

ISTANBUL TECHNICAL UNIVERSITY ★ GRADUATE SCHOOL OF SCIENCE
ENGINEERING AND TECHNOLOGY

**EXPLORING THE POTENTIAL OF ONLINE PLATFORMS IN PRODUCT
DESIGN: A STUDY ON INTEGRATING CRAFTSMEN INTO SYSTEMS OF
DESIGN**

M.Sc. THESIS

Bariş GÜMÜŞTAŞ

Department of Industrial Product Design

Industrial Product Design Programme

OCTOBER 2015

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Thesis Advisor: Assoc. Prof. Dr. Şebnem TİMUR ÖĞÜT

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İSTANBUL TEKNİK ÜNİVERSİTESİ ★ FEN BİLİMLERİ ENSTİTÜSÜ

**ÜRÜN TASARIMINDA ÇEVİRİMİÇİ PLATFORMLARIN POTANSİYELİ:
ZANAATKARLARIN TASARIM SİSTEMLERİNE ENTEGRASYONU
ÜZERİNE BİR ÇALIŞMA**

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To my family,

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ABBREVIATIONS

NGO	: Non-governmental organization
ITU	: Istanbul Technical University
CNC	: Computer Numeric Control
OECD	: Organisation for Economic Co-operation and Development
GDP	: Gross domestic product
SME	: Small and Medium-sized Enterprises
ISTKA	: Istanbul Kalkınma Ajansı (Istanbul Development Agency)
YEKON	: Yaratıcı Endüstriler Konseyi (Creative Industries Council)
SMS	: Short Message Service
IDA	: International Design Alliance
ICSID	: International Council of Societies of Industrial Design
PR	: Public Relations

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EXPLORING THE POTENTIAL OF ONLINE PLATFORMS IN PRODUCT DESIGN: A STUDY ON INTEGRATING CRAFTSMEN INTO SYSTEMS OF DESIGN

SUMMARY

Since the appearance of design as a profession from the beginning of the industrial era until today, the profession's advancement has been parallel to the development of the industry based on industrial manufacturing. With the post-industrial times the main factor of growth is shifting from manufacturing to services & information based activities. This shift brings various problems for designer as they have to adapt to the post-industrial conditions.

Since the manufacturing industry is not growing as it used to be, the jobs created by this industry is in decline. As this is a bad news for the industrial era design which heavily relies on the industrialised manufacturing, post-industrial design has to find new areas of activity by utilising alternative manufacturing methods or shifting to more popular industries such as service industries. As the community of professional industrial designers continue to grow each day, the role of those alternative manufacturing methods gets more important due to the declining employment options of manufacturing industry.

There are modern small scale manufacturing methods like 3D printing, CNC or laser cutters getting developed thanks to the advancements in the technology. Internet is allowing the development of new businesses and production of new products by providing the necessary infrastructure such as funding, marketing, distribution through online platforms of various scales. So the combination of digital manufacturing methods and infrastructure provided by online platforms can lower the barriers of entry to entrepreneurship in physical goods drastically, providing new opportunities for designers in the post-industrial era. Forming ecosystems combining digital manufacturing methods, online platforms and design provides innovation.

Quality of digital manufacturing methods are still not par with traditional methods of small scaled manufacturing and they are not accessible by many people, especially the ones in developing countries due to issues like their cost or operational difficulties. As another small scale manufacturing method, crafts can be an alternative to digital manufacturing methods in a similar fashion, forming hybrid ecosystems combining traditional manufacturing methods, online platforms and design.

Development of such a model will allow designers to design and manufacture high-quality products in low scale through local resources by relying on minimal amount of actors to split the revenue. This process might eventually increase the perception of the crafts and craftsmen economic status, giving craftsmen the opportunity to adapt to the post-industrial economy and develop his craft to survive instead of disappearing in an industrialised economy.

Formation of such an ecosystem requires integration of crafts into design system as a functional part of it. As both of them works as networked systems formed by many type of actors and interactions between them, integrating crafts into design systems requires the understanding how those systems function in their current context.

As crafts disappearing due to the modernisation of manufacturing, the ones who are still out there are mostly found in developing countries where the industrialisation process has not finished yet. Istanbul as a regional hub, and Turkey's design capital, houses one of the biggest and oldest craftsmen population in the country. Although those craftsmen are under threat of disappearance because of the urban policies, gentrification processes and competing with industrial manufacturing. Istanbul also being a global hub, creates an ideal environment for integrating crafts into design systems.

The study starts by discussing the status of design and crafts in post-industrial era, and then proposes development of an online platform for integrating those two, this decision is based upon how problems related to design solved by online platforms in the post-industrial era, and how those platforms can help for solving the problems introduced during the integration of crafts into design systems.

Followed by the explanation of the initial study, as the idea of integrating crafts into design systems was inspired by studies made in "EUT 550E - Mapping Design In Istanbul" course of ITU's Industrial Design Programme. The course started as mapping the design system around the Grand Bazaar region of Istanbul, as an attempt to map Istanbul's Design System, drawing inspiration from the book "Milan Design System". The scale of this study increased in the upcoming years to map the design system of whole city, eventually evolving into a project called "Istanbul Design Map" as part of "Creative Istanbul Workshops" by Istanbul Kalkınma Ajansı – Istanbul Development Agency (ISTKA), involving seminars and workshops and publishing of the conclusions as a booklet.

Action research is chosen as the base methodology, as it aims to initiate a change involving multiple actors, and the structure of the problem does not allow a trial-and-error based approach. The study is designed as an initial step of bigger study due to the scale of the problem, focusing on increasing the visibility of the craftsmen among public and design professionals in order to discover the mechanics behind their relations. Study is divided into three sections based on division of sections in action research cycles as (1) Plan-Act, (2) Evaluation and (3) Conclusion.

Plan-Act chapter is divided into three phases as (1) Teaser, (2) Release and (3) Exhibition. Teaser section explains the development of the identity of the online platform in detail and development of the teaser web site.

Release phase describes the formation of a map for users to navigate craftsmen in the craftsmen database, formation of the database, and the launch process of the "Istanbul Craftsmen Map". Exhibition phase covers the featuring of the project in the 2nd Istanbul Design Biennial, development of the idea of exhibition as exhibiting modern products crafted with tradition methods accompanied by video documentaries and walking maps, as a proof of the potential of the integration of crafts into design systems.

Evaluation chapter presents the data collected during the study under four groups as (1) Internet Traffic and Site Usage, (2) Press Appearances, (3) E-Mails & Direct Feedbacks and (4) Survey. Inspecting each group under its own chapter to evaluate

the data collected under that group. Internet Traffic and Site Usage is evaluated under two titles as (1) Visitors, (2) Map Usage, trying to understand the characteristics of the traffic received by the website and other parties interested in the subject. Press Appearances lists the appearances in local and global media to understand the approach of media to the subject. E-Mails & Direct Feedbacks chapter analyses e-mails sent to the publicly available e-mail address of the project as direct feedbacks, and contains couple of meetings which were requested by e-mails. In the Survey chapter, a survey which was sent to registered users of the website, designed with the purpose of how users are using the site is evaluated.

As platform manages to increase the visibility of the problem among public and individuals with the help of online and offline channels, it was lacking critical capabilities for increasing the accessibility of the craftsmen for designers, allowing the discovery of requirements for such a process through the feedbacks of users. Users requested more crafts and more craftsmen to be added into the map and phone numbers of existing ones with purpose of finding the craftsmen they are looking for and reaching to him or her quickly through phone. Along 96 participant who have filled the survey only five of them have contacted a craftsman, and none of those five decided to work with them. Most popular reasons for not contacting craftsmen among survey participants were “Couldn’t find the craft I need” and “I don’t know which craft/craftsman to contact”. The problems for not working with craftsman were trust and communication issues. Evaluation of the data collected through the research, revealed two possible routes of development. First route is increasing the coverage of the craftsmen database. Second route is developing the platform to actively assist and become part of the designer and craftsman collaboration.

As increasing the coverage of the craftsmen database is an ambitious task, distributed methods such as crowdfunding for gathering resources for such an operation or crowdsourcing for distributing the effort among volunteers can be utilised. Such a process involves development of a framework for mapping special entities in a digital space, as this framework can be communicated through materials such as guides, it can also be applied to other locations or subjects.

The other issue preventing the designers from contacting and working from designers were the problems caused by their lack of knowledge in the domain, preventing from them from finding the craft or craftsman they need, or causing trust or communication issues. As this problem requires a solution based on active communication with both parties, it needs a commitment of significant resources as effort, time and funding. This can be done in a regular fashion by collecting fees for such services, or a different approach involving online platforms can be applied, where the platform itself becomes a stakeholder in the process through additional values which can be provided such as sales channels, or commissioning as forming an ecosystem utilising online platforms for creating a hybrid production and business model combining crafts as traditional manufacturing method, and modern design approach.

ÜRÜN TASARIMINDA ÇEVİRİMİÇİ PLATFORMLARIN POTANSİYELİ: ZANAATKARLARIN TASARIM SİSTEMLERİNE ENTEGRASYONU ÜZERİNE BİR ÇALIŞMA

ÖZET

Tasarımın meslek olarak ortaya çıktığı endüstriyel devriminin başlangıcından günümüze kadar tasarım mesleğinin gelişimi endüstriyel üretime paralel bir şekilde gelişmiştir. Post- Endüstriyel dönem ile birlikte büyümenin asıl etkeni üretimden, hizmet ve bilgi tabanlı aktivitelere kaymıştır. Bu değişim, tasarımcıların post endüstriyel koşullara uyum sağlamasını gerektirdiği için çeşitli problemlere sebep olmaktadır.

Üretim endüstrisi eskiden olduğu gibi büyümediği için sağladığı iş imkanları da azalmaktadır. Bu, endüstriyel üretime aşırı derecede bağlı olan endüstriyel dönem tasarımı için kötü bir haber olsa da post-endüstriyel tasarım, alternatif üretim yöntemlerini kullanarak ya da hizmet endüstrisi gibi popüler endüstrilere kayarak kendine yeni alanlar bulmak zorundadır. Bu bağlamda her gün büyüyen endüstriyel tasarımcılar topluluğu için alternatif üretim yöntemleri günden güne önem kazanmaktadır.

Teknolojideki ilerlemeler sayesinde 3D yazıcı, CNC ya da lazer kesici gibi küçük ölçek üretim yöntemleri ortaya çıkmakta ve gelişmektedir. İnternet, yeni iş alanlarının gelişmesi ve yeni ürünlerin üretimi, finansmanı, pazarlaması ve dağıtımı için çeşitli ölçeklerde çevrimiçi platformlar üzerinden gerekli altyapıyı sunmaktadır. Sayısal üretim yöntemleri ve çevrimiçi platformlar ile sağlanan altyapı, girişimcilerin fiziksel ürün pazarına giriş bariyerini önemli bir oranda düşürmekte ve tasarımcılara post-endüstriyel dönemde yeni fırsatlar sağlamaktadır.

Sayısal üretim yöntemlerinin kalitesi küçük ölçekli geleneksel üretim metotlarınıninki ile henüz eş gelmemekle birlikte, özellikle gelişmekte olan ülkelerde maliyet ve operasyonel zorluklar nedeniyle çoğu insan tarafından dijital üretim yöntemlerine erişim sağlanamamaktadır. Bir başka küçük ölçekli üretim metodu olan zanaat, sayısal üretim yöntemlerine alternatif olarak tasarım, çevrimiçi platformlar ve geleneksel üretim yöntemlerinin bir arada kullanıldığı hibrit bir ekosistem oluşturulmasında kullanılabilir.

Bu modelin geliştirilmesi tasarımcılara yerel kaynaklar ile, karın az miktarda aktöre dağılacağı bir yapıda, küçük ölçekte ve yüksek kalitede ürünler tasarlama ve üretme imkanı sağlamaktadır. Öte yandan böyle bir süreç, zanaatkarlara post-endüstriyel üretim ekonomisine uyum sağlamaları ve zanaatın endüstriyel ekonomide kaybolması yerine varlığını sürdürmesi için fırsat vererek, zanaat algısını ve zanaatkarların ekonomik durumlarını kuvvetlendirebilir.

Bahsedilen ekosistemin oluşması için zanaatın, tasarım sistemlerine fonksiyonel bir şekilde entegre edilmesi gerekmektedir. Bu entegrasyonun sağlanması için, hem tasarım hem de zanaatın kendine ait aktörlerinden ve bu aktörlerin etkileşiminden oluşan ağ şeklindeki yapılarının nasıl işlediğinin anlaşılması gerekmektedir.

Üretimin modernleşmesi ile kaybolan zanaatkarlar, daha çok, endüstriyelleşme sürecinin tamamlanmadığı gelişmekte olan ülkelerde varlıklarını sürdürmektedirler. Türkiye'nin tasarım başkenti ve bölgesel bir merkez olan İstanbul, ülkedeki en geniş ve en eski zanaatkar topluluğuna ev sahipliği yapmaktadır. Buna rağmen bu zanaatkarlar, şehirleşme politikaları ve soylulaştırma süreçleri nedeniyle kaybolma tehdidi altında endüstriyel üretim ile rekabet etmektedir. Bu özellikleri ile İstanbul, zanaatın tasarım sistemlerine entegrasyonu için ideal bir çevre oluşturmaktadır.

Bu çalışma, post-endüstriyel dönemde zanaatın ve tasarımın durumunu tartışarak başlamakta ve sonrasında bu ikisini entegre eden çevrimiçi bir platform önerisinde bulunmaktadır. Bu öneri, post-endüstriyel dönemde tasarımla ilişkilendirilen problemlerin çevrimiçi platformlarla çözülmesine ve bu platformların tasarım-zanaat entegrasyonu sırasında oluşabilecek problemlere çözüm olarak sunulmasına dayandırılmaktadır.

Daha sonra ise önçalışma ya dair bilgiler yer almaktadır. Zanaati tasarım sistemlerine entegre etme fikri, İTÜ'nün Endüstriyel Tasarım Programı "EUT 550E - Mapping Design In Istanbul" dersinde yapılan çalışmadan yola çıkmaktadır. Çalışma "Milan Design System" kitabından ilham alarak İstanbul'un Kapalı Çarşı bölgesindeki tasarım sistemini haritalamak üzerine başlamıştır. Bu çalışmanın ölçeği yıllar içinde genişlemiş: tüm şehir için tasarım sisteminin haritalaması halini alarak "İstanbul Tasarım Haritası" adıyla seminerler, atölye çalışmaları ve sonuçlarını içeren bir kitapçık halinde Yaratıcı Endüstriler Konseyi'nin (YEKON) düzenlediği Yaratıcı İstanbul Atölyeleri'nin bir parçası olmuştur.

Problemin yapısı deneme-yanılma yaklaşımına uygun olmadığı için esas yöntemi olarak, birden çok aktörü içeren bir değişim başlatmayı amaçlaması sebebiyle, eylem araştırması seçilmiştir. Bu çalışma, aralarındaki ilişki ve mekaniği keşfetmek adına; zanaatkarların, toplumdaki ve tasarım profesyonelleri arasındaki görünürlüğünü arttırmaya odaklanan, sorunun boyutundan dolayı daha geniş bir çalışma için bir başlangıç olacak şekilde tasarlanmıştır. Çalışma, eylem araştırma döngülerinin bölümleri baz alınarak, Planlama - Eyleme Geçme, Değerlendirme ve Sonuçlandırma olarak üç bölümden oluşmaktadır.

Planlama - Eyleme Geçme bölümü 3 fazdan oluşmaktadır; Tanışma, Lansman, Sergi. Tanışma fazı, tanıtım web sitesinin geliştirmesini ve çevrimiçi platformun kimliğinin gelişimini detaylı bir şekilde anlatmaktadır. Lansman fazı kullanıcıların zanaatkarları veri tabanında arayabileceği haritanın oluşumunu, veri tabanının oluşumunu ve "İstanbul Zanaatkar Haritası" lansman sürecini açıklamaktadır. Sergi fazı, projenin İkinci İstanbul Tasarım Bienali'nde yer almasını, zanaat ve tasarımın bir araya geldiği sergi fikrinin gelişimini kapsamaktadır.

Değerlendirme bölümü çalışma süresince toplanan veriyi dört grupta sunmaktadır; (1) İnternet Trafik ve Site Kullanımı, (2) Basında Yer Alma, (3) E-postalar & Doğrudan Geribildirimler ve (4) Anket. İnternet Trafik ve Site Kullanımı sitenin aldığı trafiğin karakteristiğini ve başka partilerin konuya ilgisini anlamaya çalışmak için iki başlıkta değerlendirilmektedir; (1) Ziyaretçiler, (2) Harita Kullanımı. Basında Yer Alma, basının konuya yaklaşımını anlamak amacıyla yerel ve global medyada çalışma ile ilgili yer alan haberleri değerlendirir. E-postalar & Doğrudan

Geribildirimler bölümü is doğrudan geribildirim olarak projenin herkese açık e-posta adresine gönderilen e-postaları ve bu e-postalarda talep edilen bazı toplantıları analiz etmektedir. Anket bölümünde, web sitesinin kayıtlı kullanıcılarına gönderilen, kullanıcıların siteyi nasıl kullandığını anlamak amacıyla tasarlanan anket ve sonuçları yer almaktadır.

Toplanan veriler üzerinden yapılan değerlendirmelere göre, çalışma kapsamında geliştirilen platform, problemin toplumda ve bireyler arasında görünürlüğünü çevrimiçi ve çevrimiçi olmayan kanallar aracılığıyla arttırmasına rağmen, tasarımcıların zanaatkarlara erişimini arttıramamıştır. Ancak kullanıcılardan gelen geribildirimler analiz edilerek böyle bir sürecin gereksinimleri keşfedilmiştir. Kullanıcılar daha fazla zanaat ve zanaatkarın haritaya eklenmesini ve aradıkları zanaatkarlara daha hızlı ulaşabilmek için telefon numaralarının haritaya eklenmesini talep etmişlerdir. Ankete katılan 96 kişiden, beş kişi zanaatkarlar ile iletişime geçmiş ve bu beş kişiden hiçbiri zanaatkarlarla çalışmaya karar vermemiştir. Zanaatkarlarla iletişime geçmeme sebebi olarak “Aradığım zanaatı/zanaatkarı bulamadım.” ve “Hangi zanaat/zanaatkarla iletişime geçeceğimi bilemedim.” öne çıkmıştır. Zanaatkarlar ile iletişime geçen beş kişi ise zanaatkarlar ile çalışmama sebepleri olarak güven ve iletişim sorunlarını öne çıkartmıştır.

Toplanan verilerin değerlendirilmesi çalışmanın genişletilmesi için iki adet seçenek önermektedir. Bu seçeneklerden ilki zanaatkar veri tabanının kapsamının genişletilmesi, ikincisi ise çalışmanın tasarımcı-zanaatkar işbirliğinin geliştirilmesi amacıyla süreçte aktif bir şekilde yer alabilecek bir platform şeklinde geliştirilmesi.

Zanaatkar veri tabanının kapsamının genişletilmesi, şehrin büyüklüğü, zanaatkarların çoğunun kayıtdışı olması gibi sebeplerden dolayı gerçekleştirilmesi süresince gerek işgücü gerek maddi anlamda kaynağa ihtiyaç duyacaktır. Bu kaynakların sağlanması için ise kitle fonlama ya da kitle kaynak gibi yöntemler kullanılabilir. Kitle fonlama ile çalışmanın destekçilerine çalışma künyesinde yer alma veya basılı İstanbul Zanaatkar Haritası gibi çeşitli ödüller sağlanarak gerekli maddi kaynaklar toplanabilir. Kitle kaynak yöntemi ile ise zanaatkar atölyelerinin keşfi ve kaydı sürecinde gereken işgücü gönüllülere dağıtılabilir. Ancak toplanan verilerin merkezi bir veri tabanında toplanması için konu ile ilgili kılavuzlar gibi çeşitli materyaller hazırlanmalıdır. Bu yöntemler ile zanaatkar veri tabanının kapsamının geliştirilmesi için gereken kaynaklar sağlanabilir.

Tasarımcıların zanaatkarlarla iletişime geçmesini engelleyen bir başka durum ise tasarımcıların zanaat konusunda bilgilerinin eksik olması. Bu sebepten dolayı ihtiyaçları olan zanaat ya da zanaatkarı tam olarak belirleyememekte ve iletişime geçtikleri zanaatkarlar ile çalışırken güven ve iletişim sorunları yaşamaktadırlar. Bu sorunun çözümü tasarımcı ve zanaatkar ile aktif iletişim gerektiren bir yaklaşıma ihtiyaç duymaktadır. Böyle bir yaklaşım ile geliştirilecek bir çevrimiçi platform ise bu süreç içerisinde etken bir şekilde yer alabilir ve tasarımcı-zanaatkar arasındaki sorunlara müdahale edebilir. Ancak böyle bir platformun sürdürülebilir olması için bu süreçten bir gelir sağlaması gerekir. Bu gelirin sağlanması için ise iki adet alternatif önerilmektedir. Bunlardan birincisi platformun bu hizmeti bir ücret karşılığında sağlaması. İkincisi ise platformun tasarımcı-zanaatkar işbirliğinde paydaş olarak yer alarak, satış kanalları, görünürlük veya aracılık gibi çeşitli katkılarda bulunarak bu geliri sağlaması. Bu sayede geleneksel üretim yöntemleri, tasarım ve çevrimiçi platformları bir araya getiren hibrit bir iş modeli geliştirilebilir.

1. INTRODUCTION

From the appearance of design as a profession at the beginning of the industrial era until today, the profession's advancement has been parallel to the development of the industry based on industrial manufacturing. With the post-industrial times the main factor of growth is shifting from manufacturing to services & information based activities (Castells, 2000), and this shift brings various problems for designers, as they have to adapt to the post-industrial conditions.

Since the manufacturing industry is not growing as it used to be, the jobs created by this industry are in decline. As this is bad news for the industrial era design which relies heavily on the industrialised manufacturing, post-industrial design has to find new areas of activity by utilising alternative manufacturing methods or shifting to more popular industries such as service industries. As the community of professional industrial designers continue to grow each day, the role of those alternative manufacturing methods gets more important each day due to the declining employment options in the manufacturing industry.

Utilisation of alternative manufacturing methods in design systems can scale from the use of traditional craft production to the use of digital manufacturing methods such as 3D printing, CNC and laser cutters. The development of digital manufacturing methods heavily rely on internet as it provides the necessary infrastructure for the collaboration and development tools. Due to the collaborative and distributed nature of digital manufacturing methods, they are getting more accurate and accessible everyday (Bull & Groves, 2009). Also internet's use is not just limited to the development of digital manufacturing methods, but also development and manufacturing new products or businesses by providing the necessary infrastructure such as funding, marketing, distribution through online platforms of various scales. So the combination of digital manufacturing methods and infrastructure provided by online platforms are lowering the barriers of entry to entrepreneurship in physical goods drastically (Anderson, 2012), providing new opportunities for designers in the post-industrial era.

On the other hand craft production is still perceived as a niche production method which is mostly available in geographies which are newly or not industrialised. Also with the industrialisation of manufacturing and glorification of automated production during that process, crafts has lost their cool, causing them to be seen as the inferior way of manufacturing. Following that many craftsmen lost their jobs in the industrialised economies and the ones in not-so industrialised economies faced with financial and bureaucratic difficulties. But post-industrial times provides an opportunity for the crafts to shine once again as a viable alternative manufacturing method to industrialised manufacturing.

Although digital manufacturing methods combined with online platforms can provide a viable entrepreneurship framework for designers, digital manufacturing are still not widely accessible (especially in developing countries) and not always par with traditional methods when it comes to quality. So replacing the digital manufacturing methods in the equation with traditional craft manufacturing can provide an opportunity for the development of viable hybrid production models for the post-industrial economy, combining traditional manufacturing methods with modern design approaches supported by infrastructure provided through online platforms.

Development of such a model will allow designers to design and manufacture high-quality products in low scale through local resources by relying on minimal amount of actors to split the revenue. This process might eventually increase the perception of the crafts and their economic status, giving the craftsmen to adapt to the post-industrial economy and develop his craft to survive instead of disappearing in an industrialised economy.

1.1 Purpose of Thesis

Purpose of this study is to explore the potential of online platforms for developing or supporting hybrid models of production combining design with traditional manufacturing through crafts.

The study will be conducted through development of an online platform with the purpose of increasing the accessibility of craftsmen through designers. The expected

out come of the study will be further research questions about developing a hybrid production model with those actors.

As the researcher of the study has a background on computer science, the main motivation behind the study is the potential which can be utilised through the use of technology such as online platforms can achieve in the field of design. The reason behind the selection of integration of craftsmen into design systems as the subject, is researcher's observations made during the initial study of this study (which will be explained in detail at further chapters), which were about lack of use of technology for solving the problems surrounding craftsmen in Istanbul, and what sort of opportunities such a use can provide.

As developing a new production model using combination of design and craft though online platforms itself is a quite ambitious task due to its dependency on many actors and systems, this study focuses on connecting craft production system to the design system through an online platform, making the main challenge integrating two networks though making one accessible to another. This relies on understanding of both networks (craft system and design system) and a shared interest among them to connect them.

Study starts by discussing the current situation of design and designer in the post-industrial era, and the proceeds with the situation of crafts and craftsmen in the same era. And then proposes online platforms as a tool for integrating crafts and craftsmen to design systems as a solution for both actors' problems. Followed by the explanation of the initial study inspiring this study, and then the methodology of the study. Study itself is represented in three phases as (1) Plan-Act, (2) Evaluation and (3) Conclusion. In the conclusion section, the online platform developed during the study is evaluated, the effects of the online platform are discussed and followed by further research questions based on observations and evaluations made during the study.

2. BACKGROUND

2.1 Design in Post-Industrial Era

With the technological developments in the last 50 years in the fields of manufacturing, communication, transport, financial infrastructure the society has changed dramatically. Consumers becoming networked individuals through those developments are no longer passive and docile recipients of supply (Ramaswamy & Özcan, 2014).

2.1.1 Role of design in post-industrial era

As the society transitions from the material industry of the past to the information society of the future, we are witnessing the birth of an economy based on information in the present, where meaning of terms production, product and consumption is changing (Manzini, 1998). The shift to a service & information based economy causing the blurring of the line between material products and virtual products through the use of software, and providing interactive connections between consumers and producers making them active parts of a product's lifecycle.

This transition effected manufacturing industry heavily as the main growth actor of the economy started to shift from manufacturing to services. According to the predictions of Manuel Castells (2000) — relying on US Bureau of Labor Statistics, Japanese Ministry of Labor and OECD Data — Employment in the manufacturing industry will continue to decline as the most of the employment will shift to the service industry.

With those changes in hand design of the industrial era as the profession of giving form to physical goods has to change too. More and more designers starting their career's every day even though job opportunities from manufacturing industry is declining. To survive in the post-industrial era, the role of designer is changing from a form giver to an enabler (Hesket, 1998). And this new role of design causes borders between problem areas of design (such as graphic design, industrial design, architecture or urban planning) to collapse. Making old divisions of design practice

increasingly inadequate and ineffectual to handle with the problem areas of the post-industrial era. But this inefficacy does not mean we should abandon product design but we should connect it to a larger situation of production and use (Margolin, 1998), hence changing the meaning of production, product and consumption as Manzini (1998) said.

But there are various ways of how design should perform in the post-industrial era such as the 'harder and faster' approach of John Heskett (1998), and James Woudhuysen (1988) who positions designers within industry in roles where they contribute to the production through the strategic role and the function of the design process, and there is the 'softer and slower' approach of Jeremy Myerson (1988) who revisits pre-industrial values to establish a post-industrial values.

Even though various views clashes about what sort of values are behind the role of design in the post-industrial era, there is a certain fact that industrial production is becoming an increasing problem in today's world. Fewer and fewer people are producing more and more products, placing a burden on the environment (Rams, 1998). As we can not ignore this fact, design approach of the post-industrial era requires responsible production as the damage done to earth is taking its toll (Manzini, 1998). Dieter Rams puts "less but better" as the motto behind this approach, putting "quality" over "quantity". Ezio Manzini (1998) moves this approach further through through "dematerialisation", where the functions of products and services are moved to the virtual reality to create a hybrid environment, where the growth of virtual production can not harm the environment.

2.1.2 Reconnecting with the material

As technology develops the products, how they are built, operated and thrown away are changing too. Causing the modern day consumer to be concerned about the ethics of manufacturers, effects on environment after the product's disposal, how to operate them, even how to understand the manual of the product, along with their current concerns about the effects of materialism and new-media on their children, rendering the society of post-industrial 'anxious' (Myerson, 1998). Along with those changes the bonds between the physical products are weakening due to the digitisation of products, rendering craft techniques and traditional studio disciplines professionally and educationally irrelevant (Myerson, 1998).

Myerson (1998) says that, those changes are causing the society to loose the ability to build, repair, operate and enjoy physical products and he proposes a two point solution to the problem, starting with the redefinition of the future role and professional parameters of the industrial designer, followed by the integration of studio crafts to industrial design. And this approach fits well as a material-aware and environmentally responsible approach putting “quality” over “quantity” required by the post-industrial era as the craft disciplines can reassert these values in design.

Integration of craft disciplines to industrial design requires both actors to be present but craft studios are disappearing due to the industrialisation process preceding the post-industrial era. Many of the craft studios has been replaced with factories, leaving small scaled craft studios present in the developed economies. Although countries are newly industrialised or still industrialising still has significant amount of craft studios.

Developing countries are approaching to industrial design in a more anti-consumer way, nlike the consumerist approach to industrial design in developed economies. Although industrial design is not researched widely as it's been researched in industrialised markets (Margolin, 1989), The early studies about industrial design in Third World perceived industrial design as a ‘problem solving activity’ directed towards the basic development problems (Er, 1997). Suggesting ‘developmentalist’ roles such as satisfying ‘basic needs’, transforming ‘craft industries’ or reducing ‘technological and financial dependency’ for industrial design in the context of developing economies (Papanek, 1972). Even though such expectations are unconfirmed, the influence of those studies can be traced in some of the recent studies (Er, 1997).

When the anti-consumption approach of design and presence of the craft studios in developing countries are lined up with the Myerson’s design approach, developing countries can provide viable environments developing ‘better’ as in ‘less is better’ and material-aware production and business models.

2.2 Crafts In Post-Industrial Era

The transition to post-industrial era has affected crafts in a sense similar to changes in design, but not in the same way. As design became a theme getting popular with the industrial era and widened its scope with the post-industrial era, crafts has lost its popularity with the industrial era and looking for a new context to adapt and survive in the post-industrial era. Although there might be a place for crafts in the post-industrial era as an alternative manufacturing method which can be part of a material-aware and responsible production model for building high-end, enjoyable products.

Richard Sennet (2008) talks about the concept of crafts as not just as a production method but as desire to do things well. Expanding the definition of crafts to making music, cooking etc. This desire of doing things well, overlaps with the desire of enjoying the material world who is getting further from “enjoyability” with the industry’s pushing of “quantity” over “quality” mentioned by Ezio Manzini (1998). Also similar desires were mentioned previously by one of the founders of Arts & Crafts Movement, William Morris who was concerned about the industrialised production’s effect on material world and people’s perception of material in the early days of Industrial Revolution which was another transition period (transition from pre-industrial to industrial society).

Although there are key differences about the approach to crafts as a way to reconnect with the material and physical objects between Arts & Crafts approach in the industrial era and Myerson’s approach in the post-industrial era. Myerson (1998) agrees with William Morris’s approach to reassert studio crafts as a way to abandon society’s neuroses about modern products and relearn how to enjoy physical things. He also agrees that old design disciplines should be preserved. On the contrary he says that hybrid composition of the principles of fine art, craft, architecture, engineering etc. which was drawn up into the single discipline of industrial design in the early years of this century, should be pulled apart and resembled to suit the needs of the post-industrial era.

With industrialisation, not just the physical object has changed but how it’s produced has changed dramatically too. Machine production replaced crafts and skilled labour to provide the necessary quantity of production, as Sennet (2008) shows how

machines were created for large-scale production, “gradually threatening the standing of the most skilled labourers and increased the number of semi or unskilled workers.” and affirms machinery for the sake of eliminating “unskilled, noisome tasks,” but claims that it is problematic when it “replace[s] high-cost skilled labor”. But with the customer demand shifting from mass produced products to customised products and flexible manufacturing (Heskett, 1998), designers and firms started to look for new manufacturing methods which can respond to those demands. And this shift in the industry led to the apparent resuscitation of traditional forms of craft production (Piore & Sabel, 1984).

Manufacturing capabilities loosing their significance as a competitive factor due to globalisation has increased the importance of how things are produced, and prices of products has become the main competitive factor while products and services are getting standardised, causing products to become indistinguishable, and in such an environment, products and services designed with historical and cultural identities have become different and desirable (Er, 2014), making crafts desirable once again.

So it is possible to say that the theme of craft is coming back as more people are turning to crafts “to balance their lives, and that often comes down to working with their hands” (Charland, 2012), and designers and design researchers are discovering it as a superior manufacturing process for building unique and high quality products (İngin, 2011). Although the theme of crafts is coming back, the main source of craft, the craft studios and workshops are under threat. Industrialisation process, caused many of craft studios to close down and rendered many of those crafts professionally irrelevant, leading to the declining socioeconomic desirability (Phillips, 2011).

As a developing country, Turkey contains a significant population of craftsmen actively participating to its economy, and Istanbul has one of the biggest and oldest population of those craftsmen just like it provides almost quarter of Turkey’s GDP (Baltacı, 2013) in the recent years. Craftsmen are connected to various actors in the city such as suppliers, traders, designers forming a vast ecosystem inside the city reaching to not just Turkey but other countries too. This makes Istanbul a good candidate for observing the structure and status of crafts inside a developing country.

2.2.1 Structure of crafts in Istanbul

According to Acs and Varga (2002), there are three main aspects of research technology-led regional economic growth. First is the fact that knowledge-related economic activities tend to concentrate in certain regions rather in others. Second is finding out the key processes and institutional arrangements which favour technological advances. Third is the construction of an analytical framework explaining the role of technological change in regional economic growth (Acs, 2002).

With its unique location between Europe and Asia, the city contains various clusters of craftsmen among its neighbourhoods, many of them concentrated in historic and central parts of it such as Eminönü, Karaköy and Şişhane. Craftsmen in those clusters are providing their services to industries like jewellery, lighting and furniture by focusing on 4 main materials, wood, glass, metal and precious stones. Their contributions are ranging from product customisation to high-end products (İngin, 2011). Also providing prototyping and model-making services to students and other industries (Kaya & Yağız, 2011). Acting as a support and production actor in Istanbul's economic growth system. With three main aspects briefly covered, it is possible to dive in to the first aspect deeply to understand the current structure of craftsmen in Istanbul.

Porter (1998) defines “cluster” as a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The use of word “interconnected” can be explained as transaction, customer and technology sharing between interconnected companies and institutions forming a network between those actors. There are two main aspects to the concept of cluster: accumulation in terms of proximity and networking in terms of relationship. Therefore, if there is networking among firms and institutes in a certain area and they accumulate to form a cluster, they might be classified as a target cluster.

The clustering of craftsmen, allows them to vertically disintegrate their production process and provide local-global relations of both products and knowledge diffusion (Jessop 1992, Landry 2000), and those factors are directly affecting the speed,

quality, scale and income of the craftsmen and the other actors benefiting from the network.

Istanbul has many craftsmen clusters across the city, although the biggest ones who have survived industrialisation process are mostly concentrated around Eminönü and Beyoğlu, which are among the oldest and busiest neighbourhoods of the city. Those neighbourhoods contain business related actors such as suppliers, traders, markets and tourism related actors such as hotels, museums, providing the infrastructure for production, information exchange and sales. Also accessibility of those clusters by public, draws clients such as businesses or individuals to the area. Those clusters contain mostly family owned workshops and companies which can be classified SMEs, and clustered inside certain areas or inside hans (caravansaries) (İngin, 2011). With a structure like that, those areas involve lots of experience, and provide an area of interest for alternative tourism.

Designers are also interested in those clusters. There are industrial designers using those clusters for small-scale production and interior architects using those clusters for manufacturing their interior designs. Also other fields of design use those clusters for various purposes such as model-making and prototyping. Although those clusters are not utilised sufficiently and as of yet these areas have not been able to become a part of or a subject of visions related either with the city or with design, production and tourism (İngin, 2011).

2.2.2 Problems of crafts and craftsmen in Istanbul

Just like other big metropolises around the world, neighbourhoods in Istanbul are also being subjected to gentrification, and craftsmen are getting heavily affected by this process. As the areas where craftsmen are located became points of interest of tourism, political actors are trying to get rid of those craftsmen to ‘sanitise’ those areas to improve their ‘touristic’ yield. Such as the Grand Bazaar, as it is one of the biggest craftsmen clusters. Since 1995, local government is trying to move those craftsmen out from the city centre, and the designated location for those craftsmen is a complex named Kuyumcukent, since the completion of the building in 2005 (Evren, 2012). This complex is built in the outer region of the city with the purpose of holding industrialised jewellery producers, traders and retailers. Also in other craftsmen clusters such as Şişhane which is focusing on lightning design, is being

forced to relocate with local policy changes and increasing rents through gentrification projects (İngin, 2011).

Due to those issues, many of the craftsmen are facing with various difficulties related to their economic status or bureaucratic issues about their workshops, either relocating or closing workshops eventually. The ones who are closing might be taking hundreds of years old traditions with them, and the ones who are relocating lose many of their business connections and customer facing with possible risk of closing their workshops at the end.

Aware of the situation, some designers and academics are making the issue public by documenting, collaborating with those craftsmen and publishing researches about the issue. An example to such an effort is “Made in Şişhane” project by Aslı Kıyak İngin. The project surfaced in 2006 as a series of exhibitions and panels. Developing into workshops and being part of various design related courses in various universities, which includes the “Mapping Design in Istanbul” course that inspired this study. Also with publishing the process in a book, producing a documentary and an exhibition at the First Istanbul Design Biennial, the project publicised the issues craftsmen are facing to a wide audience. The main strategy of this project was to increase the visibility and recognition of the issues in Şişhane cluster.

As the problems surrounding those clusters are involving multiple actors and connections between those actors, it is not possible to improve the situation by focusing on symptoms such as gentrification. Therefore, Made In Şişhane applies a different approach to increase the visibility of the issue among interested parties, giving them to cooperate in the subject manner.

2.3 Integrating Crafts into Design Systems

As explained in the previous chapters, utilisation of crafts and craftsmen by designers to form hybrid production and business models holds a significant potential. According to Myerson (1998) such an integration should not be based on keeping crafts as they are but, making crafts an integral part of design, forming a craft-design-engineering hybrid suitable for the post-industrial requirements. But such a task is an ambitious one as it has multiple actors with complex interactions between them, such as design education, local policies and economic facts.

In the post-industrial society, networked entities (from consumers to businesses) around the globe are moving beyond the market structure based on demand and supply, thanks to digitisation, globalisation, the world wide web, advances in interactive communications and information technologies, social media, and ubiquitous connectivity (Ramaswamy & Özcan, 2014), therefore the post-industrial society is also a networked society. The networked structure of post-industrial networked society can provide a foundation to the task of integrating crafts into design systems, as crafts are historically based on networks of high skilled individuals inside and between craftsmen clusters, and local and global design activities can be modelled as a network of various actors such as designers, retailers, manufacturers, suppliers, publishers, etc., forming local and global design systems.

2.3.1 Design systems in scale of cities

With the concept of creativity and innovation brought by creative industries being noticed (and design as a part of creative industries), it has become a significant part in politics and development of cities, creating the concept of ‘Creative Cities’ (Er, Timur Ögüt, & Baltacı, 2014). Creative cities are defined as cities where the needs of creative class are satisfied, social and economic conditions are constantly developing, drawing more investment and creative class, and the employment rate in the creative industries is high (Florida, 2002). Also those cities has to provide the necessary environment for development of new ideas through the interactions of its citizens along its institutions, universities, cultural activities, transportation and healthcare services (Landry, 2000). As the capacity and quality of innovative design capability of a city depends on the presence of various actors and the interaction between them, therefore developing design capabilities of a city is not a simple task, it relies on cultural, economic and historical dynamics of the geographical context (Er, 2014)

One of the most significant creative cities around the world is the city of Milan, and in 1999 with the support of The Italian Education and Research Ministry, a project called “Sistema Design Milano” has been conducted to document the design system of Milano, begin one of the earliest works trying to map out the design system of a city. This project has observed many actors interacting with each other, forming a dynamic system defining the production and consumption characteristics of the city.

The project classifies the main actors of Milanese design system under seven main groups depending on the role and interactions of those actors, and explains the history and inner working of those groups (Sistema Design Milano, 1999). Those seven groups are:

1. Investors & Capital
2. Exhibitions
3. Publishing
4. Education
5. Supporting Industries (Model making, Prototyping)
6. Creative Class
7. Manufacturers

In 2013 a workshop called “Istanbul Design Map Workshop” has been conducted in Istanbul Technical University’s Industrial design department as a part of a project called “Creative Istanbul Workshops” by ISTKA (Istanbul Development Agency) and YEKON (Association of Creative Industries Council) with the support of The Turkish Development Ministry, to map out Istanbul’s own design system with a similar approach, which was also part of the initial study of this thesis. Along the study actors and mechanics of Istanbul’s design system were discovered and documented, similar to the Milanese design system the actors were categorised under number of groups according to their role and interactions. Although unlike the Milanese approach, this study aims to collect more data to document and uncover the structures behind those actors, therefore the framework used for the classification method of actors was more detailed in the case of Istanbul. So the amount of determined actor groups were 10 (Er, Timur Ögüt, & Baltacı, 2014), and these were:

1. Education
2. Traditional Manufacturing (Crafts)
3. Industrial Manufacturing
4. Design Studios
5. Activities, NGOs and Government Organisations related to design
6. Exhibitions

7. Design Competitions

8. Retailers

9. Publishing

10. Fashion

As those studies models the design systems of cities as networks, those networks create the global design though connecting each other, forming a network of networks, a quite fit theme for the networked society of post-industrial era. And technological developments such as new communication, logistics, payment systems provide more and more connectivity options between those networks and their actors, increasing their effectiveness, reducing costs and providing more and more opportunities.

2.3.2 Connecting design systems and craft networks

As design systems being networks of many actors in certain scales, and craft networks also being networks of many actors bound to certain locations(spaces), connecting those two networks requires an understanding of how those networks can be connected in a defined space, in our case Istanbul.

According to Manuel Castells (2000), the key spatial feature of the network society is the networked connection between the local and the global. The global architecture of global networks connects places selectively, according to their relative value for the network. The global functions of some areas of some cities are determined by their connection to the global networks of value making, financial transactions managerial functions, or otherwise. And from these nodal landing places, through the operation of advanced services, expands the economic and infrastructural foundation of the metropolitan region. Castells' (2000) naming of those point of interests as 'nodal landing places' is quite accurate as those areas connects the city to regional, national and global networks, begin actual 'landing places' for all the value imported and exported to the city though these networks.

As landing places of global networks, nodal landing places attract wealth, power, culture, innovation, and people, innovative or not, and for those places to become nodes of the global networks they need to rely on a multidimensional infrastructure

of connectivity: on air, land, and sea multimodal transportation; on telecommunication networks; on computer networks; on advanced information systems; and on the whole infrastructure of ancillary services (from accounting and security to manufacturing and logistics) required for the functioning of node (2000). When such an approach is applied to global, national or regional design systems, a model for integration crafts into design systems can be built, as manufacturing, especially crafts as a high-quality manufacturing method is a service which can be utilised by design systems.

Beginnings of such a model can be observed, as many designers from the world are getting interested in Istanbul for various reasons like its creative industries, strong production capabilities or rich culture, such as increasing design operations of Dutch designers in recent years (Baltacı, 2013) points out that Istanbul is getting increasingly connected to the global design network. With its large population and wide range of economic activities, Istanbul can provide many nodal landing places for the global design system. Specialised production which requires high-skilled labour in form of crafts is one of those values which can be provided through craftsmen clusters such as Şişhane or Grand Bazaar, eventually creating nodal landing places for the global design system in those clusters, providing a contact point for both networks, there for initialising an integration between design systems and craft networks.

Such a process can be initialised though increasing accessibility and visibility of both networks to each other, as the collaboration of both networks will develop as both networks benefit from each other and utilise each other more and more depending on the success of the output of the collaboration.

2.3.3 Using online platforms for integrating crafts into design systems

With the development of internet, online platforms are increasingly becoming significant part of our lives, especially for hundreds of millions of Internet users under 30, online communities have already become a fundamental dimensions of everyday life that keeps growing everywhere, including China and developing countries, and their growth has only been slowed by the limitations of bandwidth and income (Castells, 2000).

Those platforms are widely adopted by the professionals as well, they have become infrastructural parts of various networks such as design systems, connecting various nodes around the globe, handling various functions through those networks. As an integral part of the networked society, those platforms can be valid tools for integrating crafts into design systems. To understand how online platforms can contribute to this issue, three main functions provided by them will be inspected, starting with crowdfunding followed by online marketplaces and online communities.

2.3.3.1 Crowdfunding

Technological developments in the payment and communication systems allowed new structures for money transfer systems enabling the development of crowdfunding as a new method of fundraising. Unlike traditional fundraising methods, such as applying to institutions like banks or foundations, crowdfunding allows creators, people who request resources, to appeal for funds directly from supporters, people who give resources, through online platforms (Gerber & Martin, 2012), and this fundraising method became a viable and popular method of funding for entrepreneurs of small companies with no or little track of record (Valanciene & Jegeleviciute, 2014).

Kickstarter, Indiegogo are the most popular crowdfunding platforms in the internet. Both platforms conduct the fundraising using the same method, where the creator prepares the material for the fundraising campaign (which can be multimedia content in form of text, photos, videos) and inputs those in to a form on the designated platform, including a funding goal and a deadline for the project. After the campaign is published, creators promote the campaign through any channel available to them, mostly social media and online publications. If the campaign can reach to the funding goal through contribution of participants before the deadline, the money (with payment and transaction costs reduced) is transferred to the creator's account. After the transfer of funds, the role of the platform becomes providing the communication between creators and funders.

For the manufacturing of physical objects funded through such platforms, flexible productions methods available to the campaign owner are preferred mostly, but there are also big-scale campaigns utilising industrial manufacturing in countries like

China. The scale of campaigns can start from few hundred dollars to 20 million USD as in the example of a smartwatch campaign happened in 2015 (URL-1).

As a method of fundraising method, which starts with a campaign process which involves spreading information and self-marketing through media content such as video, usually followed by small-scale production, crowdfunding can be utilised for the development and manufacturing of products utilising crafts, therefore increasing the visibility of crafts as a valid and up-to-date production method. There are examples of designer-makers using crowdfunding for developing products (URL-2) and funding workshops for developing products (URL-3) and examples of craftsmen making campaigns to remodel or upgrade their studios (URL-4).

2.3.3.2 Online marketplaces

Online marketplaces are online platforms where individuals can trade services or products through internet. The transactions happening in those marketplaces are divided into three groups according to the role of the side, those three groups are (1) business-to-business, (2) business-to-customer and (3) customer-to-customer. As trading between those actors are already happening outside of online marketplaces for ages, the globalised and distributed structure of the internet allows new methods of trading.

As a method of trading without a need for a physical location for the display of the products, online marketplaces can reduce the cost of sales operation. Also it allows design, manufacture or customise on demand, hence enabling 'mass customisation'. As this was one of the initial promises online marketplaces, its current implementations are still trivial (Anderson, 2012). Nike's ID shoes (customer designed patterns on standard sneakers), Dell's custom configured computers are good examples for this, as even though they provide a certain level of customisation, both of them are based on combination of components already mass produced by those companies. This limited approach is commonly used in the business-to-business and business-to-consumer in online marketplaces as in the given perviously given examples of Nike and Dell.

Another model enabled by online marketplaces is the mass market for niche products, instead of ten million units or mass customised products, ten thousand or less units. As products don't have to sell in huge numbers to reach the global market

to find their audience, due to the reach of online marketplaces through internet (Anderson, 2010). The immense reach of online marketplaces through social media and word of mouth, combined with the global logistics and payment systems, allows the sales of niche products in small units to be sold to the whole globe, and this model is becoming increasingly visible in consumer-to-consumer marketplaces for products and services.

A good example for such an online marketplace is Etsy, an online marketplace founded in 2005, which focuses on customer-to-consumer sales of handcrafted items. To ensure the authenticity of the products the website has its own rules which restrict the manufacturing methods of the products in sale, an allowing the sale of items made by the sellers. With its immense growth in the recent years from 525.6 million USD in 2011 to 895.1 million USD in 2012, almost 59% growth in a single year (URL-5), its enabling customer's transitions into micro businesses through utilisation of small scaled manufacturing methods like crafts, and sales opportunities provided through the platform.

Although the site's success has become a problem for itself as individuals are transformed into small businesses, increasing their scale of manufacturing, but the site's policy was not allowing the use of outsourcing or mechanised production. But in 2011, they revised their restrictions about the manufacturing methods for the goods sold in the site, allowing members to grow also allowing the platform to grow. With this example it can be observed that use of online marketplaces can be used for creating business models involving small scaled manufacturing models which can serve to niche markets, also transforming consumers into small and micro businesses and providing a demand for scale manufacturing methods.

2.3.3.3 Online communities

The diffusion of Internet, mobile communication, digital media, and a variety of tools of social software have prompted the development of horizontal networks of interactive communication that connect local and global. The communication system of the industrial society was centred around the mass media, characterised by the mass distribution of a one-way message from one to many. The communication foundation of the network society in the post-industrial era is the global web of horizontal communication networks that include the multimodal exchange of

interactive messages from many to many both synchronous and asynchronous, and appropriating the new forms of communication, people have built their own system of mass communication, via SMS, blogs, vlogs, podcasts, wikis, and the like. (Castells, 2007).

Among those forms of communications, social networks such as Facebook, expanded the forms of sociability to networks of targeted relationships between identified persons of all ages. For hundreds of millions of Internet users under 30, online communities have become a fundamental dimensions of everyday life that keeps growing everywhere, including China and developing countries, and their growth has only been slowed by the limitations of bandwidth and income (Castells,). Inside and outside of those platforms and social networks, certain communities about certain subjects are forming organically (Wiertz & de Ruyter, 2007), composed of different actors about the subject (Holstroem, 2001), locally and globally.

An example for such communities is “The Honey Bee Network” from India. Formed around the question “How can those who seek to document local inventions ensure reciprocity between the innovators and those who may later seek to use and perhaps even commercialise documented ideas?” in 1988-89 by Anil Gupta (Gupta, 2006), The Honey Bee Network consists of a database of local knowledge from rural areas of India plus members who scout out, develop, sustain, and reward grassroots innovators. It collects traditional knowledges and innovations in the rural areas, and stores them inside a database along the inventors for crediting purposes, and then distributes that knowledge through periodic newsletters to its members. Since its foundation, it has documented more than 50,000 innovations and traditional knowledge practices in a database of ideas, handful of inventions collected have resulted in patents. The Honey Bee Newsletter, which includes information on inventions and discoveries, now reaches people in over 75 countries, making the network a global network.

Online communities can be viable ways to increase awareness, and provide constructive solutions to various problems by connecting actors around the problem as seen in the example of “Honey Bee Network”. Also forming local networks as online communities also provides the opportunity to grow them into global networks or connect them to other local networks to form a global network. Such a method can be used for forming hybrid networks containing small scale manufacturers such as

craftsmen and designers to create business opportunities and document the outcomes of such enterprises.

2.4 Initial Study

This study draws inspiration from the observations and discussions made during the course “EUT 550E - Mapping Design in Istanbul” at ITU’s Industrial Design Department 2011-2012 Spring Semester. The aim of the course was to map out Istanbul design system through analysing various factors participating. In 2013, the course evolved into a project, under the name of “Istanbul Design Map” as a part of a bigger project called “Creative Istanbul Workshops” supported by Council of Creative Industries – Yaratıcı Endüstriler Konseyi (YEKON). The findings of the research are published as a part of the book published by YEKON for documenting the conference and researches made during “Creative Istanbul Workshops”.

2.4.1 Mapping design in Istanbul

The course “Mapping Design in Istanbul” started in the 2011-2012 spring semester with the instruction of Professor Alpay Er, Asst. Professor Çiğdem Kaya and designer Özlem Tuna (Figure 2.1). It was inspired by the book Milan Design System, which was about understanding the dynamics behind the success of Milan in design industry. The course’s aim was to understand the dynamics behind Istanbul’s design industry, map out the actors of this design system and interactions between those actors.

As mapping the design system of Istanbul is an ambitious task when the size of the city and complexity of the relations between the actors are taken into account, the course was focused on a limited area, The Grand Bazaar region. This region has one of the biggest and oldest craftsmen population mostly focusing on jewellery and small domestic objects. As designer who is working in this very region, Özlem Tuna shared her experiences about the region and how these craftsmen are working by themselves and with designers.

güz	bahar	güz	bahar	güz	bahar
	EUT550E Mapping Design in Istanbul	EUT550E Mapping Design in Istanbul EUT 507E Advanced Design Project I	EUT550E Mapping Design in Istanbul EUT 507E Advanced Design Project II	 İSTANBUL TASARIM HARİTASI ATÖLYESİ EUT 507E Advanced Design Project I	
2011	2012 Prof. Dr. Alpay ER Y. Doç. Dr. Çiğdem KAYA Özlem TUNA (Tasarımcı) Seda Erdural Naciye Germeç Barış Güneştaş Zeynep Sinem Konca Meltem Maralcan Merve Midilli Elida Paşazade Necila İlknur Sevinç İrem Unay Aylin Yılmaz Bilal Yılmaz Selen Çatalyürekli Neslihan Çor Duygu Özkan Kapalıçarşı	2012 Prof. Dr. Alpay ER Doç. Dr. Şebnem TIMUR OĞUT Aşlı KIVAK İNGİN(Tasarımcı) Barış Güneştaş Bilal Yılmaz Can Güvenir Efe Kağan Hızır Özgür Atılgan Ahmet Hamurcu Semiha Kan Sedef Ala Güneşli Saniye Fışgın Bera Başkurt Selen Çatalyürekli Neslihan Çor Zeynep Sinem Konca Halide Güliz Tavukcuoğlu İstanbul Tasarım Sistemi tasarım eğitimi tasarım ofisleri tasarım perakendeciliği zanaat imalat sanayi tasarım sergi ve fuarları tasarım yayıncılığı	2013 Prof. Dr. Alpay ER Doç. Dr. Şebnem TIMUR OĞUT Ahmet Yiğider Cansu Pelin İşbilen Özlem Eren Burçin Fatma Tunç Esra Yavuz Filiz Yenilmez Elif Demiroğlu Alessio Ferru Valentina Piccato Zeynep Gül Söhmen Barış Güneştaş Bilal Yılmaz Eylem Yılmaz Can Güvenir İstanbul Tasarım Sistemi tasarım eğitimi tasarım ofisleri tasarım perakendeciliği zanaat imalat sanayi tasarım sergi ve fuarları tasarım yayıncılığı tasarım yarışmaları kurum, kuruluş, faaliyetler moda tasarımı	2013 Prof. Dr. Özlem ER Doç. Dr. Şebnem TIMUR OĞUT Feyza Ballacı (Koodinatör) Prof. Dr. Alpay ER (Danışman) Efe Kağan Hızır Ahmet Yiğider Aysu Dericioğlu Egemen Burç Tanır Doğan Kılınç Enver Tatlısu Burak Akbryk Güzide Güzelbey Özan Soyupak İstanbul Tasarım Sistemi tasarım eğitimi tasarım ofisleri tasarım perakendeciliği zanaat imalat sanayi tasarım sergi ve fuarları tasarım yayıncılığı tasarım yarışmaları kurum, kuruluş, faaliyetler moda tasarımı fikri haklar	2014

Figure 2.1 : Timeline of courses from ITU’s Industrial Design Graduate Programme between 2011-2014, which became part of “Istanbul Design Map” workshop, taken from YEKON booklet documenting the workshop.

The course has started with the interpretation of the book “Milan Design System” and discussions about how to conduct a similar research to map the design system around The Grand Bazaar region. Then a field trip to the region with the guidance of Özlem Tuna, covering craft workshops, buildings where those workshops are clustered, and Istanbul Chamber of Jewel crafters. After the field trip participants of the course were divided into 4 groups to work on research projects to map the region and its design system based around the observations made during the field trip and discussions before that.

2.4.1.1 Field trip to the Grand Bazaar region

The field trip involved visits to workshops inside and around the Grand Bazaar involving engraving, silversmithing, metal spinning & casting workshops (Figure 2.2), and buildings such as “Büyük Valide Han” which contains craftsmen clusters. Making observations and talking with the craftsmen about their professions, difficulties they are experiencing, and how they tackle with those difficulties.



Figure 2.2 : A photo taken during the field trips made as part of EUT 550E - Mapping Design In Istanbul course in ITU Industrial Design Graduate Programme.

After those, a visit to the Istanbul Chamber of Jewel Crafters, where participants had the chance to talk with the board member Hıraç Aslanyan, who is also a craftsmen working in the region as a jewel crafter. Discussing the current status from the point of view of the jewel crafter chamber, and how they try to keep the crafts and the craftsmen alive in spite of gentrification projects forcing craftsmen away from their craftsmen, and modernisation of production and workforce in the industry.

Followed by a visit to a high profile brand's showroom near The Grand Bazaar, which is selling the products of design-craft collaboration as high value products. Unlike many products sold in Grand Bazaar which don't involve a professional designer or a professional branding activity, this brand was combining design and traditional crafts to build high-end products. Even though the workshop was located in the same region with craftsmen and shops selling their products, and the manufacturing method was almost the same, involvement of design and branding was observable in the form, quality and the price of products.

2.4.1.2 Research projects

After the field trip, the course participants were divided into four groups based on the discussions about their observations from the field trip. Those projects groups were:

1. Mapping the journey of product from a customer order to the actual product, discovering the actors in the process and create a map of the production process.
2. Designing and producing a traditional object through the design system in the region and documenting the inner workings of the production process.
3. Interviewing designers about their cooperation with craftsmen, figuring out the characteristics of craftsmen and designer collaborations.
4. Mapping the craftsmen in the region and a form a database of them, to be utilised by tools to improve the visibility and accessibility of them.

Each project revealed some facts about the region's mechanics as they developed, providing data about how designers utilise craft & craftsmen in the region and the current status of the craftsmen in Istanbul's design system based on the interactions within the region. The findings can be listed as:

1. According to the interviews made with the designers, we have discovered that designers do not want to share the contact information of the craftsmen they work with. To prevent them from copying their designs and loosing them to another client.
2. How craftsmen work is highly distributed along the region. A single craftsman can introduce other craftsmen to complete a single order or scale the production among multiple craftsmen. In a way they can act as intermediaries for managing the other aspects of a production process other than manufacturing.
3. Regions where traditional craftsmen have formed clusters such as Grand Bazaar, Şişhane are subjected to gentrification projects by the local government and this is generating a pressure on the craftsmen to relocate their workshops to outer city areas such as Kuyumcukent.

4. Most of the craftsmen in the Grand Bazaar region were not registered or deliberately not included in the official records of Istanbul Chamber of Jewel Crafters. So the only way to discover those craftsmen was through another craftsmen or expeditions made to the areas in question.
5. There are some high profile brands and designers which are utilising local craftsmen, forming a modern image of crafts around their designs. But other than those, most of the products built by the craftsmen are not “designed” by a professional or do not involve any sort of branding activity.
6. Craftsmen have almost stopped training new generations. Low income of the workshops, and laws banning the training of young apprentices at early ages are the main reasons. Considering those facts, the amount of master craftsmen is decreasing, causing those workshops and crafts to disappear.
7. Even though there were public projects to prevent those craftsmen from disappearing, they were mostly focused on the value of craft as a disappearing tradition not its value as a mode of small production with an actual economic value.

2.4.1.3 Development of the course

In the upcoming semesters, the course has continued to work on Istanbul’s design system by increasing the scale of the research from Grand Bazaar region to the whole city and increasing the amount of actors being studied from just designers and craftsmen to seven actors in 2012 and then ten actors in 2013.

In the 2012-2013 fall semester, with instructions of Prof. Alpay Er, Assoc. Prof. Dr. Şebnem Timur Ögüt, accompanied by Aslı Kıyak İngin, who is the person behind the “Made in Şişhane” project, a methodology has been developed to classify structures and actors in Istanbul’s design system. Classifying the actors under seven groups as education, retailers, offices, exhibition, modern production, traditional production and publishing, participants collected data and produced reports for each actor. In the following semester of 2012-2013 spring, the list of actors are expanded to 10 with the addition of competitions, patents, institutions and fashion design, forming a bigger picture of Istanbul’s design system.

2.4.2 Istanbul Design Map Workshop

In 2013-2014 fall semester, with the instruction Prof. Özlem Er, Assoc. Prof. Dr. Şebnem Timur Ögüt from Istanbul Technical University, accompanied by MSc. Feyza Baltacı from YEKON, the study group became a part of “Creative Istanbul Workshops” project by YEKON under the name of “Istanbul Design Map Workshop”. Reports developed in the previous years have been revised in the course “EUT507E - Advanced Design Project I”, supported by seven seminars and workshops as part of the project. Those public seminars and their subjects were:

1. “Milan Design System” by Prof. Dr. Alpay Er
2. “Creative Industry and Design in the scale of Cities: Case Study About Dutch Design Activities in Istanbul” by Feyza Baltacı, MSc.
3. “Made in Şişhane” by Aslı Kıyak İngin, MArch.
4. Infographic and Visualisation workshop by Ertunç Öner and Emrah Cengiz
5. “Amplify Local Design Culture and Creative Industries through Innovative City Design and Urban Planning Policy” by Alexis Şanal, MArch.
6. “Visualising Databases: New Approaches and Methods” by Prof. Dr. Murat Güvenç

The findings were published as reports, data and visualisations about 10 actors of Istanbul’s design system along with reports documenting the seminars organised, as one of the four booklets documenting the whole “Creative Istanbul Workshops” project.

2.4.3 Post study

As the writer of this study, I was part of the craftsmen database project in the Mapping Design Istanbul course during the 2011-2012 Spring semester, along with my colleagues Bilal Yılmaz and Seda Erdural. Through the research project, we have observed there are not enough up-to-date data about the craftsmen in the region to form such a database, even in official records. So we had to conduct expeditions to the area and document the workshops by ourselves, which made the research much more practical than theoretical, producing data and some proposals about utilising and visualising such a database through a web site.

As the website for the visualisation of our craftsmen database started as a list displaying the craftsmen documented by us, it evolved with further iteration with the

purpose of exploring the use of such a database. After the initial development of the database, and listing the data in simple lists, the data was visualised as a map showing geographic locations of the craftsmen documented as shown in Figure 2.3.

Additionally a story telling layer which maps an object's journey through craftsmen, allowing the map of the object's journey to be embedded to the label of the object as an internet link or a QR code was developed as an experiment to increase the visibility of the craftsmen. Although this method was found less interesting than the database it self among our instructors and colleagues.

After the course, three of us developed the idea of building the online platform “Crafted in Istanbul” to provide this information to the public for free to explore the interest about the subject, encourage collaborations between designers and craftsmen, and increase the visibility of crafts and the craftsmen among designers and public. And this project is the main subject of this study.

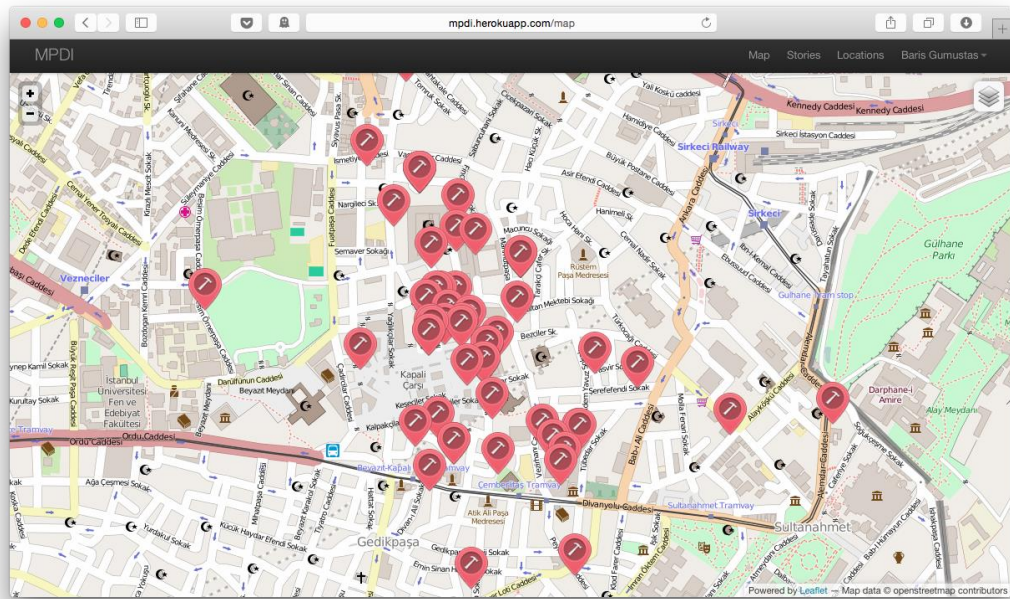


Figure 2.3 : Prototype of the Istanbul Craftsmen Map developed during the initial study.

3. METHODOLOGY

The subject of this study is to explore the potential of online platforms in product design through integrating craftsmen in to design systems. As the problem in question has no definitive formulation and aims to integrate design and craft networks, it has a complex structure, involving multiple actors of both networks and interactions between them, therefore it can be considered as a wicked problem according to Rittel and Webber's (1973) definition. This research uses Action Research as the main research method, as quoted from Robin McTaggart (cited in Brydon-Miller et al, 2003), "Fundamental to action research is the idea that social world can only be understood by trying to change it". And this approach fits well with the problem in question in this study, since it aims to integrate craftsmen into design systems, causing a social change among designers and craftsmen.

3.1 Action Research

Shani and Pasmore (1985) describes Action Research as an emergent inquiry process, in which applied behavioural science knowledge is integrated with existing organisational knowledge and applied to solve real organisational problems, and it is simultaneously concerned with bringing change in organisations, in developing self-help competencies in organisational members and adding to scientific knowledge. As those changes happen as sequence of events, it comprises iterative cycles of gathering data, feeding it back to those concerned, analysing the data, planning action, taking action and evaluating, leading to further data gathering and so on (Coghlan & Brannick, 2000). Zuber-Skerrit (2001) describes these iterative cycles as the Action Research Spiral which is consisted of as plan, act, observe, reflect steps following each other as shown in Figure 3.1.

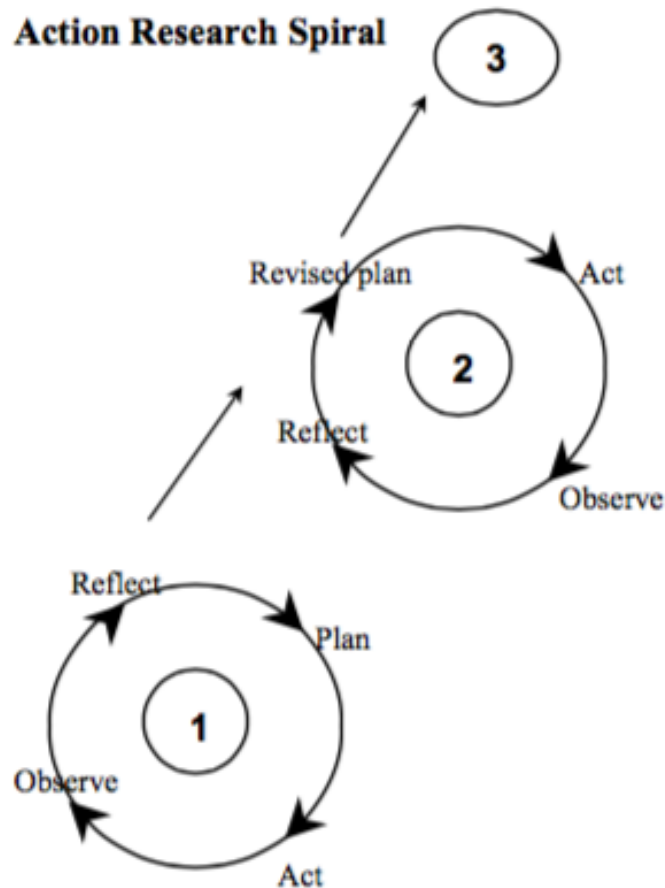


Figure 3.1 : The Spiral of Action Research Cycles according to Zuber-Skerrit.

As explained above, action research is about understanding the social world through changing it, as the changes happen during the research there is no opportunity to learn by trial-and error and every attempt counts significantly, which makes action research solutions “one-shot operations” (Rittel & Weber, 1973). Zuber-Skerrit’s model of iterative cycles manages to provide a framework for organising the processes and documentation during action research operations.

3.2 Design of the Research

To explore the potential of online platforms in product design through integration of craftsmen to design systems, this study proposes development of an online platform to increase visibility and accessibility of the craftsmen to designers, with the purpose of building a community around the subject and cultivating opportunities for collaboration between those two actors, as the initial cycle for an action research study to discover the potential of such collaborations.

Although the iterative cycle model explained in the previous section divides those cycles into four sections as (1) Plan, (2) Act, (3) Observe and (4) Reflect, this study will use a three sectioned model of (1) Plan-Act and (2) Evaluation and (3) Conclusion, to handle the blurring line between those sections to the interactions in the social world, as the study has to adapt to the reactions or changes happening in its context. The “Reflect” section will be handled under the “Conclusion” chapter, building upon the evaluations made in the “Evaluation” section, and proposing plans for the next cycles, therefore concluding the research.

The study’s Plan-Act section will be divided into three phases as (1) Teaser, (2) Release and (3) Exhibition, and will consists development of the online platform and its identity, reactions given by the public to the platform, how it has been used and feedbacks received. In Evaluation section, collected data through various instruments and the social interactions happened between interested parties and a survey among the users of the platform to understand their motive and how they use the platform will be evaluated. And Conclusion section will be the conclusion of the study, dynamics discovered through the study will be converted into proposals of further research subjects to form the next iterative action research cycle.

The online platform will be developed by three core members, who are myself, Bilal Yılmaz and Seda Erdural, but it’ll involve contributions of multiple individuals during the process. The three core team member of the project started to work on the initial study of this study during ITU’s Industrial Design Programme as mentioned in previous chapters, forming a multi disciplinary team through combination of me as a professional software developer, Bilal Yılmaz as a designer-maker and Seda Erdural as a product supervisor with a degree from a business administration programme. These three individuals will be mentioned as “Core Team Members” through the research, and the process will be explained from our perspective.

3.3 Methods of Data Collection and Documentation

Most of the data collection will done be through internet as the project is based on an online platform. Although feedback provided through physical mediums or personal meetings will be provided additionally to accompany the digital feedbacks.

Most common forms of feedback will consist of blog posts (including appearances on news sites), social media posts, e-mails and physical press coverage. Blog posts will be gathered through usage of search engines. Collection of social media posts is a much difficult issue since social media platforms have different policies about sharing data with third parties. For Twitter, publicly shared posts will be able available. For Facebook only data which can be gathered was the numbers of posts including a link to the website of the online platform. Also we have used an e-mail address available to public with the purpose of collection direct feedback. Also visits made to the website is documented through an online analytics tool, providing amounts of daily visitors, distributed among channels such as direct (visitor directly typing the address of the website), search, referrer or social media. Final method for collecting feedback and evaluating the project is a survey sent to people who are registered to the website for accessing the craftsmen database, designed to understand their motives and how they have used the platform.

The analytics tool used in the measurement of website visits has two basic units. One of them is users, which means a unique user visiting the website. Even if a single person visits the site multiple times, it'll be counted as a single user. The other metric is sessions, which means all the visits done by users. So multiple visits done in different times by the same user will be counted as multiple sessions. Those two units will be used for the analysis of the traffic received by the online platform, to measure the interest generated by the study.

Another form of data generated by the research is the data about craftsmen. Every craftsmen's contact information along with their specialisation, geographic location (in form of latitude and longitude), and photos of their workshop if available is, stored in a database. This database will be used for visualisation and shared with the public through the website of the project.

4. PLAN & ACT

4.1 Teaser Phase

The first cycle of the research is focused on creating an identity with a manifesto to emphasise the problems about crafts public perception and current situation of crafts and craftsmen in the design system. Initial work done in this cycle can be traced back to the “Mapping Design In Istanbul” course as mentioned in the previous chapters of this study. The planning phase started in the spring of 2013 with the meetings done between core team members. During this phase, the focus was about finding a way to improve the visibility of the craftsmen and the changing public perception about them.

4.1.1 Identity of The Platform

The project was named “Crafted in Istanbul” inspired by “made in” labels found in products. The aim was to have a brand which is easy to recognise, since “made in” labels are quite ubiquitous as they are found almost in every industrial product. Replacement of “made” with “crafted” was emphasising the role of crafts as a production mode. And replacement of the country name which generally follows “made in”, with “Istanbul” was emphasising the locality of that production mode and the focus of the project. Naming of the project was followed by the writing of a manifesto of the project. The manifesto was inspired by the article “The Issue of Crafts” by Prof. Alpay Er (2012), which was pointing out the theme of crafts getting popular among designers and Turkey’s population of craftsmen who have adapted to the industrial capitalism as a potential mode of production. Following the direction pointed by the article, the manifesto was criticising the romanticisation of the craftsmen and emphasising the potential of them as a part of a hybrid production model and stating the mission of the project. The full text of the manifesto is quoted below:

In today’s production processes, theme of craft is being raised again as a mode of production in small places at a slow pace. The fact that crafts and their advantages are still present in

Turkey gained importance as this issue came to the fore. On the other hand, this awareness, which is raised thanks to internalising foreign discourses, still carries the risk of making this issue a victim of commercial pragmatism and imported romanticism. In this sense, increasing the visibility of the disappearing crafts and craft workshops will be an important step towards creating hybrid production models which in turn will embrace crafts again.

Crafted in Istanbul aims at creating a map system that will make craftsmen visible, making it possible for designers and craftsmen to work together, documenting and analysing the process, and searching for the possibilities of integration of craftsmen into current design system. What is intended in creating a map system is that it will make craftsmen visible on an interactive online platform in which it will be possible to see craftsmen's workshops, basic information such as their contact information and area of expertise, and workshop images and stories of the products.

The manifesto is followed by a graphical identity for the platform. As one of the significant values differing crafts from the industrial manufacturing was the values, so Seljuk star (Figure 4.1) is selected starting point for the identity as a symbol emphasising values provided by crafts. Selcuk star is an eight-sided star which is also seen in middle-eastern and islamic civilisations.

Eight sides of the star represents 8 doors of heaven associated with the core values in islam, which are mercy, compassion, patience, honesty, discreteness, loyalty, generosity and appreciation to god (URL-6).

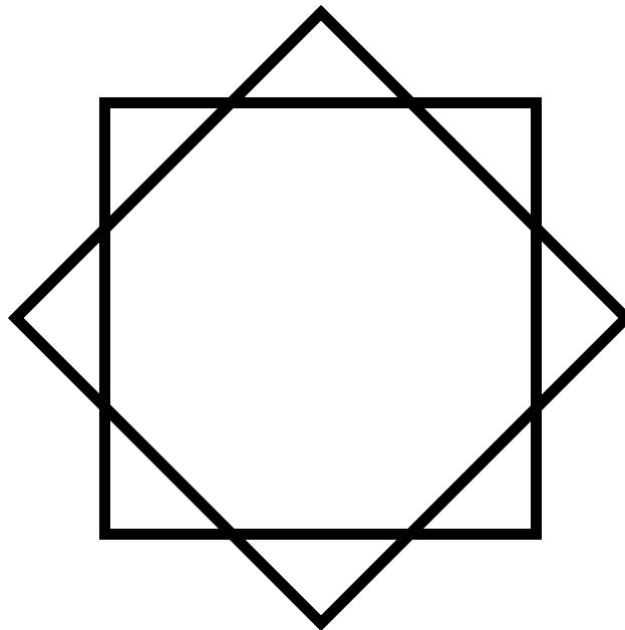


Figure 4.1 : Seljuk Star.

Strokes of a Seljuk star accompanied by a simple and geometric typography wrapping it around as a circle, forming a badge with an industrial look became the logo of the project. The font used in the logo is also used in the website and graphical material along a sans-serif font selected to accompany it, forming a look combining of simple and industrial with modern (Figure 4.2).

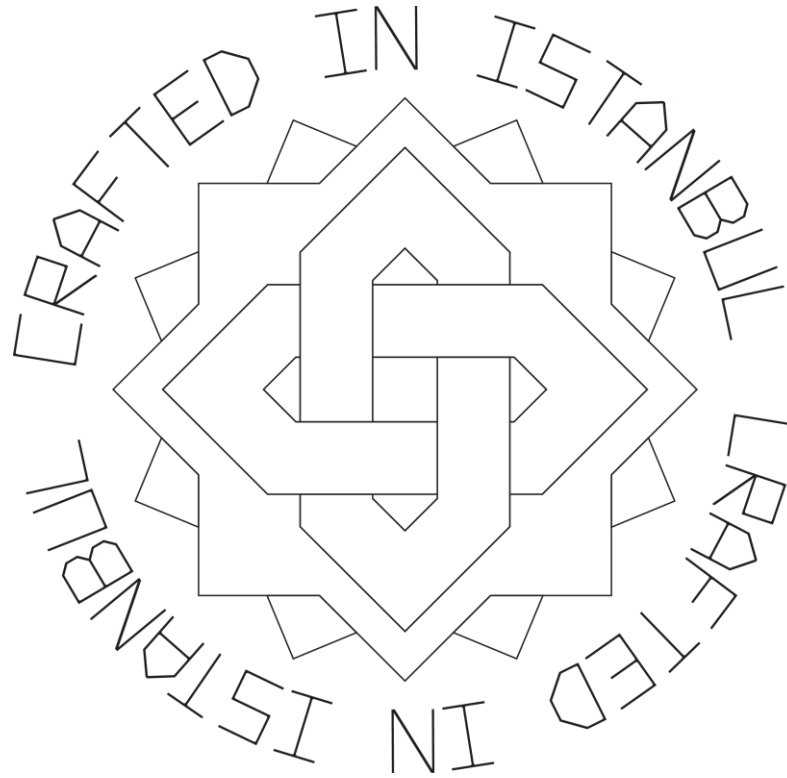


Figure 4.2 : Logo of the project.

4.1.2 Development of the teaser website

Knowing the pressure by the local government on the workshops located in the cluster's where we did our expeditions, we were concerned about the misuse of the data by the local authorities as many of the workshops we have visited might be illegal or violating laws, allowing the exploitation of the data we'll release by the local government for fining. To prevent this from happening we have decided to anonymise the data before the public release of the platform.

With the craftsmen data anonymised, the core value of the platform for the visitors was missing. Although the anonymised data visualised as a map, as the preview of the database was interesting enough when combined with the manifesto and couple of interviews we have made with craftsmen. So we have decided to release those material as a teaser site, accompanied by a form allowing interested people to join a

mailing list to receive updates about further developments. Also we were thinking about workshops to accompany the teaser site, to bring designers and craftsmen together, documenting and mediating the collaboration process, making observations about the hybrid production model in question with the purpose of understanding it.

To update the previously gathered craftsmen data gathered through expeditions made during the initial study and document the workshops, new expeditions were made to the craftsmen clusters we have visited before with a photographer. After the expeditions were completed, the total number of the craftsmen in the database reached 101. Although some of the workshops were missing photographs since we were not able to revisit the workshops previously documented without photographs.

The teaser website was a single web page starting with a big header section with an animated logo in the middle. Followed by the manifesto, a zoomable interactive version of the anonymised craftsmen map titled as “Istanbul Craftsmen Map (BETA)”, photos and highlights from interviews we have made with the craftsmen in the map. As the last section, a form for joining the mailing list was placed.

For the workshops, two proposals were written. One for IDA 2013 conference in Istanbul which got cancelled because of organisational reasons, another one for SALT Research Fund, which is a fund given by SALT which is a Turkish contemporary art foundation, got rejected. As the proposals not producing any result, we have decided to move on and focused on the digital part of the online platform.

In December 12, 2013, the teaser website launched with the content available in Turkish and English. To spread the news, we have used our social media accounts as a viral channel. No other channel was used for spreading the news of launch.

4.2 Release Phase

Second cycle of the research focused on releasing a usable database of craftsmen for the access of the public which starts right after the launch of teaser website in December 12, 2013.

4.2.1 Database access

One of the biggest discussions during the second cycle was about our concerns about the misuse of the data. The aim was to release the data free and available to public,

but it was impossible to prevent it from getting exploited. Worst case scenario in such a situation was couple of workshops shutting down and that was a risky choice. At the end of our discussions we haven't find any way to prevent the exploitation of the data and decided to open up the database with couple of restrictions behaving as control mechanisms and cognitive barriers. To handle this, we have decided to force a registration requirement, only allowing users who are willing to fill the form and confirm their e-mail addresses reach the data, allowing us to control their access in case of need, and create a cognitive barrier in the users' part, keeping uninterested parties away. Also adding a simple question about their profession to the registration form to have a better understanding of the user base.

For the release of the craftsmen data, all of the craftsmen in our database has to be verified, since it is possible that some of the workshops might have been closed. Also each craft has to be classified under a material and accompanied with a description text explaining the craft, to allow the navigation between crafts and inform users about the available crafts in the database.

To verify the workshops, we have contacted them through the information available in our database, and during that process we have found out that two of them has closed down their workshops, reducing the total number of workshops to 99. Also most of the data was not uniform, some of the craftsmen did not have their specialisations or contact information, and those missing information were also filled during the verification process.

After the completion of the missing data, craftsmen were grouped under materials of their craft. Forming four materials (wood, metal, textile & glass) over 40 crafts, providing a simple framework for navigating between crafts. Each craft required a brief description text and each description text along with the name of the craft had to be translated to English. This was a challenging task, because there isn't an easily accessible data source about the traditional crafts. For some of those crafts, which we don't know the exact definition, we have made individual research over the internet and libraries available to us. Also translating names of some of the crafts were really challenging, for those we had to use the Turkish name of the craft as it is, since it has not been translated to English before or even if it did, it was not available in the sources we have checked.

4.2.2 Istanbul Craftsmen Map

For the method of visualising the data we have gone over couple of methods such as lists, lists and map combined. At the end, we have decided to go with a simple map with filtering options on top, to make the experience a more exploratory where user has to discover craftsmen by clicking on them.

Each craftsman is represented by semi transparent circles as shown in Figure 4.3, when they are clicked the contact information and the photos of his workshop appears in a pop-up above the circle as shown in Figure 4.4. When the user moves her cursor over the craft name which is in the top of the pop-up, the description of the craft is shown as shown in Figure 4.5, and clicking to a photo inside the pop-up enlarges it as shown in Figure 4.6.

An “About” section was added to the website with a press kit containing logo of the project, a press release, photos from the workshops, and screenshots of the website, also acknowledging contributors of the project.

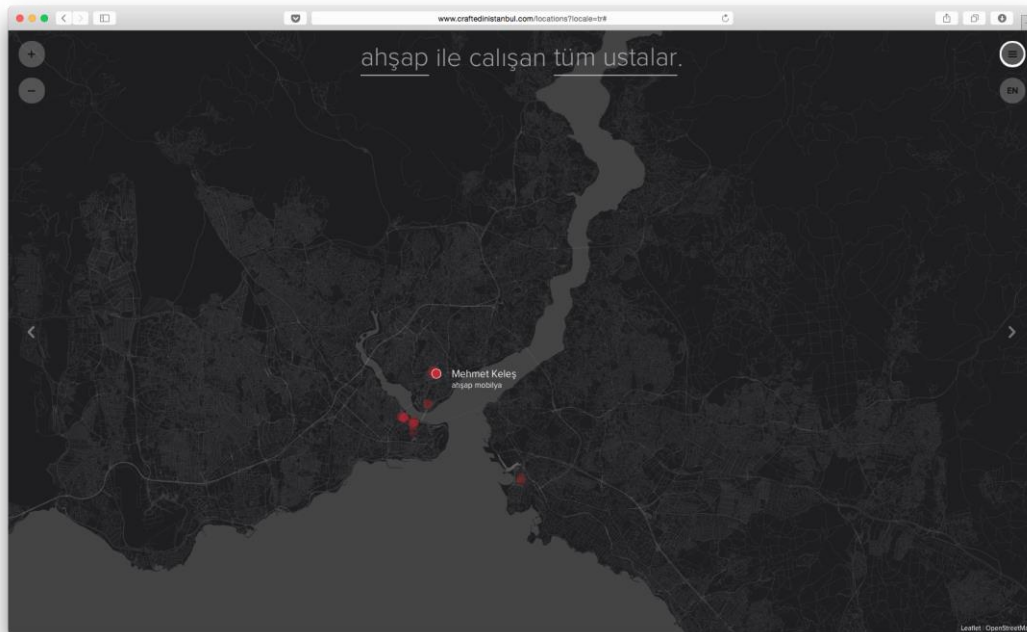


Figure 4.3 : Initial view of the Istanbul Craftsmen Map.

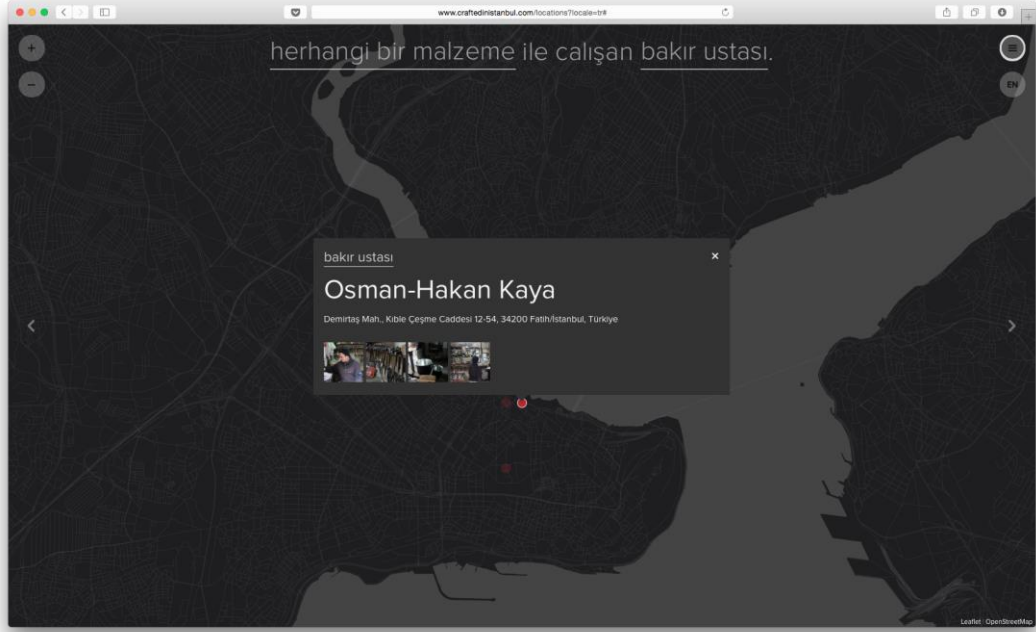


Figure 4.4 : View of a craftsman in Istanbul Craftsmen Map.

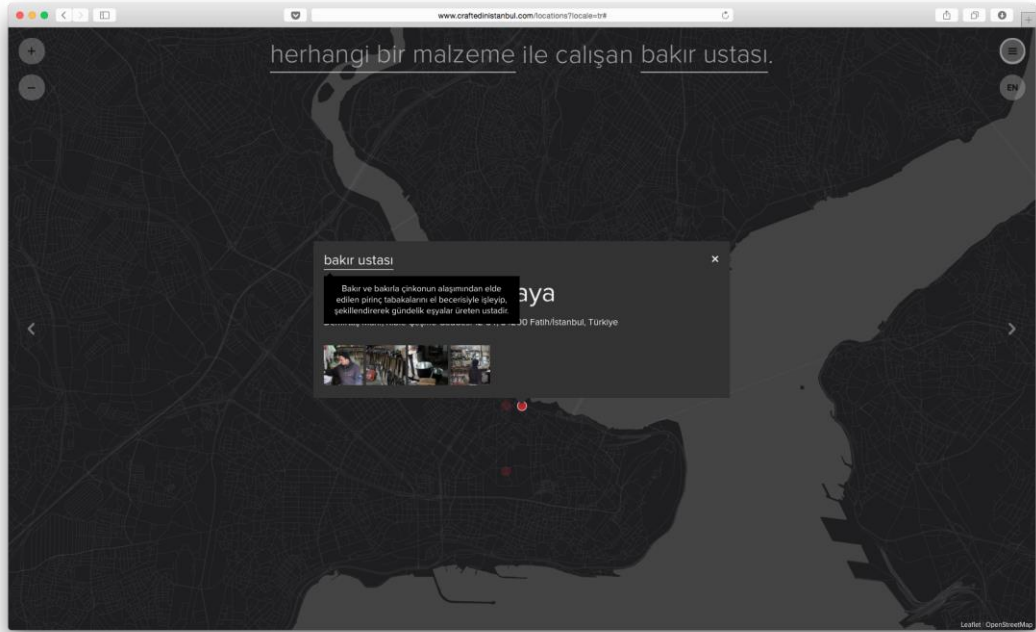


Figure 4.5 : Description of crafts displayed over the craftsman popup in Istanbul Craftsmen Map.

As a feedback mechanism a “Contact Us” option is added to the navigation of registered users, which pops up a form as shown in Figure 4.7 where user can directly send a message to e-mail address of the project. A radio button in the form allowed the user to switch from “I want to provide feedback” mode to “I want to

share a craftsman” mode, where an instruction was shown above the text input asking the user to provide name, craft, material, address, directions and a phone number for the craftsman they want to share.

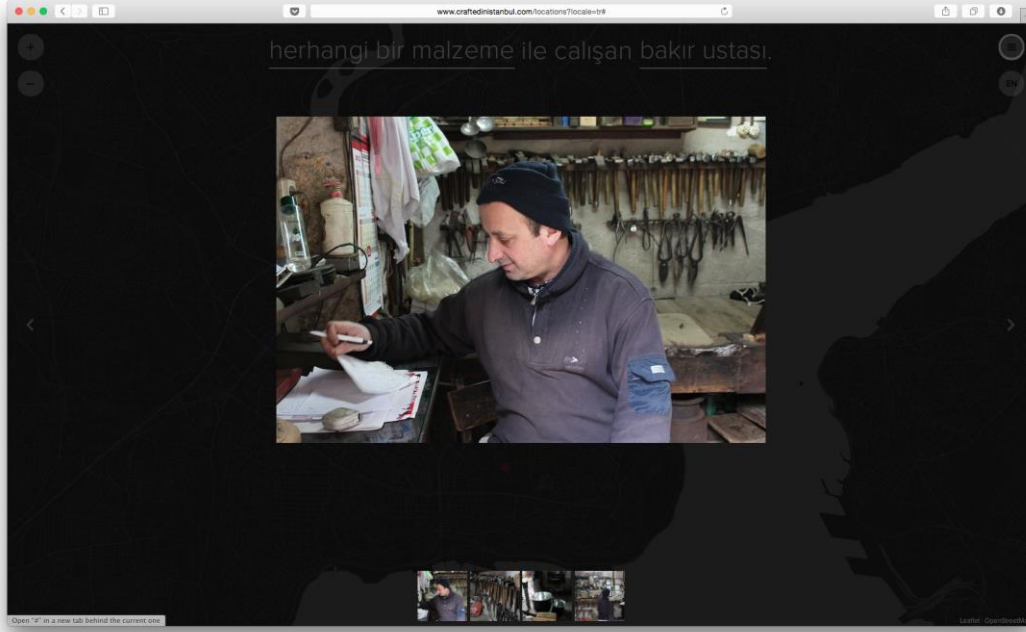


Figure 4.6 : Photos of craftsman and workshop displayed over Istanbul Craftsman Map.

A screenshot of a web browser displaying a contact form titled 'BİZE ULAŞIN' (Reach Us). The form is overlaid on a dark background image of a workshop. It contains two radio buttons: 'Geri bildirimde bulunmak istiyorum' (I want to provide feedback) and 'Usta paylaşmak istiyorum' (I want to share the master), with the second option selected. Below the radio buttons is a line of text: 'Lütfen mesajınızda ustaya ait isim, zanaat, malzeme, adres, adres tarifi ve telefon bilgilerine yer verin.' (Please provide the name, craft, material, address, address description, and phone information of the master in your message). There is a text input field labeled 'Mesajınız' (Your message) and a red 'Gönder' (Send) button at the bottom of the form. The browser's address bar shows the URL 'www.craftsistanbul.com'.

Figure 4.7 : Contact us form for collection feedback.

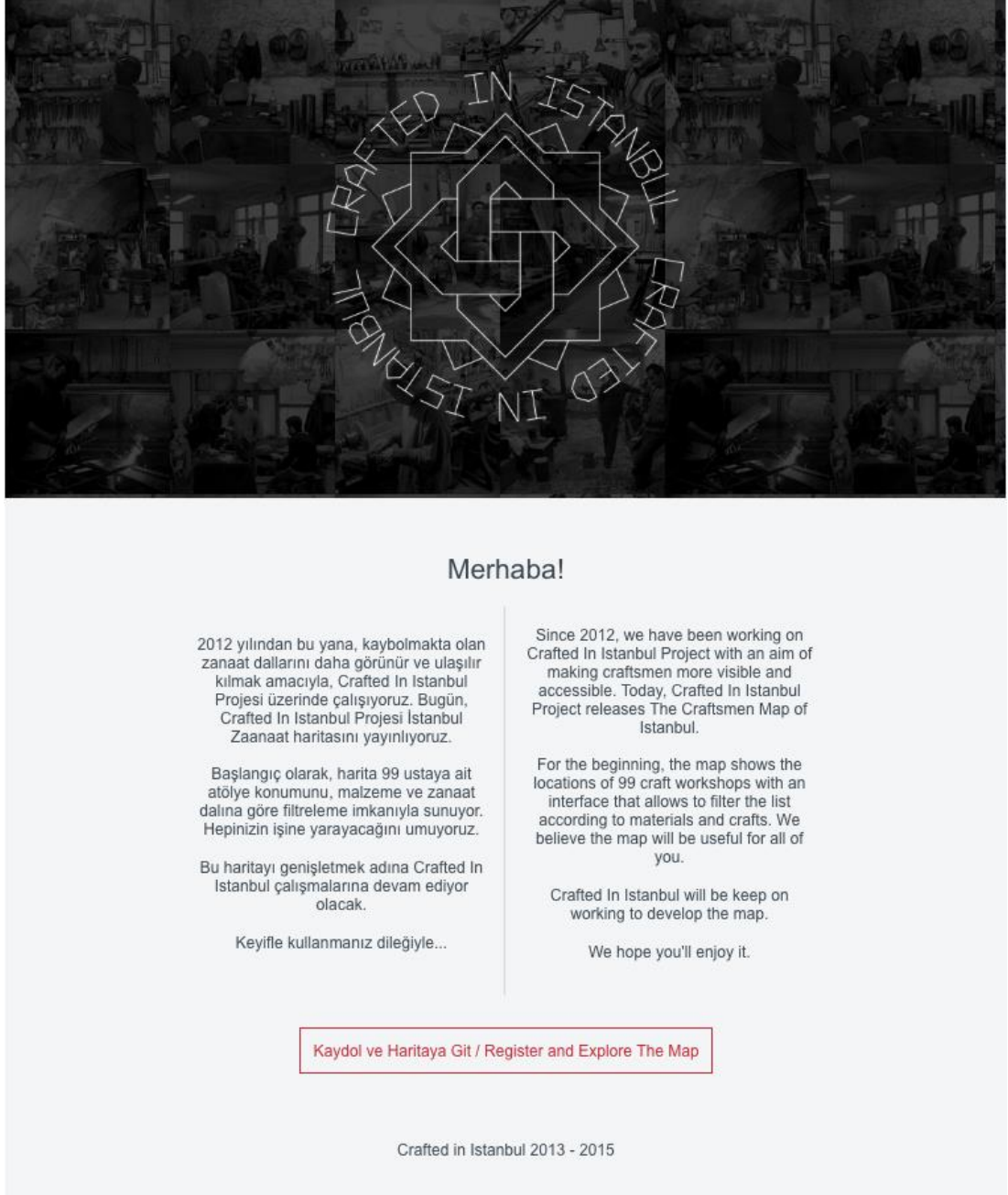


Figure 4.8 : Announcement e-mail sent to mailing list subscribers.

The new version of the website with the craftsmen map got launched in July 20, 2014. Followed by e-mails sent to the previous 837 e-mails collected in the mailing list of the teaser website as shown in Figure 4.8 and accompanied by posts in social media announcing the release of the craftsmen map.

4.3 Exhibition Phase

Unlike the previous two phases, this phase tries to move the project to a physical medium instead of focusing on digital mediums, providing a physical touchpoint for

the platform in a major design exhibition in Istanbul. It starts at January 31, 2014 just a couple of weeks after the start of the second phase, but the initial work on this cycle starts after the second cycle is finished and built upon the insights gained from that.

4.3.1 The 2nd Istanbul Design Biennial

Since the beginning of the project, we were thinking about a way to showcase the potential of designer-craftsman collaboration in a physical space with a modern manner. Our initial idea was to stage workshops to demonstrate the potential by mediating and documenting the collaboration of designers and craftsmen as mentioned in the description of first phase. But the attempts to fund and organise such workshops failed twice. One of the biggest contribution of such a workshop would be physical objects designed and built through the designer-craftsmen collaboration as a physical manifestation of the project, so we were also exploring the potential to be part of an exhibition to showcase such products. And during that process The 2nd Istanbul Design Biennial released an open call for participants. So we have decided to use this opportunity to move the platform into physical space.

The theme of the biennial was “The Future is Not What It Used to Be”, inviting designers to rethink the manifesto, harnessing this powerful and fertile genre as a platform for reconsidering where we have come from, where we are, and where we are going. As a project built around a manifesto, and proposing a new model of production, the theme fitted in to our platform’s description.

As the preparations began with the submission of the application form containing our manifesto and information about the project for the open call, it is followed by election process which involves the development of the exhibition proposal. Through the talks made with the associate curator Meredith Carruthers about the exhibition, we have decided to propose an exhibition involving three products of designer-craftsman collaboration and documentation of the production process of each product with a mini video documentary accompanied by a walking map showing the locations of the craftsmen clusters and providing directions for visiting those clusters where craftsmen built the products located.

4.3.2 Production process

The ideal products to demonstrate the capability of the designer-craftsman collaboration according to the project's manifesto was modern looking products with “out of the box” approach to break the old and dusty perception of crafts. For the products to be exhibited, each designer will be briefed in this direction for their designs. Through the production process they'll be accompanied by a photographer and a filming crew to document the process.

As we will be bringing designers with craftsmen, we needed to be sure that the production process will be completed. To provide the necessary assistance about working with the craftsmen, one of the designers would be Olmaz İşler Collective (Figure 4.9) which is experienced in the subject and formed by Bilal Yılmaz from the Crafted In Istanbul team with his colleague Serkan Yılmaz.



Figure 4.9 : A work of Olmaz İşler Collective

As the decided budget provided for the exhibition was not allowing us to produce three different products we have decided to scale down the amount of products to two. With the amount of products to be produced determined, we decided to work with Aziz Tavil as the designer of the second product, who is a designer and a sculptor with works focusing on natural materials (Figure 4.10).

The production process was scheduled as two weeks, getting one product produced each week. Although production process for each product exceeded their limit, so designers decided to work together, to fit the process in to the defined timeframe provided to them, resulting with the collaboration between designers themselves. As

the production process was consisted of multiple craftsmen working on multiple parts or processes of production, the designers worked on a different part or a different process while the rest of the product or products was being worked by the craftsmen, creating a parallel production process where multiple productions were running at the same time.



Figure 4.10 : Works of Aziz Tavit

The filming crew and the photographer documented the process by shooting videos and photos of the craftsman working on the products, later on composing the documentaries with those materials. Also photographs was used as press material, and in the walking map which was prepared after the production of the products (Figure 4.11).



Figure 4.11 : Shots taken from the short documentary filmed during the production process of Aziz Tavit's design.

4.3.3 The exhibition

The object designed by Olmaz İşler was a modern looking, compact design combining “a street bench” and “a street lamp”, a sitting unit and a lightning unit per built for semi-open spaces such as balconies and porches (Figure 4.12). The object designed by Aziz Tavil was a bed of nails built from wood, playing with idea of today’s conformism reshaping the bed of nails, demonstrating the use of crafts as a “out-of-the-box” production method (Figure 4.12).



Figure 4.12 : Products designed and produced for the exhibition along displays showing short documentary movies about their production process.

Each object was exhibited along the documentary about their production process and walking maps tracing the path of the object through craftsmen as show in Figure 4.13.



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5. EVALUATION

Evaluations of the data collected through the “Plan & Act” will be grouped under five different groups which are (1) Internet Traffic and Site Usage, (2) Press Appearances, (3) E-Mails & Direct Feedbacks, and (4) Survey.

5.1 Internet Traffic and Site Usage

In this section, measurement of the internet traffic received by the website will be evaluated to understand the interest generated by the project. Another data which will be evaluated is the other websites providing link to the project website, allowing us to discover parties who are interested in the subject directly.

5.1.1 Visitors

Since the project’s release in December of 2013 until the September month of 2015, 12947 users has been visited the project website through 17000 sessions at total, each of them spending 2:07 minutes in average in the website. 77.6% of them were new visitors (visiting the site for the first time), rest of them were returning visitors. Among those visitors 1376 of them has registered to the website, by providing their e-mail address. Most of the traffic has been originated from Turkey followed by United States and United Kingdom as seen in Table 5.1. %80 of the whole traffic has originated from Turkey, and %20 of the traffic has originated from other countries, showing that there’s significant interest outside of Turkey.

Table 5.1 : Top 5 countries by their sessions.

Country	Sessions
Turkey	13557
United States	792
United Kingdom	329
Germany	302
Netherlands	132

Among the 15.000 sessions landed on the webpage, %74.9 of the has left the webpage, remaining %25.1 has mostly moved to registration or login pages (Figure 5.1). Drop-off rate of those pages are around %24. According to this figure most of the traffic received does not attempt to view the craftsmen, and probably visited the website because they were interested in the subject, and this rate is not changing dramatically between (%74.6 for Turkish visitors and %76 for foreign visitors) means that the character of the visitors is similar inside and outside of Turkey.

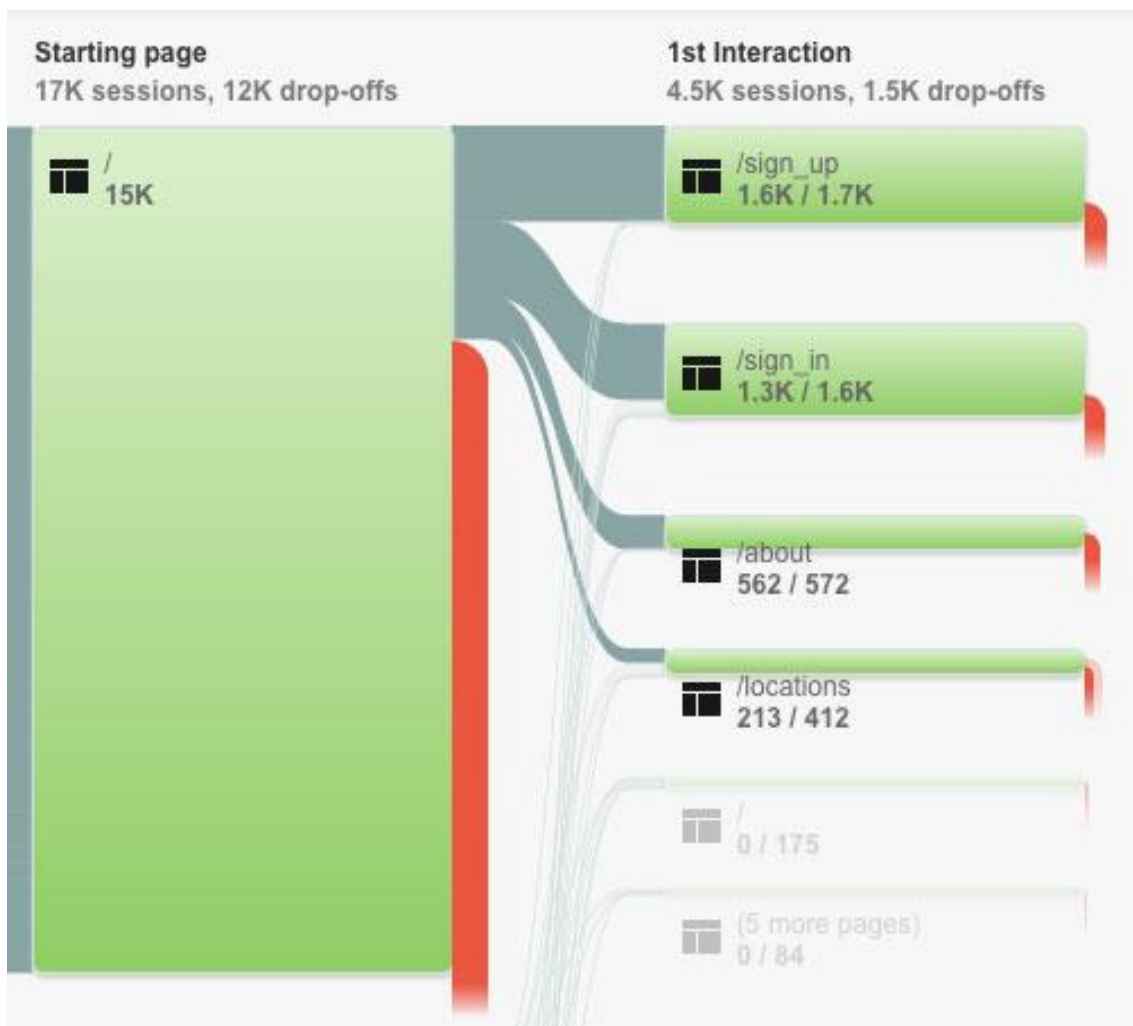


Figure 5.1 : Distribution of the traffic leaving the home page.

Most of the traffic received originated from social networks (Table 5.2). The social network bringing the most traffic was Facebook, followed by Twitter and Vimeo, although the top three networks with the highest average session duration were Tumblr, Blogger and FriendFeed (Table 5.3). According to this figure even though social networks are very effective for spreading information, more focused platforms such as blog platforms might be an effective way to reach parties in this subject.

Table 5.2 : Distribution of traffic by acquisition channels.

Grouping	Sessions
Social	6726
Direct	5679
Organic Search	3023
Referral	1373

Table 5.3 : Distribution of social referrals among social networks.

Social Network	Sessions
Facebook	5892
Twitter	784
Vimeo	13
FriendFeed	12
Pinterest	9
Blogger	6
Pocket	4
LinkedIn	3
Tumblr	2
WordPress	1

Although referrals have not brought the most traffic to the websites, they are very useful for discovering other parties who are interested or working on the same subject. Among the top performing referrals there is Arkitera.com which is the biggest online platform for architects in Turkey, they have published 2 articles about the project, first of them about the teaser site and the next one about the release of the map. Their interest fits into the target of the platform about increasing the visibility of crafts and craftsmen among design professionals. Another interesting referral comes from bigumigu.com which is an online platform about spotting trends. Other top performing referrals comes from websites of mainstream newspapers of Turkey, Hürriyet and Milliyet, covering the project under their Arts & Culture section, fitting well to the public perception of the subject. Those referrals are followed by couple couple of turkish arts & culture blogs.

Although on the way to the bottom of the list there are some significant referrals. One of them is Studio-X Global. Columbia University's Studio-X Global's research guide web page listing the project as a resource under Istanbul section. Same page describes Studio-X as a global network for exchanging ideas and projects about the built environment. It brings together scholars, professionals, students, decision makers, from different backgrounds and cultures, to foster research collaboration by organising public programs (URL-8). Another one is artisansinistanbul.com (URL-9), which is a website quite similar to "Crafted in Istanbul" but provides small interviews along the photos of craftsmen instead of the address of the workshop. Another interesting referral was from bugday.org, website of Buğday Association which is an association for supporting ecological living, also among others there was a referral from another ecological living focused web site, a blog named plusmanual.com. Lastly a referral from an Italian photographer, Francesco Marchetti's website, where he used the craftsmen database to visit workshops and took photos of the craftsmen (Figure 5.2).



Figure 5.2 : Photograph of a craftsmen from the craftsmen database, shot by Francesco Marchetti.

5.1.2 Map usage

Since the release of the map to the public, 1376 registered users have displayed the map 2722 times, examined a craftsman in the map 23302 times, used the material filter 1348 times and used the craft filter 3508. According to those people are looking for specific crafts more than looking for crafts though materials. Also they tend to examine at least 8 craftsmen on the map before leaving the website. Although they don't tend to visit the map more than couple of times, which is also confirmed by the retention data displaying amounts of interactions done by users in the following months of their registration in Figure 5.3.

Month	Size	0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+10	+11	+12	+13
01/07/14	419	365	4	4	1	3	0	1	2	2	1	0	1	0	0
01/08/14	155	132	5	2	3	1	1	1	2	4	0	1	1	0	0
01/09/14	90	78	4	2	0	2	0	0	1	0	0	1	0	0	
01/10/14	81	71	3	3	3	1	3	3	0	0	1	0	0		
01/11/14	139	124	1	2	1	0	0	0	0	0	1	0			
01/12/14	90	79	2	1	0	0	0	0	1	0	0				
01/01/15	47	43	1	2	2	0	1	0	0	0					
01/02/15	49	43	2	1	0	0	0	0	0						
01/03/15	46	43	1	1	1	1	0	0							
01/04/15	62	54	1	0	1	0	0								
01/05/15	40	38	0	1	0	0									
01/06/15	25	23	0	0	0										
01/07/15	35	32	0	0											
01/08/15	59	52	0												
01/09/15	5	4													

Figure 5.3 : Interactions done by users in the following months of their registration.

5.2 Press Appearances

Along the appearances in social media and other websites, the project was also covered by local and global press. Turkish mainstream newspapers Milliyet has covered the project under its art and culture section in its website and printed edition. Another Turkish mainstream newspaper Hürriyet covered the project in under the art and culture section of its edition for foreign countries called “Hürriyet Daily News”. There were couple of requests from Turkish televisions for interviews, one of them was rejected due to their approach contradicting with our manifesto. The other interview was shot but not aired.

The appearance of the project in the 2nd Istanbul Design Biennial attracted a lot of attention from foreign press. Multiple foreign design blogs covered the project as part of their biennial coverage. Also Monocle, a popular media company has included a small interview with our team in its video coverage of the design biennial (URL-10) (Figure 5.4). Along many blogs and publishing covering the project as a part of the biennial there was a single article in a web zine called “Walnut Grey Design” by an Irish designer, focusing just on the project.



Figure 5.4 : Monocle reporters interviewing Bilal Yılmaz about the exhibition.

After the biennial a quarterly published magazine based in Istanbul called “KLOK” has contacted us to feature our project in their issue themed “Street Heroes”. The article published in the magazine was combination of their interview with us and photos we have taken in the workshops during the biennial process. This was an interesting coverage for us, since “KLOK” magazine’s motto was “featuring young talents and their inspirational stories”, and increasing the visibility of the craftsmen among young people was an interesting opportunity (Figure 5.5).



Figure 5.5 : KLOK Magazine’s article featuring the project.

5.3 E-Mails & Direct Feedbacks

As we have provided a publicly available e-mail address for any sort of inquiries, and also used this e-mail address to collect feedback from the website users, this e-mail address has been the main communication channel allowing people to directly reach us. Since the maps’s launch in June 20, 2014 we have received 55 e-mails, and 25 of them were sent through the contact form in the website. Some of those inquiries ended up with actual meetings, some of them were simple information requests. E-mails can be grouped under eight categories as seen in Table 5.4.

Most of the e-mails received were information requests ranging from specific information about craftsmen to general information about craft production in Istanbul. As an example a popular design organisation “Istanbul Design Week”, wanted to feature us in their book for supporting Istanbul’s application for ICSID’s “World Design Capital”, and requested some material for it. Another one was from a magazine editor requesting contact information of craftsmen working on handmade tiles, and another one was from a Masters of Architecture candidate from New

Orleans, looking for a craftsman working with wood to be that craftsman's apprentice.

Table 5.4 : Distribution of received e-mails among categories.

Category	Received E-mails	Responded E-mail
Information Request	14	12
Request to Meet	15	11
Craftsman Data	9	3
Congratulate	5	2
Volunteers	3	1
Information Exchange	4	1
Feedback	4	3
Invitation	1	1

Information requests are followed by requests for meetings. The parties who wanted to meet with us were ranging from individuals to organisations, and from local to global. A couple of highlights from the meeting requests are Zet.com which is an online marketplace for designer products in Turkey, another one is from a company called Mimarşiv advising various parties about manufacturing and materials in Turkey.

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Some of the requests ended up in actual meetings, resulting in information exchanges in person. One of them was a real-estate developer from United States wanted to meet with us during his trip to Istanbul. He was coming from Detroit which was the centre of American automobile industry until the twenty-first century. But with the industry leaving the city after 2000, Detroit lost his economic power and the city's population has dropped 25% between 2000 and 2010 (Wisely & Spangler, 2011). He wanted to explore potential collaborations between designers from Istanbul and craftsmen from Detroit, since after the decline of industry in the city, lots of craftsmen has lost many of their customers. In a meeting with him we have discussed

the feasibility of the idea, and what sort of hybrid production model can be applied in Detroit.

Another e-mail ended up with a meeting was from a social initiative in Amsterdam, trying to help women immigrants to improve their income by leveraging their traditional crafts knowledge. In a meeting with the representatives of the initiative we have exchanged insights about our initiatives.

Having conversations about use of hybrid production models in design-innovation, social entrepreneurship and urban renewal verified that the demand for such models is global and various researchers, designers and entrepreneurs are working on this very same issue.

Another meeting was with Asst. Prof. Nicolò Ceccarelli from University of Sassari in Italy, who has founded Neo Local Design initiative aiming to rethink local knowledge as a major asset and use design as the vehicle to combine tradition with innovation (URL-7). We were able to meet with him while he was a visiting professor at ITU. As we were both working on a platform focusing on utilisation of local knowledge in field of design, we have discussed about our experiences. His feedback about our project was the lack of new content, and the negative effect about it on the perception of the project.

We have received contact information of nine craftsmen, although some of them were lacking the detail to contact those craftsmen, and we couldn't visit the others in an expedition. So we were not able to add any of them to the database, although they are potential candidates to be visited in an expedition for adding more craftsmen to the database. Individuals who wanted to volunteer for working on the project also contacted us, providing their contact information, although we were not in need of their service (all three of them was about shooting videos).

Another category for received e-mails is "Information Exchange", individuals sharing their contact information, projects or insights about the subject. One of them was a son of a craftsmen, owner of a company building designer furnitures through modern and traditional manufacturing methods.

We have received three feedbacks about the website, two of them were about the mandatory registration process. Those users have found the mandatory registration unnecessary, we have replied explaining the reason behind it, although those

feedbacks caused us to be concerned about registration process. The other two was about how to use the site.

Lastly we have received an invitation to a panel in a design organisation from Eskişehir, a city of Turkey known as a student city due to its high population of university students. “FEYZ” design organisation was consisted of panels and activities about design, and its theme for 2015 was “Under Normal Circumstances”, they have invited us to participate to the panel “Being Normal is Being Society” with Atölye İstanbul (a co-working space for makers from Istanbul) and Küf Project (an organisation performing urban hacks/interceptions to highlight urban issues). We have participated to the panel, explained and discussed the project. One of the feedbacks we have received during the panel was the name we have chosen for the project, audience questioned the choice of English as the language.

Another interesting feedback came through social media platform Twitter. A user found a wood workshop through our map and he was unhappy with the outcome, asking for us to verify the craftsmen we work with to ensure that they are reliable. When analysed this can be caused by multiple issues between the craftsman and the customer. As the “tweet” disappeared before we can act, we do not know if the user was a professional designer, or he has ever worked with a craftsman before. But working with a craftsman can be a difficult task sometimes due to cultural differences. Even though this feedback required further investigation, a framework to mediate the process between the designer and the craftsman might be helpful during such situations.

5.4 Survey

To understand how users have used the platform, their motives, and to collect feedback a survey was designed to be sent to the 1376 registered users.

5.4.1 Design of the survey

The aim of the survey was to find out if the users have contacted any craftsmen through the map, worked with any of the craftsmen they have contacted, and problems they had during those steps. To achieve that a survey with six conditional steps has been designed, as the flow of steps are changing according to the answers provided by the subject, the structure of the survey can be seen in Figure 5.6.

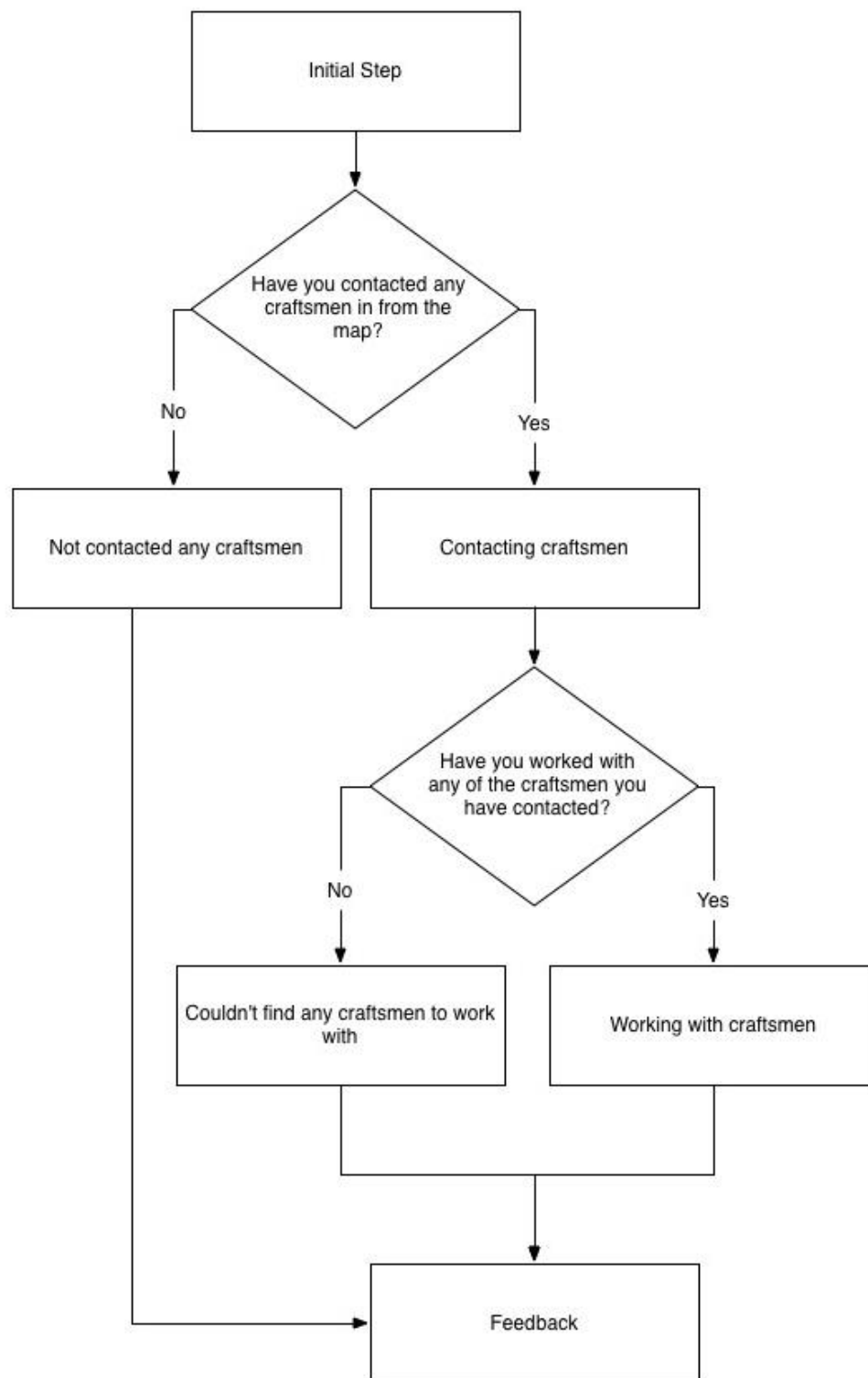


Figure 5.6 : Flow of the survey.

At the initial step subject's occupation, their motive for visiting the project website is asked, followed by a question "Have you contacted any craftsmen from our map?", deciding the next step depending on the answer, splitting the flow into two steps as "Not contacted any craftsmen" and "Contacting Craftsmen". "Not contacted any craftsmen" step aims to understand the reason behind that choice, taking the subject to the last step of the survey afterwards. "Contacting craftsmen" step aims to understand the mechanics of finding craftsmen, trying to find out problems in the process, and if the process ended up with the subject working with a craftsman. The next step depends on the question "Have you worked with any of the craftsmen you have contacted?", as if the subject has not worked with a craftsmen, ends up in "Couldn't find any craftsmen to work with" step to understand the reasons behind the failure of the process, followed by the last step of the survey. But if the subject has worked with a craftsman, survey continues with "Working with craftsmen" step which aims to understand the collaboration process, followed by the last step of the survey. The last step of the survey is the "Feedback" step. This step is consisted of two questions about the user's perception of the project, and the place where they want to see in the project followed by a free text field for any sort of feedback.

Questions which are asking motives or issues for the subject's decisions are formed as single-answer questions with an "other" answer containing a free text field to be filled by the subject. Those fields will be normalised and grouped according to their content for the evaluation of the survey. Those questions aims to understand the key motives in subject's decision making, and understand how and why they have utilised the platform.

5.4.2 Results

The survey was sent to 1376 registered users of the project website through e-mail addresses provided by them during the registration process in their preferred language. 680 of them has viewed the e-mail, 140 of them have clicked to the link going to the survey, and 96 of them have filled the survey.

5.4.2.1 Demographics

Majority of the recipients preferred to fill the survey in Turkish, and rest of them in English. The completion rate was %6.89 for Turkish recipients falling slightly shorter behind the English recipients completion rate of %7.52 (Table 5.5).

Table 5.5 : Distribution of survey recipients by language.

Language	Received Survey	Completed Survey
Turkish	1190	82
English	82	14

Majority of subjects were designers, architects, followed by interior architects and advertisers, engineers and then designer-makers (Figure 5.7). Among participants of the survey only %20 of them were students leaving %80 of the participants as professionals (Figure 5.8). According to those figures, it can be said that majority of the participants were creative industry professionals, fitting to the target audience of the online platform.

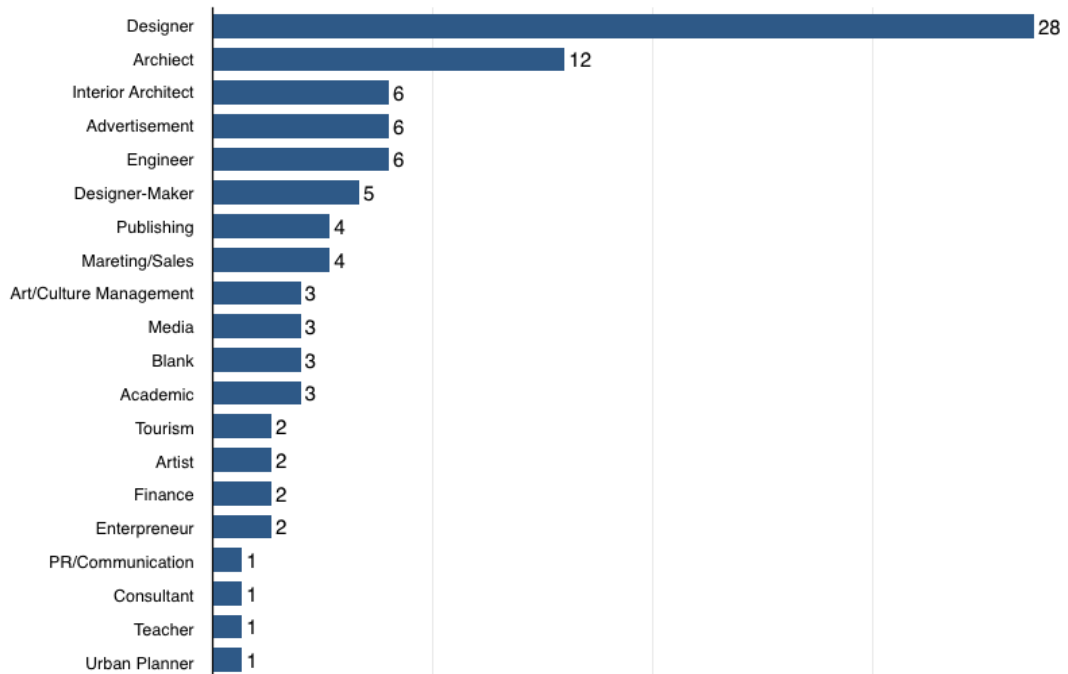


Figure 5.7 : Occupations of survey participants.

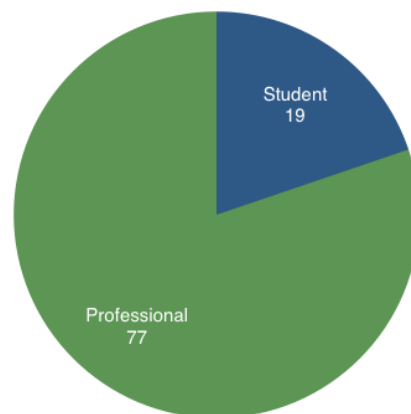


Figure 5.8 : Student-Professional distribution.

5.4.2.2 Motives for visiting the website

When the flow of participants through steps is investigated before getting into the answers of individuals, majority of the recipients has not contacted any craftsmen through the map, and those who have contacted craftsmen have not worked with any of them as seen in Figure 5.9. Also the major reason for participants to visit the website was “Curiosity” as seen in Figure 5.11, and slightly more than half of the participants were not aware of the status of craftsmen in Istanbul before visiting the website as seen in Figure 5.10. According to these figures, it can be said that the project has acted as a tool for increasing visibility more than a utility for finding craftsmen and working with them, the motives of participants and their reasons of not contacting and working with craftsmen in our map are discussed in the upcoming paragraphs.

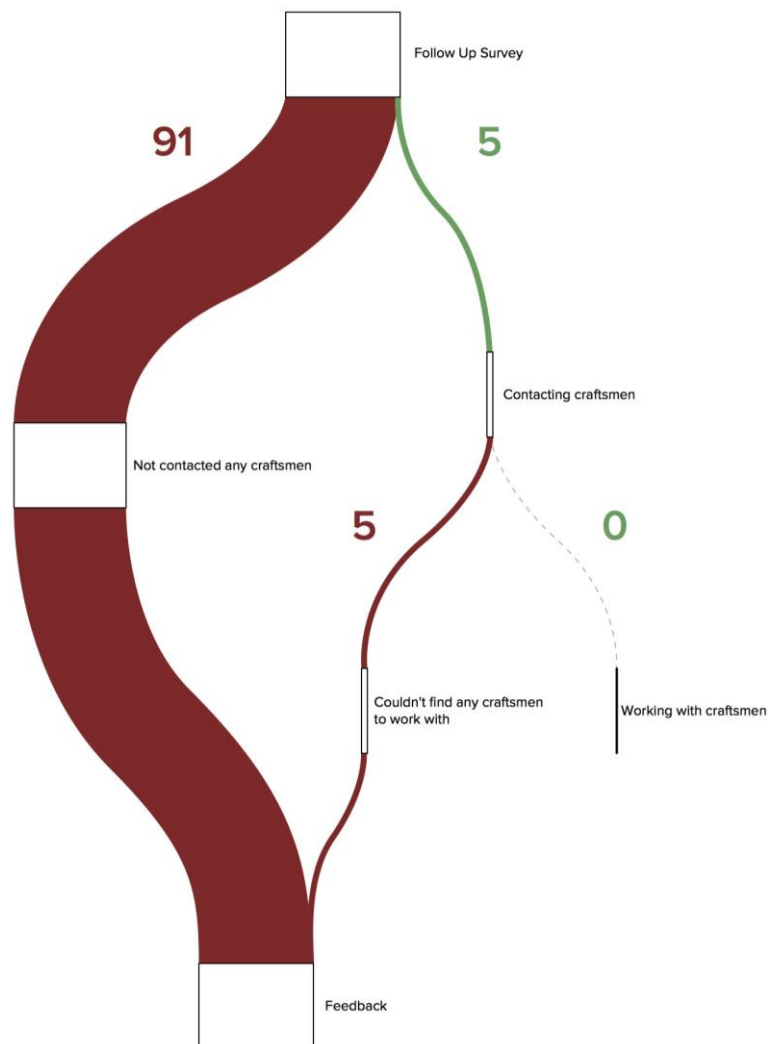


Figure 5.9 : Visualisation of participants flow through steps.

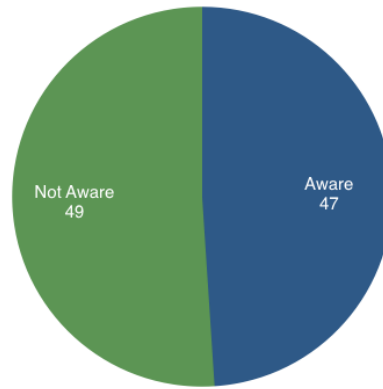


Figure 5.10 : Distribution of participants who are aware and who are not of the situation of the craftsmen in Istanbul.

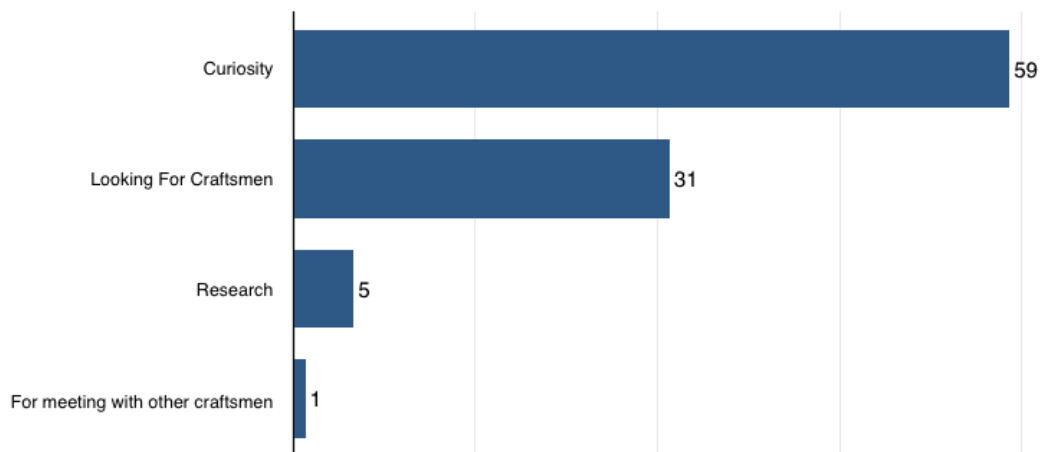


Figure 5.11 : Participants' reasons for registering to the web site

Another interesting answer for the question about the participants' motive to visit the website was "For meeting with other craftsmen", meaning that we were able to reach at least one craftsmen who is actively looking for other craftsmen though the internet, this can be evaluated as an opportunity for forming online craftsmen communities, although such an idea needs further research.

5.4.2.3 Contacting craftsmen

Only five of the participants have contacted with the craftsmen in the database as seen in Figure 5.10. The biggest reason for not contacting any craftsmen among participants was "I was not planning to contact any craftsmen" with %45.1 of the answers as seen in Figure 5.12, validating the observation that the project's main

function was increasing visibility. Followed by “I didn’t know which crafts/craftsmen to work with” at %12, which can be evaluated as participants’ needed for assistance during the process of discovering crafts and craftsmen. Other significant reasons preventing subjects from contacting craftsmen was “Couldn’t find the craft I was looking for” and “None of the craftsmen were suitable for me” highlighting the need for increasing the amount of crafts and craftsmen in the database. Another significant answer was “Lack of telephone numbers” as we did have the phone numbers in our database, they were not released publicly to prevent exploitation, although it can be an valuable information for triggering the initial contact between users of the database and craftsmen as %89.01 of the participants who has not contacted any craftsmen are planning to contact a craftsmen in the future as seen in Figure 5.13.

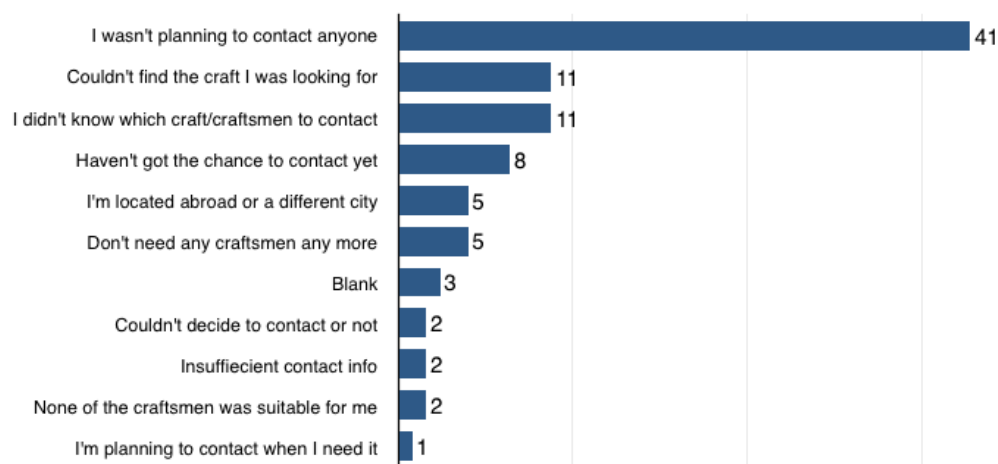


Figure 5.12 : Reason of participants for not contacting any craftsmen.

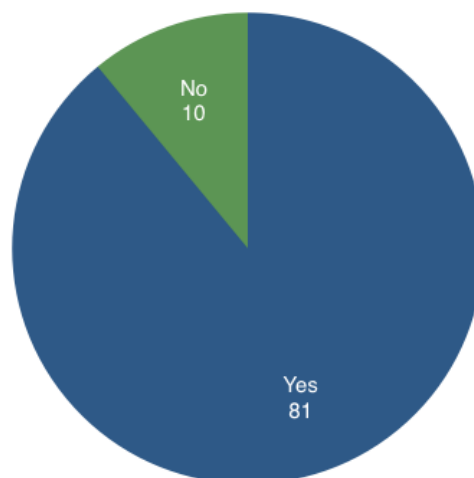


Figure 5.13 : Distribution of participants’ answers to the question “Are you planning to contact with a craftsmen in the future?”.

5.4.2.4 Working with craftsmen

Among the only five participants who have contacted a craftsman in the database, none of them have actually worked with those craftsmen. Four of those five participants have contacted with more than one craftsmen during this process. Two of the participants have found the contact information available in the database sufficient enough for contacting with craftsmen, one of the participants couldn't reach the craftsmen through the information available in the database, and another one said that phone numbers of the craftsmen should be provided. The lack of "phone number" is visible in this step too, emphasising the necessity of that information for the process. Only three of the participants have provided reasons preventing them from working with craftsmen and those were "Trust Issues", "Communication Problems" and "Couldn't find the time for it". The most popular material among the participants who have contacted with a craftsmen was wood, but demand for crafts working with glass, metals and ivory was also present.

5.4.2.5 Feedback about the platform

The last step of the survey was for understanding the role of the project from the participant's perspective and what sort of a role it should evolve into, followed by a free text field allowing any form of feedback to be entered. All of the answers are normalised and grouped according to their content.

Most of the participants' perception about the role of the project was "Craftsmen Database", followed by "Platform" and "Social Responsibility Project" as seen in Figure 5.14. The difference between "Platform" and "Craftsmen Database" is the presence of content and tools in "Platform" on top of the database. So the participants' think that the project lacks the necessary content and tools to become a platform. Also 22 of the participants evaluated the project as a "Social Responsibility Project", finding the tools and the data in the current web site insufficient to classify it as "Platform" or "Craftsmen Database".

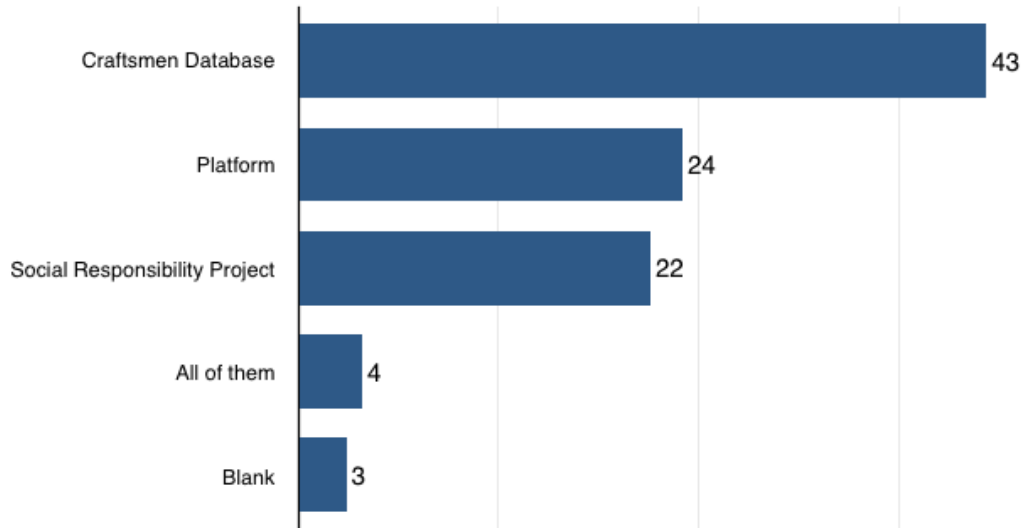


Figure 5.14 : Distribution of participants' answer to the question "How would you describe project?".

Majority of the participants, found the current role of the project fitting, therefore selecting the same answer for the question "What would you like the project to be like?" with "How would you describe project as a website?" (Table 5.6), "Craftsmen Database" was the most popular answer for those questions followed by "Platform". Among the participants who said that the role of the website should change, the most popular answer was the project should evolve into was "Platform" followed by "Craftsmen Database". This can be evaluated as participants wanted the project to focus on providing the tools and content for contacting and working with craftsmen, or it should focus on increasing the detail and amount of data in the craftsmen database. Especially the participants who wanted the platform to change from a "Craftsmen Database" to a "Platform" or vice-versa, probably found the project lacking focus.

Table 5.6 : Participants' opinions about the ideal role of the project.

	Should stay as	Should change to
Craftsmen Database	41	18
Platform	32	19
Social Responsibility Project	18	7
All of Them	4	

In the free form feedback field, participants have provided various feedbacks, to summarise them as a list:

1. There are not enough craftsmen in the database.
2. Project should include other cities as well.
3. Project should include other small-scale manufacturing methods such as laser cutting, 3d printing.
4. Project should provide more content about crafts and craftsmen, in the website and social media.
5. Project should become an open source community, allowing the infrastructure for the project to be used by other parties for other purposes.
6. Needs a better design for navigation of the map.
7. Craftsmen should be informed and trained about property rights and value of design via workshops, bringing designers and craftsmen together.

6. CONCLUSION

Conclusions of the study will be explained under two sections, first of them documenting the outcomes of the online platform developed during the process, and the second one proposing further research subjects though the development of the online platform according to the evaluation of observations made during the study.

6.1 Direct Outcomes of the Study

As the online platform developed with the aim of increasing visibility and accessibility of the craftsmen among design professionals to allow integration of crafts into design systems, the main outcome of the platform was the increased visibility among public as a starting point, although it was not able to increase the accessibility of the craftsmen according to the survey conducted as part of this study. The main tool for increasing the visibility was the Istanbul Craftsmen Map, being the base value the whole online platform. Also according to the survey identified the platform as a “Craftsmen Database” verifying this claim.

6.1.1 Istanbul craftsmen map

For the study, 101 craftsmen studios were visited and documented. Even though the coverage of the map is not high (can be estimated with the consideration of the total number of craftsmen in Istanbul is unknown & there are other craftsmen clusters in the city). Craftsmen in the database were documented with their crafts and materials they are working with, along descriptions of each craft with its translation to English. Such a list with crafts and their descriptions in Turkish and English was not available at the time, so project contributors collected and translated the necessary information for the list.

Another one of our findings was a framework for documenting craftsmen to be contacted. This framework was based on collection of the following information about craftsmen and their workshops:

1. Names of the craftsmen in the workshop
2. Crafts practiced by the craftsmen
3. Address of the workshop
4. Address description (Since most of the clusters were located in crowded regions and buildings in the city where it's hard to find it by address only)
5. Phone Number (A very important information which is used for checking the status of the workshop after it has been added to the database. Periodic checks made through phone calls is used for keeping track of workshops which has closed down, although this phone numbers were not published because of possible exploitation of them).
6. Photos of the workshop and the craftsmen
7. Notes about the workshop and the craftsmen taken through a short interview with the craftsmen
8. Reason of closing down for the workshops which were functional at the time closed down.

Through testing the framework during the research, participants have found this structure to be insufficient, providing the feedbacks about necessity of the phone number and more details about the crafts and the craftsmen in the database according to the survey done as part of this study. Also the amount of crafts and craftsmen available in the database was found insufficient by the users according to the survey.

6.1.2 Increased visibility of the craftsmen

During 21 months, news and articles about the project appeared on many publications, including mainstream newspapers in Turkey, web sites of international magazines and blogs, received interview requests from couple of television channels. By relying on those facts, it is possible to say that the subject is getting popular, and media including is increasingly getting interested about producing content about the subject. Such content might be an important tool for reaching to the masses and publicise the problems around the craftsmen.

According to the web analytics data gathered through the study, the biggest amount of visits made to the website was originating from social media. Although the amount of visits can be measured through the analytic tools available, texts

accompanying the the link to the website in the social media posts and discussions made under those posts about the project are not reachable. Also we have received requests for content about crafts and craftsmen in the social media, through the survey.

The study includes only a single exhibition as part of the Second Istanbul Design Biennial which had over 85,000 visitors (URL-11). Compared to the digital coverage about the project, exhibition visitors had the chance to see the physical manifestation of the project, experiencing the potential of the designer-craftsmen collaboration. Also the Biennial used visual material from the project for its own PR operations. Apart from the visibility generated by the Biennial, the production model proposed by the project had been tested and documented during the project, to be repeated or improved later on.

6.1.3 The online platform

The online platform itself can be considered as an outcome, as a starting point for further research by utilizing the identity developed through the process and project's user base. According to the survey participants there are certain expectations from platform such as increasing amount of crafts and craftsmen, providing more content about crafts and craftsmen, providing more tools or opportunities to bring designers and craftsmen together. Therefore, those expectations can be evaluated as further research possibilities, allowing the further discovery of the potential of online platforms in product design.

6.2 Future Research Possibilities

As the study acts as a starting point for discovering the potential of online platforms in product design, the most significant finding of the study is about providing further research possibilities through the evaluation of discoveries and observations made during the study. When the data collected through the study is evaluated, there are two potential paths for developing the online platform based on the feedbacks of the users. The online platform developed during the course of the study fulfils the role of an actor for increasing the visibility of crafts and craftsmen, although increasing accessibility of those and helping out designers to work with craftsmen is a different story. The platform lacked those capabilities according to the observations made and

the survey conducted as part of the study, and lack of those capabilities has surfaced as user feedbacks which can be grouped into two sections. First, increasing the amount of crafts and craftsmen, and providing more information for contacting them, allowing designers to access them easily. Second, development of the project to fulfil the role of a platform for bringing designers and craftsmen through content generation, workshops and active assistance. Providing two significant routes to follow for the development of the platform as future research possibilities.

6.3 Developing the “Craftsmen Database”

For the integration of crafts into design systems, crafts have to be capable to provide the necessary manufacturing capabilities, our project lacked this capability, observed as the feedbacks received from users of the online platform. Even though the amount of craftsmen were not increased during the last section of the study, the demand for such a service was present, drawing more people to the website but also causing more feedbacks about the amount of crafts and craftsmen in the database. This surfaced as the reason preventing 25% of the users (who were planning to contact a craftsman) from making the contact, due to the lack of the craft they were looking for or craftsmen accessible to them. Also three of the five users who contacted a craftsman, couldn't find a craftsman they can work with, which can also be improved by increasing the amount of craftsmen in the map.

The method used for documenting workshops was forming expeditions to craftsmen clusters and visiting workshops in those clusters. More workshops are mostly discovered through the conversations made with the craftsmen during those visits made. So each visit reveals more workshops through the network of workshops connected to the visited one. Although as the coverage of an area increases, discovering new workshops get harder. Also those expeditions are time consuming due to the time spent during locating the workshops and time spent in each workshop for taking photos and interviewing the craftsmen. Due to those facts expeditions were structured as a node to node traversal of craftsmen networks in craftsmen clusters.

As a method relying on field expeditions, and unpredictable in its nature due to the unknown amount of visits to be made during those expedition, it's an effective but an expensive method for improving the coverage of the database. Although there are couple of ways for solving those problems through online platforms. Though the

infrastructure provided by the internet either the effort or resources needed for the project can be gathered. As explained in the previous chapters, resources can be crowdfunded for funding more researchers for field expeditions and various types of rewards can be provided to the crowdfunders, ranging from crediting funders, to printed versions of the craftsmen map of Istanbul. Or collection of the data can be crowdsourced by letting volunteers running multiple field expeditions as a distributed approach to the problem, although those expeditions has to be conducted in a way that they'll be compatible with the central database. For that, materials such as guidelines and tools for collecting the data has to be developed. An online platform can provide the materials and tools needed for such a task, also creating a community of contributors during the process. Through those methods, the process gets more efficient by distributing the effort among volunteers, allowing the coverage of the database to reach more craftsmen, speeding up the process.

The %16 of the e-mails received during the study was information of new craftsmen submitted though the form in the website, users have intended to share the craftsmen they know with us, although the form they used during submitting those information was not structured well. Some of them were lacking phone numbers and some of them were lacking addresses making it harder for us to contact with those craftsmen. Also in the current structure of the map we physically visit the workshops to verify them and take photos of the workshop.

To tackle with those issues, the current format of the data in the database can be developed into a format, forming a framework for collecting craftsmen information when accompanied by a guideline for the process, and then the information collected according to that framework can be submitted to the database though a well structured form enforcing and communicating the right format for the craftsmen information, to be verified by other parties though the contact information available. Although such an effort has to be backed up by content generation such as material explaining the process, and material keeping the volunteers interested about the effort such as articles, news and multimedia content, therefore keeping the community of volunteers active. Also some sort of discussion platform like an online forum might be helpful, providing an active and central platform for discussions and exchange of knowledge among.

As the map's coverage increases through the contribution of the volunteers, there'll be more craftsmen available to collaborate for designers, and hopefully generating more collaborations between designers and craftsmen. Also the framework developed for crowdsourcing of craftsmen mapping can be abstracted into a more generic framework for mapping spacial entities, allowing it to be used for mapping other activities and locations. Parallel to the abstraction of the frame as recommended by a survey participant, the software providing the necessary infrastructure for the mapping process can also be released as an open-source software allowing other parties to develop it.

6.4 Developing the “Platform”

As crafts are not part of modern production and design processes, what they do and utilising them is not well known by designers. This was observed as the reason preventing 22% of the users from contacting craftsmen, as they didn't know which crafts or craftsmen they needed. Also most of the craftsmen are unaware of modern design practices and are relatively older than the designer population (unlike many designers getting trained everyday, craftsmen can not find apprentices due to the status of the crafts as explained in previous chapters), forming a cultural gap between those two actors. This can be observed as trust and communication issues preventing two of the five users from working with the craftsmen they have found via the online platform developed in this study. Also another observation of this issue has been made through a feedback about a user complaining about how unhappy he was with the product he got produced by a craftsmen.

Although we have not observed such an issue during the production process of the products for the biennial exhibition. This can be related to the previous experiences of the designers who worked during the biennial process, which can be evaluated as presence of an mediating layer between designer and craftsman in craft production process can reduce the process, through managing expectations of the designer from craft processes, and directing craftsman according to the designer's needs.

An online platform can be useful as this intermediary layer. As the platform developed during the study aims to connect those actors, the next step can be mediating the process either through material such as frameworks or guidelines, or direct assistance, helping each actor during the process. As both actors gets

experienced about collaborating, reliance to that sort of assistance will decrease, also increasing the exchange of knowledge between designer and craftsman.

As the current status of crafts and craftsmen is positioning them as irrelevant processes compared to the modern production processes, they have to adapt to the post-industrial era to survive and this can happen through their recognition as a valid production process. So their collaboration with designers can play a crucial role in that process, introducing them to the demands of the modern markets, allowing them to adapt to the post-industrial era. Such an assistive process can ease this process by handling issues caused by culture gap between those actors, eventually integration craftsmen to design systems, creating more value and income, eventually providing a valid path for their survival.

Such an assistive process can be handled by active communication with both parties, requiring commitment of significant amount of resources. Those resources can either be compensated as fees, or the platform can actually be a stakeholder in the process, mediating the process and also providing other values compensate the resources spent, forming a new business model around an ecosystem bringing designers and craftsmen together. An example for such an ecosystem can be an online marketplace for products designed by designers and manufactured by craftsmen which are members of the platform. Such a process will let the members of the ecosystem to adapt to each other in time while providing work opportunities for both of them. Creating a hybrid business and production model combining traditional production methods with modern design approaches and business methods.

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