Vertical transportation expands the boundaries of clinical labs

For laboratories that are distributed among different floors,
Inpeco FlexLab™ offers multi-story automation of samples.

The experience of Viollier, a Swiss reference laboratory in the Basel area.

Labs are expanding their overall footprint, and often operations are distributed over multiple floors; this is the case of the Viollier laboratory.
Viollier is a Swiss center, typified by a story of 60+ years of innovation in diagnostic services for patient care.
The lab is hosted in a multi-story building, with the accessioning and check-in areas located on the ground floor, close to street access; the Corelab - with the other specialties - is on the upper floor.

A game-changer solution for workflow continuity

The Inpeco **Vertical Transportation Module (VTM)** is designed to connect automation tracks on multiple floors without losing efficiency. The module offers a seamless connection between the tracks and grants 100% sample traceability.

At the Viollier laboratory, the Vertical Transportation Module is just one component of a wider Clinical laboratory automation that processes several thousand tubes per day, designed and implemented by Siemens Healthineers, Inpeco's Business Partner. The track **moves samples between floors without infringing their chain of custody**.

"For us, the most important benefit of the VTM is the continuous loading of tubes, that is the workflow continuity" – says Dr. Maurice Redondo – Head of Corelab at Viollier.

Technicians no longer must push carts loaded with racks in and out of elevators, with the risk of disturbing, losing, and contaminating samples.

"In the rush hour you can imagine how many times they were going up and down the elevator! They couldn't do any other task, than transporting racks with tubes. Moreover, today the accessioning is very tidy, clean and quick." – says Mrs. Vera Andrist – Head of Sample entry, Viollier.

HOW IT WORKS

From the main track line, the tube/carrier is pushed on the Porter of the lifting system that transports it onto the other floor, where a similar device unloads it and routes it back onto the main lane. Thanks to this elevator system, tubes never miss the connection with their original RFID carrier.

In addition to streamlining the check-in process, the VTM helps to **limit the risk of delays** in testing:

"The Vertical Transportation Module has eliminated the critical decision of when-to-move the tubes to the upper floor, which was fully in the hands of the operators; racks were moved to the other floors only when they were filled and the technician had time. Now tubes enter the automation line as soon as they are checked in, without any delay that might compromise the quality of the sample. It's a direct reduction of turnaround time." – says Dr. Redondo.

The VTM in Viollier has **spread workspace without losing efficiency**: *"The standard TAT by test has been reduced by 20% thanks to the VTM."*
In addition to TAT reduction, implementation of the VTM in Viollier has improved workflow efficiency and staff utilization. Two technicians have been freed from non-productive tasks and assigned to manage check-in of a wider range of tests, an important consideration since the overall workload of the Viollier laboratory increased after the installation of the automation track.

"In our lab we were suffering from space limitations, and this was our starting point for considering the Vertical Transportation Module." – says Mr. Olivier Kobel, Head of ICT at Viollier. He adds: *"When we installed it, we repourposed spaces and operations as well, because for the first time we were able to **design the laboratory workflow in a new dimension**. Thanks to the VTM, the accessioning/reception area has become more organized, thus making us able to extend its activities to other diagnostic tests, keeping thes ame team of workers."*

REDUCTION OF TURNAROUND TIME BY TEST

Another benefit of the automated vertical transport is the introduction of a **new paradigm** in the way laboratories design their layouts; the continous workflow can clead to more interaction and engagement across specialties, resulting in new ideas and greater collaborations. This has been the case at Viollier, where the VTM has contributed to achieving the "**one-touch workflow**" concept, a quality goal for the enterprise. Today, tubes are manually handled only one time, when they are removed from the plastic bags or boxes and stacked in the racks entering the automation line.

"In the future we want to reach the no-touch workflow, leaving to machines the controls and tasks that we still do manually today. The Inpeco Vertical Transportation solution is one piece in-between in this big picture." – says Dr. Redondo.

In addition to satisfying the immediate need for a seamless workflow and faster TAT, the multi-story transportation solution by Inpeco brings collateral benefits to Viollier by enabling smarter use of space and lab layouts, more efficient and productive use of staff, and extended collaboration among professionals working in the lab.