MOBILITY, KNOWLEDGE AND INFORMATION HUBS IN URBAN AND REGIONAL DEVELOPMENT

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Belgium's urban and regional innovation hubs

Keynote speech

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1. Belgium, a weak national profile country

- Difficulty of forming central government and formulating national policies, for example on energy.

- Resulting in weak multiparty governments reflecting the multiplicity of regional, local, and private lobbies, e,g. road, pharmaceutical and pesticide interests.

2. Belgium, a crossroad country

- Being in the middle of the highest populated part of Europe its accessibility is the key of its prosperity.

- Its rail, road and canal network, and its coal and iron resources made it in the early 20th century the second most industrialised country of Europe. Its coal and steel resources went exhausted in the second part of the 20th century but its transportation network remained its main investment attraction. A dense toll free routes nationales - voies rapides autoroutes voies séparées urbaines communes Sources : teleatlas, projet MOBLOC Author: Klein S. CEPS/INSTEAD 2010 25 50 0 km

motorway

network.

3. Two major Belgian urban metropolitan hubs: Antwerp and Brussels

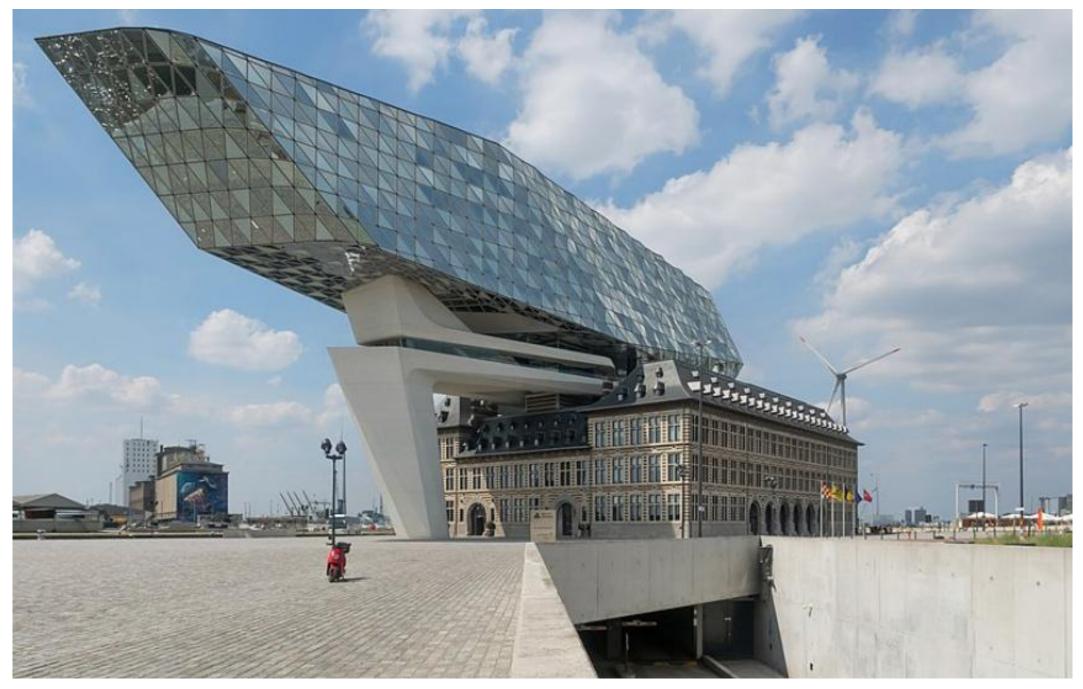
- Dispersed settlements of productive investments and population but concentration of power and wealth in the hubs of Antwerp and Brussels.

- King Leopold II used to say: "Brussels is the Capital of the country, but Antwerp is the Capital of capital".

- Both city regions successfully illustrate significant achievements in professional planning, of consequence to both Belgium and the international scene.

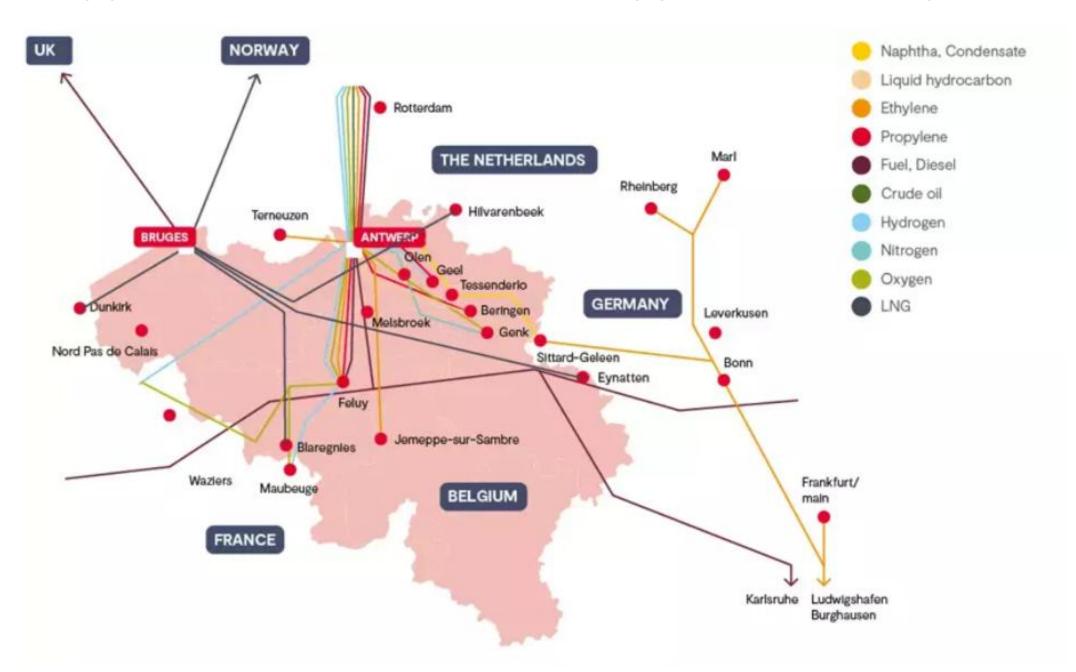
4. The Antwerp innovative petrochemical and fluids transportation hub

- The Antwerp-Bruges international Port illustrates the innovative transformation and complementarity between:
- the seaport of Bruges, its intercontinental container shipping development and
- Antwerp, its inland petrochemical port and multimodal transportation complex.
- The Port of Antwerp has become a major hub of the European chemical industry.
- It has largely succeeded in eliminating the use of semi trucks for transporting liquids and fuels from one plant to another.
- By building a network of more than 1000 km of pipes, safely using some 60 different types of inter-plant pipeline connections, it has vastly increased its transport capacity, and reduced the fossil energy use, pollution, and operating costs of all plants in the hub.



Port of Antwerp-Bruges headquarters. Architect: Zara Hadid. (c) Michielverbeek, Wikipedia.

The chemical pipeline hub and the switch from road to pipeline as main transportation mode.

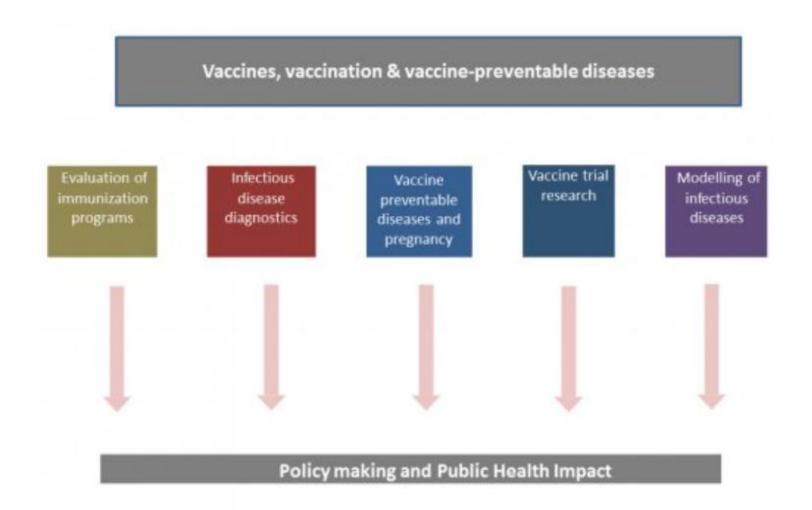




The Port of Antwerp pipelines network not only links the intra harbour transport activities but also provides a link between Antwerp and the Channel-Ruhr pipeline. (Source: ARKGk pipeline network.)

Indirect outcome of the petrochemical Port complex

The Antwerp hub in chemicals and pharmaceutical sectors: as an example **Vaccinopolis** brings together the competing vaccine producers in providing them common services increasing their common efficiency.



Source: Centre for Evaluation of Vaccination

5. Antwerp's railway hub

ANTWERP's Railway one-level terminus station of 1905 has been replaced by a four-level international through-station, linking all modes of transport while fully respecting its architectural heritage and achieving the rehabilitation of its surroundings. It is now on the World Heritage list.



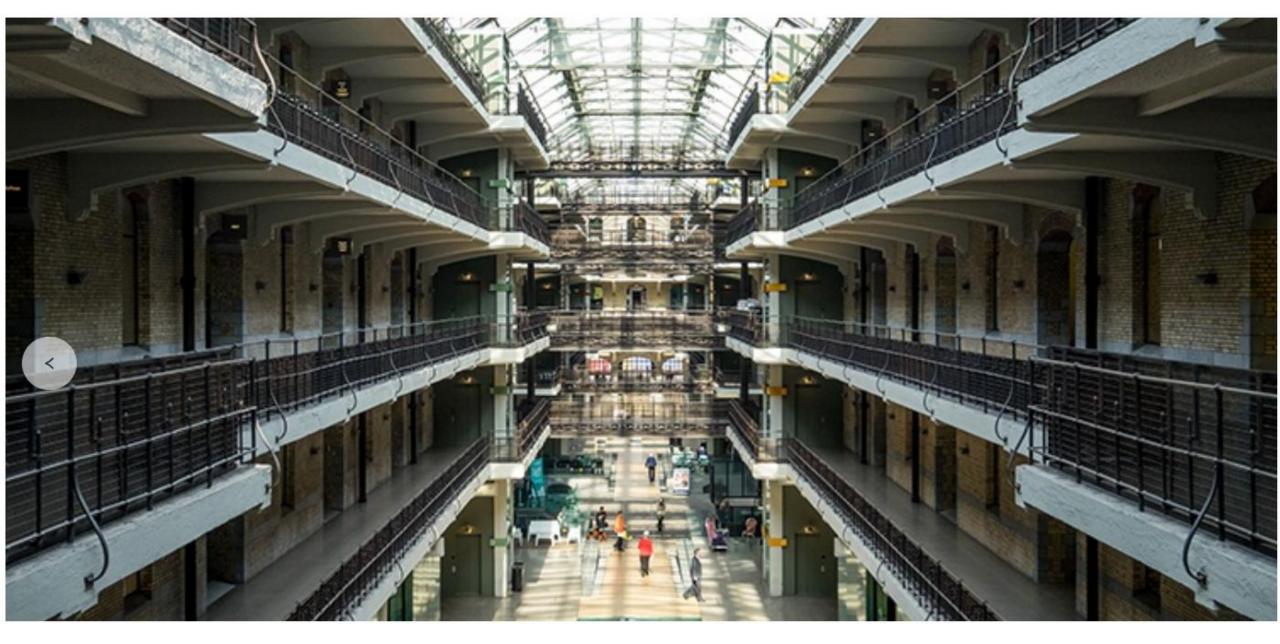
6. Brussels urban and regional services hub: The innovative urban hub of the Canal area

BRUSSELS planned a major urban transformation by concentrating new urban development around the former industrial canal. This "PLAN-CANAL" received the ISOCARP 2017 planning Award.

Its renovated former transportation hub "TOUR & TAXIS" that included the storage and customs activities and its transformation from industry to exchange of ideas and professional services and huge housing developments received two EUROPA NOSTRA Conservation Awards.



Tour & Taxis: The former Royal Storage along the Canal was transformed into services (shops, conference spaces and offices).



Tour & Taxis: inside of the former Royal Storage, now.



The former Maritime Station became a multipurpose hall including exhibitions, offices, inside garden spaces and restaurants.

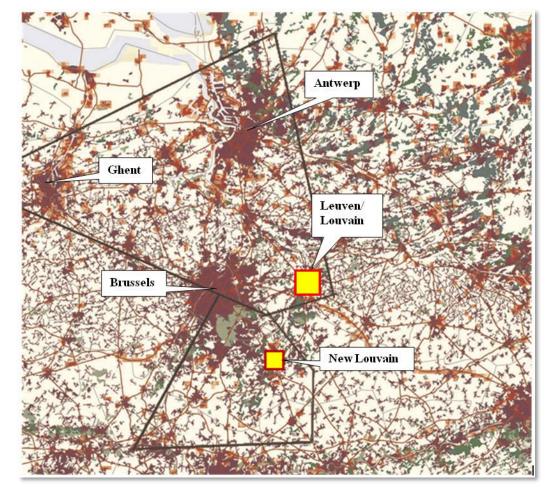
7. Brussels Metropolis East: the Louvain (Leuven) and New Louvain university hubs

Satellite map showing the urbanised area of central Belgium, around Brussels.

In the Flemish region, Louvain/Leuven historic university town lies 25 km to the south east of central Brussels, in a diamond shape. The loose conurbation south of Brussels forms a kind of triangle.

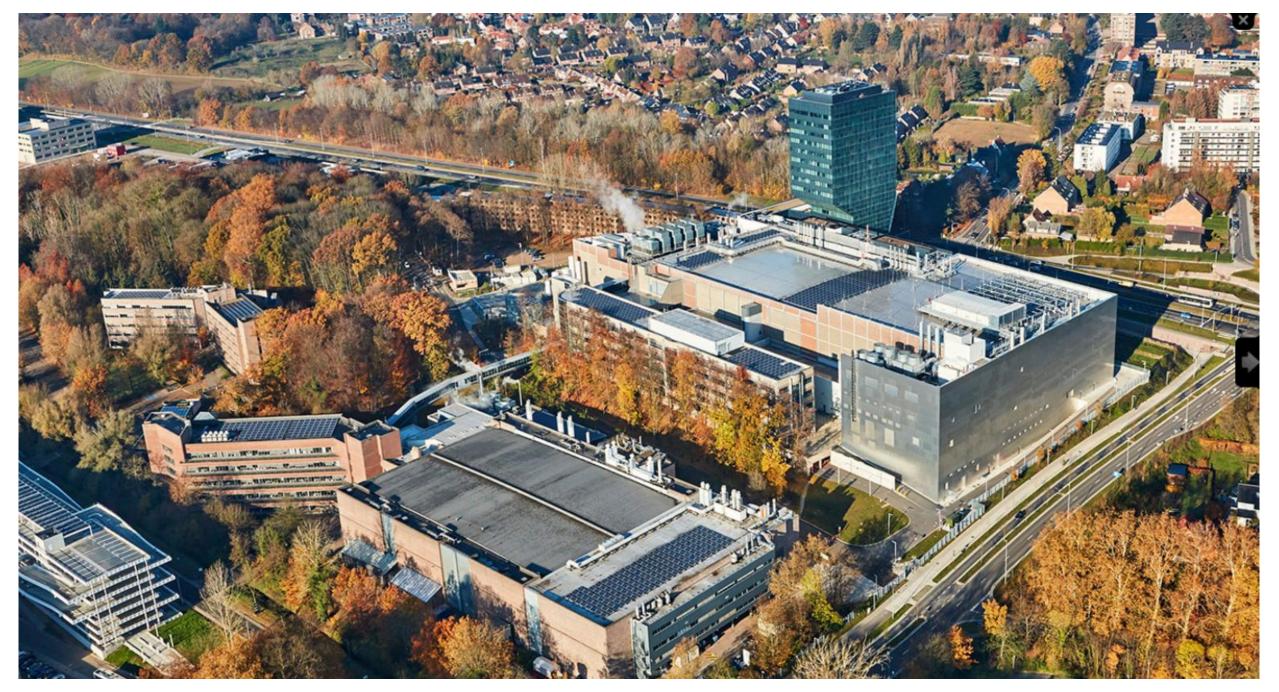
The Louvain new university town has been located in this part of the Walloon region, less than 30 km south of central Brussels.

Historic old Louvain/Leuven - east of Brussels - and the New Louvain university town (« Louvain-la-Neuve ») - south of Brussels - are shown on the map by yellow squares.



Louvain/Leuven City, original site of the Louvain university (1425) and its Science Park. View of the main square. Source: Wikipedia.





The Louvain research and development Center IMEC.

IMEC describes its services as:

Expertise

With firm roots in nanoelectronics, our portfolio covers a range of hardware and software technologies.

Research

In our 12,000 m² cleanrooms and state-of-the-art labs, we're taking nano- and digital technology to the next level.

Development

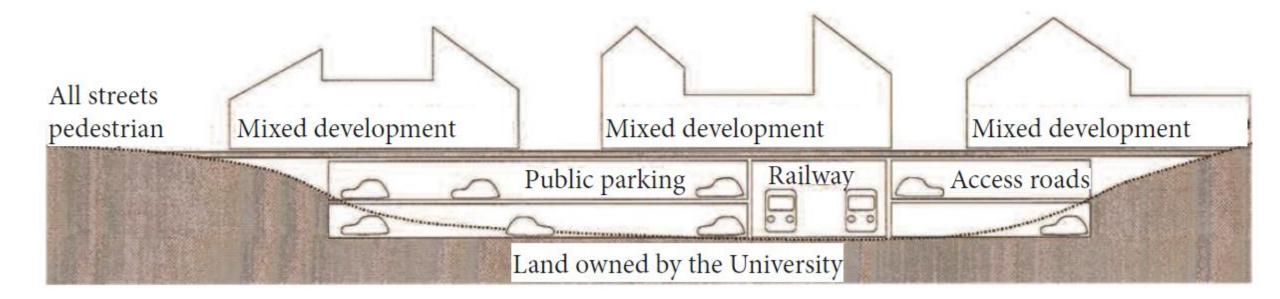
Building on our infrastructure and expertise, our partners are able to accelerate their digital innovation.

Venturing & start-ups

Our venturing ecosystem supports tech entrepreneurs by providing them with funds and knowhow. 8. Brussels Metropolis South East: the New Louvain and its Science Park South East of Brussels, an innovation urban hub



Louvain-la-Neuve partial view including the Faculty university and all urban functions (university, commerce and culture). On the right the comic strip designer Hergé Museum (Arch. Portzemparc). The city centre is built on a platform above the new railway station and parking.



Development diagramme 1975 central platform. Underground railway station and access roads, including parkings.



Place des Sciences and Science Library 1972 (Arch. André Jacqmain). View taken in 2021.



Aula Magna of the university built on the edge of the platform. Source : EmDee, Wikipedia (fr).

The New Louvain university town exemplifies an integrated urban hub, including space saving public transport infrastructure, linear growth pattern in autonomous phases and rain water collection into an artificial lake.

It has ca 40.000 day users, 25.000 students, 10.000 domiciled inhabitants, 300 high tech firms. A shopping mall of 35.000 sqm adjacent to the station attracts 8 million visitors per year.