

An aerial, high-angle photograph of a dense urban environment, likely a city center, with numerous high-rise buildings and a complex network of streets. The entire image is overlaid with a monochromatic blue tint. In the center, the logo 'aε' is displayed in white, followed by the word 'ambience' in a lowercase, sans-serif font.

aε ambience



The AEPC Concept & Business Model

SmartBuilt4EU

30 April 2021

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Outline

- Active building EPC Concept
- The value chain of Active building EPC
- Active building EPC Business Model
- Implementation of Active Building EPC

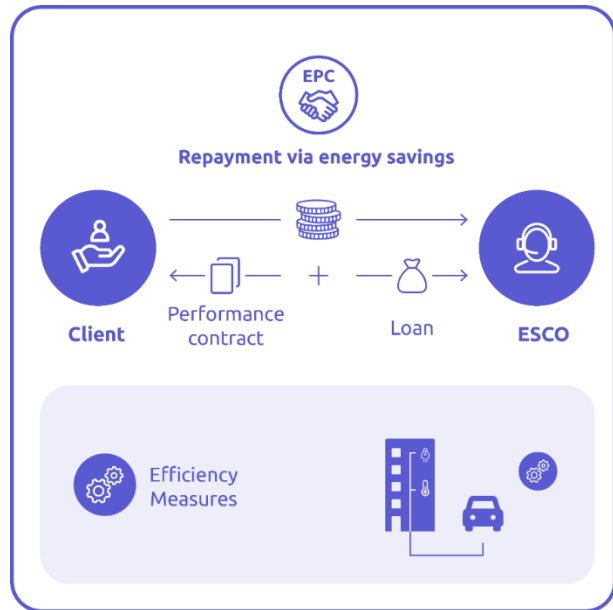
An aerial night view of a city street. A modern building with a flat roof and large glass windows is highlighted in white, contrasting with the dark blue and black tones of the surrounding city. The building is situated at a street intersection. Other buildings, cars, and streetlights are visible in the background, creating a dense urban scene.

Active Building EPC Concept

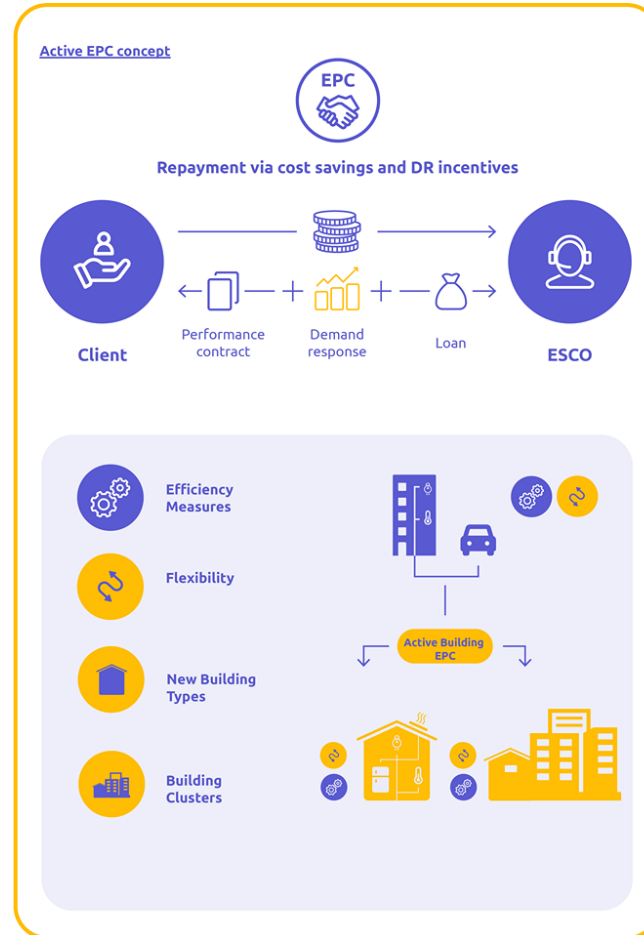
 **ambience**

New Concept

The AmBIENCE concept extends the traditional EPC concept in **3 dimensions**:



Traditional EPC



Active Building EPC

Extending energy performance guarantees related to energy efficiency to include the valorisation of flexibility through Demand Response (DR) services

Tailor EPCs to a broad scope of building types: residential, hospitals, education, offices, commerce, etc

Extending the scope of EPCs to groups/clusters of buildings under the concept of (local) energy communities.

Definition of Active building EPC

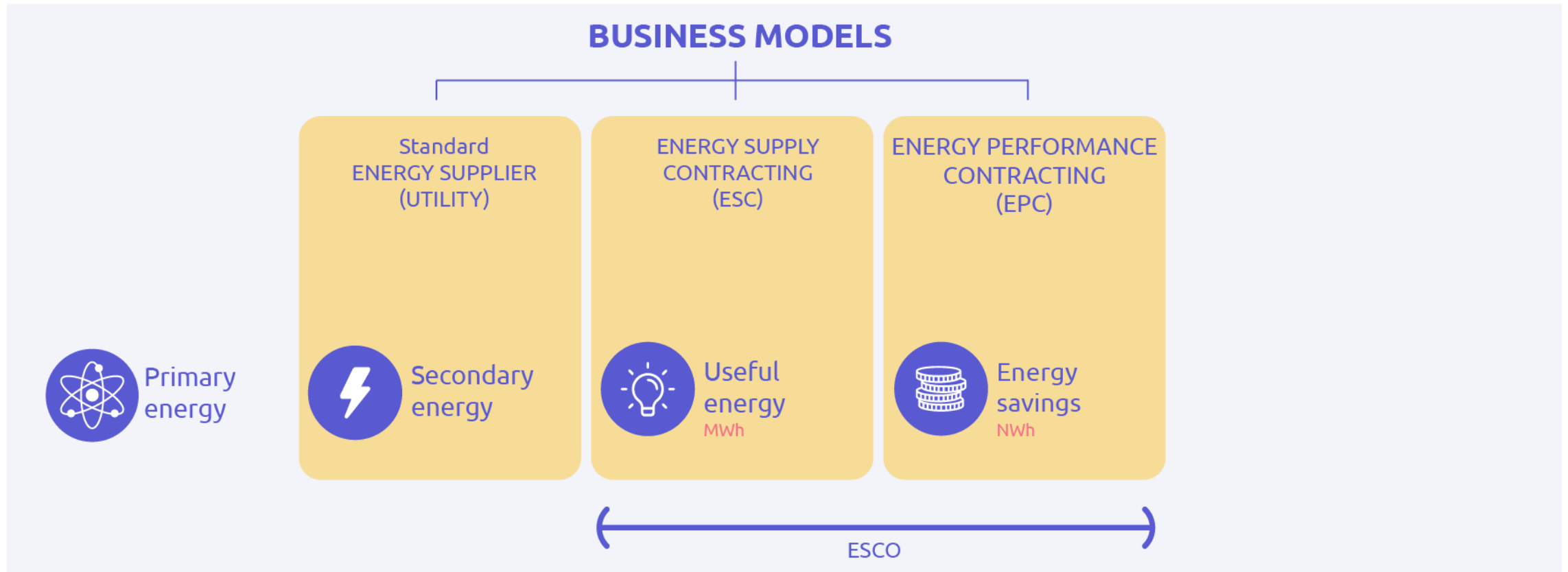
The Active building EPC Concept is an enhanced modular and **performance-based delivery** and financing for the energetic renovation and optimisation of existing and new buildings, tapping into all **passive and active energy and cost saving measures**, while leveraging a comprehensive set of technical, operational, usage, behavioural and dynamic energy or CO2 pricing parameters. The Active building EPC concept is an **enhancement of the basic EPC concept**, through a strong focus on the **electrification** of the local heat supply and the addition of **Active Control measures**.

An aerial night photograph of a city street. In the center, a large, modern building with a flat roof and some illuminated windows stands out. The surrounding area is filled with other buildings, some with lit-up windows, and streets with visible traffic. The overall scene is captured in a dark, blue-toned aesthetic.

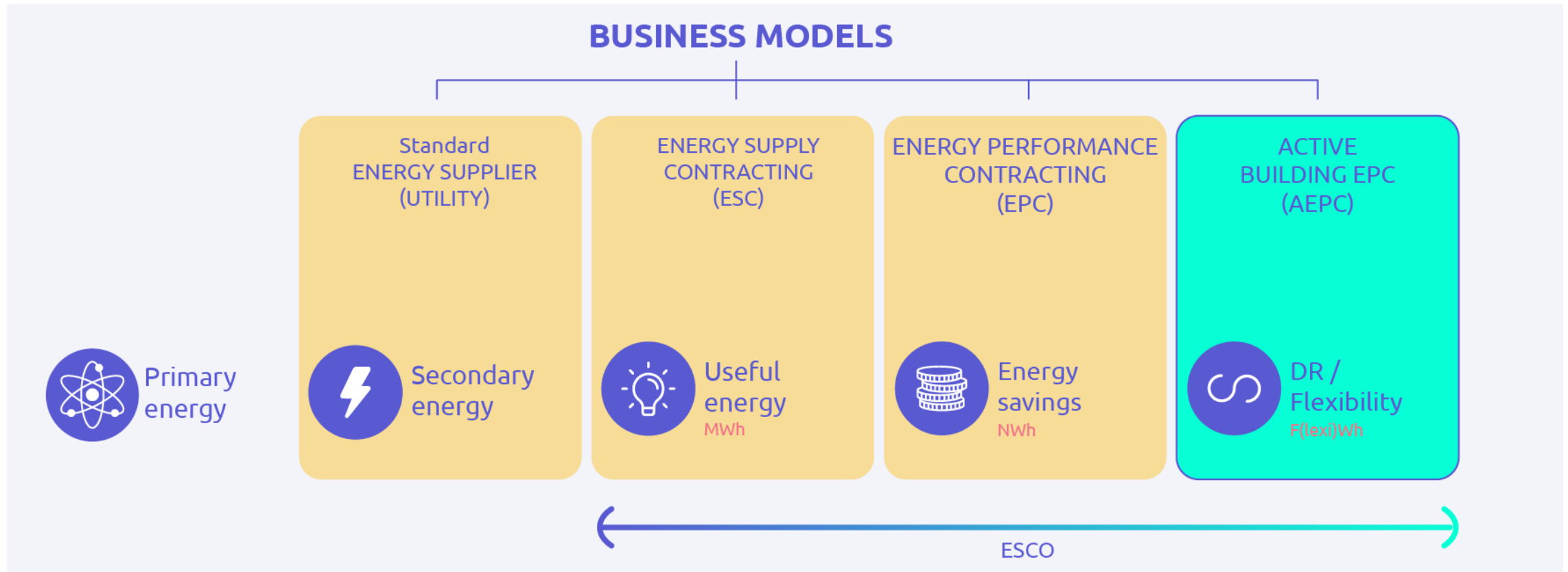
The Value Chain of Active Building EPC



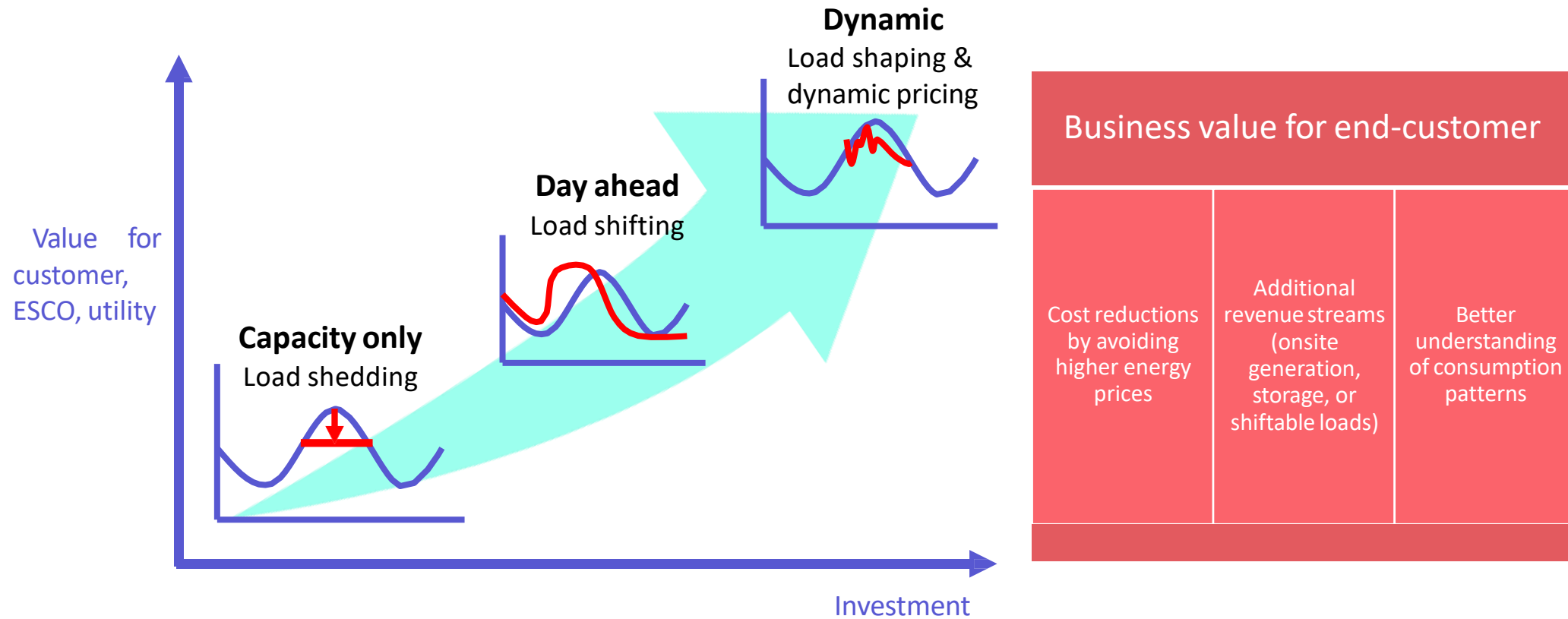
THE EXISTING ENERGY SERVICES VALUE CHAIN



A NEW ACTIVE ENERGY SERVICES VALUE CHAIN



The business value of DR in active building EPC

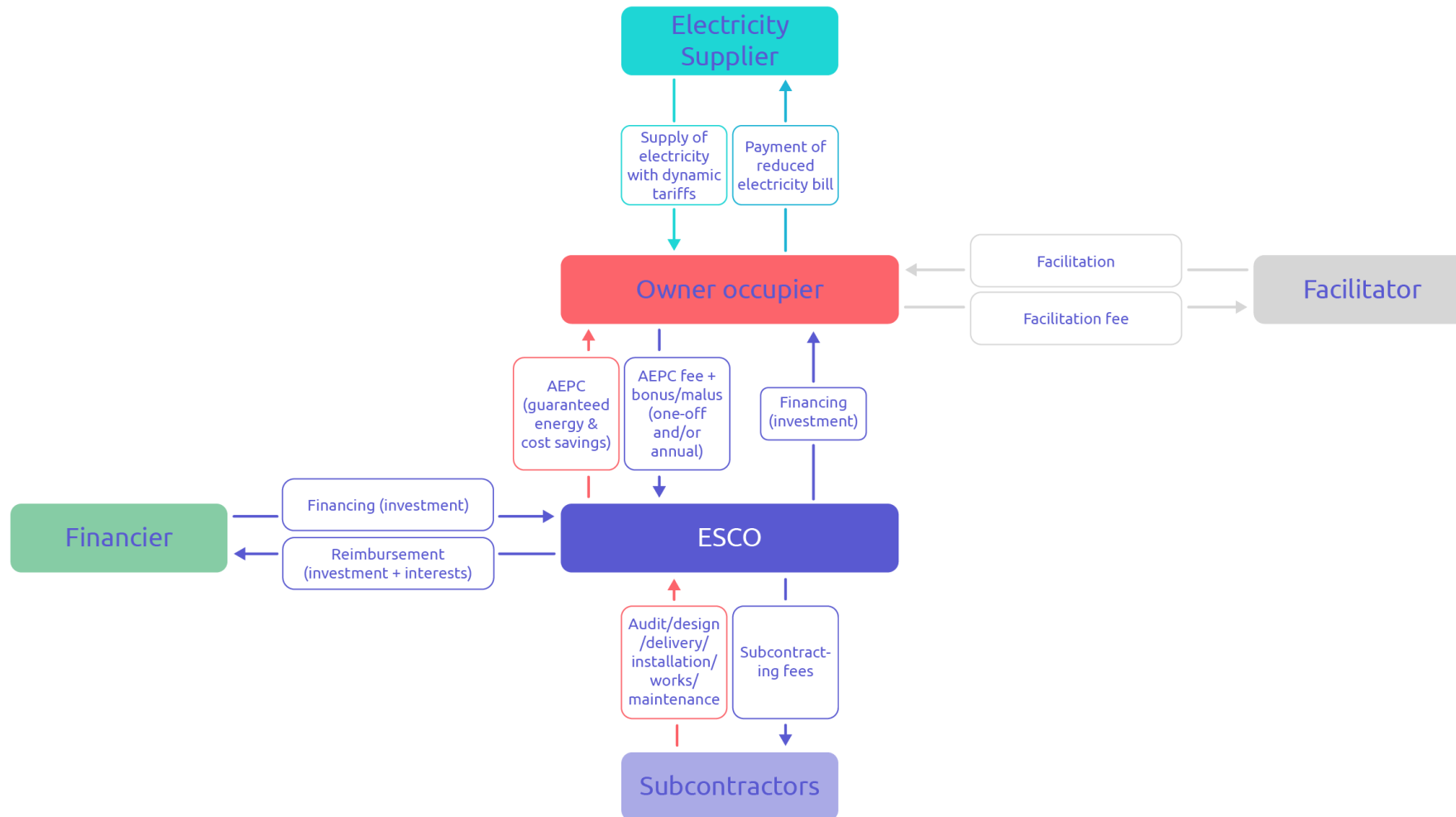


An aerial night photograph of a city street. A large, modern building with a flat roof and some illuminated windows is the central focus. The street is busy with cars, and there are trees and other buildings in the background. The overall color scheme is dark with some blue and white highlights from the city lights.

Active Building EPC Business Model

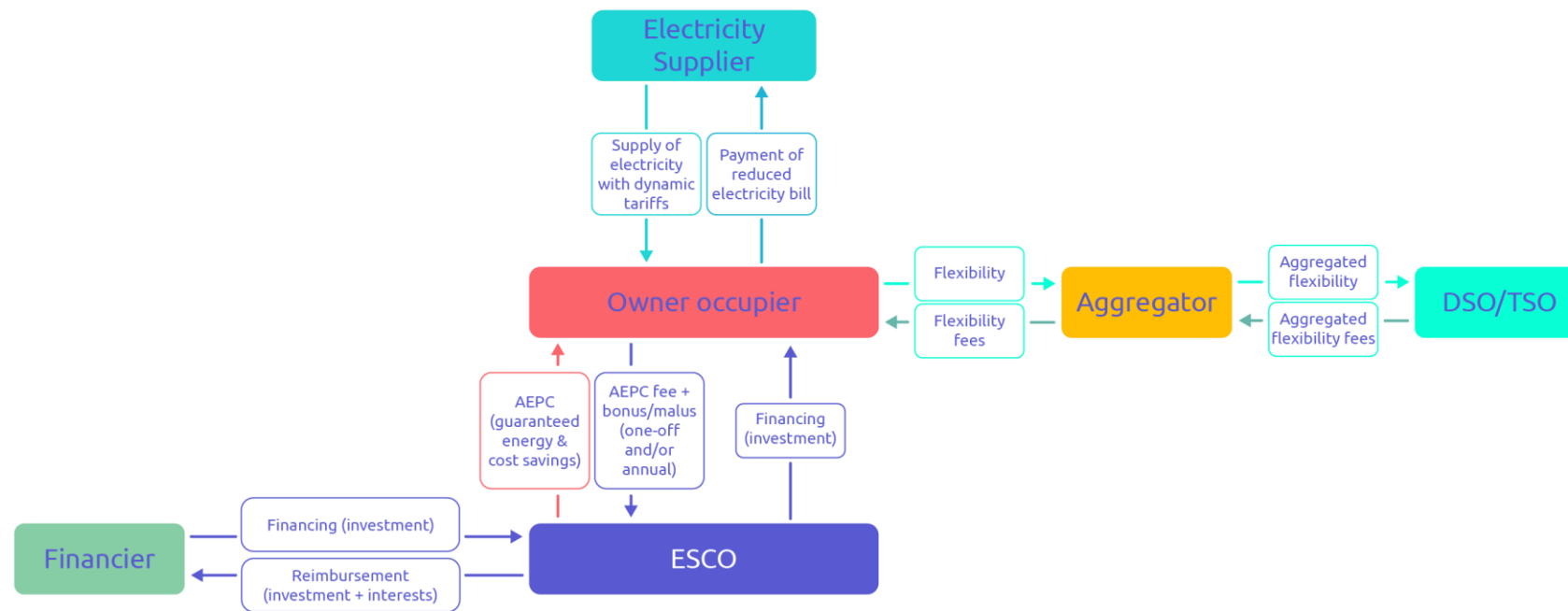


Generic Business Model



Variation B.1

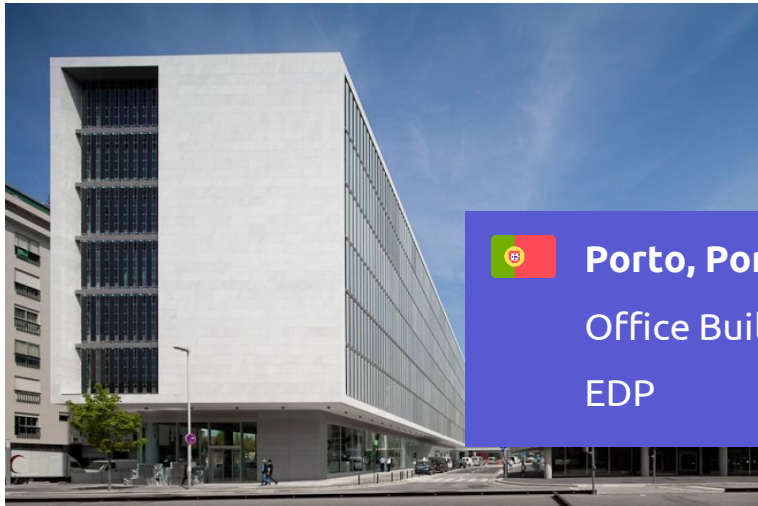
AEPC BUSINESS MODEL WITH EXPLICIT DR DELIVERED VIA AN AGGREGATOR TO THE CUSTOMER



Pilots



The AmBIENCE “proof of concept” is going to be developed and tested in two pilots, based in **Portugal and Belgium.**



Porto, Portugal

Office Buildings

EDP



Antwerp area, Belgium

Educational Building

Energinvest

Lessons learned so far...

- AEPC potential depends heavily on the initial situations of the building and what measures are being implemented
- Influenced by the level of dynamic pricing available with demand response (this has taken years in some countries
 - Demand response services vary widely by country
 - EnPC market maturity varies by country
- Early simulations have shown that for a residential building, there is a potential improvement of around 5-20% expressed in terms of total cost of ownership and benefits lasting over 25-30 years



Thank you

www.ambience-project.eu

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