

Smart, Compact, Cheap Home

Chirag G Samtani, Abdul Kadir Olia, Aravind Ajithkumar

Department of Computer Science and Engineering

SRM Ramapuram Chennai, India

Email: chiraggsam@gmail.com , abdulkadirolia@gmail.com, aravind.7aak@gmail.com

ABSTRACT

India's population currently is 1.324 Billion. That's 132 crores for all you Indians out there. That is 404 people per square kilometer. India boasts that they are not the most populated country in the world. But the metric that matters is population density. Guess what, China doesn't even come in the top 10 when it comes to population density. So, in a country as densely populated as India, it becomes impossible for everyone to have the luxury of a big house. We're disregarding the money factor here, of course. Now, what if I told you, you could have all the luxury of a big house in an incredibly small house? Yes, that's possible. In Japan, they call these micro homes. The houses look spectacular from the inside but are actually incredibly small. Now, add multi-purpose furniture to this and you've got yourself a fully functional, beautiful house with all the functionality of a huge mansion in a very small space. IoT is set to penetrate our daily devices and it can be done with furniture too. IoT can be used for automation and make routine tasks easier.

Keywords—*Smart home, Compact home, Internet of things (key words)*

I. INTRODUCTION

The number of IoT devices is going to reach 31 billion worldwide by 2020. That is a staggering figure and it is only going to increase. Modular furniture addresses a very important issue of space. Hundreds of people everywhere around India are living in cramped places and settlements called 'chauls'. Upwards of 7 people are being squeezed into a single room. Modular furniture for example, gives the advantage of having a convertible-table that later doubles up as a bed at night. People need only have one furniture piece thus saving space and even reducing costs. Add IoT into the foray and we have an affordable smart home solution. Since everything is shifting towards the internet, very soon all of the existing furniture too will be replaced by IoT devices.

II. EASE OF USE

A. Not having to manually convert the furniture

One might find the process of converting the furniture from one form to another a bit taxing and time consuming. With all the multi-purpose furniture connected to the internet or local network, one can easily convert a piece of furniture from one form to another with something as simple as a tap on the phone. The furniture can also be set to convert itself at a particular time of the day. For example, the coffee table can be converted to a dining table during meal times automatically.

B. Ensuring that the furniture does not convert when it's in use

Sensors present in the furniture will ensure that it does not convert when it's in use.

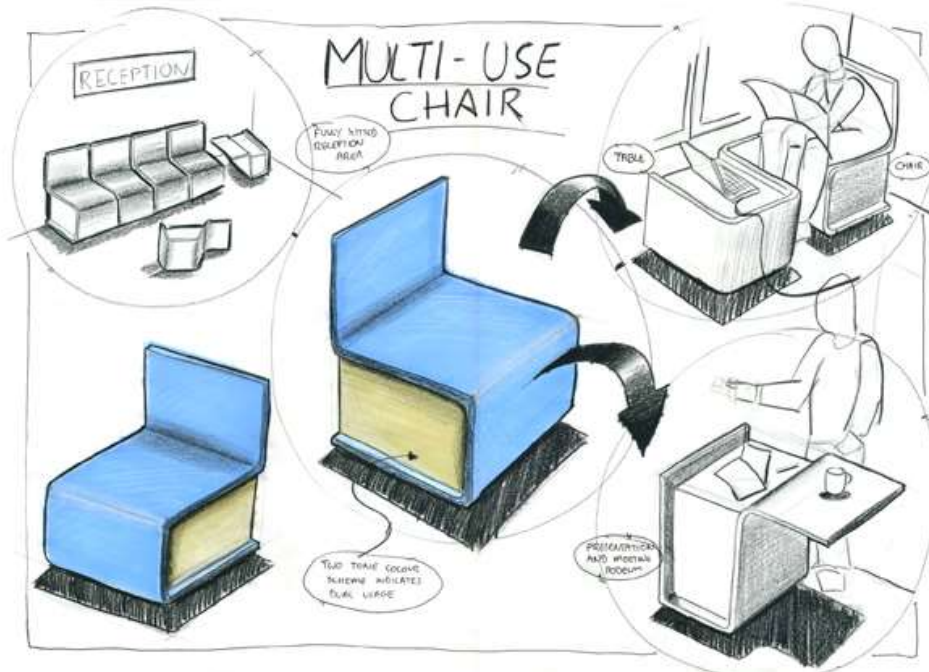
III. RELATED WORK

Multipurpose furniture is a broad category of furniture products that take up less space and aim to make life easy. It could be as simple as sofa-cum-bed or a coffee table to complex storage solutions that fold and unfold. Examples of existing multifunctional furniture include:

- Queen, bunk-wall beds that fold up as shelving units
- Transforming tables that switch between coffee tables configurations to beds, shelves, or entirely different furniture.

- Seating arrangements like armchairs, sofas and other smart modular furniture[1]

Multifunctional furniture is much more than just neat furniture and saving space. Multipurpose furniture at its core cares about the environment and aims to reduce carbon foot print. The use of sustainable materials cannot be stressed enough. Using multifunctional furniture that not only looks great but also looks out for the future. Being citizens of the world, it is important that we take care of our environment and using multifunctional furniture is a step towards that, towards the future.[2]



IV. CONCLUSION

The need for smart, compact and cheap homes in a country like India has been explained. We can always make it more efficient and one of the ways would be to add solar panels to keep the electricity bill in check. Homes like these would not only make living life easier but also save space in a larger sense. We need to bring about a change. And this change needs to happen fast.

V. REFERENCES

- [1] <http://resourcefurniture.com/product-category/product-collections/multi-purpose-furniture/>
- [2] <http://minimalist--home--designs.blogspot.com/2010/06/minimalist-furniture-design.html>

