CASE STUDY ÞEISTAREYKIR

EIMUR SUMMERSCHOOL | Nguyet Nguyen, Michael Reule, Dennis Schlonsok, Martin Wunner | 26.05.2018

EIMUR

HOCHSCHULE DER MEDIEN

BRIEFING

- Gather information and gain insights about the area
- Focus on sustainability and diversity of geothermal energy usage
- Come up with holistic solutions concerning the high energy potential, tourism industry and local communities

COLLECTING INFORMATION

POWER PLANT

- 2015: Begin of construction
- 2018: Energy output of 90MW

→Three wells are unused for energy generation

THE SITE

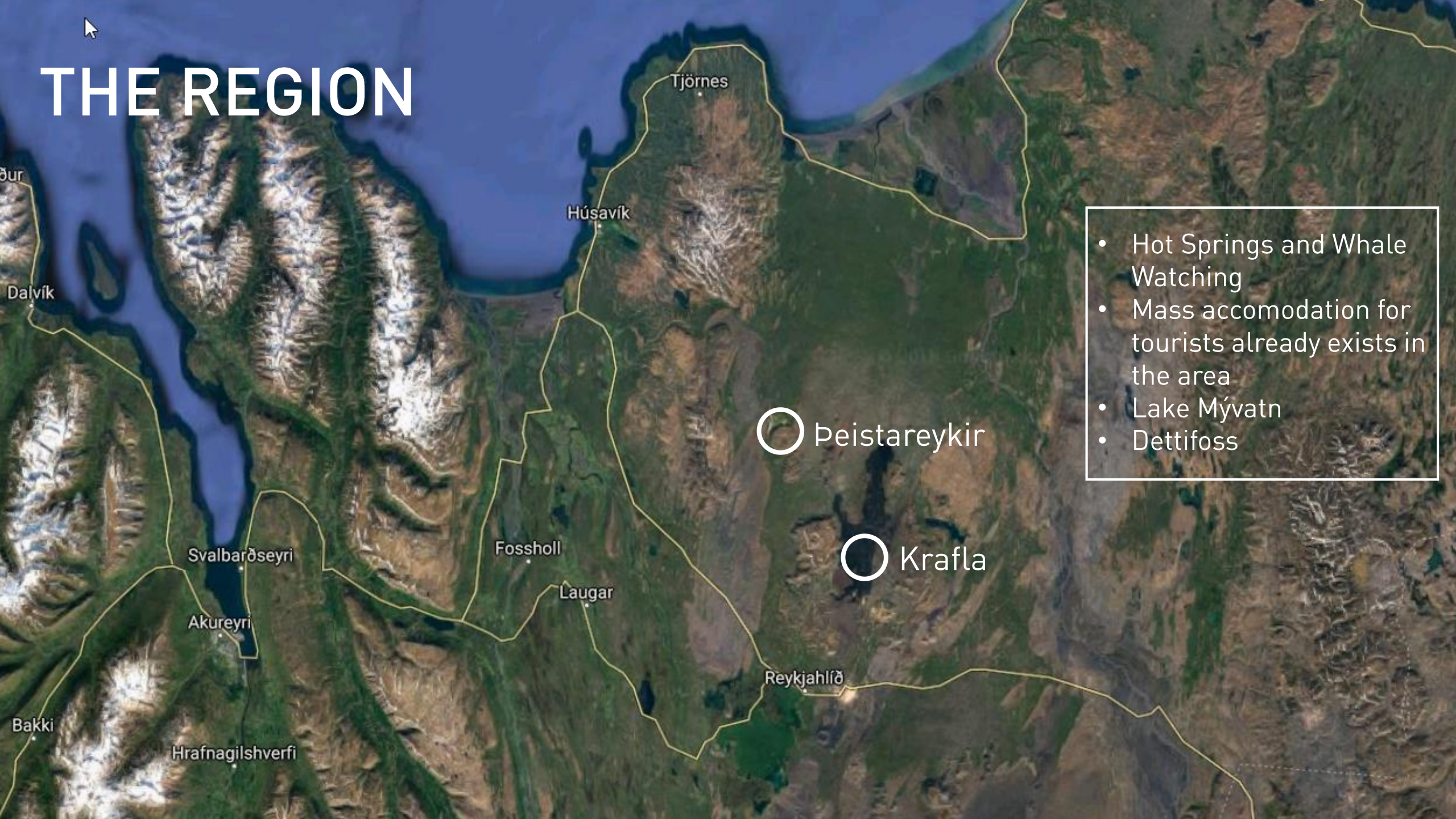
Gravel road from Mývatn

Wells

Ramblers hut with hot spring

- Nearly untouched nature with 58 registred heritage sites
- Grazing common for 5000 sheep

THE REGION



- Hot Springs and Whale Watching
- Mass accomodation for tourists already exists in the area
- Lake Mývatn
- Dettifoss

THE PEOPLE

- Enjoy benefits of tourism but want to limit its growth
- Lack of special attractions
- Positive image of geothermal plant

THE PLANET


1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

SUMMARY

COMING TO THE INSIGHT

No mass tourism

+

No heavy motor vehicles

+

Nearly untouched nature with many sights

+

Need for unique attraction

=

Small and special accomodation

COMING TO THE INSIGHT

Excess geothermal energy

+

Positive image of geothermal energy

+

Interest in sustainability

=

PLA Production

COMING TO THE INSIGHT

Interesting Design of the Power Plant

+

Geothermal activities are a trademark of iceland

+

Nearly untouched nature with many sights

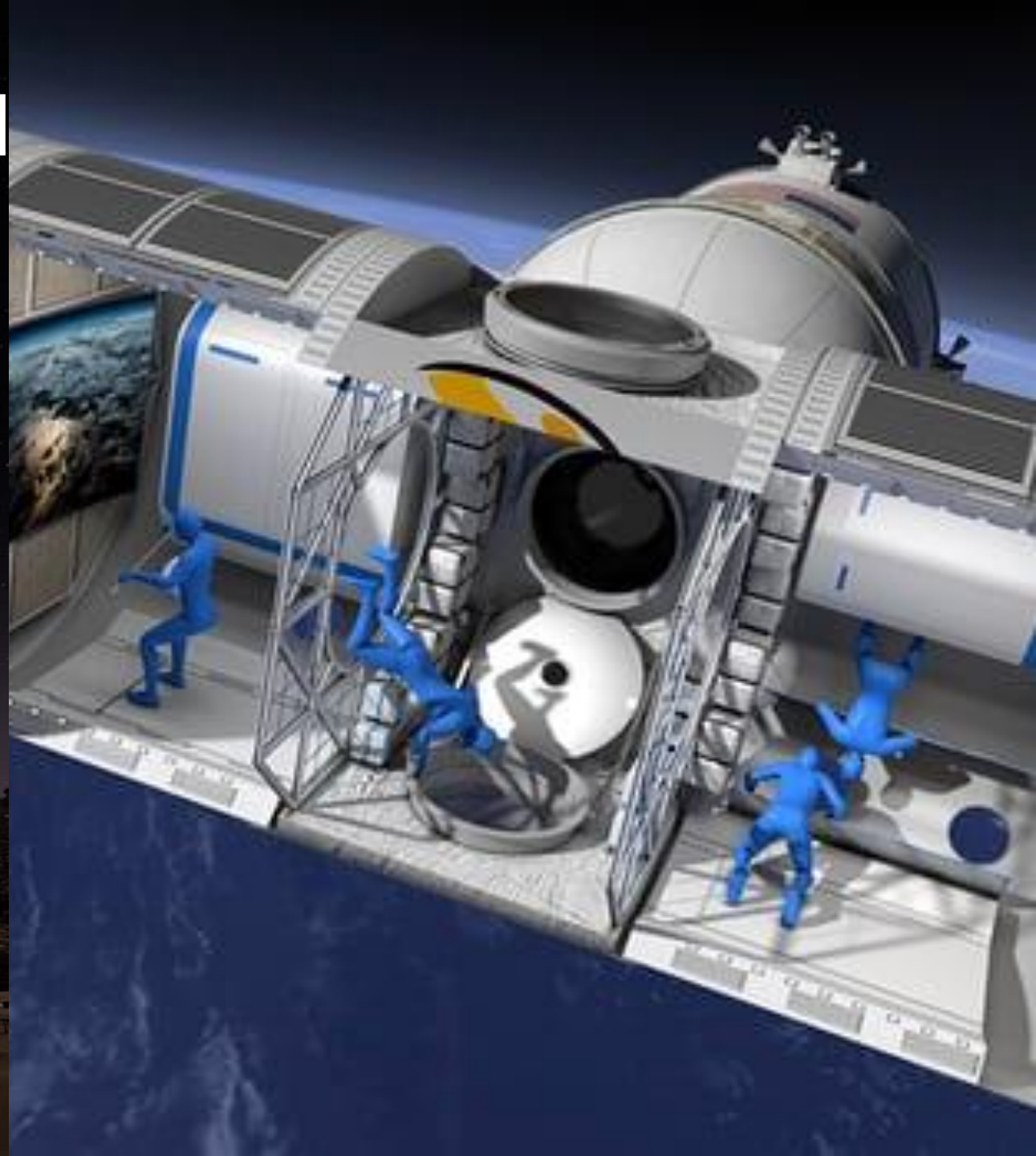
=

Power Plant as a tourist attraction

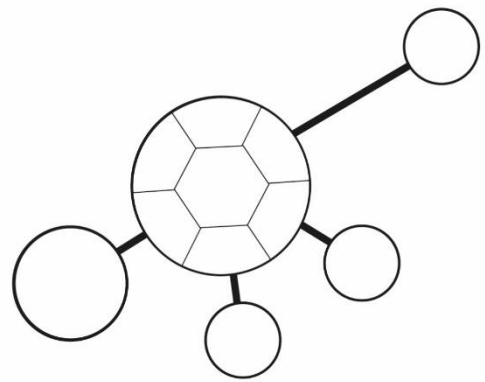
CONCEPTS

LONGING FOR ISOLATION

Existing projects

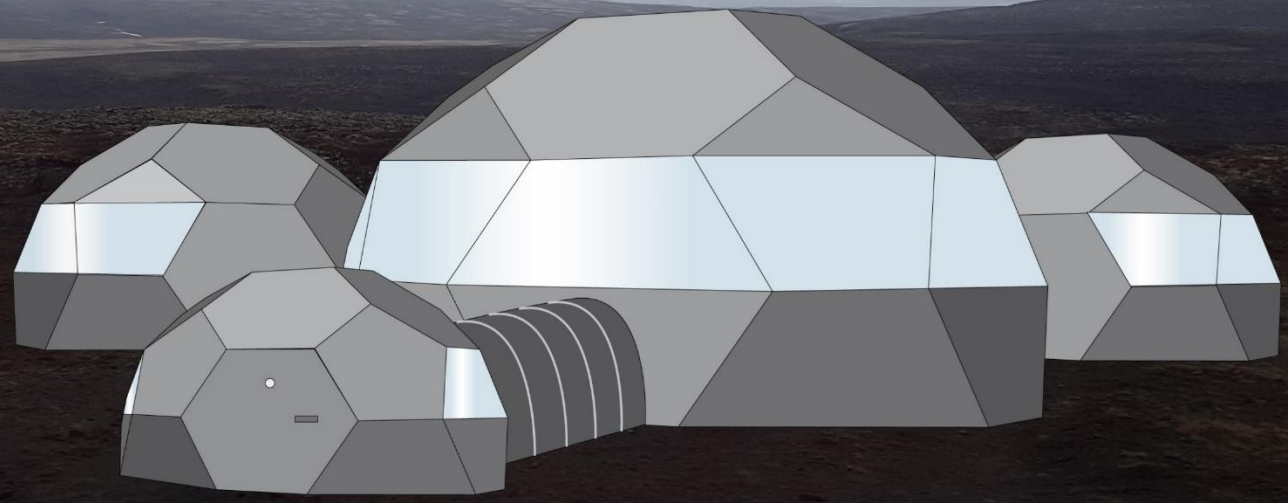



Can you spot the difference?



PROJECT SOLITUDE

PROJECT SOLITUDE

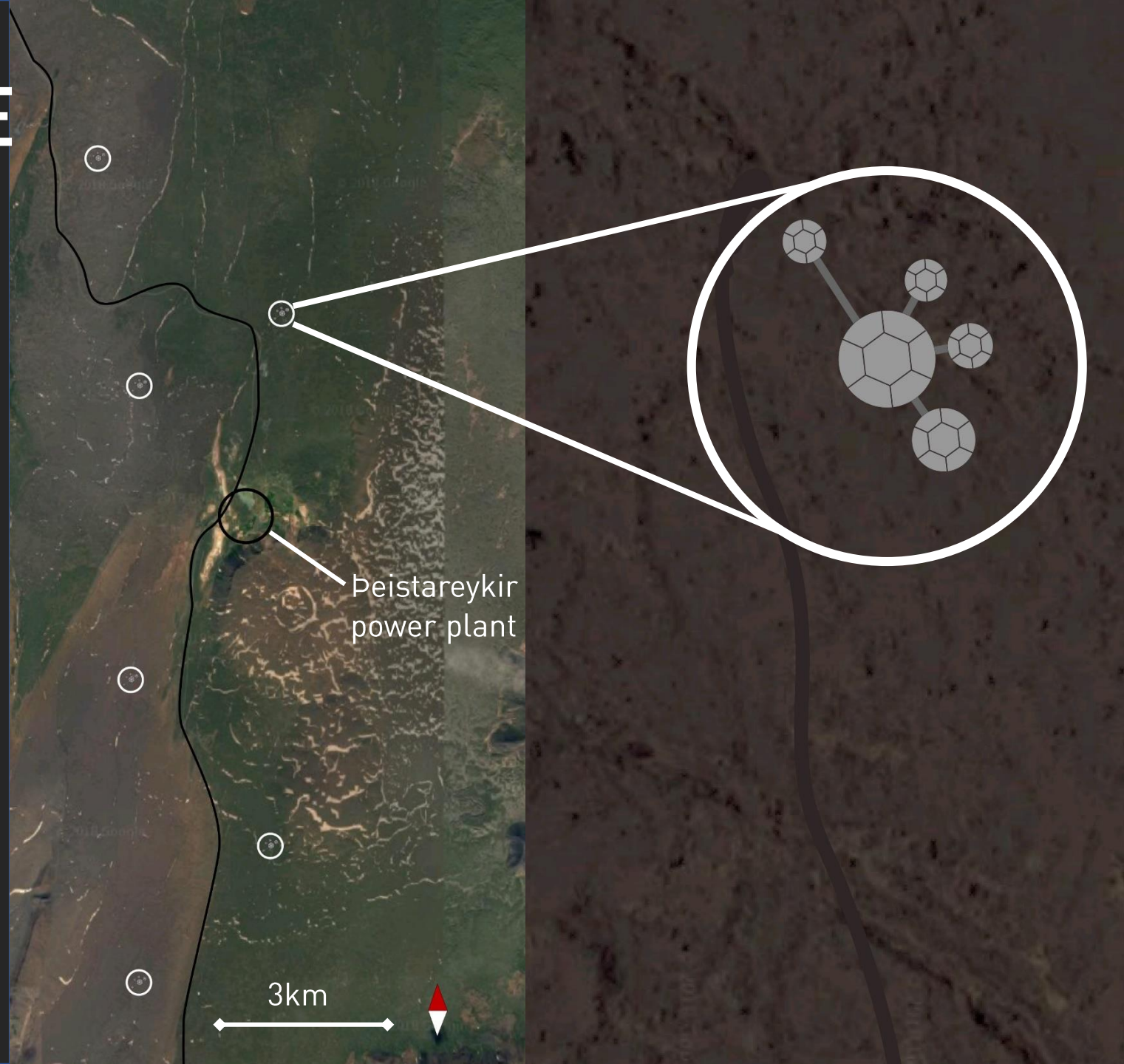


- Luxury accomodation
- Limited amount of units
- Only two to four visitors per unit

→ Quality instead of quantity

PROJECT SOLITUDE

- Units are located far away from each other
- Each unit consists of:
  - Seperated entrance
  - Living room with panorama view
  - Kitchen
  - Bathroom with hot tub
  - Miniature green house



PROJECT SOLITUDE

LOOK AND FEEL

- Living room interior

PROJECT SOLITUDE

LOOK AND FEEL

Intelligent use of space

Holistic experience

PROJECT SOLITUDE

LOOK AND FEEL

Miniature green house

PROJECT SOLITUDE

LOOK AND FEEL

Hot air steamed space food

PROJECT SOLITUDE

LOOK AND FEEL

E-Mobility powered explorer buggy

E-Mountainbike

PROJECT SOLITUDE

BENEFITS

- Quality instead of Quantity tourism
- Unique attraction
- Chance to experience solitude

PROJECT SOLITUDE

COMPARSION TO THE SDG

PROJECT SOLITUDE

COMPARSION TO THE SDG

PROJECT GREEN PLASTIC

PROJECT GREEN PLASTIC

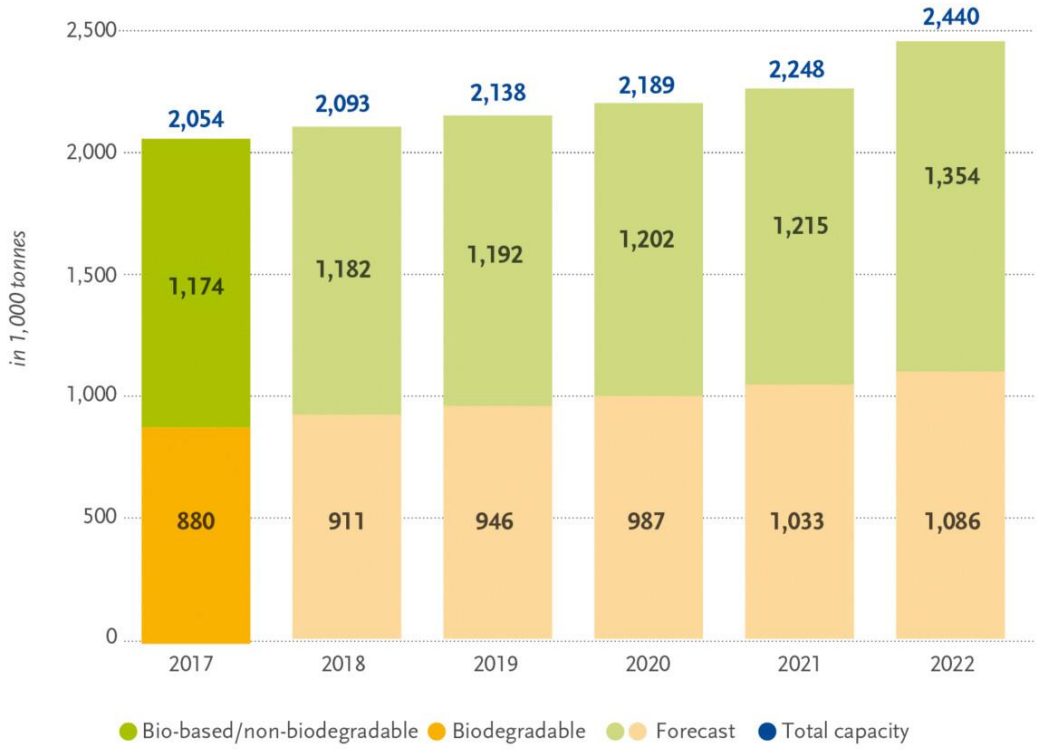
Polylactic acid production

- Biodegenarable which is made from renewable resources
- Production between 140°C and 180°C
- Excellent replacement for other plastics such as PS, PP and ABS

PROJECT GREEN PLASTIC

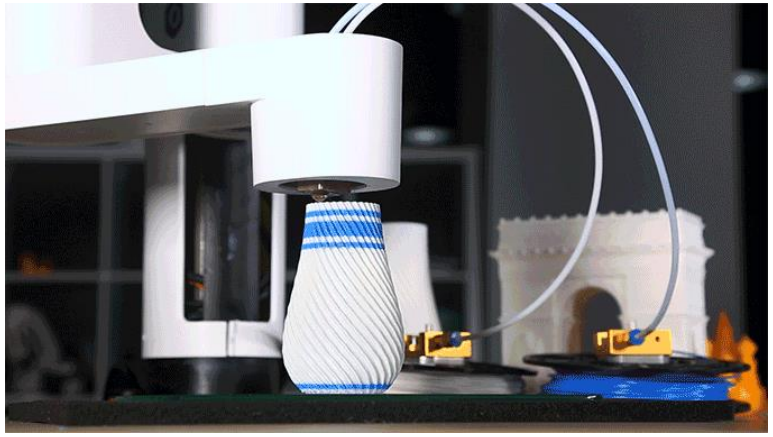
- Growing need for bioplastics
- Extending market
- No competition between renewable feedstock for food, feed, and the production of bioplastics

Global production capacities of bioplastics



Source: European Bioplastics, nova-Institute (2017).
More information: ***www.bio-based.eu/markets*** *and* ***www.european-bioplastics.org/market***

PROJECT GREEN PLASTIC



→ Plastic film production for fish transport, 3D printing and agriculture

PROJECT GREEN PLASTIC

BENEFITS

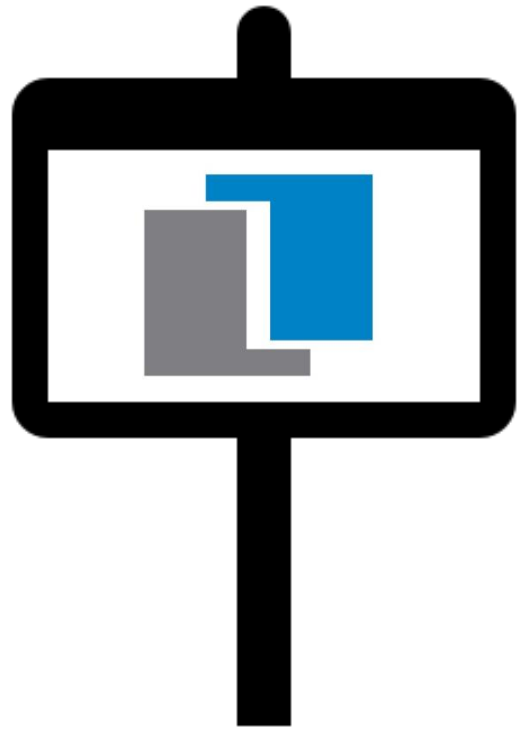
- Biodegradable and sustainable material 
- Sound solution for excess geothermal heat 

PROJECT GREEN PLASTIC

COMPARSION TO THE SDG

PROJECT GREEN PLASTIC

COMPARSION TO THE SDG



TOURIST INFORMATION ABOUT THE POWER PLANT

- Place signs that provide ifnormation about the geothermal activity and the power plant
- Create more interest and an incentive to explore

→ Cheap and effective Marketing

FURTHER IDEAS

Daylight lamps

Science lab

Server rooms

Rentable offices

Public farm houses

Sustainable restaurant

Green house

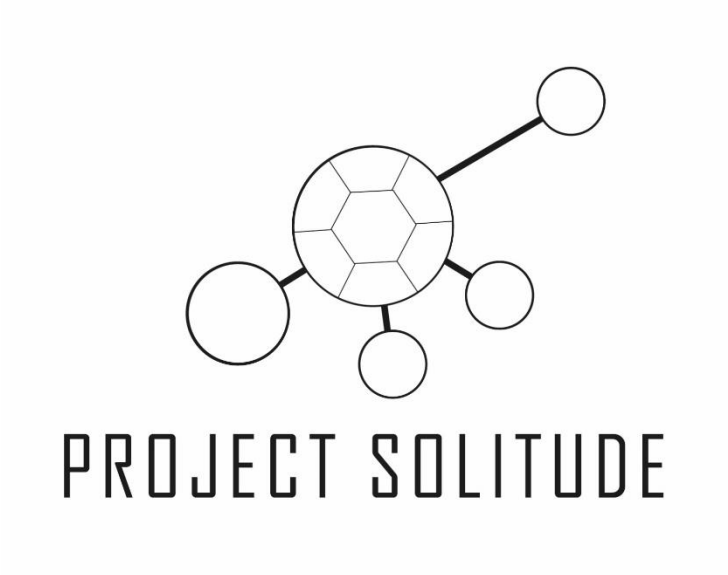
Tropical house

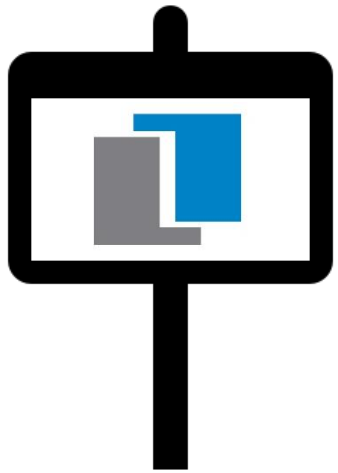
Selling energy

H2/O2 production

E-mobility

Q&A





THANK YOU