

CNIMI Project

N·F·O·E  
architecture



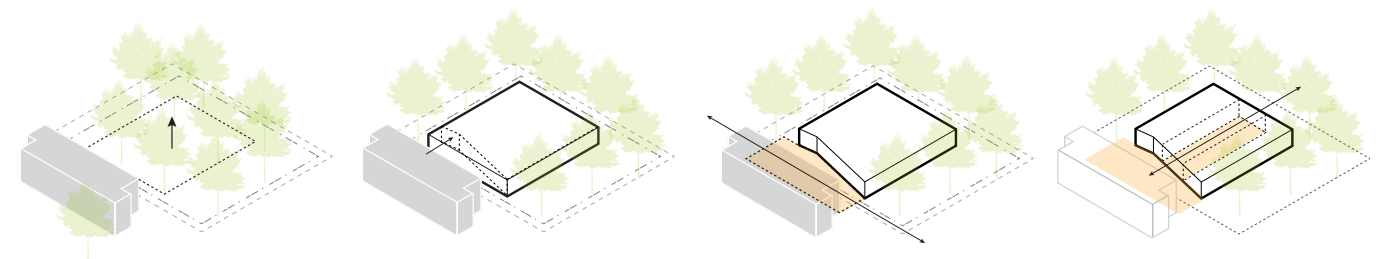


## The CNIMI's new building embraces the future with open arms

In 2019, UQTR started construction on a new building, the Centre national intégré du manufacturier intelligent (Integrated national center for intelligent manufacturing), which is connected to the neighbouring building by a tunnel on a wooded site on its Drummondville campus. CNIMI was inaugurated in 2022 and now accommodates students from two institutions, Cégep de Drummondville and UQTR. It also supports manufacturing companies that want to make the digital shift and integrate new technologies into their production, such as industrial robots.

The final concept, which is both simple and thoughtfully planned, skillfully combines the centre's innovative, technological vision with the wooded environment that surrounds it—a feat that is echoed in the building in several ways. Each of CNIMI's components was carefully thought out to help the building enhance its environment and create a bright, inspiring interior space that fosters the development of new ideas.

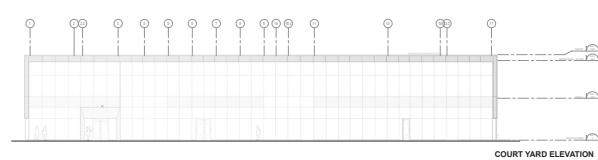
A large opening spans the building from one façade to the other, which allows natural light to reach the core of the building, where the public spaces and double-high plant-laboratory are located. CNIMI's side façades are covered with mirror-polished aluminum, reflecting the trees and helping to visually enhance the density of the wooded area. At both ends of the central space, glass façades open onto the neighbouring forest, which becomes an integral part of the interior decor.



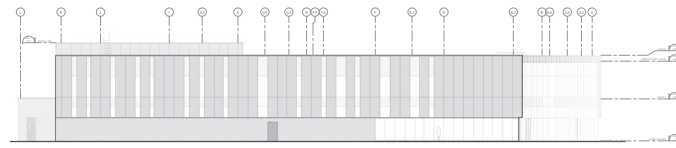


## architectural solution

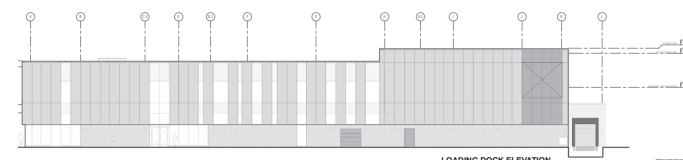
Relatively square in shape, the new pavilion offers a simple, compact solution that maximizes floor space and enhances the surrounding woodland. To reinforce the notion of a campus, the façade of the new building includes a concave angle that leads towards the entrance, a gesture that evokes open arms and opens up a public square for students.



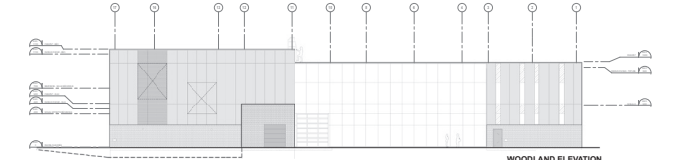
COURT YARD ELEVATION



PARKING ELEVATION



LOADING DOCK ELEVATION

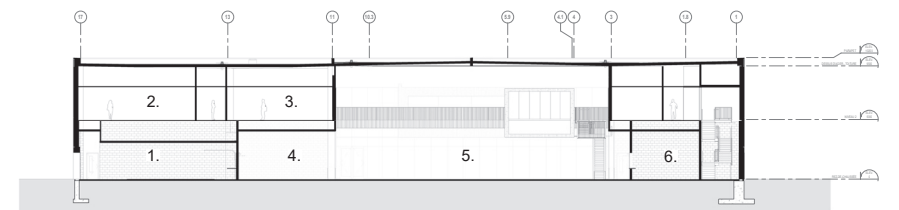


WOODLAND ELEVATION

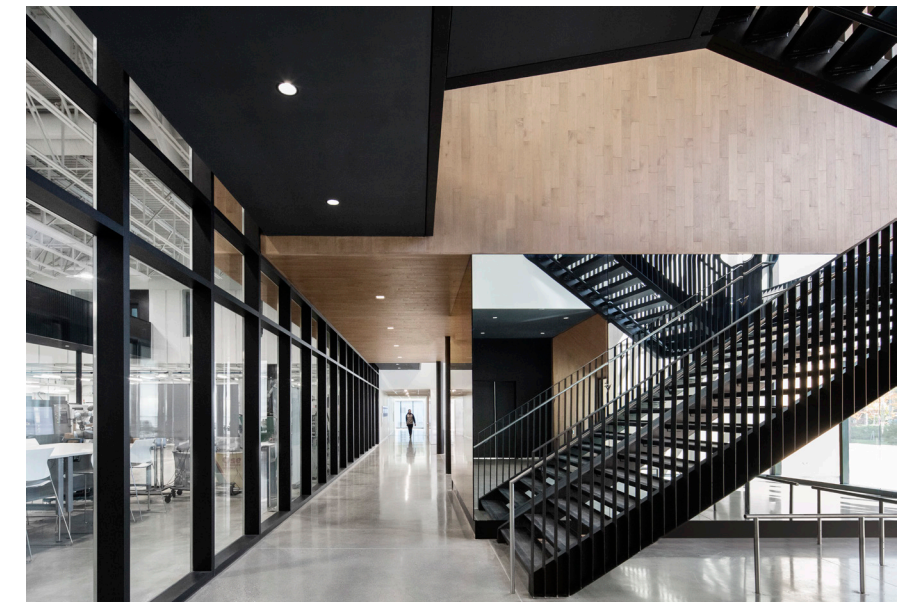


## Interior design and layout

The laboratory plant is located at the heart of the building, in the large through-passage. It is flanked on one side by classrooms and on the other by offices. This layout creates distinct sections within the space and ensures that classrooms and offices are soundproofed against noise from industrial equipment, while preserving visual transparency between the factory and the rest of the building. The space enjoys a high degree of layout flexibility, thanks to a system of channels in the concrete floor slab, that contains distribution of power and telecom cables as well as compressed air ducts.

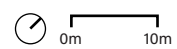


- |                     |                      |
|---------------------|----------------------|
| 1. CAO              | 4. factory           |
| 2. project assembly | 5. technician office |
| 3. self-service CAO | 6. store             |





- | GROUND LEVEL                       | 2ND FLOOR               |
|------------------------------------|-------------------------|
| 1. collaborative space             | 12. collaborative space |
| 2. multifunctional room            | 13. creativity hub      |
| 3. student cafe                    | 14. laboratory          |
| 4. executive meeting room          | 15. CAO room            |
| 5. CAO / automation                | 16. electrical room     |
| 6. factory                         | 17. administration      |
| 7. hot work                        | 18. technician office   |
| 8. CFAO room                       |                         |
| 9. project assembly                |                         |
| 10. characterization and metrology |                         |
| 11. research                       |                         |



For a seamless effect between interior and exterior, a wooden volume that seems to float in the double height houses the technicians' area and the creative carrefour. This integration of wood reinforces the biophilia concept and adds warmth to the space. Inside, white dominates all surfaces, except for the windows and curtain walls, which are black, to avoid a strong backlighting effect and to accentuate the surrounding woodland.









## Environmental measures

Numerous measures have been planned from the implementation stage to ensure energy efficiency. The building's compact shape limits the exterior walls and roofs areas, reducing the thermal energy demand intensity (TEDI). The construction materials chosen are adapted, resistant, sustainable and regional. Energy efficiency is ensured by a combination of high-performance building envelope, bioclimatic design of the fenestration and heat recovery from exhaust air. Finally, the building allows for responsible waste management, with areas dedicated for waste sorting, recycling and composting.



## Credits

Address: 575, University blvd, Drummondville

Clients: UQTR and Cégep de Drummondville

Expansion area: 6 000 m<sup>2</sup>

Budget: 21,4 M\$

Year: 2022

Architects: NFOE Inc.

### NFOE team:

Alan Orton, OAQ, OAA, FIRAC, project director

Geneviève Marsan, OAQ, OAA, project manager

Maxime Pion, OAQ, OAA, design architect

Virginie Toutant, OAQ, design architect

Daniel Legault, OAQ, senior architect

Frederick Ian Chu, senior technologist

Jonathan Arseneault, OAQ, senior architect (field)

Arianne Chang, assistant project manager (field)

Rafik Sidawy, OAQ, senior architect (specification writer)

Project manager: Planigram

Engineers, civil engineering: Pluritec

Engineers, structure: Pluritec

Engineers, mechanics and electricity: Stantec

Contractor: Beauvais-Verret

Photographer: Stéphane Brugger

Artist (sculpture): Marie-Ève Fréchette,

« Un et un font cinq »





Groupe  
**CANIMEX** **Soucy**

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