

# A handbook for designing SeaBubble docks

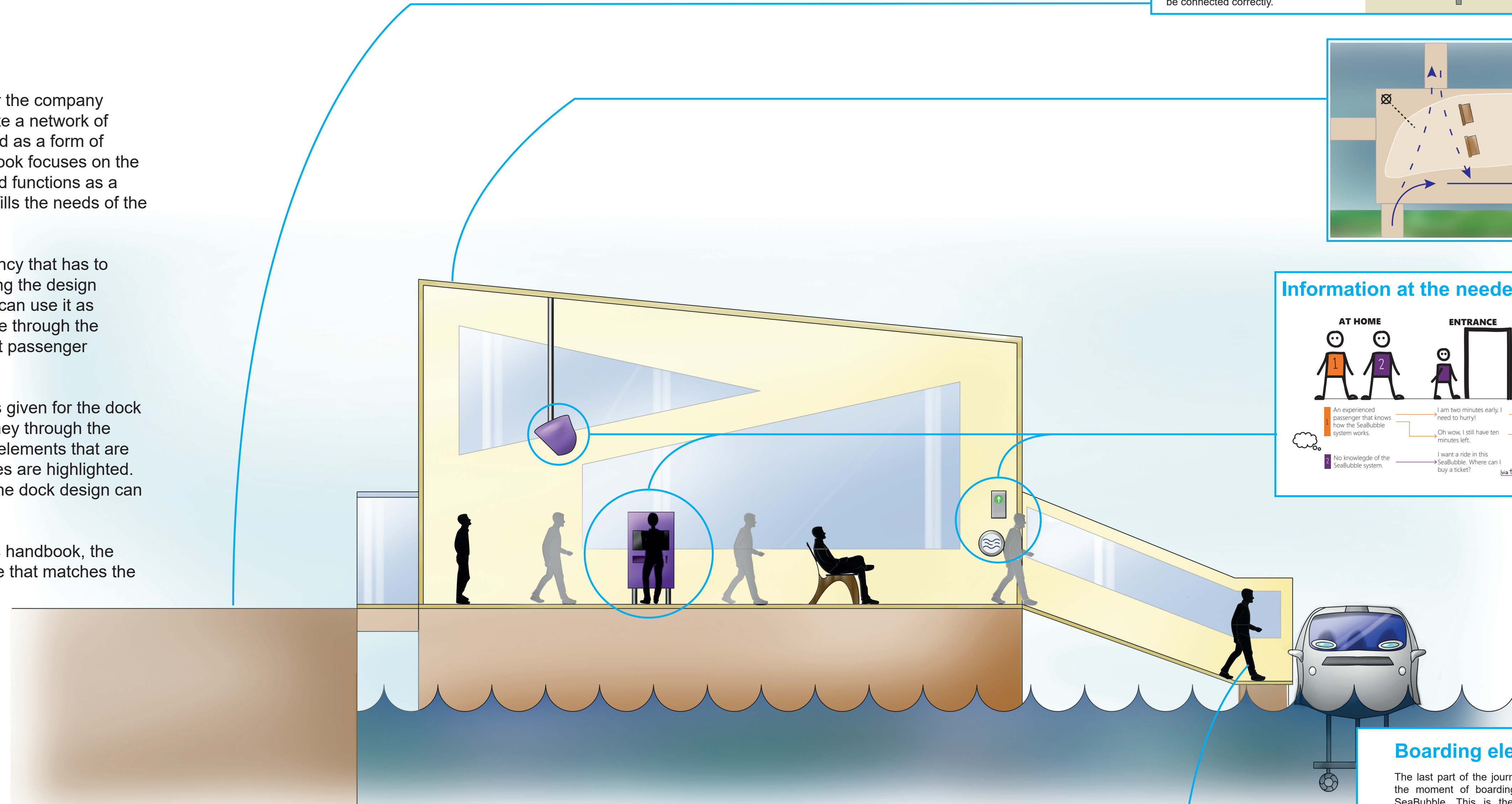
## The passenger journey starts at a SeaBubble dock

This handbook is created for the company Advier. Advier wants to create a network of SeaBubbles that can be used as a form of public transport. This handbook focuses on the design process of a dock and functions as a tool to create a dock that fulfills the needs of the passengers.

Advier will find a design agency that has to create the concepts. By giving the design agency this handbook, they can use it as inspiration and as a guidance through the design process of a pleasant passenger journey.

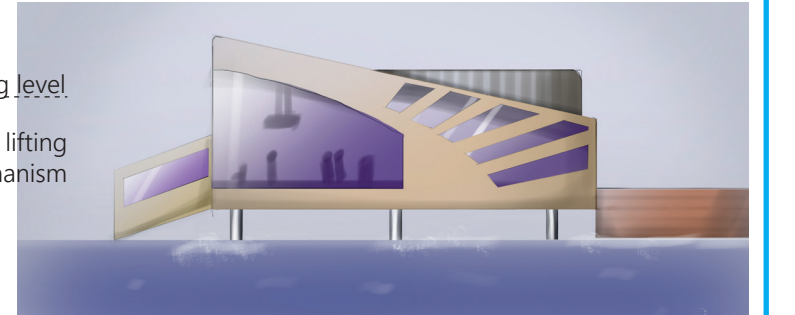
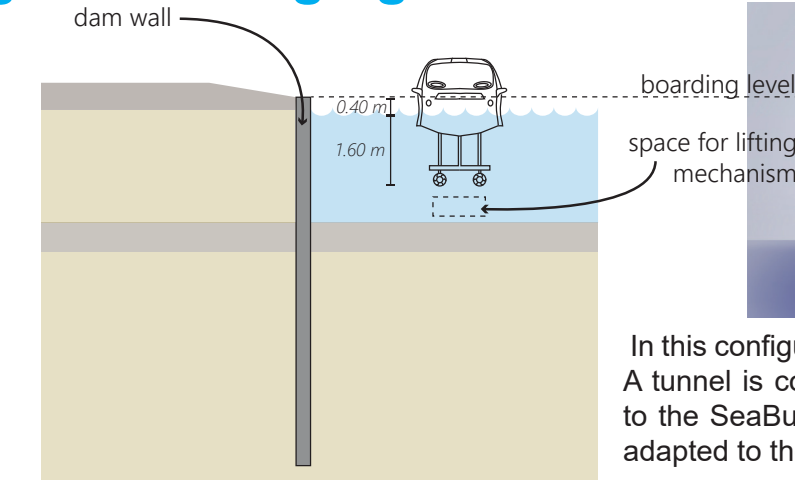
On this poster an example is given for the dock design. The passenger journey through the building can be seen. A few elements that are involved in the design choices are highlighted. This way an overall view of the dock design can be created.

By following the steps of this handbook, the dock will get a defined shape that matches the needs of the passengers.



### Dealing with changing water levels

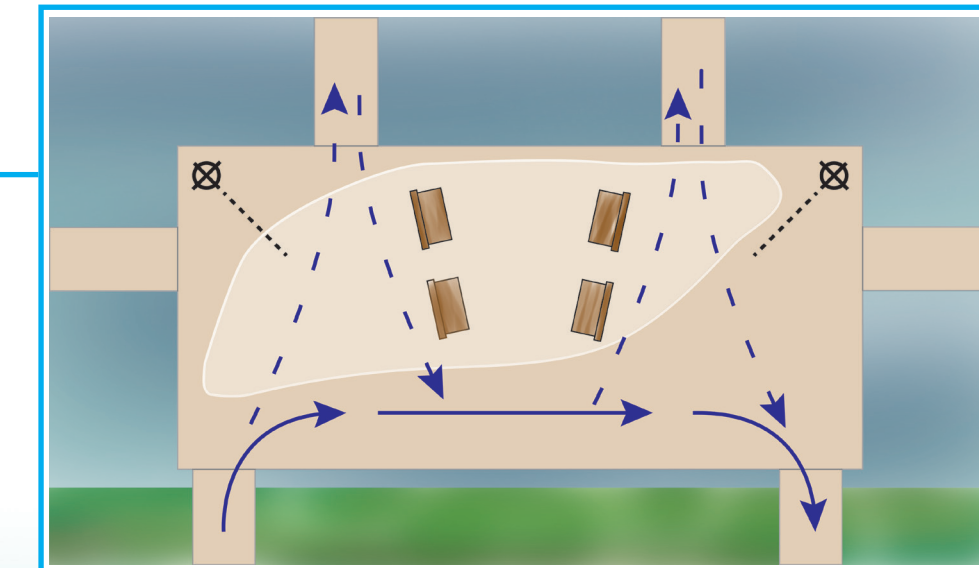
The location for the network of SeaBubbles is in the area of Dordrecht. The waters of Dordrecht are connected with the sea. The tides of the sea will affect the water level during a day. Due to this changing water level, the building or a part of the building needs to be flexible, so that the SeaBubble can dock on water level. Before choosing the configuration, it is important to analyse the type of quay so that the building can be connected correctly.



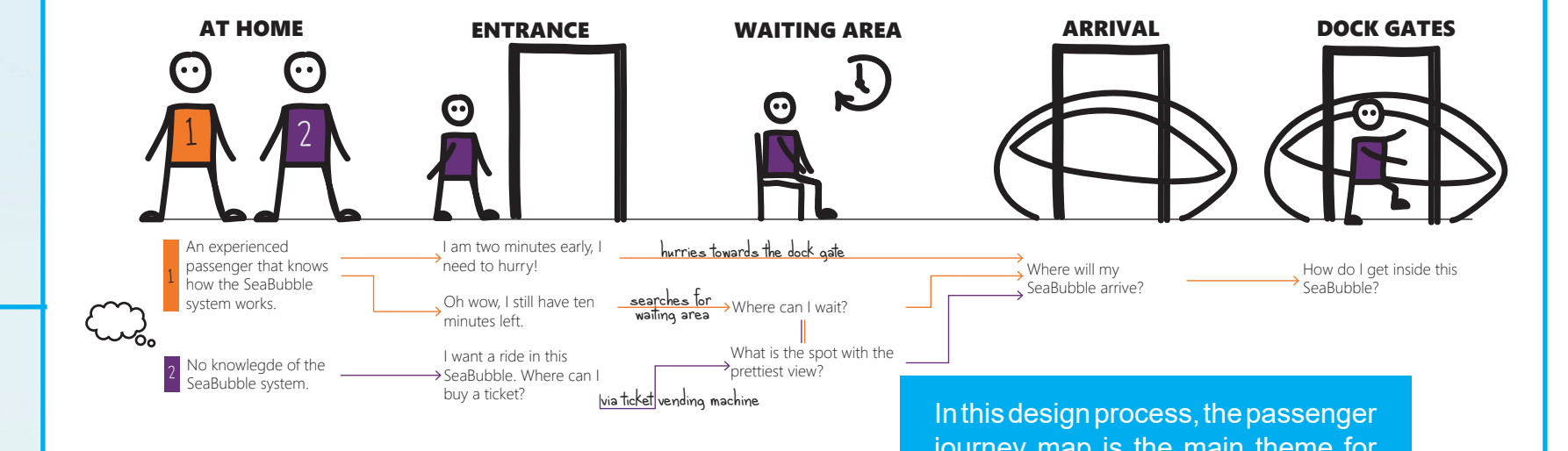
In this configuration is chosen for a building above the water level. A tunnel is connected to guide the passengers from the building to the SeaBubble. In this situation, only the tunnel needs to be adapted to the water level.

### Ideal building layout

The layout of this building is based on a crowd flow simulation. This simulates different flows of passengers, entering the building through the entrance or through different dock gates. Based on the shape of the building and the percentage of sold tickets, an optimal combination can be determined for the waiting area (wit translucent shape), ticket vending machine (black target sign) and one-way structure (purple arrows).



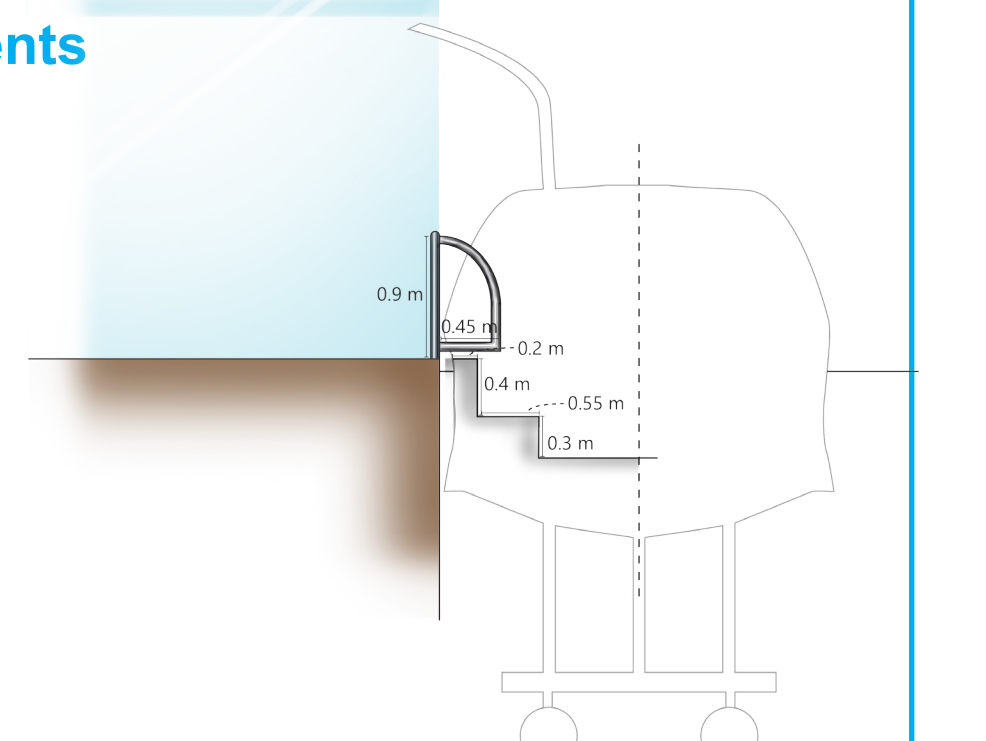
### Information at the needed moment



In this design process, the passenger journey map is the main theme for the structure. By creating a journey that matches the wishes and needs of the passengers, the experience of the journey will be good. The journey map is structured in five categories, that shows important points of the journey where choices need to be made. By following the train of thoughts in this upper picture, the needs for information can be determined. A test is created to match an information system with the needs for information of the passenger, that is found in this passenger journey map.

### Boarding elements

The last part of the journey is the moment of boarding the SeaBubble. This is the last chance to provide guidance in the passenger journey. The boarding environment feels the safest when the way of boarding is the easiest. By creating an environment with an even floor and no dangers like gaps, boarding is easy. The last step is the guidance into the SeaBubble. The scope is on designing the dock, and therefore a support on both sides of the entrance of the SeaBubble is placed.



M.J. Kuiper  
A handbook for guidance on the design process  
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Integrated Product Design

**Committee** ir. I.A. Ruiter  
ir. I.R. Smit  
**Company** Advier - Delft