

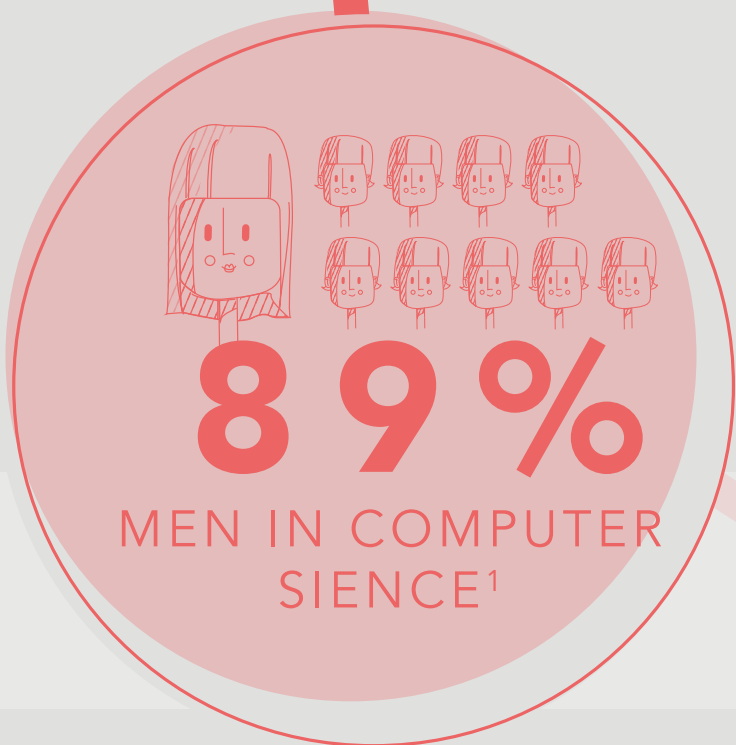
T I G

TECHNOLOGY INSPIRING GIRLS

CONTEXT

Gender equality has not yet reached the STEM fields. Especially in Computer Science (CS), female participation is even declining. As presented in studies², multiple relevant factors for the interest development occur before highschool. The focus in this project was the context „home“.

¹Federal Office of Statistics, Germany
²Hong, H., et.al.(2015). Gender differences in high school student's decision to study Computer Science and related fields, Google Inc.Heidelberg.



design goal

My goal is to inspire girls age 9-11 to lasting enthusiasm for technical exploration in their everyday environment, in order to increase the number of women in STEM professions.

WHAT'S THE PROBLEM?

CONFIDENCE

social encouragement, raising the girl's perception of their own capabilities and giving them trust and the feeling of security is essential in strengthening their self-confidence.

IMPACT

Career perception is the second most important factor for influencing the pursuit of a CS degree. This includes having a broad potential for positive societal impact.² Observations and interviews follow these studies by indicating that girls are interested in **technology as a tool to solve problems**, rather than in the technology itself.

²Hong, H., et.al.(2015). Gender differences in high school student's decision to study Computer Science and related fields, Google Inc.Heidelberg.

EXPOSURE

Women who had opportunities to learn about computers were more likely to consider CS-related careers than those without opportunities.²



HOW CAN WE SOLVE IT?

Through ideation and physical exploration I developed, tested and refined several ideas. I used Lo-Fi prototypes both, to gain understanding and inspiration.



FROM INITIAL IDEA TO FINAL CONCEPT

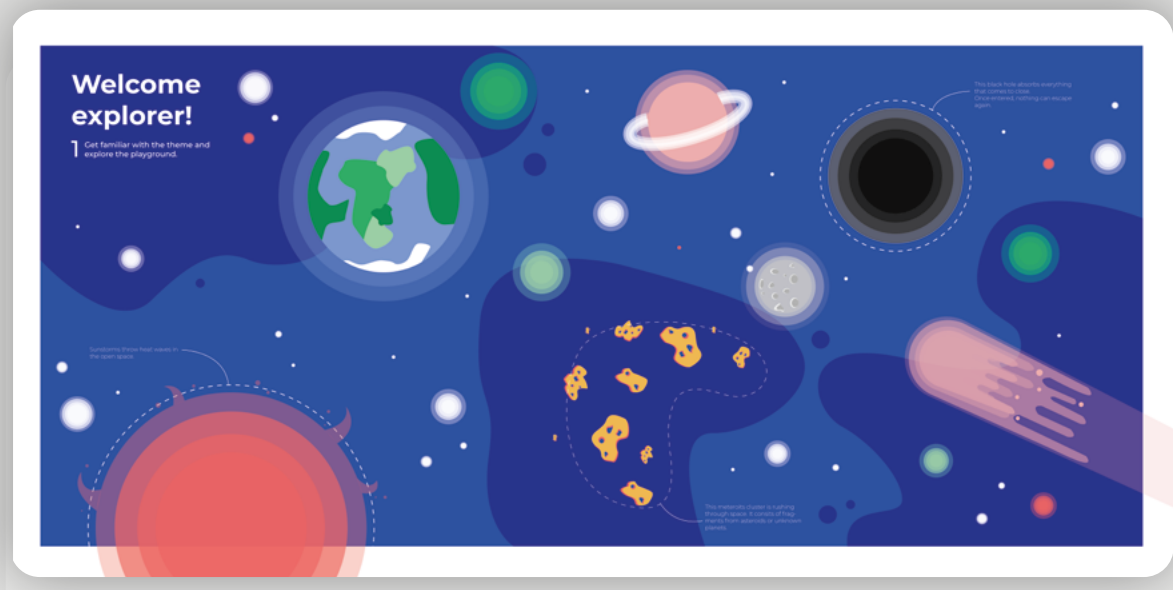
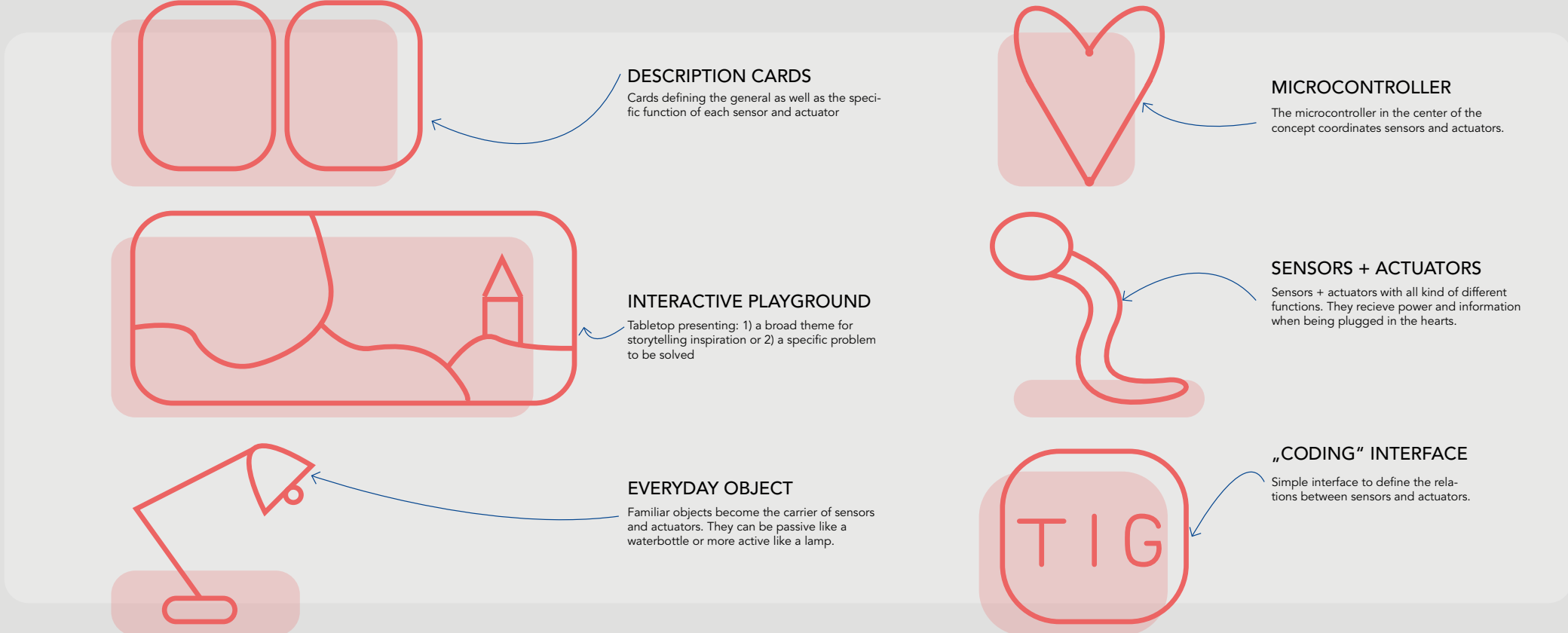
I took the idea that proofed to be most promising in the testing and further developed it into an holistic concept. I created a final functional prototype to evaluate my concept in further testings.



THE RESULTS

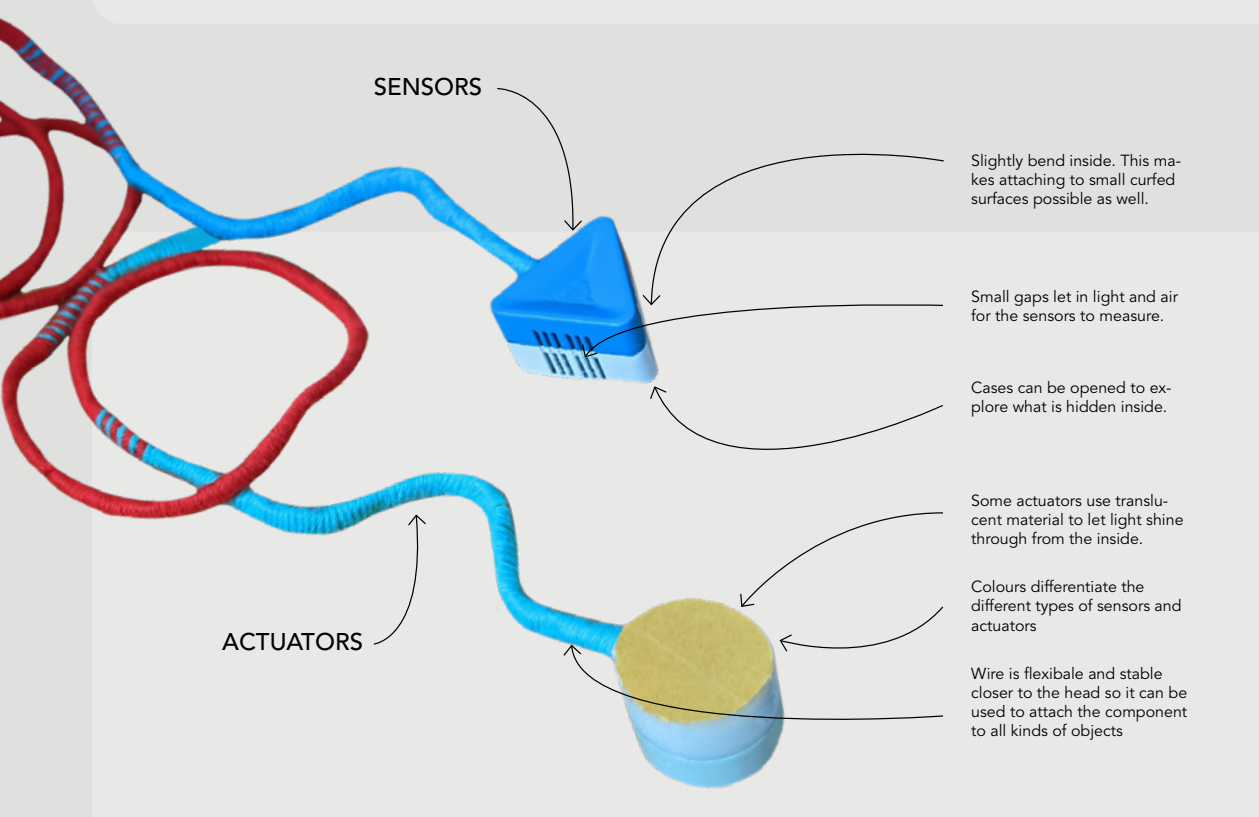
TIG is a collaborative storytelling toolkit that invites young girls to explore the impact and the possibilities of technology in their everyday environment. It is designed to help the girls to overcome their insecurity and instead develop a lasting enthusiasm for technology. TIG thereby tries to increase the number of women in STEM professions in the long term.

TIG



THE PLAYGROUND

It is a toolkit, that comes with a large playground. Designed in all kinds of themes, it provides inspiration and guidance. It builds the base for transforming a familiar environment into an immersive story universe. It can either present an open theme to creatively explore or a certain problem that has to be solved.



THE ELECTRONICS

By developing concepts, that embed all kinds of sensors and actuators, the girls can discover the impact and the possibilities of technology in their familiar environment.

As a core element, the hearts provide the sensors and actuators with energy and information, thus bringing to life the everyday objects and the girl's stories. Despite their central technical role, they also encourage collaborative interaction, by exchanging sensor data.

Everyday objects will be utilized as actors for the kid's stories, by attaching the sensors and actuators.

Sensor and actuator cards help the kids to get familiar with the components functionalities. They can use the blank space on the backside, to illustrate the individual function in their stories.

