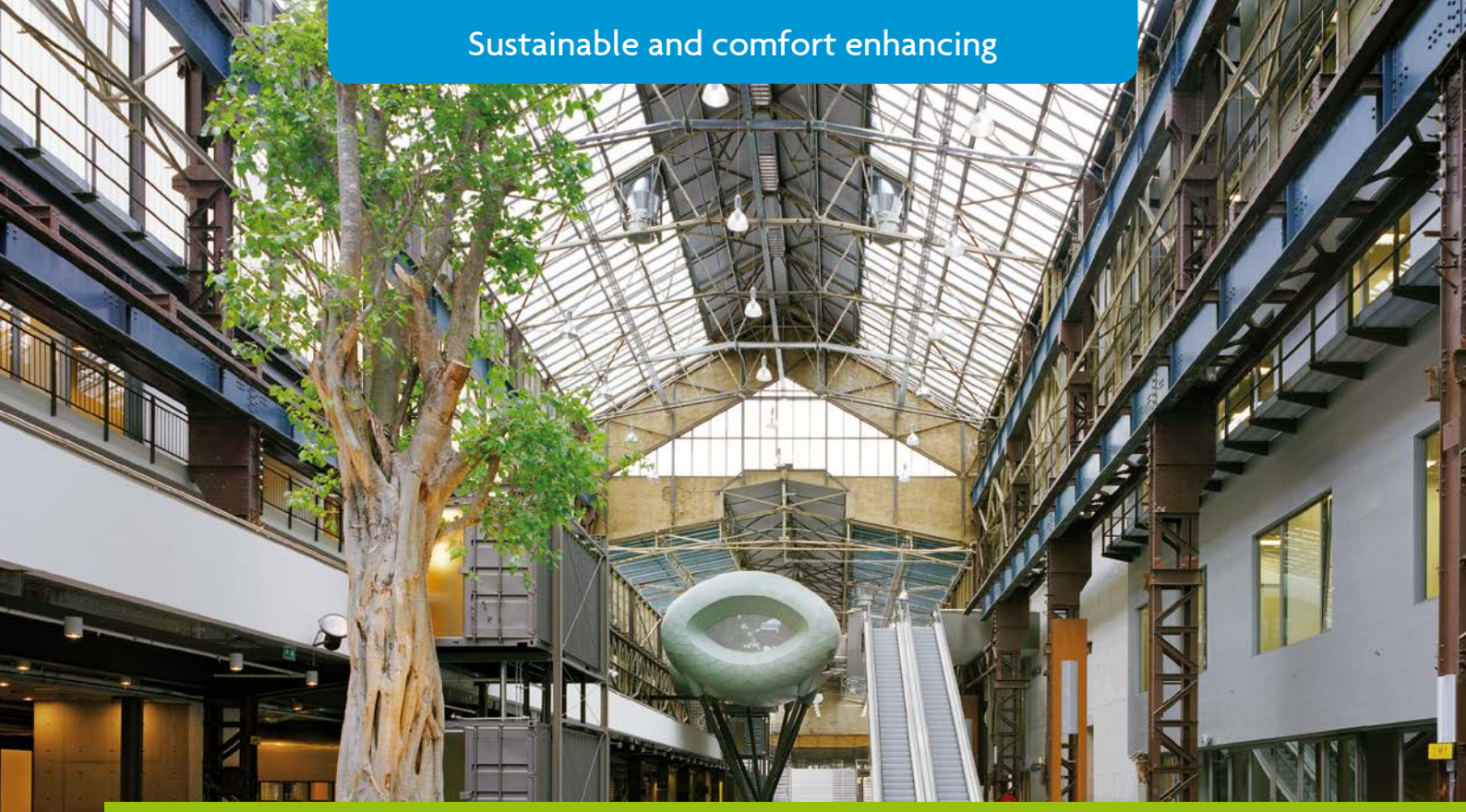
Sustainable and comfort enhancing



Brakel®
Renovation concept

The balance between old and new

From monuments to shopping centres: renovations take places in all sectors and for all different reasons. Every renovation project is a unique challenge: how do you find the perfect balance between the existing building and new additions? In order to be able to answer that question, Brakel developed the renovation concept. An integrated approach with which the optimum solution for daylight, fire safety and indoor climates can be found for every project.

Renovation often entails much more than the mere replacement of old, worn-out elements whose service life has expired. The regulations for aspects such as fire safety continue to develop and call for modern solutions. Moreover owners, managers and building users set increasingly high requirements in terms of comfort, energy consumption and economic appeal. Brakel's renovation concept is a customised answer that meets all these needs and requirements; after all, buildings are renovated for all manner of reasons. This approach creates maximum added value for the client. A number of common reasons for renovation are explained below.

Renovation and regulations

Building owners have a unique responsibility in many European countries, because they are liable if residents or users suffer damage or injury caused by defects to their buildings. Therefore it's logical that, for example, a housing corporation which is starting a renovation project wants to be sure the renovated complexes will meet all the regulations. Brakel can give that guarantee, because it has specialists who develop effective fire safety solutions that can also be used for daily natural ventilation. Sometimes it's a question of modifying worn-out or outdated fire-safety and ventilation provisions or replacing them with a modern, better solution.

Systems in parking garages are often replaced with systems that are better, quieter, more energy efficient and cost less to run.

Function change

Things get more complicated when the function of a building changes. New functions make the fire and comfort issues extremely challenging, especially when it concerns large buildings.

Upgrading increases economic value

The appearance of a building is at least as important. After all, the economic value of a building is often a crucial factor in renovations. A shopping centre or office complex is, for example, worth less if it is plagued by leakages and/or contamination.

And an old-fashioned appearance will have a negative impact on rentability or saleability of a building. Replacement with a modern system that has greater functionality and a more aesthetic appearance can provide a solution.

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The Rijksmuseum (NL)

Sustainability and comfort

The demand for sustainable, energy efficient buildings is ever greater. A building with an energy-conscious appearance impacts the image of its users. An energy efficient building also results in the realisation of cost savings during use. Something that users benefit from for many years. Sustainability impacts both newbuild and renovation projects and in order to be able to meet the requirements this entails, Brakel has developed the Green Building Program. This program combines innovative concepts, constructions, systems and products for energy efficient building and renovation. Among others the Green Building Program includes glass constructions with a U value of 0.7 W/m²K, green fire ventilation systems, solar concepts and simulation models for energy saving building, which are unique in the market.

A unique example that illustrates the unparalleled possibilities. In Amsterdam's Rijksmuseum Brakel successfully combined modern sustainability and comfort with historical architecture.

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Performance guarantees and sound financial decisions

Clients have to make a number of decisions when renovating a building: should I replace old elements with the same new elements or should I opt for improvements? And... what would the effect be? Brakel makes realistic comparisons possible by examining not only the costs of investment, but also the costs of running the building. Among other tools Brakel uses the simulation models it has developed for this, which provide insight into energy and comfort performances. This makes it possible for well-founded decisions to be made. A relatively small increase in the investment often pays back handsomely in terms of running costs. This is important to know, because the building is designed to last for a long time!

Examples of sustainable daylight, fire-safety and ventilation solutions

Brakel's R&D has focused on energy efficient systems and products for fire safety, glass constructions and ventilation for quite some time. Such systems are also aligned with one another more frequently and more effectively.

Glass constructions are more energy efficient

There have been many developments in glazing systems in recent years. Brakel designs and creates glazing constructions with excellent insulation properties, examples of which include the Brakel® HR systems, the Duralite industrial rooflight and the Greenlite glass skylight.

Controllable natural ventilation

It is now also possible to make natural ventilation controllable using updrafts, which means that constant air flows can be achieved without creating drafts. This means that natural ventilation not only functions silently, but also yields energy savings.

Fire safety systems

Natural ventilation systems can also be combined seamlessly with smoke and heat exhaust systems. Although the latter are intended for the exhaust of smoke and heat in the event of a fire, they can also be used on a day-to-day basis for ventilation. Not only is this practical and convenient; it's also financially appealing. There have also been many developments in the areas of detection and compartmentation, as a result of which it is now possible to provide better and safer solutions that are more economically appealing. Certainly when you consider the running costs.

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