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# A Digital Survey for Investigating the Affordable Student Housing Challenge in Aachen, Germany

## HUMZA MIRZA

A Digital Survey for Investigating the
Affordable Student Housing Challenge in
Aachen, Germany

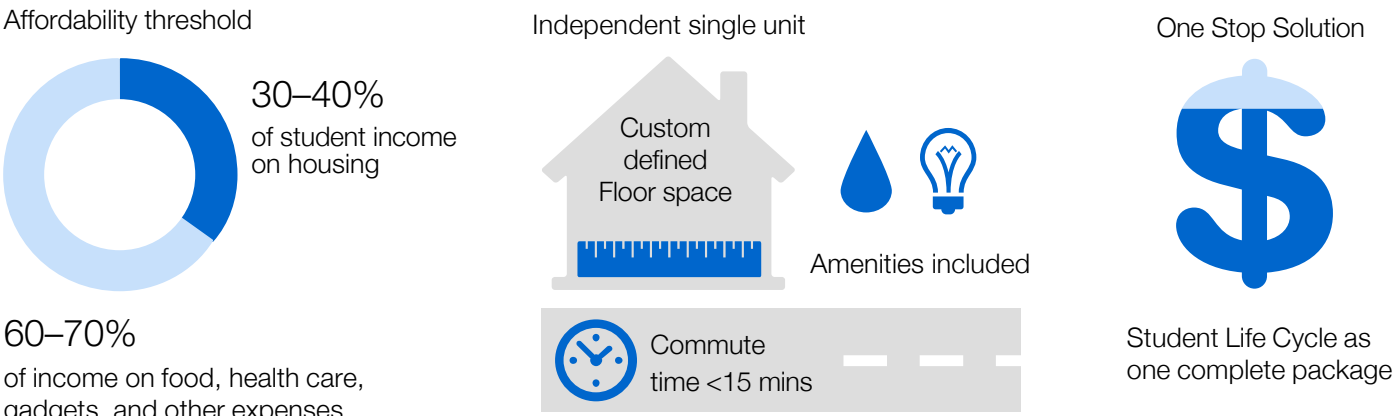# A digital survey for investigating the affordable student housing challenge in Aachen, Germany

Access to decent, affordable housing is so fundamental to the progress, health and well-being of students. Yet cities struggle with the dual challenge of attracting more students and at the same time providing housing at a reasonable cost for domestic and international students. In this report, we look at the dimensions of this problem—and explain how we addressed this challenge successfully.
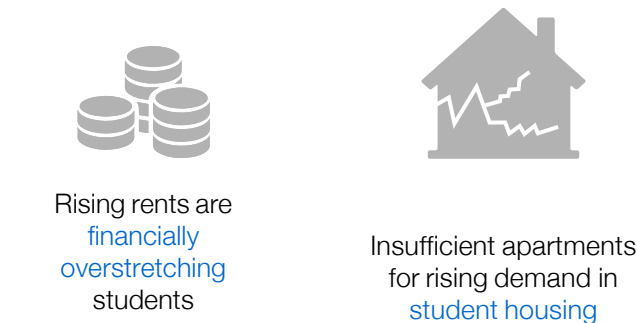
• Aachen is situated directly on the border with Belgium and the Netherlands. It is Germany's most westerly city, with a population of 250,000. More than 50,000 students attend Aachen's four major colleges and universities (Rhineland-Westphalian Technical University [RWTH], University of Applied Sciences, Catholic University of Applied Sciences and Academy of Music)

• There are currently 45,377 students enrolled at the RWTH Aachen and 11,300 students at the FH Aachen. The city has seen 36% increase in students in the last 10 years and RWTH Aachen boosts 8,252 new enrollments every year.

• There are roughly 5,129 places in 24 residence halls in Aachen and nearby. These rooms consist from classic single rooms and apartments to shared apartments and family apartments for students with children including few accessible apartments for students with disabilities.

• Based on current trends in incoming student growth, we estimate that by 2023, —at least few thousand students —would occupy crowded, inadequate, and unsafe housing or will be financially stretched. This can be currently seen in late March and mid-September, there are lines of students in front of studios, apartments, and dorms, who still need a place to live. The chances of finding a convenient, affordable and comfortable place to live long-term does have sleek chances at the beginning of each semester.

• We identify four ways to reduce the cost of and ease the market demand for student housing by 20-50%: unlock potential land at an optimal location (ask city government or university), reduce construction costs through innovative construction engineering, increase operations and maintenance efficiency by offering one-stop solution, reduce financing costs for buyers and developers while making the complete package attractive for investors.

• Our approach is an excellent opportunity for developers, investors, and financial institutions, city government and university. A proof-of-concept is Student Campus in Melaten with furnished 287 apartments, parking spaces and amenities included, in addition integrated digital and personalized student life services.

• This is possible due to innovative modular frame and space construction technique. It benefits by reduced costs, shorter construction times, and custom-built permanent or temporary living spaces.

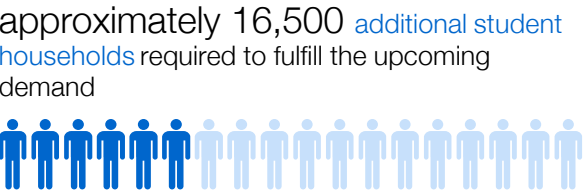# We define three parameters to custom built student accommodation tailored to city and their local requirements

## Affordability threshold

**30–40%**
of student income on housing

**60–70%**
of income on food, health care, gadgets, and other expenses

## Independent single unit

Custom defined Floor space

Amenities included

Commute time <15 mins

## One Stop Solution

Student Life Cycle as one complete package

## The challenge today …

Rising rents are **financially overstretching** students

Insufficient apartments for rising demand in **student housing**

## … and by 2025

approximately 16,500 additional student households required to fulfill the upcoming demand

# We consider four aspects are crucial for successfully executing affordable student housing: Land, Development, Operations, & In-House Financing.

| Bar | % | Label |
|---|---|---|
| | 100 | Annualized cost of a standard housing unit |
| | 23 | **Land** — Unlocking unused land |
| | 16 | **Development** — Deploying modular construction approach |
| | 2 | **Operations and maintenance** — Achieving scale efficiency for student life |
| | 7 | **In-House Financing** — Reducing cost, expanding access |
| | 52 | Optimized cost |
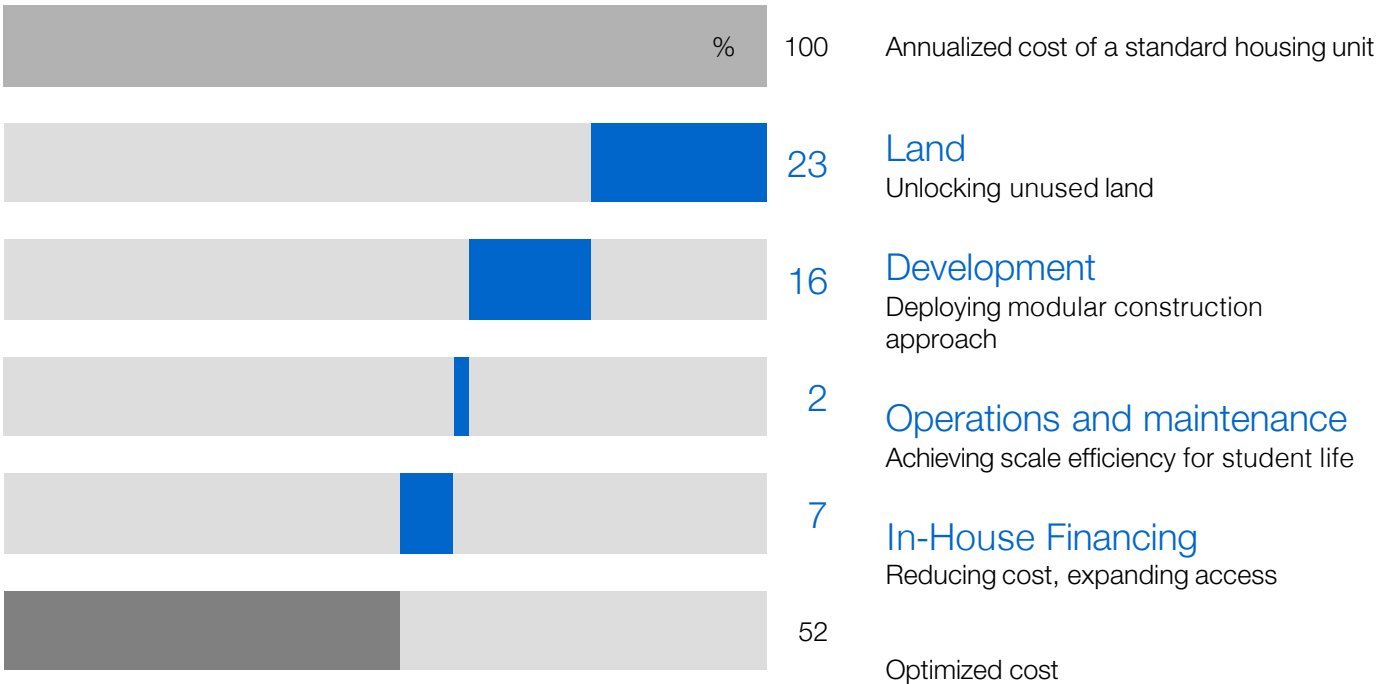
# Proposal

The struggle to obtain decent, affordable student housing could affect thousands of students as early as 2020 and within a decade and could potentially make urban student dwellers unsafe, left with inadequate housing or financially stretched due to very high rent costs. Our four identified aspects that we lay out in this report, can bring decent homes within reach of hundreds to thousands of students due to our  of households and narrow the affordable housing gap.

We see affordable student housing accommodation as a global challenge -- and also an opportunity -- therefore we conduct a digital survey regarding student life and housing in Aachen to approach this problem.

Based on the results of this survey bespoke solutions can be devised for City Aachen and Universities for affordable student housing with integrated services.

# FAQ about our affordable housing solution and planned digital survey

### FAQ 1: The custom made modular framework has no economic case for student housing.
**Answer**: Affordable housing in the right locations boosts the city's productivity by integrating lower-income students into the economy and reducing costs to provide shelter and services (see *Refugee* & *Care* campus in Aachen). It enables labor mobility, opening a path to rising incomes, giving households more to spend on goods and services in their neighborhoods and, over time, enabling them to move up the income pyramid and help drive city GDP growth.

### FAQ 2: Is this a container?
**Answer**: The custom made modular framework design is based on a Modular Building Technology which connects cross-material timber elements, even with reinforced concrete elements, and offers optimal solutions for fire protection, noise protection, thermal protection and efficiency.

### FAQ 3: Addressing the affordable housing gap means constructing new buildings.
**Answer**: We believe in building custom made solution for each case. Modular Building Technology can construct on existing housing stock and even extend it with new units that are complementary or temporary parts of the same solution. University cities need to provide housing where students can flourish, and we do just that by building new temporary custom made units or permanent objects in the most optimal manner.

### FAQ 4: Does your custom made modular solution guarantees high standards.
**Answer**: Absolutely! It may be even better at times when compared to conventional construction techniques especially when there is limited space or communal facilities. All buildings are noise, fire and thermal protected. Load calculations and design according to DIN and cross checked by third party.

### FAQ 5: Sorry, there is no land for affordable student housing.
**Answer**: Cities and universities have always some land at appropriate locations that could be unlocked. Any under-utilized or idle land—including government-owned land—that could support successful housing development can be used temporarily on lease. Land can be later freed for new development. This is an attractive source of income for city or university too.

### FAQ 6: What is the purpose of the digital survey?
**Reality:** We believe insights gained from survey and along with our existing approach we can can provide large-scale, low-cost student housing accommodations. We must inform and research the market thoroughly first.

### FAQ 7: What are some sample questions for this survey?
**Answer:** Small, single iteration survey: within 15 mins, relevant to marketing research objective topics, Simple layout, since it is web-survey, provide a counter of progress on web page with questions like:Age, gender, birthplace, study program, semester, Staying since and till when, current street Address or Student Dormitory, are cost, space, and location desired attributes to students (current + prospective) when choosing List of student accommodation services required; do students (current and prospective) choose a school verse another based on these variables; Other variables and their weight; Student background and degree affiliations; Satisfaction with current accommodation; Facilities included or required; Budget, list of expenses and approximately amount paid for amenities; Catering or Housekeeping services required; Cleanliness, infrastructure, modern or not; Management services or any digital solutions e.g. Post service, E-Mail or Wifii included;Digitally optimize balance of location, price, space, and demand of students; How to design housing facility for graduates; How to predict the desirable apts. of the future; How to optimize balance of location, price and space to offer students unparalleled outstanding life and learning experience; Effect of student background and Degree affiliation on choice of apartments .etc

### FAQ 8: If the results of the survey hint towards a new student campus what would you do?
**Answer:** Propose a well-located, properly maintained, custom built for specific price-to-area ratio that can be quite profitable.

### FAQ 9: Student housing is a problem.
**Answer**: Yes, lack of access to decent housing is a an issue, but some solutions are relatively easy.

### FAQ 10: Your new student housing idea requires a massive commitment of resources.
**Answer:** Speed of delivery may be the most important factor in success.

## Planning

- ☐ Clarify purpose and topics (complete survey planning tool)
- ☐ Consider other department surveys to assess overlap
- ☐ Clarify target population (whom will results represent?)
- ☐ Define sampling approach (identify and evaluate sampling frame if needed)
- ☐ Develop a respondent communication plan (survey invitation, reminders, etc)
- ☐ Describe dissemination plan for findings, including how results are to be used
- ☐ Prepare timeline for development, administration, analyses, reporting, and dissemination

## SURVEY DEVELOPMENT

- ☐ Outline survey
- ☐ Search for existing items
- ☐ Create first draft
- ☐ Hold Internal review and revise
- ☐ Pretest draft survey (e.g., cognitive interviews, expert review, focus groups)
- ☐ Revise draft based on pretest findings
- ☐ Communication review
- ☐ Translate to other languages (if required)
- ☐ Create final survey instrument ( test survey and upload )
- ☐ Analyze pilot data and revise

## SURVEY ADMINISTRATION

- ☐ Send survey pre-notice
- ☐ Verify contact list (e.g., evaluate e-mail bouncebacks)
- ☐ Send survey
- ☐ Send reminders
- ☐ Close survey

## Data Analysis and Sharing of Results

- ☐ Complete analysis plan and outline findings document (including methods)
- ☐ Clean data
- ☐ Analyze data
- ☐ Create first draft of survey findings document
- ☐ Have draft reviewed
- ☐ Prepare final draft
- ☐ Disseminate survey findings to audience

## Exhibit: Number of Students Responses Regarding Affordable Student Accomodation



48 (5.45%)
80 (9.09%)
125 (14.2%)
152 (17.27%)
188 (21.36%)
287 (32.61%)

**Category**
- Not affordable
- Location unattractive
- Equipment inappropriate
- Discrimination
- Too small
- Not accessible (barrier-free)
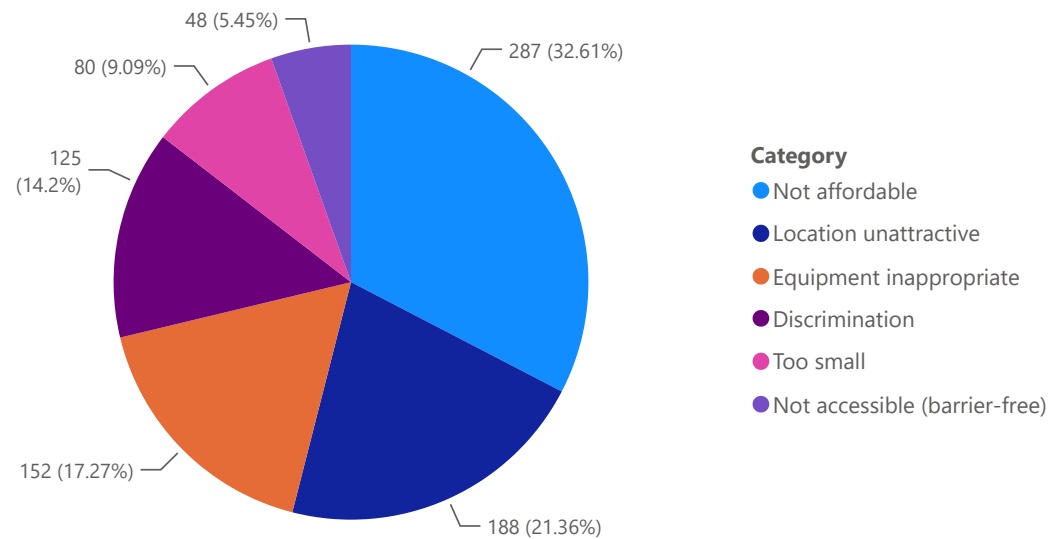
## Exhibit: Number of Students Responses by Degree Programme



Zahnmedizin 0.6%
Software Systems 0.6%
Mathematik 1.2%
Nachhaltige 2.6%
Civil Engineering 0.9%
Physics 1.2%
Computer Engineering 1.7%
Wirtschaftsingenieurwesen 2.0%
Elektrotechnik und 4.0%

Bauingenieurwesen 2.0%
Maschinenbau 7.8%
Informatik 4.9%
Architecture 1.2%
Medizin 2.3%
Architektur 2.6%
Computer Science 1.4%
Mechanical Engineering 2.9%
Wirtschaftsingenieurwesen 1.4%
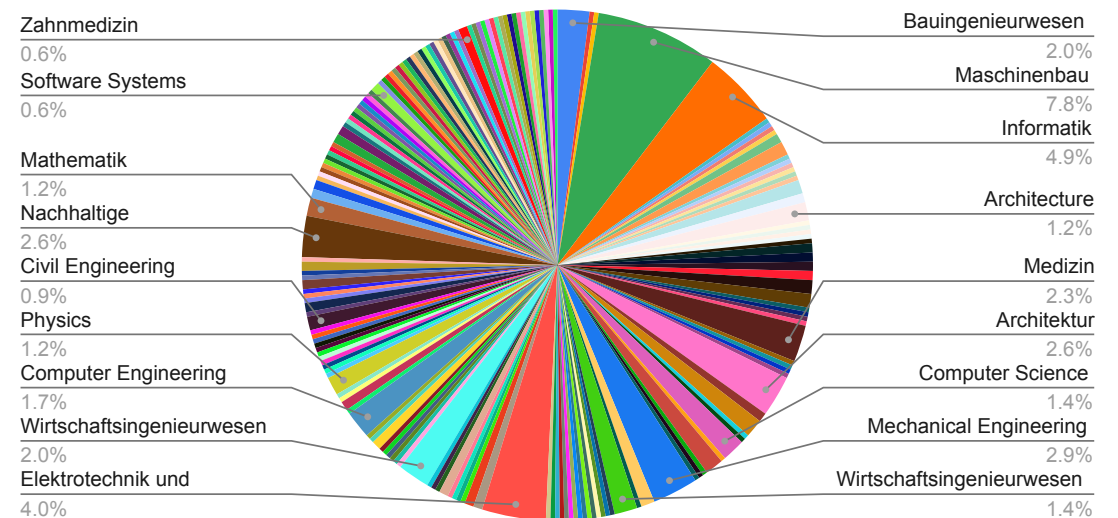
## Exhibit: Gender of Student



Prefer not to say
48 (5.45%)
7.4%
Female 27.4%
Male 65.2%
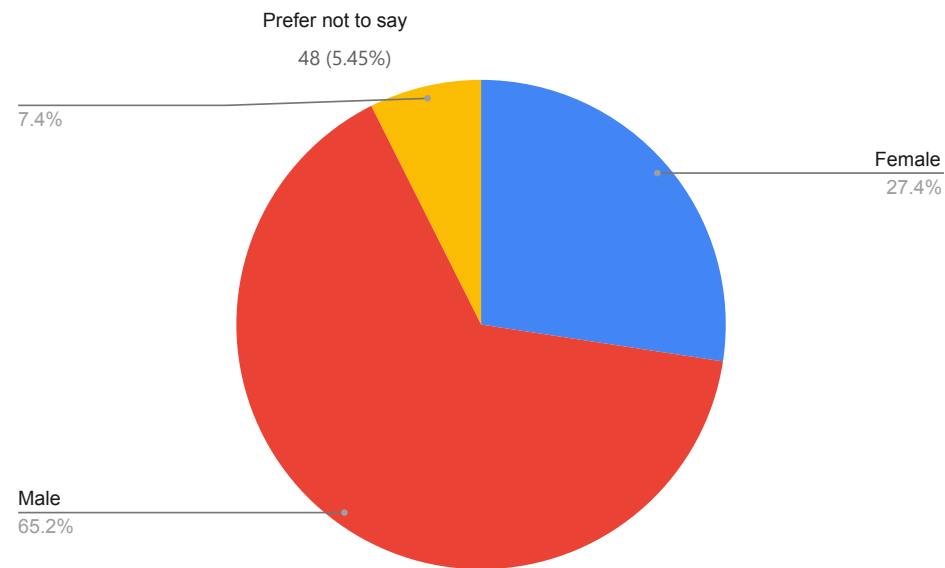
## Exhibit: Nationality of Students



1.2%
Turkey 1.7%
Egyptian 1.7%
Iranian 1.2%
Indonesian 1.2%
Türkisch 1.4%
Turkish 5.2%
Romanian 1.2%
Greek 1.2%

Spanish 1.4%
India 2.6%
Indian 5.8%
Deutsch 10.4%
German 5.2%
China 11.5%
Chinese 2.6%

9
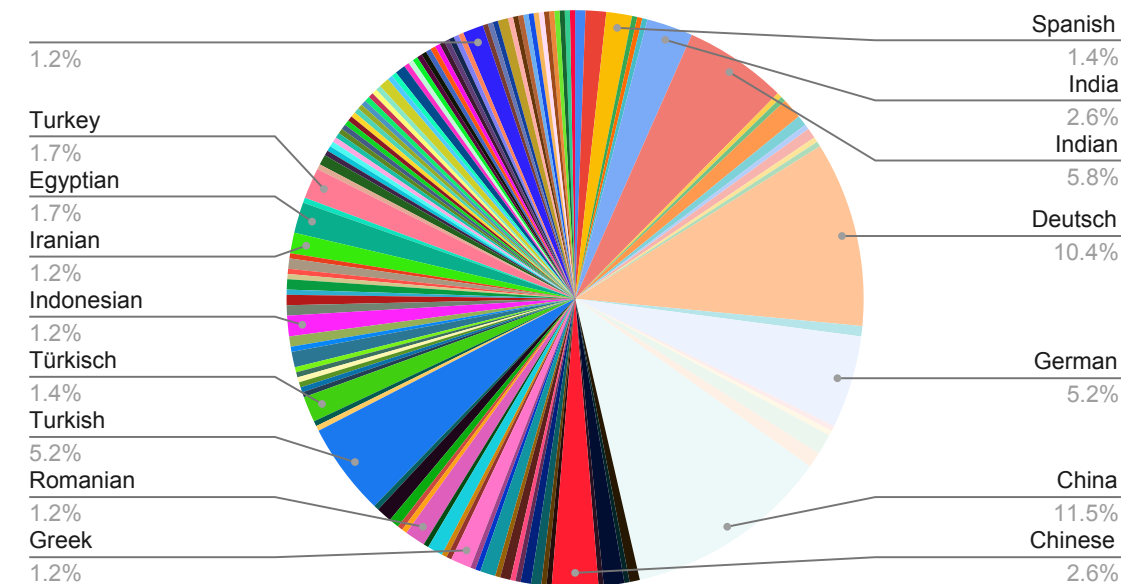
## Exhibit: Preferred Apartment Type

704 responses

| Apartment Type | Count (Percentage) |
|---|---|
| Apt. w/o Furniture w/o Balcony | 178 (50.9%) |
| Apt. w. Furniture w. Balcony | 149 (42.6%) |
| Apt. w. Furniture, w. Balcony | 159 (45.4%) |
| Single Apartment, w. Furniture | 218 (62.3%) |
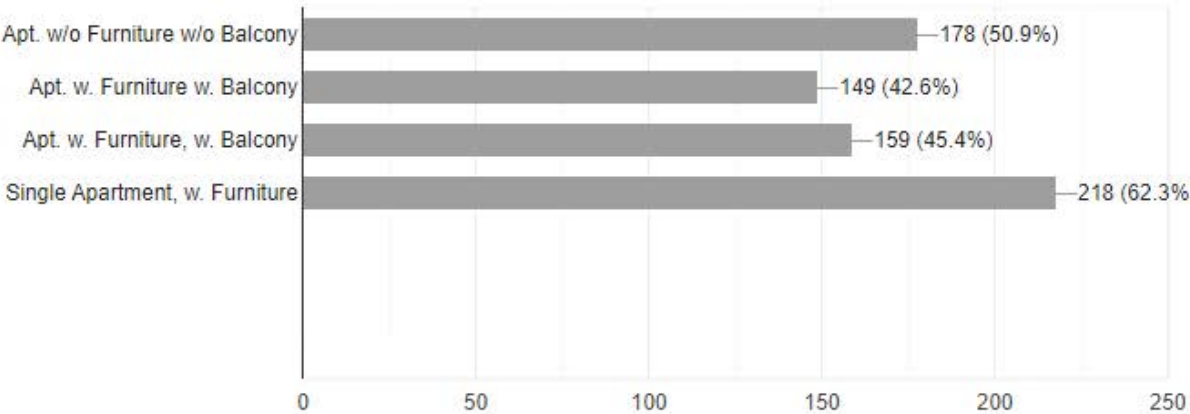
## Exhibit: Preferred Floor

350 responses

| Floor | Count (Percentage) |
|---|---|
| Ground floor | 36 (10.3%) |
| First Floor | 108 (30.9%) |
| Second Floor | 120 (34.3%) |
| Any Floor | 231 (66%) |
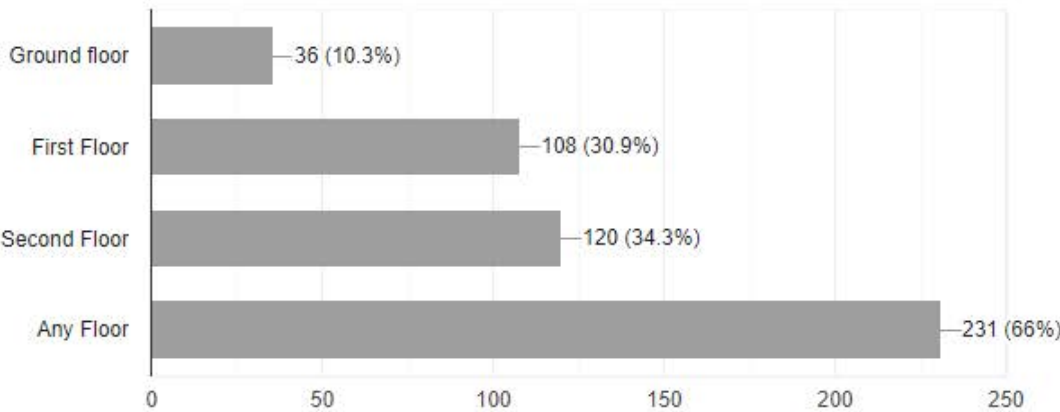
## Exhibit: Tolerance of Noise

338 responses

| Rating | Count (Percentage) |
|---|---|
| 1 | 29 (8.6%) |
| 2 | 55 (16.3%) |
| 3 | 148 (43.8%) |
| 4 | 91 (26.9%) |
| 5 | 15 (4.4%) |
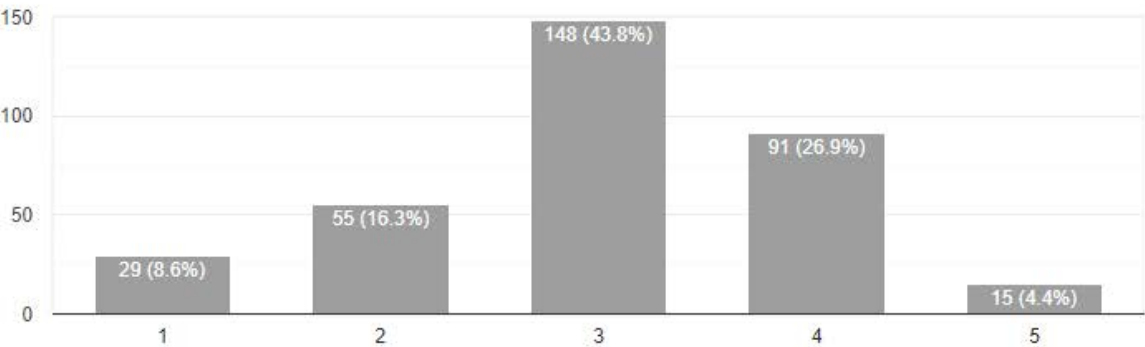
## Exhibit: Duration of Stay in Student Accomodation

880 responses



- Less than 6 months
- Atleast 1 year
- More than 1 year
- For complete study programme

12.8%
17.3%
51.8%
18.2%
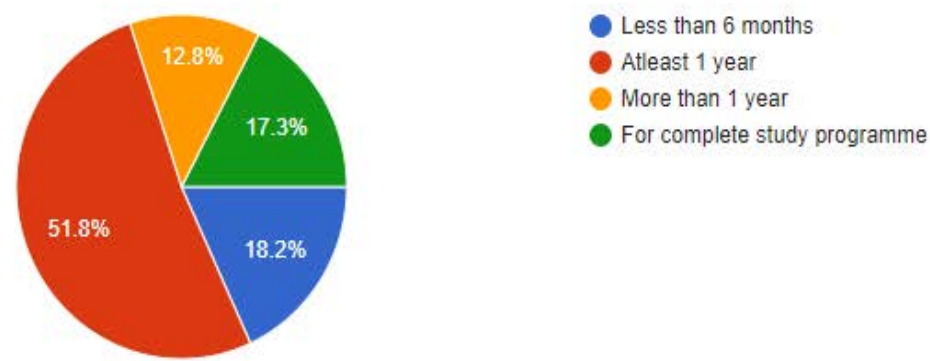
## Exhibit: How often will you be away from student accommodation?

889 responses



- No Information available yet.
- On weekends
- During semester break
- Yearly

38.5%
13.9%
8.9%
38.8%
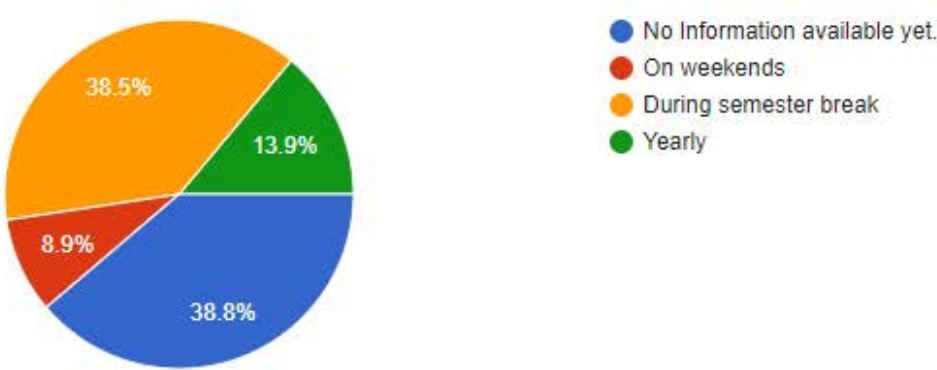
## Exhibit: Which languages are understood?

889 responses



- German
- English
- Mandarin
- Spanish
- Turkish
- English, German, Turkish
- aserbaidschanish
- French

▲ 1/13 ▼

29.4%
31.1%
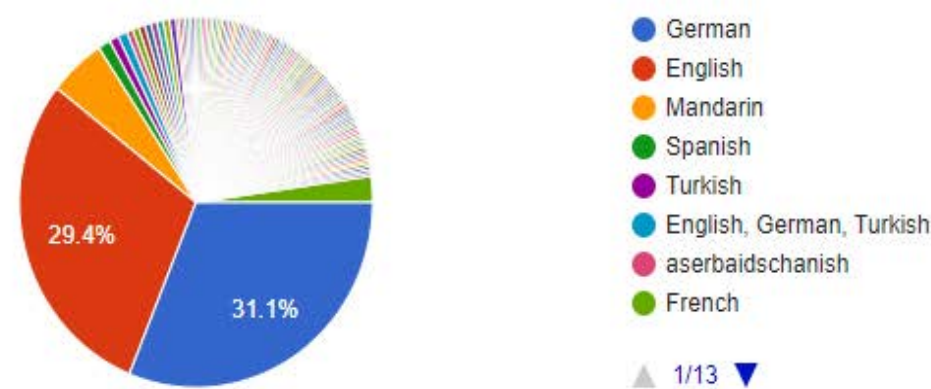
## Exhibit: Medical Health Insurance Coverage in Europe

889 responses



- Yes
- No
- Not yet

93.5%

Exhibit: What does Student Accommodation mean to you?



- I would like to do things with my neighbours from time to time, e.g. cooking, going out or doing sport., I am always there for my neighbours and I wish to be able to talk to them about things that are on my mind as well.
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- It means being close to campus which will hopefully also serve as a chance to get engaged in student life.
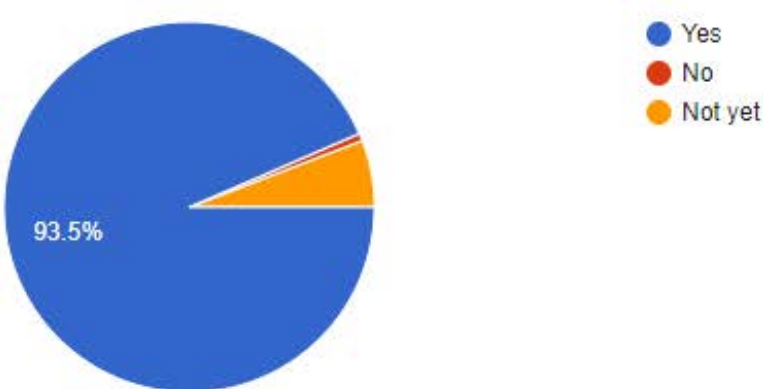- I would like to do things with my neighbours from time to time, e.g. cooking, going out or doing sport., I am always there for my neighbours and I wish to be
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