*1. Energy and environmental performance*

As part of the building, AF are associated with multiple environ mental variables. In this category, we classifified energy

and carbon emissions related aspects that get inflfluenced by, or interact with, the façade design. This includes

operational or embodied energy and carbon for AF. AF systems directly inflfluence the building in door environment and

have an impact on the cooling and heating loads. The underlying building physics of AF systems in relation to building

energy performance and envelope life cycle assessment is one of the KPIs for AF. The logic behind this category is to

group the variables that quantify the façade’s environmental impact and performance.

*2. Protective performance*

The following set of KPIs is the protective performance of AF. Inspired by the defifinition of Herzog et al. [34] we grouped

all per formance aspects related to structural stability and safety, together with construction related criteria under this

category. The underlying building physics and material science of AF systems takes into account fifire resistance and

structural performance next to acoustic and visual performance. This includes water and air permeability and the

radiation properties for natural lighting and solar control.The logic behind this category is to group the variables that

justify the façade’s function and stability from a user point of view.

*3. Building control and services*

The interaction between HVAC systems and the AF that takes place to assure comfort is the third category. Under this

group we address the four types of comfort, in direct relation with building management systems and façade controls.

The management and interaction through automated and smart technologies is based on a set of variables that fifits

under this category. Building services including mechanical ventilation and active systems and their direct control to

achieve indoor comfort are grouped under this category. The logic behind this category is to group the variables that

relate to active control of the building services in relation to the façade and indoor comfort requirements.

*4. User control and experience*

The fourth KPI category, groups variables related to occupant control and engagement. The subjective perception on the

indoor environment of users in relation to their ability to act and engage with the façade to regulate their living or working

environment is grouped under this category. The logic behind this category is to group the variables that quantify

occupant control and engagement with the façade within the indoor environment.

*5. Maintenance, durability and life cycle*

The fififth group of KPIs collects the variables related to time. As pects related to the life of the façade during operation

are grouped in this category including maintenance, replacement, cleaning and durability. This category also includes

cost-related parameters and end of life cycle or guarantee issues. The logic behind this category is to group the

variables that maintain the façade performance, components and elements.