Problem Statement

We are 🖊️

a group of four ICT and Infrastructure university students working on a project to design the network for a newly constructed student complex.

We're trying to

create a secure and efficient network infrastructure that supports the academic and personal needs of the residents.

But

the network design needs to address multiple technical challenges, including providing isolated LANs for each apartment, inter-apartment connectivity, centralized internet management, and added features like ad-blocking and real-time energy monitoring.

Because

the current infrastructure lacks a detailed plan to meet these requirements, and there is no established method to measure and validate the security or effectiveness of the system.

Which makes us feel

concerned that without a comprehensive design, the infrastructure may fail to meet its objectives, impacting usability, security, and the overall satisfaction of the residents.