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The located making framework for supporting craft maker enterprises in China

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ABSTRACT

This paper presents the Located Making Framework to support small maker enterprises in China who employ craft making practices by helping ensure (a) they are fully utilising local support opportunities; (b) their decision-making aligns with the fundamental values driving the enterprise; (c) they align with principles of sustainability; and (d) design opportunities are identified. Using constructivist methods (observations, interviews etc.), primary data was collected in the Yellow River Valley region, coded and analysed, and *values* and *context-relationships* interpreted from results. This framework, adapted to the Chinese context, is the latest iteration of a model initially developed from our research in the USA and the UK. The Chinese findings are shown in specially developed graphic formats that are readily understandable and lend themselves to ease of use. Future work to increase the reach of the research includes development of an online interactive framework to automatically generate individual and cumulative results.

KEYWORDS

Small maker enterprises, craft, sustainability, values

Introduction

Today, there is a renaissance of interest in and re-appreciation of craft and traditional making practices all around the world (Luckman and Andrew 2020, 4). In some cases, the application of design research expertise is offering ways of unlocking the potential of traditional material cultures by helping ensure they are appreciated while also being relevant and meaningful to contemporary needs (Tung 2012; Temeltaş 2017). However, some unrealistic or superficial design interventions that lack cultural appropriateness and context-sensitive, sustainable considerations have been criticised (e.g. Bissett-Johnson and Moorhead 2019; Murray 2012). Therefore, there needs to be a

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better understanding of how design expertise can contribute to the development of suitable support for the creative economy that is respectful of cultural legacy of place, and in accord with contemporary understandings of sustainability, inclusivity and resilience.

This research has been supported by the UK Arts and Humanities Research Council (AHRC) Newton funding, extending previously funded projects, namely: **Design Routes**, which examined culturally significant products, practices and designs through, amongst other things, key informant interviews with craft makers in New Mexico, USA; **Design Ecologies**, which included cultural exchange with researchers at the Chinese Academy of Social Sciences in Beijing and interviews with craft makers in China; and **Living Design**, which focussed on the values and ties to place of small maker enterprises in Cumbria in northwest England, UK. In the course of this research, we have progressively developed ways of understanding and visualising the values, motivations and priorities of craft makers and the relationships they have to the place and culture in which they pursue their work, which provides the foundation of our most recent project, **Located Making**, conducted in conjunction with colleagues at the Beijing Institute of Fashion Technology and Ningxia University, China (see the interrelation of these research projects in Figure 1).

This paper presents the results of key informant interviews with skilled craft makers in the Yellow River Valley region of central China. We explain the methods and the analytical framework we used along with the findings, and we include the visualisation tools we have developed to effectively convey the results in relation to (1) the relationship of the crafts to place; (2) the spectrum of human values, as articulated by Schwartz (2012); and (3) to Walker's Quadruple Bottom Line of Design for Sustainability (2011, 187–190; 2014, 92–93). We also present (4) a visualisation tool for craftspeople to

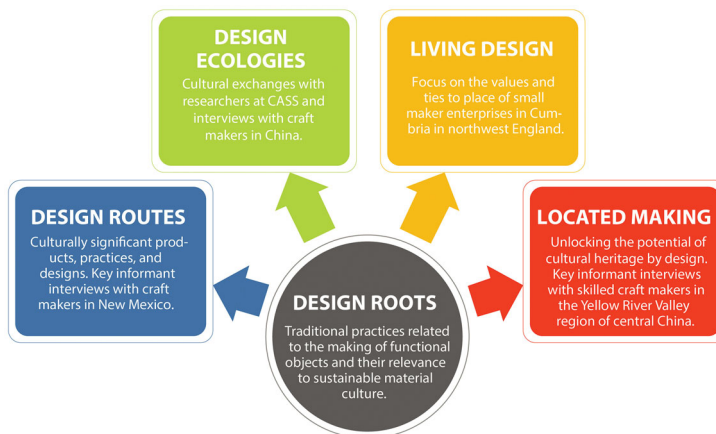


Figure 1. Inter-related research projects.

identify opportunities where design can contribute to their enterprise in ways that are appropriate to the product types they produce and are in line with their values.

Methods and analytical framework

Research methods

This research aims to investigate traditional craft enterprises in the Chinese context, and to explore the potential of design in supporting their long-term development. Due to the problems occurred in some current design-led craft revival projects (as discussed in the Introduction section), in particular, this research seeks to explore design's contributions in supporting craft and creative economy and in helping to ensure product viability, but without sacrificing sustainability-related values, such as strong connections to place and community, intrinsic human values and traditional roots, that are inherent to many crafts.

In response to the UNESCO (the United Nations Educational, Scientific and Cultural Organisation) 2003 Convention for the Safeguarding of Intangible Cultural Heritage (ICH) (ICH China 2021), the Chinese government has, since 2004, been implementing a mechanism characterised as a combination of central initiative and local participation to create its own ICH and ICH Inheritors lists at multiple levels (Kuah and Liu 2016). To better understand heritage making practices within the Chinese context, central China, including three provinces (Henan, Hubei and Hunan), was selected as a case study for the development of this research. At its heart lies the Yellow River Valley, an important site for Chinese civilisation with the origins of the Erlitou culture dating to the Bronze Age, as well as the Central Plain culture (Wang et al. 2021; China Daily 2017). Fifty-seven local traditional crafts have been identified as having national significance under UNESCO's ICH Convention (ICH China 2021). This region is also supported by the "Rise of Central China" Plan, which is a policy adopted by the central government to accelerate development of its central area (CGSS (Consulate General of Switzerland in Shanghai) 2012). As a consequence, this region has experienced rapid urbanisation, modernisation and economic growth in recent years (Wang 2019). Against this backdrop, both challenges and opportunities co-exist in relation to the continuation and development of local crafts.

A constructivist methodology (Crotty 1998, 42) was employed in the research that draws upon local knowledge and local values of makers and enterprise owners. Semi-structured interviews were carried out with over twenty micro maker-enterprises/studios and observational studies made during visits in order to understand their working environment and making process. Craft enterprises selected from this region were purposive, focusing on different craft fields within China's ICH programme, mainly in seven categories (textiles, musical instruments,

paper crafts, metalwork, carved artefacts, bamboo/straw crafts, and lacquer crafts) (See details in [Table 1](#)). Data was coded and thematically analysed within the analytical framework (see framework details in section 'Data analysis'), and values (low, medium, high) for the framework plots interpreted from results.

Data analysis

From a constructivist perspective, meaningful reality is created by human beings through interactions with the world, and developed and transmitted within an essentially social context (Crotty 1998, 42–43). In keeping with this methodology, our data analysis aims to reveal reality through constructed meanings and interpretations (Flick 2004, 89), and a series of place-based case studies of making practices in the Yellow River Valley region of central China are analysed in order to facilitate understandings of the:

- Social context in which each craft enterprise operates;
- Values and priorities of craft makers and enterprise owners;
- Relationship of maker enterprises to sustainability;
- Design opportunities.

Particularly, the interviews and observations carried out with craft makers and enterprise owners have been analysed through the lens of Schwartz's Values Circumplex (2012). Accordingly, values work together in a circular form, and these values can be divided as four categories, including openness to change, self-enhancement, conservation and self-transcendence. The cluster of openness to change values and self-enhancement values are related to external approval and rewards, e.g. financial success and social recognition; In contrast, the cluster of self-transcendence values and conservation values are associated with intrinsic character, e.g. sense of community, self-regard, caring for others (Kasser and Ryan 1996). In general, intrinsic values and extrinsic values are correlated, but to some extent, they are also conflict with each other (Schwartz 2012).

Also, a meaning-based, sustainability-oriented approach, i.e. Quadruple Bottom Line of Design for Sustainability (QBL) proposed by Walker (2011, 187–190; 2014, 92–93), including three primary elements of practical, social and personal meaning and the fourth element in relation to economics, is used here as a lens to critically examine craft enterprises in central China (see the detailed descriptions in section 'Relationship to sustainability').

Table 1. Overview of craft enterprises we visited.

| Craft category | No. | Craft making | Craft product | ICH designation | Region |
|---------------------|-----|--|---|----------------------|---|
| Textiles | 1 | Indigo dyeing | Hand-dyed products from local plants, e.g. curtains, duvet cover sets, cushion cover sets | None | Longhui county, Shaoyang city, Hunan province |
| | 2 | Cotton/linen weaving | Branding, Hand- and machine-woven scarves and socks with local ethnic patterns | National-level ICH | Tongdao county, Huaihua city, Hunan province |
| | 3 | Embroidery | Traditional and contemporary embroidery kit products with free online instructional videos | Provincial-level ICH | Daye city, Hubei province |
| | 4 | Cotton fabric sewing | Traditional hand-sewn products e.g. lion-head shoes, baby bibs | National-level ICH | Yangxin county, Hubei province |
| Carved artefacts | 5 | Knitting | Traditional hand-knitted fabrics | National-level ICH | Longhui county, Shaoyang city, Hunan province |
| | 6 | Wood carving | Hand-carved wooden art objects; Branded wooden utensils | None | Daye city, Hubei province |
| Musical instruments | 7 | River clay carving | Sculpture and inkstone from local clay-like mud | Provincial-level ICH | Zhengzhou city, Henan province |
| | 8 | Wood carving | Wooden Buddha statues/sculptures | Provincial-level ICH | Daye city, Hubei province |
| | 9 | Intricate leather carving | Leatherware, e.g. rucksacks, bags and belts | City-level ICH | Zhengzhou city, Henan province |
| | 10 | Wood carving | Traditional woodblock New Year prints | Provincial-level ICH | Zhuxian county, Kaifeng city, Henan province |
| | 11 | Drum making | Drums for folk activities and ceremonies | Provincial-level ICH | Luoyang city, Henan province |
| | 12 | Lusheng making (Chinese reed-pipe wind instrument) | Lusheng played within local Kam ethnic group | National-level ICH | Tongdao county, Huaihua city, Hunan province |
| Metal crafts | 13 | Ruan (Chinese plucked string instrument) making | Musical instrument: Ruan | Provincial-level ICH | Lankao county, Kaifeng city, Henan province |
| | 14 | Guqin (Chinese Zither) making | Musical instrument: Guqin | City-level ICH | Zhengzhou city, Henan province |
| | 15 | Metalsmithing | Branding, hand-made brassware and iron products (e.g. incense holders, tea sets, plates, bud vases) | None | Wuhan city, Hubei province |
| | 16 | Blacksmithing | Branding, hand-made cooking pots and pans | City-level ICH | Lichuan city, Hubei province |
| | 17 | Blacksmithing | Iron products for household or agricultural use (e.g. knives, axes and sickles) | County-level ICH | Zhongmu county, Henan province |
| Paper crafts | 18 | Silversmithing | Traditional and contemporary silver accessories and silverware | National-level ICH | Fenghuang county, Hunan province |
| | 19 | Oil-paper umbrella making | Traditional oil-paper umbrellas, branding | Provincial-level ICH | Wuhan city, Hubei province |
| | 20 | Chinese Dragon/lion head making | Hand-made dragon/lion heads for Chinese New Year or folk activities | National-level ICH | Fenghuang county, Hunan province |
| Bamboo/Straw crafts | 21 | Kite making | Old-style kites and miniature kites that are framed by collectors as art pieces | Provincial-level ICH | Kaifeng city, Henan province |
| | 22 | Lantern making | Traditional paper lanterns | National-level ICH | Kaifeng city, Henan province |
| | 23 | Bamboo carving/weaving | Hand-woven bamboo basketry | None | Tongdao county, Hunan province |
| Lacquer rafts | 24 | Straw weaving | Hand-woven straw sandals and flip-flops | None | Tongdao county, Hunan province |
| | 25 | Lacquer painting | Decorative panels | National-level ICH | Wuhan city, Hubei province |
| | 26 | Lacquer painting | Lacquerware | City-level ICH | Zhengzhou city, Henan province |

Findings

The findings are presented in relation to four key areas with associated visualisation tools: (1) relevance of place, (2) significant values, (3) relationship to sustainability, and (4) design opportunities.

Relevance of place

Here, eight context related factors were developed in order to examine the relevance of place and the services and opportunities available to small maker enterprises in a particular locale, which help support – or could help support – their business. These factors are described as follows:

- Resources: availability and access to local materials, availability of other materials, suppliers and service providers.
- Professional Development: availability of learning resources and training, in formats that are suited to small enterprise owners.
- Cultural Events: can provide opportunities for sales, dissemination, demonstrations, workshops, profile raising and increasing public awareness about heritage crafts and so on, e.g. festivals, fairs and dedicated markets, folk activities, ceremonies and rituals.
- Cultural Support Organisations: in the area – non-profit organisations, large companies and the media can often provide direct benefits to craft makers and their work, such as opportunities for exhibitions, the sale of goods, and an increased visibility and profile for craft practices and products.
- Policy: regional policies that help sustain heritage making practices, such as those related to education and training, fundraising, taxation, and intellectual property.
- Infrastructure: appropriate infrastructure, such as transport links, an airport, hotels, and restaurants, can indirectly support the viability of maker enterprises.
- Attractions: these comprise a variety of elements such as tourist sites, regional cuisine, the natural beauty of the region, public galleries, and museums – all these can significantly enhance the business opportunities of small maker enterprises.
- Profile: a region's national or international profile is a significant factor in attracting visitors and stimulating the local economy and opportunities for small maker enterprises, such as gaining UNESCO World Heritage Site status.

We were informed by one local government official whom we interviewed that the revival of traditional crafts is integrated into local long-term development programmes related to cultural heritage preservation, and the development of the tourist economy. According to our interviews with craft

makers and enterprise owners, regional policies help them raise their profile and sustain their craft skills. Such policies relate to education and training, fundraising, and the designation of historic old craft brands. In response to the government's call, local institutions, media companies and relevant cultural organisations also directly benefit craftspeople and their craft business; for example, by offering opportunities for exhibitions and financial support.

Small craft enterprises producing products that are particularly associated with local provenance or that have regional cultural characteristics are being supported by top-down mechanisms. Also, our research reveals a strong relationship of small craft enterprises to place, especially in terms of the resources they use in the making and production. For example, our research into drum making in Luoyang city and inkstone carving in Zhengzhou city, show that locally available materials are given priority, including wood, leather and the clay-like mud from the banks of the Yellow River. However, the drum maker was forced to change from using local leathers to leather imported from the south of China because changes in local farming practices during the 1990s meant that local water buffalo were being killed for meat when they were still young. At this young age, the leather is not yet strong or thick enough for use as drum skins.

In addition, in-depth case studies of the drum maker and inkstone carver provide a basis for demonstrating how the framework can be used to show how small craft enterprises can be developed. Referring to the diagrams below, we see that relevant business or training courses would be helpful for the drum maker to run his website and to do online promotion – [Figure 2](#) shows the drum maker is currently not taking much advantage of the business opportunities offered by the Internet. In contrast, the inkstone carver, who has a highly successful operation, is making good use of all the opportunities offered by 'place' as shown in [Figure 3](#).

Significant values

Craft making practices, particularly traditional ones, are vital to human culture as they are the expression of human values. According to Schwartz's Values Circumplex (2012), the values that drive the nature of craft, can be understood under four categories, as described below:

- Innovation: Openness to the introduction of new techniques and technologies, and novelty and change (e.g. continuous development of new product types, patterns, product lines and designs).
- Conservation: Continuity and stability of working methods (i.e. a sense of responsibility to place, family- and/or community-based knowledge and skills, and a commitment to their conservation and continuation).

RELEVANCE OF PLACE TO DRUM MAKING:

The Potential of Context-based Elements to Support Maker Enterprises

LOCATION: LUOYANG, HENAN PROVINCE

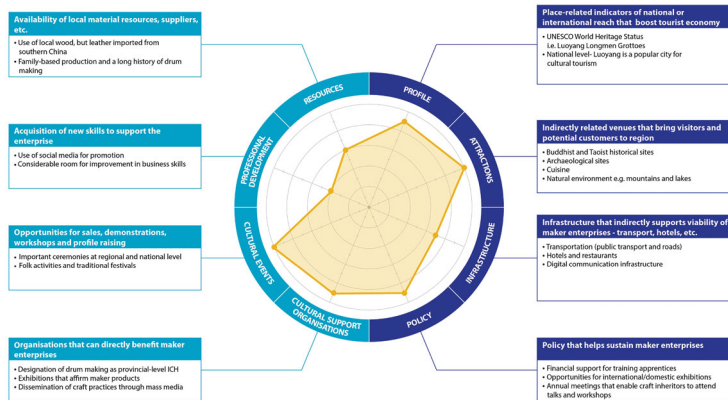


Figure 2. Relevance of place to drum maker's enterprise.

RELEVANCE OF PLACE TO INKSTONE CARVING:

The Potential of Context-based Elements to Support Maker Enterprises

LOCATION: ZHENGZHOU, HENAN PROVINCE

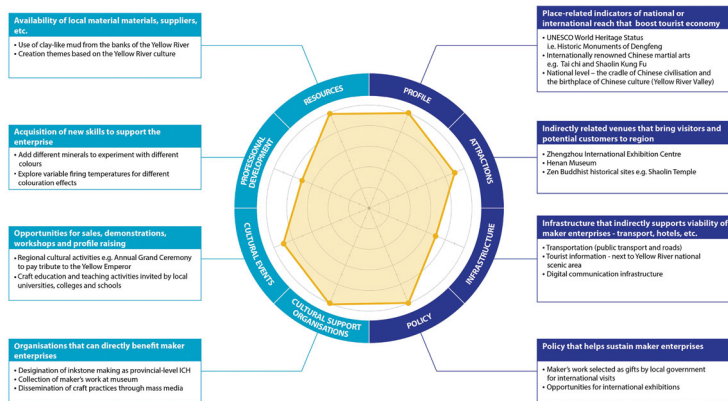


Figure 3. Relevance of place to inkstone carver's business.

- Concern for Others: adherence to self-transcending or 'beyond-self' values: Welfare of people and planet (e.g. care for other people and nature beyond one's own immediate environment), and commitment to community (care for and contribution to those with whom one is in frequent contact, e.g. individual craft makers, neighbours).
- Self-Advancement: adherence to self-enhancing or 'self-oriented' values: Recognition by others (e.g. affirmation by peers and organisations through competitions, awards and prizes, selection for exhibitions, gallery representation), and personal ambition and prosperity (e.g. opportunities for individual development and income generation).

Our analysis of the interviews with craft makers identified two important motivations related to intrinsic values (Conservation and self-transcending values): (1) **a sense of responsibility to continue the tradition**, and (2) **self-fulfilment**. First, the concept of responsibility was frequently mentioned by craft makers and enterprise owners – a strong sense of responsibility to continue the tradition. This was especially the case when they had been designated as an ICH Inheritor at the national, provincial and/or municipal level. In some cases, such responsibility can be explained as a commitment to the family and community. Second, craft makers interviewed also repeatedly mentioned the sense of personal fulfilment they gained from their work.

Our findings on personal motivations for design makers also show they are driven by a pure love of making, a strong responsibility to continue the tradition, and a sense of fulfilment. However, they are also found to be highly influenced by extrinsic values (the innovation and self-advancement cluster of values): (1) **marketable opportunities for place-based, culture-specific craft products**, and (2) **an exploration into how traditional crafts can be re-valued in the contemporary**. Some of these craft makers witness their family members working as craft makers from an early age while some show great interest in one specific practice in the learning process. Working differently from traditional ways of craft selling in shops, they take advantage of social media and online platforms to convey their aesthetic values and brand concepts, and then use multiple ways to push sales.

We found digital technology and relevant platforms play a vital role in design makers' businesses. For example, one enterprise owner used the social media platform TikTok to produce short-form videos of embroidery stitches. After gaining a large number of followers, she then successfully promoted her DIY embroidery kits via this platform. In addition, as China's live-streaming e-commerce sector is experiencing very significant growth (Greenwald 2020), she has also used this opportunity to promote her products. For example, her products were recently featured on the very popular live-streamer platform Viya. Subsequently, her online Tabao store (the largest Chinese e-commerce website) achieved over 20 million viewer visits and her product sales doubled (The Paper 2020). In these cases, a collaborative approach is often adopted to support production, and designers collaborate with craftspeople to develop new opportunities related to their local crafts, often aspiring to develop innovation with tradition.

Here, two specific craft examples were selected from the Yellow River Valley region to assist in understanding the different values and priorities of makers.

The first is a master leather craftsman who creates prototypical designs, trains apprentices and runs two fashion-oriented leather-product retail shops. His products are designed to suit the contemporary market and current

trends and he focuses on the values of innovation, consumerism and self-expression.

In contrast, the second, a traditional maker of large ceremonial lanterns (used in Chinese New Year festivals) feels a strong responsibility to spread knowledge and understanding of the traditions and to continue the skills of traditional lantern making. He feels a sense of responsibility, especially as his family's lantern making business was included in the list of China's national ICH in 2008. To achieve these goals, he provides many free courses and arranges activities for students at primary, junior and high schools, as well as at universities, each year. He has also converted his ancestral home into a lantern museum, which offers free admission (see details in Figures 4 and 5).

Clearly, these two craft makers are driven by very different values and priorities, which, in turn, affect how they develop their businesses. In the lantern making enterprise, there is a stress on cultural transmission and heritage education, while the leather maker devotes himself to designing new leather products, responding to contemporary fashions and customer needs. A comparison between these two craft makers and their businesses is shown in Figure 6, which is a clear and powerful visual demonstration of their very contrasting values.

Relationship to sustainability

This research explores how design can contribute to the effective implementation of sustainable principles at the local level in small and micro maker enterprises. According to Walker's *Quadruple Bottom Line of Design for Sustainability* (Walker 2011, 187–190; 2014, 92–93), the following four levels help us to understand the relationship of the enterprise to sustainability:

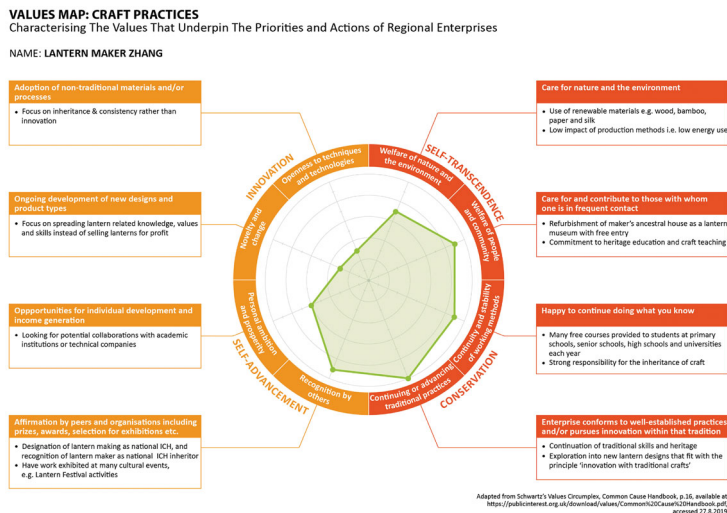


Figure 4. Value map – lantern maker Zhang's focus.

VALUES MAP: CRAFT PRACTICES
 Characterising The Values That Underpin The Priorities and Actions of Economic Development

NAME: LEATHER CARVER LI

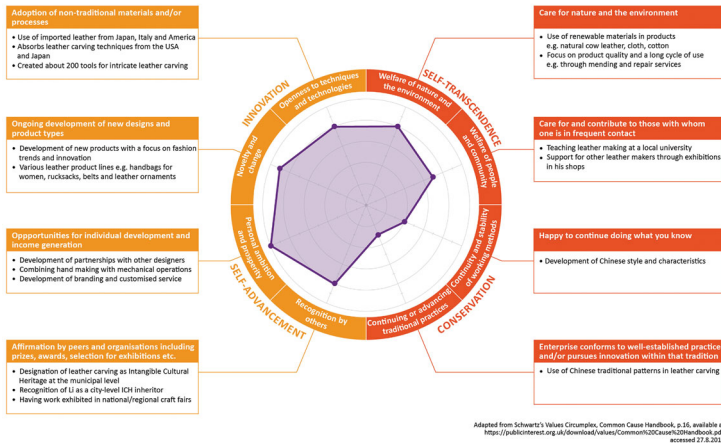


Figure 5. Value map – leather carver Li’s enterprise.

COMPARISON OF VALUES: THE LANTERN MAKER AND THE LEATHERWARE MAKER

LOCATION: HENAN PROVINCE, CENTRAL CHINA



Figure 6. Comparison of values between the lantern maker and the leatherwear maker.

- Practical meaning and environmental implications – utilitarian benefits plus the environmental repercussions of resource or materials acquisition, processes, making, packaging, marketing etc., including energy use and the production of waste.
- Social meaning – contribution to social equity, justice, community and culture.
- Personal meaning – ensuring enterprise activities are in accord with personal flourishing and non-selfish or ‘beyond self’ values.
- Economic means – ensuring economic viability of the enterprise in ways that accord with customer needs as well as one’s own values, social responsibility, and environmental care.

All of the traditional making practices we investigated in this region have been developed for local needs, and some of them also have significant cultural and/or religious symbolism, through their use in blessings and prayer, for example. Renewable and natural materials are mainly used for making, such as Tung wood for musical instruments, bamboo, and paper/silk for kites and lanterns. Locally available small-scale production is often adopted in this region. For larger business ventures, a collaborative approach with other makers and small craft businesses is used to produce sufficient stock to ensure that customer demands are met, and the business remains viable. In addition, we found that local craftspeople included environmental considerations in their practices. In the case of ironware, there is a need for firing and casting, and so it is an energy-intensive process, but its environmental impact depends on the energy source used. To reduce air pollution caused by traditional coal burning, blacksmiths we interviewed now strive to improve the technique by using the cleaner energy resource of natural gas.

The traditional practices we studied in this region were distinctive to local communities and cultures. As such they contribute to community, and people's sense of belonging and cultural identity. These practices all have a history of long-term intergenerational cultural transmission. Not only craft skills, but also socio-cultural traditions, beliefs and meanings have been passed on from generation to generation. One typical example is the woodblock painting we saw in this region, which can be dated back to the late Ming dynasty and early Qing dynasty (1600s–1700s). There is also the drum making in Luoyang city, which has a history of more than 1,000 years and has been handed down over nineteen generations in the same family. Both woodblock paintings and drums have symbolic significance as they are used in traditional celebrations, social ceremonies and cultural festivities. However, as many hand-made artefacts have been largely replaced by inexpensive mass-manufactured alternatives, they are no longer used in daily life. In turn, this change can have a detrimental impact on the cultural vitality of the community.

Our findings on personal motivation highlighted that craftspeople are predominately driven by a love of making, a strong responsibility towards their community and family, and a sense of creative fulfilment. These motivations fall within the cluster of intrinsic values for self-transcendence, benevolence, family, community, universalism and conformity (Schwartz 2012), the terms of which we have adapted in the above diagrams for the specific context of design. Substantial evidence has shown that these intrinsic values are positively associated with personal well-being (e.g. Richins and Dawson 1992; Dittmar et al. 2014) and socially responsible behaviours (such as helping others and volunteering) (Briggs, Landry, and Wood 2007; Sheldon and Kasser 1995). In our research, the craft makers interviewed generally showed

a high level of well-being, reflected in satisfaction from the completion of an artefact, a sense of achievement from external recognition and fulfilment from continuing the craft tradition. It is worth noting that many craft makers we interviewed felt a sense of duty towards their craft and its continuation and spent considerable time conducting unpaid teaching activities. In particular, some of them teach craft skills to disabled students in order to help them become self-employed.

Craft businesses in this study were found to be largely related to the development and sustainment of traditional heritage crafts. Many craft makers and enterprise owners we interviewed are also recognised as ICH inheritors, and they often feel a particular responsibility to pass their skills and knowledge on to others. One example was a young kite maker who had created a two-hour practical course for school children. She had streamlined the processes and reduced the number of steps. The time-consuming element of hand-carving the bamboo sticks into lightweight, carefully profiled rods had been replaced by the use of mass produced bamboo sticks of uniform profile. Silk and paper for traditional kites had been replaced by waterproof recyclable plastic, which is more robust and prevents the kites being damaged when taken out in the rain. Before engaging in this simplified version of kite making, a short session was first introduced to inform participants about the history of her family's kite-making business, the various designs, and the exhibitions where their kites had been displayed. From 2017 to 2019, she taught about 15,000 students this simplified version of traditional kite making.

Compared with the other three elements of the Quadruple Bottom Line (i.e. practical, social and personal meaning), we found in our research that economic considerations are generally less important for craftspeople. More broadly, external approval and rewards in general are not major priorities for them; this conclusion also aligns with the findings of Kasser and Ryan (1996). The marketing and promotion of their work is mainly about reputation and online word-of-mouth via social media. They employ local people and contribute to local economic development. As mentioned by the fifth generation New Year print woodblock maker, his responsibility 'is to inherit this making practice and also develop the historic old brand as a successful enterprise', and he hopes his enterprise, 'will finally bring both economic and social benefits to the local community and local people.' (interview with him, 2019).

From this, an indicative overall assessment of maker enterprises in the Yellow River Valley region of central China is attained by using a numerical equivalent for each with the above ratings (Low = 1; Med. = 2; High = 3) and then estimating an overall 'indicative' rating based on the average of the four. Those individual areas currently assessed as 'Low' will be the ones

SUSTAINABILITY PROFILE:
Based on Walker's **Quadruple Line of Design for Sustainability**
LOCATION: **CENTRAL CHINA**



Figure 7. Sustainable profile of the central China region.

to work on in the future if the overall assessment is to be improved (see details in [Figure 7](#)).

Design opportunities

As this research is interested in design's contributions in helping to ensure product viability and in conveying the values of traditional heritage crafts, two important factors – production cost and perceived value were considered for the examination of craft products in the Yellow River Valley region. Materials price and skills level, as two main components, are used to identify their perceived value/production cost profiles. Also, products that have Chinese ICH designation, and which embody heritage crafts through specific symbolic meanings (e.g. ceremonial, spiritual, religious, or cultural meanings) are often considered to have a high perceived value. In total, twenty-six craft enterprises and associated making practices have been classified within in a matrix under the following four categories:

- **Lucrative products:** these products have a high perceived value even though they may be made from relatively low-cost materials, employ low or moderate skills in their manufacture, or be relatively quick and easy to complete. Examples include textiles, leatherware, kitchenware and wood-block New Year prints of the Yellow River Valley.

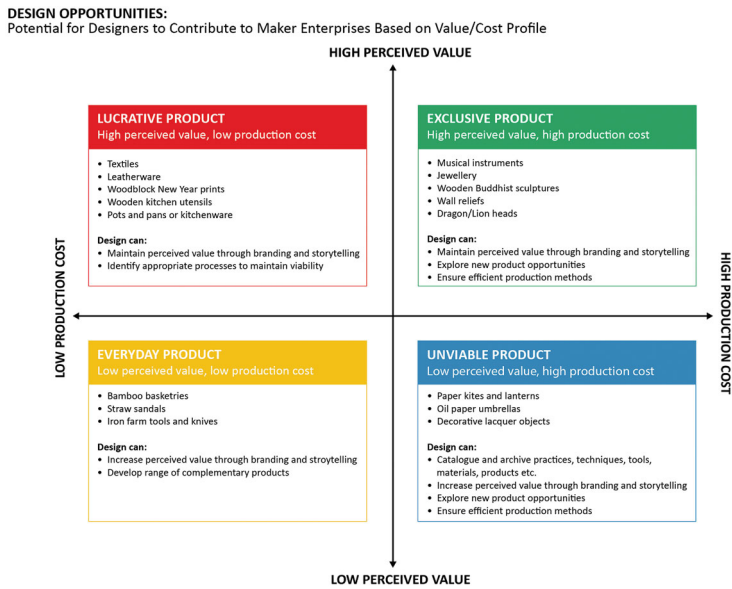


Figure 8. Potential for designers to contribute to maker enterprises in central China.

- **Exclusive products:** in these products, the materials are relatively expensive, and the making is time-consuming and requires high-level skills. Examples include musical instruments, jewellery, and large carved crafts, such as Buddhist sculptures or wall reliefs.
- **Everyday products:** these products include bamboo basketry and straw sandals. These are made from low-cost materials using relatively low skills.
- **Unviable products:** these products include paper-oil umbrellas, paper lanterns and paper kites. These all employ high-level skills and are relatively difficult and time-consuming to make. Consequently, they have been largely replaced by mass-produced alternatives. In addition, objects d'art such as decorative lacquer objects, are regarded as unviable products from the perspective of sustaining traditional practices in ways that are socially and environmentally responsible. This is because these kinds of objects are generally made for niche markets, are not usually traditional and frequently fall into the category of 'positional' products that display one's taste or socio-economic status. As such, they tend to be drivers of consumerism rather than conforming to more traditional, sustainable practices.

Figure 8, shows these four categories of product types. In each of the quadrants, opportunities are identified as to where design might make a useful contribution to a particular product category. For lucrative products, impressively, in several craft businesses that are also grouped in the lucrative

product category, design has made a significant contribution to marketing, branding, product development and packaging activities. For example, *Shanshe* is an online brand and supplier of wooden kitchen utensils, and its owner trained as a designer. Under the strong influence of his father, who is also a provincial-level ICH inheritor of wood carving, he is devoted to integrating traditional craftsmanship into the brand. He develops the new designs, which he prototypes himself. After this, he communicates with the craftspeople, and they then produce enough stock for online selling. Similar collaboration modes can be seen in other craft businesses, brands and enterprises. Informed by this, for this category, design can contribute by:

- Helping to ensure the perceived value is maintained through effective, contemporary branding and packaging; effective communication of the product's provenance, connection to place, cultural and/or historical significance; and by ensuring its contemporary usefulness, cultural relevance or aesthetic qualities.
- Identifying and developing appropriate processes and product design variations to ensure the product's continued relevance and viability.

Within the group of exclusive products, design can contribute by:

- Helping to ensure the perceived value is maintained, as in the previous example, through effective branding and packaging; effective communication of the product's provenance, connection to place, cultural significance and/or historical significance; and by ensuring its contemporary usefulness, cultural relevance or aesthetic qualities.
- Exploration and development of new product opportunities – adaptation of designs to contemporary needs and tastes, development of new markets, and representation of the product to new audiences.
- Ensuring production processes are efficient and effective in order to reduce production costs where possible, without eroding the product's associated traditions and legacy.

For the category of everyday products, design can contribute by:

- Helping to increase the perceived value of such products through effective branding, packaging and storytelling in order to be able to command a more viable price point.
- Developing a range of complementary products to create a product range with a similar aesthetic and a well-branded presence.

In the case of Unviable Products, design could be used to:

- Develop new products that employ traditional skills, techniques and materials but reinvent the product to suit a contemporary market.
- Help increase the appreciation and perceived value of the product(s) through branding, packaging and storytelling in order to be able to command a more viable price point.
- Ensure production processes are efficient and effective, employ mechanical techniques where appropriate and ensure hand skills are used for the intricate finishing work only, thereby reducing production costs wherever possible.
- Catalogue and archive the practices, techniques and tools (including by video) so that if the craft does decline and disappear it could, potentially, be revived in the future.
- Acknowledge that some types of products are simply at odds with the values and practices of sustainable futures, production should be ceased, and examples archived for future study.

Notably, within the Chinese context, as many enterprise owners are also acting as ICH inheritors, heritage teaching and craft education are closely related to their craft businesses. In some cases, they are exploring how to convey tradition and culture in craft branding and marketing, and new craft products used for craft education. There is potential for this idea to be explored further. Existing literature indicates specific digital technologies have contributed to ICH preservation. For example, the use of serious games (Dagnino et al. 2015), livestreaming (Lu et al. 2019), and augmented and virtual reality (Huang, Xiang, and Li 2019) have been explored in the transmission, documentation and education of ICH.

Discussions and conclusions

Through the analysis of primary data collected from the Yellow River Valley region of central China, this research has identified and visualised:

- the relationships of craft makers and their businesses to 'localisation' and the significance of 'place' to their operations;
- the significance of intrinsic/extrinsic values and their relationship to craft makers' priorities and aspirations for their enterprises;
- the relationship of the enterprises to sustainability; and
- design opportunities in relation to production type and value.

Our in-depth studies of craft makers and businesses in this region demonstrates that the *Located Making Framework* can be used as an effective method for understanding traditional making practices, their relevance to

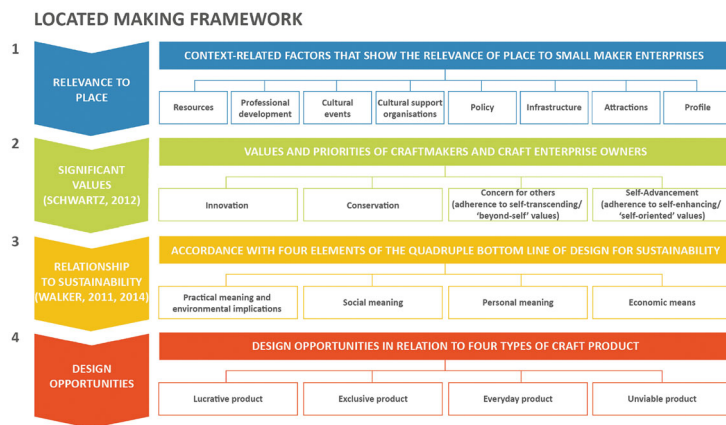


Figure 9. Located making framework.

place, their underlying values, their relationship to sustainability and their future potential.

Four phases are included in this framework. **Firstly**, context-related factors are considered to examine the relevance of place to the enterprises so as to make sense of what opportunities are offered by a particular locale that supports – or could support – the business. **Secondly**, the values and priorities of craft makers and enterprise owners were examined using a modified version of Schwartz's Values Circumplex (2012) to understand what drives the nature of their craft, the economic success of their business, and the relationship of their operations to sustainability. **Thirdly**, the four categories from Walker's *Quadruple Bottom Line of Design for Sustainability* are used to examine the sustainable performance of maker-enterprises, comprising practical meaning with environmental implications, social meaning, personal meaning, and economic means. **Fourthly**, by combining product value and cost profiles, the research identified where design might contribute effectively to improve the viability of the enterprise and to ensure the effective implementation of sustainability principles. **Figure 9** conveys the analytical framework resulting from the research, each phase of which has been explained in detail associated with case studies in the Findings.

This framework can be used by different people in different ways. By building a website that plots 'Value' data from many craft makers, *individual makers* can see how their values and motivations compare with others, and discuss this with them at meetings, conferences and other events organised by people involved in UNESCO ICH programme. Similarly, cumulative plots showing 'Connection to Place' allow *individual makers* to become better acquainted with the resources and facilities that a place can offer, such as suppliers, galleries, craft markets and other outlets. This facilitates knowledge exchange and mutual learning. In addition, the indicative 'Sustainability' plot

can be used by *individual makers* and *sector support organisations* to improve practices so they better align with the four interrelated factors of the QBL. The 'Design Opportunities' diagram aligns the product(s) from a particular craft with opportunities for business development, which can help individuals and could be used by *sector support organisations*. Finally, *policy makers* can gain an idea of craft makers' priorities, values and motivations, and their ties to place in order to make informed, appropriate, and culturally sensitive policy recommendations and decisions.

Future plans for this work include developing an interactive online framework that will employ Likert-scale online questionnaires and automated plots. This will allow the framework to be used more widely, and enable makers to benefit from having access to key indicators derived from cumulative results. In addition, our previous research into small maker enterprises in New Mexico, USA and in Cumbria in northwest England, UK, will be also examined in the framework, and the findings from three countries will be further compared. This would improve our understandings on different social conditions, government policy and mechanisms, and development directions that support the sustainable development of small maker enterprises. This would also help assess the generalisability of the framework applied in different contexts.

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No potential conflict of interest was reported by the authors.

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