

# **Alan Rozensztajn Schipper – Software Engineer – Public Report**

## **About the Project**

This project was developed as part of the business and technology development module. The objective was to design, validate, and expand a real business proposal in the field of residential and building automation.

## **Initial Vision**

Homelab started with the idea of simplifying automation through wireless kits that don't require construction work. The concept was to provide smart solutions for lighting, air conditioning, TV, and more — all controllable by voice assistants, which is something relatively new in the market.

## **Module Development Stages**

Sprint 1 focused on understanding the home and building automation market in Brazil. The research revealed high demand and low-quality offer in Rio de Janeiro. There was a clear gap in affordable, wireless, and easy-to-install systems.

In Sprint 2, the core solution was defined: modular automation kits covering lighting, air, TV, and voice control. The focus was on flexibility, accessibility, and not requiring any construction or structural changes. The first drafts of the product and basic pricing model were also outlined.

Sprint 3 was dedicated to business modeling. A complete business plan was structured, including revenue streams through product sales, installation, and recurring maintenance; cost analysis including fixed (platform, marketing, team) and variable (devices, logistics) costs; and a target audience that ranged from homeowners and renters to elderly users, people with disabilities, and developers. The value proposition focused on offering smart, modern automation in a format that was accessible and easy to use.

Sprint 4 brought the first real-world applications. A pilot partnership with a construction company was confirmed. Homelab will deliver the first smart building in Rio de Janeiro, with automation features embedded in all apartments. These included lighting, TV, and air conditioning automation. In addition, building-wide systems like facial recognition access, CCTV, and in-apartment video intercoms were also included. Marketing materials were produced and the first Instagram campaign was launched.

Sprint 5 consolidated the validations. Search interest in automation grew 45% over the past six months. Implementation costs decreased 15% due to new wireless technologies. Clients started coming through marketing campaigns, and several architecture firms expressed interest in partnerships. The kit model was validated in three tiers (basic, intermediate, advanced), and strategic decisions were made to expand through TikTok, construction company partnerships, and optional kit offers at apartment purchase. Public sector applications such as schools and clinics were identified as a future opportunity. A data privacy and LGPD compliance structure began to be outlined.

## **Main Learnings**

Validation in real-world scenarios is more impactful than planning alone. Good marketing has a measurable effect, especially in an industry surrounded by myths. Strategic partnerships, particularly in the construction industry, offer significant scalability. And finally, simplicity and modularity are crucial for mass adoption of automation.

## **What's Next**

The next steps include growing the digital presence through content, launching the first fully automated building, exploring partnerships with the public sector, and establishing Homelab as a leading name in smart, wireless, and accessible automation.