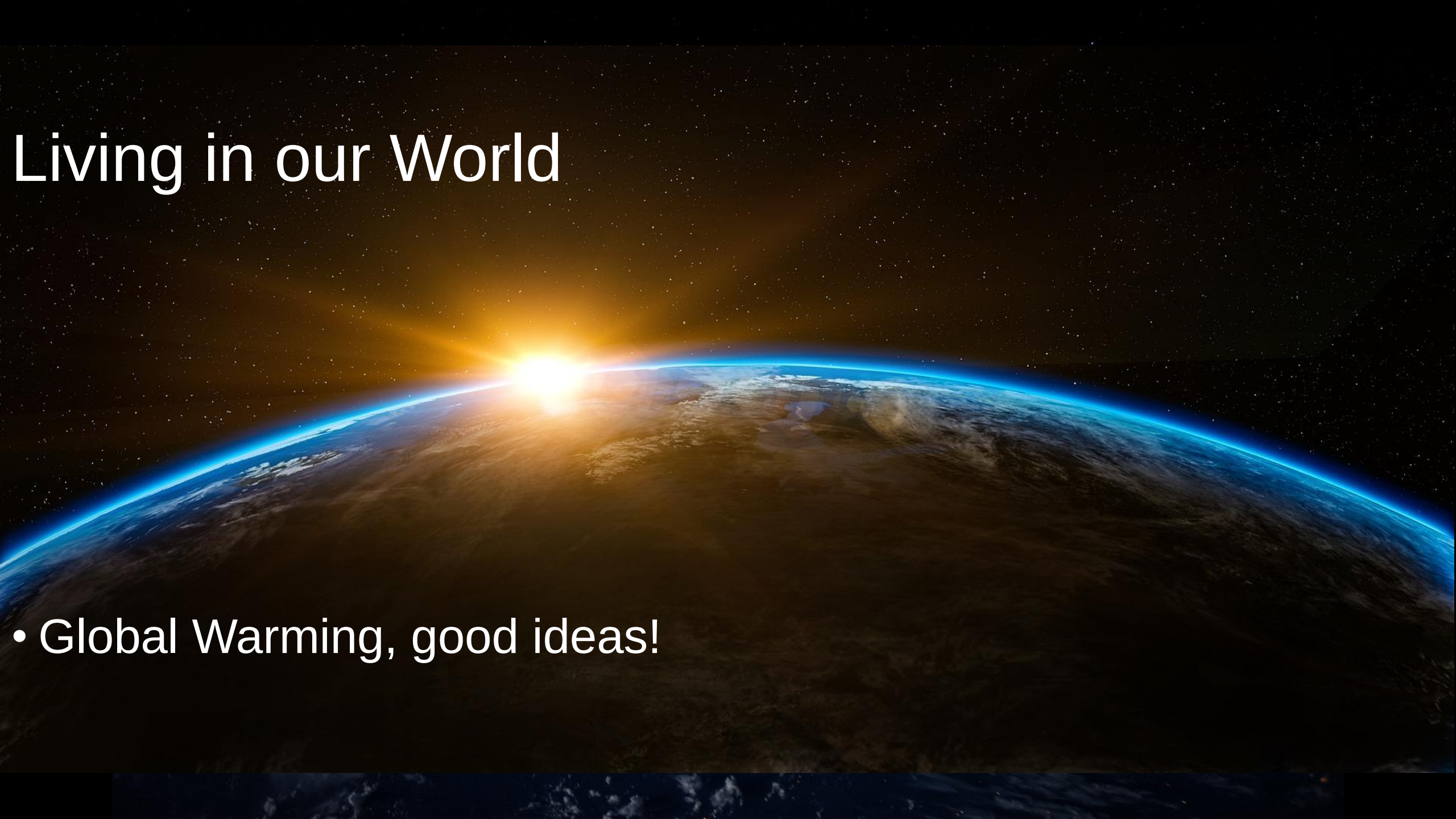
Living in our World



- Global Warming, good ideas!

Greenhouse Effect

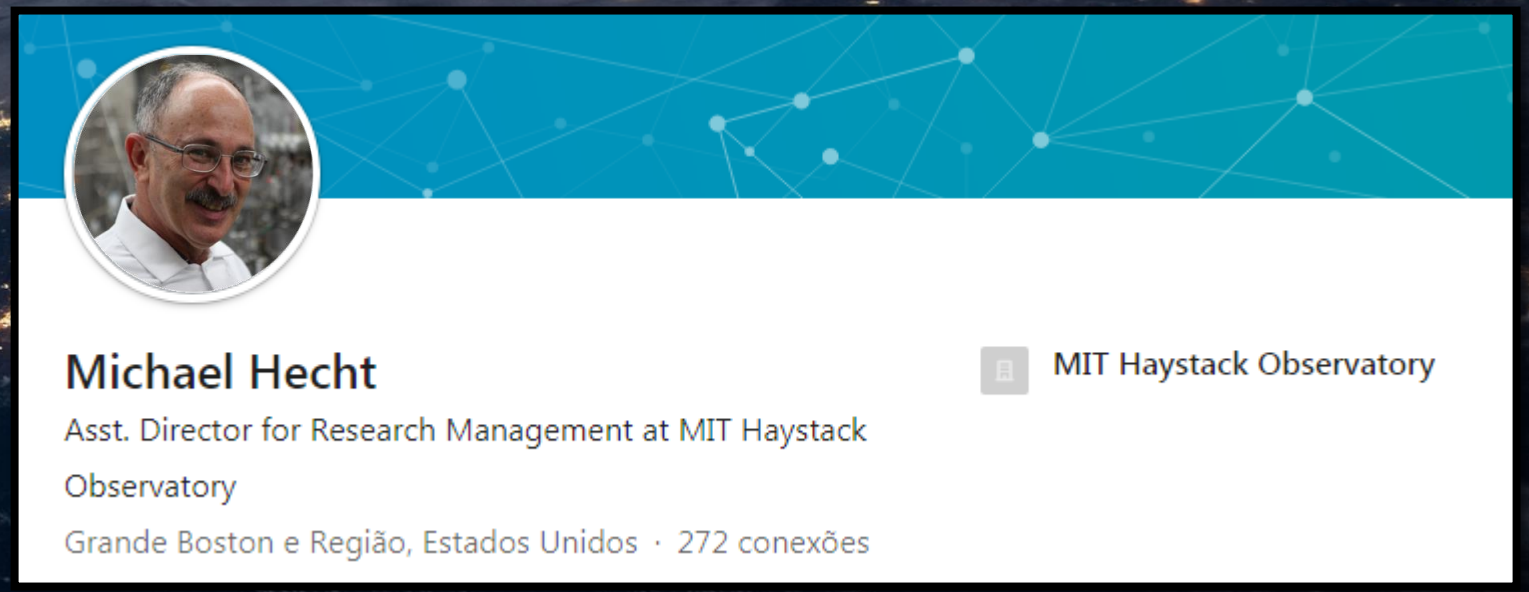
Causes and effects

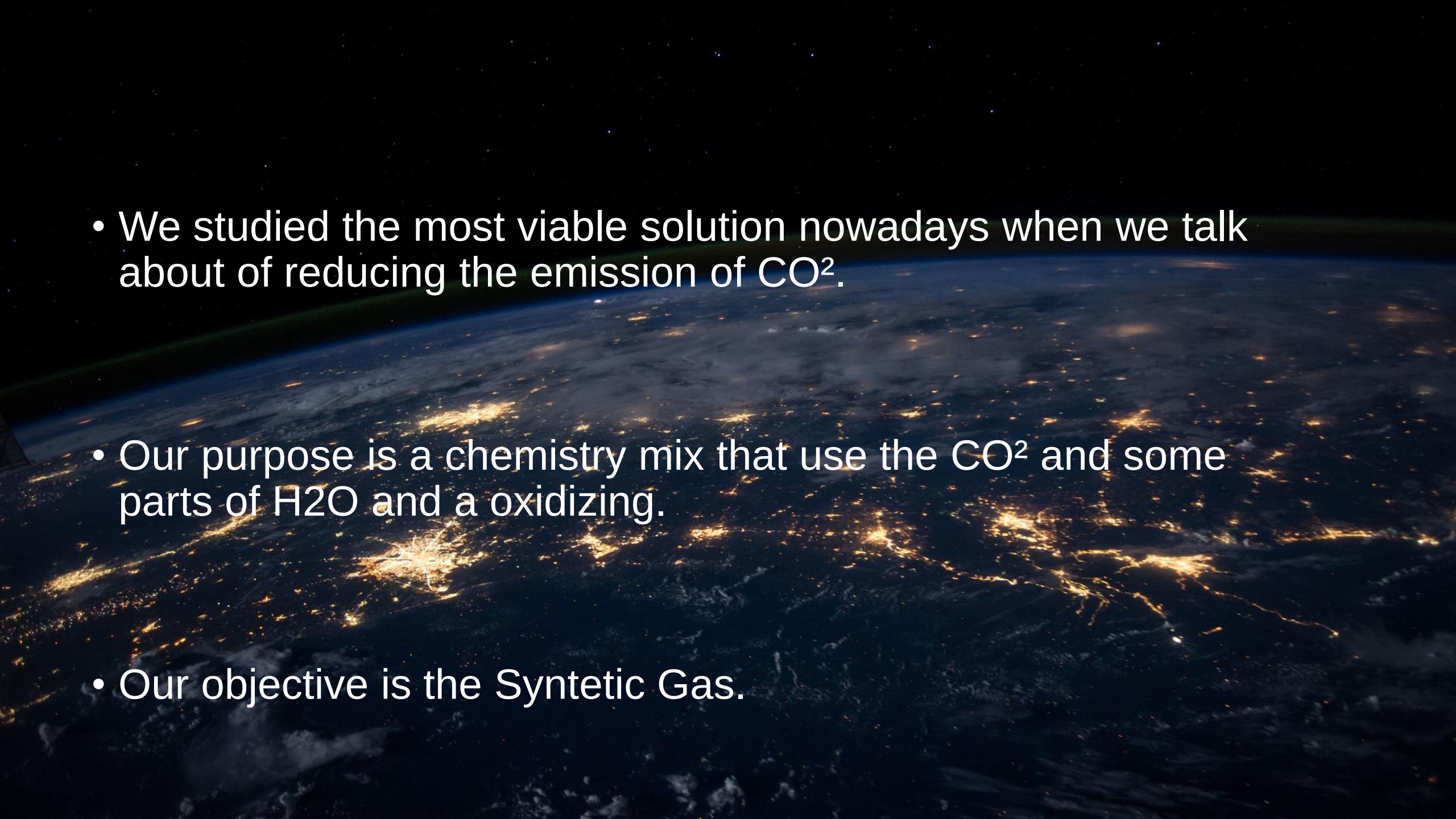
- Emission of nocives gases (CO_2, methane e nitrous oxide) and deforestation;

- This turns the human life harder meantime for living in Earth; will rise the level of the oceans; will rise the global temperature, and so much others problems.

Solution

- First solution:
  - MOXIE
  - **Becomes 800 ºC**
  - **Use so much energy**
  - **Low scale production**





- We studied the most viable solution nowadays when we talk about of reducing the emission of CO^2.

- Our purpose is a chemistry mix that use the CO^2 and some parts of H2O and a oxidizing.

- Our objective is the Syntetic Gas.

Syntetic Gas

- Electrolysis of Water.

Equação Global: $2H_2O = 2H_2 + 1O_2$

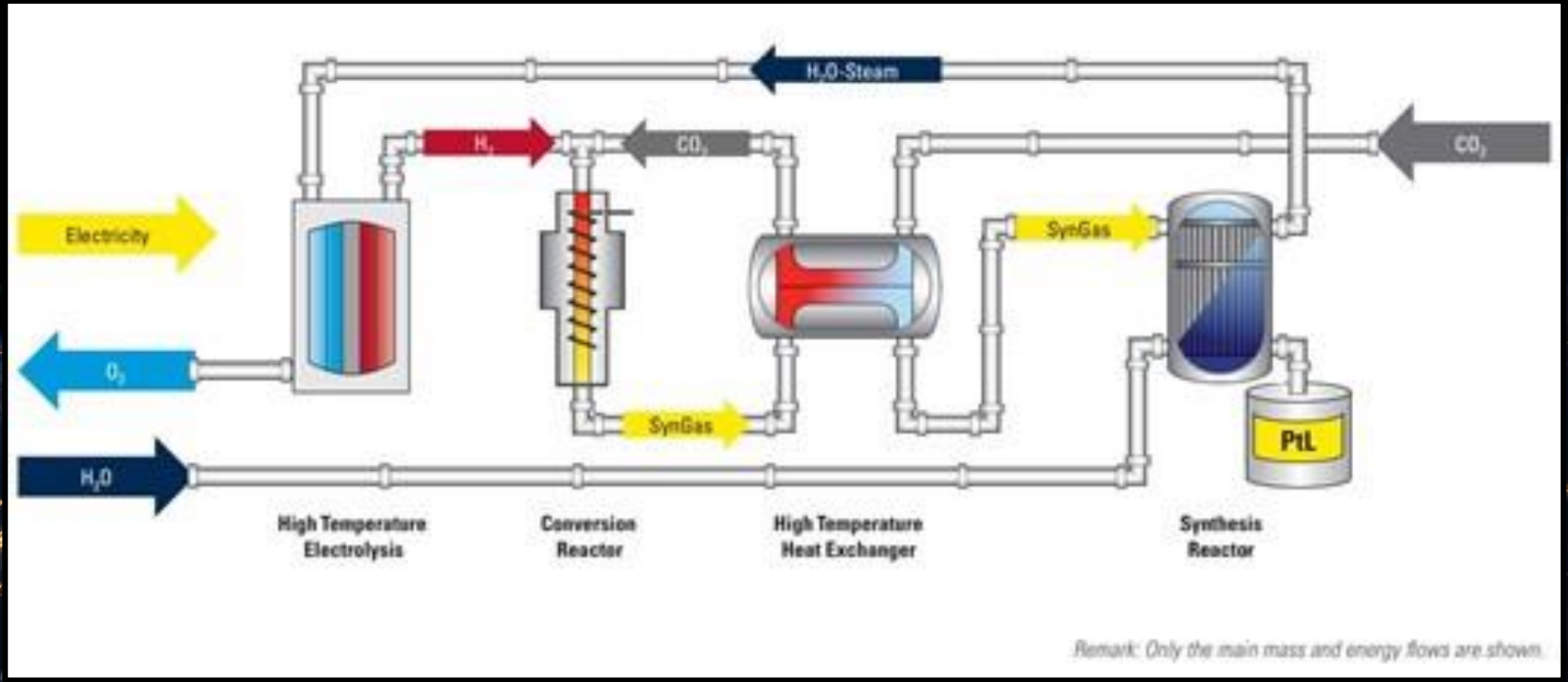
- After the electrolysis, the oxigen go to the ambient and the start the mix of CO2 with H2.

$$CO_2 + H_2 = CH_2O_2$$

- Thinking in a large scale, we could calculate 0,21 KgMOL by reaction.

C = 12 mol
H = 01 mol (x2)
O = 16 mol (x2)

$$\frac{10\ Kg}{46\ mol} = 0{,}21\ Kgmol$$


H2O-Steam
H2
CO2
CO2
Electricity
SynGas
O2
SynGas
PtL
H2O
High Temperature Electrolysis
Conversion Reactor
High Temperature Heat Exchanger
Synthesis Reactor
Remark: Only the main mass and energy flows are shown.

Utility for the Humanity

- The reducing of the CO_2 emission.
- The production of Oxigen, using a polution gas.
- The creation of a sustentable fuel.

Conclusion


Thanks!
ZTeam