

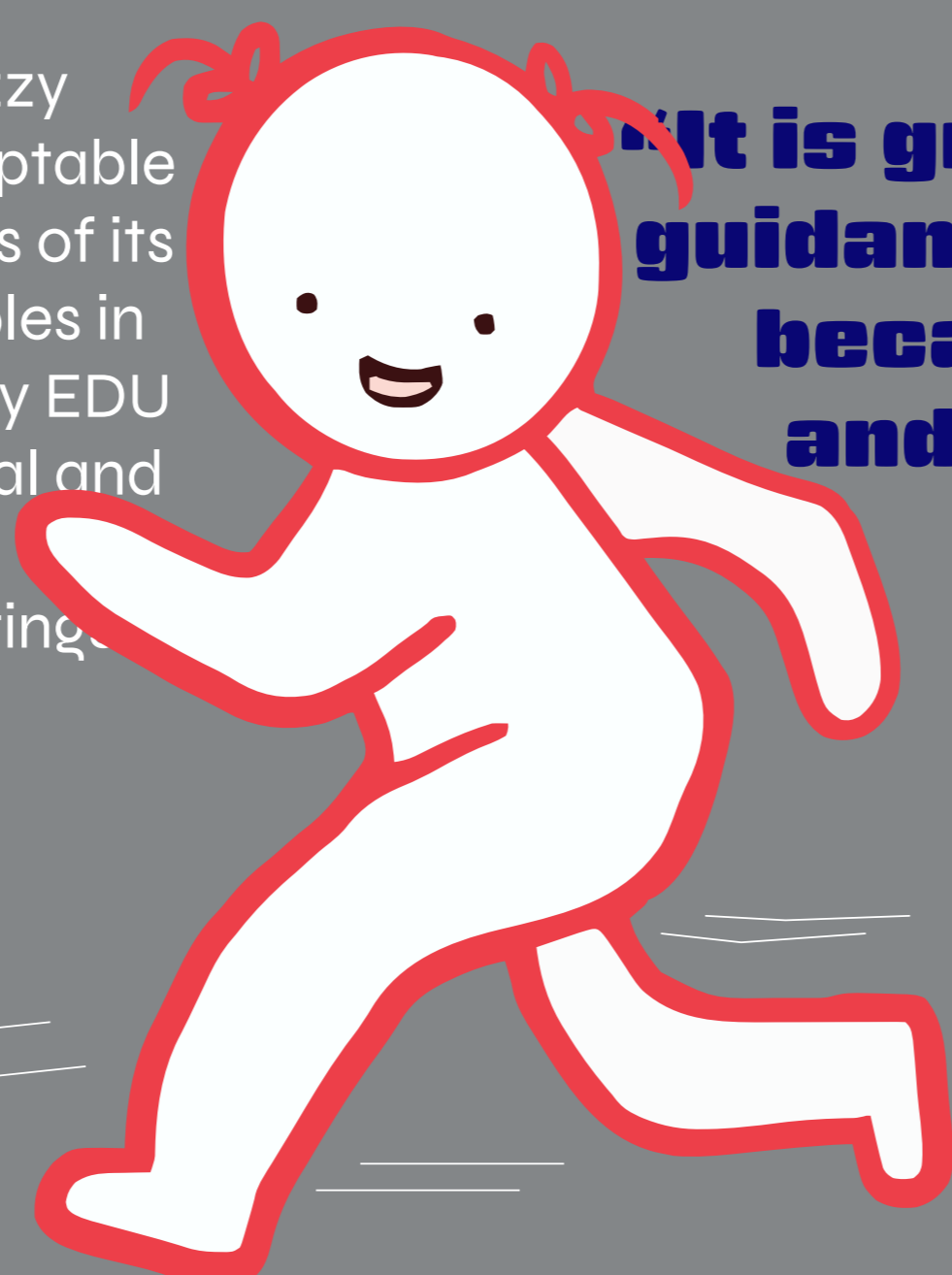
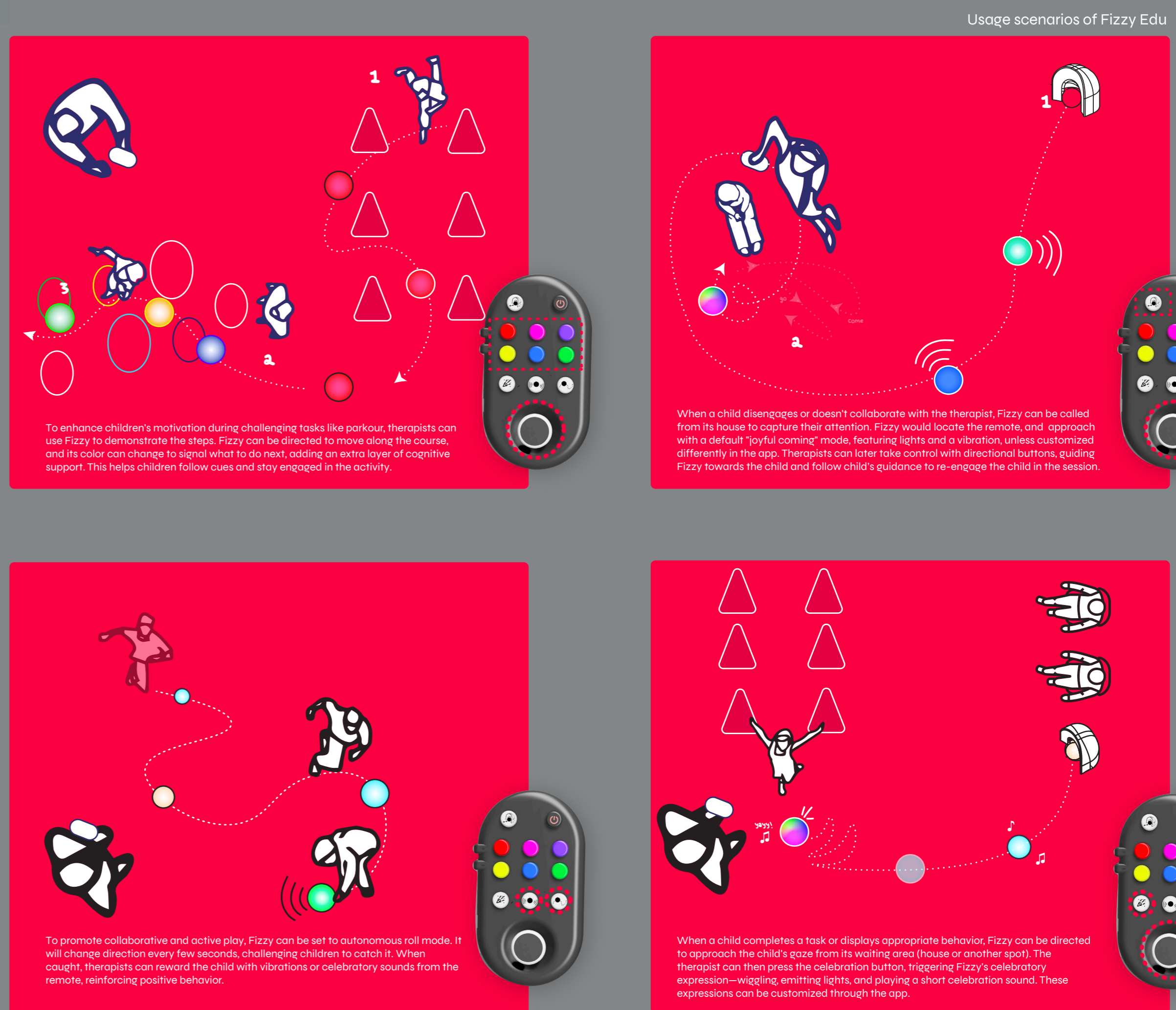
# STIMULATING ENGAGEMENT IN THERAPEUTIC ACTIVITIES FOR NEURODIVERGENT CHILDREN THROUGH A ROBOTIC BALL.



This project explores the potential of Fizzy, an interactive robotic ball, to enhance engagement and therapeutic outcomes for neurodivergent children in special education settings. Neurodivergent individuals often require specialized education to support their unique physical, social, and cognitive needs, making engagement crucial for their skill development and well-being. Therapists play a key role in helping these children develop various skills, but maintaining engagement in therapeutic activities can be challenging, as the extrinsic goals of therapy may not always align with children's intrinsic motivation for play. Fizzy aims to bridge this gap by aligning therapists' objectives with children's natural motivations, fostering a more engaging and effective learning environment.

Testing with a concept prototype of Fizzy demonstrated its effectiveness in mediating engagement, promoting classroom rules and promoting skill development across multiple domains. A documented library of behaviors with the card set provides empirical data on how therapists used Fizzy, the therapeutic value it brought to activities, and children's reactions to having Fizzy in those activities, offering insights for future research and design.

The ethnographic studies led to the development of Fizzy EDU—a comprehensive service system concept consisting of a hub, fizzy the ball, a remote, and an app. This evolution from the initial prototype to Fizzy EDU underscores the importance of adaptable technology that meets the specific needs of its users while highlighting Fizzy's varying roles in cognitive, physical, and social tasks. Fizzy EDU offers a direct alignment with educational and therapeutic objectives, making it a promising tool for special education settings.



**"It is great to reach the target under the guidance of fizzy. Fizzy is very important because it is already a motivating tool and the biggest problem is the lack of motivation in our activities"**

-Occupational Therapist from the Testing