

Global Challenges NL Space Solutions

“From space I saw a world without borders
There are no borders to the possibilities
that space can offer us here on Earth”

Andre Kuipers



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Space in our daily lives

Satellite data for global challenges

Satellite technology creates opportunities to make society safer, sustainable and more efficient.

A satellite image of Earth's terrain, showing a mix of dark and light areas representing different land and water features. The image is used as a background for the text.

Global challenges

Accurate information about

The weather and the climate

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Global challenges

A photograph of a farmer wearing a blue shirt and a black cap, operating a green tractor with a yellow implement in a field. The tractor is moving from left to right, and the implement is working the soil. The background shows a blue sky and green vegetation.

Accurate information about
Sufficient and sustainable food production

An aerial photograph of a mangrove forest, showing a dense network of waterways and roots. The water is dark blue, and the roots are a lighter, brownish color. The overall scene is a complex, interconnected web of natural structures.

Global challenges

Accurate information about

Safe air traffic, sea and road navigation

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Global challenges

A blurred night city street scene with tall buildings and traffic. The image is used as a background for the text. The scene shows a multi-lane road with a white van on the left, a dark car in the middle, and a person on a bicycle in the foreground. In the background, there are several tall skyscrapers, some with lights on, and a street lamp. The overall atmosphere is that of a busy urban environment at night.

Accurate information about

Air pollution

An aerial photograph of a coastal region. A river flows from the top center towards the bottom left, with a bridge crossing it. The surrounding land is a mix of green fields and greyish-brown terrain, possibly a delta or coastal plain. The sky is a pale, hazy blue.

Rich heritage

Dutch history

The Netherlands acquired its space knowledge and expertise due to its geographical position, history and culture. Also its scientific, social and economic development played an important role



Rich heritage

Dutch tradition in Science & Exploration

The Dutch have always been at the forefront of Science and Exploration, participating in space exploration since the beginning

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Rich heritage

Dutch tradition in Science & Exploration

The Netherlands owes its international status to its world class scientists and engineers who build the highest quality scientific instruments and applications using the most reliable space technology

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A satellite view of Earth from space, showing a large portion of the Western Hemisphere. The image captures the curvature of the planet, with the blue of the oceans and the brown and green of the continents. A bright, golden light source, likely the sun, is visible on the left side, creating a strong lens flare and illuminating the clouds and landmasses. The overall scene is a high-angle, wide-area view of the Earth's surface.

Breeding ground for business & innovation

International collaboration

Netherlands' trading spirit attracts Space industry & academic partners from around the world

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Breeding ground for business & innovation

ESA / ESTEC

The Netherlands is home to ESA's Technical Centre, ESTEC – with 2500 highly qualified people from all over Europe

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Breeding ground for business and innovation

Space Incubators

The Netherlands is home to startup companies using satellite data and space technology

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World class Science & Technology



Creative pioneering technology

Innovative Dutch space technology pushes boundaries – yet remains truly reliable

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World class Science & Technology



Space missions

Dutch scientists play a leading role in International R&D programs

World class Science & Technology

A satellite is shown in the lower right quadrant of the image, set against a vast cosmic background. The satellite has a cylindrical black body with a white top and is surrounded by a large, crinkled silver thermal blanket. The background is a deep black space filled with numerous stars and the glowing, dusty spiral arms of the Milky Way galaxy.

Space missions

The Dutch play a vital role in groundbreaking science missions including:
ALMA – HERSCHEL – ATHENA – GAIA – E-ELT and many more

World class Science & Technology

A small satellite is shown in orbit above the Earth's atmosphere. The satellite has a central body and two large, rectangular solar panel arrays extending outwards. The Earth's surface is visible in the background, showing blue oceans and white clouds. The satellite is illuminated from the side, highlighting its metallic surfaces and the grid-like structure of the solar panels.

Small satellites – distributed systems

The Dutch develop and build cost-efficient small satellites that are used for scientific and societal purposes



Leading supplier

Advanced smart structures and components

The Netherlands builds igniters and structures for Ariane and VEGA launchers

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A technician wearing a blue lab coat, a green hairnet, and blue gloves is working on a large, dark solar array panel. The panel is composed of many small, square solar cells. The technician is using a tool to adjust or inspect one of the cells. The background is a cleanroom environment with other panels and equipment.

Leading supplier

Solar arrays for satellites

The Netherlands delivers solar arrays for 2/3 of all European Space missions

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Leading supplier

Sensitive sensors and precision optics

The Netherlands builds the most accurate sensors for atmospheric research

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A satellite with large solar panels is shown in orbit above the Earth. The satellite is emitting a green laser beam towards the ground. The Earth's surface is visible, showing clouds and landmasses.

Satellite data for NL Space solutions

Dutch companies and institutes offer solutions for world wide scientific, environmental and social challenges exploiting Dutch expertise in Agriculture, Water, Climate and Mobility

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A woman in a red and gold sari is walking through a field of harvested golden wheat stalks, carrying a large bundle of the crop. The field is filled with rows of harvested wheat, and the background shows a hilly landscape under a clear sky.

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Agriculture & Food

Dutch space know-how about the weather, soil & crops is helping to feed the world

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Agriculture & Food

Precision farming: Dutch experts help farmers to interpret satellite data in combination with GPS to optimise harvests

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A satellite image showing a large river delta system, likely the Rhine-Meuse delta in the Netherlands. The image features a complex network of waterways and landmasses, with a prominent city area visible in the center. The background is a dark, textured surface, possibly representing the Earth's surface from space.

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Water & Delta

The Netherlands' exceptional water management techniques are used worldwide

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A wide-angle landscape photograph showing a grassy dike under a blue sky with light clouds. In the middle ground, a person is walking on the left, and a traditional Dutch windmill stands in the center. To the right, a wooden fence runs across the dike. The foreground shows a close-up of a cobblestone path.

Water & Delta

Dike Monitoring: Dutch companies detect the smallest imperfection in dykes using satellite radar images
- to ensure the safety of our people

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Climate & Environment

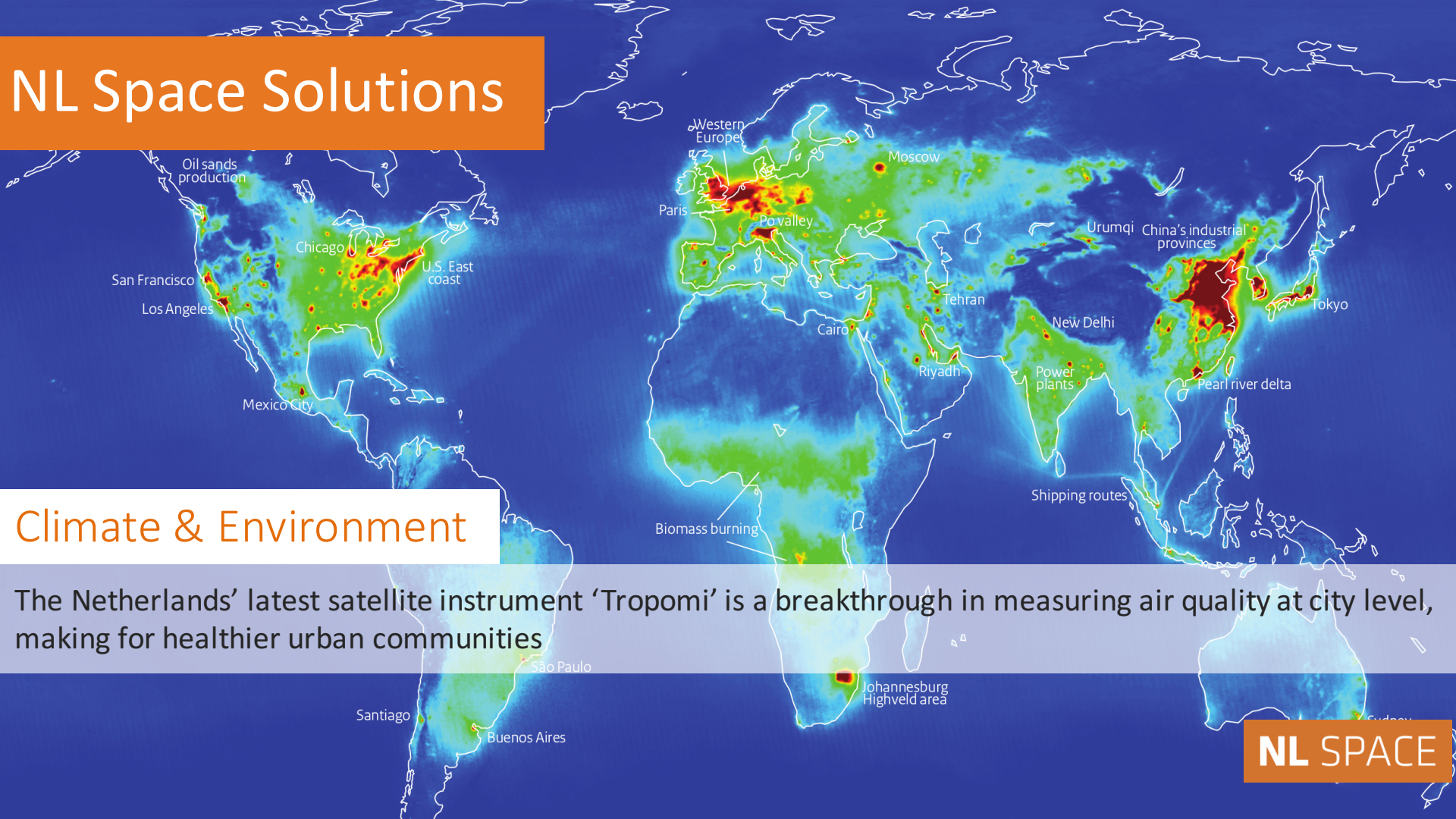
Satellites keep an eye on the health of our planet using Dutch sensors and instruments

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Climate & Environment

The Netherlands' latest satellite instrument 'Tropomi' is a breakthrough in measuring air quality at city level, making for healthier urban communities



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Mobility

A Dutch global leader has pioneered satellite navigation, providing hundreds of millions of people with safer and more efficient mobility

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A world map with a black background. The continents are shown in a light grey, textured style. Overlaid on the map is a dense network of thin, light grey lines representing shipping routes. Several prominent routes are highlighted in a bright red color, showing major shipping lanes across the Atlantic, Indian, and Pacific Oceans.

Mobility

Efficient shipping routes: Dutch companies use satellite data to analyse wind, currents and shipping traffic to optimise trade routes

Inspiring a new generation

Future knowledge workers

Dutch success in space inspires a new generation of scientists and engineers

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A close-up photograph of a young girl with dark skin and hair, looking through the eyepiece of a white telescope. She has a slight smile and her eyes are focused on the lens. The background is blurred, showing other people and what appears to be an outdoor event. The text 'Inspiring a new generation' is overlaid in a white box on an orange background in the top left corner.

Inspiring a new generation

The future

The next generation benefits from new and exciting opportunities in Space and High Tech industries

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- Providing a universe of opportunity -

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