

## Best Practice 02 Urban Planning



# Belval: A model of industrial transformation in Luxembourg

The EU's industrial transformation, driven by policies like the **Green Deal and the New European Bauhaus (NEB)**, is reshaping its market and fostering international collaboration. By advancing sustainable green and digital solutions such as clean energy and smart city technologies, Europe provides valuable models and partnership opportunities through initiatives like [IURC](#), supporting global cities' climate and innovation ambitions.

Belval, located near Esch-sur-Alzette in Luxembourg, **is a striking example of successful industrial transformation**. Once home to one of Europe's largest steel production sites, Belval has been redeveloped into a dynamic urban quarter that blends historical industrial heritage with contemporary cultural, educational, and residential spaces. This ongoing project represents a major step in Luxembourg's urban and economic development, making it a reference for post-industrial regeneration in Europe.

## From industrial decline to economic diversification

The transformation of Belval brought multiple benefits to Esch-sur-Alzette and the broader Luxembourg region. The decline of the steel industry left Belval with an economic slump and rising unemployment. By transitioning towards a knowledge-based economy, the redevelopment introduced new industries, businesses and research institutions, fostering job creation and increased economic activity. **This diversification reduced dependence on a single sector and ensured long-term economic stability.** Today, Belval hosts various enterprises and technology startups, positioning itself as an innovation hub. This approach aligns with the key objectives of the [EU Cohesion Policy](#), which aims to support regional economic diversification and innovation to reduce disparities across European regions.

## From monofunctional to new mixed-use spaces with strong heritage focus

One of the most significant achievements of the Belval transformation is the complete renewal of its urban landscape. **The district has been reshaped into a dynamic district featuring modern residential areas, office spaces and diverse cultural offerings.** Belval is not just a workplace but a thriving community where people can live, work and socialise. This reflects the principles of the [New European](#)

[Bauhaus](#) initiative, which promotes aesthetic, inclusive and sustainable urban design.

Belval has successfully integrated its industrial past into a new identity. Key steel industry structures, such as the iconic blast furnaces, have been carefully preserved and incorporated into the urban design. These landmarks serve as visual reminders of the area's history, while being reused as cultural and educational spaces.

## Sustainability and quality of life in the new Belval

Belval has been developed with a strong focus on sustainability. **Green buildings with energy-efficient designs, smart water management systems and eco-friendly public transport options are essential in its urban planning.** The area also promotes alternative mobility solutions such as cycling paths and electric vehicle infrastructure, contributing to reduced emissions in line with the [European Green Deal objectives](#).

A critical aspect of Belval's redevelopment has been the creation of an ecosystem that fosters education, research, and entrepreneurship. The presence of the University of Luxembourg has been pivotal in this transformation. **The university, recognized for its strong focus on interdisciplinary research and innovation, attracts students and academics from around the world,** further reinforcing Belval's role as a centre for knowledge and economic growth.

**The process to transform Belval began in the late 1990s, after the steelworks definitively closed.** From the beginning, strong political intervention was essential, which is why the Luxembourgish government, and the City of Esch-sur-Alzette, made a joint long-term commitment to a redevelopment vision. In 2000, a public-private partnership, Agora, was established as a dedicated public development agency to manage the planning and execution of the project.

Public consultations to engage with the local community to ensure the regeneration, reflected historical identity and future needs. Key champions included national and local political leaders, urban planners and cultural stakeholders, all of whom helped to keep the project on track despite considerable challenges.

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The project was financed through a mix of public and private investment, making Belval a flagship example of coordinated urban regeneration in Europe.

### Objectives and key actions towards a cultural and innovation hub

The redevelopment project of Belval was guided by several key objectives:

- **Transforming industrial spaces** into modern, functional infrastructures for living, working and enjoying cultural activities.
- **Fostering economic growth** by attracting businesses, research institutions and startups.
- **Enhancing quality of life** including green spaces, cultural facilities and high-quality housing.
- **Promoting sustainability** by implementing environmentally friendly urban solutions, such as energy-efficient buildings and alternative mobility options.

Preserving cultural and industrial heritage reshaping historical structures into new developments to maintain a link with the past. The key actions implemented reflect a vision of innovation, sustainability and cultural preservation, ensuring the area remains at the forefront of urban development.

**Construction of modern buildings for housing,** research centres, cultural venues, and offices including the Kirchberg residential complex and [Luxembourg's Research & Innovation Campus](#).

**Creation of the Cité des Sciences** by hosting the [University of Luxembourg](#) and research centres such as The [Luxembourg Institute of Science and Technology \(LIST\)](#), both of them key drivers of innovation in sectors like material science, engineering and ICT.

**Restoration of Blast Furnaces** which were preserved and transformed into a historical and cultural landmark housing, the Musée de la Sidérurgie, dedicated to the region's industrial heritage.

**Development of Parc Um Belval** creating green areas with walking paths, playgrounds, and pedestrian zones, reducing environmental impact.

**Hosting art exhibitions, music festivals and events** that celebrate the city's industrial past and contemporary creativity like the [Flow Music Festival](#) and the [Luxembourg Art Week](#).

### Main Outcomes

- **The area has evolved** into an innovation hub, fostering new industries beyond steel manufacturing. As of April 2021, approximately €260 million had been spent out of the initial €1.169 billion allocated for the Cité des Sciences project.
- **The revitalisation has significantly boosted** its residential and business appeal. As of July 2017, approximately 12.000 people lived or worked in Belval, with 2.400 individuals having purchased or rented flats in the area.
- **The presence of the University of Luxembourg** and other institutions has established the area as a centre for knowledge and innovation. The Cité des Sciences houses over 7.000 students and 3.000 teachers and researchers.
- **Belval's transformation contributed** to Esch-sur-Alzette being designated the European Capital of Culture in 2022, highlighting its success as a *cultural and urban regeneration model*. The [Esch2022 program](#), spanning 170 square miles, included over 2.000 events, such as 310 performances, 137 exhibitions, 141 concerts, and 360 participatory workshops, celebrating the city's cultural renaissance.

The introduction of green spaces, public transport systems and cultural amenities have improved the district's liveability and environmental quality. Belval serves as a model of post-industrial redevelopment, demonstrating how former industrial sites can be reimagined into contemporary urban quarters. Looking ahead, continued investments in research, sustainability, and cultural initiatives will ensure Belval remains at the forefront of urban transformation and economic diversification in Europe.

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### References

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