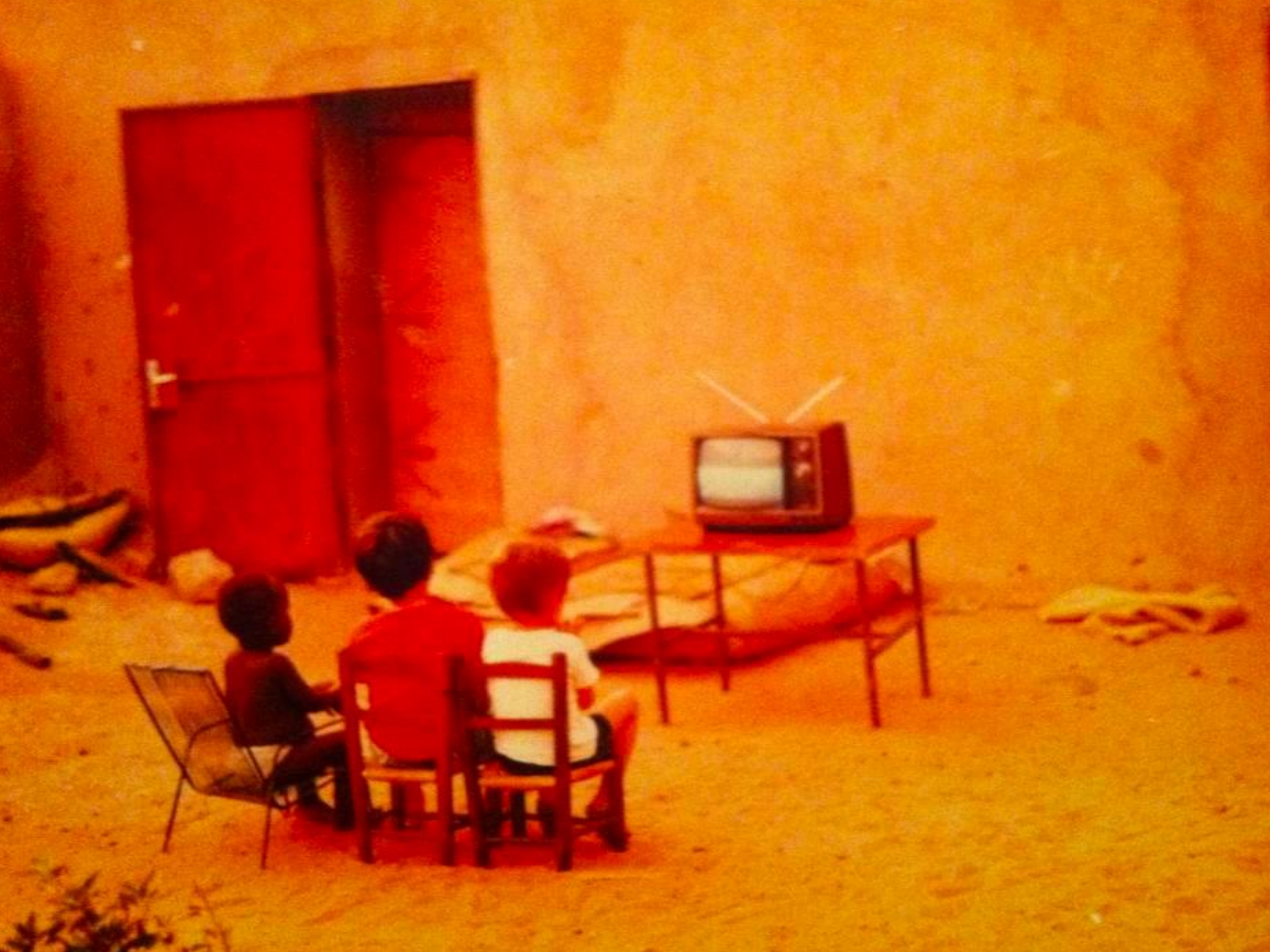


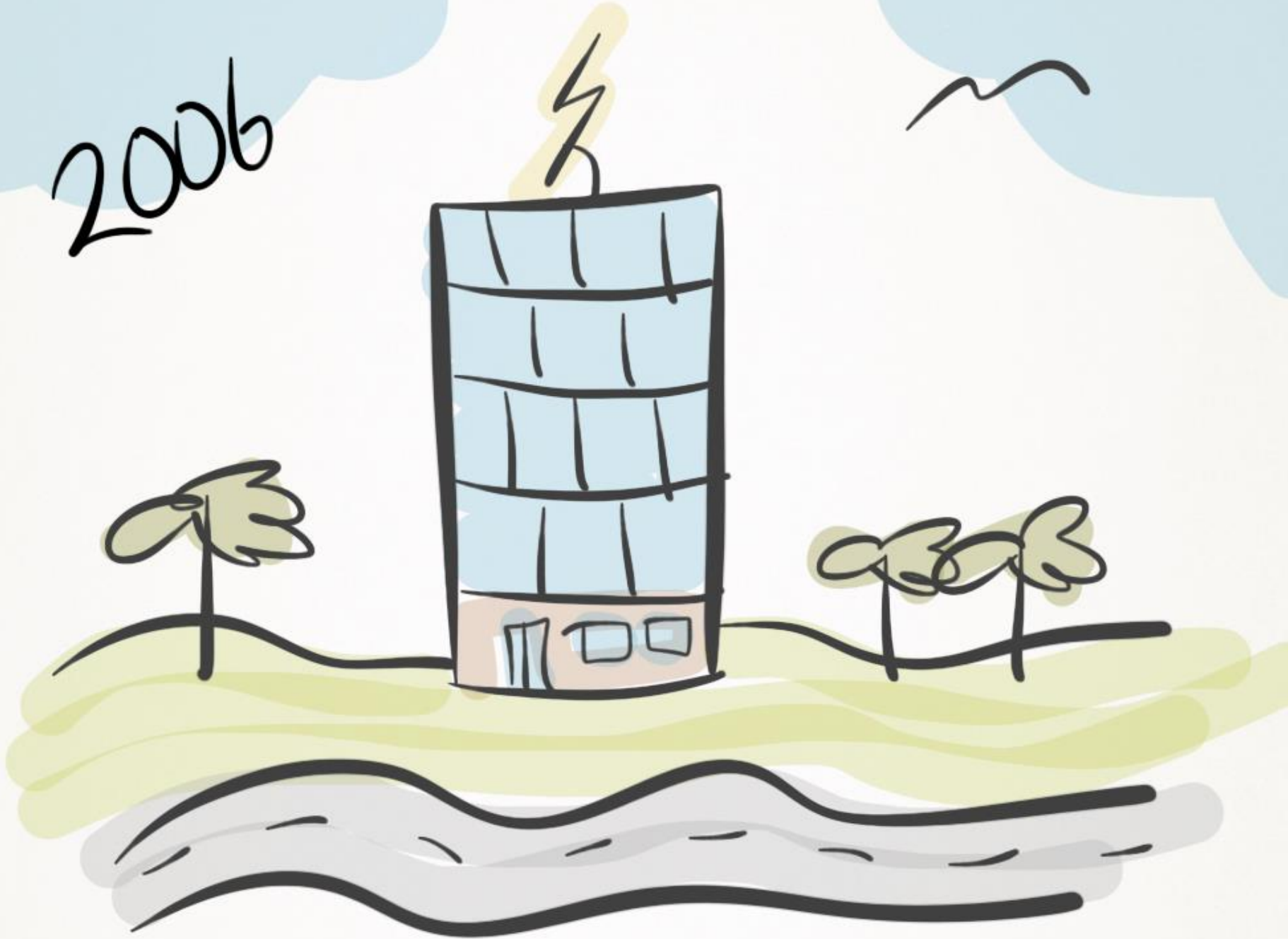
IRENA
13 5 2016



We are Kamangir: “**Architects** of the **future**”. We are **scientists**, philosophers and artists. We create visions with a **transgenerational** scope, define **transition paths** towards them and develop **models** to support them. We put the question before the answer. We go **BEYOND** lobby, beyond political, commercial or other gain. We work for the future, and empower influencers today to build legacies that their successors can proudly continue building upon. We believe in **value over volume**, in an economy of natural **abundance**, backed by a culture of empowerment. This enables equal and **truly democratic** rights for **every human being**, and empowers to create true and **sustainable wealth for all. Vision. Purpose. Action.** Kamangir.



2006



WHAT IS
ENERGY?

WELL...

WHAT IS
ENERGY?

WELL...

ERM...

WHAT IS
ENERGY?

WELL...

ERM...

WHAT IS
ENERGY?

UHH...

WELL...

ERM...

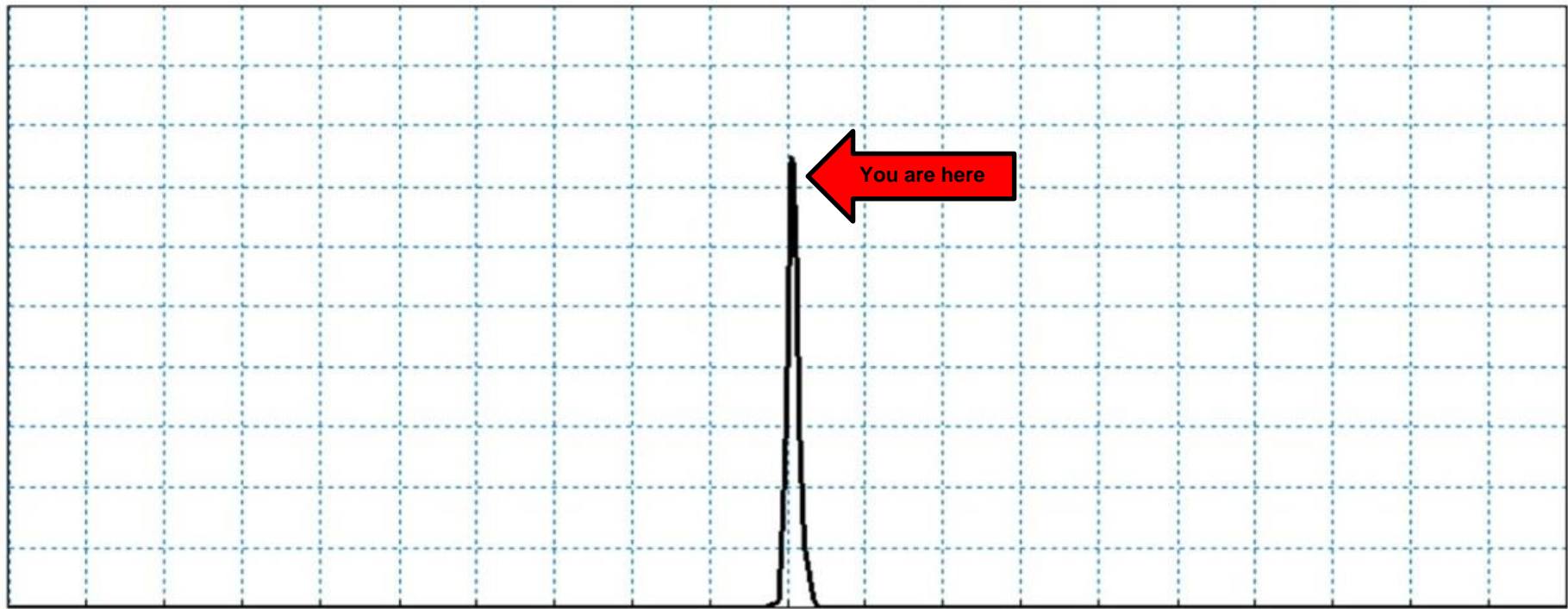
WHAT IS
ENERGY?

UHH...

¿QUÉ?



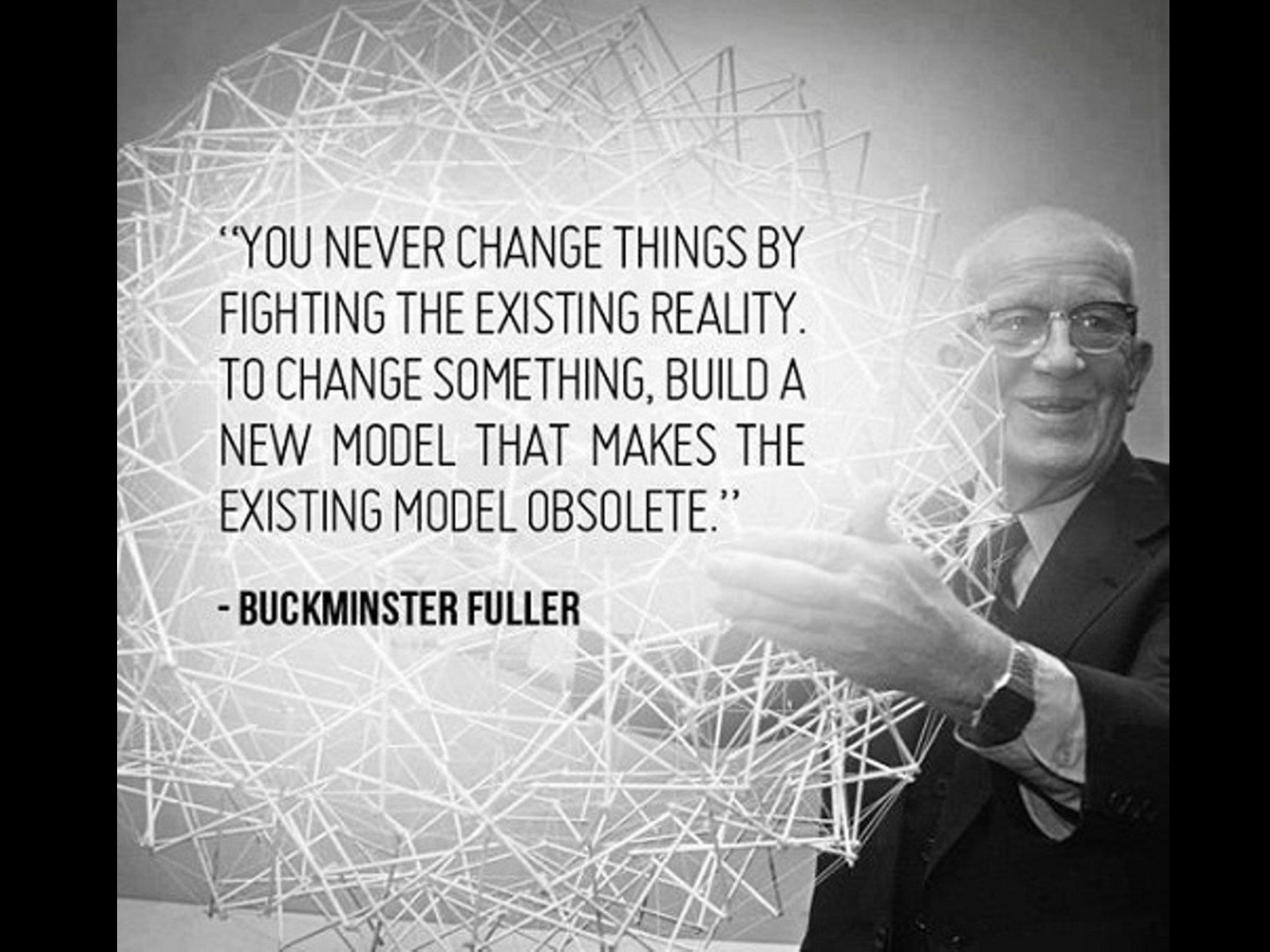




-8000 -7000 -6000 -5000 -4000 -3000 -2000 -1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000

Fossil fuel consumption (8000BC to 12000AD)

the transition to a world that runs
on 100% renewable resources is
not a choice, it is an inevitability



“YOU NEVER CHANGE THINGS BY
FIGHTING THE EXISTING REALITY.
TO CHANGE SOMETHING, BUILD A
NEW MODEL THAT MAKES THE
EXISTING MODEL OBSOLETE.”

- BUCKMINSTER FULLER

PATH TO ZERO

GOAL

A SUPPLIER THAT EARNS MORE THROUGH SELLING LESS ENERGY. AN ENERGY TRANSITION PATH THAT FINANCES ITSELF

WHAT

ALGORITHMS CALCULATE IN WHICH ORDER WHICH MEASURES SHOULD BE TAKEN ON THE PATH TO ENERGY INDEPENDENCE. SAVINGS ON EACH MEASURE BUILD UP TO FINANCE AND EXECUTE EVERY NEXT STEP ON THE PATH TO ZERO

STATUS QUO

PROFIT THROUGH VOLUME-SELLING IS BIG, BUT PASSÉ. PROFIT THROUGH CREATING VALUE HAS THE FUTURE. FIRST PTZ-COMPANY WAS FOUNDED IN 2010 AND EARNS MORE AS IT SELLS LESS ENERGY

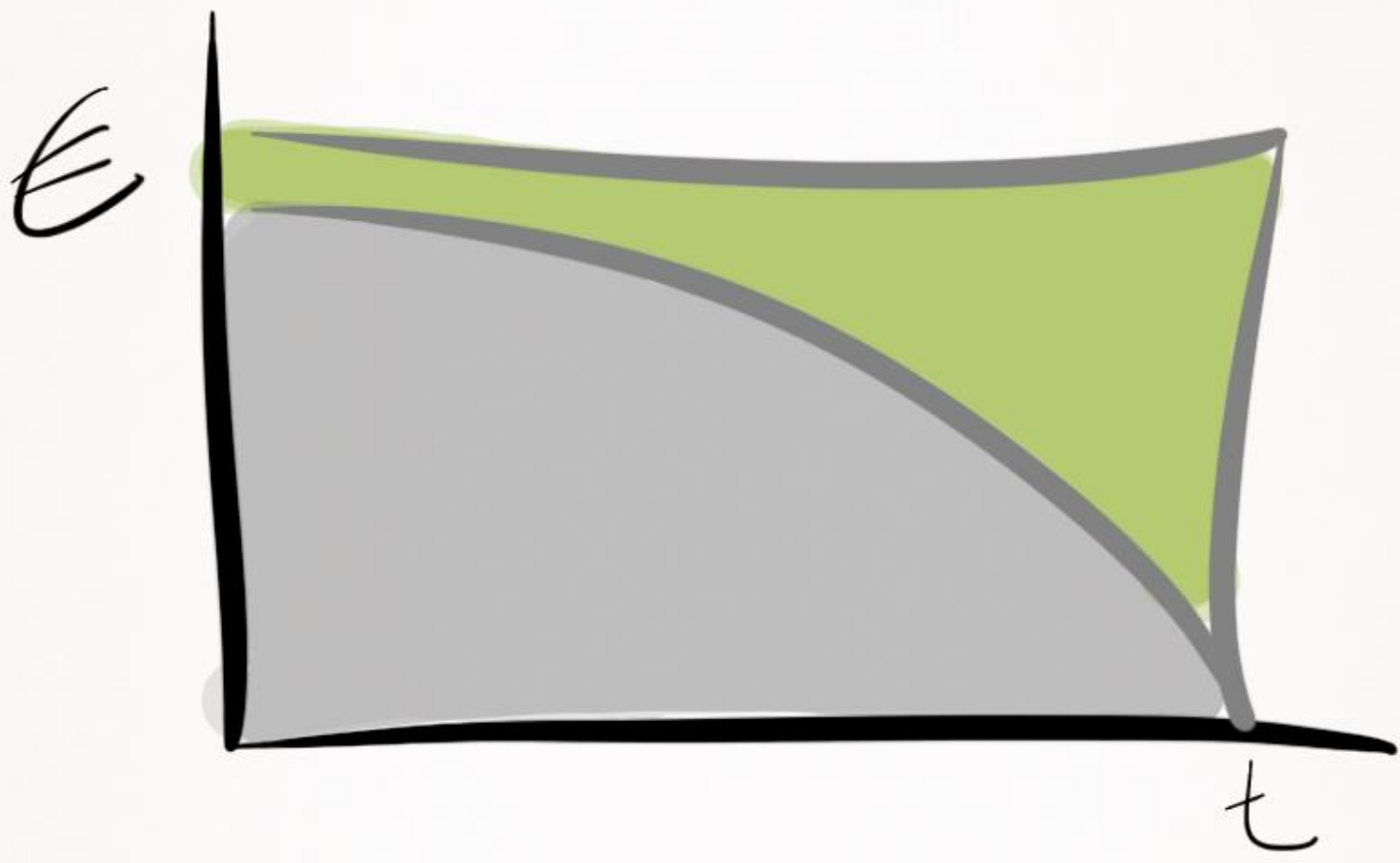
IMPACT

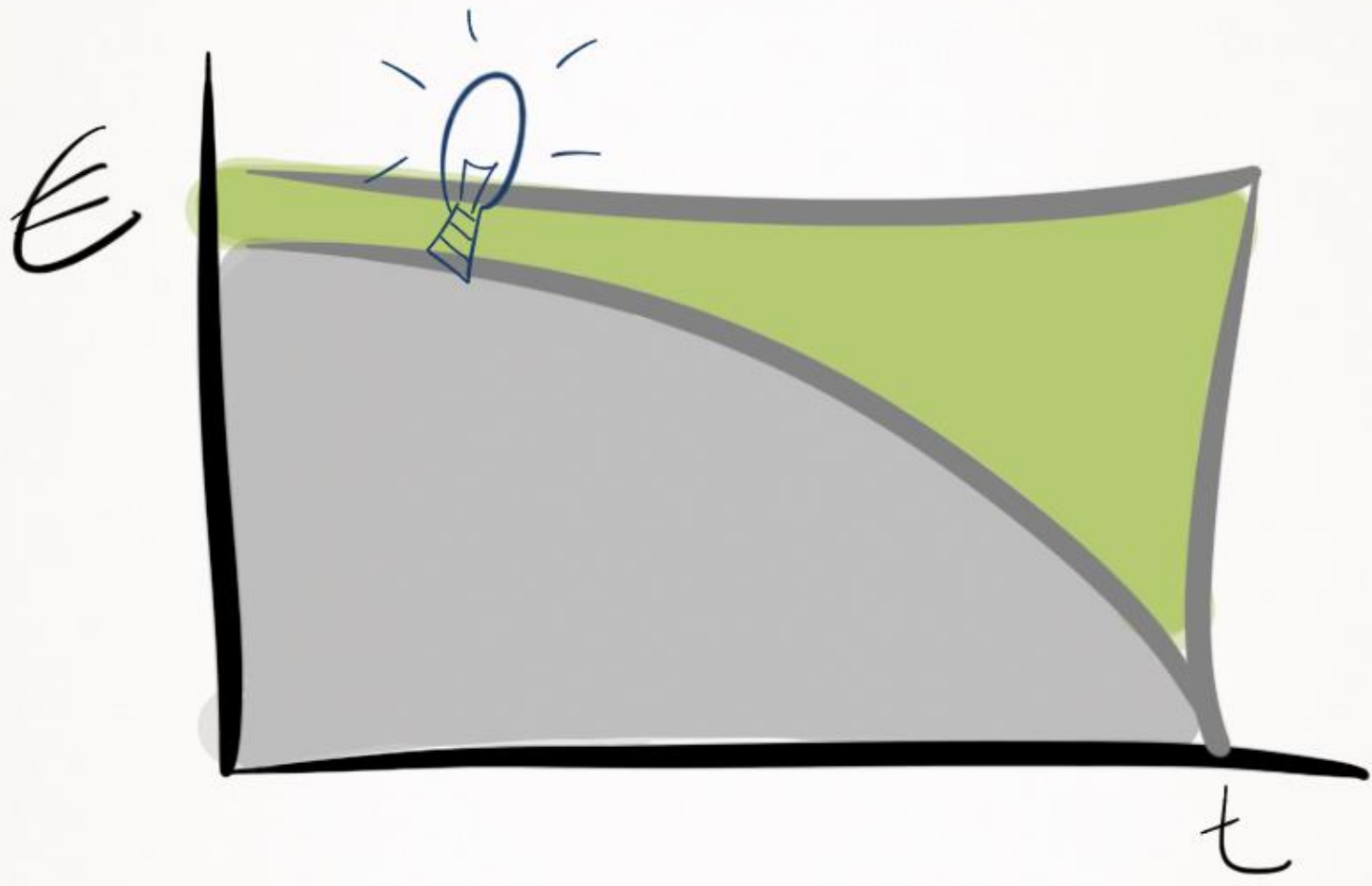
25% ENERGY SUPPLY REDUCTION PER CUSTOMER IN THE FIRST 4 YEARS, WHILE KEEPING THE ENERGY BILL AT THE SAME LEVEL. A WIN-PLAN FOR EVERY STAKEHOLDER. CURRENTLY MILLIONS OF KWH AND TONS OF CO2 SAVED

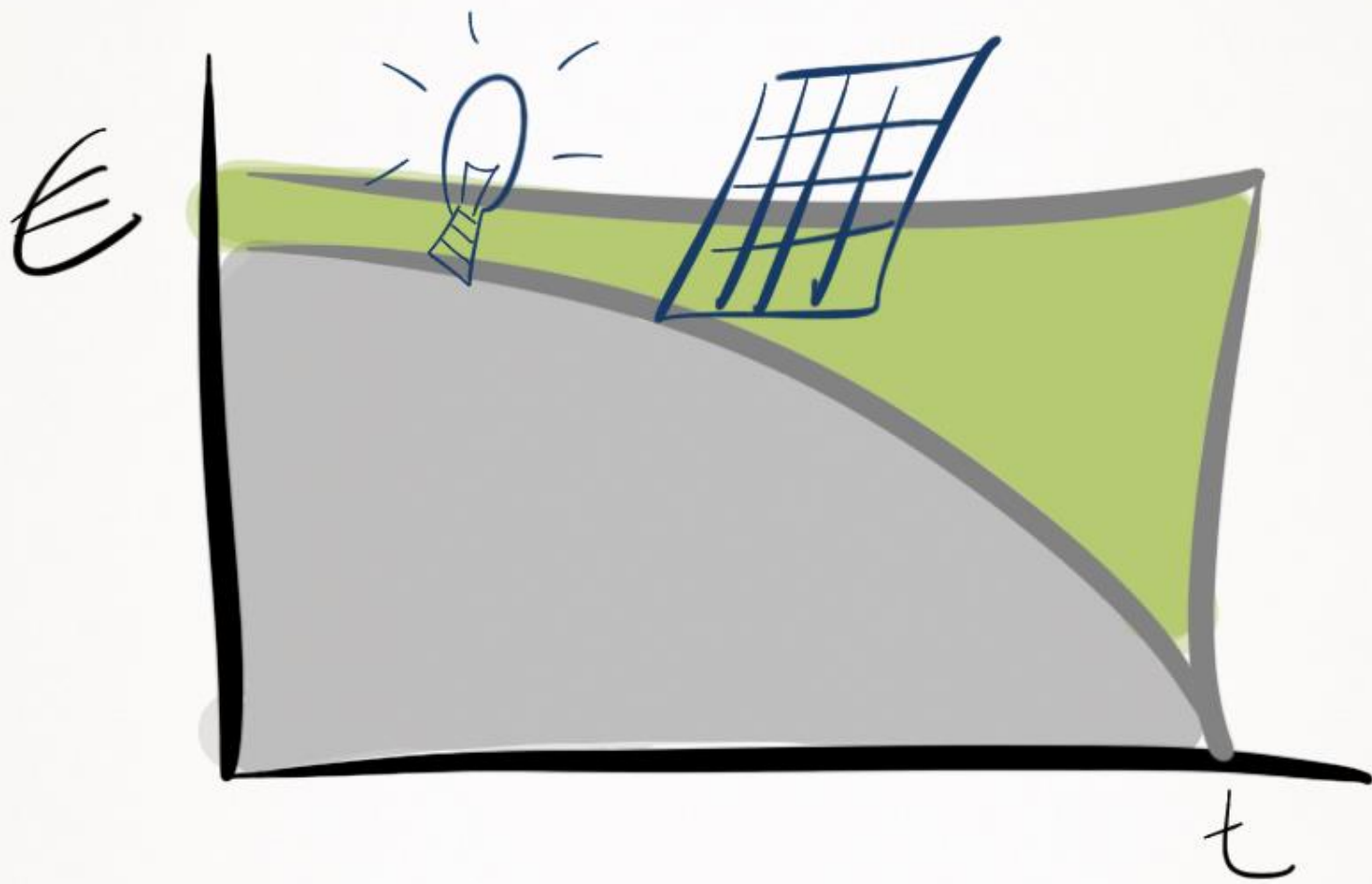
TIME LINE

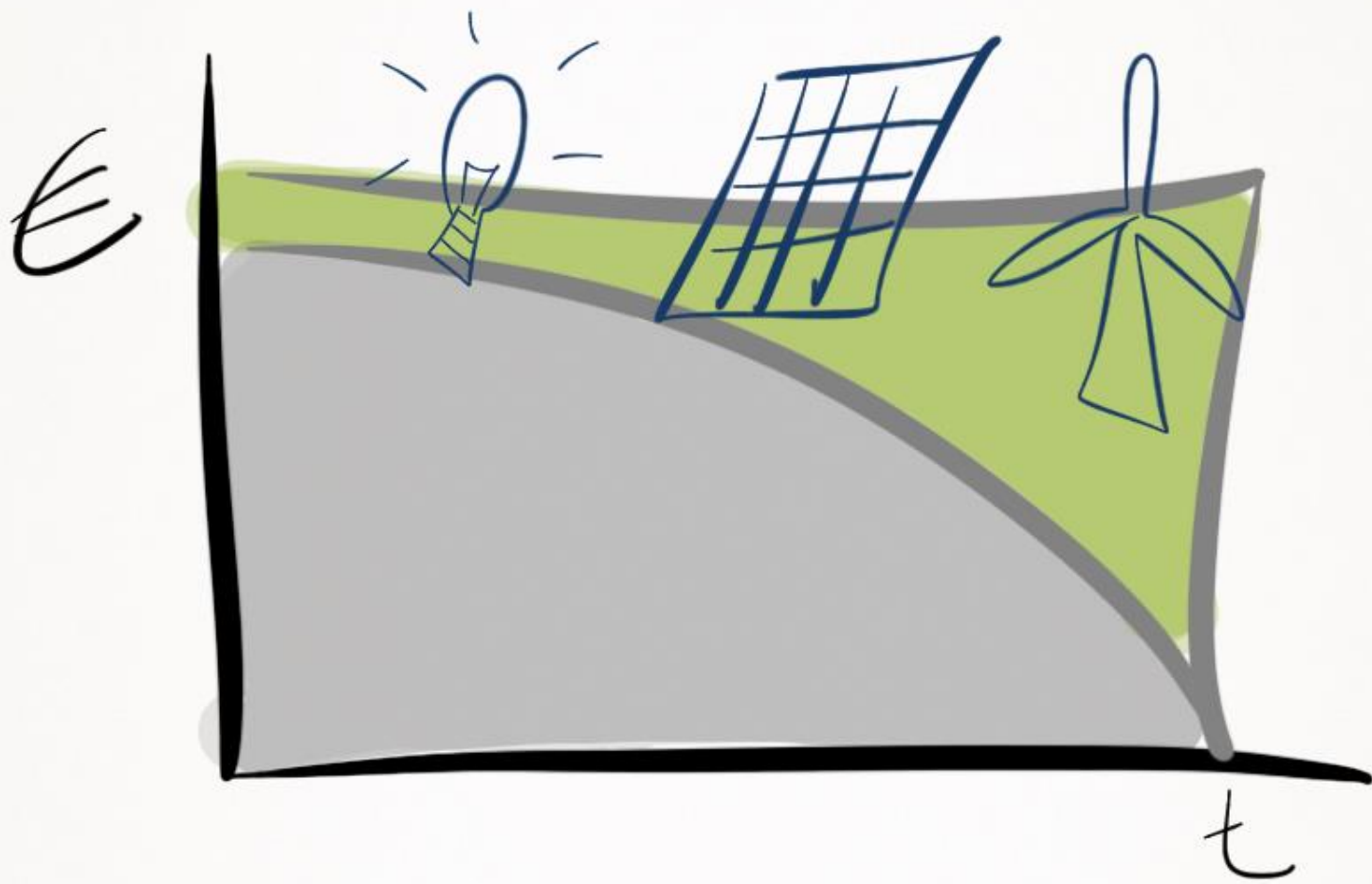
DESIGNED IN 2008, FOUNDED IN 2010, AWARDED BY MIT IN 2014, INTERNATIONALIZING NOW THROUGH A NUMBER OF UTILITIES











AND THERE IS MORE

ENERGY BLOCKCHAIN

BLOCKCHAIN-BASED TECHNOLOGY TO VALIDATE PEER-TO-PEER ENERGY TRANSACTIONS IN SMART GRID ENVIRONMENTS

GENER8

PV-TO-PV: DEVELOPING THE TECHNOLOGY TO TURN OLD AND DAMAGED SOLAR PANELS INTO NEW ONES

AFRICA AIKIDO

TURNING ELECTRONIC WASTE LANDFILLS INTO RENEWABLE ENERGY PLANTS THROUGH URBAN MINING

ENERGY AS A CURRENCY

DIGITAL CURRENCY MODELS FOR RENEWABLE ENERGY ECONOMIES – DEMOCRATIZATION OF VALUE CREATION

FAIR GRIDS

BLOCKCHAIN-VALIDATION OF ENERGY TRANSFERS BETWEEN 10 KV-SUBSTATIONS AND HIGH-VOLTAGE GRID. ENABLES 100% ENERGY TRANSFER VALIDATION. SAVINGS IN NL WILL AMOUNT TO 1,3 TWH / 1,2% OF ELECTRICITY NEEDS / >100M € PER ANNUM

METERLESS METERING

ALGORITHMS ENABLE USERS TO RECOGNIZE AND REGULATE THE “FINGERPRINT” CONSUMPTION OF EVERY APPLIANCE, AND REGULATE THEIR NEEDS IN DIRECT CONNECTION TO THEIR GRID OPERATOR



COMMIT2DATA

**national Big Data research
and innovation program**



Opportunities for data & energy

Some developments have world-wide impact potential:

- photonics
- blockchain
- energy data-disaggregation
- peer to peer energy exchange
- real-time energy pricing
- sensorics & algorithmics
- quantum computing

Who's leading the way?



CPB



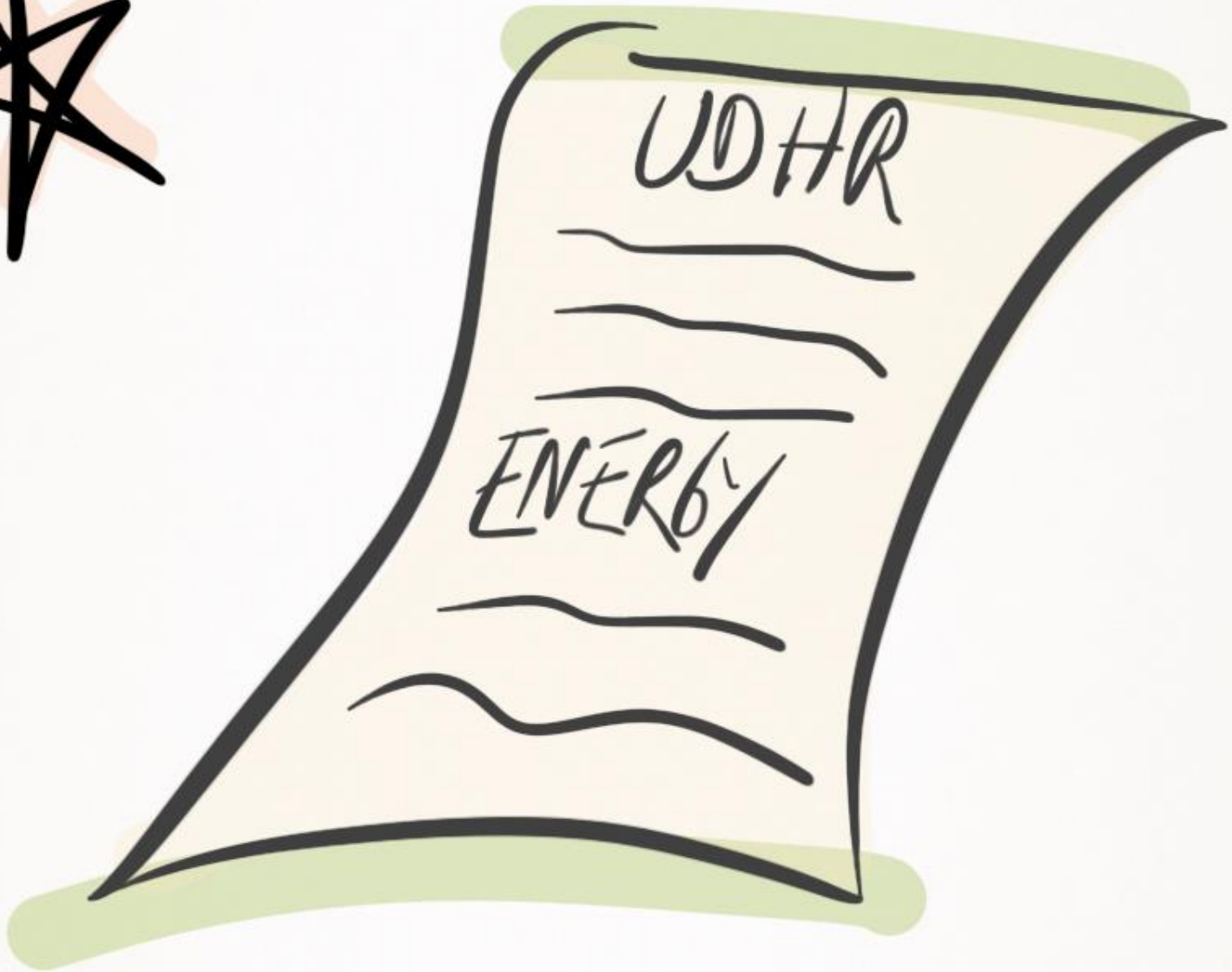












<http://beyondboundaries.nl>

“let your vision be world-embracing”

kamangir 
beyond boundaries

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