Take a look at these with Variantor

DANGER!! keep out

DANGER!! keep out

DANGER!! keep out

DANGER!! keep out

DANGER!! keep out

DANGER!! keep out

2 | Why do we need color universal design?

Perceived color

Normal

Protanope
(red cone cells defective)

Deuteranope
(green cone cells defective)

Tritanope
(blue cone cells defective)

For color vision deficient people, it is difficult to distinguish colors between, for example, red and green with similar intensity. Color vision deficiency affects a significant number of people. It occurs in about 6-8 % of males in Europe and about 200 million people worldwide.

Dichromatism and anomalous trichromatism

Normal

Protanopia
(no red cones)

Protanomaly
(anomalous red cones)

Deutanopia
(no green cones)

Deutanomaly
(anomalous green cones)

4 Coloration examples around us

Textured paving blocks
Gray tiles and pink textured
paving blocks are difficult to distinguish.

Road sign
Texts are emphasized in red,
but unfortunately they are difficult to
read against a black background.

5 Before and after color universal design 1

BEFORE

Red texts and black texts look similar.
It is difficult to realize that the
red texts are particularly important.

> Please do not cut corners
> on something as important
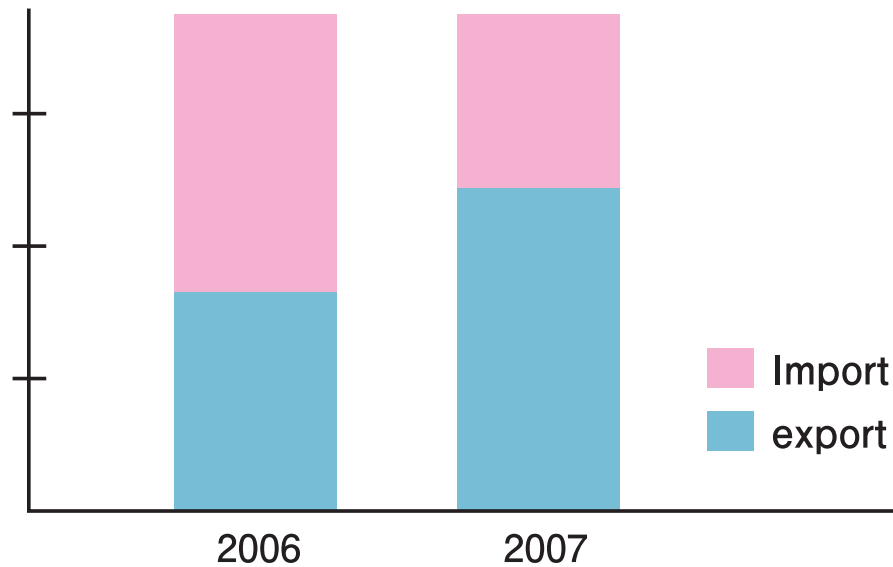> as this project.

AFTER

Red color is changed to orange.
The font is also changed to
give greater emphasis.

> Please **do not cut corners**
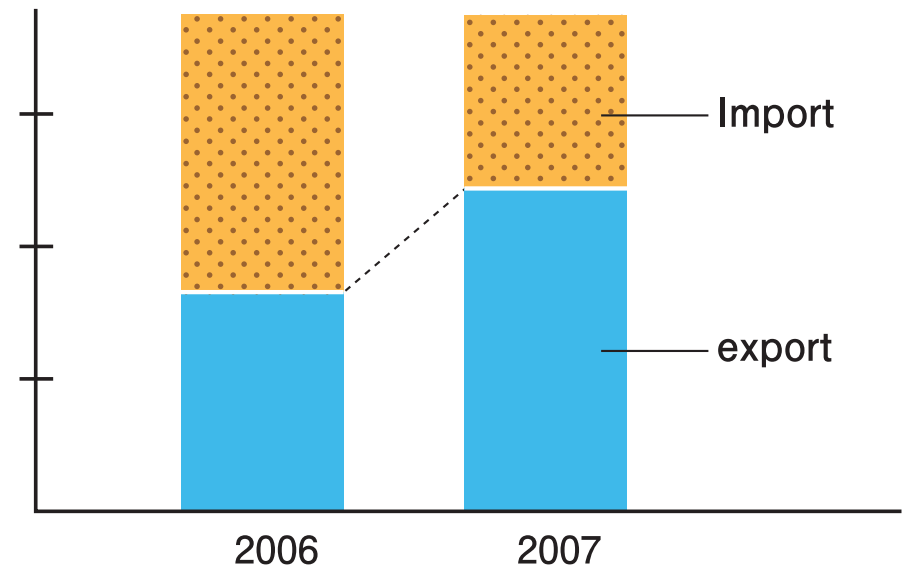> on something as important
> as this project.

Before and after color universal design 2

BEFORE

- Pink and light blue are hard to differentiate.
- Color legends are also confusing.

AFTER

- The color is changed so that the two colors are easily recognizable.
- Pattern is added to the graph.
- Border lines are added to separate the two colors.
- Legends are directly written in the graph.