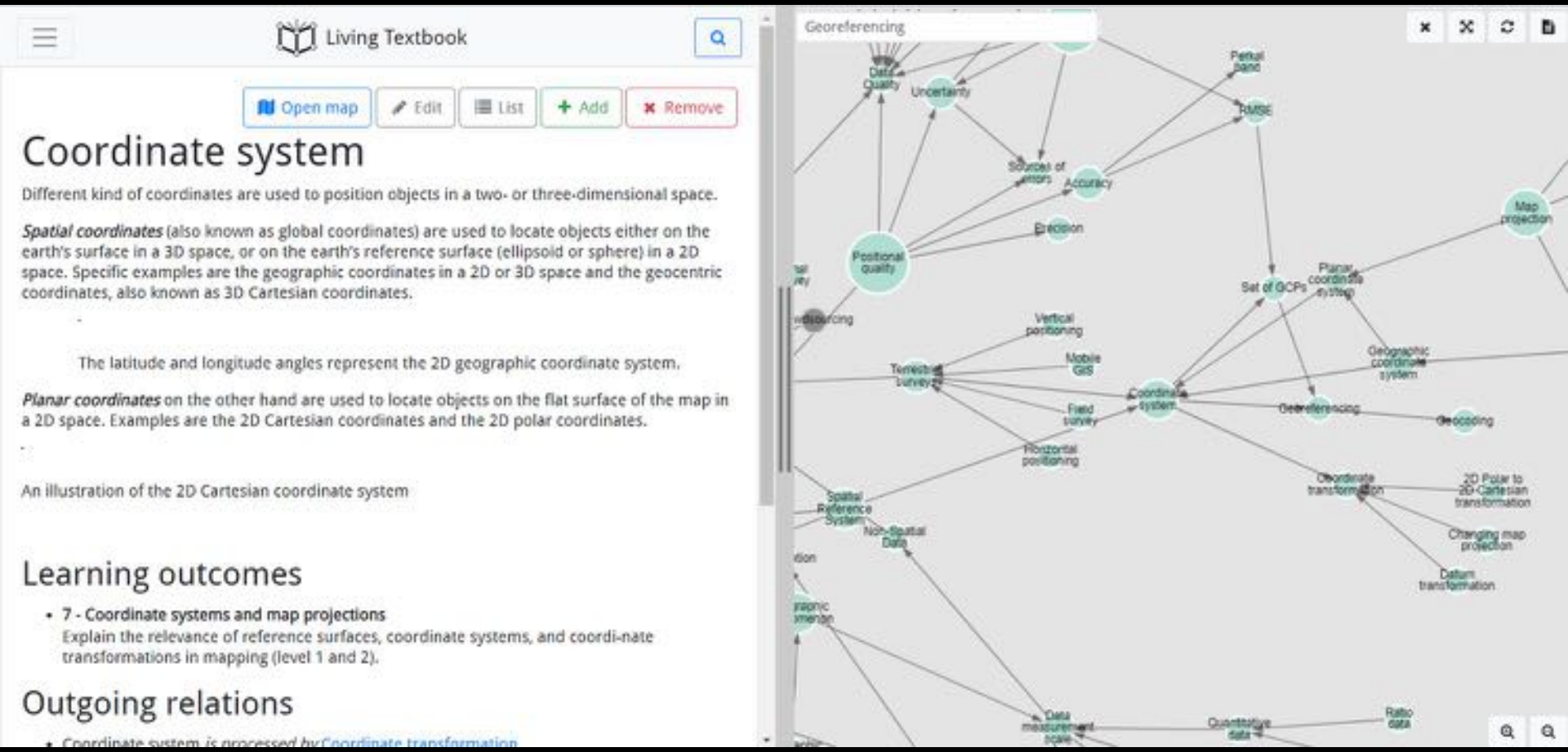


https://ltb.itc.utwente.nl/



https://ltb.itc.utwente.nl/

Living Textbook

Open map | Edit | List | Add | Remove

Coordinate system

Different kind of coordinates are used to position objects in a two- or three-dimensional space.

Spatial coordinates (also known as global coordinates) are used to locate objects either on the earth's surface in a 3D space, or on the earth's reference surface (ellipsoid or sphere) in a 2D space. Specific examples are the geographic coordinates in a 2D or 3D space and the geocentric coordinates, also known as 3D Cartesian coordinates.

The latitude and longitude angles represent the 2D geographic coordinate system.

Planar coordinates on the other hand are used to locate objects on the flat surface of the map in a 2D space. Examples are the 2D Cartesian coordinates and the 2D polar coordinates.

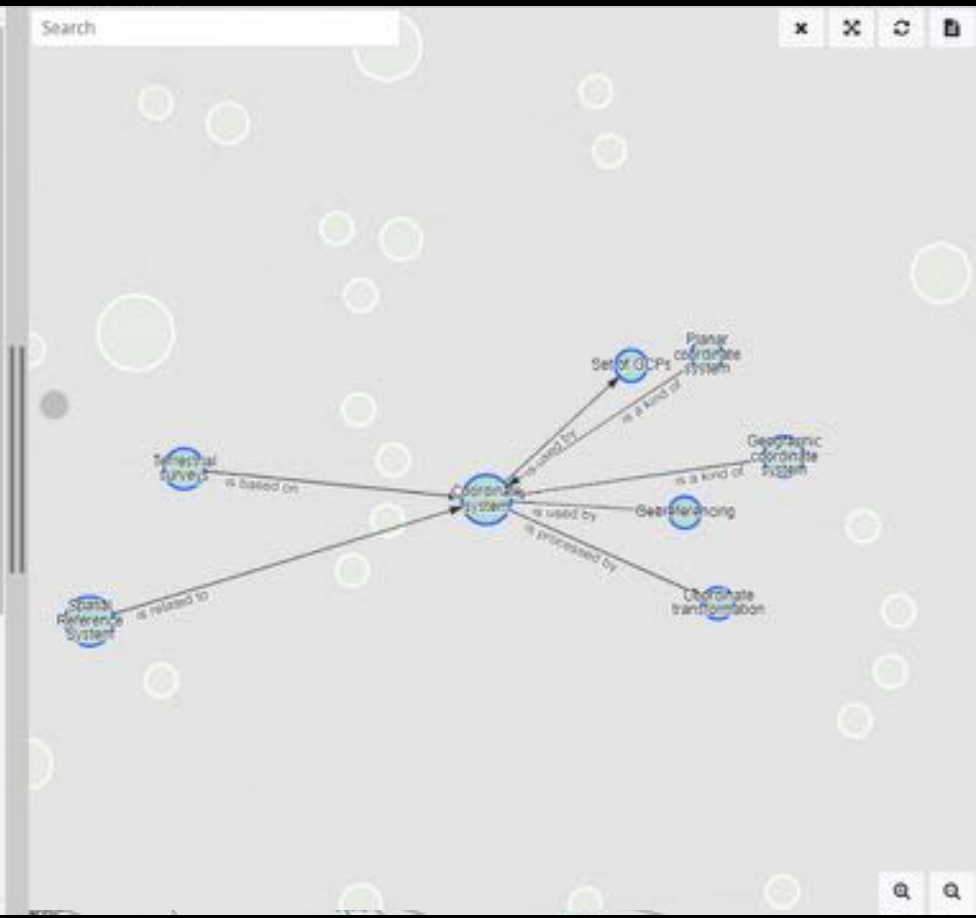
An illustration of the 2D Cartesian coordinate system

Learning outcomes

- **7 - Coordinate systems and map projections**
  Explain the relevance of reference surfaces, coordinate systems, and coordi-nate transformations in mapping (level 1 and 2).

Outgoing relations

- Coordinate system *is processed by* Coordinate transformation



https://ltb.itc.utwente.nl/

TEACH CODING WITHOUT FOCUS ON SYNTAX


Kahoot!


FeedbackFruits


BigBlueButton


codegrade


URKUND


slack


shakespeak


Mentimeter

THE 4 C'S OF EDUCATION
IN THE 21ST CENTURY

C
Communication

C
Collaboration

C
Critical Thinking

C
Creativity

Cultural Sensitivity

Ethics

Empathy


KEEP YOUR COINS.
I WANT
CHANGE

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