IMPLEMENTATION PLAN 2021-2030

'THINK BIG, TAKE SMALL STEPS'

RHIA

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INTRODUCTION

This implementation plan is a follow-up to the Multi-Year Plan 2021-2030 where the ambitions of the RHIA community are established. The ambitions have been set to give direction to our joint mission towards sustainable aviation. The RHIA community realizes that it is part of a much larger transition and aims to accelerates the intended innovation by working together in its actualization.

Working together in implementation is what we do. Working together in building an innovative airport together with facilities that make hydrogen flying and electric flying possible, but also working on an airport as a multi modal mobility hub that the region can make use of in various ways. We will work together to create a place where working and learning go hand in hand through the development of a campus environment and also develop an economic centre where start-ups and companies can make long-term contribution to sustainable aviation. New revenue models are being invented so that future innovations are viable.

In this implementation plan we provide an overview of the various programs that the RHIA community is working on. For each program, an overview is given of the 'Roadmap' 2021-2030 and the projects that have been started to realize the intended ambitions. Since we work on innovations, we apply a working method that leaves room for exploring concepts, experimenting in a test environment and bringing parties together, each of whom contribute their own expertise. We explain this method in this document. We also explain the 'governance', in which we describe the structure to facilitate decision-making on programs and projects.

The RHIA Foundation has a facilitating role within the community and as such has coordinated the development of this joint implementation plan. Do you have questions? Please feel free to contact us.

Collaboration in the RHIA-community

Strategic partners focus on the positioning and direction of RHIA. At present, these partners commit themselves to RHIA by concluding covenants and/or participating in the Administrative Consultation, which includes regional administrators with an interest in RHIA.

Project partners ensure the development and implementation of innovation projects, jointly develop innovation projects and ultimately formalize their cooperation in cooperation agreements.

Network organizations contribute to the visibility of RHIA and the involvement with other parties. They typically contribute to RHIA events, or involve RHIA in their own networking events

The RHIA Foundation supports the community in its activities to realize RHIA goals. The foundation focuses on all conditional activities to grow the larger innovation cluster (currently the community and its living lab).

STRATEGISCHE PARTNERS

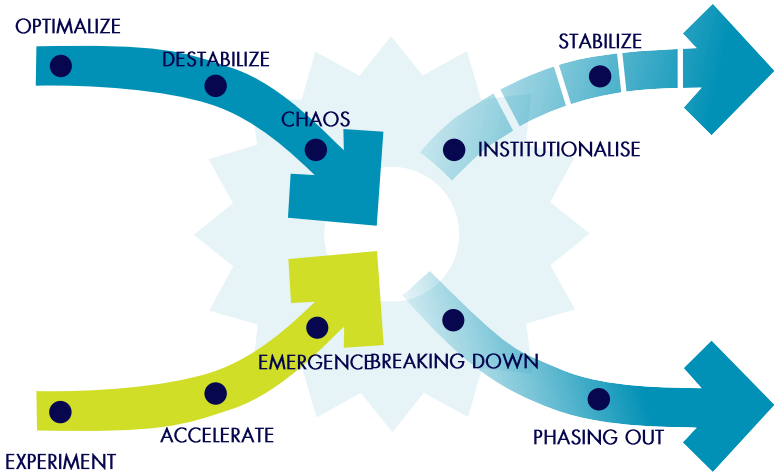
PROJECTPARTNERS

NETWERKORGANISATIES

ACCELERATE THE TRANSITION
SUSTAINABLE FLYING WITHIN ONE GENERATION

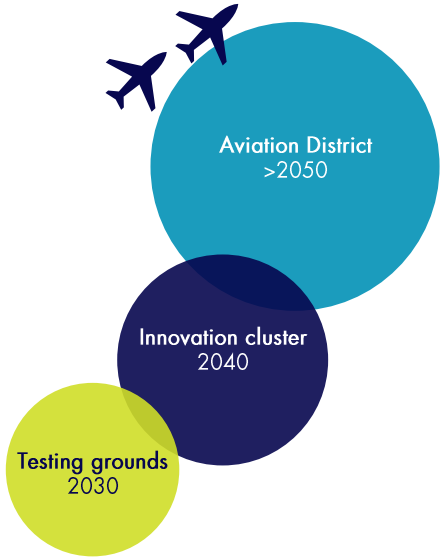
We realize that we are part of a transition, and together we want to accelerate the transition to sustainable aviation and make it irreversible within one generation.

We have a large common goal that can count on broad support, both political and societal, because of the social impact. The RHIA community aims to accelerate this transition to sustainable aviation. We want to make this possible by setting up a testing ground, and by connecting partners in which we create the right preconditions so that we can work optimally. Collaboration takes place based on various expertise: knowledge institutions, politics, regional governments, business, start-ups and social or civil organizations.



Focus RHIA based on model Drift, management in transitions, Sept 2020

With RHIA we are working towards a strong innovation cluster of parties, with the creation of the Aviation District as a dot on the horizon. In this target scenario, the airport will become an integral part of the region, and the economy will be strengthened with a new socio-economic aviation cluster. This prospect offers perspective for the transition of the aviation sector for the coming years. We start with the further construction of a testing ground.



Think big, take small steps, moving towards an Aviation District

GOALS AND AMBITIONS

In the Multi-Year Plan 2021-2030, the RHIA community has described its goals and ambitions (see next page). With the step-by-step realization of goals, RHIA aims to eventually create an Aviation District in which innovation, learning and working go hand in hand. With this dot on the horizon in mind, RHIA will accelerate the transition in the region over the next five years. The innovations of the living lab relate to CO2 reduction, improving air quality, working, learning and living environments (jobs, training, mobility), and reducing the use of materials.

WHERE THE RHIA COMMUNITY STEERS TOWARDS (OUR GOALS)

WHAT THE RHIA COMMUNITY BUILDS (OUR AMBITIONS)

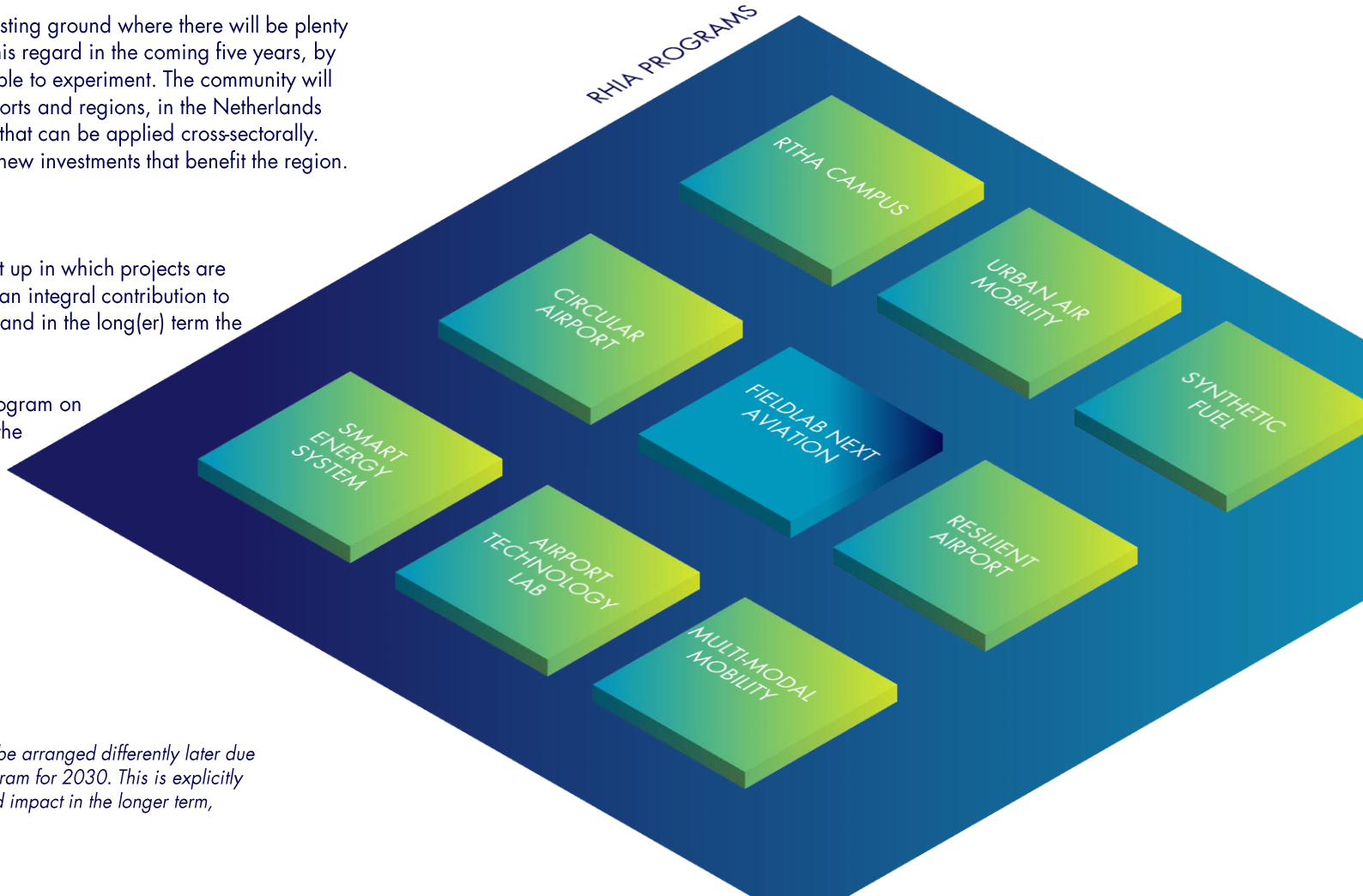
INPUT	ACTIVITIES	TARGETS 2021-2030	INTENDED MEDIUM- AND LONGTERM EFFECTS	IMPACT / CONTRIBUTION TO PUBLIC AND PRIVATE VALUES
Deployment of resources for realizing output	Converting input into output	Tangible products or services as a direct result of activities.	The effect of the goals; benefits for the region and aviation sector	The desired long-term change in society, which is brought about by several (external) factors
The resources consist of: People: RHIA community (partners) The RHIA foundation Location: RTHA as testing grounds Financial resources: Grants Funds Private investments	Theme: Flying green	Production of synthetic kerosene	RTHA airlines use synthetic kerosene	The RHIA program is working on realizing a future-proof airport / aviation district. This makes RTHA an integral part of its environment. ▪ Cleaner and quieter living environment on and around RTHA; ▪ Economic activity / gearing of innovations, startups, training and investments in and around RTHA; ▪ Attractive, working, learning and living environment in the region; ▪ Improvement of the mobility network in the region; ▪ Innovation in the aviation sector nationally and internationally; ▪ Improving public acceptance and passenger experience with regard to flying; ▪ Circular raw materials flows by reducing material use, and; ▪ Reuse of materials RTHA: 37.7% (2019).
		Offering electric/hybrid/hydrogen flying services (including ground-based activities such as taxiing)	At RTHA, airlines fly electric, hybrid or with hydrogen technology.	
		Delivery of silent rotor blades	At RTHA, flying with rotor blades is tested by airlines.	
		Drone test flights	Flying with cargo drones is applied at RTHA.	
	Theme: Gaining energy	Solarpark delivers 13,320 tons of CO2 reduction per year in green energy, 2.25 tons of SO2 reduction, 2.41 tons of NOx reduction and 0.17 tons of particulate matter reduction HeliCubes: 3,712 kg NOx reduction and 2.784 kg of particulate matter reduction per year Realization of solar parking 10 GWh/year Developed energy platform for the supply of electricity, heat and hydrogen		
	Theme: Social involvement	Additional jobs from RTHA, surrounding companies and knowledge institutions: • 250 additional jobs; • 50 visitors per day.	Economic structure strengthening for the region.	
		Creation of R&D facilities: 3 field labs, education and training: ▪ 50 start-ups/scale-ups ▪ 15 innovations realized ▪ 40 partners in the ecosystem ▪ 40 young people without basic qualifications helped by Project Runway ▪ Collectively €12.000.000 in RTHA Campus	RTHA is a 'living lab'; magnet for innovation and knowledge development in the aviation sector.	
	Theme: Smart connect	Provide space for the innovation projects on and around RTHA. Pilot autonomous passenger transport between the Meijersplein metro stop and RTHA.	Airport is better and faster accessible for the region (mobility hub).	
		Launch of new, innovative digital services on RTHA.	Digital Airport RTHA.	
	Theme: New Entrepreneurship	Research into new revenue models for the RHIA partners that are widely applicable.	Development and scaling up of new revenue models.	

IMPLEMENTATION
PROGRAMS AND PROJECTS

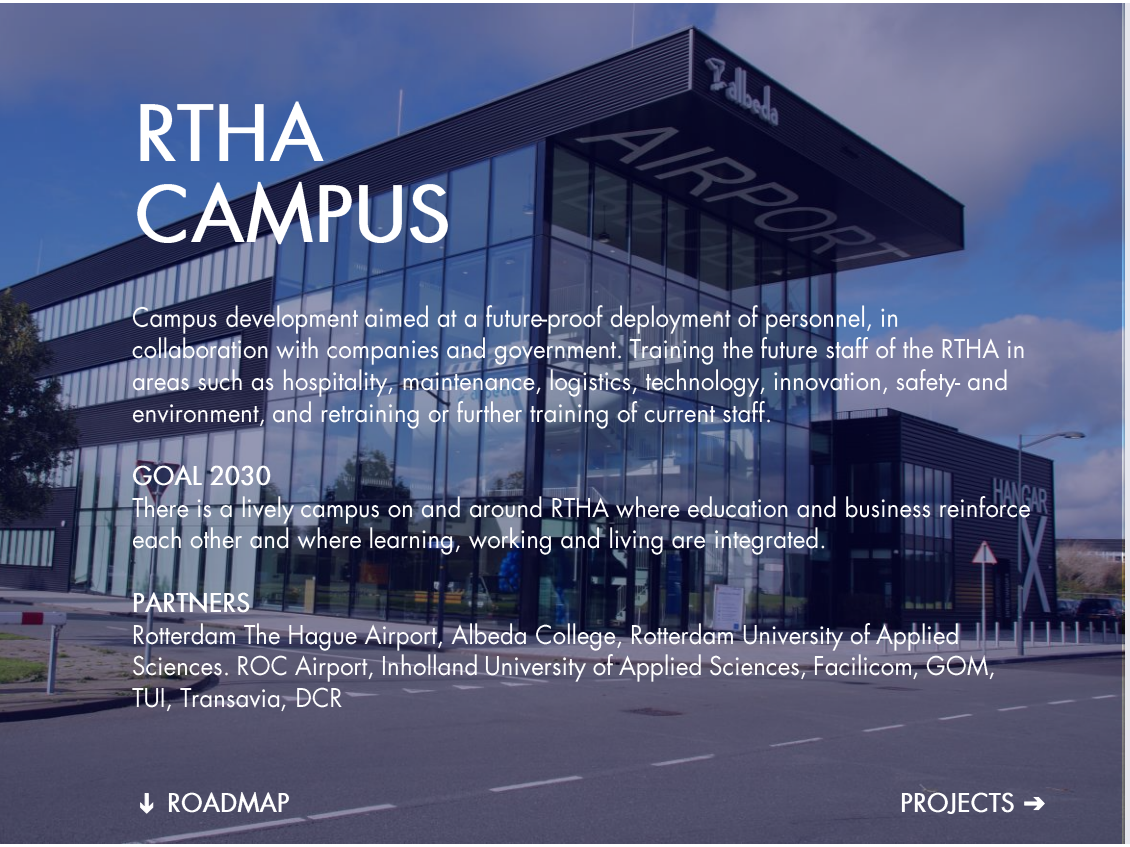
Thinking big, and taking small steps
A start has already been made on developing a testing ground where there will be plenty of experimentation. More efforts will be made in this regard in the coming five years, by realizing the facilities that the sector needs to be able to experiment. The community will work on innovations that are scalable to other airports and regions, in the Netherlands and beyond. We also want to realize innovations that can be applied cross-sectorally. Scaling the innovations makes it possible to make new investments that benefit the region.

Taking small steps: RHIA programs
To achieve the goals, nine programs have been set up in which projects are developed and implemented. The programs make an integral contribution to the creation of an innovative airport, the field lab, and in the long(er) term the Aviation District.

A roadmap for 2021-2030 is outlined for each program on the following pages. An overview is also given of the projects that are (still) being set up or are already in operation.



This elaboration of the programs is a snapshot and can be arranged differently later due to new insights. An objective has been set for each program for 2030. This is explicitly the goal of the program itself, not the intended effect and impact in the longer term, which goes beyond the scope of the program.



RTHA CAMPUS

Campus development aimed at a future-proof deployment of personnel, in collaboration with companies and government. Training the future staff of the RTHA in areas such as hospitality, maintenance, logistics, technology, innovation, safety- and environment, and retraining or further training of current staff.

GOAL 2030

There is a lively campus on and around RTHA where education and business reinforce each other and where learning, working and living are integrated.

PARTNERS

Rotterdam The Hague Airport, Albeda College, Rotterdam University of Applied Sciences. ROC Airport, Inholland University of Applied Sciences, Facilicom, GOM, TUI, Transavia, DCR

↓ ROADMAP

PROJECTS ➔

Albeda RTHA College	Learning Airport	Project Runway
Competence Center	Project Newton	Aircraft Maintenance & Training School
Student teams	Mock up Units	

2021

- Students carry out research projects within the RHIA projects.
- Elaboration and facilitation of residential-work-units project.

2023

- Major education and innovation programs at RTHA.
- RTHA Campus as a brand known in Rotterdam and surroundings.

2025

- Integration RTHA Campus with business in MRDH.
- Innovations from RTHA Campus are applied at RTHA and at RHIA partners.

>2025

- RTHA Campus continues as a separate entity.
- Develop incubator and accelerator programs for start-ups and scale-ups under RTHA Campus.

URBAN AIR MOBILITY

Researching, developing, and potentially testing Urban Air Mobility vehicles, for example for inspections, medical transport, and other freight transport. Also embedding Urban Air Mobility in the airport.

GOAL 2030
Test flights with UAM

PARTNERS
Rotterdam The Hague Airport, NLR, TU Delft, DECK180, AeroDelft

↓ ROADMAP

PROJECTS ➔

- Mapture
- Multifunctional social drone
- DECK180

2021

- Feasibility study into deployment of UAM for emergency medical transport and regional inspections.

2023

- Feasibility study into the use of UAM for commercial activities in the retail and construction sector.
- Developing partnerships for testing with UAM.

2025

- Test flights with UAM vehicles.

>2025

- Integration of UAM vehicles in daily business operations, if promising.

SYNTHETIC FUEL

Synthetic kerosene is CO2-neutral and potentially circular, and above all a sustainable alternative to the current fuel: kerosene. The production of synthetic kerosene from renewable electricity, CO2 and hydrogen can drastically reduce emissions from conventional aircraft.

GOAL 2030
Realization of synthetic kerosene demonstration plant for 1,000 litres per day.

PARTNERS
Rotterdam The Hague Airport, SkyNRG, ClimeWorks, Uniper, TU Delft, Port of Rotterdam, Innovation Quarter, TNO

↓ ROADMAP

PROJECTS ➔

Zenid

Regiovisie SAF

Platform SAF

2021

- Finalize and facilitate partnership for synthetic kerosene pilot plant.

2023

- Exploring upscaling possibilities in HIC Rotterdam for a large synthetic kerosene plant in the Rotterdam region.
- Construction consortium synthetic kerosene pilot plant.
- Start construction of synthetic kerosene demonstration plant.

2025

- Collaboration agreement for the realization of a large synthetic kerosene plant in the Rotterdam region.
- Production of 1,000 litres of synthetic kerosene per day at RTHA.
- First plane at RTHA fuelled with synthetic kerosene.

>2025

- Scaling up synthetic kerosene production outside the Netherlands.
- Increase share of synthetic kerosene flights at RTHA and Schiphol.

CIRCULAR AIRPORT - ON HOLD -

One of the first steps in the transition to a circular economy is making processes waste-free. In this project, we investigate how this is possible for the airport environment, what smart solutions there are and how energy can be gained through conservation.

GOAL 2030
Realizing partnerships to create a waste-free airport environment by 2030.

PARTNERS
Obbotec

↓ ROADMAP

PROJECTS ➔

Hydro Cat 3

2021

- Mapping waste flows of airport environment.

2023

- Investigate the feasibility of waste-free flights.

2025

- Establish and facilitate partnerships with airlines for zero-waste flights.
- Pilots for waste-free services with stakeholders present in the airport environment.

>2025

- Pilots with zero-waste flights.
- Waste-free airport environment in 2030.

FIELDLAB NEXT AVIATION

Setting up a physical test environment including necessary facilities. For the development and testing of new designs and components for the aviation of the future, such as new propulsion technologies, wing designs, propellers and rotor blades, for electric and hydrogen aircraft.

GOAL 2030

Developing and testing new designs and parts for electric and hydrogen powered small aircraft.

PARTNERS

Rotterdam The Hague Airport, TU Delft, NLR, Municipality of Rotterdam, AeroDelft, Technology Park Ypenburg, Unified, SkyNRG, ClimeWorks, iTanks, Innovation Quarter
Pending: KVE, Pipistrel, CryoWorld, Dianra, LindeGas, Airborne, ZeroAvia

↓ ROADMAP

PROJECTS ➔

Smart Rotors	UNIFIER 19	GENESIS
TULIPS	Dragonfly	Pipistrel
AeroDelft	Hydrogen Powered Aviation	H2Hub
Experience Center	Citation PH Lab	Zenid

2021

- Analysing feasibility and hazards of constructing hydrogen infrastructure at the RTHA.
- Find out certification processes for new aircraft types.
- Developing additional accommodation for companies and knowledge institutions with access to airside.
- Performing tests with Citation PH-lab Facilitating a test flight with an unmanned aircraft on hydrogen.
- Facilitate and realize new development methods for the production of smart rotor blades[1].

2023

- Test flight on hydrogen with a manned aircraft.
- Investigating risks and opportunities for infrastructure and operations geared to hydrogen and electric flying.
- Testing new smart rotor blades using whirl tower[1].

2025

- Testing with a modified hydrogen aircraft (30-40 people).
- Flight from RTHA to London by electric plane.
- Demonstrating rotor blades on an electric plane or drone[1].

>2025

- Testing with a modified hydrogen aircraft (60-80 people)Optimization business process for production rotor blades[1].

RESILIENT AIRPORT - ON HOLD -

An airport has a regional social function with medical and police emergency transport. To do this also in a situation with a terrorist threat, pandemic or extreme weather, new adaptive plans are being developed using societal analyses and modelling.

GOAL 2030
The airport is better prepared for external shocks and has improved its social position in times of crisis.

PARTNERS
TU Delft

↓ ROADMAP

PROJECTS ➔

EPD Scan

Teststraat XL

2021

- Exploring the impact and role of the airport during disasters and extreme events.

2023

- Developing business processes for strengthening airport resilience.
- Developing new roles for the airport during disasters and extreme events.

2025

- Applying new roles and processes in regular business operations.

>2025

- Review of relevant disasters and extreme events in which we reassess the role of the airport.

SMART ENERGY SYSTEM

An innovative program for an emission-free and energy-producing area around the airport. A 13 MW solar park is being built, which will make the airport energy-supplying to the surrounding area. To make good use of this energy, work is being done on a smart energy system that makes the energy supply reliable, safe, and sustainable.

GOAL 2030

Producing emission-free electricity in the form of solar energy and realizing a smart energy trading platform.

PARTNERS

Rotterdam The Hague Airport, Unisun, Eneco, EnerTrans, Municipality of Rotterdam, Vopak

↓ ROADMAP

PROJECTS ➔

Solarpark

Solar Parking

Energy platform

Hydrogen

Residual heat

2021

- Delivery solar park 14MW.

2023

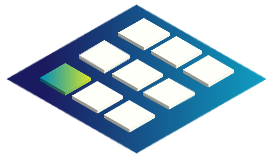
- First tests with energy trading platform.
- Start construction Solar Parking 9 MW.

2025

- Energy trading platform is in use.
- Exchange locally generated sustainable electricity with the environment, both companies and residents.
- Start combining heat and electricity demand via energy platform.

>2025

- Integration of RTHA energy supply with environment.
- Realization of energy storage for electrification operations RTHA.



AIRPORT TECHNOLOGY LAB

A development, test, and demonstration environment for data-driven innovations for airports. This allows companies to create and test new services and products. Travelers get more comfort and convenience, airliners maintain more efficient flights, handlers optimize their processes, and the airport contributes to reducing air pollution, CO2 emissions and noise pollution.

GOAL 2030
A digital twin of the airport processes.

PARTNERS
Rotterdam The Hague Airport, Adecs, Bagchain, WorldStartup, To70, MBO Rijnland, The Hague University of Applied Sciences, TU Delft, iLabs, DECK180
Sponsors: Municipality of Den Haag, Province South-Holland

↓ ROADMAP

PROJECTS ➔

Drone landscape & Flight Challenges	External bagage check-in	Call2gate strategy
Flight2Gate planning tool	Vortex prediction for take-off	Digital Twin / Shared Files

2021

- Open data information system operational at the airport.

2023

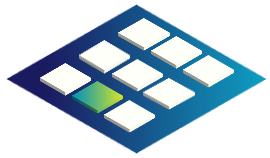
- Basis digital twin operational.

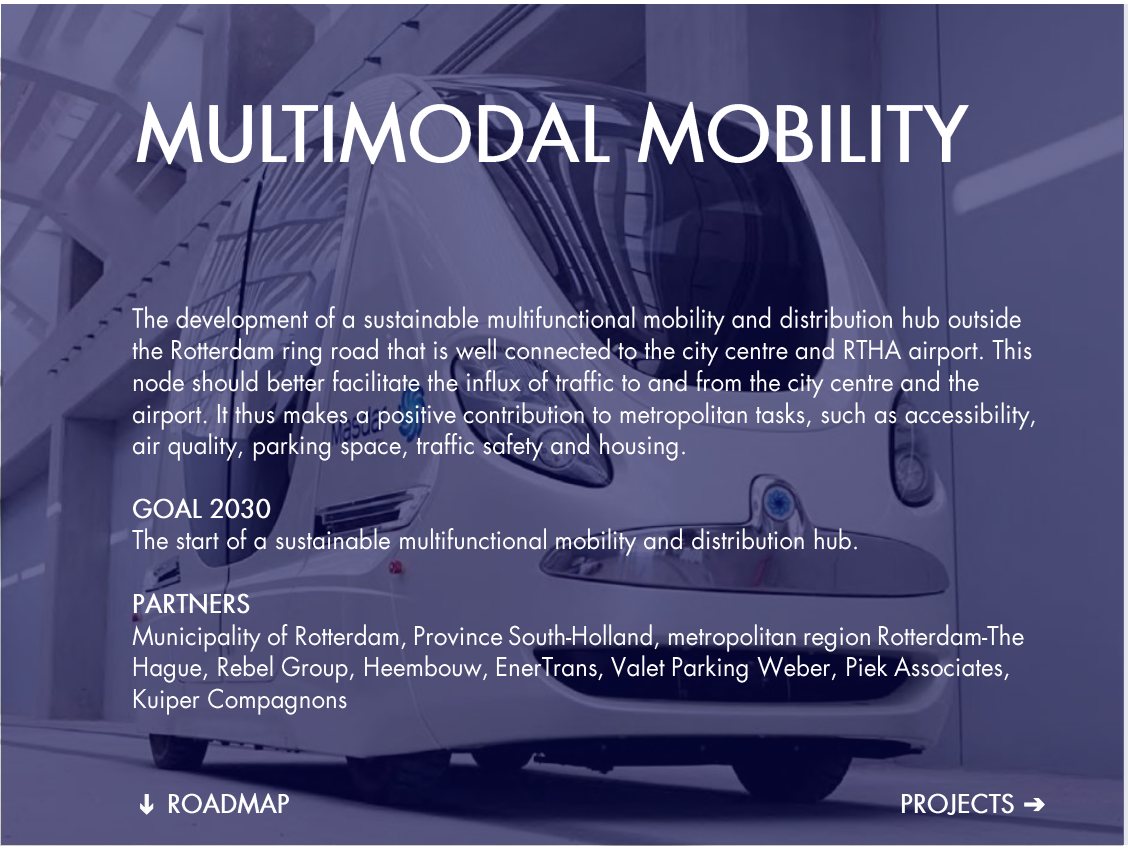
2025

- Full digital twin operational, including possibility for simulations.

>2025

- Integration of digital twin at the airport with other digital twin.





MULTIMODAL MOBILITY

The development of a sustainable multifunctional mobility and distribution hub outside the Rotterdam ring road that is well connected to the city centre and RTHA airport. This node should better facilitate the influx of traffic to and from the city centre and the airport. It thus makes a positive contribution to metropolitan tasks, such as accessibility, air quality, parking space, traffic safety and housing.

GOAL 2030

The start of a sustainable multifunctional mobility and distribution hub.

PARTNERS

Municipality of Rotterdam, Province South-Holland, metropolitan region Rotterdam-The Hague, Rebel Group, Heembouw, EnerTrans, Valet Parking Weber, Piek Associates, Kuiper Compagnons

↓ ROADMAP

PROJECTS ➔

Last Mile

Mobility hub

City Oriented DC

City Hub - Medical Drones

2021

- Facilitate and finalize cooperation for autonomous transport.

2023

- First test drive with autonomous vehicle at RTHA.

2025

- Fully autonomous transport between the Meijersplein metro stop, Albeda Lutonbaan/RTHA Campus and RTHA terminal.

>2025

- Scaling up autonomous transport to the city center of Rotterdam and other modality hubs.

METHOD

In the coming years we will work on the transition of aviation, the regional airport RTHA and its surroundings. This requires innovation. In order to achieve innovations, we go through five phases and each phase has an explicit 'gate' as a decision-making moment to the next phase.

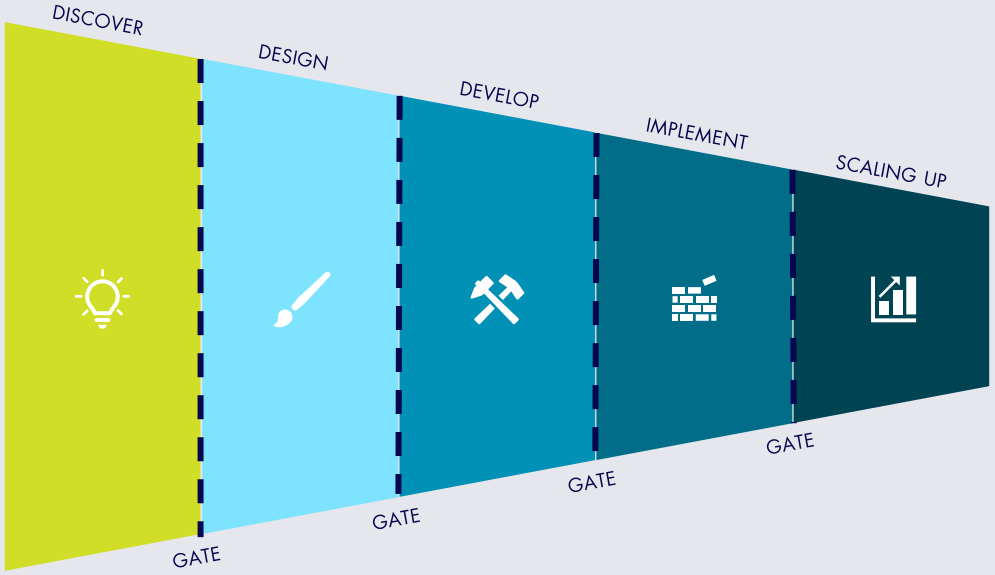
DISCOVER IDEATION & SCOPE
Knowledge about sustainability, futureproofing and innovation is continuously evolving. As partners, we share this knowledge with each other to create new connections within the network. We want to inspire each other and keep each other informed of the latest developments and come up with ideas.

DESIGN DESIGN
Innovations do not happen by themselves. That is why we create the right setting for innovation: a suitable composition of partners, a good project plan and sufficient financing that come together at a suitable location.

DEVELOP PRE-PILOT & PILOT
The new coalitions will start working on a pilot; the application of innovation(s) in an operational environment on or around RTHA. This gives us an idea of the costs, complexity, and impact of the project, including its possible large-scale implementation.

IMPLEMENT PRE-LAUNCH & LANCEREN
To make an impact, we need to implement innovations. Implementation can be at RTHA, somewhere in the region or even in another area. This phase also leads to new mindsets and new topics for conversations; the beginning of the discovery of new innovations (discovery).

SCALING UP SCALING UP
We share the innovations and associated knowledge with the community and beyond. By forming coalitions with parties abroad, we want to increase the sales market for exports and the impact of our innovations.



INVOLVEMENT RHIA-PARTNERS

DISCOVER
IDEATION & SCOPE

Knowledge about sustainability, futureproofing and innovation is continuously evolving. It is important to share this knowledge with each other in order to create new connections within the network. With this we want to inspire each other and keep each other informed of the latest developments.

PROJECTS ➔

IDEATION

SES - Solar Parking	UAM - Urban Air Mobility	FNA - Elektrisch vliegen
FNA - SAF	ATL - Hackathon Drones	ATL - EPD Scan

SCOPE

RC - Woon Werk Units	RC - Newton	RC - AM&TS
FNA - Waterstof vliegen	SES - Energie Platform	MMM - Last Mile
MMM - Mobiliteit Hub	MMM - CDC Cityhub	MMM - CDC Nedical

	IDEATION	SCOPE
DEVELOPMENT	• Idea	• Concept
GOAL	• Idea Generation • Identifying societal challenge • Explore solutions	• Delineate scope • Translating ideas into concepts • Analyse environment • Find owner
DELIVERABLES	• Analysis challenge • Target group sketch • Project / innovation sketch • Stakeholder analysis • subsidy scan • Role of RHIA	• Business model canvas • Concept scenarios • Function list innovation concept • Customer Profiles • Competition analysis • Business case sketch • Environmental analysis
OFFICIAL DOCUMENTS	• Business model canvas • PvA Scope Phase • Mail confirmation that partners are willing to work together on concept formation	• Letter of Intent with project partners • PvA Design phase
CRITERIA	• Strategic fit	• Business/economic feasibility • Private Ownership

	IDEATION	SCOPE
ACTIVITIES	• Brainstorm about idea and customer need • Explore partners/stakeholders to enrich idea • Sketching the idea and possible revenue model • Explore financing options (perform a subsidy scan)	• Detailed elaborations of various concepts / propositions • Drafting customer journey • Drafting first sketch business case • Conduct an analysis of the environment (incl. competition, spatial use & legislation)
ROLE OF RHIA	• Connect partners • Boost and accelerate • Process guidance	• Boost and accelerate • Process guidance • Stakeholdermanagement
ROLE OF PARTNERS	• Research	• Expertise
METHODS & TOOLS	• Design Thinking method • Influx of ideas via companies that are looking for a network or field lab to develop their idea • Deployment of student teams for broad exploration • Hackathon	• Design Thinking • Lean Startup • Deployment of student teams for better analysis concept • SME Challenge for linking direct company demand to small business supply

DESIGN

Innovations do not happen by themselves. That is why we create the right setting for innovation: a suitable composition of partners, a good project plan and sufficient financing that come together at a suitable location.

PROJECTS ➔

DESIGN

RC - Competence Center	SF - Demonstration plant	SF – Region vision

DESIGN	
DEVELOPMENT	• Prototype
GOAL	• Design innovation • Building a business case • Assess feasibility
DELIVERABLES	• Business model canvas • Design concept innovation • Business case • Feasibility Study • Inventory of spatial occupancy
OFFICIAL DOCUMENTS	• Letter of Commitment • PvA Development phase
CRITERIA	• Business/economic feasibility • Technical feasibility • Financial feasibility • Dependencies / Risks • Private Ownership

DESIGN	
ACTIVITIES	• Design innovation / MVP • Building business case • Updating feasibility • Select suppliers • Determining ownership
ROLE OF RHIA	• Process Guidance
ROLE OF PARTNERS	• Ownership
METHODS & TOOLS	• Lean Startup • Deployment of student teams for making a prototype

DEVELOPMENT
PRE-PILOT & PILOT

The new coalitions will start working on a pilot; the application of innovation(s) in an operational environment on or around RTHA. This gives us an idea of the costs, complexity, and impact of the project, including its possible large-scale implementation.

PROJECTS ➔

PRE-PILOT

- RC - Learning Airport
- FNA - Smart Rotors

PILOT

- ATL - Ext. Bagage Checkin
- ATL - C2G Strategy
- ATL - F2G Plan Tool
- ATL - Vortex Prediction

	PRE-PILOT	PILOT
DEVELOPMENT	• Prototype	• Pilot
GOAL	• Prepare pilot	• Testing in a physical environment
DELIVERABLES	• Pilot Plan • Pilot organisation • Prototype pilot • Update Business case	• Test results • Final design innovation • Business case • Business plan (incl. marketing & comm.) • Launch planning
OFFICIAL DOCUMENTS	• Purchase contract • Permits?	• PvA Implementation phase
CRITERIA	• Operational feasibility	• Operational feasibility • Economic feasibility

	PRE-PILOT	PILOT
ACTIVITIES	• Preparation pilot • Set up pilot organization • Prepare physical environment • Develop prototype / demonstration unit for pilot • Stakeholder & environment management	• Execute pilot • Evaluate pilot • Adapting prototype to final innovation • Stakeholder & environment management • Drafting a business plan
ROLE OF RHIA	• Process guidance • Stakeholder management	• Process Guidance • Stakeholder management • Communication
ROLE OF PARTNERS	• Development	• Operationalisation
METHODS & TOOLS	• Lean Startup	• Lean Startup

IMPLEMENTATION
PRE-LAUNCH & LAUCHING

To make an impact, we need to implement innovations. Implementation can be at RTHA, somewhere in the region or even in another area. This phase also leads to new mindsets and new topics for conversations; the beginning of the discovery of new innovations (discovery).

PROJECTS ➔

LAUNCHING

RC - Albeda College	RC - Runway	SES – Solar park

	PRE-LAUNCH	LAUNCH
DEVELOPMENT	• Dry-run startup	• Startup
GOAL	• Preparation of launch	• Commercialise innovation
DELIVERABLES	• Implementing organization • Legal Affairs • Communication campagne • Dry-run • Launchplan	• Launch of innovation • Monitoring execution
OFFICIAL DOCUMENTS	• Chamber of Commerce registration • Memorandum of association • Personnel contracts • Customer contract • Purchase contract & SLAs • Permits?	• Customers contracts
CRITERIA	• Operational Feasibility • Economic feasibility	• Economic feasibility • Operational Feasibility

	PRE-LAUNCH	LAUNCH
ACTIVITIES	• Set up implementation organization • Organizing legal affairs (license, contracts, legislation)Contracting suppliers • Recruit resources • Drafting communication strategy • Stakeholder & environment management'	• Execute launch innovation • Execute marketing & communications • Stakeholder & environment management'
ROLE OF RHIA	• Process guidance • Stakeholder management	• Process guidance • Communication
ROLE OF PARTNERS	• Operationalisation	• Commercialisation • Management • Exploitation
METHODS & TOOLS	• Lean Startup	• Lean Startup

SCALING UP
SCALING UP

We share the innovations and associated knowledge with the community and beyond. By forming coalitions with parties abroad, we want to increase the sales market for exports and the impact of our innovations.

PROJECTS ➔

	SCALING UP
DEVELOPMENT	• Scaleup
GOAL	• Realise the RHIA ambition • To attract investment
DELIVERABLES	• Participation of one European network • Building a relationship with one or two international airports • Building a working relationship with Schiphol International
OFFICIAL DOCUMENTS	• MoU / MoC • Subsidy application
CRITERIA	• Strategic fit • Interests of the strategic partners

	SCALING UP
ACTIVITIES	• Intensify cooperation with RSG – specifically Schiphol International • Intensify cooperation with other regional airports • Participate with partners in international project consortia • Participate in relevant international conferences and networks • Further develop new revenue models into propositions of our program that are suitable for upscaling
ROLE OF RHIA	• Connect with international partners
ROLE OF PARTNERS	• Participate in international development.
METHODS & TOOLS	• Stakeholder analysis linked to the RHIA portfolio and the latest developments in aviation and the broader energy transition.

GOVERNANCE COOPERATION & DECISION-MAKING

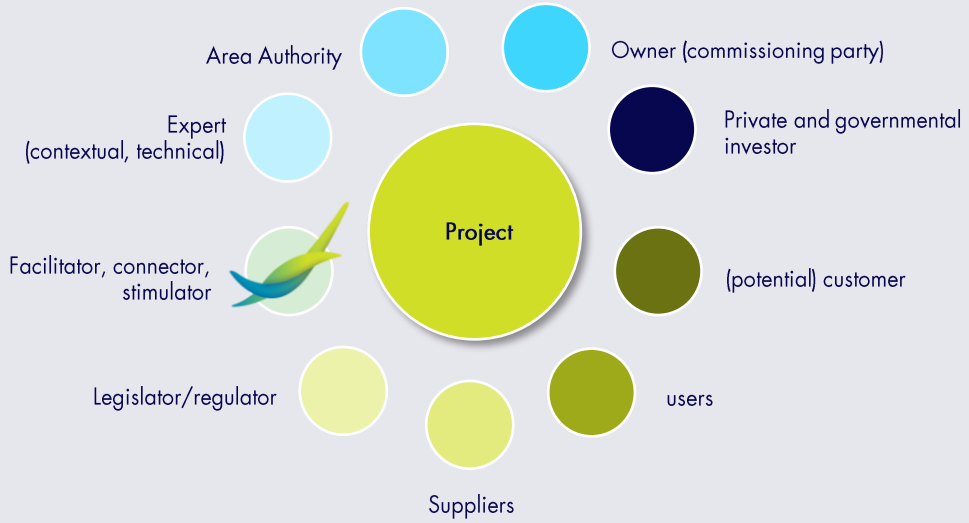
RHIA is a community of partners from the business community, governments, knowledge institutions and start-ups, facilitated by the RHIA foundation. The build-up of this community ensures that through the development of innovation projects a strong innovation cluster is created with which the Aviation District on and around the RTHA is realized. It also ensures that the right composition of parties is present to achieve results in the implementation of projects.

Working together in implementation: sharing resources, returns and risks
The collaboration between the various parties is established in the implementation of project activities, aimed at realizing innovations. The collaboration is recorded in a Letter of Intent and later in a Letter of Commitment. Each partner contributes its own resources in the form of money, people (manpower, expertise), physical space, technology, facilities, contacts/network and knowledge. The collaboration yields revenues (benefits) that match the stated goals of the RHIA community. In the collaboration it is agreed who in the further development of an innovation project will take ownership of the innovation project and thus also bear (part of) the risks.

RTHA as a testing ground
RTHA and the immediate vicinity, as a physical location, functions as a testing ground for the Aviation District by starting new innovation projects at and around the airport. The (material)
facilities are present or are being developed to support innovation on site.

Connection with other airports
Following RHIA, other airports that are part of the Royal Schiphol Group (Eindhoven Airport, Lelystad Airport and Schiphol Airport) are also working on innovation ecosystems. RHIA sees opportunities here for cooperation and coordination on test flights. In addition to the airports that are part of the Royal Schiphol Group, other airports in the Netherlands are working on projects such as electric flying, from which RHIA learns or distinguishes itself by focusing on other additional topics.

'Quadruple Helix' RHIA project team
(government, knowledge institutions, industry, users)



Project team composition different per phase

In each phase of the implementation, it is examined which parties should sit at the table. Of course, RTHA will be involved from the start as sponsoring partner and area authority for the project innovations. The municipality of Rotterdam will also be involved at a fairly early stage because of the impact of innovation projects on the immediate environment around RTHA. Strategic partners such as TUD and NLR will be asked to collaborate for substantive expertise. Private partners are invited to help develop a suitable revenue model and the associated ownership and risk-bearing capital. The RHIA Foundation has a mediating function and supervises the start and progress of the collaboration between the various parties across the programs and within projects. During the development of innovation projects, the search for the right composition of partners is ongoing.

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SUPERVISORY BOARD

Only the strategic partners are included in this overview.
The project partners are listed on the program pages earlier in this document

Colophon

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Strategische partners over het Uitvoeringsplan 2020-2030

"Together with the RHIA community, we face the challenge of contributing in the transition to climate neutral aviation in 2050. Our research center is not only a strategic partner of RHIA. The practical hands-on mentality also suits NLR well. In addition to the NLR and TU Delft research aircraft, we now also have an electrically powered two-person aircraft at RTHA. With both we can conduct research in a targeted and innovative way for the benefit of a future, quieter and cleaner aviation. In addition, this setting is quite unique, with the seaport just around the corner and an airport testing ground in a metropolitan environment. The latter, incidentally, offers an excellent opportunity to make this possible in balance with the wishes of the environment."

Michel Peters, CEO Royal NLR

"InnovationQuarter helps bring the right parties together to accelerate innovations. For aviation, we do this together with RHIA. You notice that as soon as something takes shape, such as the Airport Technology Lab, it is easier to get companies interested because you can indicate what they could do together with RHIA. This is how we build the RHIA community together."

Rinke Zonneveld, director of Innovation Quarter

"RHIA is successful with its innovative ecosystem, with which we aim to achieve ambitious aviation goals and embrace entrepreneurship to positively influence our society."

Ahmad Bakkar, Strategy & Innovation, RTHA