

# Prefabricated Extension Module for Cantilever Attachment to Building Façade – BIP

(Industrialised Folding Balcony)

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## Goal

The group is looking for a license agreement and collaboration partners.

## Patent

International patent application.  
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National application no: P202030764  
(22/07/2020)

European application no: EP 4187033  
A1 (31/05/2023)

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## Introduction

During the COVID pandemic, a growing social demand for terraces and balconies was detected in a building landscape that had neglected this type of outdoor space installation in recent times.

Therefore, light balconies produced in a factory line that could be easily added or anchored to the façades as large shelves were initially proposed for the renovation market.

Subsequently, the interesting idea of proposing these balconies for new builds arose, taking advantage of current industrialised building trends. Just as prefabricated bathrooms are being produced to be introduced into new hotels or residential blocks, these balconies could also be incorporated into the façades of these new industrialised buildings.

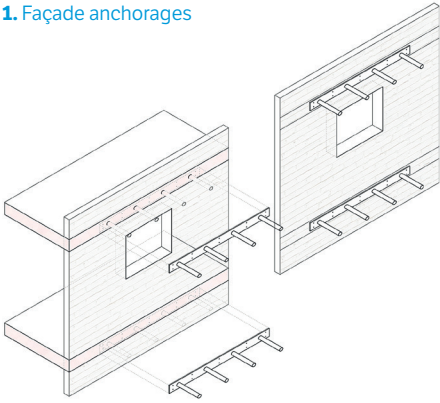
## Description

This invention consists of a prefabricated extension module that can be cantilevered onto a façade of a building to increase its usable surface area. The prefabricated extension module would typically constitute an open outdoor space such as a balcony, terrace, or a landscaped area, but could also be a closed interior space.

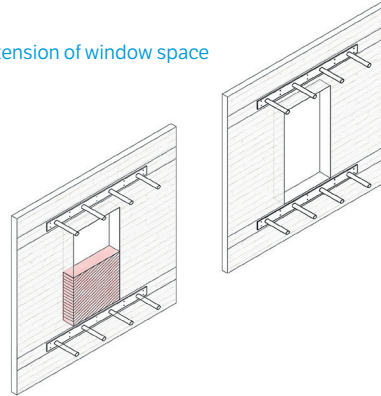
This proposed module folds into a flat, compact element that facilitates transport and allows for efficient and cost-effective transportation of a number of modules at a time. The folding system consists of a floor panel and two rigid side panels with their bottom edges hinged to its lateral edges, allowing the side panels to be folded down, leaving them in a horizontal position. This system also offers the possibility of adding a ceiling panel which attaches and hinges to the side panels in the same way.

For its installation, the floor panel is fixed to an anchorage previously screwed to the façade, through the insertion of coupling protrusions into grooves contained in the floor panel. The side panels, once erect, are also fixed to the building façade through second anchorages so that they function as structural ties of the floor platform.

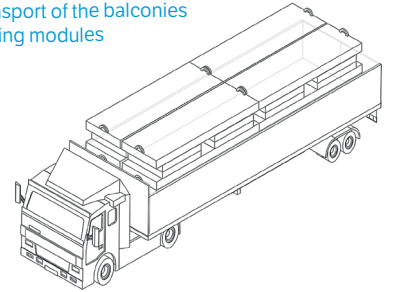
1. Façade anchorages



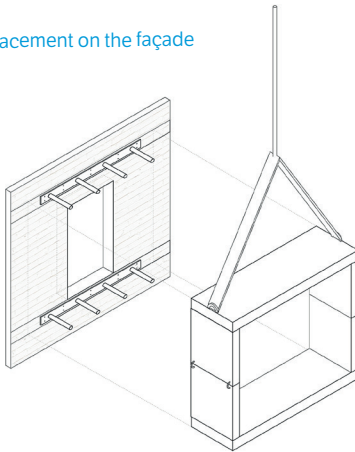
2. Extension of window space



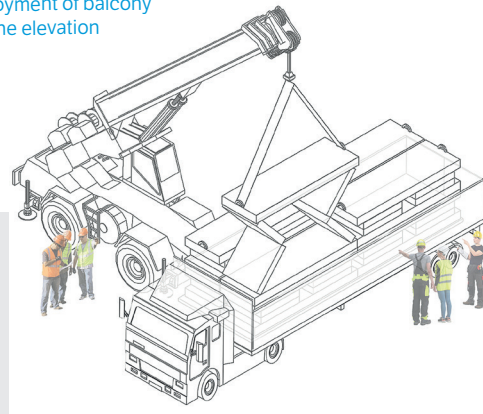
3. Transport of the balconies in folding modules



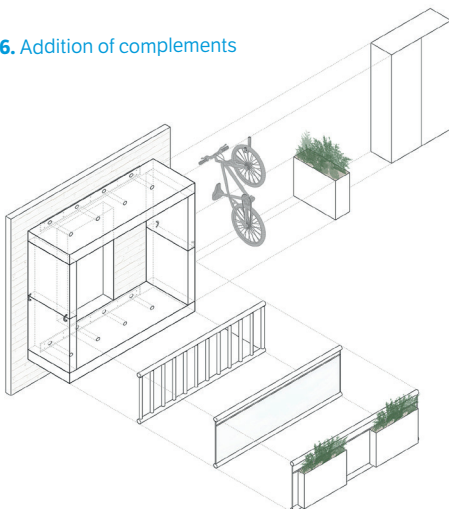
5. Placement on the façade



4. Deployment of balcony and crane elevation



6. Addition of complements



## Advantatges

One advantage is that these modules can be folded and unfolded. Previously existing prefabricated balconies occupy an excessively large space with the incorporation of railings and fastening brackets to the façade. This has a negative impact on the price of each balcony when it comes to storing and transporting them to the site, since only a few units can be transported each time. This is a structural frame that can be folded at the corners and easily reduced to a series of stacked boards. This makes it possible to transport many more units at a time and reduces warehouse storage space. This results in a better price for each balcony, compared to its current competitors.

Secondly, the perimeter frame includes a balcony cover. This benefits the building on two fronts. Firstly, the roof acts as an eave that provides shade to the glazing areas in summertime, reducing excessive sunshine and thus saves on energy consumption of air conditioning. Secondly, the roof protects the façade from moisture in rainy seasons so it will require less upkeep.

These balconies also include the possibility of incorporating complements such as furniture or railings to match the perimeter frame itself, so the structure and the content may have the same design. Also, if we consider all these balconies as a structure of large shelves for planters, the set of façades can be incorporated into a large vertical garden as an urban improvement project.