

NIRAS supports SDG 9

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE





NIRAS – engaging with the Sustainable Development Goals

Owned by a Foundation and its employees, the NIRAS Group is an international multidisciplinary consultancy firm with Scandinavian roots and values. For more than 45 years, NIRAS International Consulting has been committed to the development of innovative and sustainable solutions for our clients and society. In the more than 300 projects we help implement in Africa, Asia, Europe, and Latin America annually, the SDGs and their individual targets guide our activities in development cooperation.

Our values and continued focus on delivering sustainable solutions for people, the environment and society are embraced by the UN Global Compact. We consider the Compact's ten universal principles as a natural way of doing business. These principles steer our actions in respecting fundamental human and labour rights, showing responsibility towards the environment, and resisting all forms of corruption.

NIRAS' continued efforts to ensure sustainable development are in line with the SDGs and support Agenda 2030. In every sector we ask ourselves if we can introduce new services where we – together with our partners and clients – can contribute to this global development agenda.

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Today, we deliver technical assistance to over 100 countries annually – a project portfolio managed by 350 permanent staff. Our network of external experts approaches 25,000 development professionals worldwide, and our 51 offices in 27 countries support long-term partnerships and build local capacity in the countries where we work.

In every sector we ask ourselves if we can introduce new services where, together with clients, we can contribute to the development goals.

Through our work we aim at visibly improving livelihoods and developing resilient future societies that are inclusive, stable, well governed and climate-smart.

The green growth and circular economy initiatives we work on with our partners address climate change through adaptation, mitigation and building of resilience. At the same time, they also promote job creation and generate wealth. We integrate human rights-based approaches and structured capacity-development and skills transfer into our projects and work closely with institutions to develop expertise within agricultural sector reform, private sector development, and peace, security and governance processes.

We incorporate the UN Sustainable Development Goals in all our activities and measure their impact on society and the environment. We believe that aligning our work with the SDGs enables us to identify and deliver solutions that contribute to a more sustainable and equitable world – a fundamental objective of NIRAS employees.

NIRAS' solutions are addressing the major societal challenges of our time and are directly contributing to the UN's 17 SDGs.



Promoting global equitable and economic development and human well-being through innovation and sustainable and resilient infrastructure

NIRAS experts help build resilient infrastructure, promote inclusive and sustainable industries and foster innovation to achieve economic growth, resource-use efficiency and other targets under SDG 9. With access to affordable quality infrastructure, rural and urban communities are able to unlock their economic potentials and enjoy physical structures essential to their daily operations. Industries kick-start and drive economic growth that creates jobs, generates revenue, lessens income poverty and reduces migration. Local, climate-smart manufacturing provides goods and services necessary for improving the liveability of ever-growing cities, and perspectives and stability in rural areas.

By building resilient infrastructure, promoting inclusive and sustainable industries and fostering innovation, NIRAS is contributing to the achievement of inclusive economic growth, environmental sustainability and other targets covering SDG 9.

Investment in innovation, research and development spurs the creation of new industries and advances technological capabilities of domestic industrial sectors. An increase in demand for skilled labour stimulates reform of education and training regimes. Several NIRAS assignments facilitate innovation that strengthen the development of local solutions for local challenges, stimulate scientific research and initiate an international exchange of knowledge and best practise. This goes hand in hand with increasing access to information and communications technology.



NIRAS' commitment to SDG 9 is also reflected in our science, technology and innovation (STI) sector's grant support for young, innovative companies. The creation of jobs is one of the main results in many of our inclusive start-up innovation ecosystem and STI programmes, e.g. in Vietnam, Mongolia or Southern African countries. NIRAS transparently manages all stages of complex calls for funding proposals and emphasizes the formation of partnerships between governments, cities, public sector, private sector, universities and civil society.

In many of its rural development projects, NIRAS plans and supervises construction of essential physical infrastructure, roads, market facilities and manufacturing sites. Value addition through resource use-efficient manufacturing is a foundation for local economic development, employment and social stability. Through various investment schemes, especially in value chain development, we have supported many beneficiaries by setting up cottage industries and processing plants that created jobs and increased tax revenue of local government authorities.

Access to markets, finance and affordable credit is crucial for starting a business, especially for small-scale industrial enterprises. NIRAS is addressing this by working on value chain integration and improving access to finance through various means, i.e. by managing funds, supporting governments in implementing financial reforms and policies and increasing financial literacy through tailor-made but cost-efficient capacity development.

In this booklet, we present six ongoing or recently concluded projects, highlighting our competence in infrastructure, industrialization and innovation under SDG 9. The selected projects are located in Southern Africa, Latin America and South East Asia and illustrate our wide range of geographical presence and technical versatility.

The page features a large orange number '9' on the left. To its right, the words 'Industry, Innovation Infrastructure' are written in orange. A blue rectangle is positioned at the top right. A vertical photograph of a dense green forest runs down the right side of the page.

9

Industry,
Innovation
Infrastructure



Presenting

Six projects

Six countries

Six ways towards a more
sustainable future

and
ture





Fostering technology and innovation in Latin America

Scientific and technological cooperation has been a central element of cooperation between Germany and Brazil in the past, which is also highlighted by the Framework Agreement on Cooperation in Scientific Research and Technological Development. Even though Brazil is already among the world leaders in e.g. agro-biotechnology, biofuels, urban transport, and health research, it aims to strengthen further its science, technology and innovation capacities. This will partly be done through linking researchers as well as public- and private-sector stakeholders.

Addressing SDGs 9 and 17, the project “Promotion of technological information centres for small and medium-sized enterprises (SME)” focuses on fostering technology transfers between Brazilian and German SMEs. By organising conferences, training teachers in Brazil and Germany, and advising SMEs on technical and economic challenges, the project directly contributes to target 9.5 on upgrading the technological capabilities of industrial sectors. Through three sector-oriented technology centres of the SENAI (*Serviço Nacional de Aprendizagem Industrial* or National Service for Industrial Training Network) – focusing on wood- and furniture, tool and die manufacturing, mechatronics as well as environmental technology – it also addressed target 9.b, supporting domestic technology development, research and innovation in developing countries. The project directly resulted in the introduction of SENAI technical courses in partnership with universities in Baden-Wuerttemberg. Furthermore, it revealed opportunities for innovation and developing new approaches and ideas for technology transfer for SMEs.

The project also worked towards enhancing North-South and international cooperation on and access to science, technology and innovation and enabled knowledge sharing which is formulated in target 17.6. Through extensive networking and promotion activities – e.g. sector-oriented study visits in Brazil and Germany and regular business delegations – the collaboration between public, economic and educational bodies from both countries was strengthened significantly. Visits of fairs were used systematically to enlarge the body of cooperating and contributing firms and institutions and to create a conducive environment for technology transfer and business.

CLIENT

Ministry of Economic
Affairs of the State of
Baden-Wuerttemberg,
Germany

COUNTRIES

Brazil

LOCATION

States of Paraná and Bahia

DURATION

2004–2020



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



17 PARTNERSHIPS
FOR THE GOALS



Catalyzing public and private financing in renewable energy and energy-efficiency investments using grants

CLIENT

Ministry of Foreign Affairs, Finland

LOCATION

Mekong region

DURATION

2009–2018



Having worked with the Energy and Environment Partnership (EEP) programme in Mekong region since 2009, NIRAS has been able to leverage our expertise in diverse sectors, such as agriculture, forestry and urban development, to deliver comprehensive and sustainable energy solutions that respect local conditions.

The programme aims to improve access to sustainable energy while mitigating global climate change. Between 2009 and 2013, the EEP has supported 39 projects and provided partial grant-based funding to project developers for feasibility studies and pilot and demonstration projects with the intention of catalyzing further public and private financing in renewable energy and energy efficiency investments in the region. Projects implemented cover a wide variety of areas including biofuel, biogas, biomass, energy efficiency/energy conservation, hydropower, solar, waste-to-energy, wind and hybrid renewable energy. While EEP Mekong mainly supports SDG 9, it also contributes to SDG 7 and 17.

Based on lessons learned, the ongoing EEP Mekong phase II (2014–2018) programme aims to increase its effectiveness and impact on energy systems reform by narrowing its focus on improving access for the rural population to sustainable and affordable energy services and products in the Mekong countries. The overall objective is improved livelihoods and climate resilience in rural communities in the Mekong region through the provision of reliable, sustainable and affordable energy for households, social institutions and businesses.

To achieve these objectives the programme will support both piloting and scaling-up of district- or village-level energy delivery/ inclusive business models and renewable energy tech-



nologies that meet the needs of end-users and provide sustainable energy services that are affordable, efficient and of good quality.

The programme is implemented through three components:

- mobilization of national and regional resources to implement sustainable and affordable rural energy solutions,
- support to renewable energy-based rural energy access projects, and
- capacity-building and knowledge management.



The EEP funding mechanism (a Challenge Fund) is further developed into a result-based financing instrument that provides incentive payments, on the basis of results achieved, to businesses and other project developers that deliver pre-specified outputs within the sustainable energy access sector. Calls for proposals are organized to select projects that have a large number of beneficiaries and secured sufficient own financial contribution. Furthermore, results-based monitoring and evaluation learning and knowledge sharing are key activities of this public-private partnership programme.



Enhancing innovation cooperation in the Southern African Development Cooperation (SADC) region

CLIENT

Ministry for Foreign Affairs of Finland

COUNTRIES

Botswana, Namibia, South Africa, Tanzania, Zambia

DURATION

2017–2021





Innovation is increasingly recognized as a key factor for sustainable development in Southern Africa. Efforts at building public policies and resilient innovation systems are ongoing but often hampered by modest funding, weak skills, and lack of coordination and linkages between innovation agents. The Southern African Innovation Support Programme (SAIS) was initiated in 2011 to address these challenges and enhance innovation cooperation in the Southern African Development Cooperation (SADC) region.

SAIS 2, the second four-year phase of the programme, builds on the achievements of SAIS 1 with new partners and a revised focus that emphasizes youth entrepreneurship, inclusive innovation and data-driven management of innovation. Partners include the governments of Botswana, Namibia, South Africa, Tanzania, and Zambia as well as the SADC Secretariat.

In SAIS 2, NIRAS supports:

- the enhancement of the capacity of business-support organizations, academia and public sector to better service private sector innovation and enterprise development. This will be done by training of innovation champions to develop and apply new concepts and methodologies for the management of innovation ecosystems at regional/subnational level;
- improved capacity of early-stage enterprises to innovate and enter new markets through services provided by local innovation support organizations – such as innovation hubs, labs and incubators; and
- improved skills for early-stage enterprises and innovation-support organizations to develop and to deliver initiatives in the informal settlements and townships in urban/peri-urban areas.

As a practical instrument, the programme runs an Innovation Fund with three windows providing matching grants for innovation-support organizations fostering entrepreneurship and knowledge on innovation ecosystems in SADC region. There are also capacity-building programmes for grantees in access to finance, data management and inclusive innovation. In addition to goal 9, SAIS 2 addresses several SDGs: goal 4 on quality education; goal 5 on gender equality as it places an emphasis on women entrepreneurs; goal 8 on inclusive growth and decent work particularly for African youth and the disadvantaged; and goal 17 through its strong focus on leveraging support for entrepreneurship and innovation through multi-stakeholder partnerships.



Facilitating growth of Vietnam's innovation potential and knowledge industries

Vietnam has experienced rapid economic growth and development since 1990, which has transformed the country to a lower middle-income country. It has also developed a regional and global economic integration and is now in the midst of developing its private sector through structural reforms that promote human resources and skills development – adequate for modern, creative and innovative industries.

The Innovation Partnership Program (IPP) primarily contributes to SDG 9 as it taps into Vietnam's emerging economy and private sector, and supports Vietnam's overall goal of becoming an industrialized middle-income knowledge-based economy by 2020. IPP is an initiator, facilitator and connector with the objective of strengthening the Vietnamese innovation and entrepreneurial ecosystem and boosting sustainable economic growth through increased production and export of innovative products, knowledge and services (SDG 9, target 9.2). The second phase of the IPP program's main focus is capacity-building and financial support to the development of innovative high growth Vietnamese startups and startup ecosystem developers; including eight universities and educational institutions based in Ho Chi Minh City, Hanoi, Da Nang, Da Lat, Hue and Nha Trang.

Abivin, a big data analytics company, is one of the start-ups supported by IPP through grant funding and an illustrative example of a rapidly scaled Vietnamese company. Through the support of IPP, Abivan developed its first commercial product: a logistical route optimizer,



CLIENT

Ministry for Foreign Affairs
of Finland

COUNTRY

Vietnam

LOCATION

City regions of Hanoi, Ho Chi Minh
City, Da Nang and Can Tho

DURATION

2009–2018



“In a healthy, economically sustainable startup ecosystem, the provision of growth resources is a professional’s business, not just someone’s job.”

which saves money and reduces air pollution by cutting the number of delivery bikes needed in the streets of Hanoi for a leading international consumer goods company. IPP also addresses SDG target 9.3 by implementing activities to internationally expand connections and networks to support the growth and dynamics of the Vietnamese startup ecosystem. For example, IPP supported the HATCH! VENTURES consortium through two funding stages. This has helped the organization to develop internationally benchmarked startup support services and to grow their HATCH! FAIR event into the leading annual startup exhibition in Vietnam. The IPP also partners with SLUSH, the annual startup event in Helsinki, one of the world’s leading startup conferences. In 2017 Vietnam hosted a SLUSH impact event as a focal point for socially and ecologically oriented startups and tech talent to meet with top-tier international investors and media.

The IPP project is also addressing SDG 17 in the form of partnerships between governments, cities, public sector, private sector, universities and civil society and SDG 5, which is endorsed at programme level and in grant support programmes as well as in recruitment, evaluation panels, etc.





Strengthening the innovation ecosystem in Tanzania

In parallel with institutional and industrial change taking place in Tanzania, the Information Society and ICT Sector Development Project (TANZICT) started in the nascent stage of the booming telecom industry. In addition, a rapid growth of the technology start-up ecosystem in Finland coincided with the project, which built the foundation for strong private sector engagement.

With the support of TANZICT, the Ministry of Communication, Science & Technology (MCST, later Ministry of Works, Transport and Communications) reviewed the national ICT policy so today it enables domestic technology development, research and innovation and is supported by a conducive policy environment (Goal 9.b). The policy defines Tanzania's aspirations with regards to how the nation will leverage ICTs for inclusive socio-economic development and activates the mechanisms to realize those aspirations. While supporting the policy review, TANZICT embarked on a capacity-building exercise with MCST, enabling it to carry out its mandate of leading the ICT sector and innovation in Tanzania (Goal 17.9).

Thanks to the lessons learned from Finland's journey to become a leading ICT and innovation economy, TANZICT enhanced North-South and South-South cooperation through knowledge sharing on access to science, technology and innovation (Goal 17.6). This was achieved through learning visits to Finland with the aim of experiencing first hand how the Finnish models in higher education, innovation and national planning work. Visits were also undertaken to Kenya, Mauritius and South Africa. As special attention was given to entrepreneurship, TANZICT arranged exchange programmes for Tanzanian entrepreneurs to participate in SLUSH – an annual global growth entrepreneurship event organized in Helsinki, where startups and tech talents meet with top-tier international investors, executives and media. This matchmaking was part of the larger Tanzanian Innovation Programme (TIP) component, focusing on stimulating innovations, creating seamless ICT innovation chains from ideas to pilots and raising awareness of innovations as drivers of economic and social development.

CLIENT

Ministry of
Foreign Affairs of
Finland

COUNTRY

Tanzania

DURATION

2006–2016



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Practically, the TIP worked mostly through the BUNI Innovation Hub in Dar es Salaam and seven “Living Labs” in the regions, thereby connecting both urban and semi-urban communities to the national innovation ecosystem. Living Labs provide communities and grassroots entrepreneurs with training and mentorship and connect these with incubation and acceleration programmes. Furthermore, TANZICT encouraged innovation by managing an Innovation Fund for start-ups. The fund received more than 500 applications, 46 of which were successfully awarded seed capital (Goal 9.5).

TANZICT worked in all spheres of Tanzanian society, from grassroots to national policy-making level. The project had an overall gender sensitive approach (Goal 4.3) and ensured equal access for all women and men to enjoy services provided by the programme.”



Strengthening innovative research to address Southern Africa's challenges in Health and Nutrition

CLIENT

Ministry for Foreign Affairs, Finland

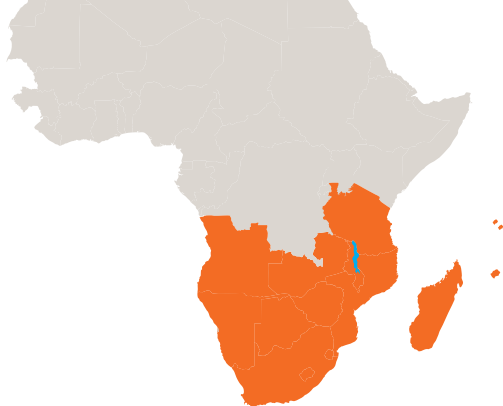
COUNTRIES

Angola, Botswana, Malawi, Mauritius, Mozambique, Namibia, Lesotho, Swaziland, Seychelles, Republic of South Africa, Zambia, Zimbabwe

DURATION

2009–2019





The Finnish-Southern African Partnership Programme to Strengthen the Southern Africa Network for Biosciences (SANBio) focuses on institutional strengthening and capacity building, especially in Knowledge Intensive Business Services (KIBS). SANBio (founded in 2004) is part of the New Partnership for Africa's Development (NEPAD) Agency Flagship for collaborative research and development, and an innovation platform aimed at addressing Southern Africa's challenges in health and nutrition. The programme mainly contributes to Goal 9 of the SDGs as its main objective is to develop Southern African capacities in the area of biosciences and introduce innovative biosciences related products to the market to eradicate poverty and achieve sustainable development. More specifically it addresses Target 9.5 which focuses on strengthening scientific research and increasing technological capabilities of industrial sectors.

A key component of the programme is the funding of innovative research and development projects resulting in significant impact at the end-user level, i.e. communities in the region. Examples of the funded projects include diagnostic kits for HIV treatment optimisation as well as diseases such as tuberculous meningitis, brucellosis and foot and mouth disease and innovative nutritional products addressing malnutrition in both humans and livestock. The programme also contributes to ensuring awareness on the importance of biosciences for the region. This includes a student ambassador initiative that promotes future talents for the biosciences field.

Furthermore it contributes to SDG 17, target 17.6, enhancing South-South cooperation on access to technology and innovation and target 17.9, strengthening international support for implementing effective and targeted capacity-building in developing countries. The aim is to create a solid and sustainable base for networks and institutions that enable high quality research and public-private partnerships necessary for the commercialization of research outcomes. Under SANBio, the BioFISA Programme supports in particular capacity building on activities related to commercialization and intellectual property management of scientific research in the field of biosciences. Its focus targets South-South and regional cooperation as it covers 12 countries: Angola, Botswana, Malawi, Mauritius, Mozambique, Namibia, Lesotho, Swaziland, Seychelles, Republic of South Africa, Zambia and Zimbabwe.

NIRAS global presence

NIRAS Australia

715 Rathdowne Street
Carlton North 3054
Melbourne, Victoria, Australia
T: +61 488 786 484
E: edly@niras.com

NIRAS Belgium

Boulevard du Régent 37-40 / 5th. Floor B-1000
Brussels, Belgium
T: + 32 (0) 4 8411 3406
E: anne.sillanpaa@niras.fi

NIRAS Cambodia

#381, 3rd floor, Building H, Phnom Penh Centre
Cnr Sihanouk & Sothearos Blvd.
Tonle Bassac, Phnom Penh, Cambodia
T: +85577995649
E: abn@niras.com

NIRAS Colombia

Mr Santiago Espinal
Calle 90 N° 11A - 34, Of. 601 Bogotá - Colombia
T: (571) 530 6420 / (571) 530 6419
E: santiago.espinal@niras.se

NIRAS Denmark

NIRAS International Consulting
Søtorvet 5, 4th floor
DK - 1371 Copenhagen K
T: +45 3537 4200
E: SVH@niras.com

NIRAS Ethiopia

Ms Maija Hyle
Atlas Area, Siham Building
5th Floor, Room: 501 - 503
Addis Ababa, Ethiopia
T: +251 9 4406 4058
E: mhyl@NIRAS.FI

NIRAS Finland Oy

Ratatie 11, 11th floor
01300 Vantaa, Finland
T: +358 9 836 2420
E: AIN@niras.com

NIRAS - IP Consult

Stuttgarter Str. 48
D-70469 Stuttgart, Germany
T: +49 0711-8969050
E: wolfgang.haag@ip-consult.de

NIRAS Greenland

Issortarfimmút 13
Postboks 769
DK-3900 Nuuk, Greenland
T: +299 32 31 11
F: +299 55 35 28
E: niras@niras.gl

NIRAS Kenya

"The Mvuli", Mvuli road, WWF Compound,
Westlands, P.O. Box 1493
00606 Nairobi, Kenya
T: +254 716 198 269
E: afo@niras.com

NIRAS Laos

Green Building
Nongbone rd, Ban Naxay
Vientiane, Laos
T: +46(0)854553326
E: jonas.noven@niras.se

NIRAS Mozambique

Rua da Argélia 159
Maputo, Mozambique
T: +258 82 948 0342
E: jlb@niras.dk, braf@niras.dk

NIRAS Myanmar

290 (A), 3rd floor, Pyay Road, Myenigon
Sanchaung Township, Yangon, Myanmar
T: +95 01 525 317
E: ads@niras.com

NIRAS Nepal

Maitri Marg, Sanepa-2, Lalitpur
GPO Box: 8975, EPC 1291
Kathmandu, Nepal
T: +977 9849361898
E: Neeranjana.Rajbhandari@niras.fi

NIRAS Norway

ENSI - Energy Saving International AS
Trondheimsveien 436A
0962 Oslo, Norway
T: +47 22 90 24 60
E: ensi@ensi.no

NIRAS Philippines

T: +381 64 2140515
E: XSNO@niras.com

NIRAS Poland

Ul. Waliców 11
00-851 Warszawa, Poland
T: +48 22 395 71 00
E: JCK@niras-ic.pl

NIRAS Serbia

Milovana Marinkovica 2,
11000 Belgrade, Serbia
T: +381 11 39 76 114
E: JJC@niras.com

NIRAS Sweden AB

Fleminggatan 14, 9tr Box 70375
107 24 Stockholm, Sweden
T: +46 854 553 300
E: ALH@niras.com

NIRAS Taiwan Limited

6F, No. 6, Sec. 4, Hsinyi Rd.
Da-an Dist Taipei
Taiwan, 10683
CYL@niras.com

NIRAS Tanzania

House No 1055 Plot No 18 Block B Msasani
Village
Dar es Salaam, Tanzania
M: +255 784 979 755
E: LSE@niras.dk

SMC NIRAS Thailand

Bangkok Business Centre Building, 13th Floor
Unit 1301-03, 29 Sukumvit 63
Bangkok 10110 Thailand
T + 66 2 381 7232
E: kim.p@smcniras.com

NIRAS UK

St. Giles Court
24 Castle Street
Cambridge, CB3 0AJ, United Kingdom
T: +44 7740 281325
E: TNO@niras.com

NIRAS Ukraine

22-A Kruglouniversytetska str,
01024 Kyiv, Ukraine.
M: +38 063 222 9663
E: ndo@niras.com

NIRAS Vietnam (RCEE-NIRAS JSC)

No.091, 9th Floor, Kham Thien Building,
193-195 Kham Thien,
Dong Da Dist.,
Hanoi, Vietnam
T: +84 4 3786 8592
E: hao.phung@rcee.org.vn

NIRAS Zambia

Plot 4128 Mwinilunga Road
Sunningdale
P.O. Box 320115
Lusaka, Zambia
T: +260 953 727 948
E: kzi@niras.com

NIRAS offices around the world

Our decentralized structure ensures we're always close to our projects. With 51 offices in 27 countries, we maintain strong local ties to clients, experts and organizations in all of our key markets. Building on our motto "we listen, we learn, we deliver", NIRAS is proud to be a long-term partner in the pursuit of growth and prosperity for the countries in which we work and is committed to building partnerships and local capacity, beyond the lifespan of individual projects, to achieve sustainable and equitable future societies.





The next generation consultancy

FOR MORE INFORMATION, CONTACT:

Senior Consultant

Mrs. Helle Qwist-Hoffmann
HQH@niras.dk
Phone +45 2030 6844

Senior Consultant

Mrs. Anna Erkkilä
AER@niras.com
Phone +358 50 350 9946

Senior Consultant

Mrs. Marjo Paavola
MPA@niras.com
Phone +358 9 83624258