







Thank you Nicole, for introducing me, As protocol has been served already, I would just like to say: bon tardi / good afternoon ladies and gentlemen. First of all, I would like to thank the Curaçao Climate Change Platform for welcoming me here and for organizing this important event!

## Contents

-  **01** Introduction
-  **02** Living Lab Curaçao
-  **03** Opportunities
-  **04** Q & A

Today I want to talk to you about the Living Lab and about the opportunities that the Energy Transition can have for our island. The Energy Transition is a key requirement to address the Climate Change challenges.

## Introduction

### Volvo to sell only all-electric vehicles by 2030

Kirsten Korosec @kirstenkorosec / 10:34 AM AST • March 2, 2021

Comment



### Boeing commits by 2030 to produce jets that can burn 100% sustainable fuel

By Jon Hemmerdinger | 22 January 2021



### By 2030, Amsterdam will Ban Fossil Fuel Cars

By Robert Giaquinto / Sustainability



Climate Capital Royal Dutch Shell PLC + Add to myFT

### Shell announces new emissions goals as it aims to go net zero by 2050

Petrol and diesel production set to be 55 per cent lower by 2030



If we look at what is happening in the world, if we just look at some headlines of the past year these are the things we see:

But also on a country level, we see big things happening:

## Introduction

UK & EUROPE

### Germany Unveils Ambitious Plan for Nearly 100% Renewable Energy by 2035

April 12, 2022 Reading time: 2 minutes

### EUROPE MUST SPEND \$5 TRILLION TO HAVE CLEAN ENERGY BY 2050

May 3, 2022

f t in



### Biden signs order for government to achieve net-zero emissions by 2050



- Germany.....
- Europe and the US are planning on reaching net zero by 2050
- Putting the technology in place to actually achieve those massive reductions in CO2 emissions will cost a lot of money and at the same time create an investment opportunity
- Decarbonizing Europe's energy system: \$5.3 trillion dollar (BloombergNEF's European Energy Transition Outlook 2022).
- Going net zero at the US by 2050 would require large capital spending: 27 trillion through 2050, this is equal to \$900 billion dollars per year on average!

## Introduction



**Challenge is storage of energy !!!**

The challenge is that energy produced from renewable sources is only intermittently available, while the demand is continuous and the demand is for reliable energy!

Storage is a major challenge. Apart from storage there are many other challenges. There are also many innovative solutions available, but these need to be tested in live environments. Which brings me to the Living Lab Curaçao.



LIVING LAB  
ENERGY &  
MOBILITY  
TRANSITION

The Living Lab Curaçao is a living lab focussed on the challenges that the energy transition and the mobility transition bring. What is a LL?

Living Lab  
Curaçao

Living Lab Curaçao



- **Live** Environment
- **Test** out sustainable and innovative solutions for energy transition and mobility transition related challenges / problems
- Triple Helix Model



# Who is involved in the Living Lab Curaçao?



Signing of "Samenwerkingsovereenkomst" January 2021  
Addendum: October 29<sup>th</sup> 2021





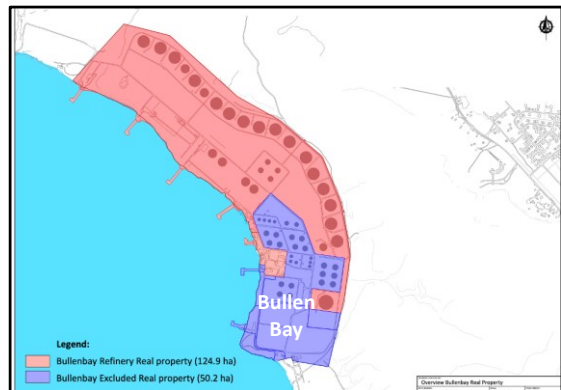
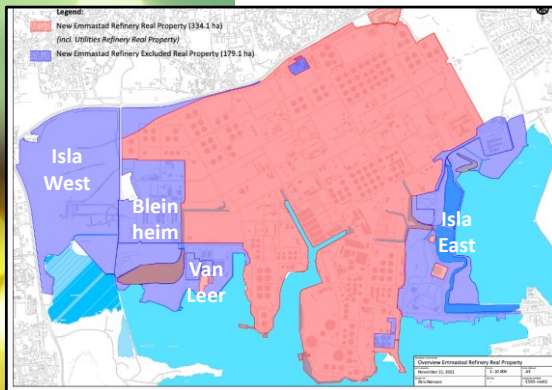
**Living Lab Curaçao**

- 1. Energy & Mobility** (*vehicles & maritime*)
- 2. New Energy Sources** (*Waste, Sargassum, Floating Wind, Solar*)
- 3. New Energy Carriers** (*Hydrogen, green fuels*)

Several work areas, cannot discuss all. Some main areas are:

Schottegat

Bullenbay



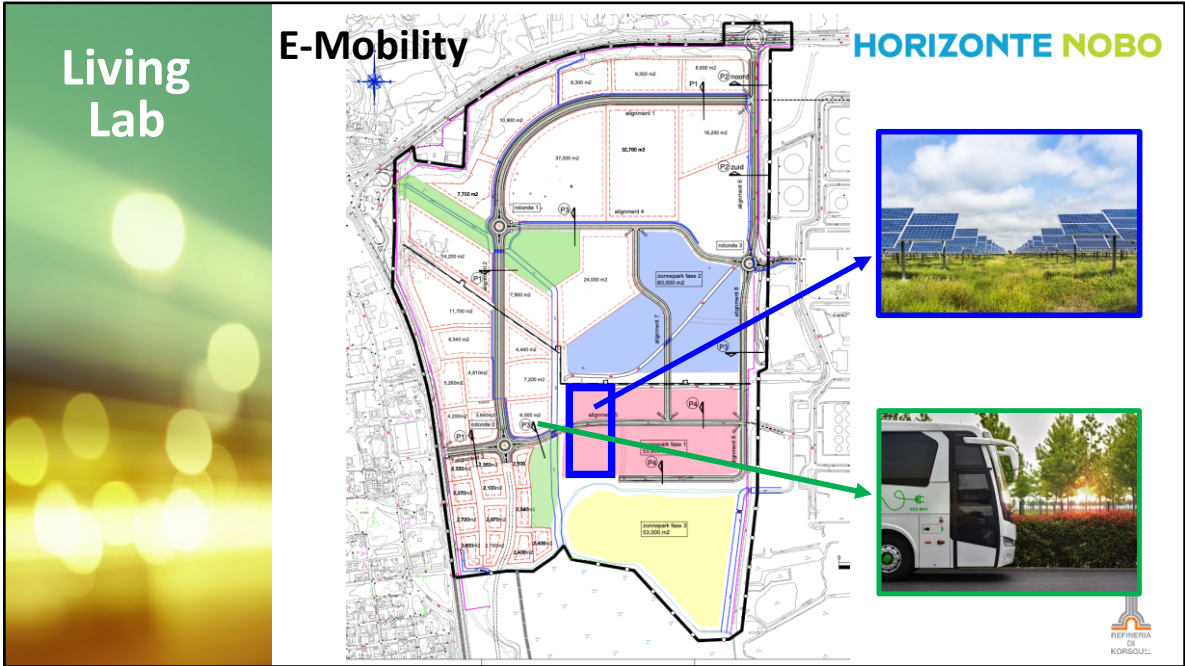
RdK has identified several areas around the refinery and the BB Terminal which are available for sustainable economic development.  
Some (not all) of the LLC activities could be developed on these areas.  
One of these areas: Isla West!

Living Lab  
Isla West  
Eco-Industrial  
Park



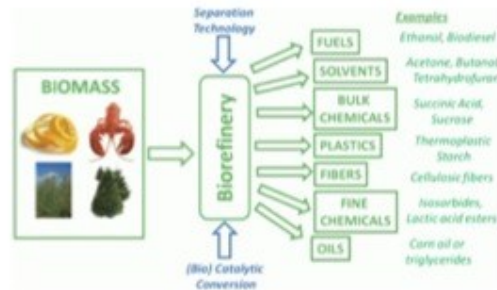
1. *Historically a landfill*
2. *Approx. 70 hectares piece of asset, yielding 0 income*
3. *Convert into an eco-industrial park, to generate new alternative income.*





1st phase Solar park + 6 electric buses for public transportation operated by ABC Busbedrijf.

Project is in the phase of acquiring the required funds for execution.



- Another LLC feasibility study together with GMN ,which is on-going is to make profit out of the Sargassum algae.
- Also together with Selikor, look for alternative solutions for the domestic waste produced, which is now landfilled.
- All these are biomass and can be used as feed to a biorefinery to produce sustainable products: fuels, plastics, chemicals, etc.

## New Energy Sources – Floating Wind

### EXAMPLE OF HOW A COMMERCIAL DEPLOYMENT FLOATING OFF-SHORE WIND WIND WILL LOOK LIKE



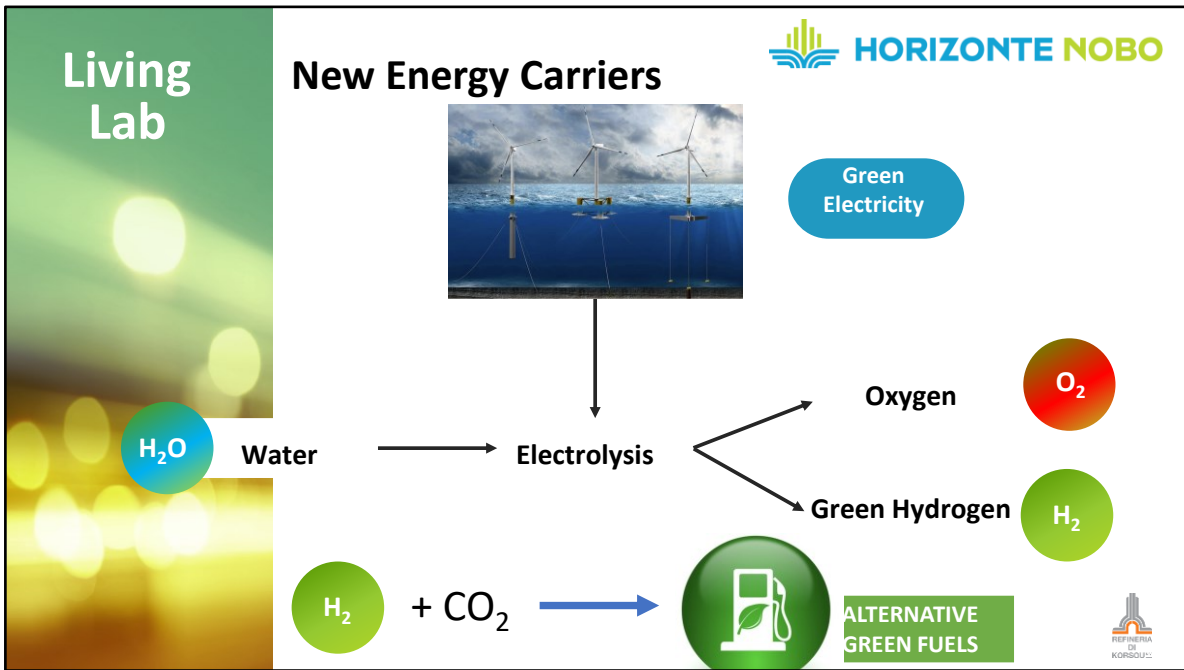
TNO innovation for life



Another example of a new energy source is floating wind.

The commercial production of wind energy can be used to produce Hydrogen and Green Fuels.

which both are a solution for the energy storage issues mentioned before.



Curaçao can make the Hydrogen and Green Fuels which are so much needed by Europe and the US.

## Opportunities

### Motivation Curaçao

- a. Become less dependent on import of fossil fuels
- b. Decarbonization of existing energy system
- c. Make maximum use of sustainable energy sources (wind, sun)
- d. Production of alternative sustainable (green) fuels & energy carriers (Hydrogen, Methanol, LOHC and ammonia)
- e. Develop a modern harbor industry for production, storage and export of sustainable energy carriers

What do we gain with all this? What are the opportunities for Curaçao?



## Opportunities



### Coalition Agreement new Dutch Government Jan 2022

Open the following “garantieregelingen” of:

- Rijksdienst voor Ondernemend Nederland (RVO),
- Nationaal Groeifonds en
- Regelingen voor duurzame energieproductie (SDE++)

for requests of all countries in the Dutch Kingdom.



In the coalition agreement of the new Gov of the Netherlands they commit with opening several funds now also for Curaçao, Aruba and St. Martin, which was not the case before.

## Opportunities



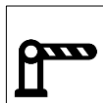
### Opportunity for Curaçao → Energy Transition



LLC is stepping-stone to a new economy for Curaçao.



Ultimate future is that Curaçao will export Knowledge and Energy carriers.



Curaçao is gate to Caribbean (44 MM inhabitants) and S. America (642 MM inhabitants)



The energy transition will happen worldwide. It will be a growing trillion dollar industry for the coming many years

If Curaçao can participate from the beginning, this forms a tremendous opportunity for Curaçao.

We have to grasp this opportunity with both hands! Curaçao should aim to become a front runner in the region.

This has been my last slide. I want to thank you all for your attention.



**HORIZONTE NOBO**

# Questions & Answers

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