

# ARCHITECTURE TABLE

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—A multi-functional table

## The Thing

Drafting table is one of the most important tools for architects and painters to trace and copy out their design. However, students have insufficient income to afford a professional product. On the other hand, we believe that a good design should accommodate multi purposes and provides long-term benefit. And that's how we came out with our design — a table that perfectly meet the drafting purpose but also serves the daily use. We also presented two versions of the design, so as to fulfil the needs for different users.

## Requirement

### Sustainable

Made from easily recycled materials

### Adaptable

Able to be used by any individual

### Affordable

As students don't have a lot of income

### Strong

In order to hold all needed equipment

### Student Size

Can fit into a dorm room

### User-friendly

Easy for anyone to use

## Features

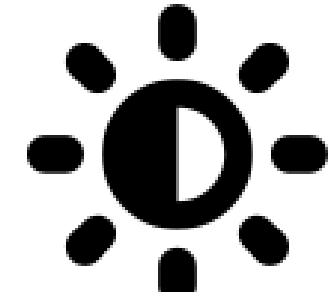
- A transparent glass providing fantastic experience of architecture drawing
- Two versions for different types of customer
- Mechanical/Electrical adjustable legs
- Manually/automatically sliding cover on top for daily use

## Comparison with Old System

	Standard table	Table+ light box	Student version	Pro version
Cost			✓	✓✓
Adjustable legs	✓	✓	✓	✓✓
Ability to trace			✓	✓
Power supply		✓	✓	✓✓
Efficient			✓	✓✓
Flexible light			✓	✓



Safety



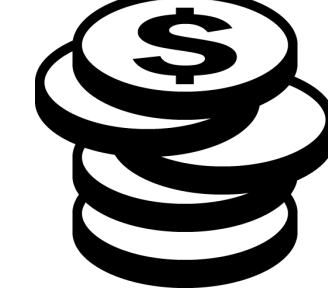
Dimmable



Sustainable



Multi-functional



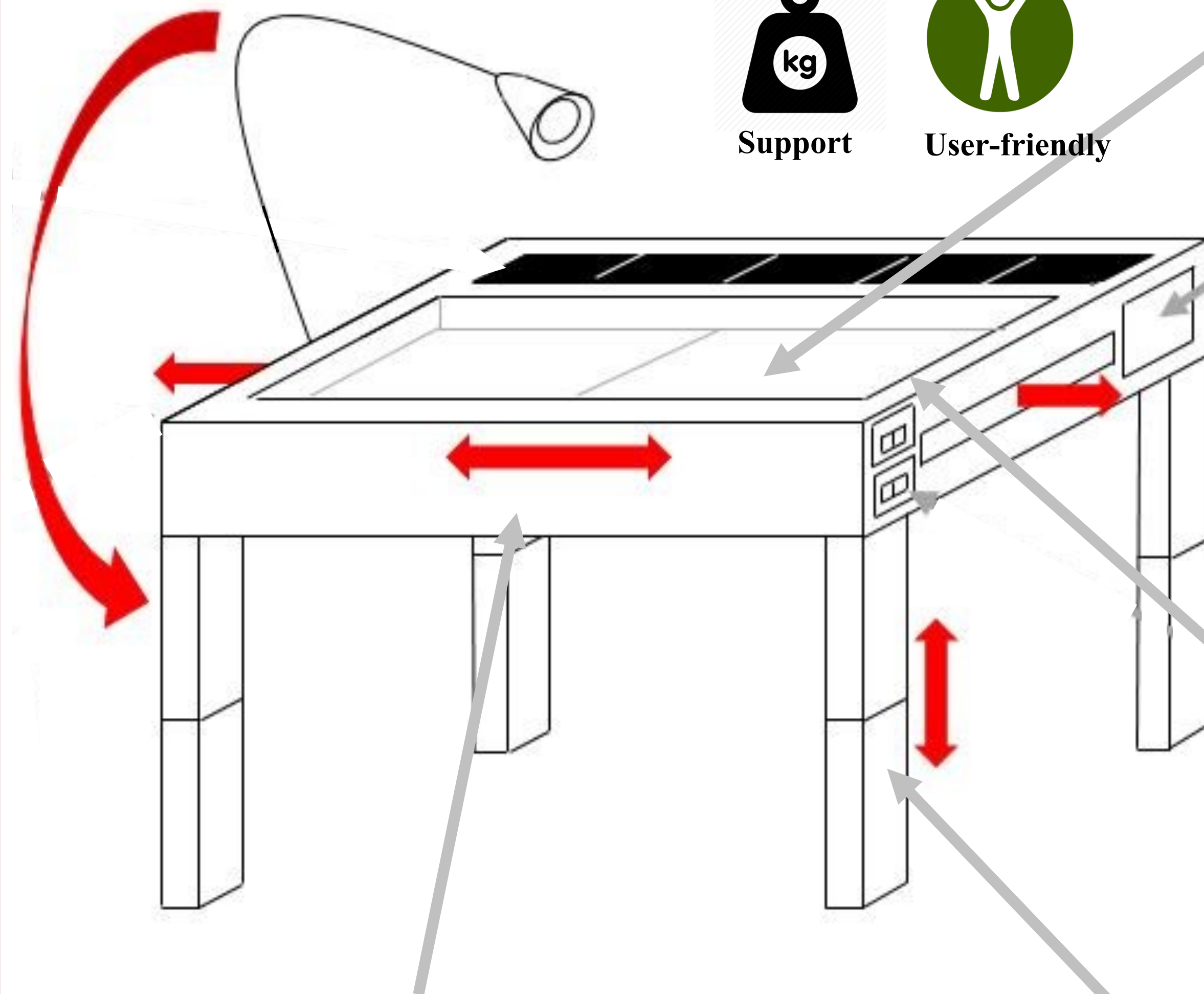
Affordable



Support



User-friendly



## Screen Material

### Pro version

Use glass:

- Pro: Clearer; Recyclable; Sustainable—last longer than plastic
- Con: Easily get broken

### Student version

Use plastic:

- Pro: Low price; Less weight; Recyclable
- Con: Transparency decreased once get scratched

## Power supply

### Pro version

Wall plug, a solar panel and a battery.

- Pro: Stable power supply, environmental friendly.
- Con: Expensive.

### Student version

Wall plug.

- Pro: Cheap.
- Con: Rely on external power source; less sustainable

## Screen Cover

### Pro version

Electrical locked screen cover; motion sensor

- Pro: more user-friendly and safe
- Con: expensive

### Student version

Mechanical locked screen cover

- Pro: the most cost effective way
- Con: manual operation

## Surface and frame material

### Pro version

Use plywood:

- Pro: Stronger than MDF; Oil and water proof
- Con: Expensive than MDF

### Student version

Use MDF (Medium-density fibreboard):

- Pro: Low costs; Strong; Easily machined material; Smooth surface
- Con: Swells once get wet

## Adjustable height

### Pro version

Adjusted electronically.

- Pro: Convenient, humanized.
- Con: Expensive

### Student version

Adjusted mechanically

- Pro: Cheap, humanized
- Con: Manual operation

## The Future

- Wheels on the table legs – to move the table easily
- Price will drop dramatically once the market identified.
- Smooth the edges of table – for safety use
- Implement more COTS components.

## Design as Engineers

- Client meeting and problem scoping
- Requirement ranking and trade-off identification
- System architecture analysis
- Design communication
- Evaluation and system mapping

## References

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- Bunnings, 2016, *CustomWood MDF 2400 x 1200 x 16mm Standard MDF Panel*, *Bunnings warehouse Australia*. Available from: [http://www.bunnings.com.au/customwood-mdf-2400-x-1200-x-16mm-standard-mdf-panel\\_p0590129](http://www.bunnings.com.au/customwood-mdf-2400-x-1200-x-16mm-standard-mdf-panel_p0590129) [Apr. 2016]