



Precast concrete walls radiate liveliness with the help of structural matrices  
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Allplan in practice

## CREATIVE PRECAST DESIGN

### PRECAST ELEMENTS ENABLE EXTRAORDINARY FACADE

More and more architectural companies as well as construction firms are discovering the creative diversity that concrete offers as a building material. In the case of exposed concrete, concrete comes to the fore and gives buildings an outstanding appearance that is memorable for a long time afterwards.

The „Talards“ residential complex in Saint Malo, France, is a vivid example of how matrices can be used to creatively design facades. In an aesthetically pleasing way, the building combines architectural freedom with the efficiency of precast elements.

The French company Société de Préfabrication de Landaul (SPL) was responsible for the production of the walls with structural matrices.

SPL specializes in precast walls and has two state-of-the-art precast factories and two design offices in Landaul and Rennes. For the precast design, SPL relied entirely on its long-time partner Allplan Precast Walls, the CAD software for prefabrication from ALLPLAN.

### CREATIVE VARIETY

For the „Talards“ residential building in Brittany, elastic matrices were used. With the help of these matrices, SPL produced the structured precast walls in its own precast plant.



Automated workflows in Allplan Precast Walls facilitated the design of the precast walls in St. Malo, France

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## EFFICIENCY USING PRECAST

One of the challenges at „Talards“ – with regards to the structural matrices – is that the building is located adjacent to the sea, and is therefore also exposed to the demanding marine climate. Due to the salty air and constant high humidity, a particularly thick matrix was used.

## DESIGN CHALLENGE OVERCOME

In addition, the alignment of the vertical joints and structural matrices between levels placed the highest demands on the design team. Thanks to the numerous automated workflows and processes in Allplan Precast Walls, the team was able to overcome these challenges as well.

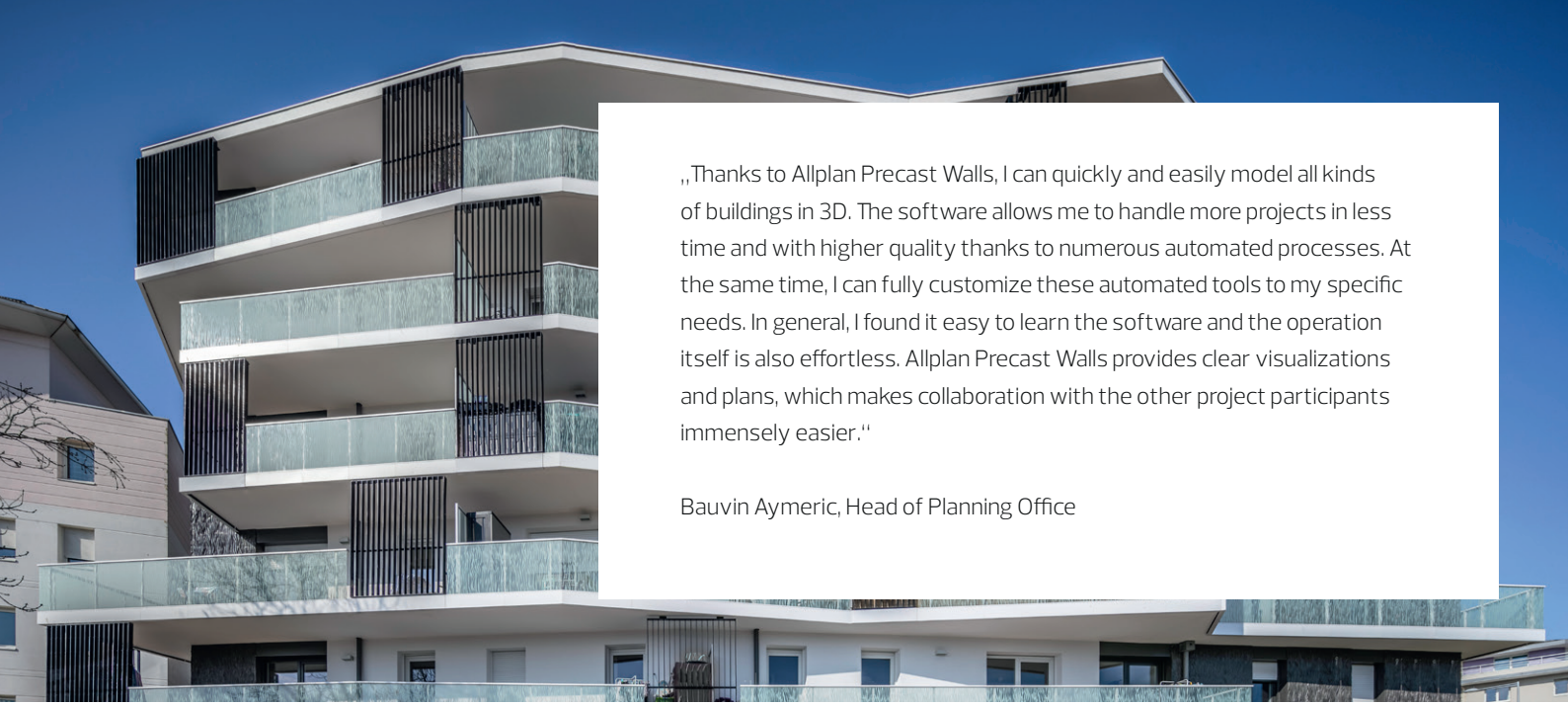
## ADHERENCE TO DELIVERY DATES

In total, SPL planned and produced 490m<sup>2</sup> of precast walls for the residential building, including 33 residential units divided into 5 floors, plus the first floor. The planning time for the walls was six months in total. Subsequently, the precast walls were erected within four months.

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### PROJECT INFORMATION AT A GLANCE

- > Focus: Precast construction
  - > Precast design software: Allplan Precast Walls
  - > Precast design: Société de Préfabrication de Landaul
  - > Residential building with 33 units
  - > 5 floors plus first floor
  - > 490 m<sup>2</sup> precast walls with matrices
  - > Structural matrix used: Reckli 2/186 DALARNA
  - > Design time: 6 months
  - > Construction time: 4 months
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„Thanks to Allplan Precast Walls, I can quickly and easily model all kinds of buildings in 3D. The software allows me to handle more projects in less time and with higher quality thanks to numerous automated processes. At the same time, I can fully customize these automated tools to my specific needs. In general, I found it easy to learn the software and the operation itself is also effortless. Allplan Precast Walls provides clear visualizations and plans, which makes collaboration with the other project participants immensely easier.“

Bauvin Aymeric, Head of Planning Office

## SOCIÉTÉ DE PRÉFABRICATION DE LANDAUL

SPL, Société de Préfabrication de Landaul, is located in the northwest of France. SPL specializes in the production of precast walls and has two state-of-the-art precast factories in Landaul and two design offices. The company was founded in 2008 by Manuel de Sousa Reis, Jean-Yves Tranvaux and Stéphane Renaudin.

SPL employs about 80 people and produces approximately 270,000 m<sup>2</sup> of precast concrete walls annually. SPL offers its customers a whole range of services, from sales, planning and scheduling to production. In doing so, SPL focuses on continuous development and innovation.

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## ABOUT THE COMPANY

ALLPLAN is a global provider of BIM design software for the AEC industry. True to our “Design to Build” claim, we cover the entire process from the first concept to final detailed design for the construction site and for prefabrication. Allplan users create deliverables of the highest quality and level of detail thanks to lean workflows. ALLPLAN offers powerful integrated cloud technology to

support interdisciplinary collaboration on building and civil engineering projects. Around the world over 500 dedicated employees continue to write the ALLPLAN success story. Headquartered in Munich, Germany, ALLPLAN is part of the Nemetschek Group which is a pioneer for digital transformation in the construction sector.

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