RYOBI ONE+

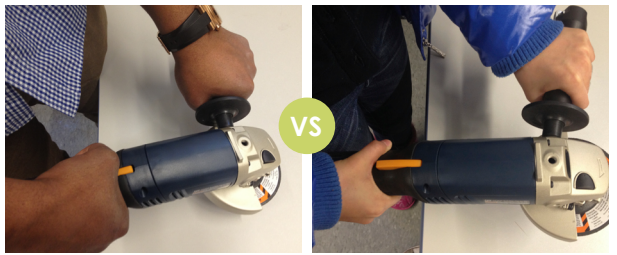
Angle Grinder Redesign

This Ryobi One+ Angle Grinder is a redesign of the existing 2012 product. Begin by understanding of how the existing angle grinder works and is used, I try to make the tool universal and simplify the user interaction.

HUMAN INTERFACE ANALYSIS

RYOBI RIGID

It works better to use different color and material to indicate where to grip



It is hard for people with small hands to have a fully control of this tool

Opportunities:

- Improve the color indicate on Ryobi angle grinder
- Make the handle more universal to fit different hands better

HUMAN FACTORS TASK ANALYSIS

Switch the side hand to a most comfortable position

Check and change the disc

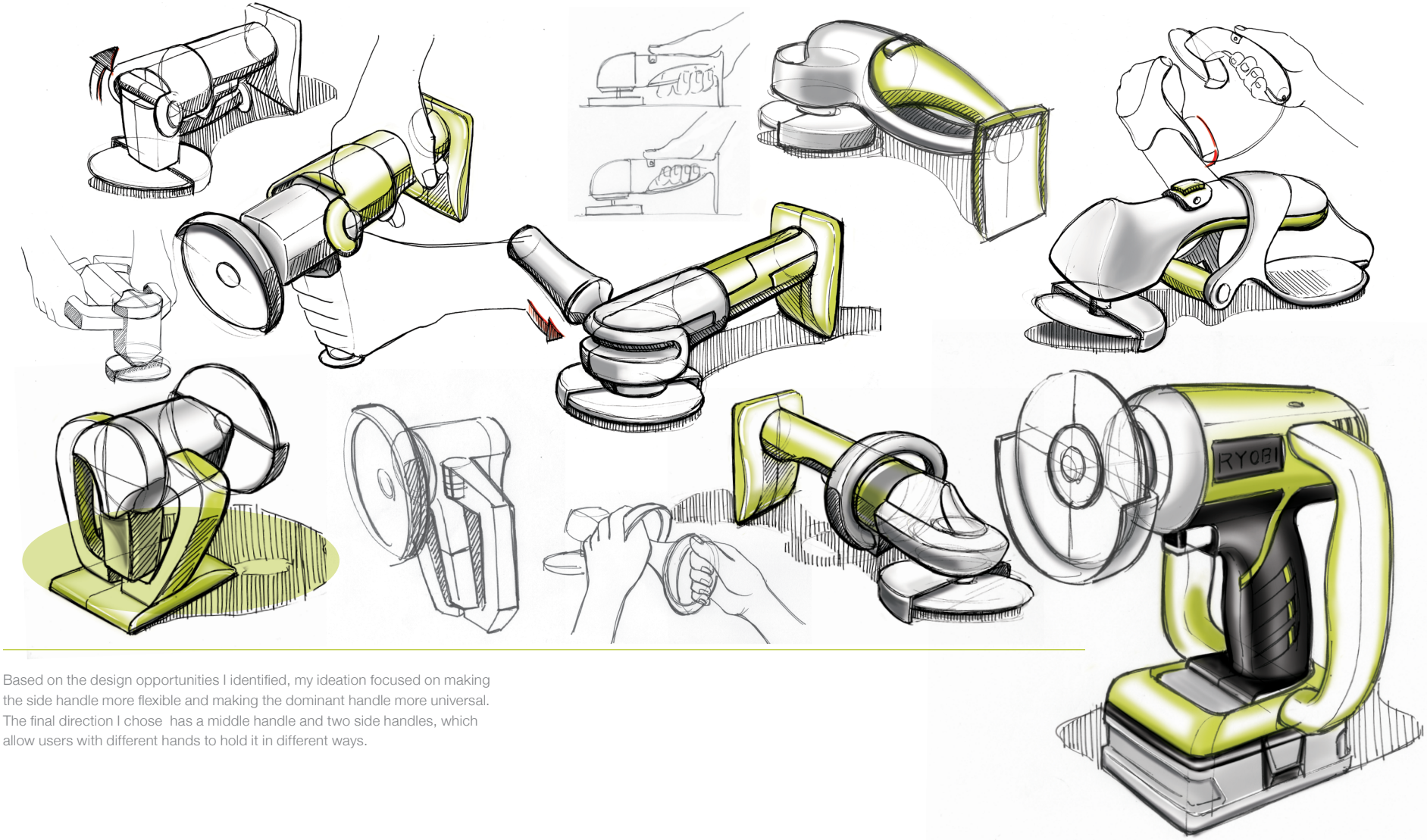
Adjust the safety guard to a appropriate position

Rotate the battery to a appropriate position

Opportunities:

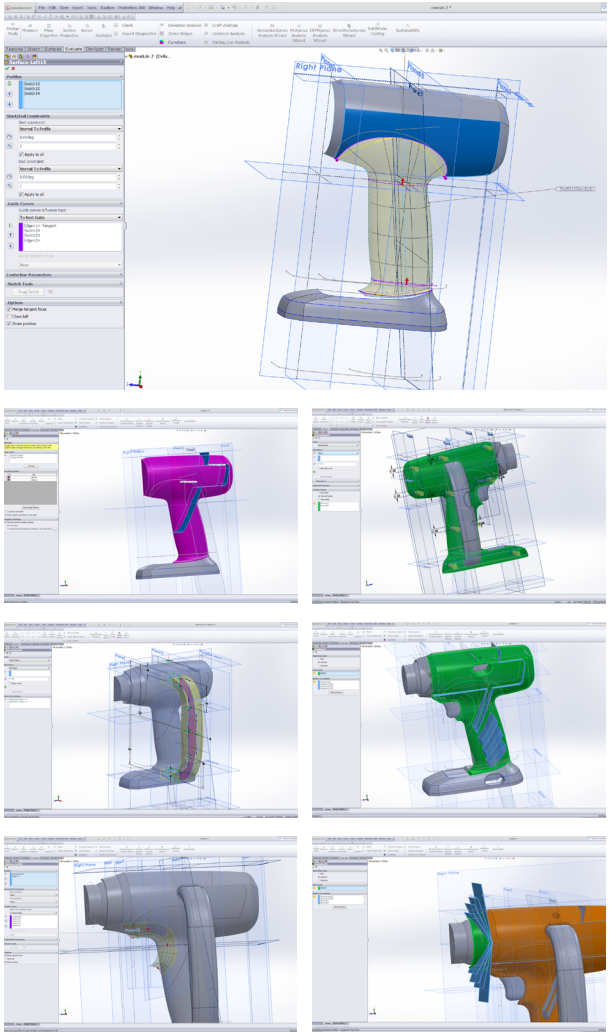
- Find a better solution for the side handle
- Improve the safety guard to be easier to adjust
- Make it possible to adjust the angle of the disc

CONCEPT IDEATION

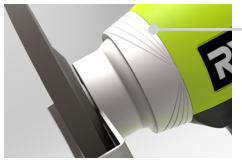


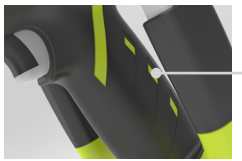
Based on the design opportunities I identified, my ideation focused on making the side handle more flexible and making the dominant handle more universal. The final direction I chose has a middle handle and two side handles, which allow users with different hands to hold it in different ways.

CAD MODEL



DESIGN FEATURES





A one simple motion, you can adjust the disc and the safety guard to the angle you desire. The ball joint and universal joint structure allows the user to have more flexibility.

For users with smaller hands, you can hold the main handle with your dominate hand, and hold the side handle with the other hand. This is better for detailing work.

For users with large hands, you can hold both of the side handles. This is better for removing material quickly.

APPEARANCE MODEL