

# Clay as a sustainable future material

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## Introduction

Clay is a unique material that could be shaped into various forms starting from the ancient era till our contemporary life. Culture plays a huge role in the shaping process of clay and in deciding its design form. Each form of clay artifacts is a reflection of the human needs and has always contained a cultural value that fulfills the sustainable development of society. Changes in clay applications should be made to go with the flow of the current and future human needs. The aim of this research is to create a design platform that can help in renovating the clay artifacts focusing on how a link between the designers and the craftsmen can take a part in reviving the clay products. This is to fulfill our current needs, enhancing the economical and social needs under the trend of using sustainable materials.



Source: <https://unsplash.com/photos/AO3nLHOPf0Q>

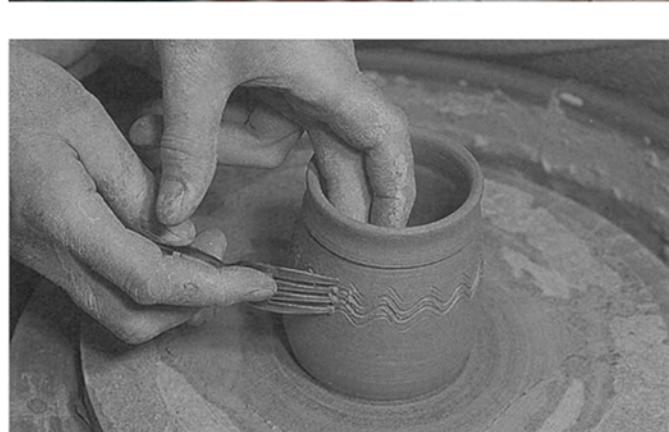


Figure 1: Clay engraving (Pitelka, 2001)



Figure 2: Clay rolling (Turner, 2004)

## Literature Review

Pottery was a tradition that has been inherited along the years, it always had a spark to keep going in each generation. It was not the norm to see a decline in its strength. Traditions in pottery along the years sometimes evolve slowly and in other years evolve faster (Burrison, 2017). The technological methods used in pottery now are affected by the culture of the potter, it is what drives the selection of the technology to be taken (Beltrame et al., 2020). Over the years it has been a cultural tradition that pottery is a relation between the hands and clay. The customers that often bought clay pots had the culture of being connected to natural earthen products (Fay, 2017). Clay has developed in its form along the years as seen in figure 3, showing the uplift in the design starting from the ancient era till the contemporary era. Meanwhile, the future of clay is still under debate whether the material will be further developed or will vanish.



Figure 3: Development of clay forms along the years (Wodzińska, 2009)

Clay acts as a sustainable material which fulfills the “SDGs” sustainable development goals seen in the sustainable consumption and production goal (Kumar et al., 2021), clay can act as a more sustainable material that substitutes the unsustainable materials like plastic.

## Methodology

The main variables that are used in the research are; culture, design and human needs. There is a blockage in the process of designing the clay artifacts which we need to readapt with the contemporary human needs to sustain the cultural values and act as a source of inspiration for designers. The cycle illustrated as seen in figure 4 & 5 is used as a guidance tool for understanding the gap between the current clay artifacts and modern user needs, in order to sustain the clay material from extinction through renovating the form language and improving the semantics of the products. The research is using qualitative methods to analyze the variables mentioned considering the fact that design can include a cultural dimension into clay products to be more attractive and act as a source of satisfaction to the current user’s needs. This is achieved by using a methodological plan that includes using observations along with experimental methods and field trials to reflect the real life situation. Also, a competitive analysis is carried out to collect data about the offerings found and creating a SWOT analysis to further examine the strengths, weaknesses, opportunities and threats of each clay product existing in the market.

## Methods for uplifting:

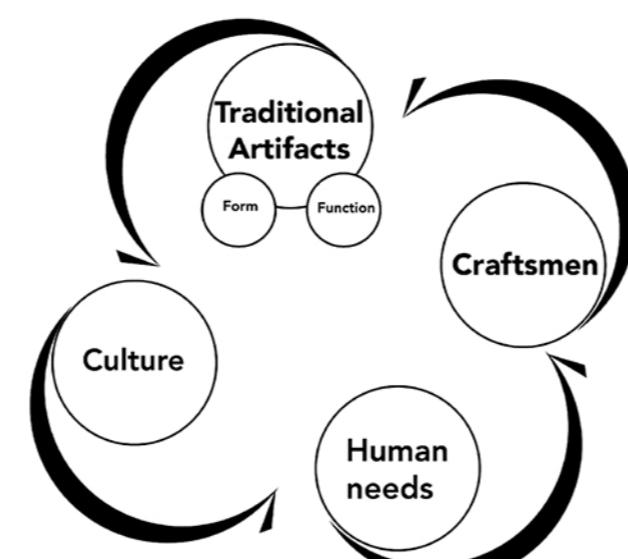


Figure 4: “Normal flow of artefact design” led by craftsmen leading to traditional products

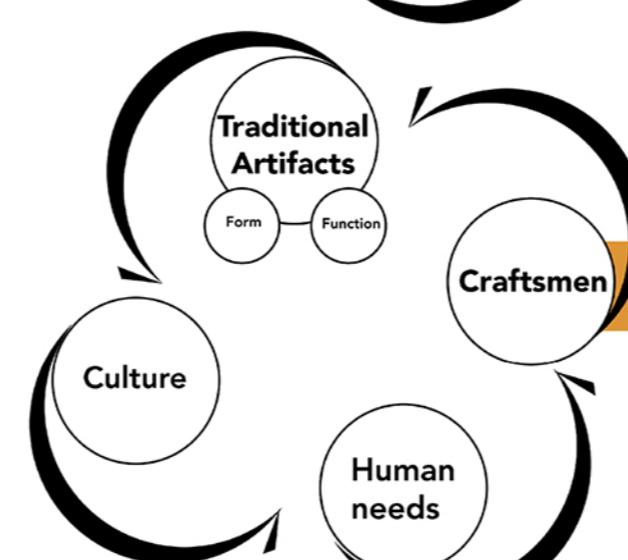


Figure 5: Lack in introducing contemporary design process which is led by the designer into the “Normal flow of artefact design”

## Results

I. New approaches should be emerged to offer further market goals or to maintain the current market situation. This will be achieved through understanding the role of design that could be essential in renovating and sustaining the interrelation between culture and

contemporary design. In this context creating a linkage is needed that could lead to futuristic products. The results revolve around four pillars as seen in figure 6.

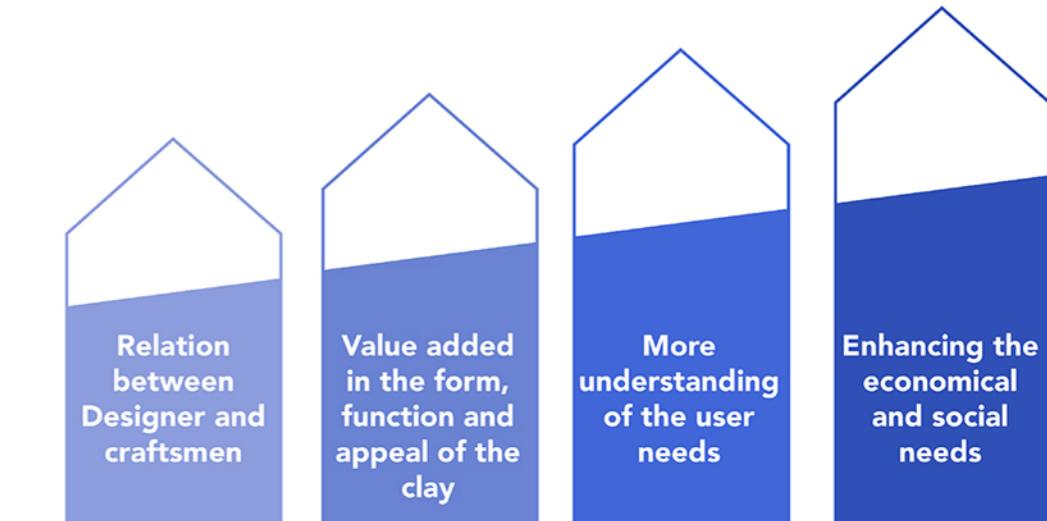


Figure 6: Four pillars used in strengthening clay artifacts

II. Sustainability is a common ground between the contemporary human needs and the value of clay artifacts. Fig.7

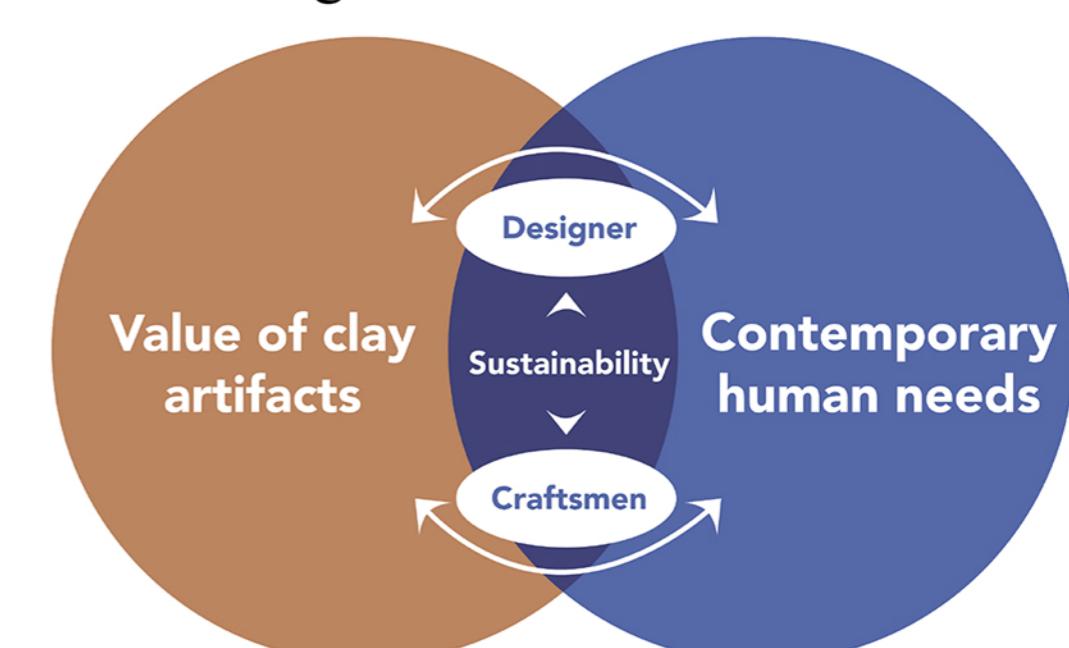


Figure 7: Linkage between value of clay artifacts and contemporary human needs

III. Introducing contemporary design methods in clay artifacts is a tool that helps in reaching more sustainable concepts by creating connections between current users needs and clay artifacts as seen in figure 8.

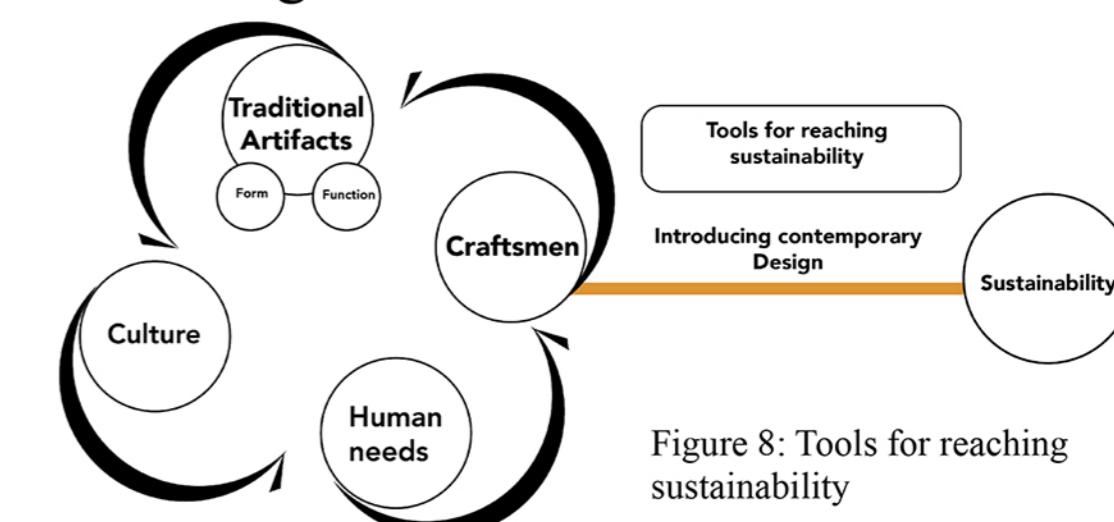


Figure 8: Tools for reaching sustainability

## Conclusion

In conclusion, clay is a sustainable material which has many values that should be highlighted. Different approaches are found to link between the designers and craftsmen in order to change the current style of clay artifacts. Both should act as an active ingredient to present consumer with everyday new products rich in cultural designs, sustaining the natural characteristics of the clay. Form language should be updated and uplifted aiming to intertwine with the contemporary world we are living in. Also, function should be redefined to suit the current needs and to face the challenges of using unsustainable material. These approaches help in enhancing the clay artifacts in order to enter the market much stronger.

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