The Netherlands are working on five major challenges

Climate adaptation

Agricultural Transition

Energy Transition

Replacement Infrastructure

Housing Construction
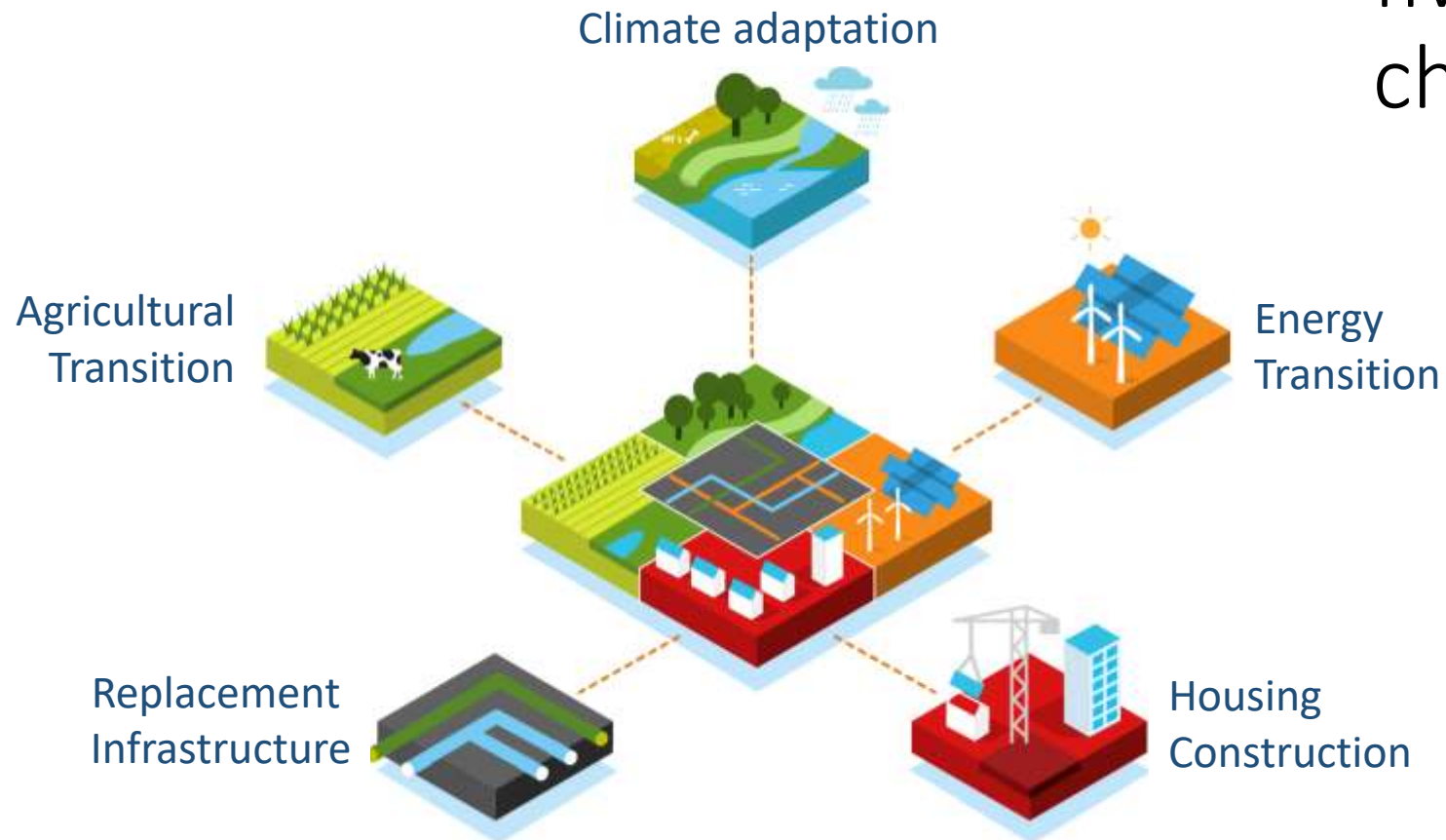
A new strategy

New techniques such as big data, artificial intelligence and digital twins offer great new possibilities to target complex, spatially interrelated societal challenges.

For this, investments in the National Geo Information Infrastructure (NGII) are necessary as well as an ongoing reflection on the ethical handling of the growing amount of data. It is now time for a new national geospatial strategy: GeoSamen 2.

This has to fit in with European developments. We can learn from our international colleagues and open up the European market to Dutch successes through mutual standards.

Geospatial as vital infrastructure

Geo key registers form the core of the National Geo Information Infrastructure (NGII) and play an essential role in Dutch social and economic life. Without these geo key registrations, not a single package would be delivered, no house sold and no permits granted.

We will further develop and solidify this infrastructure.

In five years
- fully integrated basic data and a public-private platform for data sharing will be in place;
- financing for this will be sustainable;
- all networks will be equipped to handle increasing traffic of geospatial data;
- NGII will meet the desired information security level;
- NGII will be fully integrated into the Common Digital Infrastructure;
- the GI-council, where stakeholders meet and cooperate, will be a strategic decision-making body.

Data

In The Netherlands geospatial data plays a crucial role. Our dependency on geospatial data has grown rapidly over the years. The annual growth in handling data of the geo key registers is up to 50%. Our public geospatial data service PDOK handled 30 million data requests per day in 2020. Over the next years, these numbers will further increase.

Conflicting claims in our physical living environment will demand more and better insight. New technical possibilities will further fuel this growth.

In five years
- our data infrastructure can handle large amounts of dynamic data;
- access to private dynamic data sources, research data and 'civilian data' is managed
- FAIR principles will be implemented in such a way that geospatial data for large groups of users can easily be reused;
- multiple data spaces will be set up and connected to their European counterparts.

Artificial intelligence

Artificial intelligence allows us to extract more information from large quantities of raw data and manage the quality of existing data by quickly comparing it to incoming data.

Thanks to artificial intelligence, Digital Twins can be implemented to research scenarios for our challenges in climate adaptation, smart mobility, energy transition, healthy living cities, public order and safety.

In five years
- the public sector will present their challenges in field labs and work on innovative solutions with companies, researchers and students;
- there is a community of practice for AI, publish and scale up 'best practices' into Dutch government practice;
- AI will be part of geo-ICT education and students will be educated with state of the art expertise.

Digital Twin Infrastructure

There are many potentially competitive challenges in our limited physical environment. These complex challenges require major investments in our physical environment. A digital copy of the physical environment makes it possible to reach careful and inclusive decision-making.

In five years
- we have established a set of rules and standards for building Digital Twins
- a national object registry forms a binding factor for building Digital Twins;
- FAIR principles will be adopted beyond data to modelling and visualisation
- For major societal challenges digital twins are the modus operandi for unifying sector solutions into integrated solutions.

Ethics

Continuing digitalisation offers enormous possibilities. At the same time, we are increasingly aware of possible undesired effects. Processing of (personal) geospatial data and the use of algorithms requires thorough reflection on how best to handle this responsibly.

In five years

- we will have a solid and coherent understanding of public values and principles as a basis for ethical handling of geospatial data;
- we are able to address ethical considerations when working with location data and have expertise how to do so;
- we will actively include all stakeholders in the achieving these goals.

![GeoSamen - wijs met locatie]

Labour market and education

To realize our ambitions, the availability of sufficient people with the right knowledge and skills is crucial. The need for new inflow is on the full width of the sector, but especially for the field of geodesy.

In five years
- education in digital geography will be in line with market demands and move along with our dynamic society and new technological possibilities and these studies will be attractive for new students;
- plans are made for a higher education degree in geodesy (HBO level) as well as an Associate Degree Geodesy;
- an educational track that allows students to graduate to higher levels of education is in place;
- there are training courses that offer sufficient modules for additional training.