helexia
large buildings' energy

A ENERGIA DE GRANDES EDIFÍCIOS

1º ENCONTRO INTERNACIONAL SOBRE AMIANTO

Soluções fotovoltaicas para coberturas

ou

Fotovoltaico como solução na renovação de coberturas contendo amianto

CHALLENGE

What if, we convert the existing roofs containing Asbestos into roofs producing Clean, Renewable and Sustainable energy?

Literature mention's the existence of about **600.000ha of fibrocement**,
And a total used quantity of **115.000 Tons of Asbestos**

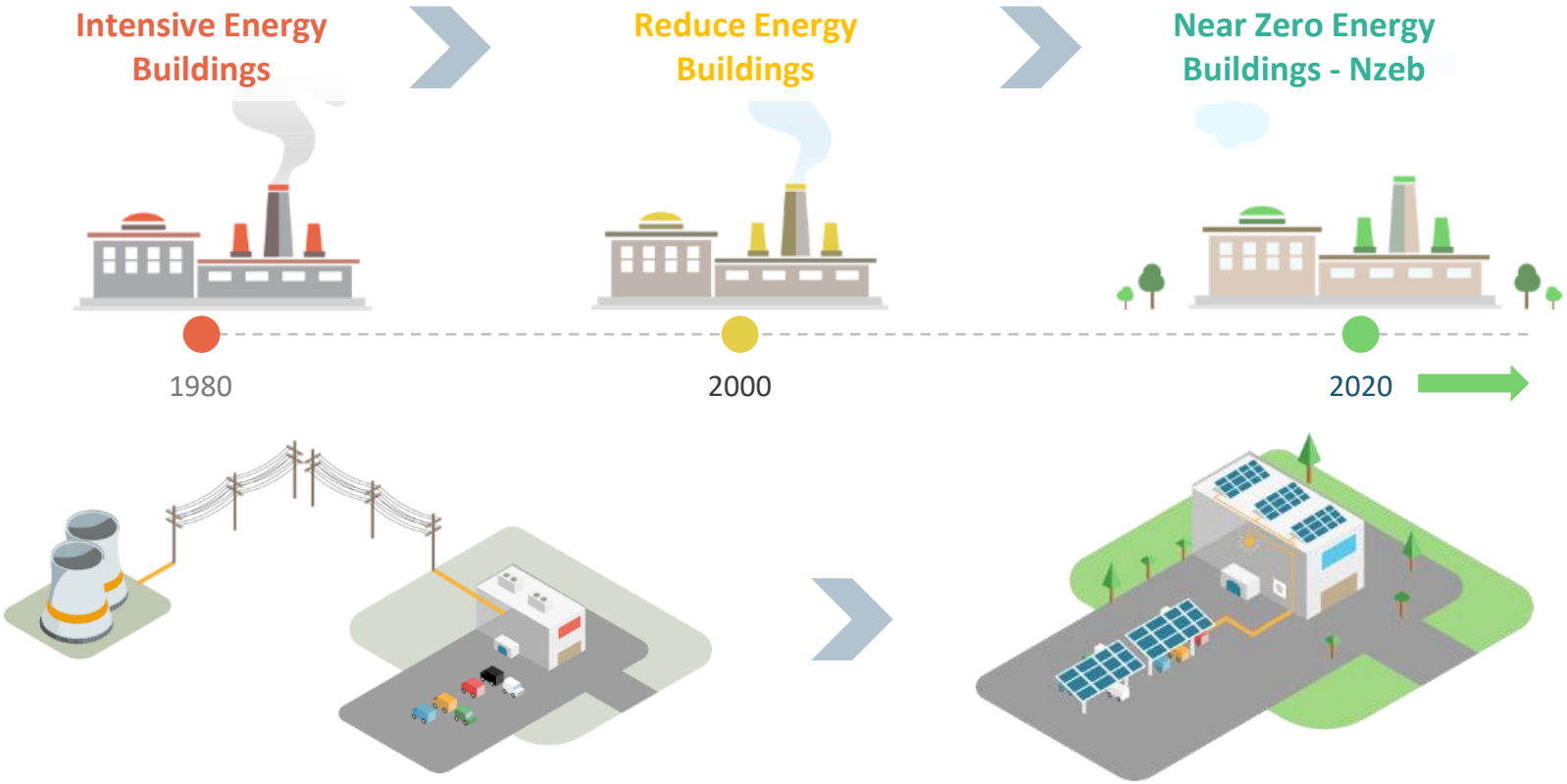
Portuguese Government mentions the existence of **+4000** public buildings **containing Asbestos**

Regarding private buildings there is no consistent data on the number…

OUR GOAL?

Reduce building's energy consumption

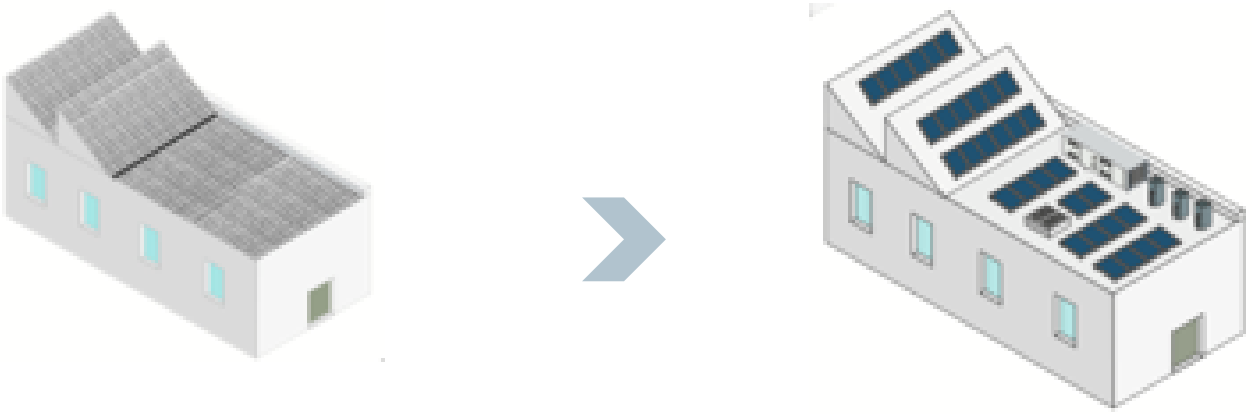
- **Reduce** energy consumption by means of **sustainable energy efficiency** measures, operating a energy transition towards NZEB (Near Zero Energy Buildings)



HOW TO REDUCE DEPENDENCY?

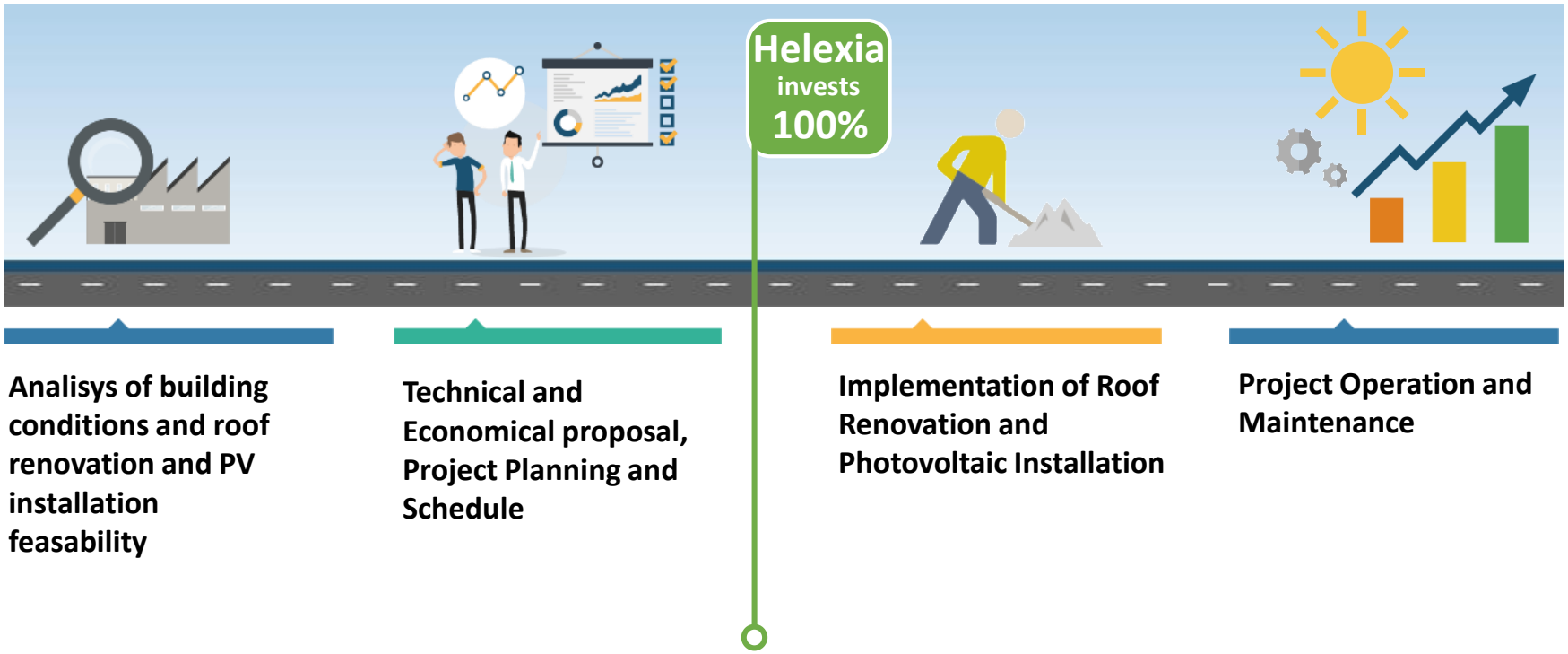
Producing your own energy

- Current regulation favors the Decentralized Energy Production



- Existing Asbestos Buildings are (at least) 13 years old, therefore and apart all Asbestos risks, are in need of renovation.
- A roof with 1000m2 of asbestos roof can yield between 75 to 150 MWh/year
  - Equivalent to 15 to 30 
- Roof renovation payback from energy output is between 2,5 and 5 years
- A Photovoltaic Installation as +25 years lifetime and offers the opportunity to use the savings on the energy generation to « finance » the roof renovation

THE PROJECT PATH



Analisys of building conditions and roof renovation and PV installation feasability

Technical and Economical proposal, Project Planning and Schedule

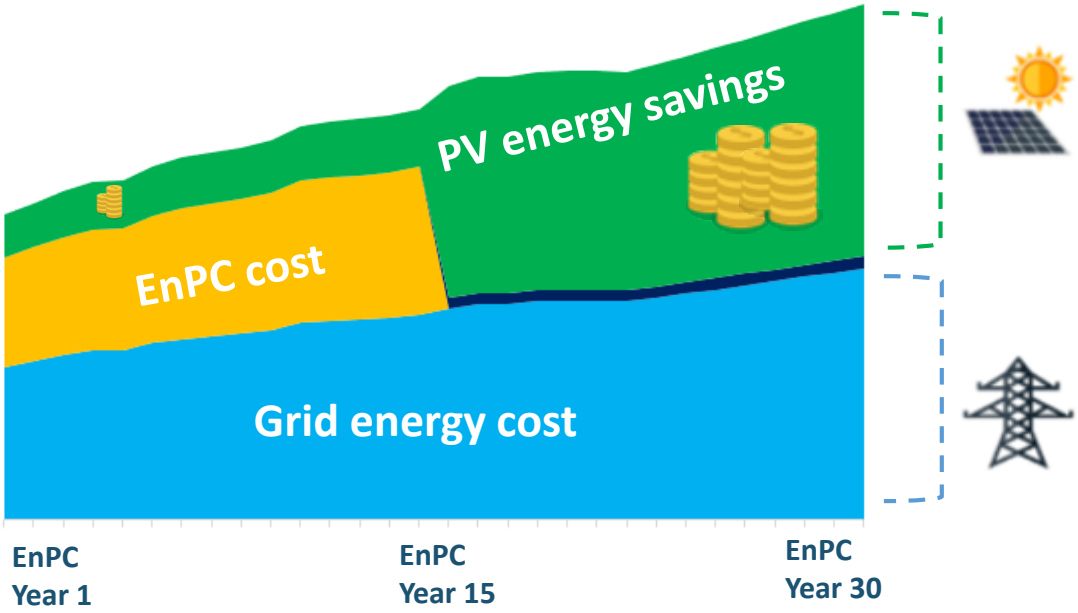
Implementation of Roof Renovation and Photovoltaic Installation

Project Operation and Maintenance

Helexia assures **100% financing/investment** of the project, under an **Energy Performance Contract** (EnPC).
Building owner benefits from day 1:

- roof renovation
- Energy Self-Production & Consumption
- Secured savings on the energy bill

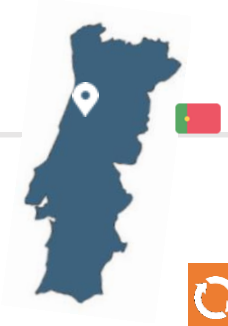
OUR 360º Energy Performance Contract - Concept



Added Value

Engineering	*Procurement*
Financing	Project Management
Maintenance	*Performance Management*

REAL CASE: Roof renovation + PV



Client : Porcelanas Costa Verde

Place : Vagos, Portugal

Self-Consumption ratio: 87%

Energy Coverage ratio : 24%

Total surface: 20.000m2

Roof usage as Energy producing unit : 80kWh/m2/year

Peak Power	**998 kWp**
Commissioning date	**August 2017**
Annual Production	**1 590 MWh**
PV Panels	**Jinko**
Inverters	**Huawei**
Households equivalent	**454**
CO2 avoided	**528 t/year**

REAL CASE: Roof renovation + PV