**Step a: Guiding Questions**

Challenge: Advising on how the Haaksbergerstraat in Enschede can be more resilient against rainwater nuisance.

What is the capacity of the sewage system of the Haaksbergerstraat?

How much of the area is paved?

How much water is coming into the Haaksbergerstraat from other neighborhoods?

What is the capacity of the current storage facilities?

What are the current measures that were taken when the area was flooded and what is the Municipalities water nuisance policy?

What is the recurrence time of heavy precipitation events that result in flooding?

What were the damages of the water nuisance in 2024?

What type of sewage system is present in the Haaksbergerstraat?

Are there any green roofs in the street?

Which department at the municipality is responsible for water nuisance?

Which location experiences the most water nuisance?

# Activities and resources

**Interview municipality**

* Activity: Find out who was involved in the floodings of Haaksbergerstraat and currently is involved in the water nuisance policies of the Municipality. Conduct an interview with this person to gain more knowledge about the problem.
  + Things we need to know:
    - What type of sewage is present and what are the capacities?
    - What were the implications of the event in 2024?
    - What are the current measures that were taken when the area was flooded and what is the Municipalities water nuisance policy?
    - What is the capacity of the current storage facilities?
* Resource: word for taking notes.

**Neighbourhood characteristics**

* Activity: define the study area and gather important characteristics which are important as input for the model we are going to build.
  + Things we need to know:
    - Are there any green roofs in the street?
    - How much of the area is paved?
    - Boundaries of the study area and elevation
* Resource: Google maps, kadaster kaarten Enschede, interview Municipality

**Water parameters**

* Activity: gain more knowledge on relevant water information.
  + Things we need to know:
    - How much water is coming into the Haaksbergerstraat from other neighborhoods?
    - What is the recurrence time of heavy precipitation events that result in flooding?
    - What are the infiltration and storage capacities of unpaved areas and green roofs?

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| Interview municipality | | | | | | | | | | | | |
| What is the capacity of the sewage system of the Haaksbergerstraat? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Search online Info. | | | | | Open-source doc. | | | |  | | Roel&Jonne | |
| Interview municipality | | | | | Interview template | | | |  | | Roel&Jonne | |
|  | | | | | | | | | | | | |
| What is the capacity of the current storage facilities? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Interview municipality | | | | | Interview template | | | |  | | Roel&Jonne | |
|  | | | | | | | | | | | | |
| What were the implications of the water nuisance in 2024? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Search online | | | | | Online articles | | | |  | | Roel&Jonne | |
| Interview municipality  Interview template | | | | | |  | | |  | | Roel&Jonne | |
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| What are the current measures that were taken when the area was flooded and what is the Municipalities water nuisance policy? | | | | | | | | | | | | |
| **Guiding activities** | | | | | | **Guiding resources** | | | **Plan (time/when)** | | **Who** | |
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| What type of sewage system is present in the Haaksbergerstraat? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Interview municipality | | | | | Interview template | | | |  | | Roel&Jonne | |
|  | | | | | | | | | | | | |
| Which department at the municipality is responsible for water nuisance? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Using university network | | | | |  |  | | | Roel&Jonne | |
|  | | | | | | | | | | | | |
| Neighbourhood characteristics | | | | | | | | | | | | |
| What percentage of the area is paved and what is greenery? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Analyze Google map | | | | | Google Maps | | | |  | | Luca | |
| Interview municipality | | | | | Interview template | | | |  | |  | |
|  | | | | | | | | | | | | |
| Are there any green roofs in the street? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Visual check | | | | | Google maps/field work | | | |  | | Stefan | |
|  | | | | | | | | | | | | |
| Which location experiences the most water nuisance? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Check maps&articles | | | | | |  | | |  | | Luca | |
|  | | | | | | | | | | | | |
| Water parameters | | | | | | | | | | | | |
| What is the recurrence time of heavy precipitation events that result in flooding? | | | | | | | | | | | | |
| Guiding activities | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
| Search Online | | | | | Online articles | | | |  | | Stefan | |
| Calculations | | | | | Recurrence time | | | |  | |  | |
|  | | | | | | | | | | | | |
| How much water is coming into the Haaksbergerstraat from other neighborhoods? | | | | | | | | | | | | |
| **Guiding activities** | | | | | **Guiding resources** | | | | **Plan (time/when)** | | **Who** | |
|  | | | | |  | | | |  | |  | |
| What is the infiltration and storage capacity of green roof? | | | | | | | | | | | | |
| **Guiding activities** | | **Guiding resources** | **Plan (time/when)** | **Who** | | | |
| Search online | | | | | | Acticles | | |  | | Arend | |
| What is the infiltration and storage capacity of unpaved areas? | | | | | | | | | | | | | |
| **Guiding activities** | | | | | | **Guiding resources** | | | **Plan (time/when)** | | **Who** | |
| Search online | | | | | | **Articles** | | |  | | Arend | |

Video ideas:

* Use model output to show how high the water heights will be on the streets.