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CREATING THE FOUNDATIONS FOR A SUSTAINABLE SOCIETY

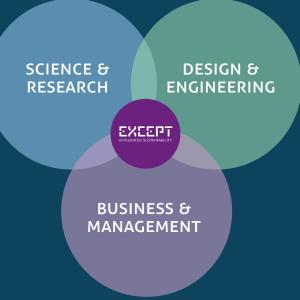
TOM BOSSCHAERT

ABOUT US





CREATING THE FOUNDATIONS OF A SUSTAINABLE SOCIETY





WE DEVELOP PIONEERING SUSTAINABLE PROJECTS

SAN FRANCISCO SALESFORCE PARK

SAUDI ARABIA SERENITY FARMS

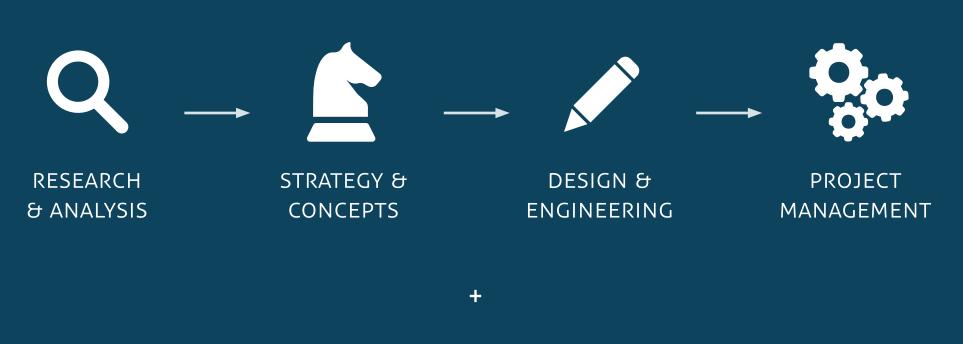
NETHERLANDS REGEN VILLAGES







WE DELIVER PROJECTS FROM IDEA TO REALIZATION





MASTERCLASSES & TRAINING



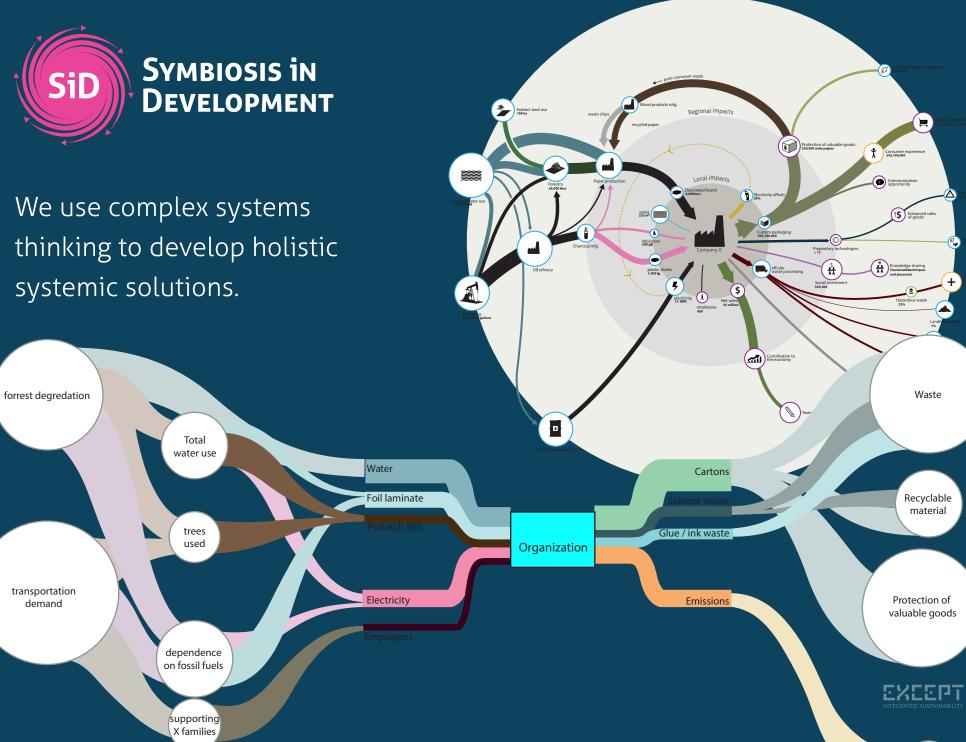
WE WORK AROUND THE WORLD SINCE 1999







We use complex systems thinking to develop holistic systemic solutions.





SiD is open source and free.

Find books, video training and resources on <u>www.thinksid.org</u>







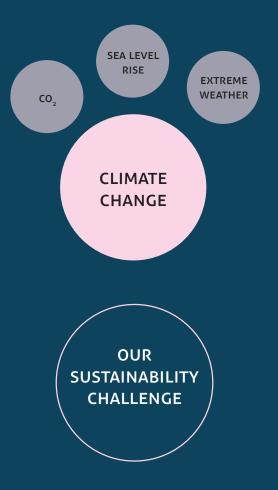
ORCHID CITY

REINVENTING THE FUTURE OF LIVING



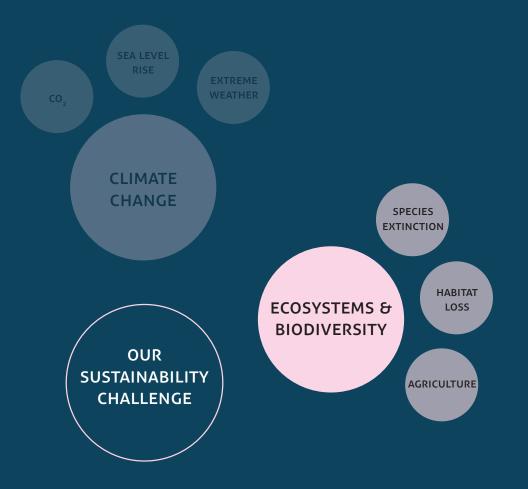






UNEP estimates a global cost of \$280-500 billion per year to fix climate change costs to infrastructure by 2050.





We have lost over 80% of all life on the planet. Cambridge University estimates the costs of preventing further biodiversity loss until 2050 at \$2,2 trillion.





The UN estimates that by 2050, 50% of the world faces water shortages, we need 50% more energy, and 40% more food.





















REINVENTING THE FUTURE OF LIVING

Orchid City is the world's first self-sustaining city blueprint.

Here, we reinvent how we coexist with nature and with each other.



A GLOBAL PARTNERSHIP

NETHERLANDS







JAPAN

linden

Superuse on site

NETHERLANDS

DOEPELSTRUKERS

....

WOODSTOCK



CREABITAT





PDIE Purpose Driven Innovation SINGAPORE





NETHERLANDS/USA



SWITZERLAND



JAPAN INNOVATION PARK N PARTNERSHP WITH SWITZERAND NIKOVATION PARK BELIGIENNE VIETNAM Royal HaskoningDHV Enhancing Society Together



VS	Vietnam Sustainability
CE	Social
SE	Enterprise

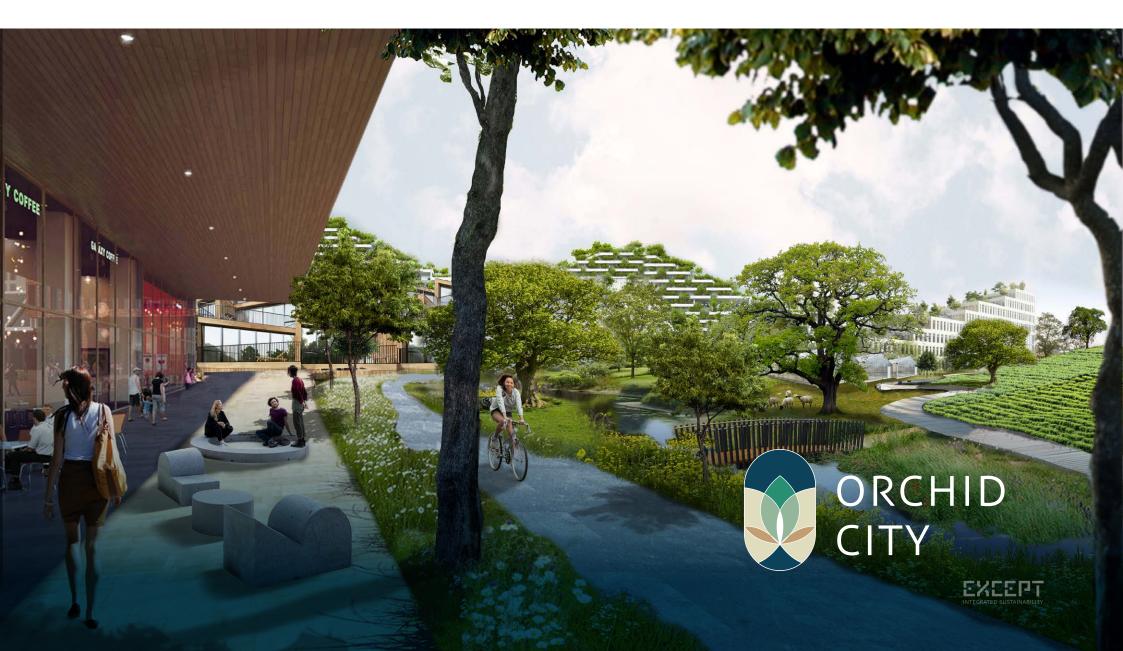


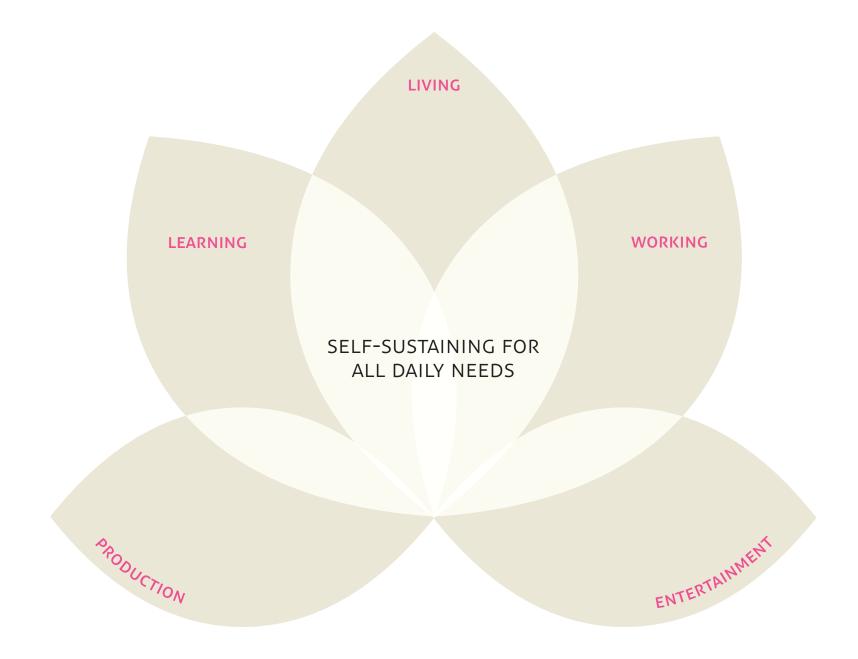


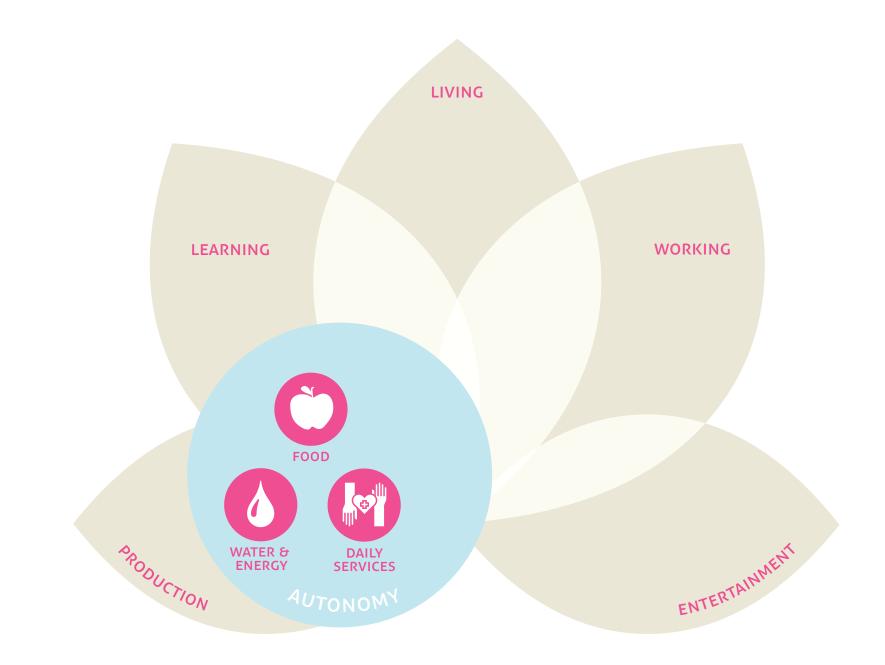
CROATIA

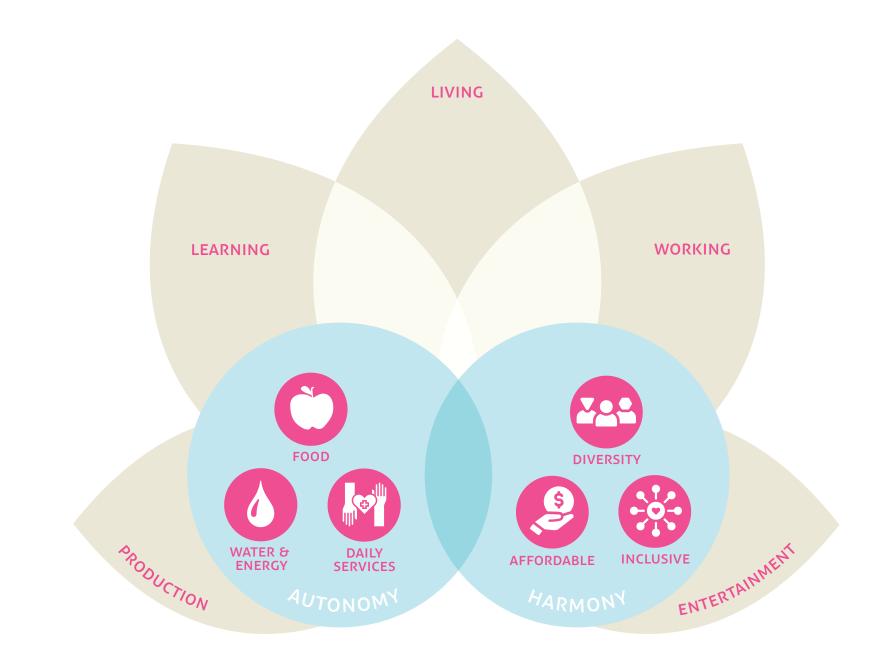


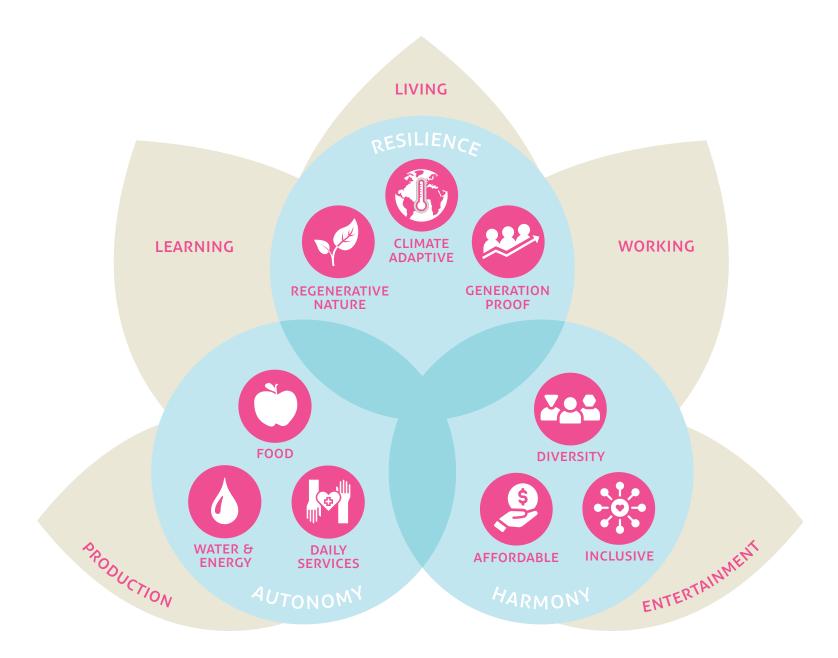
WE BUILD THE PLACE TODAY, WHERE WE WANT TO LIVE 20 YEARS FROM NOW, THAT IS REALISTIC, FEASIBLE, AND AFFORDABLE.

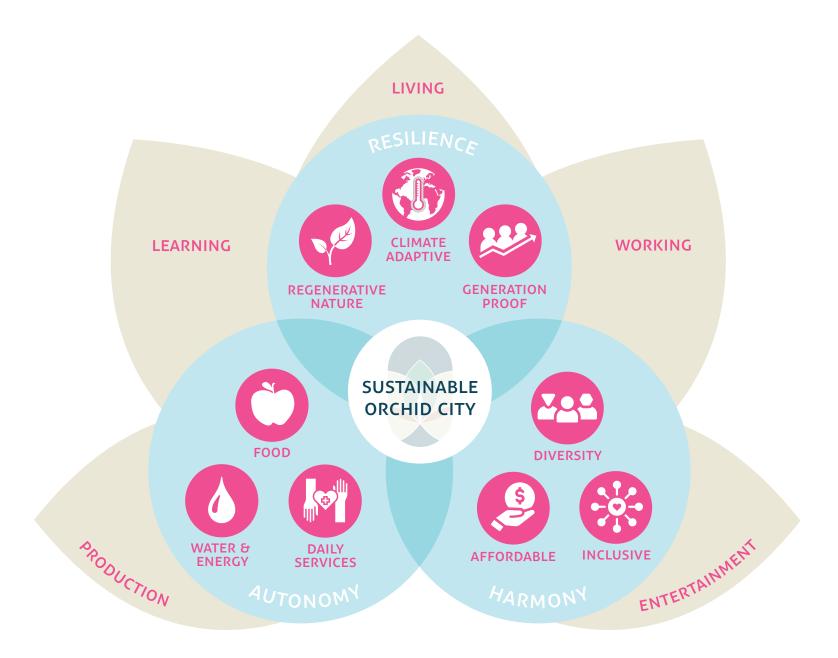








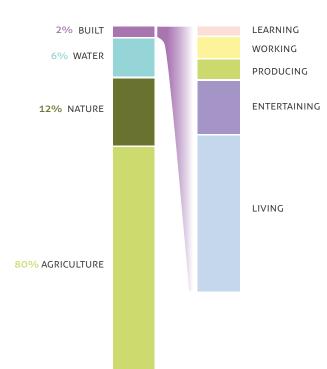




PROGRAM OVERVIEW

Example for an Orchid City of 5,000 people.

LAND USE



PROGRAM		TOTAL (HA)
LIVING		
Housing		13.9 ha
	Detached	3.1 ha
	Villas	0.5 ha
	Semi-detached	3.5 ha
	Rowhouse	4.7 ha
	Two Bedroom Ap.	0.5 ha
	Studio Apartment	0.3 ha
	Elderly Homes	0.4 ha
	Student Housing	0.1 ha
	Social Housing	0.8 ha
Care & Health		0.5 ha
Emergency Services		0.3 ha
Infrastructure		17.0 ha
TOTAL		31.7 ha
LEARNING		
Schools		1.8 ha
	Daycare	0.1 ha
	Primary Schools	0.9 ha
	High School	0.7 ha
	Craft School	0.1 ha
TOTAL		1.8 ha
ENTERTAINING		
ENTERTAINING Hospitality		1.7 ha
	Hotel	1.7 ha 0.6 ha
	Hotel Resort	
		0.6 ha
	Resort	0.6 ha 0.5 ha

Leisure		3.6 ha
	Spa & Relaxation	0.2 ha
	Community Centers	0.6 ha
	Entertainment	0.5 ha
	Culture	0.3 ha
	Sport Facilities	0.6 ha
Services		6.0 ha
TOTAL		10.5 ha

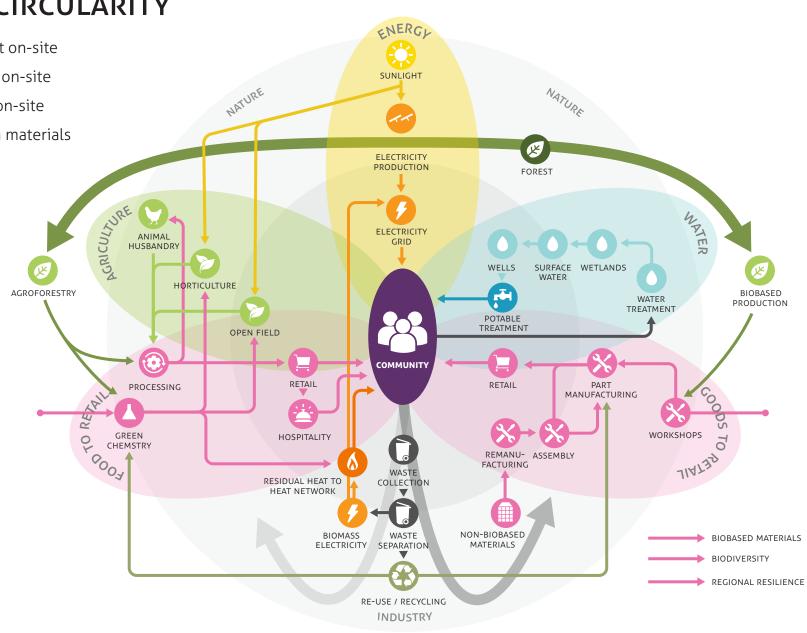
PRODUCING & NATURE		
Industry & product	tion workshops	6.7 ha
Urban Green		2 ha
Agriculture		1,462 ha
	Open Field	309 ha
	Husbandry	1,034 ha
	Orchard	96 ha
	Greenhouse	23 ha
Nature & Water		332 ha
TOTAL		1,800 ha
	WORKING	
Offices	WORKING	1.1 ha
Offices Co-working	WORKING	1.1 ha 0.3 ha
	WORKING	
Co-working	WORKING	0.3 ha
Co-working Retail		0.3 ha 0.2 ha
Co-working Retail Market		0.3 ha 0.2 ha 0.6 ha

This table details the program of a scenario of 5000 people in Orchid City, The Woods, in the Netherlands.



RESOURCE CIRCULARITY

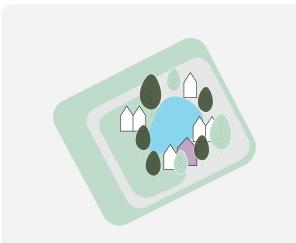
- > Energy self-sufficient on-site
- > Water self-sufficient on-site
- > Food self-sufficient on-site
- Circular construction materials
- Circular textiles
- Circular ceramics
- > Repair workshops





BUILT ON A SCALABLE DYNAMIC MODEL

- > Scale matches availability of space, ambition of the partners, and local demand
- > From a neighborhood to a city, from 500 to 50.000+ population
- Phased development



500 inhabitants

Total land area:	175 ha
Built up area:	4.1 ha
Centers & satellites:	1
Self-sufficiency:	75%
Development costs:	€ 125 million



5,000 inhabitants	
Total area:	1,840 ha
Built up area:	49 ha
Centers & satellites:	3-5
Self-sufficiency:	90%+
Development costs:	€ 1.400 million

>>>



15,000 inhabitants

Total area:	5,570 ha
Built up area:	140 ha
Centers & satellites:	5-8
Self-sufficiency:	95%+
Development costs:	€ 4.200 million

BUILDING ADVANCED SIMULATION & MONITORING SOFTWARE

- > Symoto: cutting edge node-based modeling, simulation, and monitoring apps
- > Revenue through its own business model





SELF-SUFFICIENT COMMUNITIES POWERED BY ECOSYSTEM SERVICES



- Sustainable agriculture through agroforestry, permaculture, and aquaculture
- Advanced organic greenhouses
- Constructed wetlands and helophyte filters as biodiverse purification systems
- > Biodiversity preservation and restoration
- Circular nutrient cycles



REDISCOVER HAPPINESS & WELLBEING

SELF SUFFICIENCY IN SOCIAL AND HEALTH SERVICES



- > Live inside the nature that feeds us
- Mental and physical health programs
- > Public parks, sports, and outdoor activities
- Educational institutions
- > Elderly care
- > Daycare facilities & schools







RECONNECTING PEOPLE THROUGH GENERATIONS

DIVERSE AND GENERATIONALLY CONNECTED COMMUNITIES

- Trans-generational living
- Community services and program
- > Safe, generation-proof homes
- Financial support for startups
- Social housing
- Workshop centers



REIMAGINE YOUR WORKING-LIVING RELATIONSHIP

SELF SUSTAINING IN JOBS, WITH MEANINGFUL WORK AND PRODUCTION



- Self sustaining in job provision
- > Meaningful, sustainable workplaces
- Production centers for sustainable food, durable goods, and technology
- Financial support for startups
- Work placement for students
- Generational learning in the worksplace



CONTEXT SENSITIVE ADAPTATION

BRAZII

The Orchid City model adapts to local climate, culture and context. Each design is tailored to local needs and societal challenges.

Orchid City Brazil, The Valley Inland hills climate

- + Social Inclusivity & Safety
- + Sustainable Agriculture & Water
- + Regenerative Nature

Orchid City Netherlands, The Woods *Moderate sea climate*

+ Research & Higher Learning

NETHERLANDS

- + Regenerative Nature & Climate Adaptive
- + Generational Inclusivity & Senior Care

Orchid City Vietnam, The Delta *Tropical climate, river delta*

+ Flood-Proof

VIETNAM

- + High-tech Agriculture & Water Purification
- + Rural Job Creation & Balance Urbanization



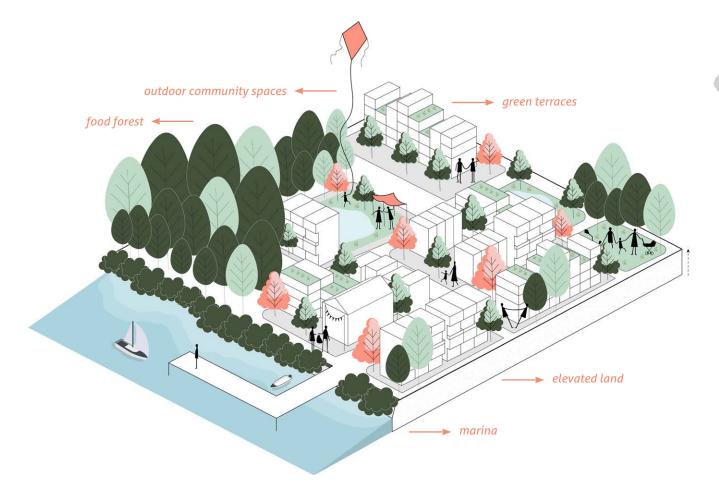


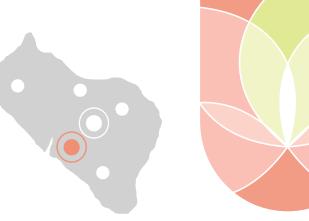
OC VIETNAM _THE DELTA



SPECIFIC FEATURES

- > Flood-proofing
- High-tech agriculture & water purification
- Fresh locally grown food
- א Rural job creation & De-urbanization







WATERFRONT DOWNTOWN

- Diverse apartment buildings & row houses
- Offices & co-working spaces
- > Schools and healthcare center
- > Restaurants, shops and entertainment
- Marina
- Bioretention areas



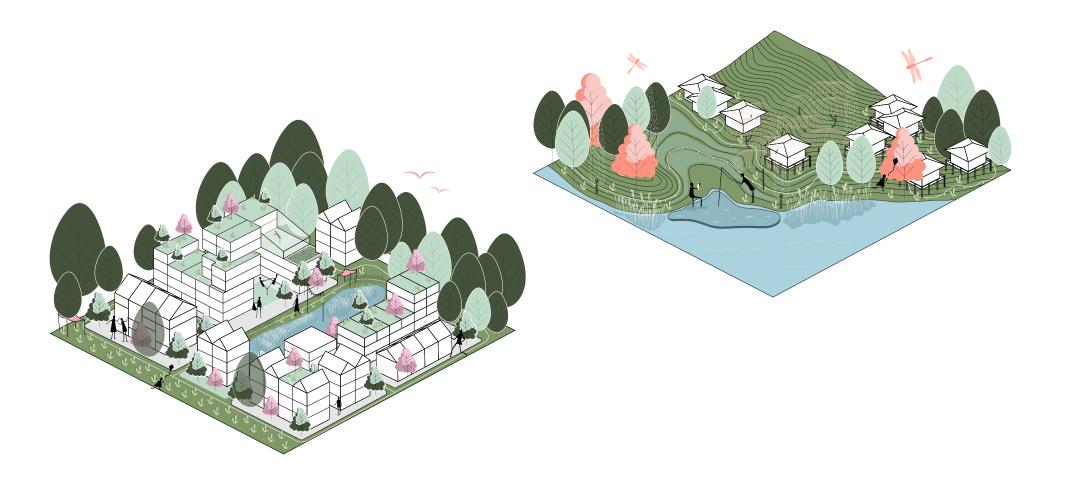


NEIGHBORHOOD ON THE TERRACES

- > Villas and semi-detached houses on stilts
- Elevated flood-proof & productive terraces
- Elevated infrastructure & food-storage units for emergency situations
- Fishing ponds
- Aquatic vegetation, orchards & rice paddies

VARIABLE DENSITY

From urban to rural density









VARIABLE DENSITY

- A

LOW DENSITY / RURAL

IMPACT OF AN ORCHID CITY OF 50.000 PEOPLE



CLIMATE CHANGE

 Reduces CO₂ emissions by 133 million tons per year. Saving 140% CO₂ footprint per person.



FOOD PRODUCTION

> Produces 100% of its food requirement, with 100% organic farms.



JOBS & EDUCATION

- 30.000 direct jobs created, 100%+ of jobs needed. Part-time, full-time, in different skill levels, and on-site work training.
- > Provides 100% of pre-school, primary, and secondary education.

IMPACT OF AN ORCHID CITY OF 50.000 PEOPLE



ECONOMY

 Contributes € 7 billion to the local economy during developmentand € 1,2 billion per year during operations for jobs.



LAND & WATER REGENERATION

- Regenerates 39.000 hectares of land, saving 60%+ of NOx emissions compared to average NL land use.
- > Adds 6.100 ha of wild nature and water.
- > Is 100% water-neutral



BIODIVERSITY

- Restores beyond 100% of natural biodiversity.
- > Implements localized endangered and rare species development program.

REALIZING HOW WE WANT TO LIVE TOMORROW - TODAY



THANK YOU



EXCEPT INTEGRATED SUSTAINABILITY

"The best way to predict the future, is to invent it"

- Alan Kay

YOU CAN DO THE IMPOSSIBLE, IF YOU TRY.

WWW.ORCHIDCITY.ECO

WWW.EXCEPT.ECO