

Case #5

ReGen Villages

Re-inventing the City:
Building new sustainable
cities from the ground

START DATE	2015
LOCATION	Almere, Netherlands
THEME	Urban Transitions
LEAD CONTACT	James Ehrlich, President, ReGen
STAKEHOLDERS	Private, Public & Third Sector



Case Study Overview

At the Centre for Design Research (CDR) at Stanford University, James Ehrlich, a Senior technologist, has worked with a scholars on new stream of research focused on the built environment – specifically, sustainable cities. The research eventually transitioned into the ReGen project which sought to develop strong, resilient communities, one neighbourhood at a time. Following years of research, in 2015 James Ehrlich decided to develop a commercial business, ReGen Villages, to provide model blueprint for businesses, government and academic action^[1]. The partnership aimed to accelerate the proliferation of affordable, integrated village designs, providing off-grid, integrated and resilient

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villages that could power and feed self-reliant families around the world.

The ReGen Village concept provided a holistic approach by combining a variety of innovative technologies, such as energy positive homes, renewable energy, energy storage, door-step high-yield organic food production, vertical farming aquaponics, aeroponics, water management, and waste-to-resource systems.

The new business aimed to tackle challenges expected from climate change and over-population from the economic, social and environmental perspective. However, the model blueprint requires challenging the status quo, shifting

[1] Business Insider www.businessinsider.com/self-sufficient-village-regen-2016-9?r=US&IR=T&IR=T – Accessed December 2017

from the traditional ‘top down’ development of housing as they propose a model intervention into prevailing modes of residential living, as James Ehrlich, President of ReGen Villages states:

‘This is an experiment ... normally, government has a [development] plan for an area, but we’ve turned that upside down.’ – (Quoted in the Guardian, 12th July 2016, article available [here](#).)

ReGen Villages have drawn on the open innovation process in order to make the business a commercial success. The business still have to work with existing decision-making processes

and land regulations when proposing new city concepts to municipalities. In this, they have worked very closely with the Dutch Government, the Almere Municipality and Danish design firm, EFFEKT, to get their buy-in for the development, ensuring the

venture was commercially viable and that it met compliance requirements.

Obtaining: Using research data to build sustainable cities

Following years of researching organic family farms and communities around the world, in 2013 Ehrlich discovered research data that signified future populations could be put at risk due to food shortages and intense resource consumption. Given the data identified that the natural resource systems were under increasing strain, the proposition of a residential village that considers its own food production, energy generation, waste re-use, and water conservation could drastically reduced the reliance on municipal systems. With this in mind, Ehrlich decided

to volunteer at an open innovation competition at Stanford University, where 20 universities competed to who can design and build the most energy positive homes. He became the ‘organic food coach and lecturer’ for the cohort and was inspired by the different approaches proposed at the competition. Following further research in France in 2014, he identified that it was possible to rapidly deploy complete neighbourhoods at the nexus of food, water, energy and waste, thus Ehrlich developed the ReGen Village project as a commercial business.

Integrating: Getting the idea off the ground

Once the university spin-out had been registered in 2015, James Ehrlich soon realised that there was a high demand for his blueprint model: millions of people around the world desperately wanted to live in ReGen Villages. Realising that local government buy-in was a crucial component for the new development, Ehrlich approached various municipalities around the world to encourage legislation that would fast track permitting and exception zones for

regenerative community development. Ehrlich elaborated:

‘We require governments to think completely differently about how whole neighbourhoods and communities are grown rather than merely built – and this means re-thinking zoning, permitting, environmental, health and economic obstacles lifted or removed.’

ReGen Village represents a shift from the status-quo, ‘top down’ approach to housing developments and requires the political support to introduce incentives for low carbon developments and industry support, where real profitability is about having healthy, thriving communities of inhabitants.

Implementing: University and Government partnerships for sustainability

A year later, following countless meetings with national governments, municipalities and refining the blueprint model, Ehrlich was approached by the Dutch Government to develop the ReGen



Villages concept in an area of The Netherlands called Almere – a town renowned for being forward thinking. Following the offer from the Dutch Government, it soon became apparent that Ehrlich had the technological knowledge, but not necessarily the design skills, to turn his vision into a reality; he decided to collaborate with other stakeholders. ReGen Vilages thus collaborated with a EFFEKT (an architectural firm) as well as municipality (primarily in Almere and in Oosterwold) and the national Dutch Government, in order to develop comprehensive plans of the development and reach a signed land agreement in 2016^[2].

Overtime, the relationship between the Stanford University spin-out and the Dutch government has been proved effective – the government has created preferential regulations for sustainable developments, for example: suitable land grants without down payment, where both parties

[2] ReGen Villages www.regenvillages.com – Accessed December 2017

realise that there's a shared success in the eventual sale, lease and management of these communities (and where municipalities receive increased tax benefits). Additionally, the local government in Almere has agreed to fast-track all permits when working with ReGen Villages in the creation of exclusion zones for 'prototyping' pilot neighbourhoods. This is openly communicated across the region and nationally, to enable anyone in the country to access information regarding the project and showcase the benefits of the Village. Ehrlich is hopeful that other governments will be just as supportive:

'We require interested cities to join with us in presenting to national/parliamentary levels of government for removing obstacles, and/or to legislate a new way forward for regenerative community developments to flourish.'

It is hoped that the ReGen Village concept will be upscaled and replicated in other countries, in partnership with national and local government, business and universities.



Case Study Summary

ReGen Villages has a global vision to bring science-to-action research to implement thousands of regenerative, villages within the next decade. The ReGen Villages initiative will act as conduit for bringing design challenges and endowment funding to partner universities around the world, in addition to providing safe, secure and self-reliant communities to life.

Building on an open-source ideology and partnering with national and municipal governments, major universities, industry partners, regional and local stakeholders at every level, ReGen Villages aims to dissolve barriers to rapid deployment and proliferation. Drawing on the Open Innovation process to bring stakeholders together to develop a sustainable neighbourhood blueprint model requires an integrated focus on the human and technical issues – this is ReGen Village's recipe for success.

Challenges:

Often policies and the ways of working between cities and municipalities are often too different to allow smooth cooperation. For solution providers such as ReGen Village, this requires navigating their way through an incoherent working environment and can present a sizeable barrier to scaling up solutions to new cities. This barrier was exemplified by the experiences

of ReGen Village, as they spent the first year or so developing relationships with both national and local government, in order to identify ways of working that would align. This research was crucial to the business, as without it, ReGen Village may not have been able to scale up they first pilot community in The Netherlands.

Results:

- First pilot community in Almere, Netherlands where they are designing, integrating and facilitating first 25 pilot homes, as well as agreements in the pipeline to develop ReGen across Northern Europe in Sweden, Denmark, Norway, Germany and Belgium.
- Significant interest in ReGen Villages: since June, 2016 they have received over 20 million page views and 10 thousand emails from all around the world.
- On August 25th, 2016, ReGen Villages was presented at the White House for the Office of Science and Technology Policy (OSTP) as part of a round table on the nexus of food, water, energy and waste.
- Nominated for a Global Solutions Award from Singularity University.

