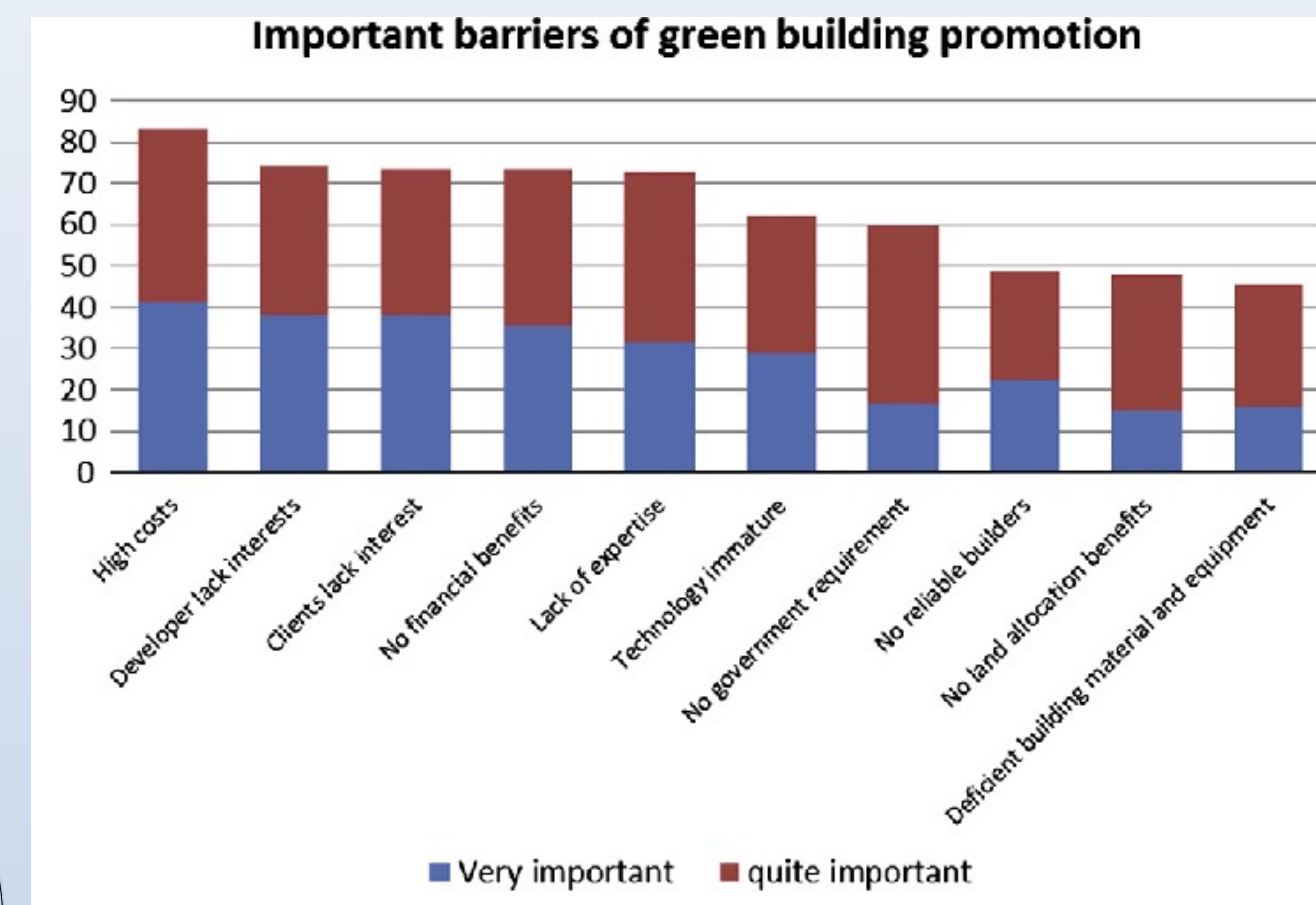
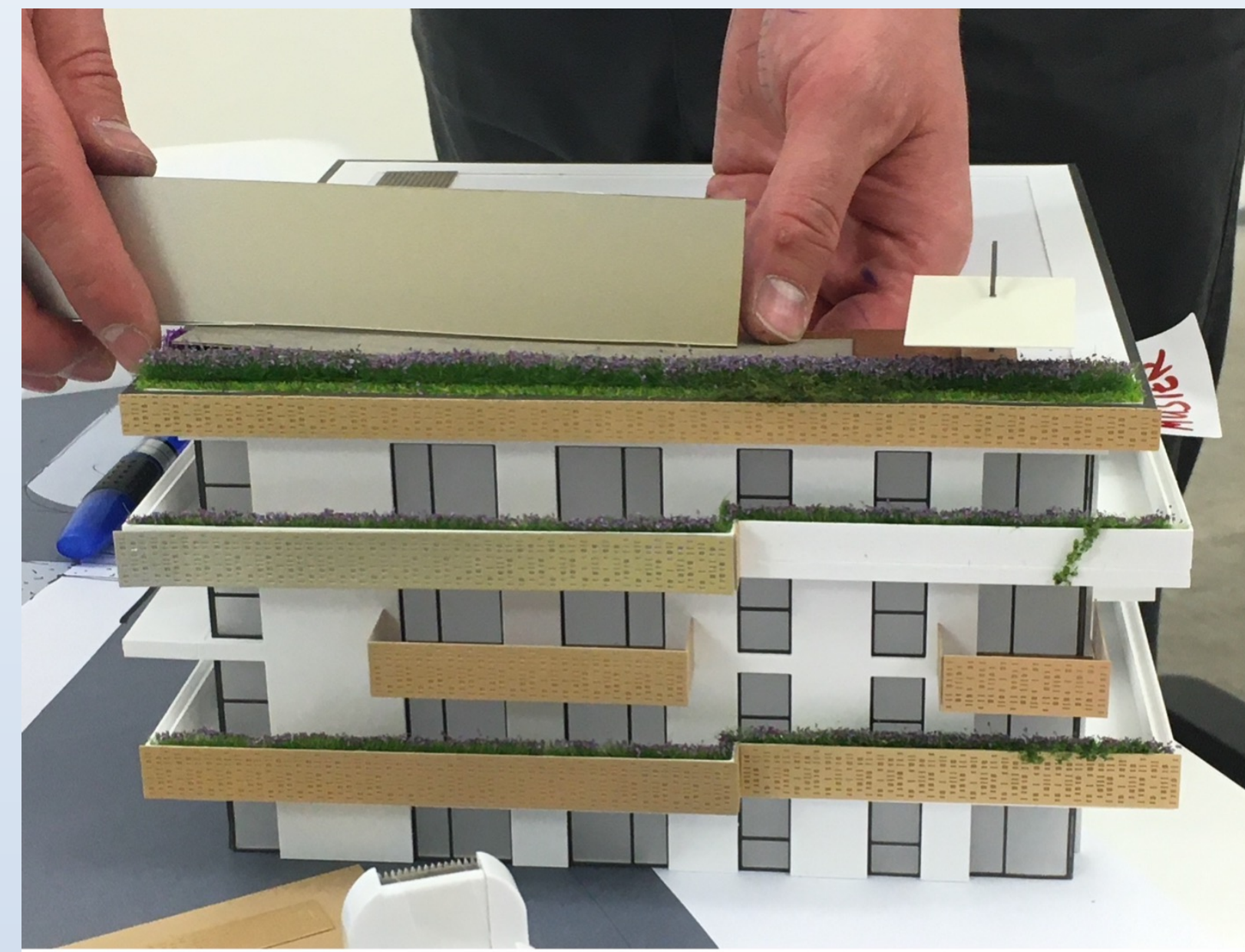


# Sustainable Construction: The Advantages and Disadvantages of Modern Construction Technologies

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**Figure:** Factors in construction which prevent companies from moving towards sustainable methods.

## Background

- The built environment emits about 2/3 of the world's CO<sub>2</sub>
- A large increase in world's population increases the demand for more buildings
- Tight time schedules force construction companies to work fast and make them cut corners
- Bad water and waste management pollutes the surrounding environment
- Cheap materials get produced and delivered by other countries

## Thesis Questions

- How does the industry build now? How should they build?
- What are advantages or disadvantages of sustainable construction?
- What needs to be done to promote changes?

## Internship and Methods

- I interned with Herbert Bau GmbH in Vienna.
- I worked within a team of students and conducted research on sustainable construction.
- Our job was to find different methods of construction and maintenance, and to figure out what prevents companies from changing.
- We did weekly observations on construction sites

## Results

The results of my research came from different research papers, site observations and interviews with different professionals.

### Two common construction methods:

- Pre-fabricated method
- On-Site method

### Building Styles:

- Energy efficient Building
- Environmentally friendly Building
- Sustainable Building

### Advantages of Sustainable Construction

- Decrease construction time, which decreases emission of GHG
- Increases health of the surrounding Environment
- Saves energy during construction

### Disadvantages of Sustainable Construction

- High financial expenses
- Specialist workers
- Complex design procedures

### Changes that should be made:

- Governments need to make sustainable construction more attractive for companies
- Support local material producers to prevent price dumping by big international companies
- This will reduce transport time of material

## Significance

The importance of this project is to show that small changes in the way we build and maintain buildings can have big positive impacts on the environment

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